NI 43-101 TECHNICAL REPORT:

Preliminary Economic Assessment
Santa Maria Project
Parral, Chihuahua, Mexico (Amended)

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1 SUMMARY

This Preliminary Economic Assessment report (PEA) on the Santa Maria Project has been developed for Fabled Copper Corp. (now Fabled Silver Gold Corp.) in respect of its acquisition of the Santa Maria Project from Golden Minerals Company. Minera de Cordilleras S.A. de C.V., a wholly owned subsidiary of Golden Minerals Company currently has the rights to acquire the Property from the registered owners of the Property. This report uses an updated resource derived using drill hole data and a geologic model provided by Golden Minerals Company, the prior operator of the Property. The authors of this report have, as described in Section 12 of this report, reviewed verified and accept the information provided as accurate in the preparation of this PEA.

1.1 KEY PROJECT COMPONENTS

This PEA has been developed by Mineral Resources Engineering after having a new resource calculated by Marc Jutras, Ginto Consulting, in November, 2020 using available drill hole data and the geologic model for the Santa Maria project and concludes that:

- The author, during the site visit and from the date of the site visit to the date of this report, confirmed that no additional work on the property had been done since the work in respect of the information used to develop this PEA. The author has independently reviewed this by, (i) during the site visit reviewing all of the existing workings underground to ensure no further work has been done other than that described in the report; (ii) reviewing all available drill data to ensure no further drilling has been recorded other than that used in the preparation of this PEA; (iii) reviewing news releases from Golden Minerals that would have noted Santa Maria work over the last two years; (iv) reviewing SEDAR filings by Golden Minerals for reporting on the Santa Maria over the last two years; and (v) conducting conversations with Golden Mineral's personnel discussing whether any recent physical work had been done on the property that may effect the validity of the resource model used in the analysis.
- The data summary and description of the exploration, exploration drilling and sampling, and sampling protocol performed on the property to date is acceptable for use in this report.
- This analysis assumes the extracted run of mine (ROM) material will be trucked to one of three toll plants in the Parral, Chichuahua, Mexico region for processing. The three plants have both agitated leach and flotation circuits. The Santa Maria mine is located 30 to 40 km from the processing plants. The proposed processing rate is ±200 tpd.
- The main development drifts are 3.0 m high by 3.0 m wide. Ramps will be excavated at 15-percent grades unless there is a significant reason for change.
- Two mining methods will be employed depending on the width of the mineralized structure;
  - Sublevel and Fill stoping will be used for all widths wider than 2.4 m and
  - Resue Cut and Fill stoping used in areas that are less than 2.4 m in width.
- The economic model assumes electrical power will be generated onsite rather than constructing a line power to the project.

1.2 PROJECT RISKS

Mineral Resource Engineering acknowledges the following Project risks:

- This PEA has incorporated Indicated and Inferred Resources. Inferred Resources are inherently risky, speculative, and do not have demonstrated value. Inferred Resources have been estimated in mineralized shoots from wide spaced drilling and by extrapolation. Significant variances in location, shape, grade, and tonnage of Inferred Resources may occur.

- The Santa Maria resource is limited to the concession boundary.
- There is no guarantee that the toll mills in Parral have sufficient space for the planned production from the project.
- Equipment procurement time could significantly delay the proposed project timeline.
- Insufficient data and knowledge prevent adequate understanding of the ground water inflow associated with the Santa Maria mine at depth.
- A marketing study is required to fully understand the value of the sulphide concentrates and the acceptability at a smelter.

1.3 LOCATION, PROPERTY DESCRIPTION & OWNERSHIP

The Santa María silver-gold project is located in the La Unión Mining District ("La Unión") southeast of the city of Santa Bárbara, located along the "San Francisco del Oro-Santa Bárbara" a major mining district in the State of Chihuahua, Figure 1-1. The Project is located 19 km from the center of the city of Santa Bárbara and approximately 39 km from the center of the city of Parral, a moderate sized, full service regional center of commerce. Golden Minerals controls 95.10-hectares in four mineral concessions through its subsidiary Minera Cordilleras which has the right to acquire the concessions' rights from the current holders.

Figure 1-1: Location Map

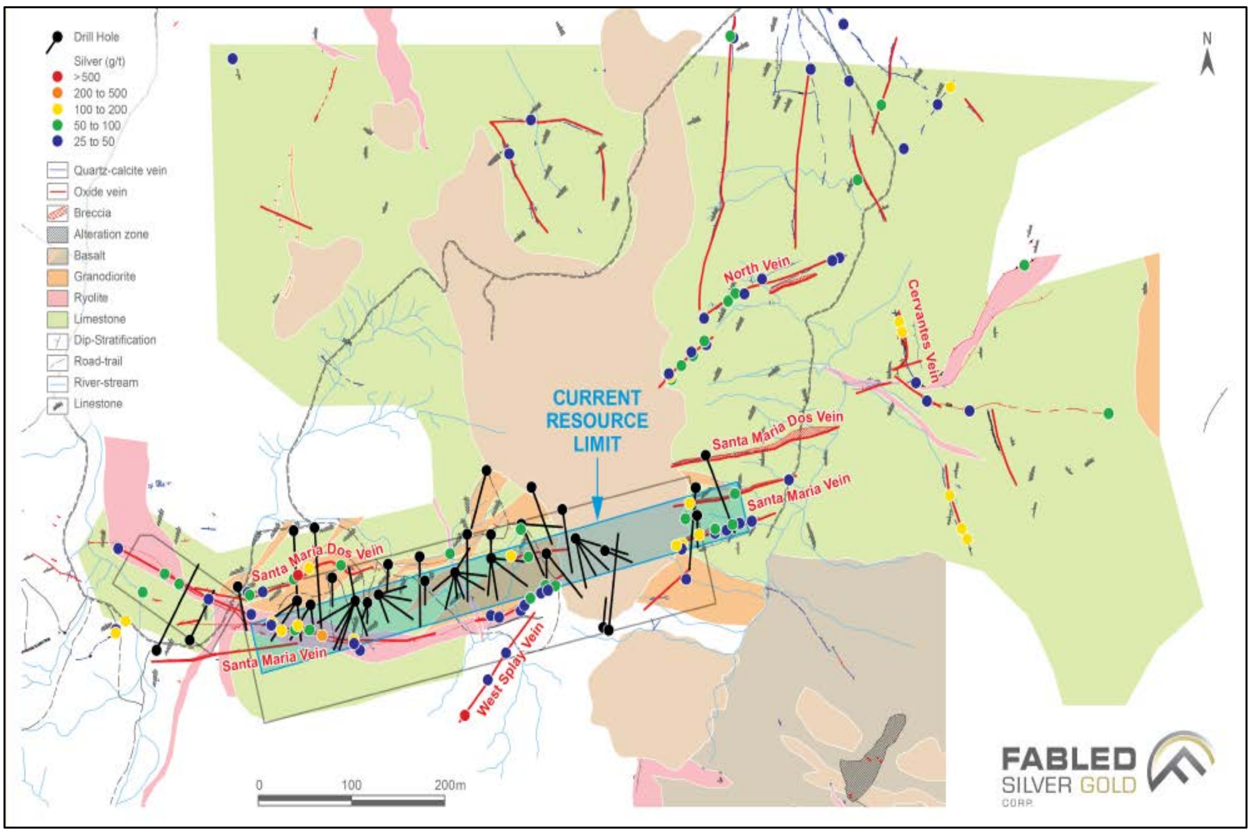
1.4 GEOLOGY & MINERALIZATION

The local geologic setting can be described as the sedimentary rocks of the Parral Formation, which are constituted from the base by an alternating sequence of flysch, shales, limestones, sandstones, siltstones and marls of the Aptian-Albian age Parral Formation; these rocks have been affected by intrusive rocks of the Laramide orogeny resulting in a sequence of metamorphized rocks with silicification and skarns, along the northeastern foothills of the Sierra Madre Occidental ("SMO") within the sub-province of Sierras y LLanuras ("SLL") in the geologic province of the Faja Ignimbrítica Mexicana (“FIM”)[1] and partially covered by the most recent rhyolites of the Upper Volcanic Series (“UVS”) of the SMO.

Santa María is located within the historical mining area denominated La Unión District which lies adjacent to the west of a major regional outcropping of an igneous stock of Laramide orogeny age (42.1 Ma) with monzonitic-granodiorite composition. Numerous andesitic stocks and dikes occur within the area which may be considered as apophysis of the granodioritic intrusive.

Geology of the property is dominated by metamorphosed sedimentary rocks of the Parral Formation, rhyolites, granodioritic intrusive and a post-mineral basaltic cap on the eastern edge. The Santa María vein deposits are hosted by rhyolitic dikes. The veins are observed cutting the Parral Formation and Tertiary rhyolite dikes. The property geology is depicted in **Figure 1-2**.

Figure 1-2: Property Geology Map



The primary Santa María vein deposit generally strikes in east-west direction and it gently curves following the outcropping of the host rock, a rhyolite dike along a surface extension of about 750 m. The current drilled demonstrated down dip extent is 260 m and remains open at depth and along strike. The vein occurs hosted by a

[1] Servicio Geológico Mexicano (SGM). Carta Geológico-Minera Hoja Santa Bárbara G13-A57. Chihuahua y Durango. Explicación – Resúmen

rhyolitic dike which appears to be associated with a fault zone cutting rocks of the Parral Formation. Breccia textures filled by quartz gangue are common in the vein. The vein varies in width between 1 and 4 meters with an average width of about 2 meters. The vein deposit dips to the north varying between 75 and 85 degrees. In underground workings, occasional post mineral normal faults can be observed to locally offset the vein deposit.

A second vein, the Santa María Dos, branches out from the western part of the Santa María structure following an eastern strike with a slight northern inflexion; its outcrop shows an approximate extension of 600 meters. This Santa María Dos mineralized structure appears to be hosted by a probable fault zone cutting rocks of the Parral Formation and crossing some granodiorite stocks and dikes.

The deposit type consists of an epithermal quartz - calcite mineralized structures system. Typical banded epithermal mineralized textures are observed in underground workings and drill core. Brecciated textures filled by quartz and calcite are common. Concentrations of galena and sphalerite with associated presence of silver minerals may indicate an exposure at medium to high elevation within the epithermal mineralized system.

1.5 EXPLORATION, DRILLING, SAMPLING & QA/QC

Exploration by Minera Cordilleras consisted of surface and underground geologic mapping and channel sampling. A total of 2,186 underground channel samples were collected for analysis. Channels were taken within existing underground development that spans approximately 575 m east to west and 110 m down dip. Samples are spaced between five and 15 meters apart with few spaced more than 25 meters apart due to access and to explore the vein strike, but are spaced one to four meters apart in areas that are accessible and potentially prospective for mining.

The Project database contains a total of 59 diamond drill holes, totaling 9,922.61m, drilled by Minera Cordilleras. Surface drill holes are NQ and BQ size with either plastic or steel surface casing. Drilling was completed by Maza Diamond Drilling S.A. de C.V. of Sinaloa, Mexico utilizing a portable rig with a 500-m depth maximum. Drilling was completed by Minera Cordilleras in 2014, 2016, 2017 and 2018 drilling campaigns, including underground and surface drilling for exploration, expansion and recognizance of mineralized ore shoots, and to increase Resource classification.

The author has verified through a previous site visit and data review that the sample preparation, analyses and security procedures implemented by Minera Cordilleras meet standard practices. The data collected is of adequate quality and reliability to support the estimation of Mineral Resources. Only Project level staff are involved with the selection, preparation and delivery of samples to the laboratory. Historic sampling by previous operators is not considered current and is therefore not described in this section. The Project database contains results collected from both drill core and channel sampling.

The Project is located well off main roads and is guarded by a caretaker who lives in a mine building near the mine entrance while the site is active. Samples awaiting delivery to the ALS preparation facility in Chihuahua are placed in a locked building overnight. Samples are delivered to ALS Minerals in Chihuahua City, Chihuahua, Mexico (“ALS Chihuahua”) by Minera Cordilleras staff by road as needed, typically every two weeks.

Minera Cordilleras’ quality assurance (QA) measures involved the use of standard practice procedures for sample collection for both drill core and channel sampling as described above; and include oversight by experienced geologic staff during data collection. Quality control (QC) measures implemented by Minera Cordilleras included in-stream sample submittal of standard reference material, blank material and duplicate sampling.

1.6 Mineral Processing & Metallurgical Testing

Samples of oxide and sulfide material were subjected to scoping level metallurgical testing at Golden Minerals' Velardeña Mine laboratory in September 2014. This test work indicated that the oxide material is amenable to direct cyanide leaching. The sulfide material underwent flotation testing to concentrate the precious metals into lead and zinc concentrates. The results of this flotation testing indicate the potential to produce a relatively low-grade lead concentrate with a relatively high silver content, as well as a high-grade zinc concentrate.

Pilot scale flotation process test work was undertaken from September 10 to October 16, 2015 on mixed material. In this test, the aim was to produce a concentrate with high silver content.

Additional samples of the sulfide material were subject to laboratory flotation testing by SGS in October 2016 to evaluate production of a bulk silver bearing concentrate as opposed to the production of separate lead and zinc concentrates.

Golden Minerals engaged RDi Inc. in January 2017 to perform additional rougher and cleaner flotation test work on the same composite as used in the October 2016 SGS testing. This test work evaluated the impacts of alternative reagent suites as well as grind sizes.

It is currently envisioned the mixed and sulfide material will undergo toll processing. Additional test work specific to the selected mill facilities flowsheet capabilities is necessary to establish a higher level of confidence regarding anticipated operating parameters as well as grade and recovery values.

1.7 Mineral Resource Estimation

The estimation of the mineral resources was carried out for the Main and Dos veins of the Santa Maria deposit, located in Chihuahua state, Mexico.

The estimation of the mineral resources of the Santa Maria deposit was performed by Marc Jutras, P.Eng, M.A.Sc., Principal, Mineral Resources at Ginto Consulting Inc. ("Ginto"). Mr. Jutras is an independent Qualified Person as defined under National Instrument 43-101.

The estimation of silver and gold grades was calculated with an ordinary kriging technique with capped composites, an anisotropy model of search ellipsoid angles, and a restrictive search for higher grades. A block model of silver, gold, and silver equivalent grades was discretized on 2m x 1m x 2m blocks. The mineral resource was edited for mined-out underground voids and was classified as indicated and inferred according to the CIM guidelines.

The mineral resource of the Santa Maria deposit is reported in Table 1-1 at an AgEq cut-off of 155 g/t. The mineral resource is effective as of December 2, 2020.

Table 1-1: Mineral Resources at a 155 g/t AgEq Cut-Off – Effective November 19, 2020 – Santa Maria Deposit

Indicated[3,4]								
AgEq[1,2] Cut-Off g/t	Vein	Tonnage tonnes	Avg AgEq[2] Grade g/t	AgEq[2] Content oz	Avg Ag Grade g/t	Ag Content oz	Avg Au Grade g/t	Au Content oz
155.0	Main Vein	318,813	315.6	3,235,262	271.7	2,784,945	1.11	11,378
	Dos Vein	-	-	-	-	-	-	-
	Total	318,813	315.6	3,235,262	271.7	2,784,945	1.11	11,378
Inferred[3,4]								
AgEq[1,2] Cut-Off g/t	Vein	Tonnage tonnes	Avg AgEq[2] Grade g/t	AgEq[2] Content oz	Avg Ag Grade g/t	Ag Content oz	Avg Au Grade g/t	Au Content oz
155.0	Main Vein	124,305	239.5	957,169	209.8	838,385	0.79	3,157
	Dos Vein	23,475	216.3	163,241	201.4	152,019	0.55	415
	Total	147,780	235.8	1,120,410	208.5	990,405	0.75	3,572

1. AgEq cut-off grade is calculated as follows:

AqEq cut-off = ($55/t mining + $40/t milling +$5/t transport) / ($20 Ag/oz x 0.03215 oz/g) = 155.5 g/t

2. Ag equivalent grade is calculated from $20 Ag/oz and $1,600 Au/oz, 90% Ag recovery and 80% Au recovery:

AgEq = (Ag x 0.9) + ((Au x 0.8) x 80.0)

3. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, changes in global gold markets or other relevant issues.

4. The CIM definitions were followed for the classification of indicated and inferred Mineral Resources. The quantity and grade of reported inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred Mineral Resources as an indicated Mineral Resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured Mineral Resource category.

1.8 MINING

This preliminary economic assessment is preliminary in nature. it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized;

The mine plan developed for this PEA utilizes the existing mine entries for primary accesses and integral parts of the ventilation system. The mineralized structures at the Santa Maria are classed as narrow veins. Two stope systems have been selected for this analysis; Sublevel Stoping with Fill, and Resue Cut and fill Stoping. The Resue mining method, which is the mining of the high grade material followed by the adjacent low grade material, will be used in areas of the vein where the mining of the structure must be less than 2.4 m wide. Areas wider than 2.4 m will use the Sublevel stoping method. **Table 1-2** outlines the possible tonnes that can be excavated by the two stope types. Primary development will use drifts excavated to 3.0 m high by 3.0 m wide, with an arched back.

All drilling for excavations will utilize handheld pneumatic jackleg drills. Removal of the blasted material from the development face(s) will be done with 2.0 LCY LHD units. Blasted material will be hauled out of the mine with 15-tonne underground haul trucks. A total labor force of 80 to 90 employees, including the General and Administrative staff, is required for the mine operations. The mine will work two 10 hour shifts per day, seven days per week.

Table 1-1: Potentially Minable Resource Tonnage Sub-Divided by Mining Method

Mining Method	Average Vein Thickness (m)	Estimated Dilution	Tonnes Diluted	Grade Ag g/t Diluted	Grade Au g/t Diluted
Resue Cut and Fill	1.84	11%	129,705	345	0.71
Sub Level Stoping	2.55	12%	178,316	322	0.83
Both Methods	2.18	11.5%	308,021	331	0.78

Table 1-3 Equipment Summary

Type	Manufacturer Details	Number	Capacity/Size
Jacklegs	FNP S83F, telescopic Leg	20	257 CFM
Hydraulic Longhole Drill	Atlas Copco B104	1	1.04 m width
LHD - Scooptram	Sandvik LH203	3	2 yd^3 bucket /1.48 m wide
Mining trucks	Sandvik TH 315	3	5 yd^3 box / 1.55 m wide
Tractor	Massey Ferguson	2	
48” x 29” Hub Axivane Fan	Spendrup	2	55,000 cfm
40 hp Axivane Fan	Woods 100 HG71A 32°	5	25,000 cfm
15 hp Axivane Fan	Woods 100 HG56A 12°	3	17,000 cfm
Screw Compressor	Sullair 1050	2	1,050 cfm at 100 psig
900 Kw Prime Power	Caterpillar	1	900 Kw Prime Power

1.9 ECONOMIC ANALYSIS

The Project cost estimates and economics developed in the Technical-Economic Model (TEM) have been prepared monthly for the life of mine (LOM) and are based on the Ginto Consulting Inc.'s Resource. The level of accuracy of this estimate is scoping level (30-35% accuracy) and the study is based upon the design criteria presented in this report. The economic results are summarized in **Table 22-2**. The analysis delivers the following conclusions:

- Project Life: five years with a production life of slightly more than four 56 months.
- Pre-Tax Net Present Value (NPV5%): US$1.25 million, IRR: 12%.

Table 1-2: Technical Economic Results

Description	Unit Cost $/tonne	Amounts in US$000's					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
NSR and Royalty Calc.							
NSR	$128.06	$746	$11,721	$12,338	$12,657	$7,768	$45,230
Royalties (Mex. at 0.5%)	$0.64	$4	$59	$62	$63	$39	$226
Net After Royalties	**$127.42**	**$742**	**$11,663**	**$12,276**	**$12,594**	**$7,729**	**$45,004**
Operating Costs							
Mining+Development	$74.78	$2,126	$6,151	$7,993	$6,485	$3,655	$26,410
Processing	$29.30	$266	$2,040	$3,439	$2,603	$2,000	$10,349
G&A	$3.16	$137	$273	$273	$273	$160	$1,117
Total Operating Costs	*$107.24*	*$2,529*	*$8,465*	*$11,705*	*$9,361*	*$5,816*	*$37,876*
Operating Margin	**$20.18**	**-$1,787**	**$3,198**	**$571**	**$3,233**	**$1,913**	**$7,128**
Capital Costs							
Mining - Equipment, Etc.	$9.07	$2,559	$271	$119	$253	$0	$3,202
Infrastructure	$1.24	$438	$0	$0	$0	$0	$438
Business Unit	$0.59	$208	$0	$0	$0	$0	$208
First Fills	$0.18	$255	$0	$0	$0	-$191	$64
Total Capital Costs	*$11.08*	*$3,460*	*$271*	*$119*	*$253*	*-$191*	*$3,912*
Salvage value						-$1,001	-$1,001
Reclamation						$100	$100
Pre Tax Cash Flow	**$11.65**	**-$5,247**	**$2,927**	**$452**	**$2,980**	**$3,005**	**$4,116**
VAT		$15	$19	$25	$21	$12	$92
Income Tax		$0	$0	$0	$0	$0	$0
SMT Tax (Deferred Tax)		$0	$240	$43	$242	$143	$669
After Tax Cash Flow	**$9.50**	**-$5,262**	**$2,668**	**$383**	**$2,717**	**$2,849**	**$3,356**

1.10 INTERPRETATIONS AND CONCLUSIONS

Drill hole and channel samples have been collected and analyzed using industry standard methods and practices and are sufficient to characterize grade and thickness and support the estimation of Indicated and Inferred Mineral Resources. This preliminary economic analysis includes Indicated and Inferred Mineral Resource estimates, suggesting that further studies and advancement of the Project to pre-feasibility may be warranted.

1.11 RECOMMENDATIONS

The following recommendations are set forth based on the strength of the analysis performed on the project to date:

- Further explore the property to develop a resource that would support building an on-site processing plant. No single recommendation could affect the project more than having an on-site processing plant.
- Further explore the Project to increase tonnage and confidence of the currently defined Resources.
- Plan significant underground development along the mineralized structures to determine widths, grades, and mineralization distribution. This will increase certainty on the Mineral Resources and conversion into Mineral Reserves.
- Engage a local environmental consultant to determine permitting costs and timelines.
- Perform additional metallurgical testing characterization; It is important to fully understand the processing of the transition and sulphide material in an agitated leach plant,or treating the concentrate from flotation in an agitated leach plant.
- Additional studies and work required to advance the Project to a preliminary feasibility study (PFS) and Reserves include but are not limited to:
    - Geotechnical drilling and stability analysis gained from historic core and new core if needed.
    - Hydrogeologic analysis.
    - Waste rock geochemical determination.
    - Improved closure cost estimation.
    - Base line environmental studies and permitting.
    - Improved estimation for site infrastructure requirements.

2 INTRODUCTION

This report has been prepared on behalf of Fabled Silver Gold Corp. (formerly Fabled Copper Corp.), (“Fabled” or the “Issuer”), in respect of its acquisition of the Santa María silver Project currently held by Minera de Cordilleras S. de R.L. de C.V., a wholly owned subsidiary of Golden Minerals. Fabled is an exploration stage mining company engaged in the business of exploration of mineral projects, principally in Mexico. it has no principal products and has no revenues. It’s primary mineral project is the Santa María Project which is the subject of this report.

This report has been prepared for the purpose of:

- Detailing exploration and drilling data collected by Minera Cordilleras,
- Summarizing the results of an independent estimation of Mineral Resources by Ginto Consulting Inc (“Ginto”) and,
- Presenting the findings of Mineral Resources Engineering for a PEA using the November 2020 Ginto Mineral Resource estimate.

This PEA has been developed by Mineral Resources Engineering after having a new resource calculated by Marc Jutras, Ginto Consulting, using all of the available raw data for the Santa Maria project provided by Minera Cordilleras.

Technical information including locations, orientations, mapping and analytical data has been supplied by Minera Cordilleras and has been verified through spot checking by Mineral Resources Engineering experts while visiting the Santa Maria Project. Information pertaining to title, environment, permitting and access has also been supplied by Minera Cordilleras.

The Santa María Project site was last inspected on July 20, 2019 and July 21, 2019 by David E. Drips, QP for MRE. The inspection consisted of visiting the property and touring the extent of the surface area held by Golden Minerals, visiting the surface drill pads and inspecting the condition and reporting of the hole collars, visiting the underground workings at all faces and areas that are accessible, and visiting the core shed with review of the core.

The inspection by Mr. Drips entailed:

- Observations of drill cores gained from the past drilling programs,
- Trial mining areas,
- A review of the availability and condition of mining equipment,
- Observations of the current ramp,
- Discussions regarding potential strategies for stoping, development and ventilation,
- Observations of current surface infrastructure, and
- General observations of the current environmental conditions.

Mr. Drips, during the site visit and from the date of the site visit to the date of this report, confirmed that no additional work on the property had been done since that the work in respect of the information used to develop this PEAor since Mr. Drips’ site visit. The author has independently reviewed this by, (i) during the site visit reviewing all of the existing workings underground to ensure no further work has been done other than that used in the preparation of this PEA; (ii) reviewing all available drill data to ensure no further drilling has been recorded other than that described in the report; (iii) reviewing news releases from Golden Minerals that would have noted Santa Maria work over the last two years; (iv) reviewing SEDAR filings by Golden Minerals for reporting on the Santa Maria over the last two years; and (v) conducting conversations with Golden Mineral's personnel discussing whether any recent physical work had been done on the property that may effect the validity of the resource model used in the analysis.

Mr. Drips, based on his review, and the above described inspections, believes that the drill hole data and geologic model used in the preparation of this PEA is accurate and relevant for use in the preparation of this PEA.

2.1 Units of Measure

All references to dollars in this report are to US dollars (US$) unless otherwise noted. Distances, areas, volumes, and masses are expressed in the metric system unless indicated otherwise.

For this report, common measurements are given in metric units. All tonnages shown are in Tonnes of 1,000 kilograms, and precious metal grade values are given in grams per tonne (g/t), precious metal quantity values are given in troy ounces (toz). To convert to English units, the following factors should be used:

1 short ton = 0.907 tonne (T);

1 troy ounce = 31.1035 grams (g);

1 troy ounce/short ton = 34.286 grams per tonne (g/t);

1 foot = 30.48 centimeters (cm) = 0.3048 meters (m);

1 mile = 1.609 kilometer (km); and
1 acre = 0.405 hectare (ha).

2.2 Abbreviations

The following is a list of abbreviations used in this report:

2D	two-dimensional
3D	three-dimensional
Ag	silver
As	arsenic
Au	gold
bhp	brake horsepower
°C	degrees Celsius
cm	centimeter
cm3	cubic centimeters
m3	cubic meters
CONAGUA	National Water Commission (Comisión Nacional del Agua)
Cu	copper
CUSTF	Change in Forestry Land Use (Cambio de uso del suelo en terrenos forestales)
ER	Risk Study (Estudio de Riesgo)
ETJ	Technical Justification Study (Estudio Técnico-Justificativo)
g	gram

g/t	grams per tonne
g/cm3	grams per cubic centimeter
Golden Minerals: Golden Minerals Company	
GxT	grade multiplied by thickness
ha	hectare
ID	identification
IMMSA	Industrial Minera México, S.A.
INAH	National Institute of Anthropology and History (Instituto Nacional de Arqueología e Historia)
kg	kilogram
km	kilometer
km2	square kilometers
km/hr	kilometers per hour
LAU	Comprehensive Environmental License (Licencia Ambiental Única)
LGDFS	General Law of Sustainable Forestry Development (Ley General de Desarrollo Forestal Sustentable)
LGEEPA	General Law of Ecological Equilibrium and Environmental Protection (Ley General del Equilibrio Ecológico y la Protección al Ambiente)
LGPGIR	General Law for the Prevention and Comprehensive Waste Management (Ley General para la Prevención y Gestión Integral de los Residuos)
LOM	Life of Mine
m	meter
M	million
MIA	Environmental Impact Statement (Manifestación de Impacto Ambiental)
Minera Cordilleras: Minera de Cordilleras S. de R.L. de C.V.	
mm	millimeter
mm/yr	millimeters per year
Mya	million years before present
NOM	Official Mexican Standard (Norma Oficial Mexicana)
NI 43-101	Canadian Securities Administrators' National Instrument 43-101
NOM-120-	Mexican Official Standard SEMARNAT-1997
NSR	Net Smelter Return
Pb	Lead
PEA	Preliminary Economic Assessment
PFS	Preliminary Feasibility Study
PMLU	Post-Mining Land Use
PPA	Accident Prevention Plan
ppm	parts per million
PROFEPA	Federal Bureau of Environmental Protection
Project	Santa María
QA/QC	quality assurance/quality control
ROM	Run of Mine material

Sb	antimony
SEDENA	Secretariat of National Defense (Secretaría de la Defensa Nacional)
SEMARNAT	Secretariat of Environment and Natural Resources (2001-) (Secretaría de Medio Ambiente y Recursos Naturales [2001-))
SMT	Special Mining Taxes
t	metric ton
toz	troy ounces
tpd	tonnes per day
US$	United States dollars
V	volt
Zn	zinc
/	per

3 RELIANCE ON OTHER EXPERTS

MRE experts relied on statements and information provided by Golden Minerals Company and Minera Cordilleras concerning matters included in Section 4.0 of this report.

Further, MRE experts relied on statements and documents provided by the following Golden Minerals employees: Warren Rehn, President and Chief Executive Officer of Golden Minerals; and Joaquín Rodríguez, Exploration Manager for Minera Cordilleras as follows:

- Joaquín Rodríguez, Senior Exploration Geologist - multiple discussions during October 2020 in respect of compliance requirements to continue exploration activities;
- Warren Rehn, CEO and President of Golden Minerals - multiple discussions during October and November 2020. Mr. Rehn provided copies of the notarized claim boundary maps and information on leasing, royalty and purchase agreements relating to the concessions, concession legal boundaries, and the concessions current standing.

4 PROPERTY DESCRIPTION AND LOCATION

The Santa María silver-gold project is located within the "La Unión" historical mining district southeast of Santa Bárbara in the State of Chihuahua, **Figure 4-1**. The property is located 19 km from the center of the town of Santa Bárbara and approximately 39 km from the center of the city of Parral. Parral is a moderate-sized, full-service regional center of commerce.

Figure 4-1: Location Map

The site can be accessed from Santa Bárbara by traveling northwest out of town for 4 km on paved roads. The route goes east at IMSA's Santa Bárbara mine tailings dam on a well-kept public dirt road for 7.5 km and then heads south towards the village of Chicanaya. The route is 7.5 km south on ranch dirt roads to access the site. The mine entrance has the following coordinate: latitude 26°45'37"N, longitude 105°44'45"W (WGS84).

The mineral rights are held by five mineral concessions totaling 101.06 hectares. Figure 4-2 shows the concessions overlaying a satellite photo of the area. Table 4-1 details the concessions controlled by Minera Cordilleras.

The concession group that makes up the Santa Maria project are Mexican Mining Concessions, with 50-year leases. The following dialogue outlines the commitments that will have been developed by Golden Minerals and will be carried forward by Fabled.

A wholly owned subsidiary of Golden Minerals, Minera de Cordilleras, S. de R.L. de C.V. ("Minera Cordilleras") holds the exclusive right to acquire the Santa María concessions under two separate option agreements (the "GMC Option Agreements") as follows:

- *The first option agreement was executed in August 2014, and gave Minera Cordilleras the rights to acquire from Mr. Joaquín Rolando Chávez González the Santa María claim, T-216632 at a total purchase price of $1.74 M due on April 2022. The initial agreement was amended and restated on November 9, 2018 to include the Punto Com, T-228022 concession rights and to reduce the total amount payable based on advance payments made. All required payments in respect of this agreement have been made by Golden Minerals prior to the date hereof. The final payment of $100,000 under the agreement was made on November 9, 2020 into the Mexican Courts to be placed into the estate of Mr. Joaquín Rolando Chávez González who passed away in April 2020. Upon the completion of the administration of his estate title to both Santa Maria and Punto Com will be assigned to Minera Cordilleras.*
- *The second option agreement was contracted with Mr. José Alfredo Cervantes Rivera (and partners) and was executed on August 4, 2017. Under this agreement Golden Minerals holds the right to purchase the María T-226591, María II Fraction 1 T-230200 and Martía III T-231703 claims for $0.70 million paid over a period of four years. $50,000 was paid upon signing the option agreement, and variable payments are due every six months for the duration of the contract in order to acquire a 100% interest, upon which it will be subject to a 2% Net Smelter Royalty (NSR) for the concessions related to that option. This option was also re-negotiated, on August 4, 2018, and again in August, 2020. There are three remaining payments due totaling $380,000 in order to acquire 100% interest.*

Golden Minerals and its wholly owned Mexican subsidiary have granted to the Fabled Parties the sole and exclusive right and option (the "Option") to acquire the undivided one hundred percent (100%) of the ownership of the mineral claims, subject to several conditions, including the Fabled Parties making the following payments to the Golden Minerals or Minera Cordilleras, as required and complying with the following conditions:

1. Cash payments as follows:

Table 4-1: Golden Minerals Option Payments

Option Payment Timing	Payment Amount USD$
On the Closing Date of the Option Agreement	$500,000
On or before the 12th month anniversary of the Closing Date of the Option Agreement.	$1,500,000
On or before the 24th month anniversary of the Closing of the Option Agreement	$2,000,000

2. On the Closing Date of the Option Agreement, 1,000,000 Common Shares of Fabled. issued in favor of Golden Minerals;

3. Additional payments to Golden Minerals in an amount equal to the amount of all payments due under the GMC Option Agreements between Minera Cordilleras and the title holders of the mineral claims as follows:

Table 4-2: Golden Minerals Option Payments to Property Holders

Option Payments			
Claims	Date	Option Payment US$	Payment to
Santa Maria + Punto Com	On Closing	$ 100,000.00	Chavez
Las Marias	2/4/2021	$ 120,000.00	Cervantes/Peralta
Las Marias	8/4/2021	$ 120,000.00	Cervantes/Peralta
Las Marias	2/4/2022	$ 140,000.00	Cervantes/Peralta

4. Timely submit to Minera Cordilleras the amount of all Annual Holding Costs and any other costs payable to any applicable Governmental Authority, to maintain the mineral claims in good standing; and

5. Upon exercise of the Option, simultaneous with the execution and delivery of the conveyance of the mineral claims to Fabled's Mexican subsidiary the Parties shall enter into a Royalty Agreement by which Fabled grants to Minera Cordilleras a 1% net smelter return royalty interest in all minerals processed and sold from the mineral claims.

Promptly after the Closing Date of the Option Agreement, Minera Cordilleras will assign its exploration rights under the GMC Option Agreements, pursuant to Assignment Agreements written in the English and Spanish languages that will be duly filed in the Public Mining Registry, which shall include the terms of the Option Agreement between Fabled. and Golden Minderals

Upon Fabled exercising the Option, GMC shall, if it has not done so prior to such date, exercise the options and fulfill its obligations under the GMC Option Agreements and, upon Minera Cordilleras acquiring the title to the mining claims thereunder , Minera Cordilleras shall convey the mining claims to Fabled's Mexican subsidiary.

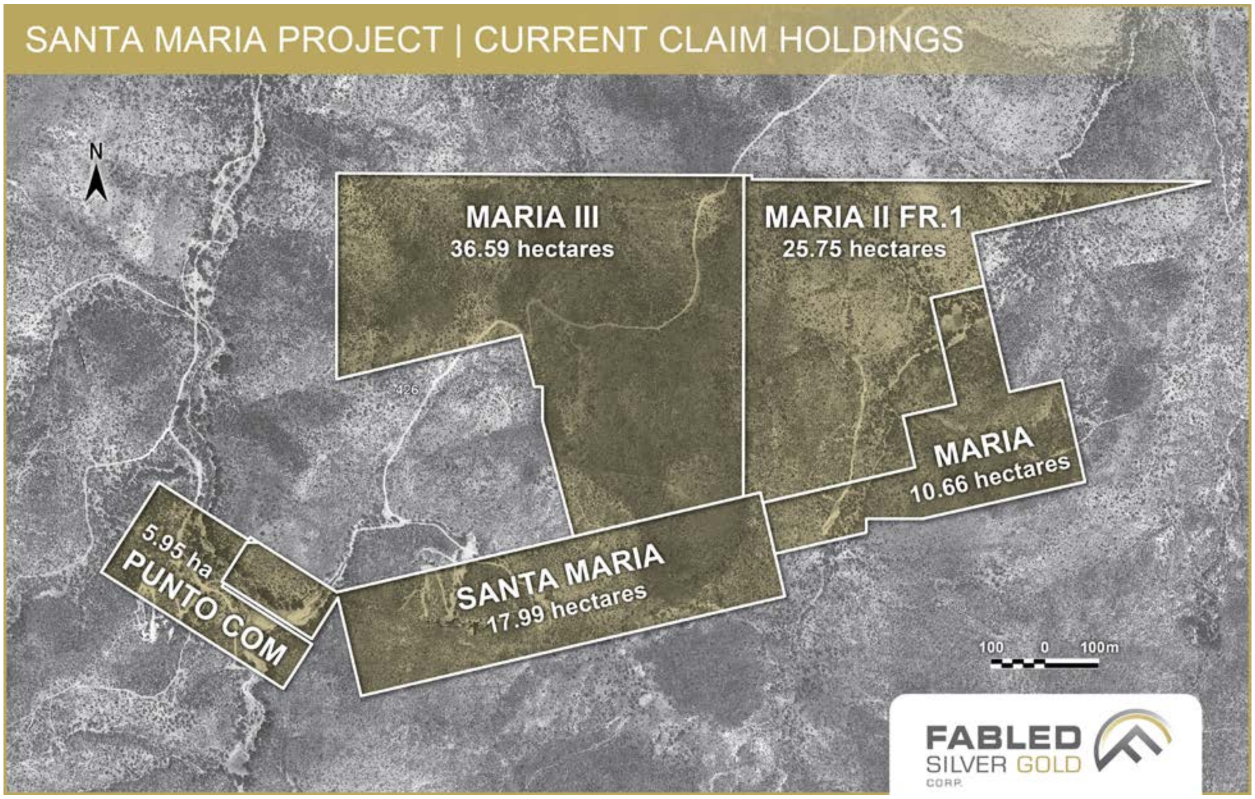


Figure 4-2: Map of Concession Boundary

Table 4-3: List of Concessions

Concession	Title #	Concession Holder	Expiry (Good Standing)	Surface Right Secured[2]	Minera Cordilleras' Arrangement	Hectares
Santa María	216532	Joaquín Rolando Chávez Gonzales	16-May-2052	In Process	Option to Purchase from holder	17.9668
María	226591	José Alfredo Cervantes Rivera	1-Feb-2056	In Process	Option to Purchase from holder	10.8394
María II Fracción I	230200	José Alfredo Cervantes Rivera	30-Jul-2057	In Process	Option to Purchase from holder	24.3262
Martia III	231703	José Alfredo Cervantes Rivera	14-Apr-2058	In Process	Option to Purchase from holder	41.9674
Punto Com	228022	Joaquín Rolando Chávez Gonzales	28-Sep-2056	In Process	Option to Purchase from holder	5.9595
	101.0593					

Notes:

1. *Table 4-3: List of Concessions Controlled by Minera Cordilleras,*
2. *There is a surface rights agreement with J. Chavez and the ranch, which covers most of the areas covered by the concessions. The balance of the area not owned by the ranch is controlled by a non-recorded ejido; Golden Minerals did not follow up the surface rights with the ejido because none of the land influences anything Golden Mineral's is doing with the concession group. (Inserted by D.E. Drips for Fabled Copper PEA Report).*

4.1 ENVIRONMENTAL AND PERMITTING

There are existing remnants of a minor historic vat leaching operation on the property as well as waste rock piles located in and around water drainages that have partially been utilized for recent waste rock disposal. Minera Cordilleras is in discussions with regulators regarding the waste disposal area and a permit application has been submitted to cover these areas of disturbance.

It is recommended that the company work directly with regulators to identify and document each case on the property where there could be a potential liability from past disturbances and process sites.

Minera de Cordilleras has engaged a local environmental contractor to characterize the discharge water quality which has been determined to be within acceptable limits for acidity and mineral content.

Fabled plans to continue an exploration program similar to Golden Minerals efforts over the last five-years. The permitting framework for this type of activity is in place from the past activity and Fabled should not have much problem gaining like permits.

The following outlines the general permitting a mine in Mexico and the required permits. The Santa María property is in the exploration and Resource stage and is not considered an advanced property. The permits discussed here do not apply to the construction, those permits will be required to advance the property from construction to regulation.

4.1.1 MEXICAN PERMITTING FRAMEWORK

Environmental permitting of the mining industry in Mexico is mainly administered by the federal government body SEMARNAT, the federal regulatory agency that establishes the minimum standards for environmental compliance. Guidance for the federal environmental requirements is largely held within the General Law of Ecological Equilibrium and Environmental Protection (Ley General del Equilibrio Ecológico y la Protección al Ambiente, or LGEEPA). Article 28 of the LGEEPA specifies that SEMARNAT must issue prior approval to parties intending to develop a mine and mineral processing plant. An environmental impact statement (by Mexican regulations called a Manifestación de Impacto Ambiental, or "MIA") must be filed with SEMARNAT for its evaluation and, if applicable, further approval by SEMARNAT through the issuance of an Environmental Impact Authorization; the document specifies approval conditions where works or activities have the potential to cause ecological imbalance or have adverse effects on the environment. Further requirements for compliance with Mexican environmental laws and regulations are supported by Article 27 Section IV of the Ley Minera and Articles 23 and 57 of the Reglamento de la Ley Minera. Article 5 Section X of the LGEEPA authorizes SEMARNAT to provide the approvals for the works specified in Article 28. The LGEEPA also contains articles for soil protection, water quality, flora and fauna, noise emissions, air quality, and hazardous waste management.

The National Water Law (Ley de Aguas Nacionales) provides authority to the National Water Commission (Comisión Nacional del Agua or CONAGUA), an agency within SEMARNAT, to issue water extraction concessions, and specifies certain requirements to be met by applicants.

Another important piece of environmental legislation is the General Law of Sustainable Forestry Development (Ley General de Desarrollo Forestal Sustentable – LGDFS). Article 117 of the LGDFS indicates that authorizations must be granted by SEMARNAT for land use changes to industrial purposes. An application for change in forestry land use (CUSTF) must be accompanied by a technical study that supports the Technical Justification Study (Estudio Técnico-Justificativo – ETJ). In cases requiring a CUSTF, an MIA for the change of forestry land use is also required.

Mining projects also must include a Risk Study (ER) and an Accident Prevention Plan (PPA) from SEMARNAT.

The General Law for the Prevention and Comprehensive Waste Management (Ley General para la Prevención y Gestión Integral de los Residuos – LGPGIR) also regulates the generation and handling of hazardous waste coming from the mining industry. The LGPGIR also regulates the generation and handling of hazardous waste coming from the mining industry. Guidance for the environmental legislation is provided in a series of Official Mexican Standards (Norma Oficial Mexicana – NOMs). These regulations provide specific procedures, limits and guidelines and carry the force of law.

4.1.2 Project Permitting Requirements

Preventive Report (Informe Preventivo) – Based on local environmental characteristics and according to regulations, an Exploration Program for the Santa María project is not required to present a MIA Report, but a Preventive Report should be presented by Fabled through the title holder to SEMARNAT's local office in the City of Chihuahua (Delegación Federal Chihuahua).

4.2 Significant Risk Factors

The claims are located on a private ranch and on land that is in process of being titled to Mancomún, Chicanaya, and Los Solices communities.

Although the mineral rights are independent of the surface rights, access to the claim block is granted through an agreement between the current concession holder and the ranch and Mancomún that do not have direct interests in the mineral concession.

The Rancho del Arroyo de la Ciénega de los Solices has an area of 114.94 hectares. It superficially covers the total mineral resources quantified so far, all the current mining works and facilities of the Santa María Mine.

The owner of the Arroyo de la Ciénega de los Solices Ranch, Mr. Ramón Perfecto Galindo Olivas, entered into a right-of-way contract, on October 14, 2016, with Mr. Joaquín Rolando Chávez for a term of 20 years. This agreement allows exploration and exploitation work to be carried out throughout the Ranch area. Subsequently, on October 4, 2019, by means of a rights assignment agreement, Mr. Joaquín Rolando Chávez González assigned to Minera de Cordilleras the rights of the right-of-way contract that Mr. Joaquín Chávez had entered into with Mr. Ramón Perfecto Olivas.

The lands that adjoin the Property to the north and east have not been legally titled by the government to the inhabitants of the Chicanaya community, so it is a legally unowned surface. Steps are being taken to legalize it although these are not yet complete. Upon completion an agreement will be entered into with the communities with respect to access.

As stated above, there are existing remnants of a minor historic vat leaching operation on the property as well as waste rock piles located in and around water drainages that have partially been utilized for recent waste rock disposal. Minera Cordilleras is in discussions with regulators regarding the waste disposal area and a permit application has been submitted to cover this area of disturbance.

The author is unaware of any other significant risk factors that may affect access, title, right or ability to perform work on the property.

5 Accessibility, Climate, Local resources, Infrastructure and Physiography

5.1 Accessibility and Surface Rights

The property is located 19 km from the center of the city of Santa Bárbara and approximately 39 km from the center of the city of Parral and is accessed by paved and dirt roads. Parral is a moderate sized, full service regional center of commerce with full service repair shops and heavy equipment dealers. Legal access to the concession is granted through an agreement between Joaquín Chavez Gonzalez (concession holder) and a private ranch owner and Mancomún, Chicanaya, and Los Solices (pending title to surface).

5.2 Physiography

The Project site is moderate to steeply undulating with large hills, representing a physiographic transition from mountains in the west to plains in the east. Drilling and historic mine roads cross most of the property and all drill hole collars are accessible. Property elevations range from 1,950-2,090 m above mean sea level (amsl). Current mine access is located at around 1,955 m amsl. The vegetation of the property is characterized by drought-tolerant scrubby bushes, relatively small trees and limited grasses.

5.3 Climate

The nearest available climate data sourced from the National Meteorological Service is for San Francisco del Oro and is shown in **Figure 5-1**. The average daily temperature for San Francisco del Oro is 17.7℃ and the total average annual precipitation is 332 mm. The length of the operating season is year-round; access to the site may be temporarily inhibited during major rain events due to unimproved access roads crossing numerous drainages.

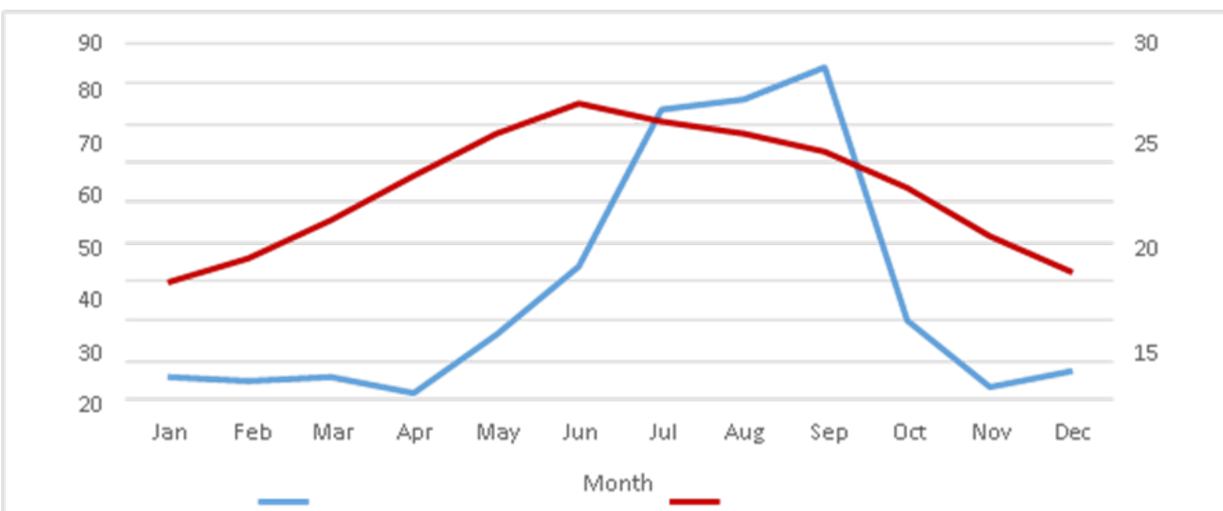


Figure 5-1: Climate Data for San Francisco del Oro

5.4 LOCAL RESOURCES AND INFRASTRUCTURE

Currently, mine ventilation fans are powered by a portable diesel generator. Water required for mining operations could be sourced from mine dewatering. Drinking water would require treatment or confirmation of drinking quality, but could be sourced from the installation of a well or trucked from nearby flowing streams. Experienced miners and laborers could be sourced from Santa Bárbara and the region and would not require onsite housing. Qualified mine management and technical staff could be sourced from the region in general and could commute daily from Parral. The property is in the exploration and resource stage and is not considered an advanced property; however, the most likely plan of operation would entail the mining of relatively small tonnage and would not include onsite milling facilities and therefore tailing storage would not be necessary. Land is available for lesser amounts of waste disposal.

6 HISTORY

The following discussion of historic tonnages and grades extracted from the mine has not been independently verified and is not considered a current assessment of Mineral Resource grade or expected tonnage, and has been included to provide an accurate property history.

A QUALIFIED PERSON HAS NOT DONE SUFFICIENT WORK TO CLASSIFY THE HISTORICAL ESTIMATES DISCLOSED IN THIS ITEM 6 AS CURRENT MINERAL RESOURCES OR MINERAL RESERVES; AND (II) THE ISSUER IS NOT TREATING ANY HISTORICAL ESTIMATE DISCLOSED IN THIS ITEM 6 AS CURRENT MINERAL RESOURCES OR MINERAL RESERVES.

The Santa María project, historically known as La Unión Mine, dates to 1658. The earliest known operator of this property is the Minas De Iguala Company who operated the property in the 1940's. Minas De Iguala constructed the existing shafts and on vein drifts and is thought to have been the mine's most significant producer, extracting exclusively oxide ores. Production data from this period is not available.

In the 1980's the property was leased to Victor Arias who reportedly exploited approximately 20,000 tonnes of near surface oxide material at an estimated grade of 2 Au g/t and 200 Ag g/t.

The property was subsequently leased to Gustavo Durán, Mining Engineer from 2009 to 2011, during which time a ramp was completed to virgin material below the 50 meter Level. Although Gustavo Durán completed the ramp, for unknown reasons his lease was terminated before completing any substantial stope development. From 2009 to 2011 it is estimated Gustavo Durán extracted 40,000 tons of residuals and backfill waste left by historic operators, at an estimated grade of 1-1.15 Au g/t and 150-200 Ag g/t. The material was processed exclusively by cyanidation.

The Project was inactive from 2011 until the involvement of Minera Cordilleras in 2014.

In February - March 2016, September - October 2016, and June 2017, Minera Cordilleras conducted small- scale selective non-mechanized trial mining and milling totaling 7,098 tonnes grading 337 Ag g/t and 0.78 Au g/t. The trial mining was completed by local contract miners using mining equipment owned by Golden Minerals. The material mined was a mixture of oxide and sulfide mineral types. Recoveries of 73% and 50% for Ag and Au were achieved. Concentrates were sold as a combined bulk Ag/Au concentrate. Results from trial mining and milling have been used to inform this study, but grades and recoveries are not indicative of the Project in general.

7 GEOLOGIC SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

The Project site is in the Sierra Madre Occidental (SMO) volcanic province and is on the border between the states of Chihuahua and Durango physiographic provinces. The property is situated on the southern extent of the Mesa Central metallogenetic province which includes the Parral-Santa Bárbara-San Francisco del Oro mining districts.

The SMO province is comprised of two primary sequences of igneous rocks. The upper series (UVS) is dominated by calc-alkaline volcanic rocks with associated rhyolitic intrusions and ignimbrites. The lower series (LVS) contains abundant andesites. Large sinters were formed from the recirculation of meteoric waters heated by the thick volcanic sequence often associated with basaltic lava flows. In addition, there are large stretches of acidic volcanic domes of Miocene to Upper Eocene age.

The eastern and central portions of the SMO province are characterized by sedimentary rocks of marine origin, including calcareous shales and limestones. The limestone layers are thinly bedded, fine-grained and light to dark. The limestones are often folded and intruded by felsic plutons. Folding occurs on a scale of up to regional folds greater than 500 m. The limestones are middle to upper Cretaceous in age.

7.2 LOCAL GEOLOGY

The local geologic setting is represented by rocks of the Parral Formation, which consist of sedimentary rocks, shales and limestones of the Grupo Mezcalera of Lower Cretaceous age which were covered by Eocene volcanic rocks and intruded by porphyry monzonite and granodiorite stocks and dikes. The pre-existing rocks were structurally arranged by regional scale extensional block faulting and folding by Oligocene volcanic events with intrusions of hypabyssal origin including mineralizing fluids that were emplaced in the region. Tertiary granodioritic and monzonitic intrusive bodies and dikes affected locally the Parral Formation rocks causing metamorphic skarns and hornfels with associated mineralization. The local geology is depicted in **Figure 7-1**, and has been adapted by GSM Map G13-A57.

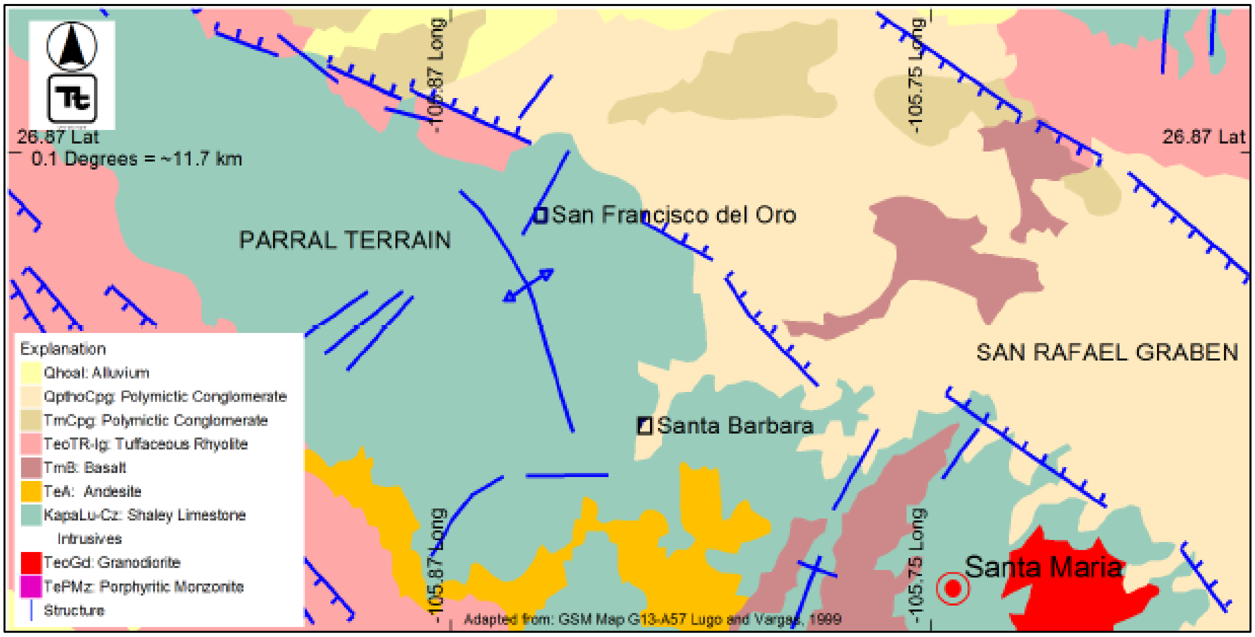


Figure 7-1: Local Geology Map

7.3 Property Geology

The geology of the property is dominated by rocks of the Parral Formation, rhyolites, granodioritic intrusive and a post-mineral basaltic cap on the eastern edge. The Santa María mineral deposits are hosted in and adjacent to a rhyolitic dike and granodioritic rocks. Veins are observed hosted by skarns and silicified limestones of the Parral Formation and the Tertiary rhyolite dike. The property geology is depicted in **Figure 7-2**.

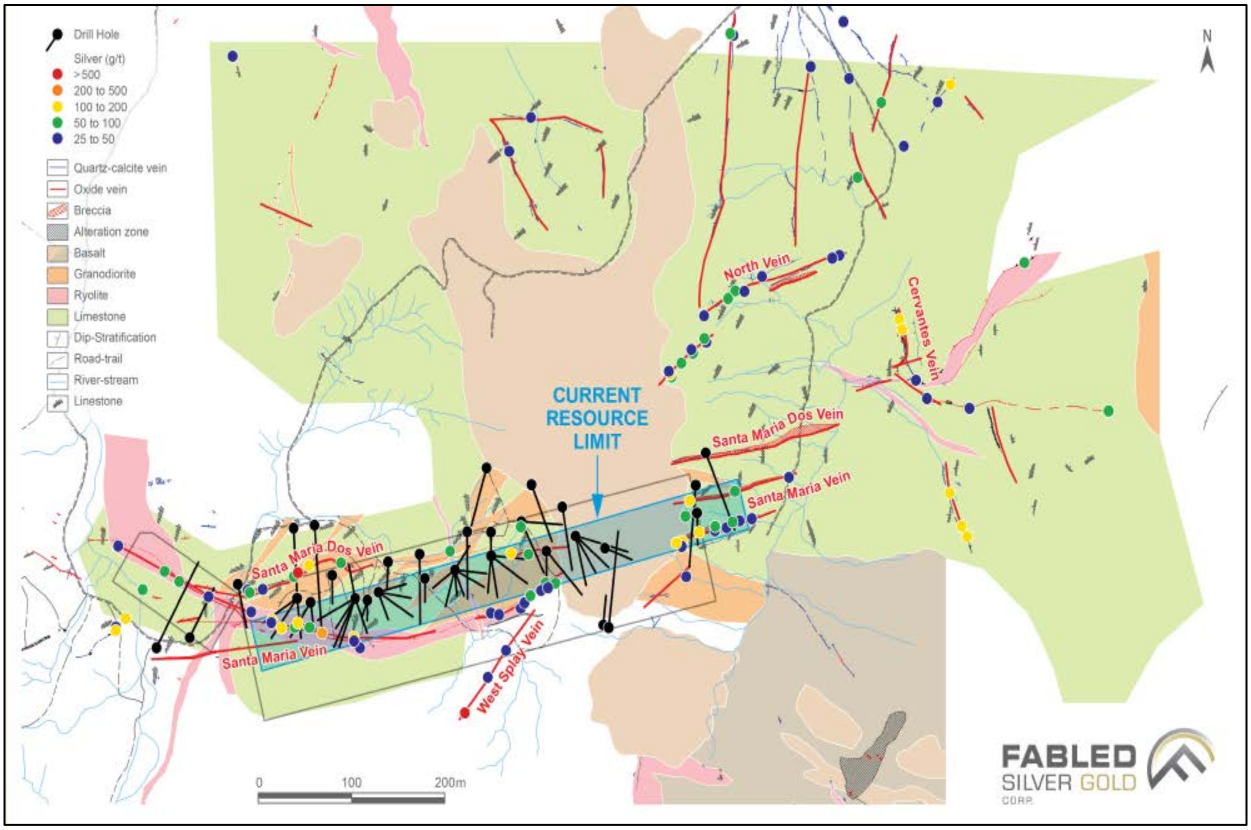


Figure 7-2: Property Geology Map

7.4 PROPERTY MINERALIZATION

7.4.1 SANTA MARÍA MAIN VEIN

The primary Santa María vein gently curves following the contact of the associated rhyolite dike and can be traced on surface for 1,150 m. The current demonstrated down dip extent is 260 m and remains open at depth and along strike.

The vein occupies a fault zone near the contact between the Parral Formation sediments and the Tertiary dike. Breccia textures healed by quartz gangue are common in the vein. The vein varies in width between 1 and 4 meters with an average width of 2 meters. The dip of the vein is north varying between 75 and 85 degrees. In the underground workings, occasional post mineral normal faults can be observed to offset the mineralization locally. Drill holes SM 18-03 and SM 17-04 appear to have intercepted a mineralized bulk zone with higher grades.

At surface the vein is oxidized, and oxidation extends irregularly to ~75 meters depth. In the easternmost portion of the vein sulfide mineralization is preserved in the footwall of a cross-cutting fault. Oxide portions of the vein are characterized by strong iron oxides including goethite and hematite. The observed sulfide minerals are galena and sphalerite with rare occurrences of acanthite and ruby silver sulfosalts.

7.4.2 SANTA MARÍA DOS VEIN

The Santa María Dos vein is a hanging wall splay from the Santa María Main vein. It diverges from the Main vein close to the entrance of the Santa María decline and can be traced along surface for 1,050 m. The vein has been drilled down-dip for approximately 200 m where it intersects the Main Vein. The Santa María vein is open along strike to the east.

The vein appears to occupy a fault zone near the contact between Parral Formation limestones and an east-west striking diorite dike. The vein varies in width from 0.25 to 3.5 m and average width is around 1 m. The vein dips to the south varying between 65 and 85 degrees.

At surface the vein appears as a narrow, oxidized banded and brecciated quartz vein. Oxidation is variable. In the west it extends to 40 m depth, and in the east up to 150 m depth. Oxide parts of the vein are characterized by iron oxides including goethite and hematite, and in the sulfides zone of the vein sulfide minerals are dominated by pyrite with minor galena and sphalerite.

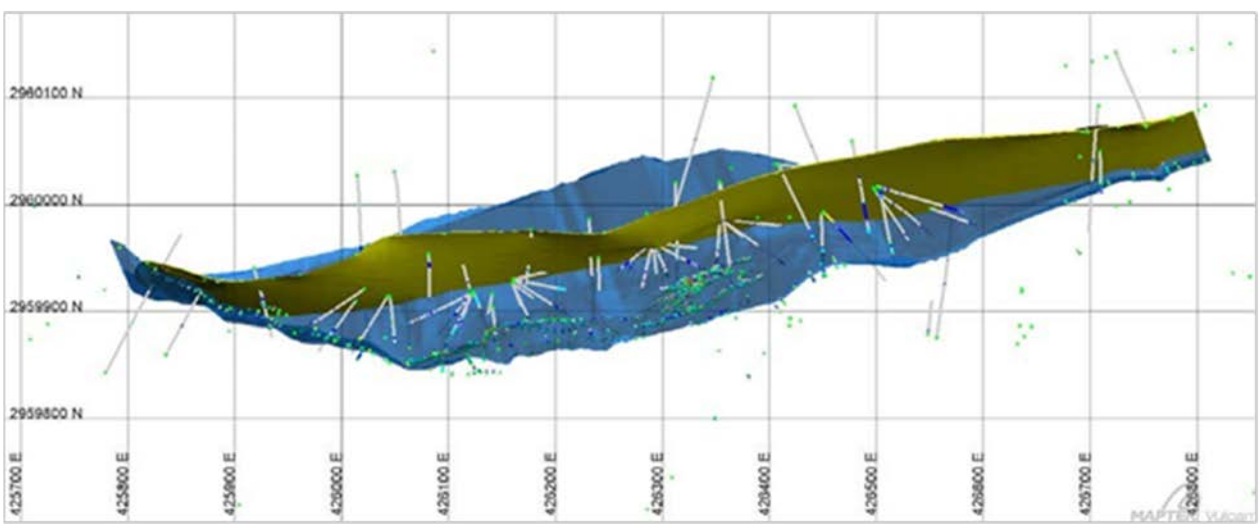


Figure 7-3: Santa María vein deposits, with the Main vein in cyan and the Dos vein in yellow

7.4.3 North Vein

The North vein crops out approximately 350 m north of the Main vein and can be traced along surface for 350 m. The western extension is covered by post-mineral basalts. The vein varies in width from 0.15 to

2.2 m with an average of 0.8 m. The vein has been explored by several small prospect pits.

The vein has a northeast strike and is steeply dipping (80o to the NW or SE depending on the vein limb). The vein appears to be offset by a NW striking fault. The host rocks are the Parral Formation limestones.

At surface the vein is a narrow oxidized banded and brecciaed quartz vein with variable oxidation and rare pyrite.

A total of 38 chip-channel samples were collected from the North Vein.

Sampling returned grades up to 3.01 g/t Au, 196 g/t Ag, 0.41% Pb and 1.09% Zn.

7.4.4 Cervantes Vein

The Cervantes vein crops out 450 m to the east of the Santa María vein system and has been mapped and sampled over a 900 m strike length.

The vein varies in width from 0.25 to 1.3 m with an average of 0.6m. The vein is explored by several prospect pits and shafts and in the center of the system, and an 80 m long tunnel has been developed on the vein exploring an area where sulfide mineralization occurs.

The vein has a north-south strike and dips steeply (80o) to the west within a narrow fault zone within the Parral Formation limestones. On the surface the vein is a narrow banded and brecciated quartz-calcite vein and with variable oxidation. Adjacent to the small mine, the vein has a northeast strike and is steeply dipping (80o to the NW or SE depending on the vein limb). The vein appears to be offset by a NW striking fault. The host rocks are the Parral Formation limestones. The vein contains moderate iron oxides and iron oxide staining. However, the vein cropping out above the small mine working contains significant sulfides including sphalerite, galena and pyrite. A total of 27 chip-channel samples were collected from the Cervantes Vein.

8 DEPOSIT TYPES

The Santa María deposit type can be described as an epithermal quartz - calcite vein system. Typical banded epithermal textures are observed in underground workings and drill core. Brecciated mineral textures filled by quartz and calcite are common. Low concentrations of galena and sphalerite and the presence of silver minerals indicate an elevated level of exposure within the epithermal system. Figure 8-1 shows typical epithermal mineralized textures encountered at Santa María in drill core specimens.

It is common for epithermal deposits to have higher-grade lineation trends internal to the structure’s plane often related to regional structures or preferential host lithologies. Drilling, sampling, and modeling of results indicate that mineralized shoots within the structures have high angle rakes. Modeling has defined two such shoots.

Exploration programs have been planned in the context of mineralized structures, assuming the Santa María and Santa María Dos deposits are approximately planar and follow the general structural trends observed on the surface and throughout the underground workings. Successful exploration drilling down- dip of the workings supports the assumption that the mineralized structures follow oriented structural trends.

Figure 8-1: Epithermal Deposit Textures in Drill Core Specimens

9 EXPLORATION

Locations for the collection of channel samples were chosen by the Project geologist during mapping. Underground channel samples are located within existing deposit drifts. Channels were marked on the structure by the geologist and collected as close to perpendicular to strike as feasible during sampling. Using a rock hammer, five-pound sledge hammer and chisel, samples weighing at least 2 kg were collected in a bucket and then transferred to a transparent plastic bag labeled with a sample number. For samples located on the drift back, the sampler stood on a ladder and a tarp was placed under the sample area to catch the sample chips. The material on the tarp was then funneled into the sample bucket and again transferred to a labeled plastic bag. Both the bucket and tarp were cleaned between each sample collection. Coordinates of underground sample locations were initially tape surveyed by a geologist using a sighting compass and were corrected to align with the survey of the drift when completed by transit survey. Each sample location was not independently surveyed.

A total of 2,286 underground channel samples were collected for analysis and are included in the Santa María database. Channels were taken within existing development that spans approximately 575 m east to west and 110 m down dip. Samples were spaced between 5-15 meters, with few spaced more than 25 meters apart due to access for exploring the vein strike but spaced 1-4 meters apart in areas that were potentially prospective for mining. A summary of the significant high-grade channel samples is shown below in **Table 9-1**.

Significant channel sample results indicate the deposits host higher grade areas preferential to metal deposition and these areas can be observed throughout levels as mineral shoot domains. The results also demonstrate in some areas sampling "nugget effect" is significant, meaning erratic high or low-grade values can be observed inside or outside of generalized shoot trends.

Table 9-1: Significant High-Grade Deposit Intervals

Channel ID	From	To	Width	Ag >500 g/t	Au g/t	Deposit
SM-100	0	2	2.0	2500	1.0	Santa María
SM-101	0	2	2.0	899	1.3	Santa María
SM-107	0	2.15	2.2	1115	1.3	Santa María
SM-113	0.35	1.7	1.4	579	2.2	Santa María
SM-182	0	1.7	1.7	1353	4.0	Santa María
SM-186	0	2	2.0	658	0.9	Santa María
SM-208	0	1.8	1.8	504	1.1	Santa María
SM-230	1.1	2.5	1.4	525	0.6	Santa María
SM-241	0	2.4	2.4	594	1.4	Santa María
SM-249	0	2.35	2.4	1284	1.5	Santa María
SM-250	0	2.65	2.7	922	1.5	Santa María

Channel ID	From	To	Width	Ag >500 g/t	Au g/t	Deposit
SM-253	0	1.63	1.6	561	1.5	Santa María
SM-262	0.8	2.75	2.0	621	0.8	Santa María
SM-269	0	1.5	1.5	520	0.5	Santa María
SM-287	0	2.9	2.9	523	0.7	Santa María

SM-288	0	2.9	2.9	559	1.3	Santa María
SM-290	0	2.5	2.5	509	0.9	Santa María
SM-292	0	1.45	1.5	1744	2.4	Santa María
SM-293	0	2.2	2.2	1029	1.9	Santa María
SM-296	0	3.03	3.0	535	1.4	Santa María
SM-298	0	2.4	2.4	903	1.5	Santa María
SM-300	0	1.5	1.5	991	1.8	Santa María
SM-301	0	0.95	1.0	2094	2.3	Santa María
SM-307	0	1.75	1.8	681	0.6	Santa María
SM-311	0	0.95	1.0	2500	3.6	Santa María
SM-312	0	1.2	1.2	955	0.9	Santa María
SM-318	0	1.25	1.3	754	0.4	Santa María
SM-321	0	1.65	1.7	533	2.6	Santa María
SM-323	0	2.4	2.4	559	0.6	Santa María
SM-340	5	7.2	2.2	1094	0.8	Santa María
SM-346	1.3	3.9	2.6	790	0.8	Santa María
SM-359	0.2	2.6	2.4	536	1.1	Santa María
SM-360	0.8	3.3	2.5	591	0.9	Santa María
SM-367	0.5	3.8	3.3	635	1.0	Santa María
SM-392	1	2.2	1.2	1175	1.8	Santa María
SM-398	1.7	2.4	0.7	1184	2.4	Santa María
SM-400	0.8	1.8	1.0	1653	2.6	Santa María
SM-418	0.8	2.7	1.9	569	2.2	Santa María
SM-434	1.2	2.3	1.1	597	2.4	Santa María
SM-435	0.9	1.9	1.0	1005	2.8	Santa María
SM-438	0	2.8	2.8	614	3.7	Santa María
SM-439	0	1.6	1.6	530	1.1	Santa María
SM-452	0	1.75	1.8	519	0.5	Santa María
SM-470	0.4	1.5	1.1	618	1.1	Santa María
SM-480	0.5	2.4	1.9	762	0.9	Santa María
SM-486	0.8	2.6	1.8	762	0.9	Santa María
SM-487	1.1	2.93	1.8	823	0.9	Santa María
SM-488	0.85	2.7	1.9	759	0.8	Santa María
SM-489	0.8	2.4	1.6	752	1.1	Santa María

Channel ID	From	To	Width	Ag >500 g/t	Au g/t	Deposit
SM-493	0.15	3	2.9	584	1.2	Santa María
SM-494	1.06	2.46	1.4	1261	3.5	Santa María
SM-496	0	2.18	2.2	694	1.9	Santa María

SM-497	0	1.65	1.7	607	1.1	Santa María
SM-498	0.58	2.42	1.8	601	1.5	Santa María
SM-499	0	1.49	1.5	1584	2.6	Santa María
SM-500	0.45	1.95	1.5	845	2.4	Santa María
SM-504	0	2.58	2.6	1099	2.0	Santa María
SM-507	0	1.9	1.9	1127	2.1	Santa María
SM-520	0.8	1.85	1.1	693	1.0	Santa María
SM-521	0.65	2.5	1.9	774	1.4	Santa María
SM-526	1	2.25	1.3	598	1.1	Santa María
SM-527	0.9	2.5	1.6	1022	4.0	Santa María
SM-528	0.6	2.2	1.6	839	1.5	Santa María
SM-534	0.5	2.41	1.9	604	1.4	Santa María
SM-535	0.6	2.25	1.7	1278	4.0	Santa María
SM-536	0.7	2.5	1.8	721	0.5	Santa María
SM-537	0	2.5	2.5	1086	1.0	Santa María
SM-546	0.6	1.8	1.2	594	1.5	Santa María
SM-549	0	1.75	1.8	935	1.5	Santa María
SM-550	0	1.59	1.6	627	1.8	Santa María
SM-553	0	1.7	1.7	773	1.0	Santa María
SM-554	0	1.55	1.6	1149	0.9	Santa María
SM-555	0	0.6	0.6	2100	1.5	Santa María
SM-556	0.15	1.1	1.0	1256	1.2	Santa María
SM-563	0	3.13	3.1	684	1.4	Santa María
SM-574	0.2	2.4	2.2	796	1.6	Santa María
SM-607	1.58	2.84	1.3	694	3.2	Santa María
SM-610	0	0.4	0.4	891	0.6	Santa María
SMS-94	0	1.3	1.3	648	1.88	Santa María

The sampling of the mineralization was mainly carried out on sample lengths varying from 0.5m to 1.0m across the mineralized veins from channel sampling and at various angles from surface and underground drilling. Channel samples were taken on tightly spaced interval sets along underground exploration drifts. Underground drilling was carried out as fans providing good local coverage, while surface drilling was carried out on a wider spacing. The quality of the sampling is believed to be of sufficient quality.

10 DRILLING

The Project database contains 59 surface and underground drill holes, totaling 9,922.61 m, drilled during four campaigns in 2014, 2016, 2017, and 2018 by Minera Cordilleras. Surface drill holes are NQ size with either plastic or steel surface casing. Drilling was completed by Maza Diamond Drilling S.A. de C.V. of Sinaloa, Mexico utilizing a portable rig with a 500 m maximum depth.

In 2016 Minera Cordilleras completed 24 drill holes from underground using Boart Longyear LM30 and LM75 drill rigs, totaling 2,190.1 m. The purpose of the underground drilling was primarily to delineate the mineralized shoots and increase Resource classification. Two of the holes (SM16-18 and SM16-19) targeted the vein east of the known strike extension at the time and intersected significant high-grade mineralization.

In 2014 Minera Cordilleras completed 13 drill holes with total drilled depth of 2,884.50 m, and in 2017 Minera Cordilleras completed 14 drill holes with total drilled depth of 3,305.90 m; while in 2018 a total of 8 drill holes were completed with total depth of 1,542 m.

Surface drill hole collar locations were surveyed by handheld GPS and then by a professional surveyor with the aid of a Differential GPS. Underground drill collars were surveyed using a Total Station. Drill hole orientations were established by measurements of casing using a field compass and then down hole surveyed using a magnetic Reflex instrument.

Table 10-1 shows the locations and orientations of the drill holes relative to the surface topography and underground development. Drill hole orientations have been inclined to target the vein as perpendicular to strike and dip as practically possible given the surface terrain and access.

Table 10-1: Locations and orientations of drill holes

Surface / Underground	Hole ID	Easting	Northing	Elevation	Total Depth	Initial Azimuth	Initial Dip	No. of Surveys
Surface	SM14-01	426,351	2,960,026	2,019	181	180	-57	3
Surface	SM14-02	426,239	2,959,950	1,998	124	180	-73	2
Surface	SM14-03	426,146	2,959,920	2,006	86.4	180	-73	1
Surface	SM14-03A	426,137	2,959,923	1,999	150	190	-81	2
Surface	SM14-04	426,041	2,959,920	2,028	174	180	-75	3
Surface	SM14-05	426,347	2,960,119	2,033	321	197	-65	4
Surface	SM14-06	426,304	2,960,030	2,009	263	180	-65	6
Surface	SM14-07	426,043	2,960,040	1,987	296.5	180	-58	3
Surface	SM14-08	426,078	2,959,960	2,006	208.5	180	-79	3
Surface	SM14-09	426,172	2,959,980	1,988	229	185	-73	4
Surface	SM14-10	426,351	2,960,026	2,019	240	180	-77	4
Surface	SM14-11	426,009	2,960,030	1,973	297.3	182	-55	3
Surface	SM14-12	426,228	2,959,992	1,985	312.35	180	-72	5
Surface	SM17-01	426,451	2,959,994	2,028	300	137	-75	8

Surface	SM17-02 SM17-03	426,424	2,960,093	2,043	241.5	160	-70	4
Surface / Underground	Hole ID	Easting	Northing	Elevation	Total Depth	Initial Azimuth	Initial Dip	No. of Surveys
Surface	SM17-03 SM17-04 SM17-04	426,497	2,960,016	2,030	252	146	-75	7
Surface	SM17-04 SM17-05	426,449	2,959,992	2,027	117.9	180	-56	4
Surface	SM17-05	426405	2,960,038	2,031	220	94	-69	8
Surface	SM17-06	426,709	2,960,050	2,005	138	180	-70	4
Surface	SM17-07	426,708	2,960,093	2,011	258	190	-60	6
Surface	SM17-08	426,504	2,960,015	2,030	174	172	-64	6
Surface	SM17-09	426,551	2,959,997	2,027	241.5	112	-78	5
Surface	SM17-10	426,499	2,960,013	2,030	350	125	-78	7
Surface	SM17-11	426,501	2,960,017	2,030	261	105	-70	5
Surface	SM17-12	426,556	2,959,876	2,007	350	7.5	-68	9
Surface	SM17-12A	426,548	2,959,879	2,007	102	7.5	-66	2
Surface	SM17-15	426,724	2,960,143	2,008	300	160	-64	7
Surface	SM18-01	426,477	2,960,058	2,040	270	167	-70	7
Surface	SM18-02	426,043	2,959,914	2,021	200	210	-73	6
Surface	SM18-03	426,409	2,960,037	2,031	150	155	-55	5
Surface	SM18-04	426,013	2,959,910	2,016	186	220	-71	7
Surface	SM18-05	425,918	2,959,941	1,960	150	165	-65	7
Surface	SM18-06	426,021	2,959,922	2,016	261	232	-76	8
Surface	SM18-07	425,836	2,959,860	1,953	125	30	-45	6
Surface	SM18-08	425,779	2,959,843	1,953	200	30	-45	6
Underground	SM16-01	426,123	2,959,918	1,900	171.56	158	-68	5
Underground	SM16-02	426,121	2,959,916	1,900	91	208	-26	3
Underground	SM16-03	426,121	2,959,917	1,900	115.5	221	-62	1
Underground	SM16-04	426,120	2,959,917	1,900	106.2	244	-47	3
Underground	SM16-05	426,122	2,959,917	1,900	104.8	203	-41	3
Underground	SM16-06	426,160	2,959,927	1,904	60	152	-43	1
Underground	SM16-07	426,161	2,959,930	1,904	96	104	-53	1
Underground	SM16-08	426,161	2,959,930	1,904	81.2	122	-30	1
Underground	SM16-09	426,160	2,959,928	1,904	98.7	123	-67	2
Underground	SM16-10	426,159	2,959,928	1,904	87	151	-67	2
Underground	SM16-11	426,293	2,959,960	1,897	63	158	-54	2
Underground	SM16-12	426,294	2,959,963	1,894	69	120	-37	1
Underground	SM16-13	426,290	2,959,961	1,895	63.65	196	-28	1
Underground	SM16-14	426,295	2,959,964	1,896	101	100	-60	1

Underground	SM16-15	426,289	2,959,963	1,895	102	234	-65	1
Underground	SM16-16	426,353	2,959,984	1,885	60	187	-35	1

Surface / Underground	Hole ID	Easting	Northing	Elevation	Total Depth	Initial Azimuth	Initial Dip	No. of Surveys
Underground	SM16-17	426,356	2,959,986	1,885	86	130	-64	3
Underground	SM16-18	426,357	2,959,985	1,885	83	127	-29	3
Underground	SM16-19	426,357	2,959,987	1,885	96	99	-52	1
Underground	SM16-20	426,120	2,959,922	1,904	50.1	347	0	2
Underground	SM16-21	426,354	2,959,985	1,885	122.5	184	-63	3
Underground	SM16-22	426,160	2,959,931	1,904	123	81	-66	1
Underground	SM16-23	426,292	2,959,961	1,895	90	177	-66	1
Underground	SM16-24	426,293	2,959,966	1,895	60	31	-43	1

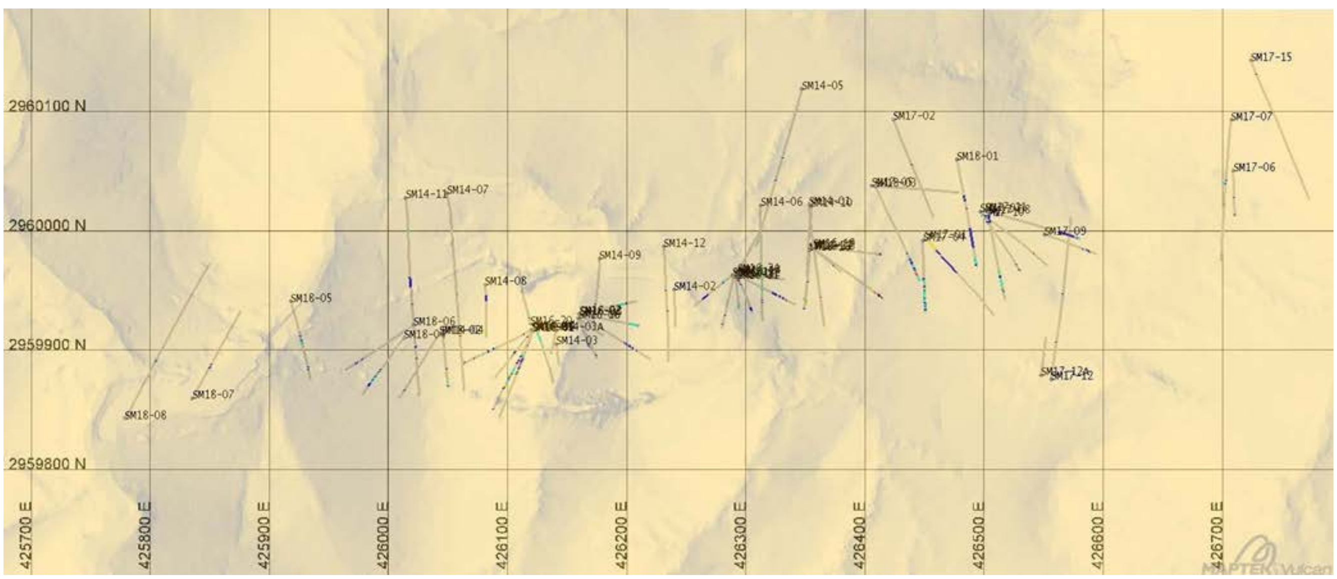


Figure 10-1: Drill Hole Location Map

The majority of the samples from channels, surface and underground drill holes was carried out on 0.5m to 1.0m intervals, which provides sufficient discretization of the mineralized veins. The underground channel samples from the on-vein drifting provide good confirmation of the veins' true thicknesses, orientations, and local geometric configurations.

From the QA/QC programs related to the assayed samples (Section 11.4), there is no known bias observed from these results.

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Data summarized in this section and utilized for estimation of Resources has been collected by Minera Cordilleras staff. The sample preparation, analyses and security procedures implemented by Minera Cordilleras meet standard practices. The data collected is of adequate quality and reliability to support the estimation of Mineral Resources. Only Project level staff are involved with the selection, preparation and delivery of samples to the laboratory.

Historic sampling by previous operators is not considered current and has therefore not been described in this section. The Project database contains results collected from both drill core and channel sampling.

11.1 SAMPLE PREPARATION

In this section drill core and channel sampling are discussed.

11.1.1 DRILL CORE

Diamond drill core is transported from the rig to the core preparation site, located at the mine entrance, by truck. Following geotechnical logging by field assistants, geologists log the core and select sample intervals. Sample intervals are selected only where the geologist anticipates mineralization to exist. In practice the core is extensively sampled in both the hanging wall and footwall about the primary deposit intervals but is not sampled continuously from top to bottom. Drill core that is selectively un-sampled can be considered waste; however, no numeric value or null place holder is inserted into the Project database. Sample selection begins and terminates at alteration or lithologic contacts, constrained to a minimum length of 20 cm and maximum of 1.5 m. During the process of sample selection, the geologist draws a centerline to guide the core cutters. The center line is rotated by the geologist to align with the apex of observable vein structures to minimize sample selection bias.

A sample sheet is provided to the core cutters containing sample numbers and from, to intervals. In addition to a cut sheet the sample number and meters are annotated on the white plastic core box using a marker, Figure 11-1. Sample numbering begins where the previous sample batch left off. The core cutters have been instructed to cut the core down the marked centerline using an electric powered wet diamond saw, and to always place the right-hand portion of the cut core in the sample bag. Sections of broken core or low recovery are carefully divided to reduce bias; however, these sections are inherently less reliable than sections of competent core. The core cutters write the sample number using a marker on a transparent plastic bag and tie off the bag using twine when complete. A tear-away sample tag system has not been implemented but is recommend in the future. Five samples are grouped and placed in a large rice sack. The beginning and ending number of the five samples contained in the sack is written on the outside of the bag. The sack is tied shut with twine when full.

Figure 11-1: Drill Core Sampling

11.1.2 CHANNELS

The Project database contains only underground channel sampling, and no surface samples have been collected. The geologist first maps the structures and veins underground; following mapping, the geologist uses a can of red spray-paint to mark channel sample lines spaced along the strike of the drift. Channel samples are selected only in mappable mineralized structures and do not include hanging-wall or foot-wall waste samples. Samples are initiated and terminated based on observable vein styles or mineral type difference across the deposit. Sample lengths are dictated by structural thickness with a minimum of 20 cm with no defined maximum, but do not typically exceed 2 m in length.

Field assistants, often with sampling experience at nearby operations, are recruited to assist with channel sample collection. Under the supervision of a geologist, the samplers are instructed to fully chip away the entire painted portion of the channel sample indicated by the geologist. Using a rock hammer, chisel and five-pound sledge hammer, one sampler chips the vein while another sampler holds a bucket to capture the sample, **Figure 11-2**. The material in the bucket is then poured into a transparent plastic sample bag annotated with the sample number that is painted on the wall by the geologist. The bucket is then tapped out and wiped out by hand. For hard to reach samples, samplers utilize a ladder to access the drift back while a helper positions a tarp on the ground to catch the chiseled material. The tarp is then funneled into the sampling bucket. Both the bucket and tarp are cleaned between the collection of samples. Preparation, analyses, and security of channel and drill hole sampling are the same from placing the material in a transparent plastic bag onward.

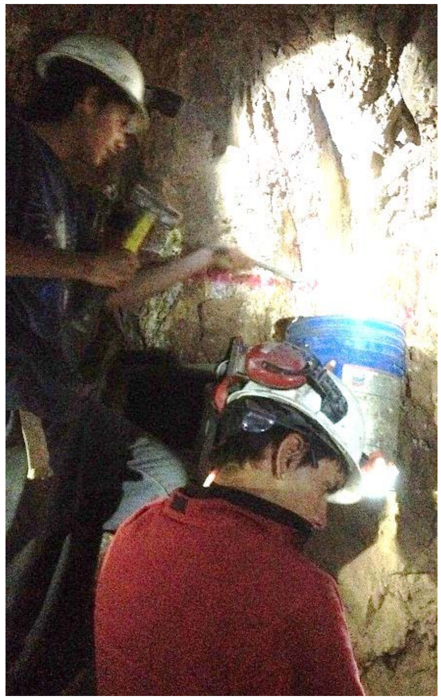


Figure 11-2: Channel Sample Collection

11.2 SECURITY

The Project is located well off main roads and is guarded by a caretaker who lives in a mine building near the mine entrance while the site is active. Samples awaiting delivery to the ALS preparation facility in Chihuahua are placed in a locked building overnight. Samples are delivered to ALS Minerals in Chihuahua City, Chihuahua, Mexico (ALS Chihuahua) by Minera Cordilleras staff by road as needed, typically every two weeks.

11.3 ANALYSES

Sample batches are delivered to ALS Chihuahua for preparation and then shipped to Vancouver, British Columbia, Canada (ALS Vancouver) for analysis. The ALS Vancouver laboratory is independent of Golden Minerals and Minera Cordilleras and is ISO 17025-accredited, the accreditation of ALS Vancouver encompasses preparation processes completed at ALS Chihuahua.

Samples are initially analyzed for Au using fire assay with atomic absorption spectroscopy finish (AA24) with rerun for values exceeding 10 g/t Au using fire assay with gravimetric finish (GRA22).

Samples are also initially analyzed for Ag, Pb, Zn, Cu, and 32 additional elements using aqua regia inductively coupled plasma - atomic emission spectroscopy (ICP41) with rerun for values exceeding 100 g/t Ag, and 1% Pb, Zn, Cu analyzed by ore grade aqua regia inductively coupled plasma - atomic emission spectroscopy (OG46).

Analysis flow is further described in graphic form in **Figure 11-3**.

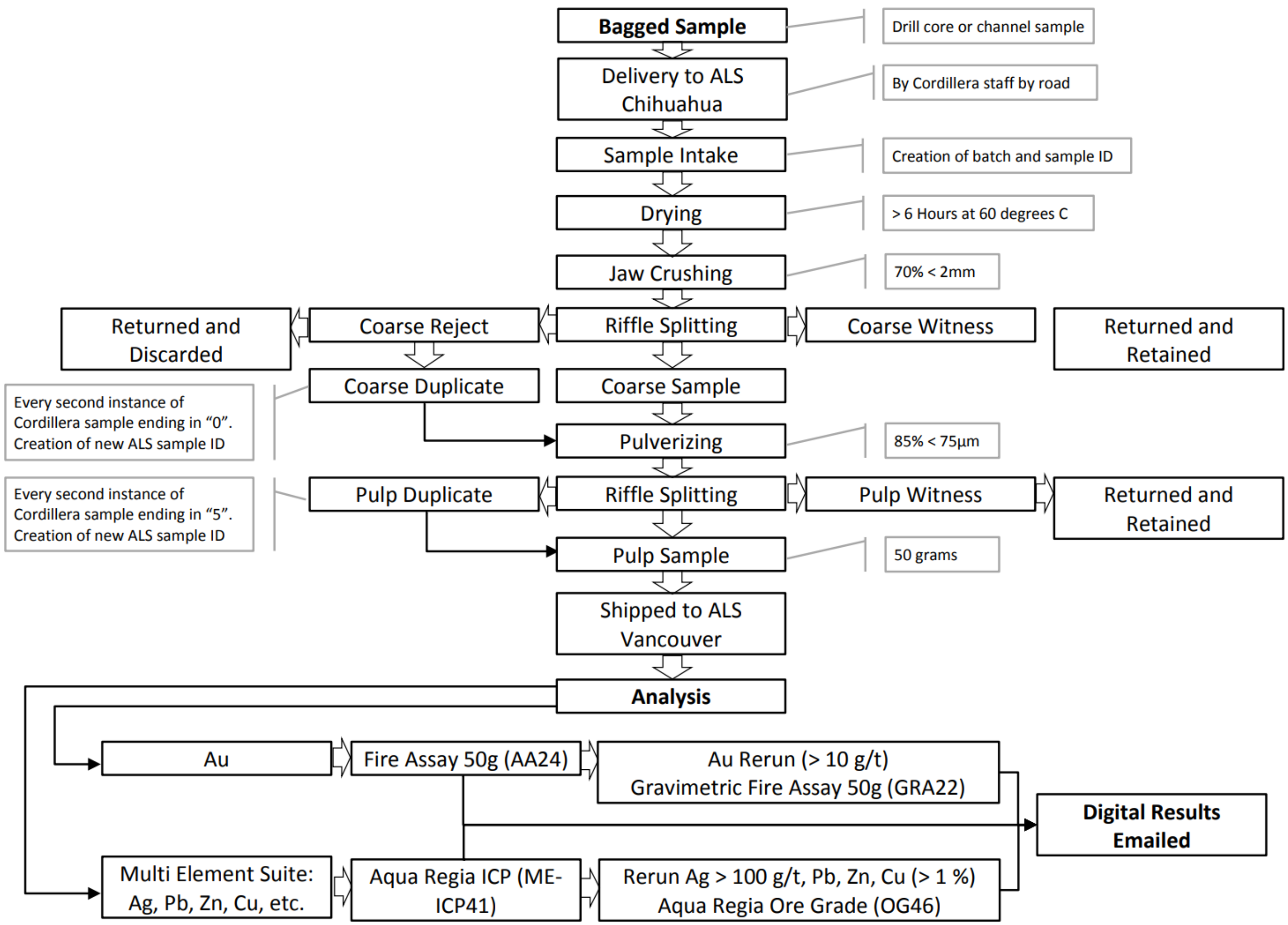


Figure 11-3: Sample Analysis Flow Diagram

11.4 Quality Assurance and Quality Control for Sample Analysis

Minera Cordilleras' quality assurance (QA) measures involve the use of standard practice procedures for sample collection for both drill core and channel sampling as described above, and include oversight by experienced geologic staff during data collection. Quality control (QC) measures implemented by Minera Cordilleras include in-stream sample submittal of standard reference material, blank material and duplicate sampling.

The insertion of control samples is dictated by the last digit of the sample ID number; the sequence is independent of the drill hole or channel sample set and is continuous through the sampling campaign. For example, the first instance of a drill core sample id ending in "0" is a blank sample and is placed in a sample bag rather than a collected core sample. On the next instance of a "5" the lab is instructed on the sample submittal sheet to create and test a fine duplicate following pulverizing. On the next instance of a "0" the lab is instructed to create a coarse duplicate at the crushing stage. On the next instance of "5" a low grade standard sample is placed in the sample bag instead of a collected sample and the next "0" a high-grade standard. The same order described above was utilized for the channel sampling campaign; however, the submittal was conducted on sample id's ending in "0" only. The effective QC submittal for the drill core campaign is 1 control sample for 10 collected samples and 1 control sample for 50 for the channel sample campaign.

11.4.1 Quality Control Sample Performance

QC sample performance was generally tracked throughout the campaign by Minera Cordilleras staff and no key issues were observed, but results suggest standard control sample strategies could be refined. It is recommended that standard reference material with a grade closer to the Resource average for Ag be sourced and tested more frequently to provide a consistent baseline.

As part of this report, QC sample performance was reviewed. Relevant QC sample performance is summarized below. Six standard references were implemented for testing, with the certified values for each shown in Table 11-1 below. Information regarding certified values for one of the low-grade standards was not located but the test results show consistent values. In addition, standard M2-87438 which is above the rerun limit was initially tested twice, but not rerun by the lab due to an insufficient sample following initial testing.

Table 11-1: Au Standard Reference Material Certified Values

Standard	Source	Standard Grade g/t	95% Confidence Interval	Standard Deviation	Tested Count	Tested Mean
Unknown	Unknown	0.2			6	0.2
M2-87439	Minera Cordilleras Custom (Tested by SGS)	9.06	0.023	0.029	2	
M4-87438	Minera Cordilleras Custom (Tested by SGS)	1.24	0.025	0.032	2	1.19
SE-44	RockLabs	0.61	0.006	0.017	21	0.6027
SP-49	RockLabs	18.34	0.120	0.340	51	17.954
OxC72	RockLabs	0.205	0.003	0.008	42	0.2024

Table 11-2: Ag Standard Reference Material Certified Values

Standard	Source	Standard Grade g/t	95% Confidence Interval	Standard Deviation	Tested Count	Tested Mean
Unknown	Unknown	0.2			6	0.2
M2-87439	Minera Cordilleras Custom (Tested by SGS)	378.6	5.09	6.504	2	
M4-87438	Minera Cordilleras Custom (Tested by SGS)	1.78	0.086	0.110	2	2.05
SE-44	RockLabs	NA	NA	NA	6	0.48
SP-49	RockLabs	60.2	1	2.5	51	60.1
OxC72	RockLabs	0.205	0.003	3	42	0.54

Standard performance was determined through methods suggested by RockLabs of Auckland, New Zealand and provided in a Microsoft Excel™ template on their website for plotting standard performance. The RockLabs analytical spreadsheet defines accuracy as the tested mean (in stream), at the laboratory in question, minus certified mean over the certified mean. Precision is defined as the percentage of standard deviation over the tested mean. For both precision and accuracy, outliers more than three times the tested standard deviation are ignored for performance assessment and identified for review.

When compared to two standard deviations of the assigned values, as commonly but improperly done, the results falsely indicate poor performance; however, using the performance assessment determinations defined by RockLabs, which establishes failure thresholds based on standard deviations calculated from sampling of the laboratory in question, the standards perform well except for ore grade reruns in sample SP-49 which perform poorly for both high-grade gold and low-grade silver. The deficient performance has little bearing because very few samples have grades that trigger the Au rerun. Standard results are shown in **Table 11-3**. By the above defined limits, an outlier in most cases is considered a batch failure. One outlier has been observed in the review of submitted standards. The failure rate observed is not unusual for a program of this size; however, it is suggested that the failure be investigated further to determine if batch reruns are necessary.

Table 11-3: Au Standard Reference Material Control Analysis

Standard	Count	Accuracy (% of Assigned)	Precision (% Relative Std Dev)	Outliers
?	6	NA	NA	NA
M2-87439	2	NA	NA	NA
M4-87438	2	-4	0	0
OxC72	21	-1.3	2	0
SE-44	21	-0.5	2.7	0
SP-49	51	-2.1	2.7	1

Table 11-4: Ag Standard Reference Material Control Analysis

Standard	Count	Accuracy (% of Assigned)	Precision (% Relative Std Dev)	Outliers
?	6	NA	NA	NA
M2-87439	2	NA	NA	NA
M4-87438	2	15.2	38.9	0
OxC72	21	NA	NA	NA
SE-44	21	NA	NA	NA
SP-49	51	0.3	6.3	2

The blank material has been sourced from barren coarse sand. The performance of the blank material shows very few failures. Failures observed (two gold and two silver) are minor and most likely a result of very small amounts of gold and silver in the blank material and low-end instrumentation precision, and not a result of contamination given the grades of the prior samples **Figure 11-4** shows blank performance for both gold and silver.

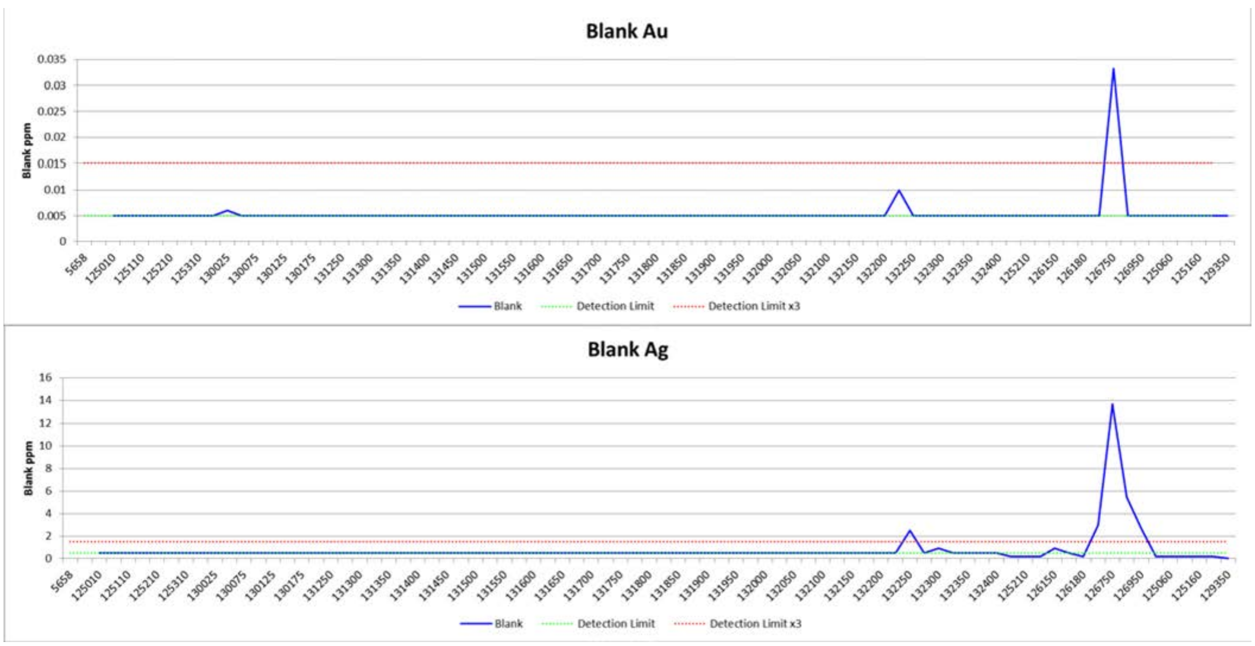


Figure 11-4: Blank Control Analysis

The performance of the fine and coarse duplicates shows good reproducibility. Poor reproducibility in coarse duplicate sample pair sample, 125131 and 125130, for both gold and silver was investigated and determined to be caused by nugget effect.

Figure 11-5 shows coarse duplicate performance for Au and Ag. **Figure 11-6** shows fine duplicate performance for Au and Ag.

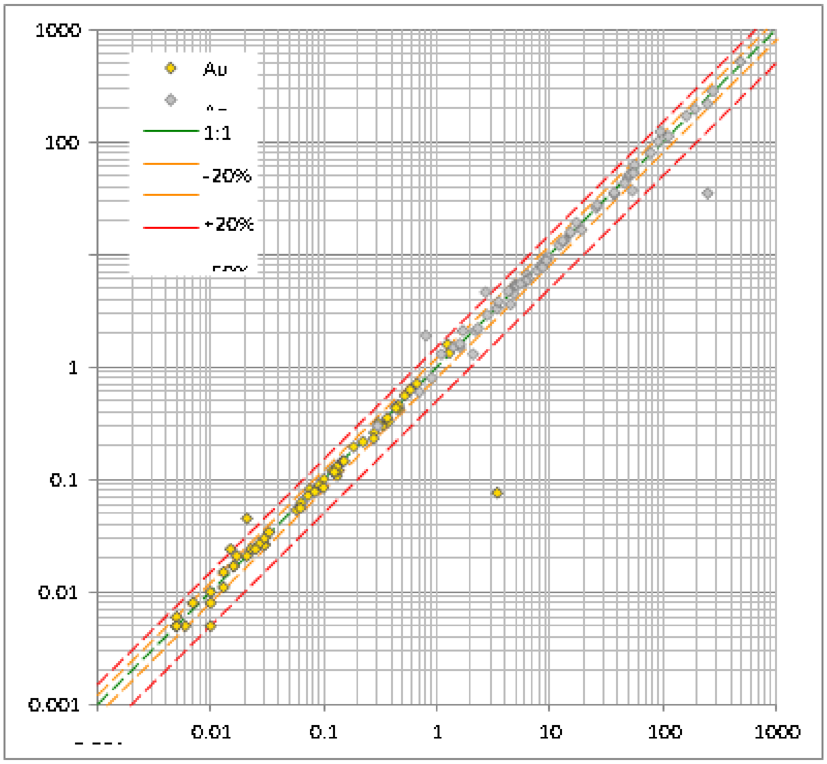


Figure 11-5: Coarse Duplicate Analysis

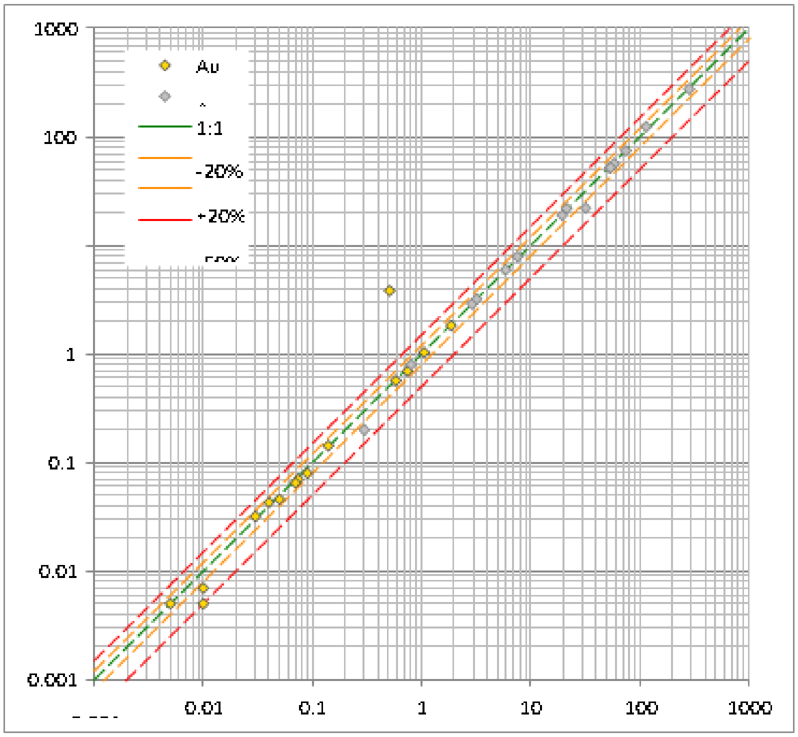


Figure 11-6: Fine Duplicate Analysis

12 DATA VERIFICATION

The following section describes steps taken by the authors of this report to verify data provided by Minera Cordilleras that was used to create the new resource calculated by Marc Jutras in November 2020.

Data verification conducted by David E. Drips, QP during the previous site visit included observations of drill hole collar locations and orientations, drill core, channel sample locations, channel sample collection, underground mine accesses, on mineralized structure drifts and stopes, stockpiled oxide material from waste backfill mucking. The deposit was witnessed in underground workings and at the surface but was not traversed in its entirety. Confirmatory sampling of drill core was not completed due to the sparseness of mineral intervals; the author did not want to eliminate the physical record of previously halved core for the purposes of verification.

Drill hole collars and their orientations were observed in the field using a compass and handheld global positioning system (GPS). Verification of collar locations and orientations were found to correspond to those provided by Minera Cordilleras.

Core boxes containing mineralized intervals of the following drill holes SM14-04 and SM14-09 were made available for visual review. The textures observed are typical of epithermal veins including banding of quartz and sulfide minerals, quartz flooding, brecciation and oxidation. In addition to visually reviewing core on site, the author has reviewed core photos of mineral intervals and spot checked the assay database provided with assay certificates from the laboratory.

As part of the data verification, 18 channel samples were selected to be re-sampled and submitted to ALS for analysis. The samples were chosen by David E. Drips, QP and were collected on the ramp and the East side of the 1890 m level. The collection of the samples from within the mine was witnessed by David E. Drips, QP. The samples were delivered to ALS Chihuahua where the sample preparation facility was toured. The original samples from the Project database are compared to the check samples in **Figure 12-1**; the chart axes have been log base 10 transformed. The results of the verification sampling correspond well to those provided by Minera Cordilleras

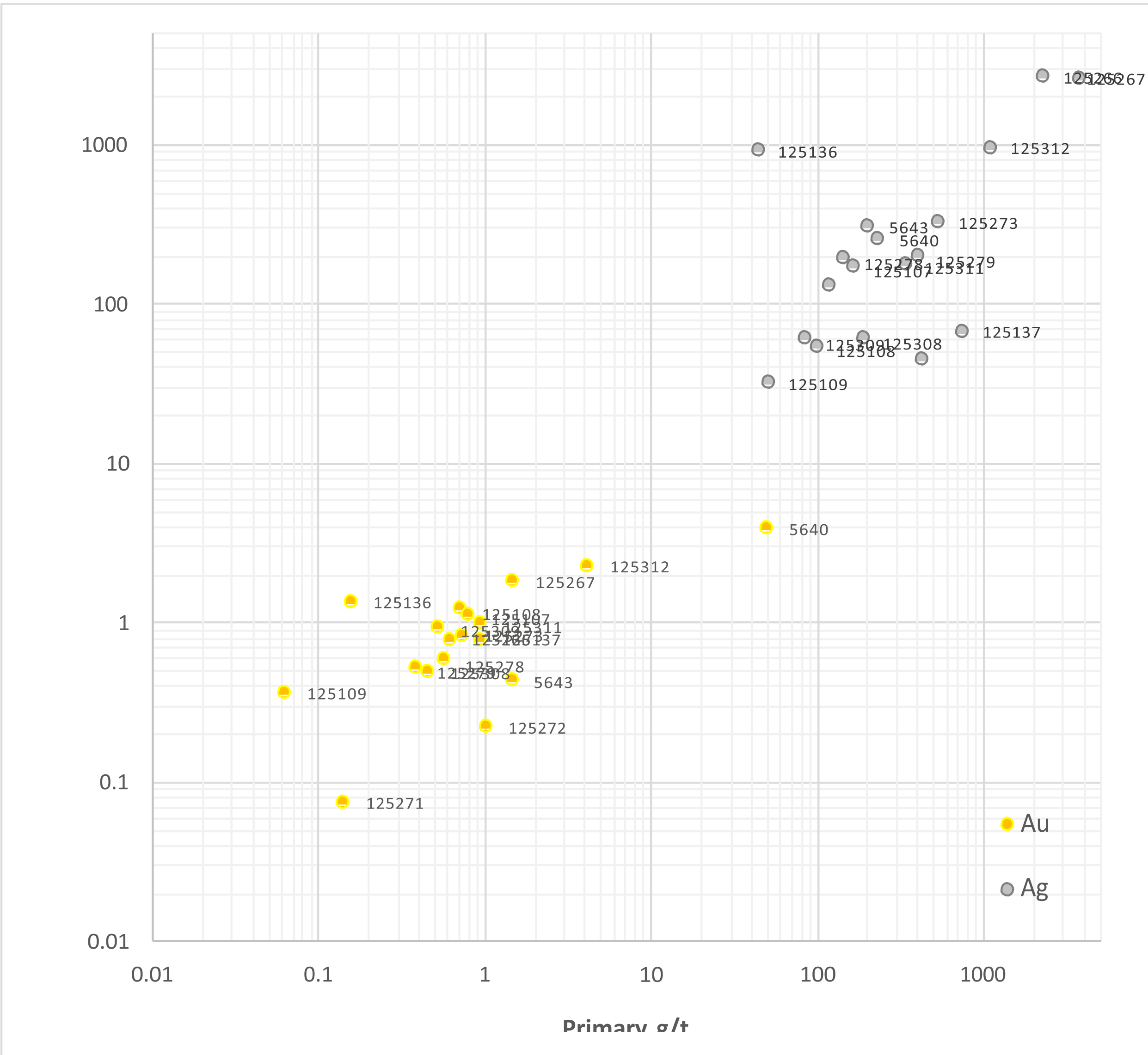
David E. Drips, QP, during the site visit and from the date of the site visit to the date of this report, confirmed that no additional work on the property had been done since that work in respect of the information used to develop this PEA. He independently verified this by, (i) during the site visit reviewing all of the existing workings underground to ensure no further work has been done other than that as used to develop this PEA; (ii) reviewing all available drill data to ensure no further drilling has been recorded other than that described in the report; (iii) reviewing news releases from Golden Minerals that would have noted Santa Maria work over the last two years; (iv) reviewing SEDAR filings by Golden Minerals for reporting on the Santa Maria over the last two years; and (v) conducting conversations with Golden Mineral's personnel discussing whether any recent physical work had been done on the property that may effect the validity of the resource model used in the analysis.

David E. Drips is of the opinion the quality of data collected by Minera Cordilleras meets industry standard practice and is sufficient to support the estimation of Mineral Resources.

An independent validation of the drillhole database was carried out by Marc Jutras, P.Eng., M.A.Sc. of Ginto Consulting Inc prior to the estimation of the Mineral Resources for this PEA. In this exercise approximately 10% of the gold assays from the drillhole database were checked against the original assay certificates. Similarly, approximately 10% of the drillhole collar coordinates and downhole surveys from the drillhole database were checked against the drill logs. Overall, no significant errors were found and the drillhole database was deemed valid for the estimation of Mineral Resources. It is thus in the opinion of the QP Marc Jutras, P.Eng., M.A.Sc. that sufficient verification checks have been undertaken on the drillhole database to provide confidence that the database is of sufficient quality to support the Mineral Resource Estimate.

John Thompson, QP, assisted with the dialogue throughout Section 16 of this report, and reviewed the calculations for mathematical correctness and logic. John Thompson, QP reviewed the proposed mining and development plan that was prepared by David E Drips, QP, for the purposes of performing the preliminary economic study that is a part of this report and is satisfied on the basis of his review that the reviewed materials were adequate for the preparation of Section 16 of this report.

Figure 12-1: Au Check Channel Samples



13 Mineral Processing and Metallurgical Testing

Samples in the existing underground workings were collected for visual evaluation and metallurgical testing at the Golden Minerals Lab in Valardena, Durango, Mexico. The testing was performed to better understand the cyanidation of the sulphide and transition material, which would enable all the extracted material to be treated in a single processing circuit. The results of the testing were reasonable relative to the past metallurgical testing that is outlined in this section. The inspection of the samples and the results of the testing supported that there are no processing problems or elements that would cause problems with treating the Santa Maria material at the local Toll Mills in the area.

Samples of oxide and sulfide material were subjected to scoping level metallurgical testing at Golden Minerals' Velardeña Mine laboratory in September 2014. This test work indicated that the oxide material is amenable to direct cyanide leaching. The sulfide material underwent flotation testing to concentrate the precious metals into lead and zinc concentrates. The results of this flotation testing indicate the potential to produce a relatively low-grade lead concentrate with a relatively high silver content, as well as a high-grade zinc concentrate.

Pilot scale flotation process test work was undertaken from September 10 to October 16, 2015 on mixed material. In this test, the aim was to produce a concentrate with high silver content.

Additional samples of the sulfide material were subject to laboratory flotation testing by SGS in October 2016 to evaluate production of a bulk silver-bearing concentrate as opposed to the production of separate lead and zinc concentrates.

Golden Minerals engaged RDi Inc. in January 2017 to perform additional rougher and cleaner flotation test work on the same composite as used in the October 2016 SGS testing. This test work evaluated both the impacts of alternative reagent suites as well as grind sizes.

RDi recently completed additional scoping level metallurgical test work on all three ore types (i.e., oxides mixed and sulfides). It is currently envisioned that all three ore types will undergo toll processing. The oxide ore will by cyanide leached for silver extraction whereas mixed and sulfide material will be floated to produce a saleable concentrate, and the flotation tailings can be cyanide leached for additional silver recovery or sent to the tailings pond. Additional test work would be required to optimize the process parameters and to establish a higher level of confidence regarding anticipated grade and recovery values.

13.1 2014 Testing Program

13.1.1 Oxide Material Testing

Preliminary whole ore leach test work on oxide material suggests it is possible to achieve leach recoveries of 80% and 79% for gold and silver respectively within 48 hours. The results of this testing are shown below in **Table 13-1**.

Table 13-1: Cyanide Leach Extraction vs. Retention Time

	Recovery %

Retention Time (Hours)	Au	Ag
24	80.0	74.7
48	80.0	79.0
72	83.6	77.8

Details pertaining to reagent consumption, dosage, and particle size were not included in the provided summary of test work. Hence, additional test work was undertaken in 2018 to determine the reagent consumptions.

13.1.2 Sulfide Material Testing

Preliminary flotation test work was focused on making marketable lead and zinc concentrates. This test work suggests it is possible to recover the gold and silver into lead and zinc concentrates. The final cleaner concentrate grades produced in this test work are shown below in **Table 13-2**.

Table 13-2: Final Cleaner Concentrate Grades

Product	Grade Au g/t	Grade Ag g/t	Grade Pb%	Grade Zn%	Grade Cu%	Grade Fe%	Grade As%	Grade Sb%
Pb Concentrate	72.0	50,094	22.89	9.01	0.98	9.51	5.90	0.89
Zn Concentrate	1.6	1,926	0.23	49.16	0.28	3.10	0.02	0.11

Concentrate market terms have not yet been investigated. Indications from this initial test work are that the lead concentrate contains significant amounts of arsenic and antimony as well as a relatively low lead content, which may adversely affect the commercial terms. The high silver content of the lead concentrate suggests that it could potentially be marketable as a silver bearing bulk concentrate rather than as a traditional lead product.

The test work indicates the zinc product is a relatively high-grade concentrate, and the marketability may not depend on the precious metal content.

No details were provided at the time of writing regarding the specific test work conditions such as reagent dosage, retention time, and grind size.

13.2 2015 Mixed Material Pilot Processing

Pilot scale tests were performed in the time periods of September to October 2016, February to March 2016, and June of 2017, on mixed material from the Santa María project at the Silveyra Mill in Parral. Over the course of the testing, approximately 7,098 tonnes of material were processed to produce a bulk concentrate for metallurgical and marketing purposes. The silver head grade averaged 337 Ag g/t. Silver recovery averaged 73% at a concentrate grade of 8,897 Ag g/t. Gold head grade averaged 0.78 Au g/t and recovery averaged 50% at a concentrate grade of 14 Au g/t.

Recoveries from the pilot processing from September to October 2016 are shown below on a measurement periods, rather than daily basis, in **Figure 13-1**.

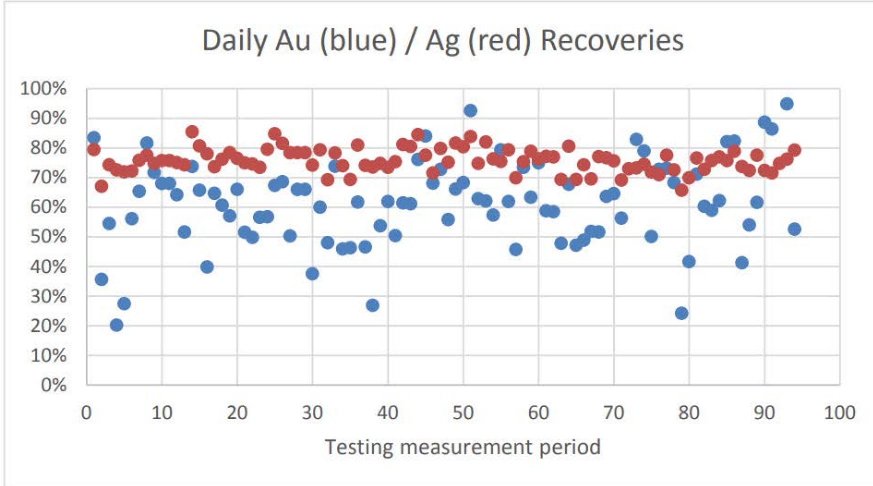


Figure 13-1: Pilot Scale Gold and Silver Recoveries

13.3 2016 SGS Testing Program

13.3.1 Rougher Flotation Testing

Following the completion of the bulk mixed material pilot production, three sulfide flotation lab-scale trials were performed by SGS in 2016. The first of these trials attempted to suppress pyrite and zinc recovery to the bulk concentrate, while the second trial attempted to maximize gold recovery. In doing so, the latter trial resulted not only in an improvement to gold recovery, but also yielded a better silver grade/recovery curve. These results are shown below in **Table 13-3** and **Table 13-4** respectively.

Table 13-3: Bulk Concentrate Rougher Flotation with Pyrite

Product	Weight %	Grade				Recovery %			
		Au g/t	Ag g/t	Pb %	Zn %	Au	Ag	Pb	Zn
Conc 1	3.0	12.6	8,016	10.4	6.2	21.6	61.7	52.2	9.8
Conc 1-2	5.6	8.8	5,168	6.8	5.2	28.0	73.9	63.6	15.4
Conc 1-3	7.3	7.3	4,220	5.7	5.0	30.6	79.0	69.7	19.5
Conc 1-4	9.0	6.2	3,546	4.9	4.8	32.0	81.7	73.1	22.8
Conc 1-5	10.7	5.4	3,043	4.2	4.5	33.1	83.6	75.7	25.8
Conc 1-6	12.6	4.8	2,631	3.7	4.3	34.4	85.2	78.0	29.1
Tails	87.4	1.3	65.9	0.2	1.5	65.6	14.8	22.0	70.9
Calculated Head	100	1.75	390	0.60	1.88	100	100	100	100

Table 13-4: Bulk Concentrate Rougher Flotation with the Addition of Max Gold Collector

Product	Weight %	Grade				Recovery %			
		Au g/t	Ag g/t	Pb %	Zn %	Au	Ag	Pb	Zn
Conc 1	4.9	11.76	6,453	2.6	5.07	37.2	70.6	66.7	13.7
Conc 1-2	8.4	8.47	4,290	1.79	4.51	46	80.5	78.7	21
Conc 1-3	10.7	7.51	3,620	1.56	4.47	51.8	86.3	87	26.4
Conc 1-4	12.8	6.72	3,112	1.35	4.29	55.3	88.5	90	30.2
Conc 1-5	14.4	6.26	2,817	1.23	4.19	57.9	90	92.2	33.1
Conc 1-6	15.7	5.95	2,609	1.15	4.14	60.1	91.1	93.9	35.8
Tails	84.3	0.7	47.5	0	1.4	39.9	8.9	6.1	64.2
Calculated Head	100	1.55	450	0.6	1.88	100	100	100	100

The third test evaluated the effect of a specialty collector, known as Max Gold, to supplement the reagents used in the second test. This resulted in further improvement to gold recoveries, while having negligible impact on the resulting concentrate silver grades compared to the second test. This suggests that a sizable portion of the gold in the rougher feed is present in liberated form at a grind size of P80 200 mesh. The results of this testing are shown below in **Table 13-5**.

Table 13-5: Bulk Concentrate Rougher Flotation with the Addition of Max Gold Collector

Product	Grade		Recovery, %	
	Au g/t	Ag g/t	Au	Ag
Conc 1	11.59	3,981	55.8	77.6
Conc 1-2	9.9	3,260	63.7	85
Conc 1-3	8.9	2,872	67.4	88.3
Conc 1-4	8.3	2,677	69.3	89.9
Conc 1-5	7.8	2,472	70.9	91.2
Conc 1-6	7.7	2,365	74.3	92
Tails	0.5	35.1	25.7	8
Calculated Head	1.52	376	100	100

13.3.2 Cleaner Flotation Testing

The results of the 2014 cleaner lead/zinc flotation test work, coupled with the 2016 bulk rougher flotation results, suggested that improvements to the silver grade/recovery response may be possible with the implementation of cleaner flotation. The results of this test work are shown below in **Table 13-6**.

Table 13-6: SGS 2016 Bulk Concentrate Cleaner Flotation Test Results

Product	Grade		Recovery, %	
	Au g/t	Ag g/t	Au	Ag
Rougher Conc (calc)	9.1	3,031	77.1	92.6
1st Cl Conc (calc)	14	5.105	63.5	83.1
2nd Cl Conc	16.2	6.019	55.3	73.7
Rougher Tailings	0.4	35.1	22.9	7.4
1st Cl Tailings	3.4	670	13.5	9.6
2nd Cl Tailings	7.4	2,322	8.3	9.3
Calculated Head	1.49	416	100	100

13.4 2017 RDi Testing Program

13.4.1 Sulfide Material Rougher Flotation Testing

Testing by RDi in January 2017 evaluated the impact of a longer retention time, reagent selection, and grind size on the rougher flotation response on the same composite, averaging a head grade of approximately 450 g/t Ag, as used in the 2016 SGS test program. The results for the rougher flotation concentrates produced after a 9-minute-long retention time are shown below in **Table 13-7**.

Table 13-7: RDi Rougher Flotation Conditions and Results

Test	Primary Grind, P_{80} mesh	Reagents	Concentrate Grade		Recovery, %		
			Au g/t	Ag g/t	Wt.	Au	Ag
FT-1	150 mesh	PAX, AP404	12.51	3,532	13.1	87.4	94.9
FT-2	200 mesh	PAX, AP404	12.36	3,402	13.4	87.7	92.5
FT-3	270 mesh	PAX, AP404	12.94	2,604	12.7	88.7	95.2
FT-4	200 mesh	PAX, AP404, $CuSO_4$	10.86	3,048	13.9	86.8	96.0
FT-5	200 mesh	PAX, AP404, Sulfidization	11.60	2,816	14.2	89.4	96.4
FT-6	200 mesh	PAX, 3477	11.11	3,017	15.2	90.6	97.4
FT-7	200 mesh	A31, 3418A	8.96	2,419	18.2	86.9	97.2

This test program indicated that there is a benefit to a longer retention time based on the elevated Ag recoveries. Additionally, test FT-1 and FT-2 indicated that the rougher flotation response is similar at 150 mesh to that obtained at the finer grind size of 200 mesh. This has positive implications with respect to the proposed toll mill facility as

Golden Minerals' management indicates the facility is at present configured to produce a rougher flotation feed of 150 mesh.

With respect to reagent selection, this testing indicated that the selection used in the SGS test work is likely to produce lower concentrate grades, as exhibited by the higher mass recovery in FT-7, than alternative reagent suites. The elevated recovery results obtained in FT-6 indicated that a combination of PAX and 3477 represented the most favorable selection for increasing Au and Ag recovery, and thus were selected for use in the later cleaner flotation testing. However, as the results obtained with 3477 are still comparable to AP404, both are worthwhile for inclusion in future test work.

13.4.2 Sulfide Material Cleaner Flotation Testing

Subsequent test work by RDi evaluated two additional cleaner flotation trials performed with a modified reagent suite at two separate rougher feed grind sizes. The results of this testing are shown below in **Table 13-8** and Table 13-9 for a feed size P80 of 150 mesh and 200 mesh respectively.

Table 13-8: RDi Cleaner Flotation Test FT-8 at 150 Mesh Feed

Product	Grade Au g/t	Grade Ag g/t	Recovery % Wt.	Recovery % Au	Recovery % Ag
Rougher Concentrate (calculated)	10.18	3,099	14.9	87.7	95.5
1st Cleaner Concentrate (calculated)	13.61	4,426	9.6	75.8	88.2
2nd Cleaner Concentrate	15.10	5,164	7.8	68.4	83.7
Rougher Tailings	0.25	25.4	85.1	12.3	4.5
1st Cleaner Tailings	3.90	669	5.3	11.9	7.3
2nd Cleaner Tailings	7.10	1,209	1.8	7.4	4.5
Calculated Head	1.73	482	100	100	100

Table 13-9: RDi Cleaner Flotation Test FT-9 at 200 Mesh Feed

Product	Grade Au g/t	Grade Ag g/t	Recovery % Wt.	Recovery % Au	Recovery % Ag
Rougher Concentrate (calculated)	10.99	3,258	13.6	88.3	96.2
1st Cleaner Concentrate (calculated)	14.78	4,957	8.3	72.7	89.7
2nd Cleaner Concentrate	15.80	5,666	7.1	65.8	86.7
Rougher Tailings	0.23	20.4	86.4	11.7	3.8
1st Cleaner Tailings	5.00	569	5.3	15.6	6.5
2nd Cleaner Tailings	9.20	1,065	1.3	7.0	3.0
Calculated Head	1.70	461	100	100	100

This test work represented open circuit conditions and included no provision for a regrind stage. Based on input from Golden Minerals obtained after the completion of this testing, the toll mill facility has an anticipated grind size of 150 mesh, no regrinding capacities, and currently intends to include only one stage of cleaner flotation. However, the toll mill already includes capacities for the recirculation of the cleaner flotation tailings back into the rougher flotation feed. As such, in operation the plant would be operating under locked cycle rather than open circuit conditions.

13.4.3 ANTICIPATED LOCKED CYCLE RESPONSE

Considering this configuration, RDi attempted to estimate an anticipated locked cycle response for this material based on the results of both the rougher and cleaner flotation test work. For the rougher flotation response, it was assumed that RDi test FT-1 at 150 mesh would represent the best baseline. Combined with this, cleaner flotation test FT-8 was used as a baseline for a 1st cleaner flotation response. From here, it is assumed that approximately 50% of the Au and Ag found in the 1st cleaner flotation tailings would be re-recovered in the rougher concentrate, and that the resulting downstream 1st cleaner concentrate grade would remain identical to that of open circuit conditions. Overall, this is anticipated to produce a final sulfide Au and Ag recovery of 80% and 90% respectively at a concentrate grade of approximately 4,500 g/t Ag and 13.6 g/t Au regardless of the specific feed grade processed. Follow up testing under locked cycle conditions would be required to confirm these assumptions.

13.5 2018 RDI TESTING PROGRAM

The scoping level metallurgical study in 2017 did not address the processing of the oxide material. Since the recent Resource update Indicated the proportion of oxide ore accounted for 37% of the total Resource, Golden Minerals Company contracted RDi to undertake additional scoping level metallurgical testing with the objective of testing oxide, mixed/transition and sulfide ores to determine precious metal extractions.

RDi undertook leaching and flotation testing of four composite samples. Two composites were oxide ore and one each of mixed and sulfide ores. The highlights of the test results Indicated the following:

- The head analyses of composite samples, given in Table 13.10, Indicated silver grades ranged from 222 g/mt to 286 g/mt Ag and the gold grades ranged from 0.72 g/mt to 0.99 g/mt Au. The oxide composites contained no sulfide sulfur while the mixed composite contained 1.0% Ssulfide and the sulfide composite contained 1.8% Ssulfide. The sulfide composite also contained a significant amount of lead and zinc (i.e., 1.1% Pb and 2.0% Zn).
- Bond's ball mill work-indices, given in Table 13.11, were calculated using indirect method due to insufficient sample available for testing. The BWi ranged from 15.9 kwh/st to 25.2 kwh/st thereby indicating the ores were relatively hard.
- The oxide samples responded favorably to cyanide leaching. The test data, summarized in Table 13.12, indicated gold and silver extractions of 78.5% to 88.2% and 61.5% to 79%, respectively. The precious metals continued to leach for the entire 72 hours of leach time.
- The results for rougher flotation of the mixed and sulfide ore are given in Table 13.13. The flotation process recovered 60.6% of the gold and 81.2% of the silver in the rougher concentrate for the mixed ore and 89.9% of gold and 95.8% of silver for the sulfide ore.
- The flotation tailings were cyanide leached to determine if one could extract additional values. The leach process recovered 74.8% of gold and 74% of silver from the flotation tailings of mixed ore and 53.3% of gold and 71.8% of silver from the sulfide ore (Table 13.14).
- The rougher flotation concentrate grade assayed 1586 g/t Ag to 2942 g/t Ag. These results were similar to the concentrate grade achieved in 2017 RDi testing (Table 13.7). Two stages of cleaner flotation should produce a concentrate assaying over 5 kg/t as was the case in earlier testing.

- Precious metal extraction of the oxide composite appears to be size dependent. The finer the grind, the higher the extraction. Gold and silver extractions increased by approximately 4% and 10% respectively, for both composites as the grind size increased from P80 of 100 to 200 mesh.
- Cyanide consumption decreased by 55% to 60% with 4 hours of pre-aeration with lime. Addition of lead nitrate did not improve silver extraction.

Table 13-9: Head Analyses of Composite Samples Including ICP

Element	Oxide 1	Oxide 2	Mixed	Sulfide
Au, g/mt	0.720	0.741	0.919	0.988
Ag, g/mt	369	293	303	368
Sulfide S %	<0.01	<0.01	1.01	1.78
Sulfate S %	0.04	0.04	0.83	1.82
Total S %	0.04	0.04	1.83	3.60
%				
Al	2.58	1.94	2.87	2.09
Ca	2.72	4.04	5.09	7.31
Fe	2.56	1.86	2.56	2.46
K	3.27	2.40	3.78	2.72
Mg	0.16	0.06	0.23	0.12
Na	0.06	0.04	0.09	0.06
Ti	0.06	0.04	0.08	0.06
ppm				
As	1340	1560	2320	2930
Ba	502	478	552	471
Bi	<10	<10	<10	<10
Cd	18	36	261	199
Co	5	4	7	4
Cr	143	94	113	122
Cu	207	242	452	435
Mn	586	594	627	746
Mo	2	1	<1	<1
Ni	5	<5	12	11
Pb	2040	2790	5840	10800
Sr	126	103	134	132
V	216	167	48	28
W	55	63	165	230
Zn	4600	6240	15700	19900

Table 13-10: Indirect BWI results

Sample	BWi (kWh/st)
Oxide 1	25.19
Oxide 2	15.92
Mixed	20.50
Sulfide	23.24

Table 13-11: Oxide Composites Leach Results

		Extraction %		Residue Grade		Calc Head Grade		NaCN Consumption (kg/mt)	Lime Consumption (kg/mt)
Sample	Conditions	Au	Ag	Au (g/mt)	Ag (g/mt)	Au (g/mt)	Ag (g/mt)		
Oxide 1	100 mesh	81.9	61.5	0.10	126.8	0.57	329.7	1.198	2.375
Oxide 1	200 mesh	86.0	70.4	0.08	100.2	0.54	338.3	1.675	2.233
Oxide 1	200 mesh Pre-Aeration	78.5	64.9	0.12	125.4	0.57	357.3	0.663	2.671
Oxide 1	200 mesh Lead Nitrate	86.1	71.4	0.08	91.0	0.54	318.3	1.498	2.199
Oxide 2	100 mesh	84.6	68.4	0.12	101.2	0.80	320.6	0.660	1.757
Oxide 2	200 mesh	88.2	78.3	0.10	72.8	0.81	335.3	1.257	1.779
Oxide 2	200 mesh Pre-Aeration	85.4	79.0	0.10	66.6	0.066	316.6	0.544	2.156
Oxide 2	200 mesh Lead Nitrate	87.0	74.6	0.10	87.8	0.74	345.2	1.139	1.769
Mixed	200 mesh	65.7	78.5	0.27	69.6	0.798	323.9	2.036	2.519

Table 13-12: Flotation Test Results

Product	Cumulative Flotation Time, min	Cumulative Recovery %			Cumulative Grade	
		Wt.	Au	Ag	Au g/t	Ag g/t
Mixed Comp (Test 1)						
Conc. 1	3	3.7	43.0	60.9	9.60	5150
Conc. 2	6	6.5	55.2	77.4	6.93	3680
Conc. 3	9	8.6	60.6	81.2	5.80	2942
Cal. Feed	-	100.0	100.0	100.0	0.82	310
Sulfide Comp (Test 2)						
Conc. 1	3	7.6	66.7	76.0	10.56	2890
Conc. 2	6	13.3	84.6	92.7	7.71	2028
Conc. 3	9	17.5	89.9	95.8	6.20	1586
Cal. Feed	-	100.0	100.0	100.0	1.21	291

Table 13-13: Sulfide and Mixed Composites Leach Results

Sample	Particle Size	Extraction %		Residue Grade		Calc Head Grade		NaCN Consumption (kg/mt)	Lime Consumption (kg/mt)
		Au	Ag	Au (g/mt)	Ag (g/mt)	Au (g/mt)	Ag (g/mt)		
Mixed	200 mesh	65.7	78.5	0.27	69.6	0.798	323.9	2.036	2.519
Mixed Float Tails	200 mesh	74.8	74.0	0.09	16.6	0.35	63.9	0.973	2.274
Sulfide Float Tails	200 mesh	53.3	71.8	0.07	4.2	0.15	14.9	1.573	1.657

13.6 Bulk Concentrate Specifications

Input from Golden Minerals indicates that a bulk silver gold concentrate with a silver grade of 4,500 Ag g/t could be acceptably marketed and conceptual market terms have been provided for the PEA. Bulk concentrate production is not rare in Mexico but is less prevalent than a conventional lead or zinc concentrate therefor smelter terms are case dependent.

The composition of a bulk concentrate sample produced during the pilot plant trial for selected components is shown below in **Table 13-15**.

Table 13-14: Mixed Material Concentrate Composition

Product	Unit	Value
Au	g/t	14.0
Ag	g/t	9,773
Pb	%	2.8
Zn	%	5.9
S	%	9.3
As	%	0.81
Sb	%	0.177
F	%	0.420
Bi	%	0.010
Fe	%	9.6
SiO2	%	40.1
Al2O3	%	3.7
Insolubles	%	51.7

Given that the above table illustrates the composition of a higher-grade concentrate from mixed material, it is unknown how this will vary compared to that of a lower Ag grade sulfide concentrate. An analysis of penalty constituents such as Zn, As, Sb, F, and Bi has not been performed on any materials generated in the recent cleaner flotation studies, thus it is currently unknown what impact this may have on the resulting smelter penalties.

The incorporation of the cyanidation leach of the flotation tailing for the sulfide and the mixed ores has resulted in several processing options. The recoveries were calculated based on the following assumptions:

- The cleaner flotation process with recycling of process streams will recover 92% of gold and 95% of silver from the rougher concentrate.
- The concentrate grade will be similar to that obtained in open-cycle cleaner flotation tests.
- The leach process will extract same amount of gold and silver from the combined rougher and cleaner flotation tailing as the rougher tailing.

The estimated gold and silver recoveries for the various processing options are given in **Table 13-16**.

Table 13-15: Estimated Gold and Silver Recoveries for Different Processing Options

	FLOTATION PROCESS			LEACH PROCESS		FLOTATION + LEACH	
	Recovery %		Grade, g/t Ag	Extraction %		Recovery %	
ORE	Au	Ag		Au	Ag	Au	Ag
Oxide[1]	-	-	-	85.2	73.1	-	-
Mixed/Transition	55.8	77.1	>4500	33.1	17.0	88.9	94.1
Sulfides	82.7	91.0	>4500	9.2	6.5	91.9	97.5

NOTES:

(1) Average of six tests at P_{80} of 200 mesh for the two composites.

(2) Cyanide Consumption will be 0.60 kg/t and lime consumption will be 2.4 kg/t initially and will reduce to 1.2 kg/t eventually.

14 Mineral Resource Estimate

The estimation of the mineral resources was carried out for the Main and Dos veins of the Santa Maria deposit, located in Chihuahua state, Mexico. The drill hole data and geologic model developed provided by Golden Minerals, the previous operator of the Property, were reviewed and utilized as the input information for the current mineral resource estimate.

The estimation of the mineral resources of the Santa Maria deposit was performed by Marc Jutras, P.Eng, M.A.Sc., Principal, Mineral Resources at Ginto Consulting Inc. ("Ginto"). Mr. Jutras is an independent Qualified Person as defined under National Instrument 43-101.

The mineral resource estimation was primarily undertaken with the Maptek™ Vulcan™ software and utilities internally developed in GSLIB-type format. The following sections outline the procedures undertaken to calculate the mineral resources of the Main and Dos veins of the Santa Maria deposit.

14.1 DRILL HOLE DATABASE

The drill hole database of the Santa Maria project used for the estimation of the mineral resource is comprised of 952 holes with 11,740.1m of drilling and 5,978 assays for silver and gold in g/t. These samples are from surface drilling with 2,528 assays, from underground drilling with 942 assays, from underground channel sampling with 2,186 assays, and from surface sampling with 322 assays. Statistics of the drill hole database's content are presented in Figure 14-1.

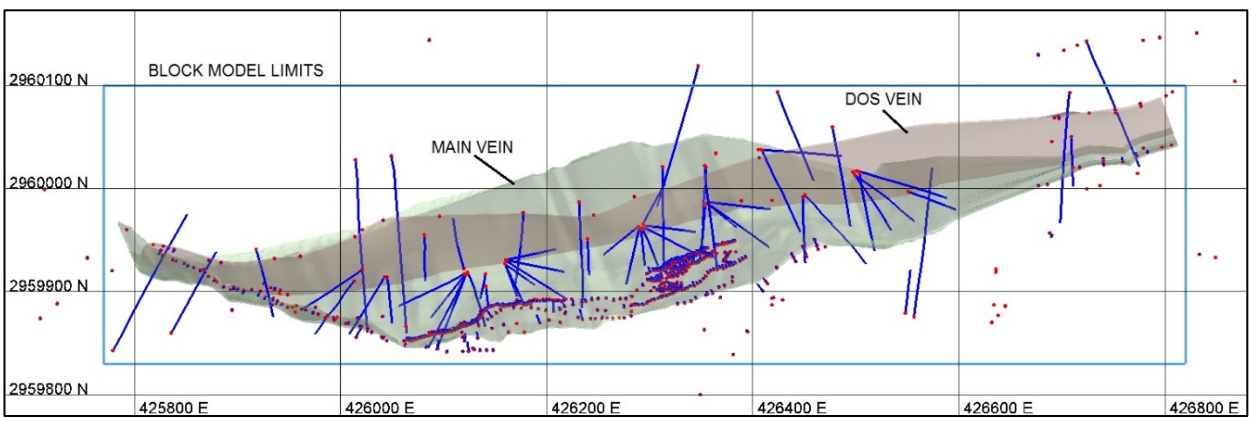
Table 14-1: Drill Hole Database Statistics – Santa Maria Project.

Santa Maria Project - Chihuahua, Mexico - All Drill Hole Data

Collar Data	Number of Data	Mean	Standard Deviation	Coefficient of Variation	Minimum	Lower Quartile	Median	Upper Quartile	Maximum	Number of 0.0 values	Number of < 0.0 values
Easting (X)	952	426363.0	309.15	0.001	425079.0	426160.0	426325.0	426387.0	427418.0	–	–
Northing (Y)	952	960011.0	250.414	0.0	959516.0	959888.0	959924.0	959956.0	960862.0	–	–
Elevation (Z)	952	1937.42	41.95	0.022	1884.54	1899.47	1925.81	1963.95	2047.5	–	–
Hole Depth	952	12.332	45.452	3.686	0.15	1.15	2.1	2.9	350.0	–	–
Azimuth	952	265.19	112.497	0.424	0.0	196.41	331.24	342.24	359.74	–	–
Dip	952	-3.703	14.948	-4.036	-80.0	0.0	0.0	0.0	0.0	–	–
Overburden	952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–	–
Survey Data											
Azimuth	160	150.71	60.757	0.403	5.39	127.48	165.82	183.31	351.64	–	–
Dip	160	-64.479	12.142	-0.188	0.0	0.0	0.0	0.0	0.0	–	–
Assay Data											
Interval Length (from-to)	5978	0.877	0.491	0.56	0.08	0.55	0.81	1.11	14.0	0	0
AG_GPT	5978	91.295	301.064	3.298	0.0	4.3	15.0	59.0	8140.0	186	440
AU_GPT	5978	0.343	1.087	3.173	0.0	0.025	0.1	0.32	49.1	407	440

The location of the drill holes within the Santa Maria project area is presented in Figure 14-2.

Figure 14-1: Drill Hole Location – Plan View - Santa Maria Deposit



14.2 GEOLOGY MODEL

The geology model of the Santa Maria project consists of 2 mineralized veins; the Main vein and the Dos vein. The Main and Dos veins are interpreted as epi-thermal deposits that were flooded into structurally prepared fault and fracture zones, and on the normal geologic contact between rhyolite and limestone formations. Initial vein intervals representing the general contact was provided by Minera Cordilleras as an attribute in the Project database.

. The interpretation of the Main and Dos veins was carried out on sections at every 10-meter intervals. These sections were reviewed in 3D within the context of the surface geologic and vein mapping, underground development mapping, drill hole intercepts, and core photos. Hanging wall and footwall data of the high-grade material was developed on these sections. The hanging wall and footwall data was then fed into a triangulation modeling method using grids. The grids were used to create a 3D wireframe of the mineralized structures. The mineralized structure model assumes a continuous traceable vein structure as suggested in the level mapping; however, complexities regarding local vein splays have not been captured in the model

The mineralized solids extend to surface. Surface sampling and mapping indicate the structure is continuous on the surface. The vein solid was limited down dip by an approximate 150 m convex orthogonal buffer and limited along strike at the extent of the last channel sample to the west and to the east. The Dos vein was limited in the up-dip direction using the Main vein upper limits and was then terminated at the intersection with the Main vein down-dip.

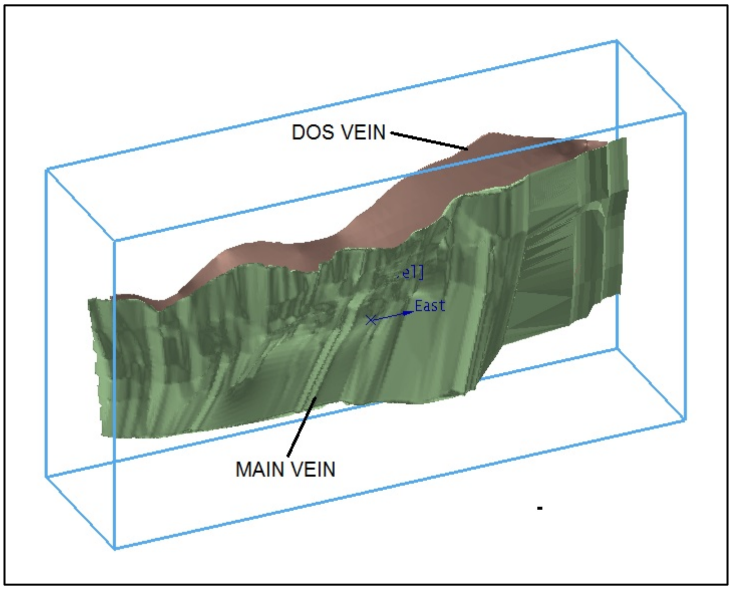
The triangulations of the Main and Dos veins used by the previous operator were utilized for this estimation as there is no new drill hole information since then. As well, solids of reduced oxidation state (redox) were available from this previous study. All solids of mineralization and redox were visually compared to the drill hole information by Ginto and were considered to be a fair representation. The volumes of the mineralized solids are provided in Table 14-1 and examples of the veins interpretations are presented in Figure 14-3 and the redox interpretations in Figure 14-4.

Table 14-2: Wireframe Volumes – Santa Maria Deposit

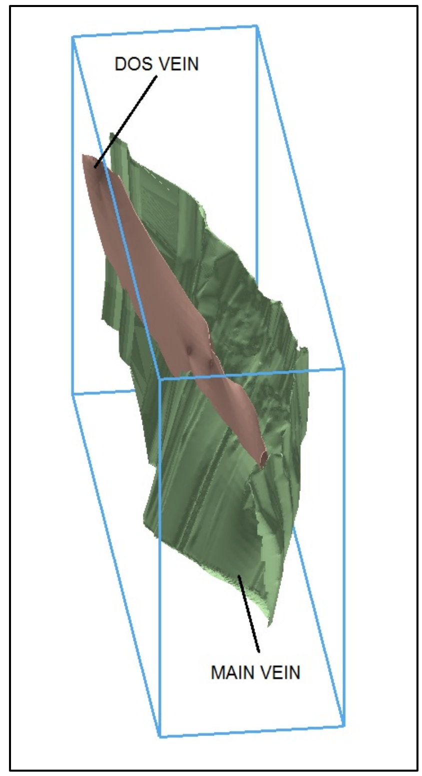
Veins	Volume m^3
Main Vein	662,016.4
Dos Vein	141,399.9
Total	803,416.3

Figure 14-2; Geologic Model – Mineralized Veins – Perspective Views – Santa Maria Deposit

Looking North



Looking East



Looking South

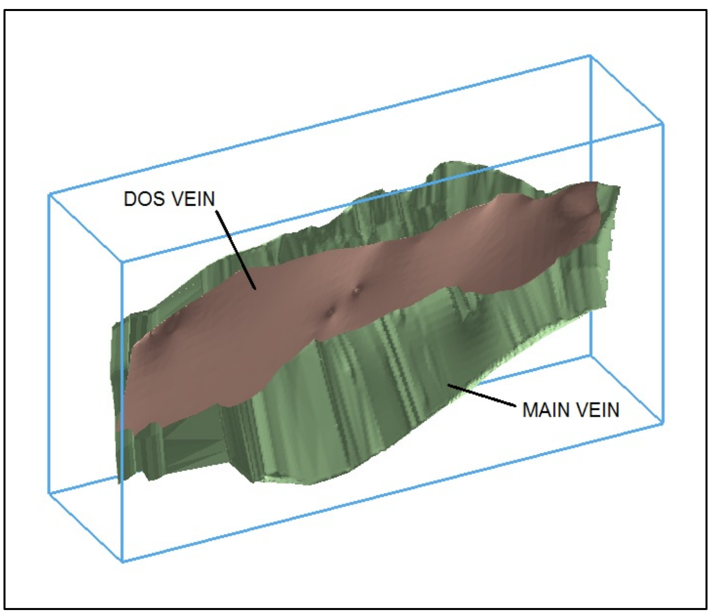
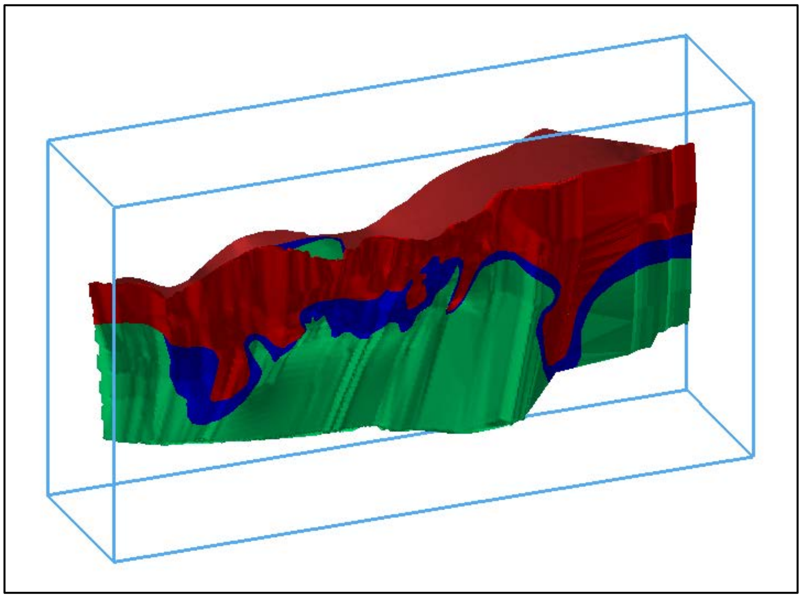
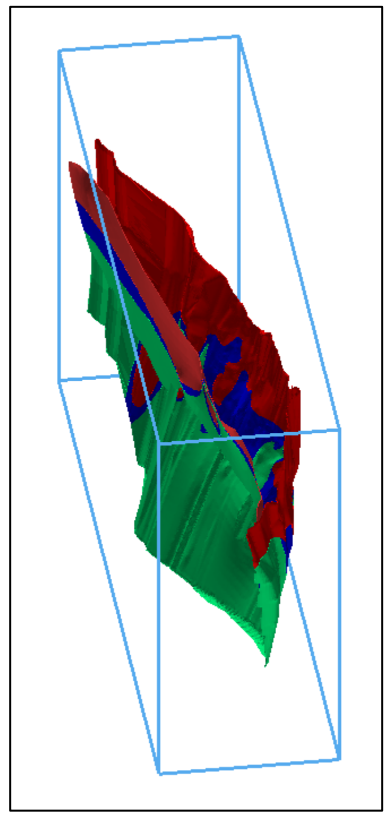


Figure 14-3: Geologic Model – Redox: Oxide (red), Mixed (blue), Sulphide (green) - Perspective Views – Santa Maria Deposit

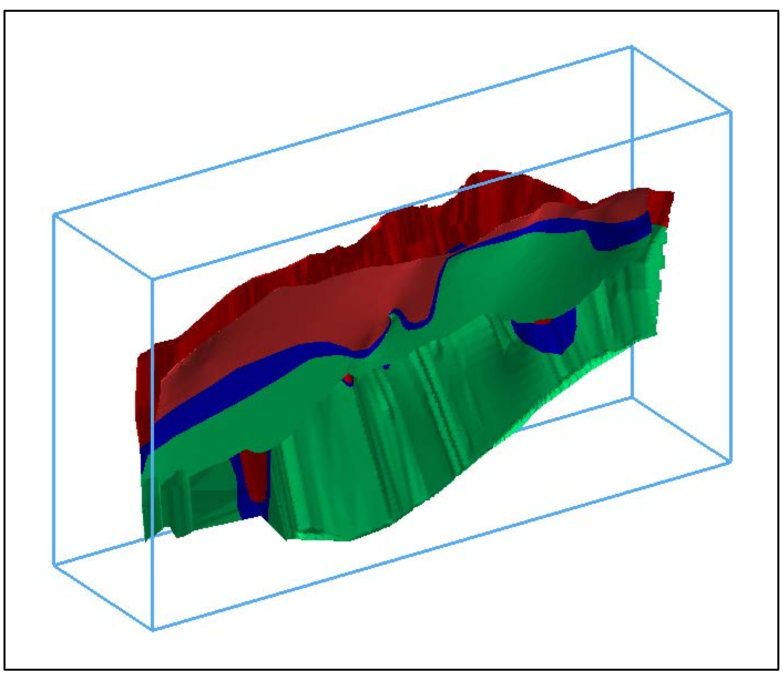
Looking North



Looking East

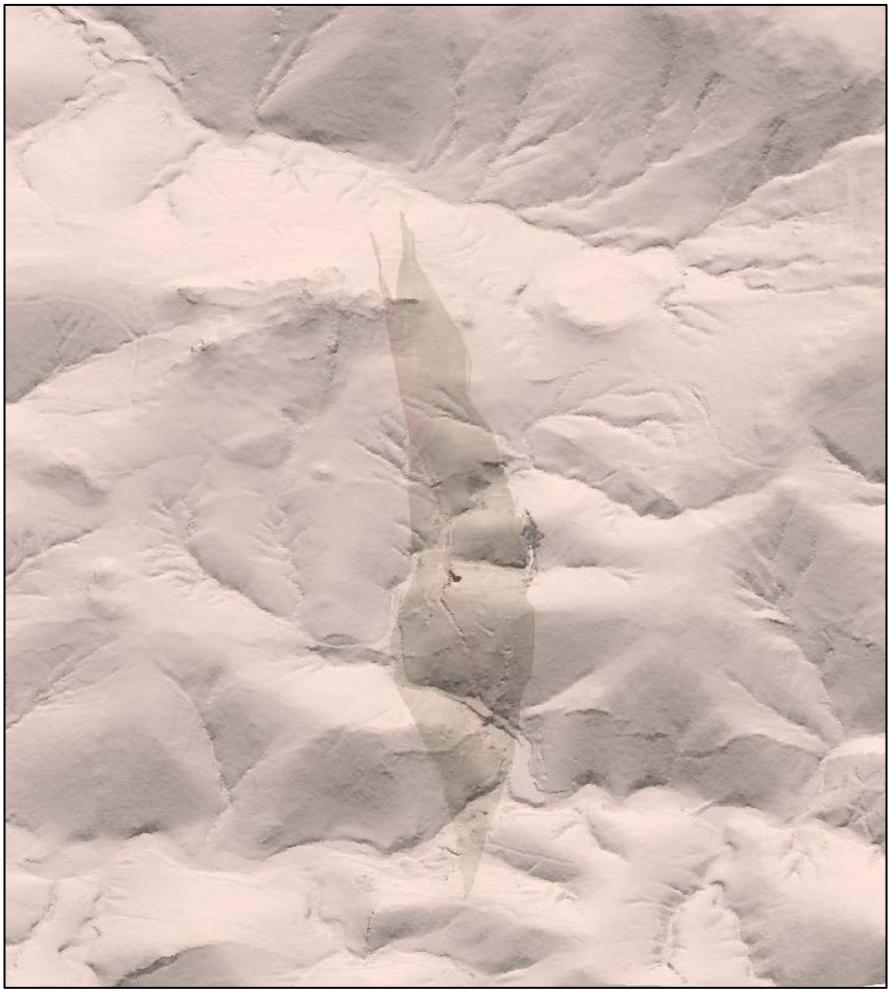


Looking South



An example of the topographic surface is shown in Figure 14-5.

Figure 14-4: Topography Surface with Main and Dos Veins (shadowed) – Perspective View Looking East – Santa Maria Deposit



14.3 GRADE COMPOSITING

The original assays were composited to 0.5m regular intervals to ensure that the intrinsic variability of the original assays is respected along with representing one of the most common sampling interval. Within the Main vein, 15% of the samples are on 0.5m lengths, while within the Dos vein, 25% of the samples are on 0.5m lengths. A dynamic compositing process was utilized for this exercise whereby residual composites are redistributed within the vein to ensure that all composites are of the same length. A total of 2,791 silver composites from 634 holes, and 2,705 gold composites from 632 holes, are located within the two mineralized veins. Some adjustments to the selection of in-vein composites were made in certain instances to ensure that the correct composites were identified as part of the vein structure.

The composite length to block height has a ratio of 0.5/2.0m or 1:4 and is within the general guideline of a ratio range between 1:2 to 1:5.

14.4 EXPLORATORY DATA ANALYSIS

The exploratory data analysis or EDA is an exercise that allows to better understand the different geometric and statistical aspects of the data under study.

14.4.1 DRILL HOLE SPACING AND ORIENTATION

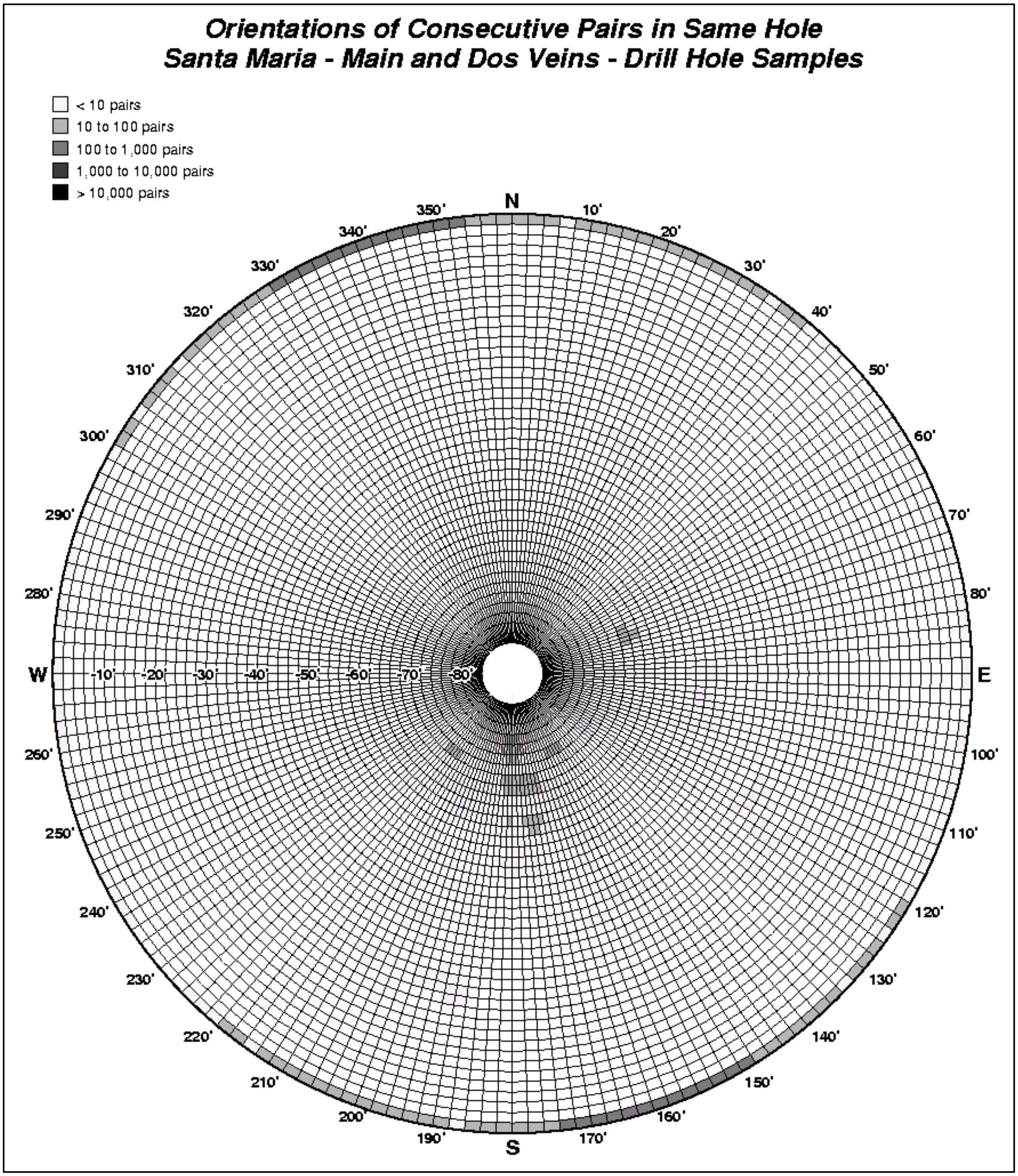
A first item examined was the drill hole spacing, for which a set of statistics were computed for each of the Main and Dos veins. A summary of the drill hole spacing statistics is provided in Table 14-2.

Table 14-3: Drill Hole Spacing Statistics – Santa Maria Deposit

Zone	Drill Hole Spacing	
	Average (m)	Median (m)
Main Vein	7.0	1.8
Dos Vein	37.8	21.4
Main and Dos Veins	8.2	1.9
Out of Veins	24.7	23.2

The drilling orientation of the Santa Maria deposit is shown in Figure 14-6.

Figure 14-5: Drill Hole Orientations – Santa Maria Deposit

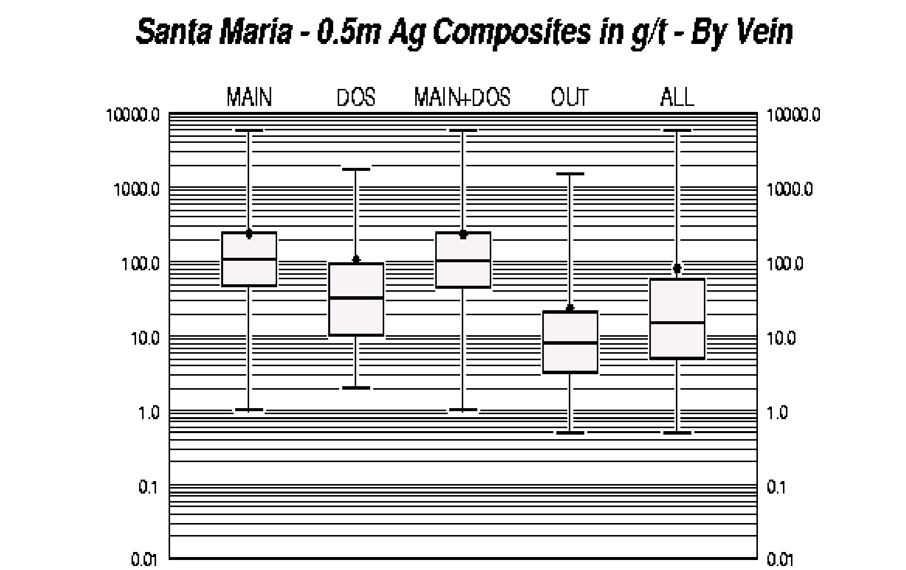


As seen in Figure 14-6, the drilling and the sampling were carried out across the deposits' strike and dip orientations. The orientations of the surface and underground sampling are observed to be on the outer limits of the stereonettype plot, representing horizontally taken samples. There are two main sets of orientations with one set to the north at angles varying from 300° to 40°, and another set to the south at angles varying from 220° to 120°. The orientation of drilling is mainly found to the south at azimuth angles varying between 180° and 160° and dip angles varying between -55° and -75°. Note that the azimuths are read from the outer circle while the dips are read from the inner circles.

14.4.2 Basic Statistics

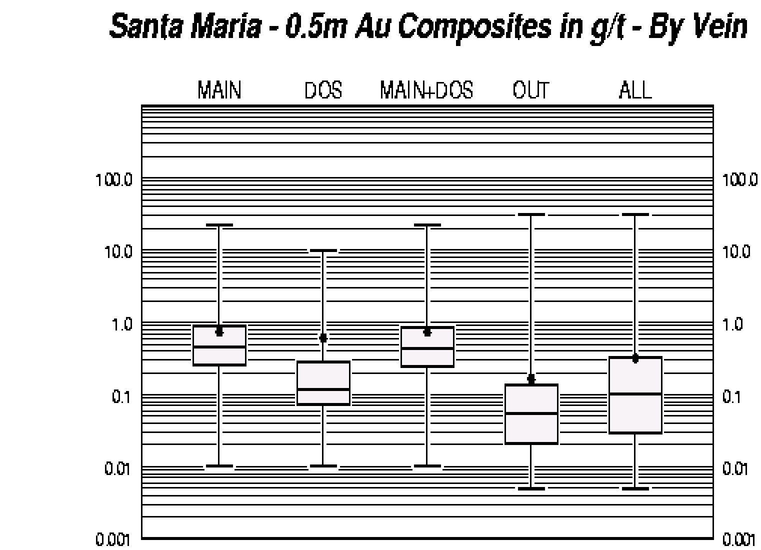
Basic statistics were conducted on the composite data with histograms, probability plots, and boxplots for the Santa Maria deposit. These various utilities show a positively skewed distribution of silver and gold grades with well-behaved populations. It is observed that the coefficients of variation (standard deviation divided by the mean), which represent a measure of the variability of the distributions, are low for silver and gold with values below 3.0. Results from the boxplots of silver and gold grades are shown in Figures 14-7 and 14-8, respectively.

Figure 14-6: Boxplots of Silver Grade Composites – Santa Maria Deposit



	MAIN	DOS	MAIN+DOS	OUT	ALL	
Number of data	2654	137	2791	7568	10359	Number of data
Mean	239.91	105.72	233.5	23.58	81.34	Mean
Std. Dev.	425.38	235.06	419.23	62.22	244.86	Std. Dev.
Coef. of Var.	1.77	2.22	1.8	2.64	3.01	Coef. of Var.
Maximum	5840.0	1760.0	5840.0	1535.91	5840.0	Maximum
Upper quartile	249.68	94.41	240.92	21.0	58.0	Upper quartile
Median	106.13	32.0	101.34	8.1	15.0	Median
Lower quartile	48.24	10.17	44.78	3.3	5.0	Lower quartile
Minimum	1.0	2.0	1.0	0.5	0.5	Minimum
Number of holes	613	36	634	779	947	Number of holes

Figure 14-7: Boxplots of Gold Grade Composites – Santa Maria Deposit



	MAIN	DOS	MAIN+DOS	OUT	ALL	
Number of data	2571	134	2705	7288	9993	Number of data
Mean	0.733	0.601	0.727	0.164	0.319	Mean
Std. Dev.	1.052	1.635	1.088	0.655	0.838	Std. Dev.
Coef. of Var.	1.435	2.722	1.496	4.008	2.623	Coef. of Var.
Maximum	22.367	9.97	22.367	30.499	30.499	Maximum
Upper quartile	0.87	0.287	0.84	0.136	0.32	Upper quartile
Median	0.45	0.12	0.43	0.056	0.1	Median
Lower quartile	0.252	0.073	0.24	0.021	0.03	Lower quartile
Minimum	0.01	0.01	0.01	0.005	0.005	Minimum
Number of holes	611	35	632	752	934	Number of holes

14.4.3 Capping of High-Grade Outliers

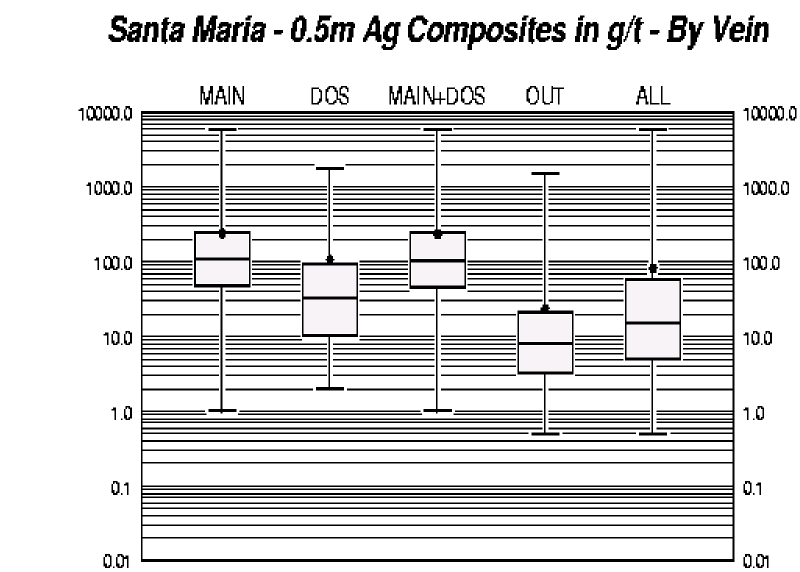
The location of the high-grade outliers was first examined to ensure that they are not related to a high-grade unit that can be modeled separately. It was observed that the high-grade outliers are distributed randomly and for such can be capped from their corresponding population. The probability plot approach, where the capping threshold is selected at the grade for which the distribution deviates from its main orientation, was utilized in the selection of the capping thresholds. As well, an application named “cutstats” helped in the selection of final capping thresholds. In this utility, a plot comparing correlation coefficients for various cut-off grades allows for the selection of the capping value at a cut-off grade where there is no correlation between the grades above this cut-off. Another plot, where coefficients of variation (CVs) are compared for various cut-off grades, the capping value is selected by identifying the cut-off grade where a major shift occurs in the distribution of CVs. The resulting compilation of the capping thresholds is listed in Table 14-3. One of the objectives of the capping strategy is to have less than 10% of the metal affected by the capping process. This was achieved for the silver grades of both veins and for the gold grades of the Main vein. For the Dos vein, a few high gold grade outliers were observed to carry a large portion of its metal content.

Table 14-4: Capping Threshold of High-Grade Silver and Gold Outliers – Santa Maria Deposit

Silver			
Vein	Capping Threshold Ag g/t	% of Metal Capped	# Capped
Main Vein	3,000.0	2	10
Dos Vein	700.0	4	4
Gold			
Vein	Capping Threshold Au g/t	% of Metal Capped	# Capped
Main Vein	10.0	1	3
Dos Vein	1.5	38	10

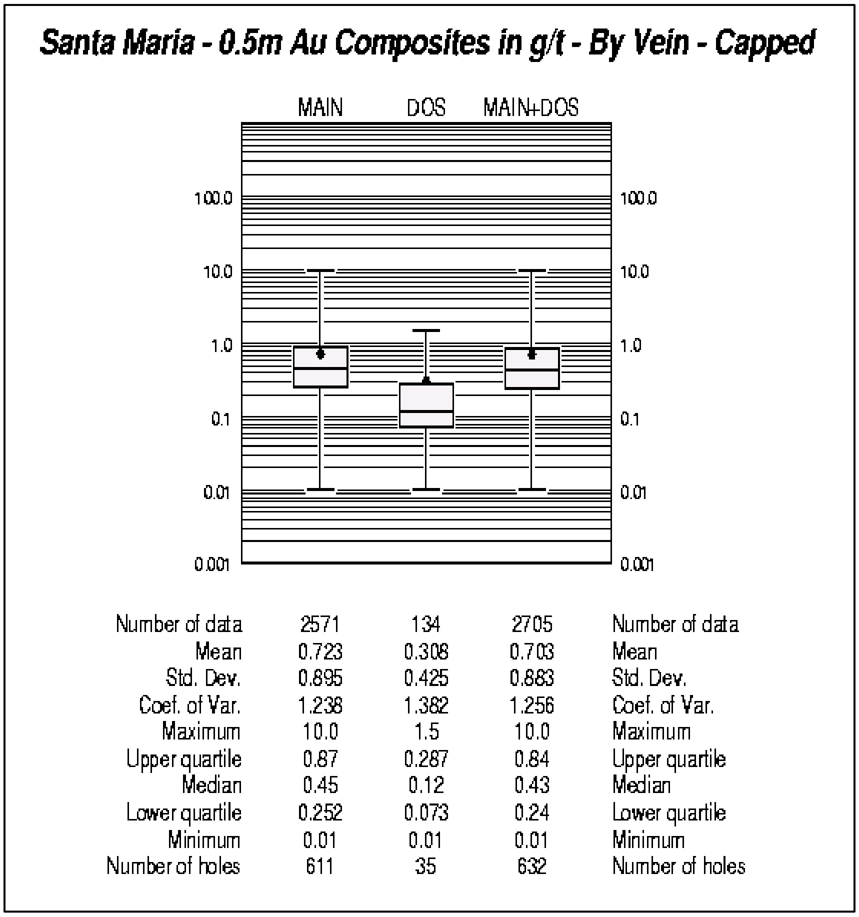
Boxplots of capped silver and gold grade composites were calculated and shown in Figures 14-9 and 14-10, respectively. As seen in these boxplots, the coefficients of variation are low with values of 1.61 and 1.69 for silver grades of the Main and Dos veins, and values of 1.24 and 1.38 for gold grades of the Main and Dos veins. This indicates more homogeneous distributions of silver and gold grades, which in turn makes ordinary kriging a well-suited grade interpolation method in this case.

Figure 14-8: Boxplots of Capped Silver Grade Composites – Santa Maria Deposit



	MAIN	DOS	MAIN+DOS	OUT	ALL	
Number of data	2654	137	2791	7568	10359	Number of data
Mean	239.91	105.72	233.5	23.58	81.34	Mean
Std. Dev.	425.38	235.06	419.23	62.22	244.86	Std. Dev.
Coef. of Var.	1.77	2.22	1.8	2.64	3.01	Coef. of Var.
Maximum	5840.0	1760.0	5840.0	1535.91	5840.0	Maximum
Upper quartile	249.68	94.41	240.92	21.0	58.0	Upper quartile
Median	106.13	32.0	101.34	8.1	15.0	Median
Lower quartile	48.24	10.17	44.78	3.3	5.0	Lower quartile
Minimum	1.0	2.0	1.0	0.5	0.5	Minimum
Number of holes	613	36	634	779	947	Number of holes

Figure 14-9: Boxplots of Capped Gold Grade Composites – Santa Maria Deposit



14.4.4 Declustering

In general, there is a tendency to drill more holes in higher grade areas than in lower grade areas when delimiting a potential ore body. As a result, the higher grade portion of a deposit will be overly represented and would translate into a bias towards the higher grades when calculating statistical parameters of the population. Thus, a declustering method is utilized to generate a more representative set of statistical results within the zone of interest.

A polygonal declustering was applied to the composites to provide a better representation of the statistical parameters of the silver and gold grade distributions. In this process a weight is assigned to each composite based on the volume made from the half-distances to the nearest surrounding composites. Thus, composites in a densely drilled area are assigned smaller volume-weights than those in sparser areas. In this case an average silver grade of 113.8 g/t for the Main and Dos veins was obtained, a reduction of 51.3% indicating a strong clustering of the higher grade assays. For gold, a declustered average grade of 0.501 g/t was obtained, representing a reduction of 28.7%. These results will be helpful when comparing the grade estimate results to the declustered composites in the validation process.

14.5 VARIOGRAPHY

A variography study was performed on silver and gold grade composites of the Main and Dos veins. The silver and gold grades were examined to determine the best directions of continuity in the deposit. In this process, the best direction of continuity is established in the X-Y plane, followed by the plane of the plunge of this direction, and then the plane of the dip. Relative pairwise experimental variograms were calculated in increments of 10°, while final variograms were modeled with 2-structure spherical variograms. Variogram model parameters are presented in Table 14-4 for silver and Table 14-5 for gold. Examples of modeled silver and gold variograms for the Main vein are presented in Figures 14-11 and 14-12, respectively. Variogram models for the Dos vein were found to be less conclusive than for the Main vein due to the limited amount of assay data.

The main directions of silver and gold grade continuity were found to be along strike and down dip of both Main and Dos veins.

Table 14-5: Variogram Model Parameters for Silver – Santa Maria Deposit

Parameters	Main Vein			Dos Vein		
	Principal	Minor	Vertical	Principal	Minor	Vertical
Azimuth*	80°	170°	170°	80°	170°	170°
Dip**	0°	70°	-20°	0°	-75°	15°
Nugget Effect C_0	0.252			0.212		
1st Structure C_1	0.867			1.152		
2nd Structure C_2	0.416			0.627		
1st Range A_1	7.1m	8.1m	4.9m	35.8m	9.1m	3.8m
2nd Range A_2	52.1m	38.2m	11.3m	52.8m	28.3m	11.3m

*positive clockwise from north
**negative below horizontal

Table 14-6: Variogram Model Parameters for Gold – Santa Maria Deposit

Parameters	Main Vein			Dos Vein		
	Principal	Minor	Vertical	Principal	Minor	Vertical
Azimuth*	80°	170°	170°	80°	170°	170°
Dip**	0°	70°	-20°	0°	-75°	15°
Nugget Effect C_0	0.105			0.130		
1st Structure C_1	0.631			0.879		
2nd Structure C_2	0.308			0.637		
1st Range A_1	4.9m	4.9m	4.9m	22.0m	12.4m	6.0m
2nd Range A_2	63.9m	59.6m	12.4m	62.5m	40.1m	12.4m

*(1) *positive clockwise from north*
*(2) **negative below horizontal*

Figure 14-10: Variogram Model of Silver for the Main Vein – Santa Maria Deposit

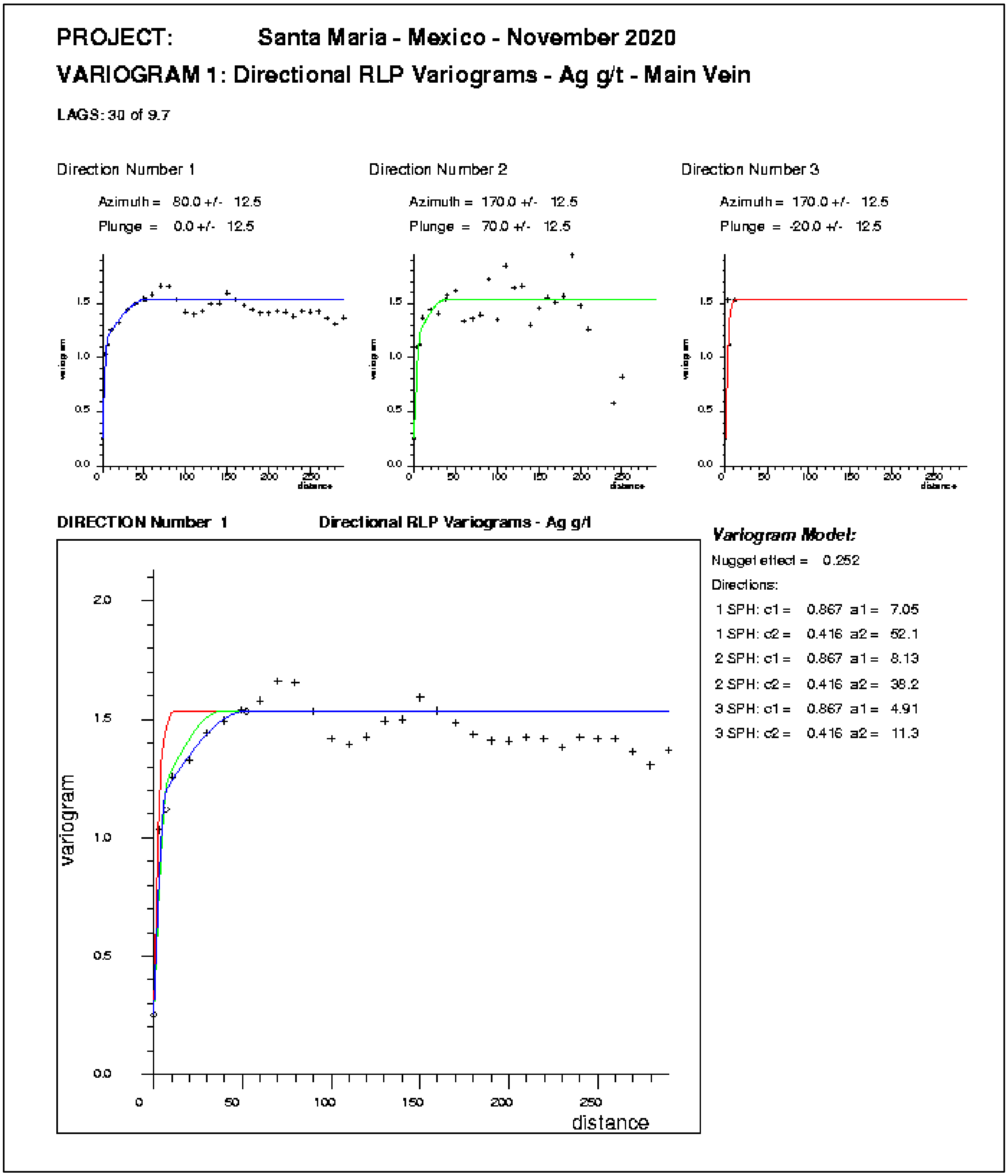
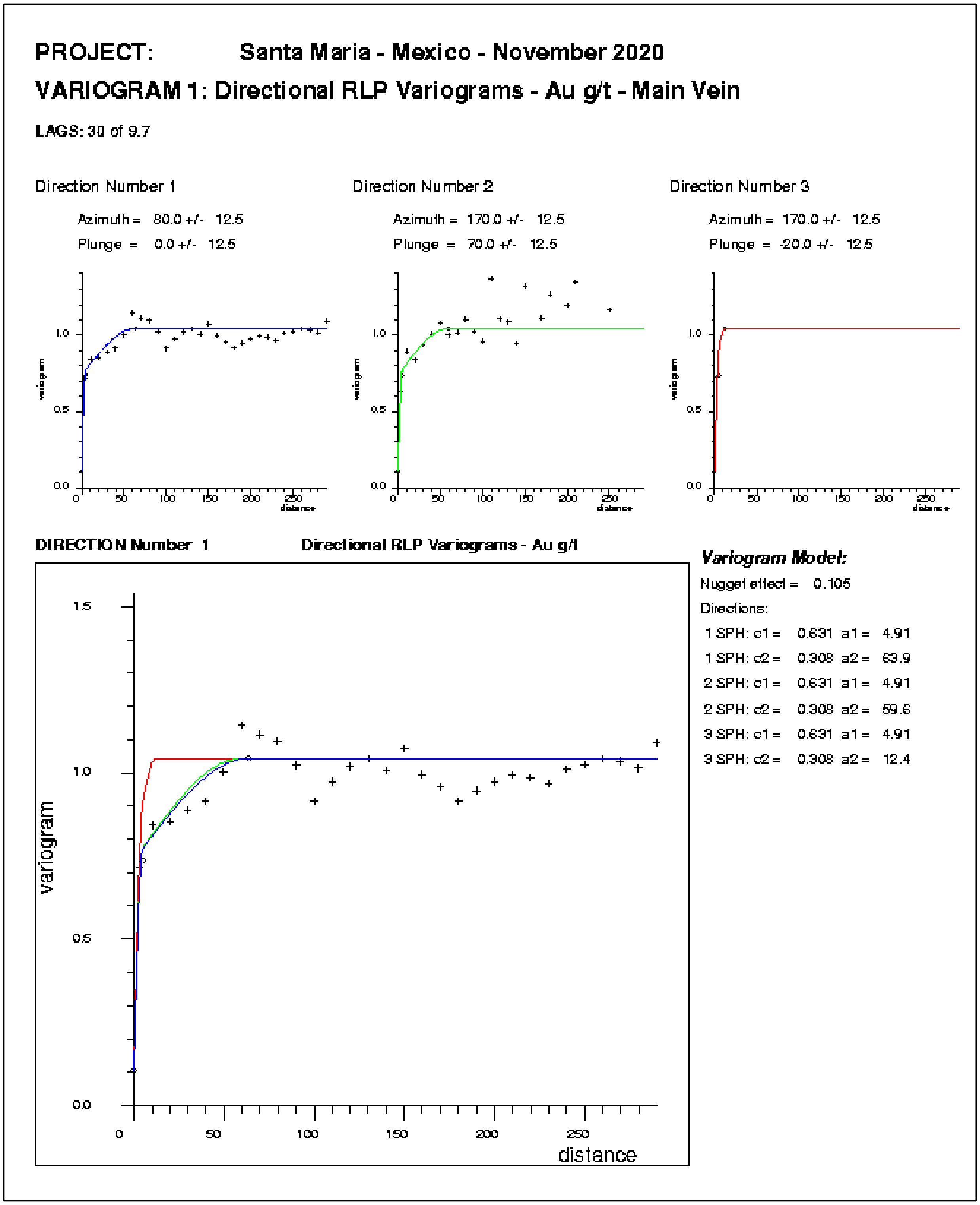


Figure 14-11: Variogram Model of Gold for the Main Vein – Santa Maria Deposit



14.6 GRADE ESTIMATION

The estimation of silver and gold grades was performed with the ordinary kriging technique (OK) on capped composites. The block model structure consists of an orthogonal model (no rotation) with block dimensions of 2m (X) x 1m (Y) x 2m (Z). The block grid definition is presented in Table 14-6. It should be noted that the coordinates of the origin of the block model are for the edges of the first block in the model.

Table 14-7:Block Grid Definition – Santa Maria Deposit

Main and Dos Veins Area					
Coordinates	Origin m	Rotation	Distance m	Block Size m	Number of Blocks
Easting (X)	425770.0	0° X Axis Azimuth = 90°	1,050.0	2.0	525
Northing (Y)	2,959,830.0		270.0	1.0	270
Elevation(Z)	1,565.0		590.0	2.0	295
Number of Blocks		41,816,250			

A minimum of 2 and maximum of 12 samples were required to calculate a block estimate. The search ellipsoid was dimensioned and oriented according to the variogram models. A summary of the estimation parameters is shown in Table 14-7.

Table 14-8: Estimation Parameters for Silver and Gold Grades – Santa Maria Deposit

Estimation Parameters – Silver Grade – Santa Maria Deposit									
Veins	Estimation method	minimum # of samples	maximum # of samples	search ellipsoid – long axis - azimuth/dip	search ellipsoid – long axis - size	search ellipsoid – short axis - azimuth/dip	search ellipsoid – short axis - size	search ellipsoid – vertical axis - azimuth/dip	search ellipsoid – vertical axis - size
Main Vein	OK	2	12	80°/0°	52.0m	170°/70°	38.0m	170°/-20°	11.0m
Dos Vein	OK	2	12	80°/0°	53.0m	170°/-75°	28.0m	170°/15°	11.0m
Estimation Parameters – Gold Grade – Santa Maria Deposit									
Main Vein	OK	2	12	80°/0°	52.0m	170°/70°	38.0m	170°/-20°	11.0m
Dos Vein	OK	2	12	80°/0°	53.0m	170°/-75°	28.0m	170°/15°	11.0m

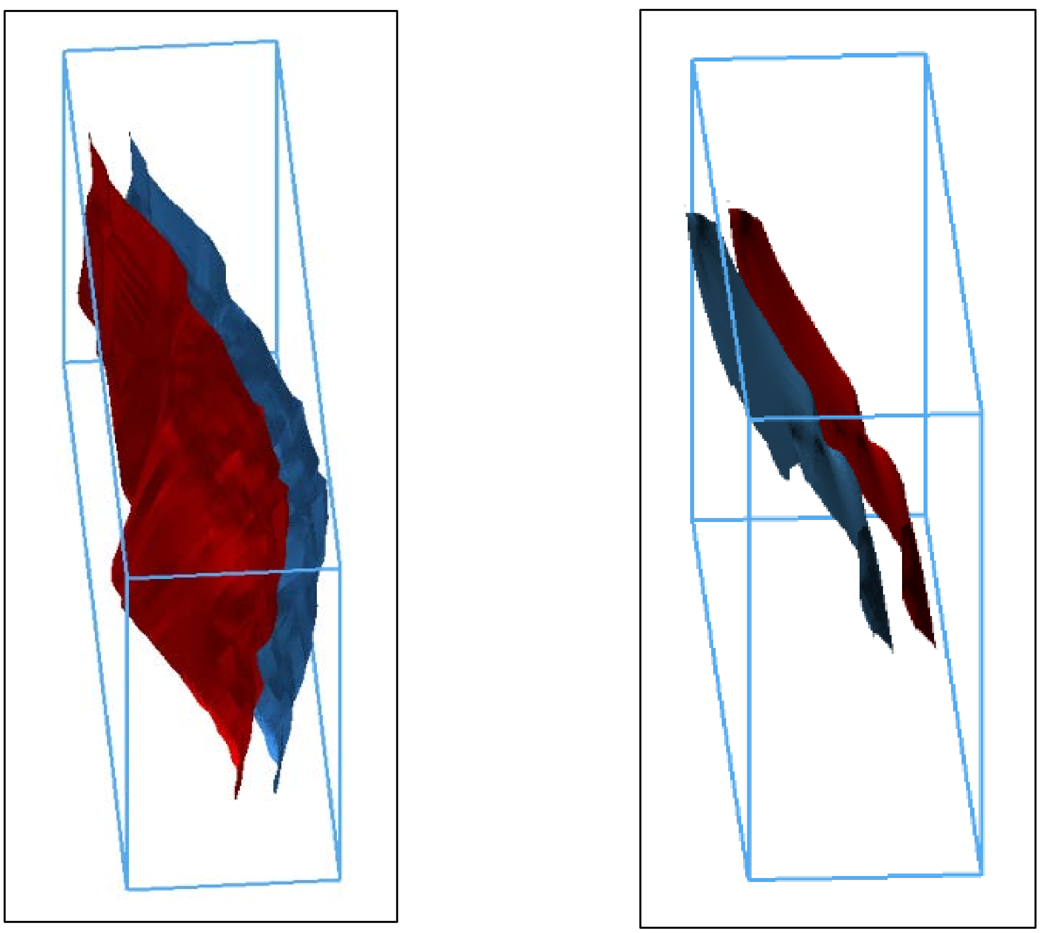
An anisotropy model was utilized for the estimation of silver and gold grades for the Main and Dos veins. The anisotropy model consists of azimuth, dip, and plunge angles assigned to each block estimated within the veins. These angles are calculated from surfaces for the hanging wall and footwall geometries of each vein. Examples of these surfaces are presented in Figure 14-13. During the grade estimation process, the search ellipsoid is oriented according to these angles on a block by block basis. This approach ensures that the local profile of the vein is accounted for in the search of samples through the grade interpolation procedure.

Since a single block size was utilized in the estimation process, the fraction of each block within the Main and Dos veins was recorded and later utilized for the tonnage calculation of the mineral resources within each vein.

The grade estimation process consisted of a 3-pass approach with the parameters of the first pass as presented in Table 14-7. The estimation parameters of the second and third passes are the same with the exception of an enlarged search ellipsoid by 1.5 times and 3 times the dimensions from the first pass, respectively. In this case, priority was given to estimates from the first pass, followed by estimates from the second pass for un-estimated blocks from the first pass, and finally the estimates of the third pass for un-estimated blocks from the first and second passes. From this process, approximately 90% of the blocks within the mineralized veins were estimated. No estimates were calculated outside of the Main and Dos veins.

Figure 14-12: Hanging Wall (red) and Footwall (blue) Anisotropy Surfaces for the Main and Dos Veins – Perspective View Looking East - Santa Maria Deposit

Main Vein | Dos Vein



14.7 VALIDATION OF SILVER AND GOLD GRADE ESTIMATES

Validation tests were carried out on the estimates to examine the possible presence of a bias and to quantify the level of smoothing/variability.

14.7.1 Visual Inspection

A visual inspection of the block estimates with the drill hole grades on plans and cross-sections was performed as a first check of the estimates. Observations from stepping through the estimates along the different planes indicated that there was overall a good agreement between the drill hole grades and the estimates. The orientations of the estimated grades were also according to the projection angles defined by the anisotropy model of the ellipsoid's orientation angles. The silver grades are displayed on longitudinal sections for the Main and Dos veins in Figures 14-14 and 14-15, respectively. Similarly, the gold grades are displayed on longitudinal sections for the Main and Dos veins in Figures 14-16 and 14-17, respectively:

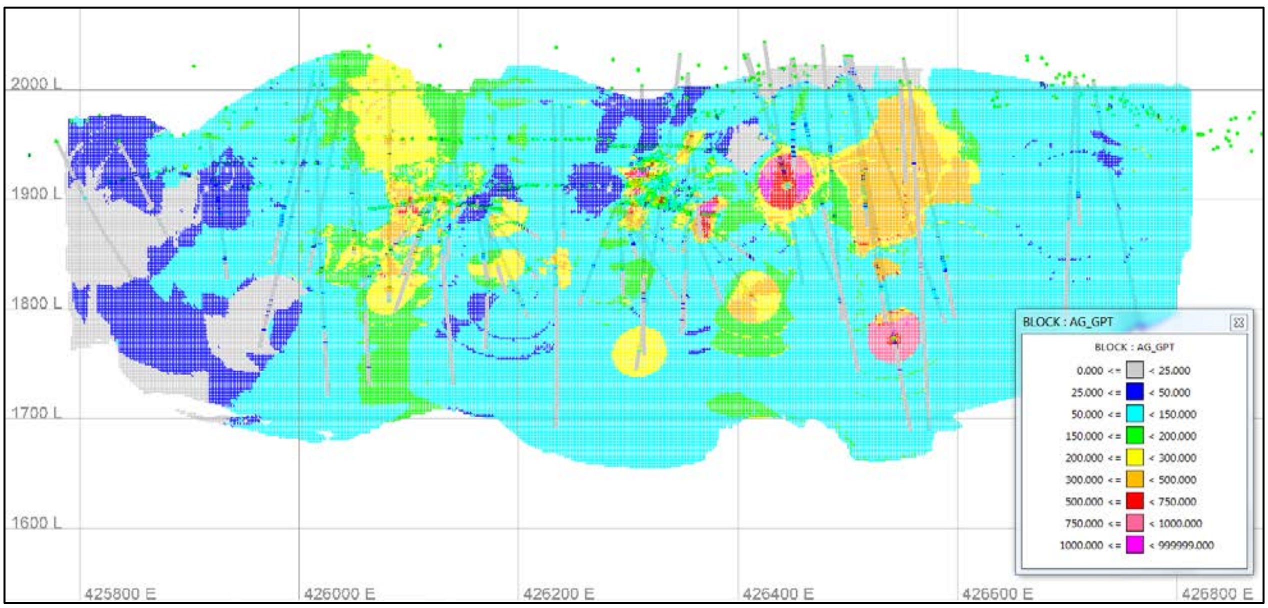


Figure 14-13: Longitudinal Section Looking North – Main Vein – Silver Grades - Santa Maria Deposit

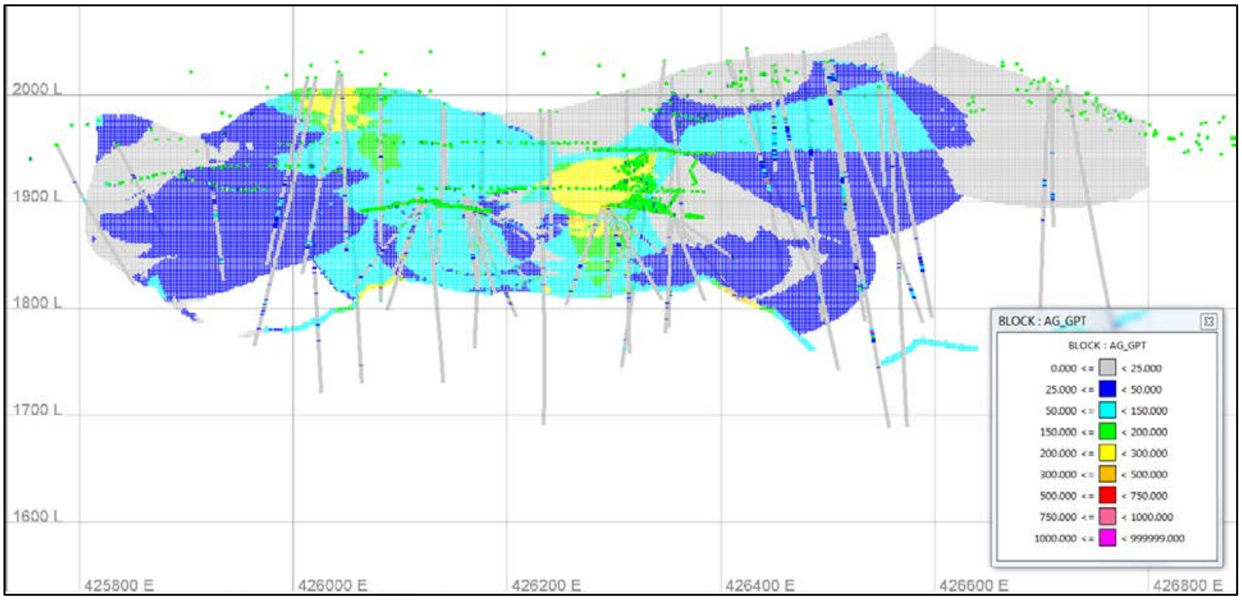


Figure 14-14: Longitudinal Section Looking North – Dos Vein – Silver Grades - Santa Maria Deposit

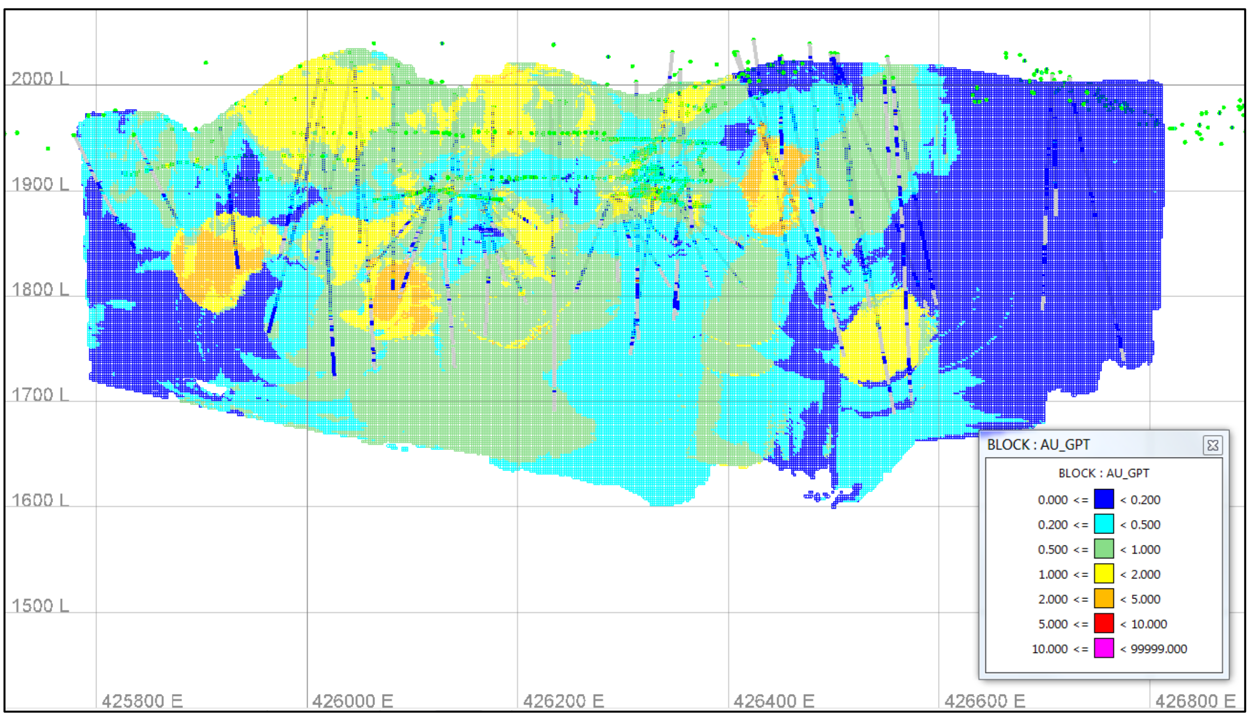


Figure 14-15: Longitudinal Section Looking North – Main Vein – Gold Grades - Santa Maria Deposit

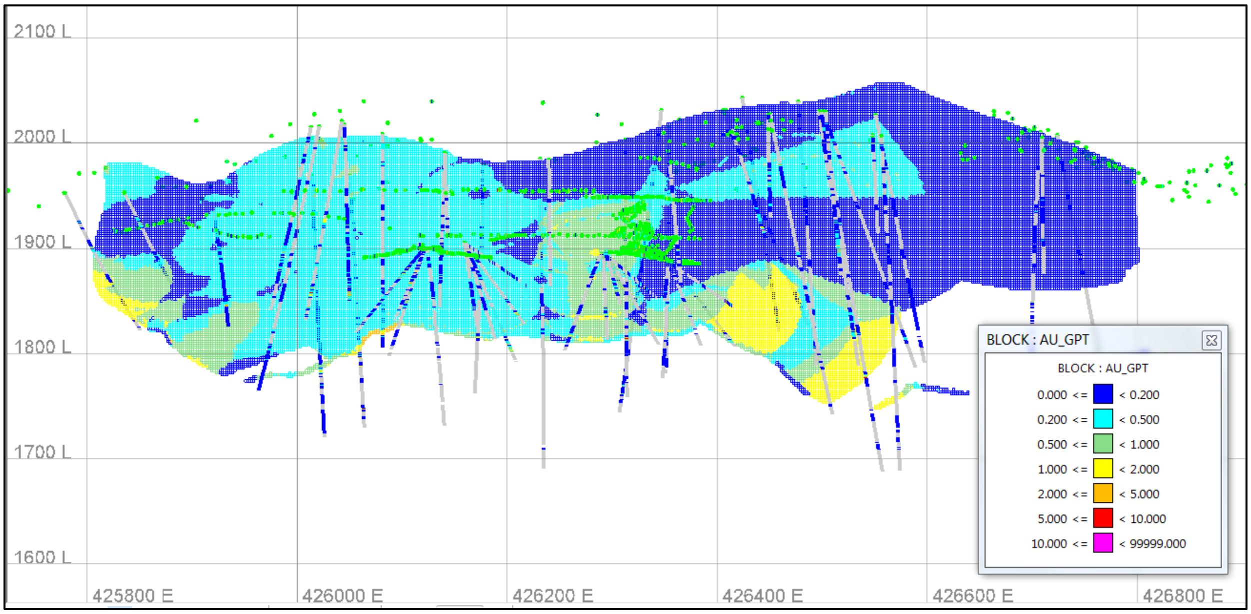


Figure 14-16: Longitudinal Section Looking North – Dos Vein – Gold Grades - Santa Maria Deposit

14.7.2 Global Bias Test

The comparison of the average silver and gold grades from the declustered composites and the estimated block grades examines the possibility of a global bias of the estimates. As a guideline, a difference between the average grades of more than ± 10% would indicate a significant over- or under-estimation of the block grades and the possible presence of a bias. It would be a sign of difficulties encountered in the estimation process and would require further investigation. A polygonal declustered method with a bounding solid corresponding to the estimated volume was utilized for this exercise.

Results of the average silver and gold grade comparisons are presented in Table 14-8 for the Main and Dos veins.

Table 14-9: Average Silver and Gold Grade Comparison – Polygonal-Declustered Composites with Block Estimates – Santa Maria Deposit

Stats	Silver		Gold	
	Declustered Composites Ag g/t	Block Estimates Ag g/t	Declustered Composites Au g/t	Block Estimates Au g/t
Average Grade	113.8	113.3	0.501	0.503
Difference	-0.4%		0.4%	

As seen in Table 14-8, the average silver and gold grades between the declustered composites and the block estimates are well within the limits of the tolerance levels of acceptability. It can thus be concluded that no global bias is present in the silver and gold grade estimates.

14.7.3 Local Bias Test

A comparison of the grade from composites within a block with the estimated grade of that block provides an assessment of the estimation process close to measured data. Pairing of these grades on a scatterplot gives a statistical valuation of the estimates. It is anticipated that the estimated block grades should be similar to the composited grades within the block, however without being of exactly the same value. Thus, a high correlation coefficient will indicate satisfactory results in the interpolation process, while a medium to low correlation coefficient will be indicative of larger differences in the estimates and would suggest a further review of the interpolation process. Results from the pairing of composited and estimated grades within blocks pierced by a drill hole are presented in Table 14-9 for silver and gold grades.

Table 14-10: Silver and Gold Grade Comparison for Blocks Pierced by a Drill Hole – Paired Composite Grades with Block Grade Estimates – Santa Maria Deposit

Silver				Gold			
Block Composites Avg. Ag g/t	Block Estimates Avg. Ag g/t	Difference	Correlation Coefficient	Block Composites Avg. Au g/t	Block Estimates Avg. Au g/t	Difference	Correlation Coefficient
220.4	225.4	2.3%	0.879	0.694	0.701	1.0%	0.861

As seen in Table 14-9, the block grade estimates are very similar to the composite grades within blocks pierced by a drill hole, for both silver and gold. Combined with high correlation coefficients, this analysis indicates satisfactory results from the estimation process. Thus no local bias is observed.

14.7.4 Grade Profile Reproducibility

The comparison of the grade profiles of the declustered composites with that of the estimates allows for a visual verification of an over- or under-estimation of the block estimates at the global and local scales. A qualitative assessment of the smoothing/variability of the estimates can also be observed from the plots. The output consists of three graphs displaying the average grade according to each of the coordinate axes (east, north, elevation). The ideal result is a grade profile from the estimates that follows that of the declustered composites along the three coordinate axes, in a way that the estimates have lower high-grade peaks than the composites, and higher low-grade peaks than the composites. A smoother grade profile for the estimates, from low to high grade areas, is also anticipated in order to reflect that these grades represent larger volumes than the composites.

The silver grade profiles are presented in Figure 14-18 and the gold grade profiles in Figure 14-19.

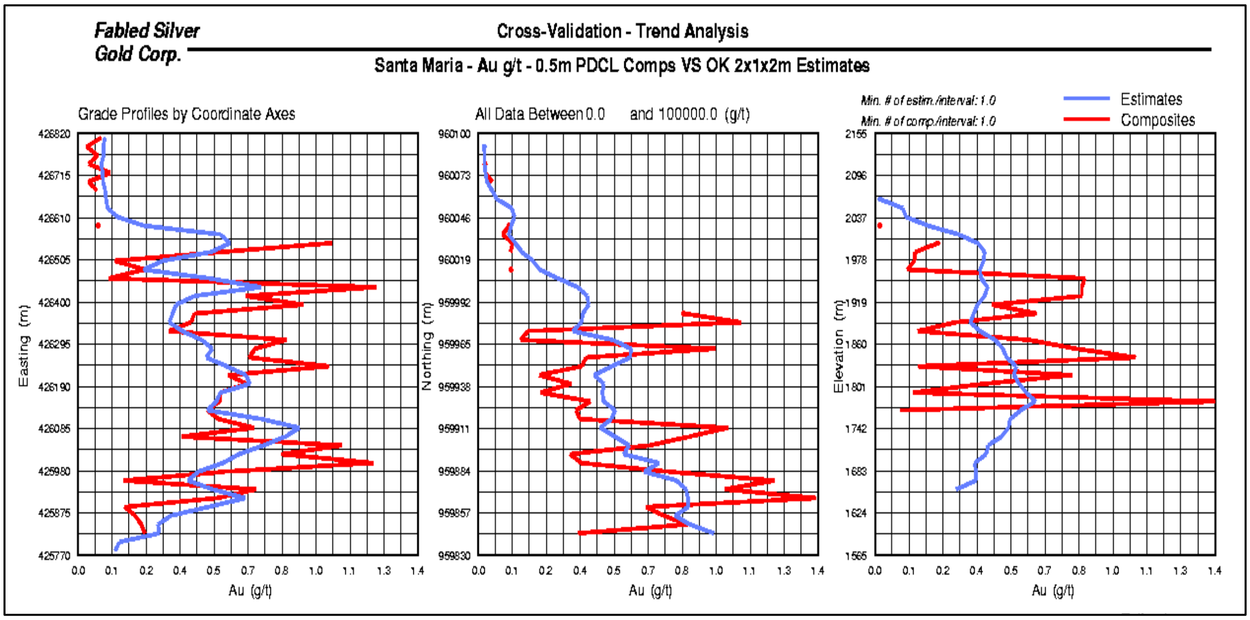


Figure 14-17: Silver Grade Profiles of Declustered Composites and Block Estimates – Santa Maria Deposit

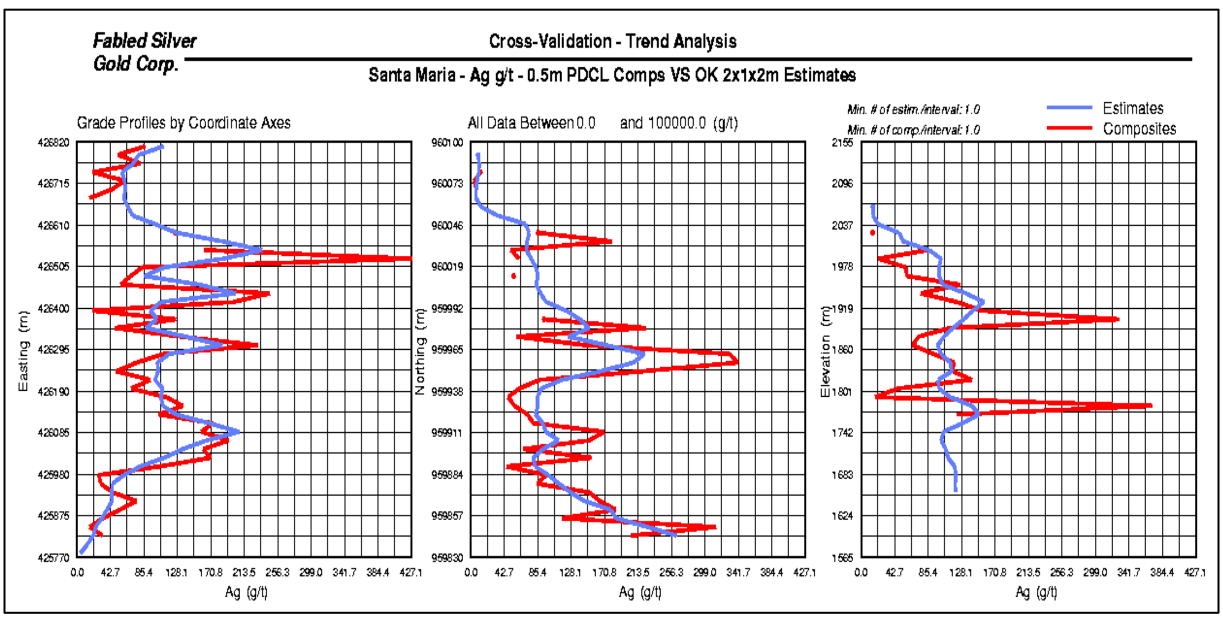


Figure 14-18: Gold Grade Profiles of Declustered Composites and Block Estimates – Santa Maria Deposit

From the plots of Figures 14-18 and 14-19, it can be seen that the silver and gold grade profiles of the declustered composites are well reproduced by those of the block estimates and consequently that no global or local bias is observed. As anticipated, some smoothing of the block estimates can be seen in the profiles, where estimated grades are higher in lower grade areas and lower in higher grade areas.

14.7.5 Level of Smoothing/Variability

The level of smoothing/variability of the estimates can be measured by comparing a theoretical distribution of block grades with that of the actual estimates. The theoretical distribution of block grades is derived from that of the declustered composites, where a change of support algorithm is utilized for the transformation (Indirect Lognormal Correction). In this case, the variance of the composites' grade population is corrected (reduced) with the help of the variogram model, to reflect a distribution of block grades (2m x 1m x 2m). The comparison of the coefficient of variation (CV) of this population with that of the actual block estimates provides a measure of smoothing. Ideally a lower CV from the estimates by 5 to 25% is targeted as a proper amount of smoothing. This smoothing of the estimates is desired as it allows for the following factors: the imperfect selection of ore blocks at the mining stage (misclassification), the block grades relate to much larger volumes than the volume of core (support effect), and the block grades are not perfectly known (information effect). A CV lower than 5 to 25% for the estimates would indicate a larger amount of smoothing, while a higher CV would represent a larger amount of variability. Too much smoothing would be characterized by grade estimates around the average grade, where too much variability would be represented by estimates with abrupt changes between lower and higher grade areas.

Results of the level of smoothing/variability analysis are presented in Table 14-10 for the silver and gold grade estimates. As observed in this Table, the CV of the silver estimates is within the targeted range of acceptability, while that of the gold estimates is slightly lower than the range from the guidelines. It is thus concluded that the amount of smoothing of the block grade estimates is of an adequate level overall.

Table 14-11: Level of Smoothing/Variability of Silver and Gold Grade Estimates – Santa Maria Deposit

Silver			Gold		
CV – Theoretical Block Grade Distribution	CV – Actual Block Grade Distribution	Difference	CV – Theoretical Block Grade Distribution	CV – Actual Block Grade Distribution	Difference
1.288	1.073	-16.7%	1,271	0.947	-25.5%

14.8 RESOURCE CLASSIFICATION

The mineral resource was classified as indicated and inferred based on the variogram ranges of the second structures. The average distance of samples from the block center was utilized as the primary classification criterion. An on-screen review and uniformization of the indicated portion of the resources was subsequently performed. No measured or indicated resources were assigned to the estimates of the Dos vein due to the reduced amount of assay data available at this time. No measured resources were assigned to the Main vein due to local uncertainties. The distances to categorize the resources into the different classes are provided in Table 14-11, and a longitudinal section of the indicated and inferred categories for the Main vein is presented in Figure 14-20.

Table 14-12: Classification Distances – Santa Maria Deposit

Veins	Indicated	Inferred
Main Vein	≤ 52.0m	< 52.0m and ≤ 104.0m
Dos Vein	-	≤ 104.0m

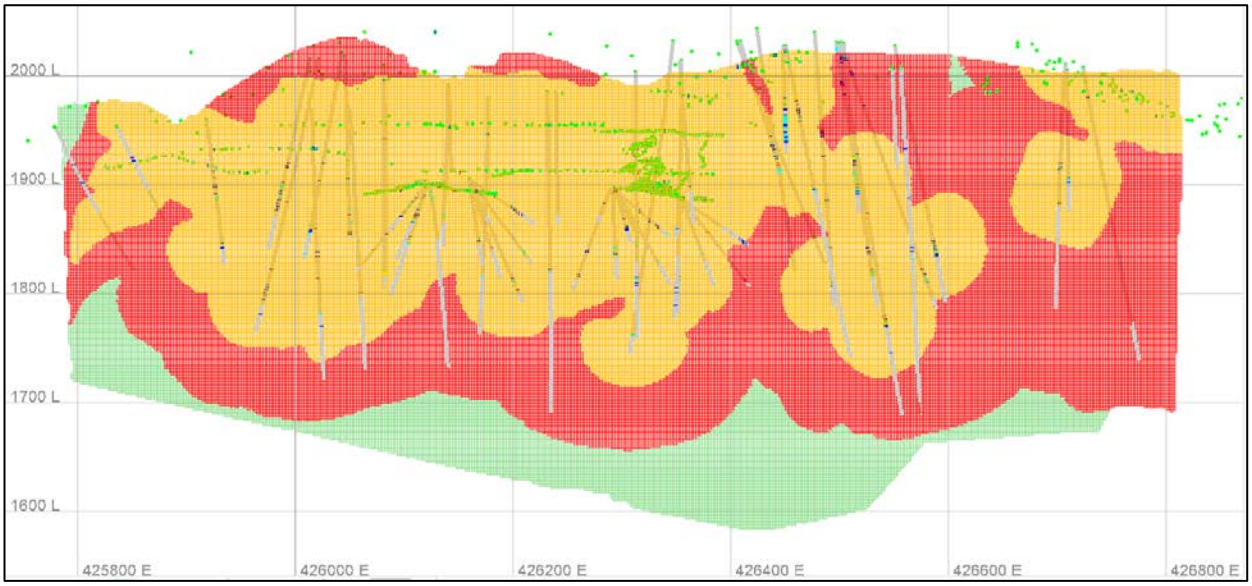


Figure 14-19: Classification of Mineral Resources of the Main Vein – Indicated (orange), Inferred (red), Not Classified (green) - Longitudinal Section Looking North – Santa Maria Deposit

14.9 EDITING OF THE BLOCK MODEL

Prior mining of the Main vein was accounted for in the mineral resource block model. Mined out shapes of underground stopes, drifts, and shafts were taken from information provided by the previous operator. For such, the block fraction within these mined out voids was recorded in the block model and utilized in the calculation of the remaining mineral resources. An example of the mined out stopes, drifts, and shafts is presented for the Main vein in Figure 14-21.

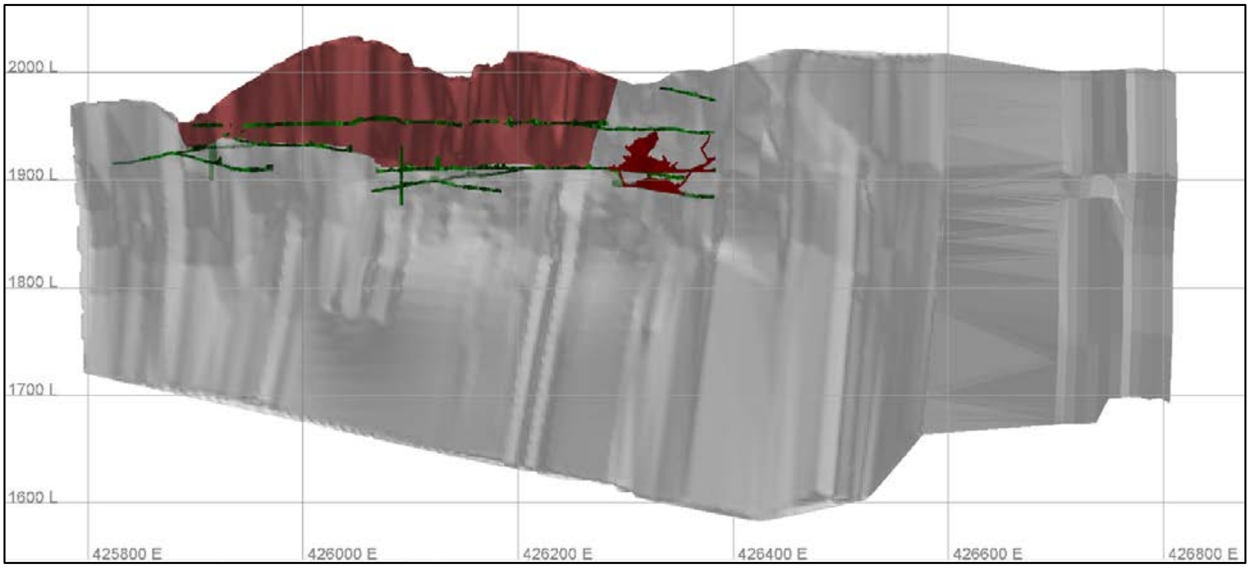


Figure 14-20: Mined Out Stopes, Drifts, and Shafts – Main Vein – Santa Maria Deposit

The block percentage below the topographic surface was also recorded in the block model and utilized in the tonnage calculation of the mineral resources.

14.10 MINERAL RESOURCE CALCULATIONS

The mineral resource was calculated for the exact proportion of 2m (X) x 1m (Y) x 2m (Z) blocks within each vein with specific gravity (SG) values based on reduced oxidation state (redox). A total of 1,317 SG measurements were available, with 108 measurements located within the Main and Dos veins. Statistics were carried out on these SG values for each redox unit of each vein, and the average SG was utilized in the resource's tonnage calculation. Table 14-12 presents the different average SG values.

Figure 14-21: Specific Gravity – Santa Maria Deposit

Vein - Redox	Specific Gravity
Main Vein - Oxide	2.526
Main Vein – Mixed	2.623
Main Vein – Sulphide	2.612
Dos Vein – Oxide	2.526
Dos Vein – Mixed	2.623
Dos Vein - Sulphide	2.612

As previously mentioned, the resource's tonnage calculation accounts for the exact fraction of the block within the Main and Dos veins, the percentage of the block below the topography surface, and the fraction of the block located outside the mined out underground voids.

A silver equivalent grade was calculated from the silver and gold grade estimates. The following elements presented in Table 14-13 were considered for the calculation of the silver equivalent grade and cut-off grade in order to reflect a reasonable expectation of economic extraction of the mineral resource estimates, as prescribed in NI 43-101.

Figure 14-22: Silver Equivalent and Break-Even Cut-Off Grade Factors – Santa Maria Deposit

Ag price	$20.00/oz
Au Price	$1,600.00/oz
Ag Recovery	90%
Au Recovery	80%
Mining Cost	$55.00/t
Milling Cost	$40.00/t
Transportation Cost	$5.00/t

All dollar amounts are in US dollars

The silver equivalent grade is calculated as follows:

AgEq = (Ag x 0.9) + ((Au x 0.8) x ($1600/oz / $20/oz))

The silver equivalent break-even cut-off grade is calculated as follows:

AqEq cut-off = ($55/t mining + $40/t milling +$5/t transport) / ($20 AgEq/oz x .03215 oz/g) =155.5 g/t

The indicated and inferred mineral resources for the different mineralized zones are presented in Table 14-14 at a 155 g/t AgEq cut-off. The mineral resources were also tabulated by redox unit in Table 14-15 at a 155 g/t AgEq cut-off. No external dilution from mining was included in the reported results from Tables 14-14 and 14-15.

The mineral resources were reported at the break-even silver equivalent (AgEq) cut-off grade to reflect an underground extraction scenario. The mineral resources above the 155.0 g/t AgEq cut-off grade are displayed in Figures 14-24 and 14-25 for the Main and Dos veins, respectively. As seen in these Figures, it is believed that the continuity of the mineral resources above the break-even cut-off is sufficient to support underground selective mining methods.

Figure 14-24: Mineral Resources Above the Break-Even Cut-Off (in orange) – Main Vein – Indicated Mineral Resources (shaded) and Inferred Mineral Resources (not shaded) – Longitudinal Section Looking North

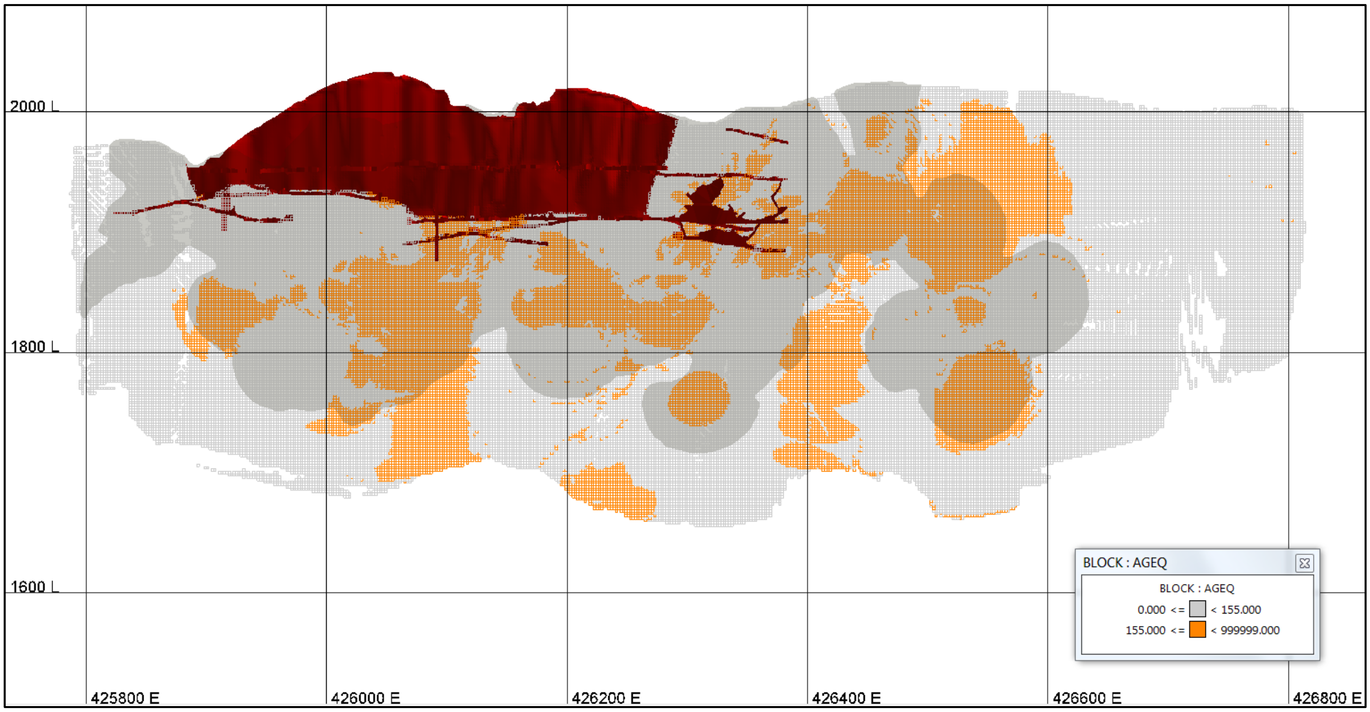
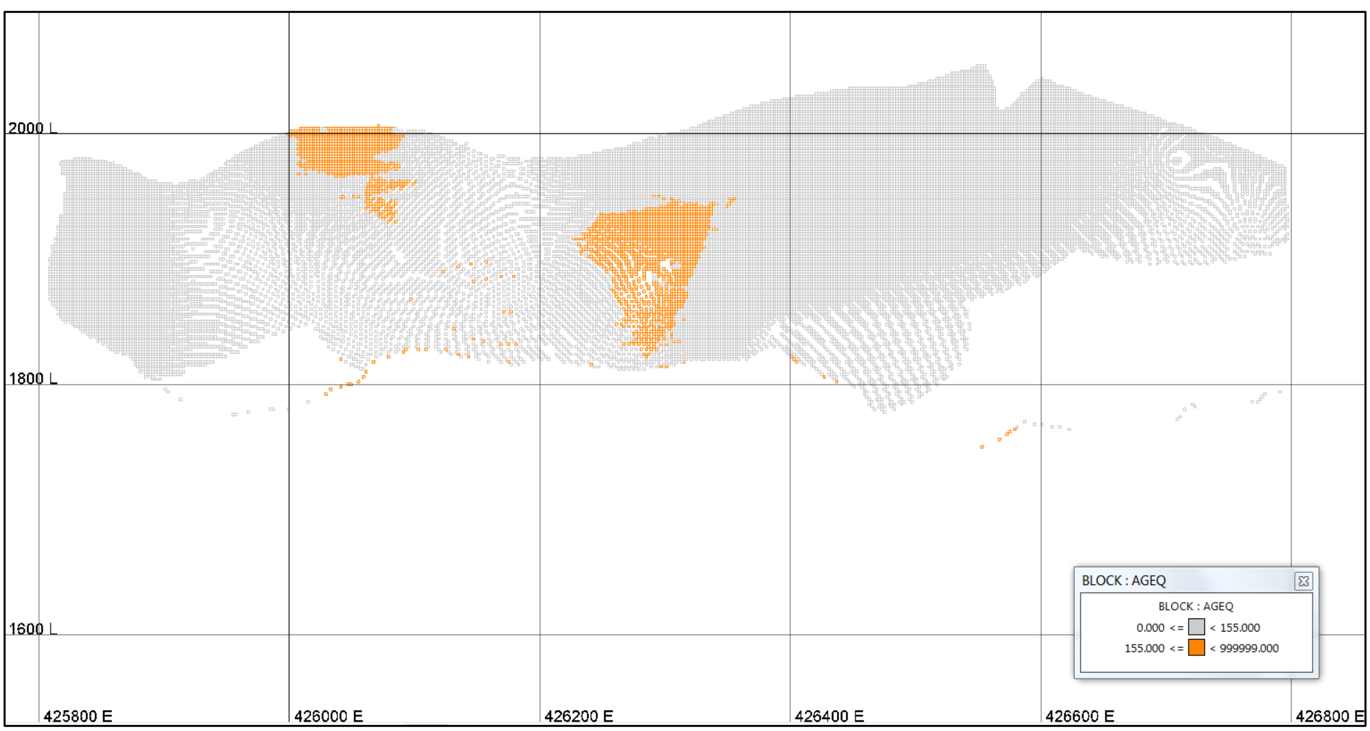


Figure 14-25: Mineral Resources Above the Break-Even Cut-Off – Dos Vein – Inferred Mineral Resources – Longitudinal Section Looking North



It should be noted that 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 resources estimated will be converted into mineral reserves. The estimate of mineral resources may be materially affected by future changes in environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. However, there are no currently known issues that negatively impact the stated mineral resources.

The CIM definitions were followed for the classification of indicated and inferred mineral resources. The inferred mineral resources have a lower level of confidence and must not be converted to mineral reserves. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Table 14-13: Mineral Resources at a 155 g/t AgEq Cut-Off – Effective November 19, 2020 – Santa Maria Deposit

Indicated[3,4]								
AgEq[1,2] Cut-Off g/t	Vein	Tonnage tonnes	Avg AgEq[2] Grade g/t	AgEq[2] Content oz	Avg Ag Grade g/t	Ag Content oz	Avg Au Grade g/t	Au Content oz
155.0	Main Vein	318,813	315.6	3,235,262	271.7	2,784,945	1.11	11,378
	Dos Vein	-	-	-	-	-	-	-
	Total	318,813	315.6	3,235,262	271.7	2,784,945	1.11	11,378
Inferred[3,4]								
AgEq[1,2] Cut-Off g/t	Vein	Tonnage tonnes	Avg AgEq[2] Grade g/t	AgEq[2] Content oz	Avg Ag Grade g/t	Ag Content oz	Avg Au Grade g/t	Au Content oz
155.0	Main Vein	124,305	239.5	957,169	209.8	838,385	0.79	3,157
	Dos Vein	23,475	216.3	163,241	201.4	152,019	0.55	415
	Total	147,780	235.8	1,120,410	208.5	990,405	0.75	3,572

1. *AgEq cut-off grade is calculated as follows:*

AqEq cut-off = ($55/t mining + $40/t milling +$5/t transport) / ($20 Ag/oz x 0.03215 oz/g) = 155.5 g/t

2. *Ag equivalent grade is calculated from $20 Ag/oz and $1,600 Au/oz, 90% Ag recovery and 80% Au recovery:*

AgEq = (Ag x 0.9) + ((Au x 0.8) x 80.0)

3. *Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, changes in global gold markets or other relevant issues.*
4. *The CIM definitions were followed for the classification of indicated and inferred Mineral Resources. The quantity and grade of reported inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred Mineral Resources as an indicated Mineral Resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured Mineral Resource category.*

Table 14-14: Mineral Resources at a 155 g/t AgEq[1] Cut-Off – by Redox - Effective November 19, 2020 – Santa Maria Deposit

Indicated[3,4]							
Redox	Tonnage tonnes	Avg AgEq[2] Grade g/t	AgEq[2] Content oz	Avg Ag Grade g/t	Ag Content oz	Avg Au Grade g/t	Au Content oz
Oxide	114,461	394.0	1,449,922	359.0	1,321,122	1.11	4,085
Mixed	97,842	278.4	875,761	230.5	725,082	1.11	3,492
Sulphide	106,362	265.4	907,566	215.5	736,927	1.12	3,830
Inferred[3,4]							
Redox	Tonnage tonnes	Avg AgEq[2] Grade g/t	AgEq[2] Content oz	Avg Ag Grade g/t	Ag Content oz	Avg Au Grade g/t	Au Content oz
Oxide	67,438	284.1	616,072	271.9	589,630	0.62	1,340
Mixed	4,685	201.0	30,277	163.8	24,670	0.83	126
Sulphide	75,645	194.8	473,824	154.6	376,031	0.87	2,108

1. *AgEq cut-off grade is calculated as follows:*

AqEq cut-off = ($55/t mining + $40/t milling +$5/t transport) / ($20 Ag/oz x 0.03215 oz/g) = 155.5 g/t

2. *Ag equivalent grade is calculated from $20 Ag/oz and $1,600 Au/oz, 90% Ag recovery and 80% Au recovery:*

   AgEq = (Ag x 0.9) + ((Au x 0.8) x 80.0)

3. *Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, changes in global gold markets or other relevant issues.*
4. *The CIM definitions were followed for the classification of indicated and inferred Mineral Resources. The quantity and grade of reported inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred Mineral Resources as an indicated Mineral Resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured Mineral Resource category.*

14.11 DISCUSSION

The estimation of the mineral resource of the Santa Maria project was carried out with the drill hole database and geology model provided by the previous operator. This input data is believed to be relevant and of sufficient quality to provide an adequate estimation of the mineral resources.

A clustering of assays was observed from the underground channel samples in the upper levels of the Main vein. These areas, thus, present better local definition of the mineralization and are indicative of the possible outcome from additional infill drilling. The continuity of the Main and Dos veins along strike and dip, away from the underground on-vein drifts, was interpreted from the surface and underground drill holes. There is a good potential for additional mineral resources further along strike and down dip and additional exploration drilling is recommended. As well, additional infill drilling would provide greater confidence in the areas currently identified.

There is greater certainty in the estimation of the mineral resources for the Main vein as more assay data is present. The Dos vein is less well informed and for such difficulties in assessing the silver and gold grade continuity were experienced in this study. Additional infill drill holes are recommended to provide better assurance in the estimation of the mineral resources of the Dos vein.

The strategy employed for the estimation of silver and gold grades considered an anisotropy model of azimuth, dip, and plunge angles. These angles were derived from hanging wall and footwall surfaces for both veins. This technique allowed for the orientation of the search ellipsoid on a block by block basis, following the turns and bends of the veins at a local scale, providing a more realistic outcome of the grade estimates. As well, a restrictive search was applied to the higher silver and gold grades to prevent unrealistic generation of higher grade estimates in areas less informed.

Validation of the silver and gold grade estimates have shown good results with unbiased estimates and appropriate levels of smoothing. It is thus believed that the mineral resource estimation of the Santa Maria deposit is a realistic representation based on the available drill hole information and current geologic knowledge.

15 MINERAL RESERVE ESTIMATE

This preliminary economic assessment is preliminary in nature. It includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

16 MINING METHODS

This preliminary economic assessment is preliminary in nature. It includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

Standalone economics have not been undertaken for the Indicated Resources and as such no Reserves have been estimated for the Project.

A preliminary mine plan has been generated for the PEA. The existing underground facilities would be used to gain access to the new underground Resources using the current adit on the western end of the property. The mine plan includes 353,000 tonnes of mill feed from stoping activities using 2 mining methods: resue cut and fill and sublevel stoping with fill.

16.1 MINING AND GEOTECHNICAL CONDITIONS

The Santa Maria resource is a narrow vein deposit that has with a vertical to near vertical dip. There are two primary structures, the Santa Maria vein and the Santa Maria Dos vein. The true width of the material that may be planned for extraction is 0.6 m to 3.7 m. The lack of ground support in the existing old workings demonstrate that the host rock and the vein material are stable. However, there has been no geotechnical investigation made at the property. There is a small amount of ground water, which fluctuates with the climate's rainy season, in the old workings.

16.2 MINE OPERATIONS

The planned extraction uses two types of stoping: Sublevel and Fill, and Resue Cut and Fill. **Figure 16-1** outlines the stope method, general stope zone, and elevation of the proposed extractions. The general operation utilizes handheld pneumatic jackleg drills for the development and production drilling, 2 LCY LHD units for all mucking and filling tasks, and 15 Tonne haul trucks for the transportation of ROM material for both process feed and waste. The mine work force will be sourced locally from the Parral, Chihuahua region with a few transient miners from other regions. The operation will employ 80 to 90 persons including the General and Administrative staff. The mine production schedule is planned to average ±200 tpd (tonnes per day) of ROM material for processing at toll plants in Parral, and ±125 tpd of development waste. Fill requirements will be sourced from development waste and nearby alluvial deposits.

The mine infrastructure will consist a 900 kw rated prime power generator, 2,100 cfm of compressed air capacity, small maintenance and office facilities, a fuel and lubricant storage area, and settling ponds for the small amount of underground water discharge that happens occasionally during the year. The mine has underground explosive storage magazines that have been permitted under the previous owner's name.

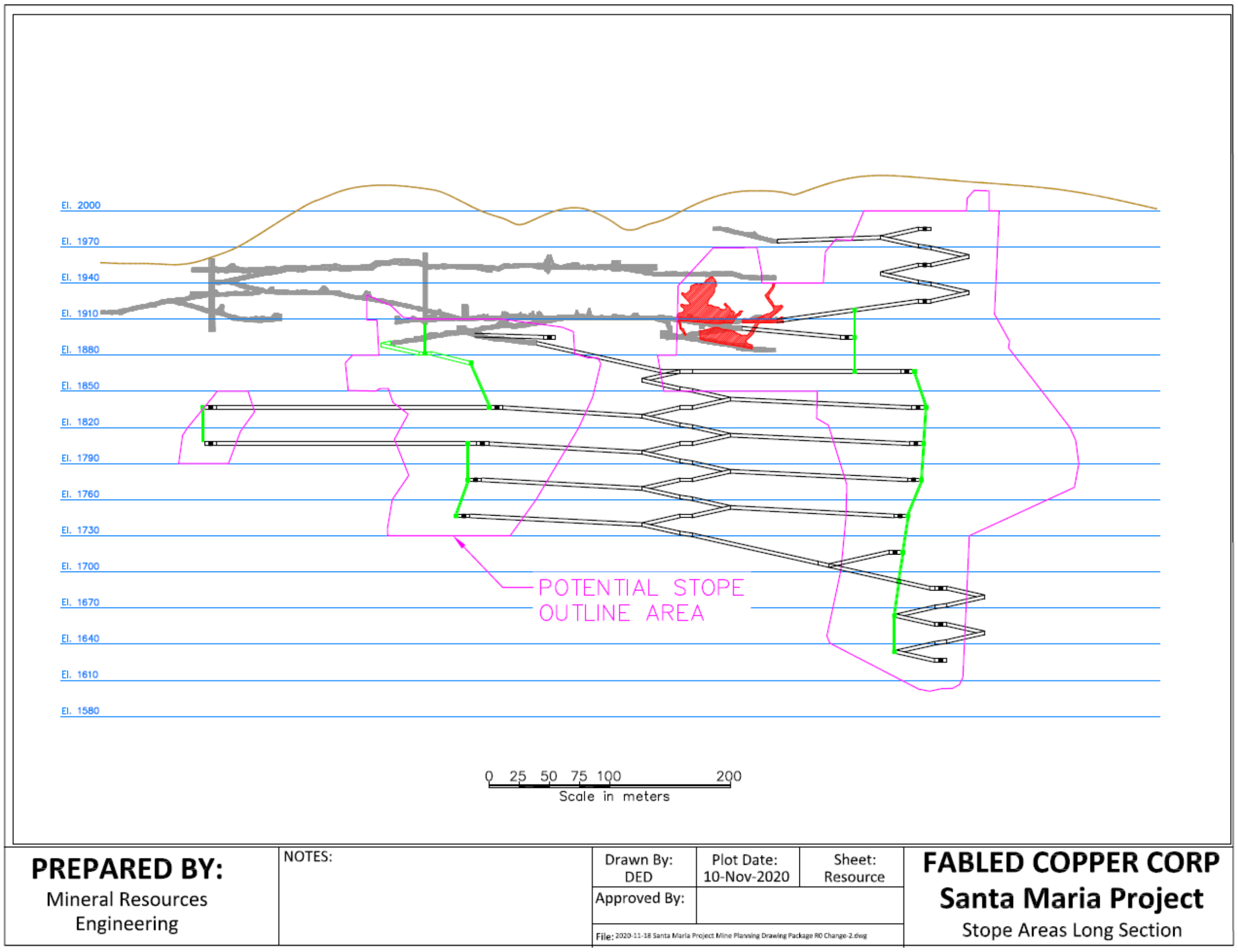


Figure 16-1: Potential Stope Areas

16.2.1 Stope Delineation

The mining width is the definitive control in the stope type selection process. The resue stope method will be employed for areas less than 2.4-meters in width and a minimum mining width of 0.75-meters will be employed. The sublevel stoping will be employed for all areas that are greater than 2.4-meters. The two mining methods can be used in the same stope; resue the narrow areas and sublevel stoping the areas that are wider.

16.2.2 Mining Methods

Two types of mining methods are planned in this analysis for the Santa Maria project: a sublevel Stoping with fill method, and a resue cut and fill method. The width of the mineralized vein will drive the selection of the mining method. The current analysis supports Resue cut and fill for areas of the vein that have a final mining width less than 2.4 m and sublevel stoping will be employed for areas greater than 2.4 m. The vertical extent selected for both stope types is 30 m and 31 m sloped distance in areas of the vein that are not vertical.

16.2.2.1 SUBLEVEL STOPING WITH FILL

Figure 16-2 below outlines the required development and stope extraction sequence proposed for the sublevel stopes at the Santa Maria project.

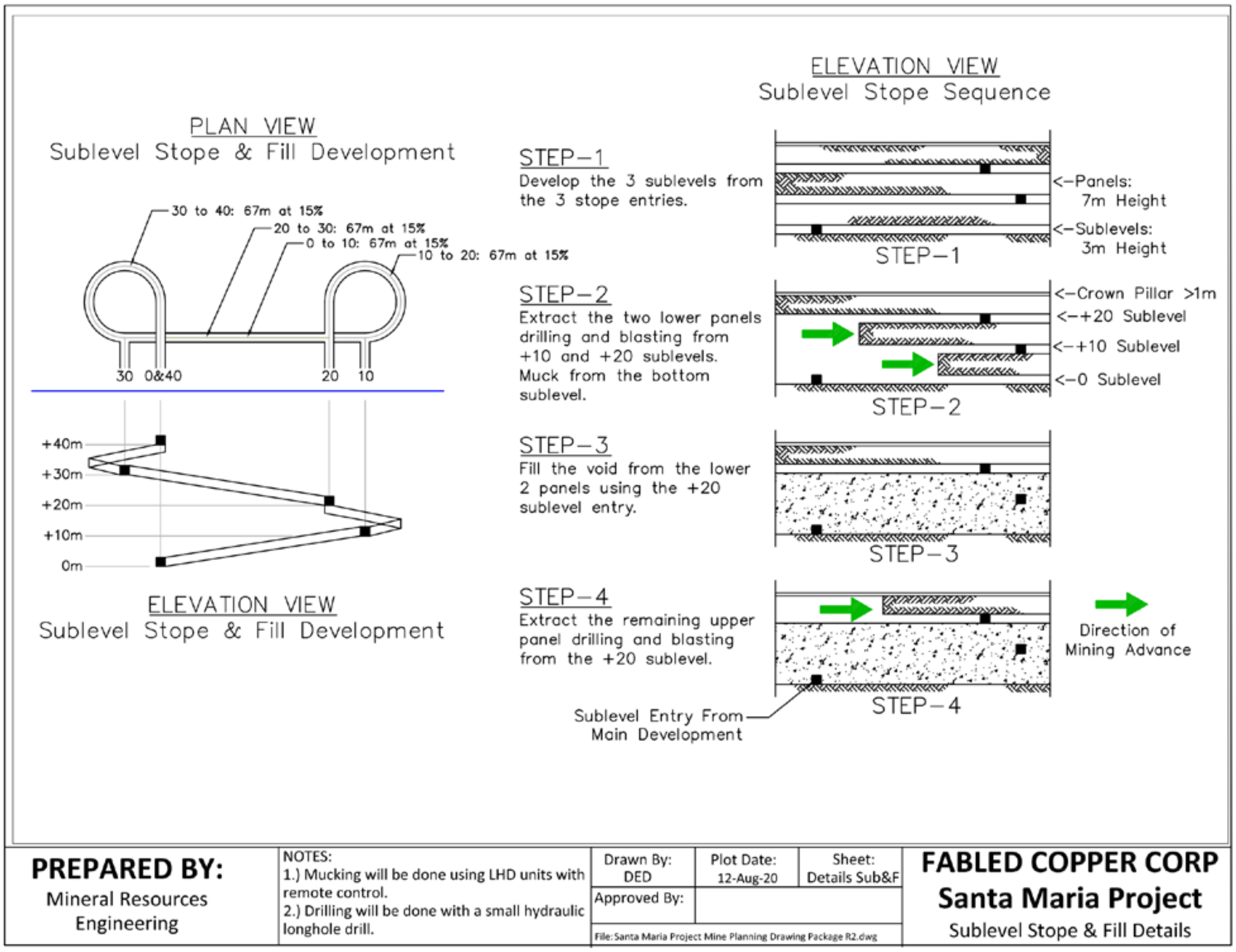


Figure 16-2: Sublevel Stoping and Fill Mining Method

The main development consists of the ramp unit shown in the preceding figure. The development drift is 3.0 m wide by 3.0 m high and driven at a maximum grade of ±15 percent. Development drifts will be excavated by miners with jackleg drills during the production drilling cycle. The muck cycle will be completed with 2.0 LCY LHD units. Explosives used for the excavations will be gelatin dynamite for the primer, ANFO as the primary explosive, and LP delay shock tubing blasting caps for the initiation. Active working faces will be ventilated with Axivane fans providing ventilation air to the face in 30-inch brattice cloth ventilation tubing. The drift will be equipped with 6-inch diameter HDPE tubing for compressed air, 4-inch diameter tubing for water discharge, and 2-inch steel tubing for freshwater delivery to the work areas. Active mining faces will use air powered diaphragm pumps to remove ground water and drill water. This water will be pumped to sumps strategically located throughout the ramp system for removal from the mine using electrically powered submersible pumps.

Each 30 m panel will require three sublevels: one sublevel at the base level (0 m level), the second sublevel locate +10 m above the base sublevel, and the third sublevel located +10 m above the second sublevel. Vein accesses, ±10 m, will be driven from the development ramp to the vein structure. The dimensions of sublevels are the mining width of the ROM material by 3.0 m in high and are started from the intersection of the access to the vein. Sublevels are excavated in both directions until the extent of the planned stope is reached. Ventilation for excavating the sublevels will be supplied by an Axivane fan located in the development ramp providing ventilation air into the sublevel through a 24-inch brattice ventilation tubing. Sublevel drifts will be excavated using miners with jacklegs. Two drill units will be used during the production drilling cycle with the muck cycle completed using 2.0 LCY LHD units. The excavated material will be stored in muck bays adjacent to the main development, near the sublevel access, until the material is transported outside.

A small raise will be excavated at the end of each panel to provide the initial free face for blasting. Mining of the panel material can commence once the base sublevel, the +10 sublevel, and the small raise are completed.

The initial panel, designated as the +0m to +10 m panel, is 7 m in height and will be mined at the width of the defined ROM material, starting at one extent or the other. The production drilling of the panel will be done using a small hydraulic Longhole drill rig. The production drill holes will be drilled downward and break into the base sublevel. This enables the confirmation that the holes bottom in the correct location, thus reducing unnecessary dilution. Explosives will be loaded into the production blast holes from the top. Plugs will be installed in the bottom of the holes. The second cut designated as the +10 m to +20 m panel, is extracted in the same fashion as the 0 m to +10 m panel, with the production drilling done from the +20 m sublevel. Mucking of the blasted material will be done from the 0 m base sublevel using an LHD unit equipped with remote control. The remote control eliminates the danger that exists in the open stope area to an operator. There are two possibilities for extracting the last, upper most, panel:

1.) Fill the void left by extracting the two lower panels and sublevels with waste (barren rock), then extract the panel by drilling the production holes vertically upward while working off the placed fill, or

2.) Drill the production blasting holes vertically upward from the +20 m sublevel while drilling the second panel's production holes, blasting both panel simultaneously.

The internal waste (barren rock) areas that exist within the defined stopes in the sublevels will be mined identical to the ROM material. The two materials will be segregated by blasting barren material or the ROM mineralized material separately. Waste zones within the extents of the panels will not be extracted but left in place as support pillars. These barren zones will be identified by sampling and visual inspection on the sublevels.

Table 16-1: Sublevel Stope Calculated Variables

Sublevel Stope Details	Avg. Sublevel Length (m)	Avg. Sublevel Waste (m)	Stope Life Days	Avg. ROM Rate (tpd)	Avg. Waste Rate (tpd)	ROM Cost per Tonne
Calculated Variables	257	47	604	70	5	$13.15

Notes:
1.) ROM – Run of Mine material assumed for processing
2.) 157-tpd ROM generated during the panel excavations.
3.) 1,170 m3 Total waste generated.
4.) 11,550 m3 Fill required, compacted to 87%

The stope domains and block model were used to define the stope costs and mine life schedule. The average dilution from wall rock, added to the dilution built into the block model, is nine percent.

16.2.2.2 RESUE CUT AND FILL

Figure 16-3: Resue Cut and Fill Mining Method displays the required development and stope extraction sequence proposed for the resue cut and fill stopes at the Santa Maria project.

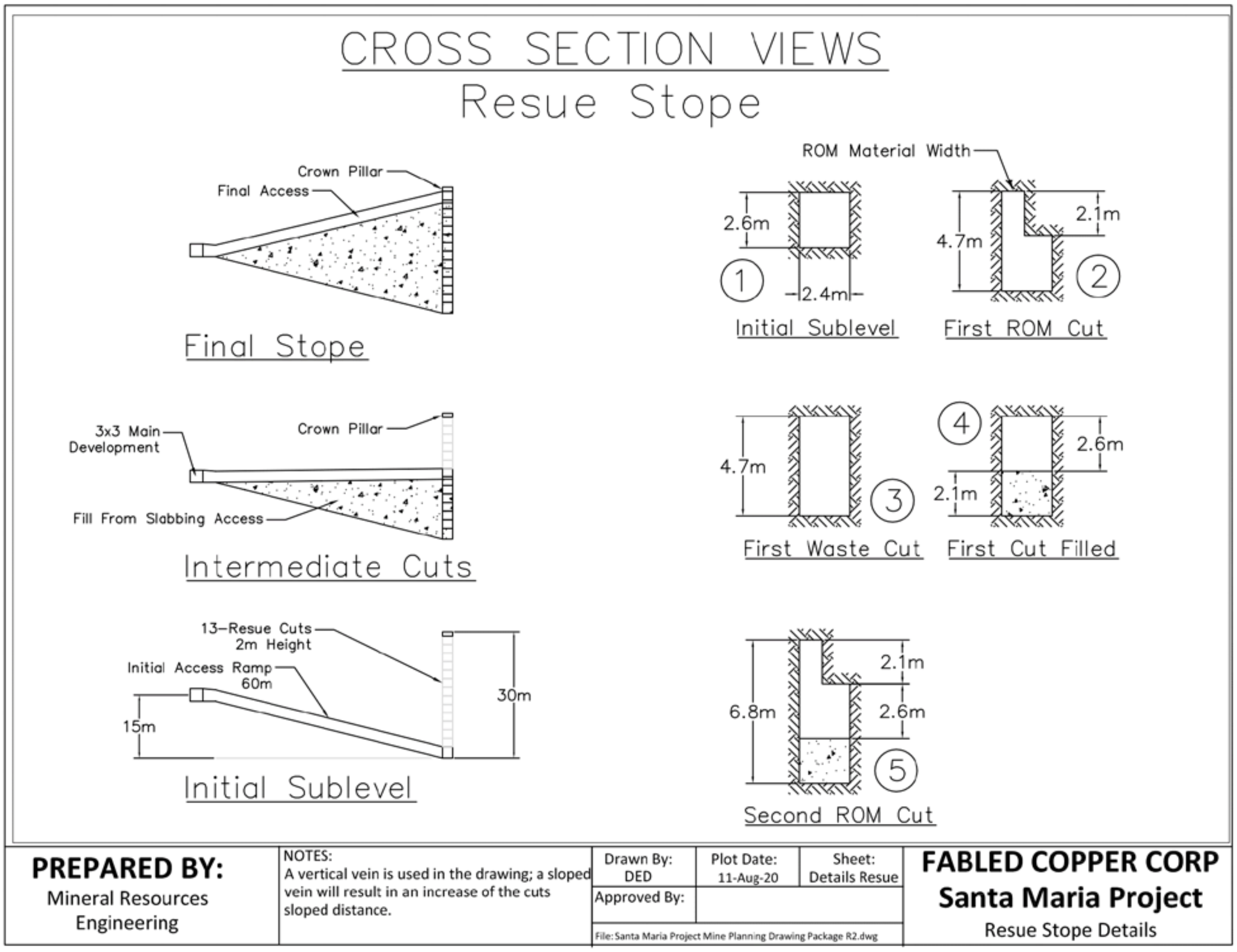


Figure 16-3: Resue Cut and Fill Mining Method

The preceding figure shows the stope's initial access ramp extending from main development. This ramp is part of the main development system that also accesses the sublevel stopes. Access ramps will be excavated using miners with jacklegs, one drill unit will be used during the production drilling cycle, and the muck cycle completed with 2.0 LCY LHD units. The explosives used for the excavations will be gelatin dynamite for the primer, ANFO as the primary explosive, and LP delay shock tubing blasting caps for the initiation. The active faces will be ventilated with Axivane fans blowing the required air to the face in 24-inch brattice clothe ventilation tubing. Development ramps will be equipped with 2-inch diameter HDPE tubing for compressed air, 2-inch diameter tubing for water discharge, and 2-inch HDPE tubing for freshwater delivery to the work areas. Active mining faces will use air powered diaphragm pumps to remove ground water and drill water. This water will be pumped to sumps strategically located throughout the ramp system for removal from the mine using electrically powered submersible pumps.

The dimensions of sublevel are the mining width of the ROM material by 2.6 m in high and are started from the intersection of the access to the vein. Each sublevel is excavated in both directions until the extent of the planned stope is reached. Ventilation for excavating the sublevel will be supplied by the ventilation system used to excavate the access ramp. The sublevel drifts will be excavated using miners with jacklegs with mucking carried out with 2.0 LCY LHD units.

Resue mining will be used to excavate the balance of the ROM material located above the sublevel. The resue sequenced steps is shown in **Figure 16-3**:

1. Excavation of the sublevel to the extents of the planned stope.
2. Excavation of the defined ROM by drilling vertical production blast holes using handheld jackleg drills. The drill holes will be located at the two outer boundaries where the barren rock and the mineralized rock meet. The vertical holes will be 6-feet in length. The vertical drill holes will be loaded with explosives and the ROM material blasted. A 2.0 LCY LHD unit will muck the ore away from the area and store until the material is transported to the surface. The excavated material will be stored in an area adjacent to the main development, near the access ramp, until the material is transported outside.
3. Drilling and blasting the waste that is adjacent to the ROM material excavated in Step 2. The drilling and mucking of the barren material in this step will be handled the same as in Step 2. The mine opening is 4.7 m high at the completion of Step 3.
4. Fill, comprised of barren material, is installed using the 2.0 LCY LHD to bring the working height to 2.6 m, as shown in Step 4.
5. Step 5 is the same as Step 2, which is the extraction of the mineralized ROM material.
6. Steps 2 through 4 are repeated for 13 cuts, or until the crown pillar is reached.

The integral waste (barren rock) areas that exist inside the defined stopes will be mined in an identical manner as the ROM material. The two materials will be segregated by blasting either barren material or the ROM mineralized material, but never the two materials together.

Table 16-2: Resue Cut and Fill Stope Calculated Variables

Resue Stope Details	Avg. Sublevel Length (m)	Avg. Sublevel Waste (m)	Stope Life Days	Avg. ROM Rate (tpd)	Avg. Waste Rate (tpd)	ROM Cost per Tonne
Calculated Variables	168	36	282	45	35	$35.14

Notes:

1.) ROM – Run of Mine material assumed for processing

2.) 89-tpd ROM generated during the Resue Cut excavations.

3.) 3,733 m3 Total waste generated.

4.) 11,700 m3 Fill required, compacted to 87%

The stope domains and block model were used to define the stope costs and mine life schedule. An average dilution factor for the ROM material of 12% is built into the block model.

16.2.2.3 Dilution

A global factor of 12-percent dilution was used for the resource and a 5% percent material loss after dilution was used to determine the possible extraction grade of the material. It was assumed that the dilution material will contain metals because the active stopes are not mining wall to wall in the vein but extracting the richer zones that exist inside the two main structures, Santa Maria Main vein and Santa Maria Dos vein.

16.2.3 Mine Development

Figure 16-4 shows the proposed development requirement to access the resource.

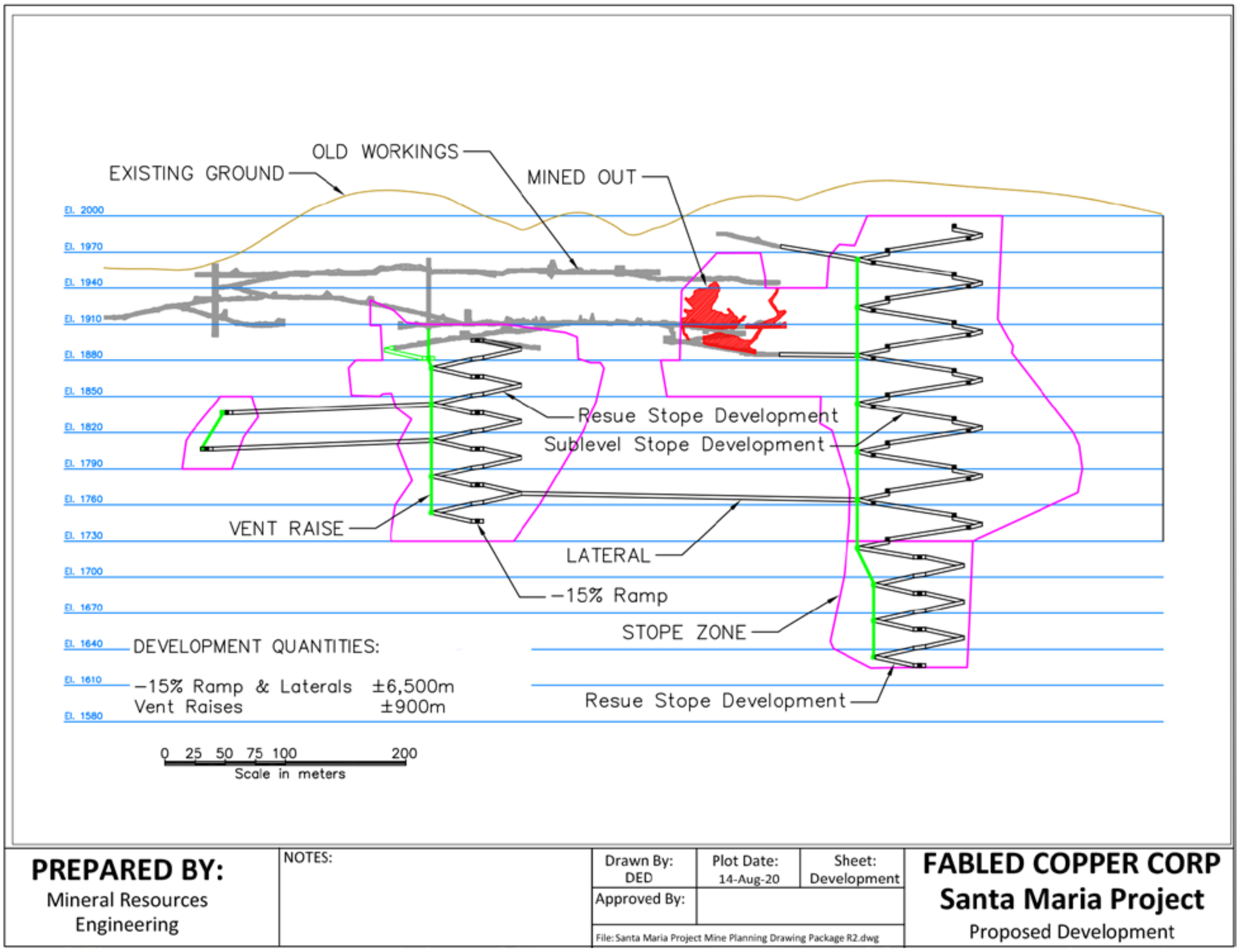
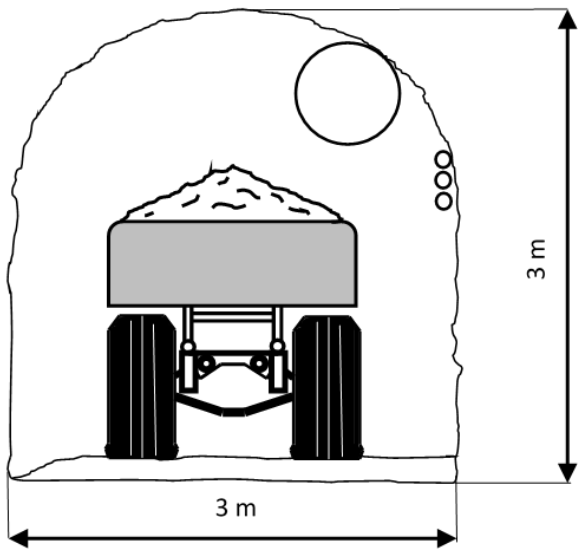


Figure 16-4: Proposed Development

The main developments consist of ramps, driven at a grade of ±15 percent, and laterals driven on the level. The concept for development is to excavate a ramp for access to each of the main mineralized zones. This concept yields the minimum amount of development required for the project. A lateral will connect the two ramp systems, as shown in the Figure 16-4, to enable an underground exploration drill platform. Laterals will be used to extract the mineralized material at the eastern most zone. The development ramps and laterals dimensions are 3.0 m wide by 3.0 m high, **Figure 16-5** shows the proposed cross section of the main development drifts. The development drifts will be excavated with miners using jacklegs drills. Two drill units will be used during the production drilling cycle, with the muck cycle carried out with 2.0 LCY LHD units. Explosives used for the all excavations consists of gelatin dynamite and ANFO initiated with shock tube delay caps. The active faces will be ventilated with Axivane fans blowing the required air to the face in 36-inch brattice clothe ventilation tubing. The drift will be equipped with 6-inch diameter HDPE tubing for compressed air, 4-inch diameter tubing for water discharge, and 2-inch steel tubing for freshwater delivery to the work areas. Active mining faces will use air powered diaphragm pumps to remove ground water and drill water. This water will be pumped to sumps strategically located throughout the ramp system for removal from the mine using electrically powered submersible pumps.

Figure 16-5: Proposed 3 x 3 Ramp and Lateral Cross Section

Ventilation raises will be excavated using the "bean hole" method which consists of driving the raise (excavation) slightly off vertical, ±70 degrees from the horizontal, upward from one development to the next. Steel ladders are installed on the downside of the excavation providing the miners access to the live face. The ladders will serve as a work platform while excavating the raise... The explosives used for the all raise excavations consists of gelatin dynamite with shock tube initiation. The blasted material falls to the bottom of the excavation after the blast and



the material will be cleaned up using 2.0 LCY LHD units. The next cycle starts once the broken material is removed.

Table 16-5 displays the typical advance rates and unit costs associated with underground work of this nature when using the selected equipment.

Table 16-3: Development Advance Rates and Costs

Development Details	Advance mpd	Cost US$/m
3.0 x 3.0 Ramp and lateral	1.8	$606
Muck Bays	1.8	$482
Ventilation Raise	1.6	$613
Resue Stope Access Ramp	1.9	$453

16.2.4 Ventilation

Figure 16-6: Proposed Mine Ventilation Plan displays the proposed final ventilation circuit for the Santa Maria project.

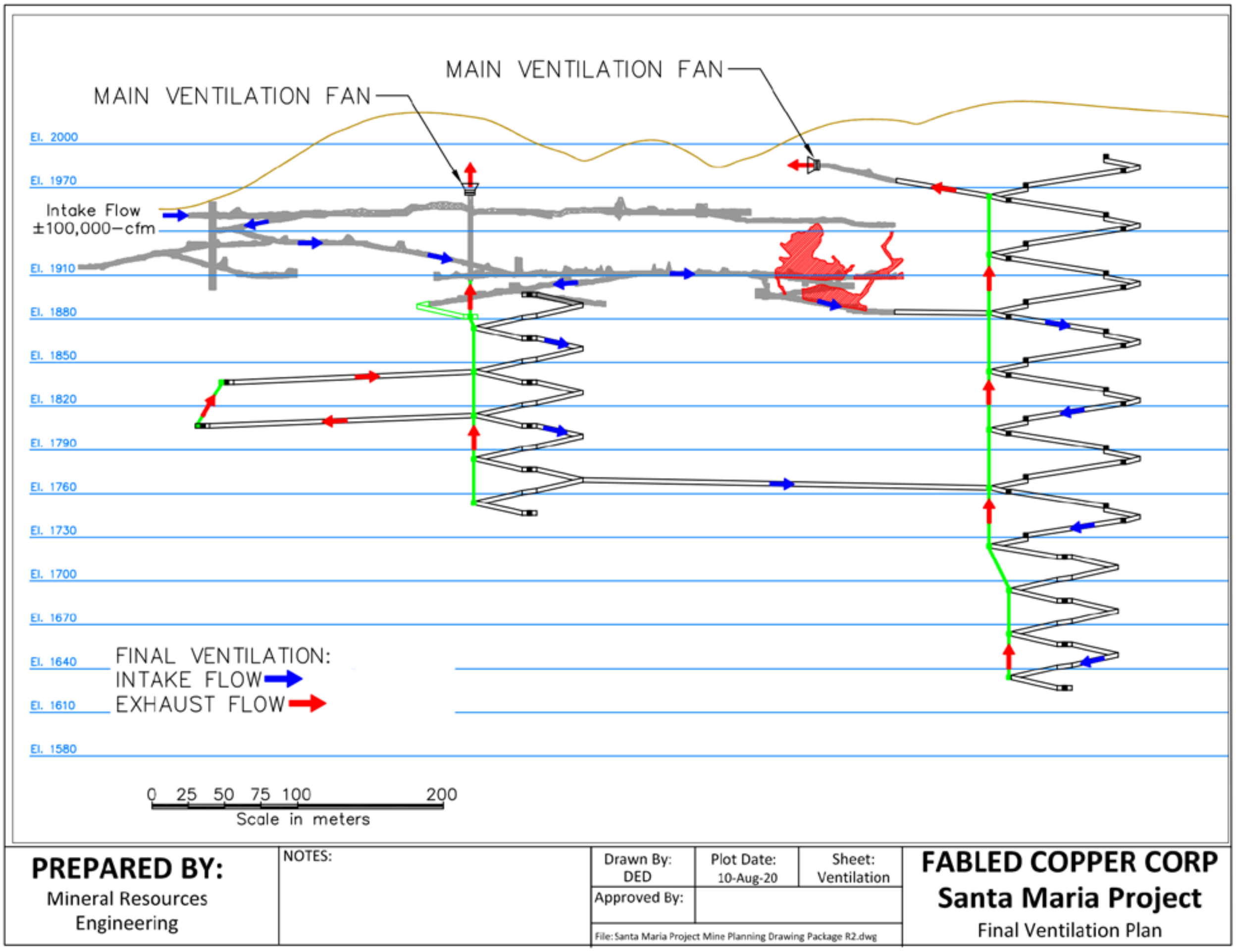


Figure 16-6: Proposed Mine Ventilation Plan

The proposed ventilation plan was developed using concepts based on experience at operating mines. A detailed ventilation study will be required for any future production work.

The ventilation circuit is designed to draw fresh air in the main mine portal and down the access ramp to the entries of the two proposed spiral development ramps. The air flow will be split at the two ramp entries with each split of air traveling down one of the spiral ramps. Ventilation raises are excavated as the development ramps are advanced serve as the return for each split of air. One main ventilation exhaust fan will be located at the No. 2 shaft and one main exhaust fan will be located at the eastern portal. Main fan installations will have remote control reversible starters so the air flow can be reversed in the event of an emergency. A stench gas warning system for mine evacuation during an emergency and installed in the intake air flow at the main portal.

The ventilation circuit is designed to support 23 people underground continually, two LHD units operating with one of the LHD units at 60% operation underground, and two 13 Ton haul trucks operating with one of the truck units at 60% operation underground. Tractors used by mechanics and surveyors are considered intermittent and not planned into the ventilation air quantity calculations. The preliminary design has the main fans with 75 bhp (brake horsepower) motors, development Axivane fans with 40 bhp motors, and stope fans with 15 bhp motors.

16.3 Underground Infrastructure

16.3.1 Dewatering

Face areas in the main ramps and stope access ramps (downhill excavations) will use air powered diaphragm pumps to remove the ground water and used water from drilling. It is pumped up the ramp to the closest sumps that contain electrically powered submersible pumps. The sumps with electrically powered submersible pumps are connected in a "chain fashion" that lifts the water further uphill with each sump stage. Sumps are strategically located throughout the ramp system to enable the delivery out of the mine with the minimum number of sumps/pumps. Each sump will contain a backup pump and are operated using automatic level control devices. The discharge water from the mine will be contained in a designated pond to enable solid settling before the water is discharged into the local drainage system.

16.3.2 Refuge and Escape Ways

The main fans located on the surface will be equipped with remotely controlled reversing capabilities for handling underground emergencies in the event of a fire or other reason requiring reverse flow ventilation. The proposed mine plan provides escape routes from all mining areas. The primary route for entry and exits are the main ramps and laterals. A secondary/escape route is the system of ventilation raises equipped with ladders. The secondary/escape route becomes a fresh air route with the main fans flow direction reversed. Additionally, it is recommended that refuge chambers be constructed at strategic points in the two main ramp systems.

16.4 Surface Infrastructure

The surface infrastructure will require the following facilities:

- Fuel tank farm and lubricant storage
- Office trailer – single wide standard
- 900 kw Prime power generator with shelter, surface switchgear, and surface power network
- Warehouse – 3 Used Conex units with shelving installed
- Maintenance structure, concrete floor, equipped with required equipment and tools
- (2) 1300-cfm Diesel powered compressors
- Discharge water settling pond
- Source of clean water

16.5 Mine Equipment

Table 16-6: Project Required Equipment outlines the major capital purchases to accommodate this proposed plan.

Table 16-4: Project Required Equipment

Type	Manufacturer Details	Number	Capacity/Size
Jacklegs	FNP S83F, telescopic Leg	20	257 CFM
Hydraulic Longhole Drill	Atlas Copco B104	1	1.04 m width
LHD - Scooptram	Sandvik LH203	3	2 yd^3 bucket /1.48 m wide
Mining trucks	Sandvik TH 315	3	5 yd^3 box / 1.55 m wide
Tractor	Massey Ferguson	2	
48” x 29” Hub Axivane Fan	Spendrup	2	55,000 cfm
40 hp Axivane Fan	Woods 100 HG71A 32°	5	25,000 cfm
15 hp Axivane Fan	Woods 100 HG56A 12°	3	17,000 cfm
Screw Compressor	Sullair 1050	2	1,050 cfm at 100 psig
900 Kw Prime Power	Caterpillar	1	900 Kw Prime Power

Availability used for the LHD and haulage truck units is 85 percent. A fleet of three truck units should yield a predicted 43 working hours per day well within the 34 working hours required. A fleet of 3 LHD units will yield 43 working hours per day, which will satisfy the required underground tasks.

16.6 MINE LABOR

Table 16-7: Project Staffing and Manpower outlines the proposed manpower for the project. It is assumed that Fabled will set up a corporate unit in either Parral or Santa Barbara, both of which have adequate services to support the operation. The mining operation will work 350 days per year with two shifts per day. The non-staff manpower will work 10 days in a row followed by five days of rest. Each of the non-staff position will require three employees on the payroll because of the two operating shifts, there has to be two working (one on each shift) and one on their rest days.

Table 16-5: Project Staffing and Manpower

Administration	No.	Mine operation	No.	Maintenance Staff	No.
General Manager	1	Mine Superintendent	1	Maint. Superintendent	1
Purchasing/Warehouse	1	Shift Supervisor	3	Mechanic	6
Safety and Environmental	1	Engineer	1	Mechanic helpers	3
Clerk, Filing, Etc.	1	Survey Helper	1	Electrician	1
Janitorial, Cleanup	1	Geologist/Modeler	1	Electrician helpers	1
		Face Geologist	1		
		Samplers	1		
		Utility Crew	2		
		Janitorial, Cleanup	1		
		Vigilante, Mine Lamps, Etc.	2		
		Clerk, Filing, Etc.	1		
		Underground Labor	54		
Totals	**5**	**Total**	**69**	**Total**	**12**

16.7 MINING PRODUCTION SCHEDULE

The Scheduled developed for this report assumes underground work starts six-months into the first year. Equipment procurement and infrastructure setup will are required the initial six months. **Table 16-8** summaries the planning quantities for the economic analysis of the project.

The following advance rates have been used to generate the schedule:

- 1.8m x 1.8m Vent Raise – 1.6 mpd
- 3.0m x 3.0m Ramps and laterals – 1.8 mpd
- 2.5m x 2.64m Resue Stope Access Ramp – 1.9 mpd
- Resue Access ramp Slabbing – 46 m3 per day
- Resue Stope production – 44.8 tpd over life of stope including sublevels
- Sublevel Stope – 69.5 tpd over life of stope including sublevels

Table 16-6: proposed Mine Production Quantities

Item	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
3x3 Ramp (m)	544	1,088	1,100	153	0	2,885
3x3 Lateral (m)	522	2,146	2,152	2,182	182	7,184
Muck Bays (m)	196	392	320	6	0	913
Vent Raise (m)	0	105	220	110	0	435
Vent Drifts (m)	36	73	73	6	0	188
Resue Stope Access (m)	51	103	214	181	160	708
Sublevel Stope Entry (m)	0	55	82	53	29	219
Totals	**1,348**	**3,960**	**4,162**	**2,690**	**372**	**12,532**
Waste Mined (tonnes)	31,784	92,093	94,328	61,165	7,697	287,067
ROM Material	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Resue Stoping (tonnes)	10,649	21,613	44,976	38,085	33,799	149,122
Sublevel Stoping (tonnes)	0	50,892	76,679	49,012	27,483	204,067
Totals	**10,649**	**72,505**	**121,655**	**87,098**	**61,282**	**353,189**
Process Data	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Totals**
Total Tonnes ROM	10,649	72,505	121,655	87,098	61,282	353,189
Au Grade (gpt)	1.58	1.43	0.83	1.05	0.86	1.04
Ag Grade (gpt)	386	442	231	222	199	271
Au Mined (oz.)	540	3,338	3,253	2,939	1,702	11,772
Ag Mined (oz.)	132,290	1,030,505	901,639	621,390	391,149	3,076,974

16.8 Mining Costs

16.8.1 Mine Operating Costs

A preliminary estimate of mining costs has been generated based on information supplied by Golden Minerals staff, the author's experience as an operator in Mexico, local venders servicing the Parral district, and communication with a small operation in the Parral district.

These costs are outlined in **Table 16-** and use the following principle assumptions as a basis:

- Fuel costs - US$ 0.97 per liter
- ANFO - US$1.03 per kg
- Gelatin Dynamite – US$3.39 per kg
- Mexico miner fully loaded daily rate – MX$1,361 per calendar day
- ROM Haulage to Toll Plant – US$5.59 per tonne
- 2 shifts of 10 hours each per day, 350 days per year operation

Table 16-7: Mining Costs Summary

	Annual Costs in 000's					
Category	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Labor	$773	$1,688	$1,816	$1,533	$920	$6,729
Equipment	$488	$1,257	$1,500	$1,577	$867	$5,690
Material & Supplies	$654	$1,731	$1,936	$1,327	$723	$6,371
Power	$203	$594	$598	$736	$436	$2,567
Other Costs	$116	$232	$232	$232	$164	$976
Totals	**$2,234**	**$5,502**	**$6,082**	**$5,405**	**$3,110**	**$22,333**
ROM Cost per Tonne	**$209.78**	**$75.88**	**$70.38**	**$62.06**	**$60.57**	**$72.50**

Notes:

1.) ROM – Run of Mine material assumed for processing

2.) The stope totals include tonnes from the sublevels.

16.8.2 Mine Capital Costs

A preliminary estimate of capital costs are based on the authors personal research and past experience with mines of similar size and similar nature..

These capital costs are outlined in **Table 16-9** :

Table 16-9: Summary of Major Capital Costs

Capital Description	No. Units	Cost
Business Unit Items		$208,000
Mine Rehabilitation		$30,000
Surface Infrastructure		$150,000
Mine Maintenance		$100,000
Capital Equipment		
48" x 29" Hub Axial Fan	2	$202,000
Jackleg Complete	20	$160,000
21,000-cfm Axivane Auxiliary fan	5	$90,000
31,000-cfm Axivane Auxiliary fan	3	$66,000
MF Tractor (Surveyors, etc.)	2	$32,000
ANFO Loaders, etc..	8	$8,000
Submersible Pumps 125-gpm	10	$90,000
UG Rear Dump Haul Truck 13-Ton	3	$690,000
2.0 CY Scooptram	3	$981,000
Boomer 104	1	$678,000
1050 cfm Portable Compressor	2	$160,000
Generator 900 kw prime power output	1	$128,000
Equipment Freight and Handling		$75,000
Sustaining Capital		$577,200
First Fills		$255,100
Total Capital		**$4,680,300**

17 Recovery Analysis

17.1 Metallurgical Testing Results and Values Used

Table 17-1 is a summary of the metallurgical results used in the economic analysis. These recoveries are based on past testing that cannot be relied on, and the author's experience with mineralized material of this nature.

Table 17-1: Summary of Metallurgical Results

Metallurgical Variables	Units	Variables
Bond Work Index		
Oxide ROM	kwh/tonne	20.56
Mixto ROM	kwh/tonne	20.50
Sulphide ROM	kwh/tonne	23.24
Whole Ore Leach		
Au recovery	percent	85.0%
Ag Recovery	percent	73.0%
Sulphide Floatation		
SU Au Recovery	percent	82.7%
SU Ag Recovery	percent	91.0%
Ag Concentrate Value	gpt	4,500
Mixto Floatation		
MX Au Recovery	percent	55.8%
MX Ag Recovery	percent	77.1%
Ag Concentrate Value	gpt	4,500

18 PROJECT INFRASTRUCTURE

The planning of infrastructure for an operation at Santa María is based on using an offsite toll milling facility. The PEA assumes the following infrastructure is necessary for the Santa Maria mine site. Proposed layout of infrastructure is displayed in **Figure 18-1**.

18.1 ACCESS ROAD

The access road to the mine site is in reasonable condition but will require periodic grading prior at regular intervals. The current access road leads all the way to the mine site, passing numerous ranches on the way. The installation of a “vado” (concrete slab on grade river crossing) may be considered. No major improvements are necessary.

18.2 MILL FEED STOCKPILE

An active stockpile will be available on the surface for the underground trucks to dump at. The trucks hauling to the toll mill will be loaded at this stockpile using a five-yard FEL.

18.3 WASTE ROCK STORAGE

The waste, from development, is planned to be deposited at the western end of the existing waste rock pad, which forms the access to the mine portal. Eventually most of the waste will be placed as fill in the underground stopes.

18.4 EQUIPMENT MAINTENANCE SHOP

An existing covered area exists at the portal for equipment maintenance. Additionally, an underground maintenance facility to eliminate bringing equipment to the surface should be investigated at a later stage of mining.

18.5 EXPLOSIVES STORAGE

The underground mine has an approved magazine for detonators and a separate approved magazine for high explosives and ANFO.

18.6 OFFICES

Offices for management and administration will be required at the mine site. Some relatively flat areas to the west of the portal along the access road could be prepared for mobile offices.

18.7 WEIGHBRIDGE

The haulage trucks will be weighed at the toll mill in Parral. It may be prudent to rent a weigh bridge periodically to check against the toll mill’s weights.

18.8 WATER MANAGEMENT STRUCTURES

The mine access portal occurs in a valley which had flowing water at the time of the site visit. A small diversion canal and structure should be considered to insure that the flow passes the area undisturbed.

18.9 Contact Water Treatment

Contact water from the mine will be discharged into a settling pond at the far western end of the surface operations. After settling, and potential treatment if needed, water will be discharged into the stream channel which runs through the surface operating area.

18.10 Substation Or Generator Laydown

Generated power is being recommended, as described in Section 17.

Figure 18-1: Project Site Infrastructure

19 MARKET STUDIES AND CONTRACTS

Markets for the potential bulk Ag and Au concentrate include metal brokers and possibly direct sales to smelters. The concentrate indicated by the test work is relatively common within the Mexican mining industry. No market studies have been undertaken with the bulk concentrate assumptions used in the PEA and no contract is in place for the material at this point, past smelter terms were used by the author for similar concentrates and verbal dialogue with a smelter marketing consultant lead to the smelter payment used in the PEA..

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section characterizes the available environmental baseline data for the Project area, makes suggestions for additional studies that would provide a basis for the mine permitting efforts, describes the major environmental permits that would likely be required for the Project, and identifies potential significant social or community impacts. As previously discussed in this report, the Santa María property is in the exploration and Resource stage and is not considered an advanced property. For this reason, extensive environmental studies have not been conducted. Most of information presented herein was summarized from a recently completed Manifestación de Impacto Ambiental, (MIA [CFFGA, 2016]), which is discussed as part of the permitting process. Many of the required permits discussed herein apply to the construction stage and are not currently being pursued.

20.1 MEXICAN PERMITTING FRAMEWORK

Environmental permitting of the mining industry in Mexico is mainly administered by the federal government body SEMARNAT, the federal regulatory agency that establishes the minimum standards for environmental compliance. Guidance for the federal environmental requirements is largely held within the General Law of Ecological Equilibrium and Environmental Protection (Ley General Del Equilibrio Ecológico y la Protección al Ambiente, or LGEEPA). Article 28 of the LGEEPA specifies that SEMARNAT must issue prior approval to parties intending to develop a mine and mineral processing plant. An environmental impact statement (by Mexican regulations called a MIA must be filed with SEMARNAT for its evaluation and, if applicable, further approval by SEMARNAT through the issuance of an Environmental Impact Authorization; the document specifies approval conditions where works or activities have the potential to cause ecological imbalance or have adverse effects on the environment. Further requirements for compliance with Mexican environmental laws and regulations are supported by Article 27 Section IV of the Ley Minera and Articles 23 and 57 of the Reglamento de la Ley Minera. Article 5 Section X of the LGEEPA authorizes SEMARNAT to provide the approvals for the works specified in Article 28. The LGEEPA also contains articles for soil protection, water quality, flora and fauna, noise emissions, air quality, and hazardous waste management.

The National Water Law (Ley de Aguas Nacionales) provides authority to the National Water Commission (Comisión Nacional del Agua or CONAGUA), an agency within SEMARNAT, to issue water extraction concessions, and specifies certain requirements to be met by applicants.

Another important piece of environmental legislation is the General Law of Sustainable Forestry Development (Ley General de Desarrollo Forestal Sustentable - LGDFS). Article 117 of the LGDFS indicates that authorizations must be granted by SEMARNAT for land use changes to industrial purposes. An application for change in forestry land use (CUSTF), must be accompanied by a technical study that supports the Technical Justification Study (Estudio Técnico-Justificativo - ETJ). In cases requiring a CUSTF, a MIA for the change of forestry land use is also required.

Mining projects also must include a Risk Study (ER) and an Accident Prevention Plan (PPA) from SEMARNAT. This is discussed in more detail below.

The General Law for the Prevention and Integrated Waste Management (Ley General para la Prevención y Gestión Integral de los Residuos - LGPGIR) also regulates the generation and handling of hazardous waste coming from the mining industry. The LGPGIR also regulates the generation and handling of hazardous waste coming from the mining industry. Guidance for the environmental legislation is provided in a series of Official Mexican Standards (Norma Oficial Mexicana - NOMs). These regulations provide specific procedures, limits and guidelines and carry the force of law.

20.2 Project Permitting Requirements

There are many environmental permits required to advance the Santa María project into production. Most of the mining regulations are at a federal level through SEMARNAT, but there are also a number regulated and approved at state and local level. There are three SEMARNAT permits that are required prior to construction; MIA, CUSTF and ER, which are described below.

Environmental Impact Manifest – Regulations within Mexico require that an MIA be prepared by a third- party contractor for submittal to SEMARNAT. The MIA must include a detailed analysis of climate, air quality, water, soil, vegetation, wildlife, cultural resources and socio-economic impacts. An MIA has recently been completed for the Project which adequately defines existing Resources, evaluates potential impacts and outlines potential mitigation measures. A brief description of environmental resources and impacts identified in the MIA are outlined in Section 20.3 below.

Under the MIA process, public consultation is solicited by promulgating a summary of the MIA to the public through newspapers or any electronic media. The entire MIA is evaluated by the environmental authorities (federal, state, and municipal), which includes consideration of public comments and opinions regarding the Project. The MIA either may be rejected if it does not meet minimum requirements, or federal, state and municipal authorities may require the proponent to make corrections to the MIA. Proof of local community support for a Project is required to get a final MIA approved.

SEMARNAT or the project proponent may arrange public meetings. Any person can request a public meeting within 10 days of the publication of the MIA summary. Once SEMARNAT receives the request, it has 5 days to respond. The project proponent has another 5 days to publish a response to public concern. After that, the public has 10 days to file a request for a copy of the entire MIA from SEMARNAT. Once the entire MIA is available to the public, anyone can propose, in writing, changes to the MIA, including changes to designs and mitigations.

Preventive Report (Informe Preventivo) – Based on local environmental characteristics, which consist of flat land and low hills with natural grass, and according to Regulations, an **Exploration Program for the Santa María** project is not required to present a MIA Report at this stage of the project's exploration, and only needs to present a Preventive Report, which was presented by Golden Mineral through the title holder to SEMARNAT's local office in the City of Chihuahua (Delegación Federal Chihuahua) on May 11, 2017. The Preventive Report was presented for environmental impacts during a drilling program consisting of 32 drilling sites and roads of access, and it was approved for a duration of 36 months from November 05, 2017. Upon completion of the program, the titleholder most report to the Chihuahua Delegation the results of the measurements of prevention and mitigation proposed in the Preventive Report.

Study of Risk (ER) – A second required permit is a Risk Study (Estudio de Riesgo – ER). A study is developed to obtain this permit. This study identifies potential environmental releases of hazardous substances and evaluates the risks to establish methods to prevent, respond to, and control environmental emergencies. Since the proposed Project is primarily to advance underground mining with no onsite milling or processing, SEMARNAT may not require and extensive ER.

Land Use Change (CUSTF) – The third permit is Change in Forestry Land Use (Cambio de Uso del Suelo en Terrenos Forestales – CUSTF). In Mexico, all land has a designated use. The CUSTF is a formal instrument for changing the designation to allow mining on these areas. The CUSTF study is based on the Forestry Law and its regulations. It requires that an evaluation be made of the existing conditions of the land, including a plant and wildlife study, an evaluation of the current and proposed use of the land and impacts on natural resources and an evaluation of the reclamation and revegetation plans. The establishment of agreements with all affected surface land owners is also required.

20.2.1 Other Registrations and Permits

A Project-specific comprehensive environmental license (Licencia Ambiental Única – LAU), which states the operational conditions to be met, is issued by SEMARNAT when the agency has approved the Project operations.

A construction permit is required from the local municipality and an anthropological release letter is required from the National Institute of Anthropology and History (INAH).

An explosives permit is required from the Ministry of Defense (SEDENA) before construction begins. Water discharge and usage must be granted by CONAGUA.

The key permits and the stages at which they are required are summarized in **Table 20-1**.

Table 20-1: Key Permitting Requirements

Permit	Required Prior to this Mining Stage	Agency
Environmental Impact Statement - MIA	Construction/Operation/Post-Operation	SEMARNAT - Completed
Land Use Change - CUSTF	Construction/Operation	SEMARNAT
Technical Justification Study - ETJ	Construction (Includes Conceptual Design)	SEMARNAT
Risk Study - ER	Construction/Operation	SEMARNAT
Construction Permit	Construction	Local Municipality
Explosive & Storage Permits	Construction/Operation	SEDENA
Anthropological Release	Construction	INAH
Water Use Concession	Construction/Operation	CONAGUA
Water Discharge Permit	Operation	CONAGUA
Unique Environmental License	Construction, Six Months Prior to Operation	SEMARNAT
Accident Prevention Plan	Operation	SEMARNAT
Hazardous Waste Generator	Operation	SEMARNAT/PROFEPA

20.3 Environmental Baseline

The following environmental baseline conditions of major Resource areas are primarily summarized from the MIA, which has been developed for the Project (CFFGA, 2016).

20.3.1 Project Location

The Santa María Project is located southeast of the Santa Bárbara mining district in Chihuahua. The property is located 19 km from the center of the town of Santa Bárbara and approximately 39 km from the center of Parral, a moderate sized, full service regional center of commerce. The Project area is located within a 1.4829-hectare area called San Miguel de Chicanaya. The MIA fully recognizes the development of mining projects for silver and other minerals in the Santa Bárbara region, and specifically in the San Miguel Chicanaya area, is economically beneficial to the region.

20.3.2 Climate

The Project is in a temperate, semi-arid region. Based on meteorological data available for San Francisco del Oro, the average temperature ranges between 12 ° C and 18 °C with an average annual temperature of 17.7 °C. The temperature in the coldest months generally range between 3° C and 18 °C and during the warmest months, temperatures are generally being less than 22 °C. The average annual precipitation is 332 mm. The length of the operating season could be year-round; however, access to the site could be temporarily inhibited during large rain events, due to potential flooding of the major river crossing. Precipitation and temperature data from the National Meteorological Service for San Francisco del Oro and is shown in **Figure 20-1**.

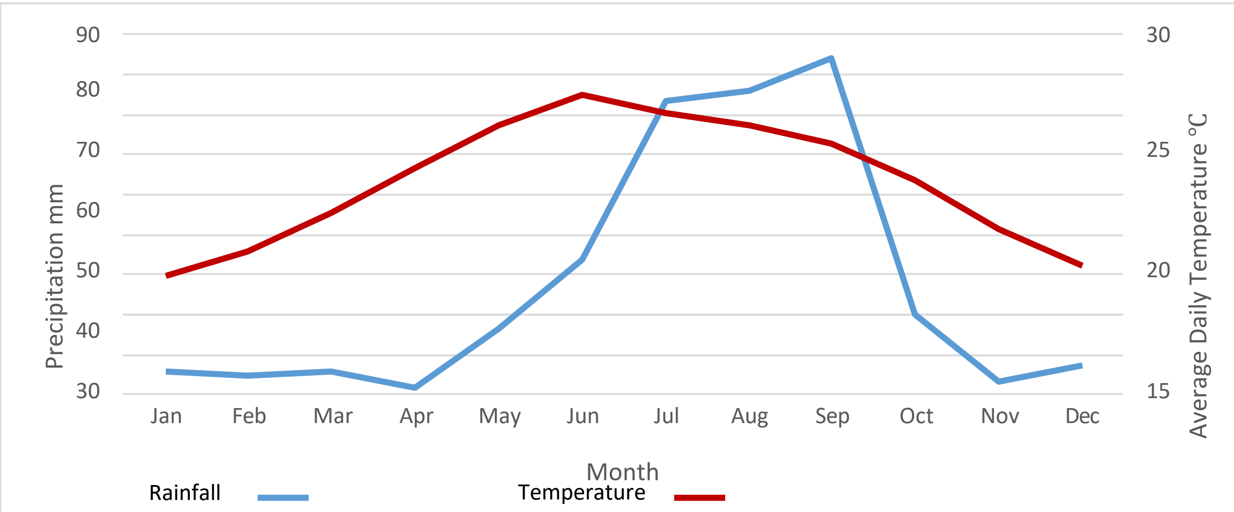


Figure 20-1: Climate Data for San Francisco del Oro

20.3.3 Soils

Soils in the region vary in their development depending on vegetation type, climate and relief. In general, soils in the area are poorly developed, lack distinct horizonation and are low in organic matter. Much of the soils in the region have been impacted by wind and water erosion caused by lack of vegetative cover, overgrazing by livestock, and stripping of vegetation for roads or mine development.

20.3.4 Surface Water

The watersheds in the area occur within Hydrologic Region No. 24 called Bravo Conchos, which is not considered to be in a region of hydrologic priority in Chihuahua. Streams within the immediate region are generally first, second and third order streams. Streams in the Project area are intermittent or ephemeral 2nd order streams which flow to larger tributaries in the R. Florido watershed. The proposed Project is not expected to use a large amount of surface water.

20.3.5 Groundwater

The primary aquifer within the Project area is called the "Parral – Valley of the Summer". The aquifer is not considered an important supply of water to the region compared to larger surface water developments from the Parral dam and the Talamantes dam. Dewatering of the current mine workings are discharged to a surface drainage but is not expected to impact aquafer supply or other users.

Minera de Cordilleras has engaged a local environmental contractor to characterize the groundwater quality which is being discharged. Sampling to characterize groundwater quality has shown that the groundwater that is currently being pumped is of acceptable quality for a discharge permit according to regulations specified by National Water Quality Standards (NOM-001-SEMANART-1996). Applicable water quality standards by designated use are shown in **Table 20-2** and **Table 20-3**; and groundwater quality sampled from the Project discharge in 2014 is shown in **Table 20-4**.

Table 20-2: Maximum Permissible Limits for Basic Contaminants

(NOM-001-SEMARNAT-1996)																				
	Rivers						Natural and Artificial Reservoirs				Coastal Waters						Groundwater			
Parameter	Agricultural Irrigation		Public Urban Use		Protection of Aquatic Life		Agricultural Irrigation		Public Urban Use		Fisheries and Navigation		Recreation		Estuaries		Agricultural Irrigation		Wetlands	
mg/L unless otherwise noted	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**
Temperature °C	NA	NA	40	40	40	40	40	40	40	40	40	40	40	40	40	40	NA	NA	40	40
Oil and Grease	15	25	15	25	15	25	15	25	15	25	15	25	15	25	15	25	15	25	15	25
Floating Materials	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent	absent
Sedimentary Solids	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	NA	NA	1	2
Total Suspended Solids	150	200	75	125	40	60	75	125	40	60	150	200	75	125	75	125	NA	NA	75	125
Biochemical Oxygen Demand	150	200	75	150	30	60	75	150	30	60	150	200	75	150	75	150	NA	NA	75	150
Total Nitrogen	40	60	40	60	15	25	40	60	15	25	NA	NA	NA	NA	15	25	NA	NA	NA	NA
Total Phosphorous	20	30	20	30	5	10	20	30	5	10	NA	NA	NA	NA	5	10	NA	NA	NA	NA

Table 20-3: Maximum Permissible Limits for Heavy Metals and Cyanide

(NOM-001-SEMARNAT-1996)																				
	Rivers						Natural and Artificial Reservoirs				Coastal Waters						Groundwater			
Parameter	Agricultural Irrigation		Public Urban Use		Protection of Aquatic Life		Agricultural Irrigation		Public Urban Use		Fisheries and Navigation		Recreation		Estuaries		Agricultural Irrigation		Wetlands	
mg/L unless otherwise noted	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**	**M.A.**	**D.A.**
Arsenic	0.2	0.4	0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.2	0.2	0.4	0.1	0.2
Cadmium	0.2	0.4	0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.2	0.05	0.1	0.1	0.2
Cyanides	1.0	3.0	1.0	2.0	1.0	2.0	2.0	3.0	1.0	2.0	1.0	2.0	2.0	3.0	1.0	2.0	2.0	3.0	1.0	2.0
Copper	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Chromium	1.0	1.5	0.5	1.0	0.5	1.0	1.0	1.5	0.5	1.0	0.5	1.0	1.0	1.5	0.5	1.0	0.5	1.0	0.5	1.0
Mercury	0.01	0.02	0.005	0.01	0.005	0.01	0.01	0.01	0.005	0.01	0.005	0.01	0.01	0.02	0.01	0.02	0.005	0.01	0.005	0.01
Nickel	2	4	2	4	2	4	2	2	2	4	2	4	2	4	2	4	2	4	2	4
Lead	0.5	1	0.2	0.4	0.2	0.4	0.5	0.5	0.2	0.4	0.2	0.4	0.5	1	0.2	0.4	5	10	0.2	0.4
Zinc	10	20	10	20	10	20	10	10	10	20	10	20	10	20	10	20	10	20	10	20

Table 20-4: December 2014 Groundwater Quality

Parameter	Units	Results
Total Arsenic	mg/L	0.068
Total Cadmium	mg/L	ND
Total Cyanide	mg/L	ND
Total Copper	mg/L	ND
Total Chromium	mg/L	ND
Total Mercury	mg/L	ND
Total Nickel	mg/L	ND
Total Lead	mg/L	0.02
Total Zinc	mg/L	0.21
Total Kjeldahl Nitrogen	mg/L	ND
Total Phosphorous	mg/L	0.0455
Settleable Solids	mL/L	< 0.1
Total Suspended Solids	mg/L	< 10.5
Chemical Oxygen Demand	mg/L	80.8
Biochemical Oxygen Demand	mg/L	< 39.6
Total Dissolved Solids	mg/L	474
Fecal Coliforms	MPN/100 ml	6.8

ND = not detected - below the method detection limit mg/L = milligrams per liter
mL/L - milliliters per liter
MPN = most probable number of colony forming bacteria

20.3.6 Vegetation

The primary vegetation type within the region is dominated by scrub oak, other oak shrub and oak forest with occurrences of various oak species of the genus Quercus. This vegetation type is in a transition zone between coniferous forests which occur at higher elevations and wetter forests in the east. Plant cover varies from very dense areas to areas with sparser vegetation. The immediate area of the Project site is generally devoid of vegetation because of prior surface disturbance from mining.

20.3.7 Socio-Economics

The primary socio-economic driver in the region is mining for gold, silver copper, zinc and fluorite. Historically, mining has been the main economic factor driving employment and business activity in the region and specifically in the municipality of Santa Bárbara.

20.4 Summary of Potential Environmental Impacts

A summary of potential environmental and socio-economic impacts identified by the current Project MIA is presented in **Table 20-5** below.

Table 20-5: Summary of Environmental Impacts by Resource

Resource	Degree of Potential Impact	Description
Surface and Groundwater	Low Impact	The Project is not expected to affect surface water supply or quality. There is some potential impact to groundwater from mining activities and dewatering.
Soils	Moderate to High Impact	The area is currently impacted from previous disturbance of soils and is generally devoid of vegetation. Project activities will continue to impact soil erosion and compaction.
Air	Low Impact	Potential emission of dust, particulates and air pollutants from machinery or vehicles during all phases of the Project. These impacts expected to be minor. Noise and vibrations generated by machinery and vehicles ca be mitigated with appropriate measures.
Flora	Low Impact	No environmentally sensitive species as defined by NOM-059-SEMARNAT-2010 were found in the Project area.
Landscape (Visual)	Moderate Impact	The Project will have moderate impacts to visual Resources because of its high visibility. The fragility to the visual Resource is potentially high.
Socio-Economic or Community Impacts	Moderate (positive) Impact	The Project will have moderately positive impacts to the socio-economics of the area, particularly in the municipality of Santa Bárbara because the Project could supply reliable jobs.

20.4.1 Mine Dewatering Activities

Dewatering of the current mine workings are discharged to a surface drainage. Information provided during the site visit indicated that the rate of dewatering was approximately 10 liters per second (L/s). Minera de Cordilleras has engaged a local environmental contractor to characterize the groundwater quality, which is being discharged. Available data from December of 2014 shows that all water quality standards are being met. It is assumed that the source of this current discharge is from workings, which exist in zones considered to have oxide mineralization. However, as the Project progresses, mining could be expanded into zones considered to have sulfide materials. For this reason, it is unknown if the groundwater from these zones would be of similar quality and quantity. There is some risk to the Project if dewatering activities from these lower zones would produce water that does not meet water quality standards and would require treatment prior to discharge.

In general, acid generation and/or metal leaching (ARD/ML) can form by the natural oxidation of sulfide minerals exposed to air and water. Activities that involve the excavation of rock with sulfide minerals can accelerate the process because it increases the exposure of sulfide minerals to air, water, and microorganisms. The drainage produced following contact with these minerals after the oxidation process may be neutral to acidic, with or without dissolved heavy metals, but will always contains sulfate. The potential to produce acidic conditions or not is based on several factors which include:

- The total concentration of sulfur (as sulfide) in the mineral;
- The surface area of exposure to sulfide bearing rock;
- The length of exposure; and
- The Net Neutralization Potential (NNP) of the ore and host rock, which is also based on mineralogy.

As the Project progresses through the prefeasibility and feasibility process, it is recommended that further studies to characterize the water quality and geochemistry of the ore and host rock in the sulfide zones be conducted. However, the probable plan of operation and the risk that future activities would produce groundwater of degraded quality would be low, however a thorough ground water study is required to properly evaluate this risk. This assumed minimal risk is based on the following:

- Mining in these zones is only expected for a few years and the time of exposure of residual sulfides to oxygen and water would be very short;
- Most high sulfide materials would be extracted and removed with the ore;
- The host rock is likely to have a slightly positive or positive neutralization potential (NNP).

20.5 Reclamation and Closure

A reclamation and closure plan has not been developed. Reclamation and closure plans are only developed and appropriate for advanced stage properties. As this Project progresses through the feasibility and mine planning process, a conceptual reclamation and closure plan can be developed. By Mexican law, mining may be initiated under a conceptual closure plan with detailed closure plans being developed later in the Project. A reclamation and closure plan for the Santa Maria will contain the following components:

- Analysis and engineering of closure design and costs;
- Demolition and disposal of surface facilities and buildings;
- Sealing of adits, shafts and other mine openings;
- Geochemical stabilization of any mine waste;
- Well abandonment;
- Site grading plan;
- Hauling, dumping and spreading of plant growth medium (PGM);
- Revegetation;
- Installation, monitoring, and maintenance of erosion, sediment, and dust control best management practices;
- Post-closure monitoring and maintenance;
- Demonstration of bond release (i.e. performance criteria).

20.5.1 Reclamation and Closure Costs

For the Santa María Project, it is assumed that most of closure and reclamation activities will include the demolition of surface facilities and buildings, site grading, hauling dumping and spreading PGM and installation of storm water systems. It is assumed all waste rock will be disposed underground and that there will be no on-site milling and processing or associated storage facilities for tailings. It is further assumed existing access roads to the Project site will not require reclamation. Based on these activities,

A closure and reclamation plan and cost has been developed based on the author’s past experience with mines of this size and nature, and familiarity of operating mines in Mexico.

20.5.2 Cost of Potential Groundwater Treatment

The author considers a minimal risk for groundwater pumped from sulfide zones in the mine to become degraded by ARD. Nevertheless, if this water does not meet water quality standards as specified by NOM-001-SEMARNAT-1996 and NOM-157-SEMARNAT-2009, a treatment system may be required. No allowance for a treatment plant of any type has been included in the economics, however a capital cost of +/-US$2M could be incurred should the mine’s discharge require treatment. Treatment would also include ongoing plant treatment costs.

21 CAPITAL AND OPERATING COSTS

All costs and economic results are presented in U.S. dollars. Quantities and values are presented using metric units unless otherwise specified. No escalation has been applied to capital or operating costs. Technical economic tables and figures presented in this section require subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding. Where these occur, they are not considered to be material.

21.1 CAPITAL COSTS

The Year-1 capital costs represent the estimate to construct the surface infrastructure, purchase the equipment required to start the project and maintain the scheduled level of production, purchase the inventory first fills, and purchase the required business unit equipment and supplies. **Table 21-1** outlines the proposed capital expenditure by category.

Table 21-1: Capital Cost Estimate

	US$000's					
Capital Costs	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Pre-Mining Rehabilitation	$30	$0	$0	$0	$0	$30
Surface Infrastructure	$438	$0	$0	$0	$0	$438
Mine Maintenance	$100	$0	$0	$0	$0	$100
Equipment Procurement	$2,429	$271	$119	$253	$0	$3,072
Business Unit	$208	$0	$0	$0	$0	$208
Sustaining Capital	$481	$41	$18	$38	$0	$577
First Fills	$255	$0	$0	$0		$255
Totals	**$3,941**	**$312**	**$137**	**$291**	**$0**	**$4,680**

21.2 Operating Costs

The operating costs are driven by the following critical variables:

- Fuel costs - US$ 0.97per liter
- ANFO - US$1.03 per kg
- Gelatin Dynamite – US$3.39 per kg
- Mexico miner fully loaded daily rate – MX$1,361 per calendar day
- ROM Haulage to Toll Plant – US$5.59 per tonne
- 2 shifts of 10 hours each per day, 350 days per year operation

Table 21-2 summarizes the projected operating costs based on the proposed plan of operation.

Table 21-2: Operating Cost Estimate

	US$000's					
Operating Costs	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Mining Costs	$1,458	$4,455	$6,002	$4,532	$2,332	$18,779
Processing and Haulage	$326	$2,446	$4,120	$3,090	$2,343	$12,325
G&A	$745	$1,564	$1,583	$1,739	$1,141	$6,773
Totals	**$2,529**	**$8,465**	**$11,705**	**$9,361**	**$5,816**	**$37,876**
ROM Tonnes Processed	10,649	72,505	121,655	87,098	61,282	353,189
Cost per ROM tonne	**$237.49**	**$116.75**	**$96.22**	**$107.48**	**$94.91**	**$107.24**

Table 21-3: Operating Cost by Category

	Annual Costs in 000's					
Category	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Labor	$765	$1,840	$2,193	$1,771	$999	$7,567
Equipment	$500	$1,352	$1,901	$1,626	$977	$6,355
Material & Supplies	$620	$2,001	$2,662	$1,906	$902	$8,091
Power	$203	$594	$598	$736	$432	$2,563
Processing Costs	$326	$2,446	$4,120	$3,090	$2,343	$12,325
Other Costs	$116	$232	$232	$232	$163	$975
Totals	**$2,529**	**$8,465**	**$11,705**	**$9,361**	**$5,816**	**$37,876**
ROM Tonnes Processed	10,649	72,505	121,655	87,098	61,282	353,189
ROM Cost per Tonne	**$237.49**	**$116.75**	**$96.22**	**$107.48**	**$94.91**	**$107.24**

22 ECONOMIC ANALYSIS

The following preliminary economic analysis includes Indicated and Inferred Mineral Resources;

This preliminary economic assessment is preliminary in nature. It includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

Project cost estimates and economics developed in the Technical-Economic Model (TEM) have been prepared monthly for the life of mine (LoM) and they are based on a portion of the total Project Resource. The level of accuracy of this estimate is scoping level (30-35%) and this study is based upon the design criteria presented in this report. The economic results are summarized in **Table 22-2**. The analysis delivers the following conclusions:

- Project Life: five years with a production life of slightly more than four years.

Table 22-1: Inputs and Assumptions

Description		Units	Value
Market Prices			
	Gold	$/oz	$1,619
	Silver	$/oz	$20.00
Taxes			
	Federal Tax*	%	30.0%
	Special Mining Tax	%	7.5%
	Precious Metals Tax	%	0.5%
Financial			
	Discount Rate	%	5.0%

22.1 Technical Economic Result

The Pre-Tax Cash Flow results are shown in **Table 22-2**.

Table 22-2: Technical Economic Results

Description	Unit Cost $/tonne	Amounts in US$000's					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
NSR and Royalty Calc.							
NSR	$128.06	$746	$11,721	$12,338	$12,657	$7,768	$45,230
Royalties (Mex. at 0.5%)	$0.64	$4	$59	$62	$63	$39	$226
Net After Royalties	**$127.42**	**$742**	**$11,663**	**$12,276**	**$12,594**	**$7,729**	**$45,004**
Operating Costs							
Mining+Development	$74.78	$2,126	$6,151	$7,993	$6,485	$3,655	$26,410
Processing	$29.30	$266	$2,040	$3,439	$2,603	$2,000	$10,349
G&A	$3.16	$137	$273	$273	$273	$160	$1,117
Total Operating Costs	*$107.24*	*$2,529*	*$8,465*	*$11,705*	*$9,361*	*$5,816*	*$37,876*
Operating Margin	**$20.18**	**-$1,787**	**$3,198**	**$571**	**$3,233**	**$1,913**	**$7,128**
Capital Costs							
Mining - Equipment, Etc.	$9.07	$2,559	$271	$119	$253	$0	$3,202
Infrastructure	$1.24	$438	$0	$0	$0	$0	$438
Business Unit	$0.59	$208	$0	$0	$0	$0	$208
First Fills	$0.18	$255	$0	$0	$0	-$191	$64
Total Capital Costs	*$11.08*	*$3,460*	*$271*	*$119*	*$253*	*-$191*	*$3,912*
Salvage value						-$1,001	-$1,001
Reclamation						$100	$100
Pre Tax Cash Flow	**$11.65**	**-$5,247**	**$2,927**	**$452**	**$2,980**	**$3,005**	**$4,116**
VAT		$15	$19	$25	$21	$12	$92
Income Tax		$0	$0	$0	$0	$0	$0
SMT Tax (Deferred Tax)		$0	$240	$43	$242	$143	$669
After Tax Cash Flow	**$9.50**	**-$5,262**	**$2,668**	**$383**	**$2,717**	**$2,849**	**$3,356**

The Technical Economic Result has the following highlights:

- NSR after Royalties of $127.42/processed tonne.
- Total Operating Cost of $107.24/processed tonne.
- **An Operating Margin of $20.18/processed tonne.**
- Total Capital Cost of $11.08/processed tonne.
- **A Pre-Tax Cash Flow of $11.65/processed tonne.**
- **An After-Tax Cash Flow of $9.50/processed tonne.**

22.2 Sensitivity Analysis

The sensitivity analysis explores the three major areas of a mining project: 1.) the Revenue producers which include metal prices, recoveries, and grade, 2.) The operating costs which include labor, equipment operation, and materials and supplies, 3.) Capital costs which include equipment procurement and mine site infrastructure. Table 22-3 displays the results of varying the amounts of the three major categories by plus or minus 30-percent.

Table 22-3: Sensitivity Analysis NPV Results

Category	After Tax $NPV_{8\%}$ (US$000,000's)		
	-30%	**Base**	**30%**
Revenue Producers	($9.51)	$1.66	$9.19
Operating Costs	$10.59	$1.66	($7.28)
Capital Costs	$2.73	$1.66	$0.58

Figure 22-1 displays the results of the sensitivity analysis on a spider graph. Analysis of the graph readily shows that the project is most sensitive all of the variables which contribute/effect the project's revenue: metal prices, recoveries, and grade.

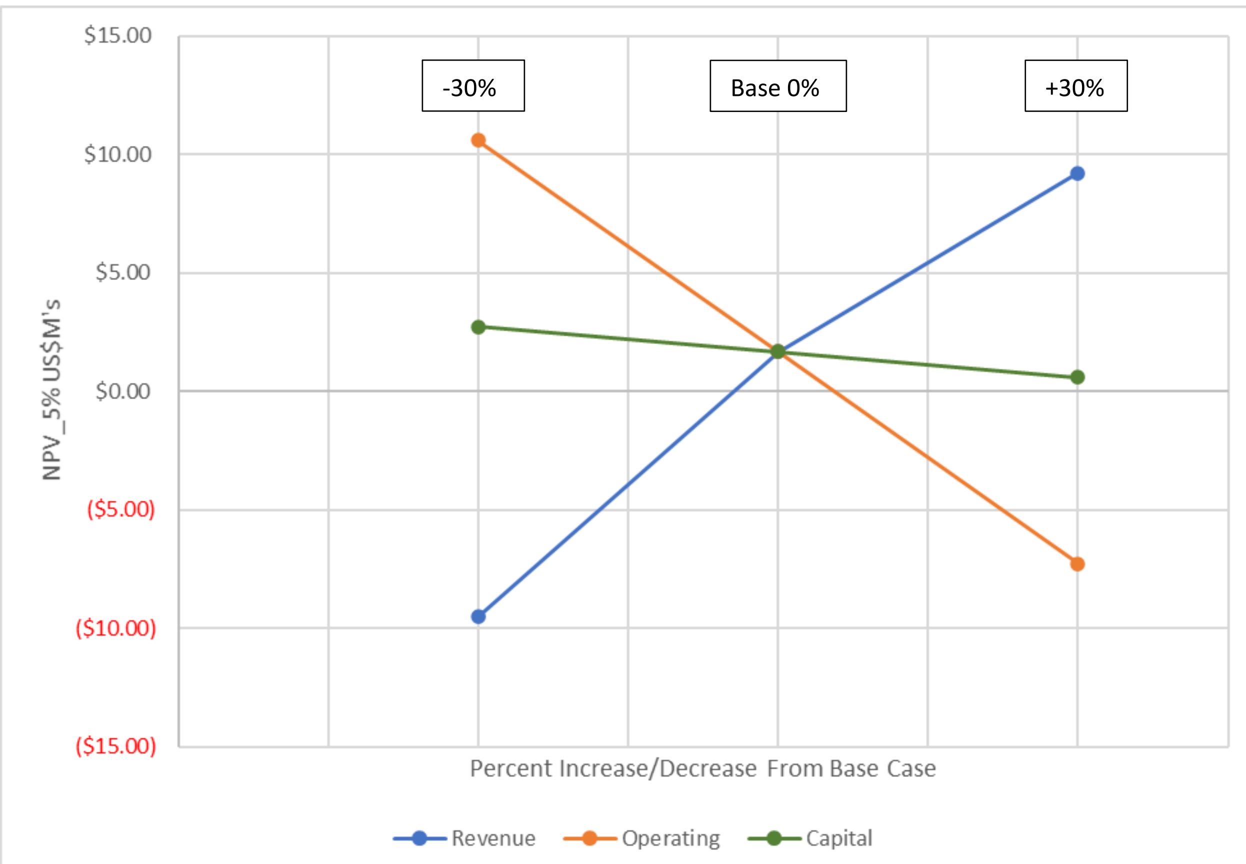


Figure 22-1: Sensitivity Spider Graph

Figure 22-2 displays the Pre-Tax NPV associated with the Base Case (PEA Ag Price), the three year trailing average of the price of silver, and the price of silver the day before the report's issue date (9/14/2020).

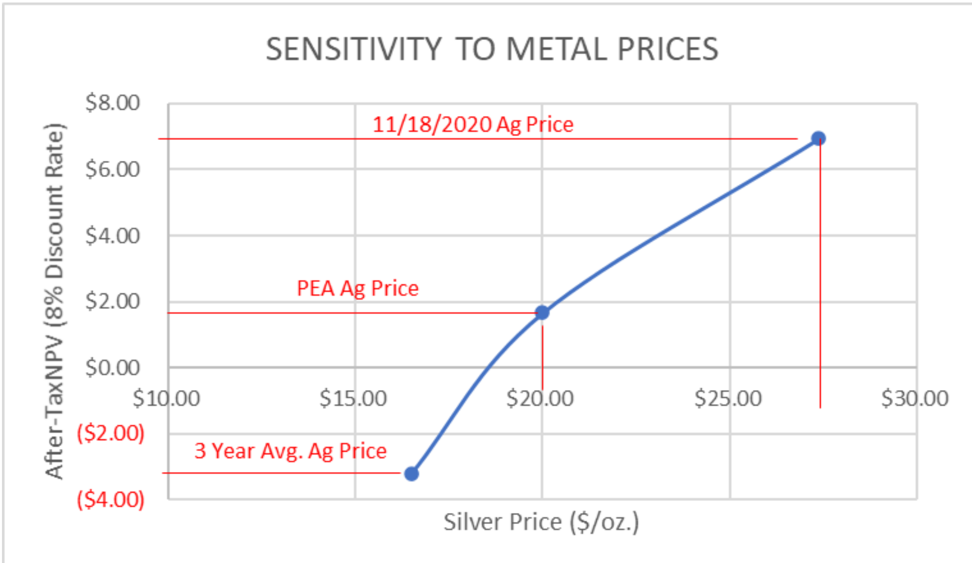


Figure 22-2: Sensitivity Comparison to Price of Silver

23 ADJACENT PROPERTIES

A search using the Sistema de Administración Minera (SIAM) website yielded the names of title holders for the surrounding claims. The following associated mining companies are believed to hold titles surrounding the Santa Maria claim group: Grupo Mexico S.A. de C.V., Industrias Peñoles, S.A. de C.V., Minera Platte River Gold, S. de R.L. de C.V. The Grupo Mexico exploration claims are generally contiguous with Grupo Mexico's Santa Bárbara operations.

There appears to be no publicly available information regarding the adjacent properties were located of the historic El Estandarte mine thatis west of the historic Santa Niño mine.

24 OTHER RELEVANT DATA AND INFORMATION

Relevant data and information has been included within the respective sections.

25 INTERPRETATION AND CONCLUSIONS

The following sections outline the interpretations and conclusions that can be gained from this Preliminary Economic Analysis.

25.1 GEOLOGY AND RESOURCES

Drill hole and channel samples have been collected and analyzed using industry standard methods and practices and are sufficient to characterize grade and thickness and support the estimation of Mineral Resources. However, to confirm the Resource estimates and increase the level of certainty we recommend developing underground drifts and crosscuts along the vein deposits to define “ore shoots”, mineralized structures, and continuity. These workings may be partially financed by shipping economic mineralization to the Parral Mill for processing.

25.1.1 SIGNIFICANT RISK FACTORS

Significant Project risks include those discussed in the Resource section regarding the true shape of mineralized shoots and the consistency of areas above cutoff vs. those that are below. Difficulty in defining these areas could directly affect the Project’s amenability to mine planning and successful operations.

Conversion of Inferred Resources to Indicated or Measured classification in vein deposits is historically more expensive when compared to more massive deposit types, and it is rarely advantageous to delay Project progression until the Project has been completely explored and Reserves defined.

For the type of mineral deposits at the Santa María project, Tt recommends following the exploration with underground development, drifting and crosscutting; the economic investment for these workings may be mitigated by processing any mineralized material produced during the workings.

The claim’s boundary limits the Project Resource upside, prohibiting any significant increases beyond what has been stated in this report.

25.2 MINING

It is the authors opinion that this Preliminary Economic Assessment warrants additional work on the Santa Maria project. The following sections outline the authors interpretations and conclusions that could refine the planning of future work on the Santa Maria project.

25.2.1 GEOTECHNICAL AND HYDROGEOLOGICAL EVALUATION

Since no formal study has been completed on the geotechnical conditions, this remains a Project risk that could result in safety concerns, cost escalation or more challenging mining conditions than currently anticipated.

25.2.2 VENTILATION

No formal ventilation study has been conducted. During the initial mining no issues are expected. A ventilation study should be conducted to ensure Fabled is prepared for additional ventilation requirements for deeper mining.

25.2.3 Equipment Requirements

This PEA study found that the proposed fleet is right sized for the prescribed operation. However, a full review of the fleet size and equipment size would be warranted with significant expansion of the extractable resource.

25.2.4 Opportunities

The following opportunities should be further evaluated by Fabled for pursuing mining at Santa María.

25.2.4.1 Expansion of Sublevel Stoping

It is possible that the competence of the ground may enable the use of Sublevel stoping in areas narrower than currently assumed. Opening analysis should be done simultaneously with the earliest mining. The use of the Sublevel Stoping method is more productive on a daily basis and is a lower cost method than the Resue Cut and Fill.

25.2.4.2 Processing of Low Grade from Vein Drifts

Where stope development is done on the vein to access economically feasible stoping areas, vein material mined as part of required access development could be selected for processing at a lower cutoff. Fabled will need to confirm recoveries and mill capacity to ensure that this does make economic sense.

26 RECOMMENDATIONS

The following recommendations are set forth based on the strength of the analysis performed on the project to date:

- Further explore the Project to increase tonnage and confidence of the currently defined Resources.
- Plan significant underground development along the mineralized structures to determine widths, grades, and mineralization distribution. This will increase certainty on the Mineral Resources and conversion into Mineral Reserves.
- Engage a local environmental consultant to determine permitting costs and timelines.
- Perform additional metallurgical testing characterization; It is important to fully understand the processing of the transition and sulphide material in an agitated leach plant, or treating the concentrate from flotation in an agitated leach plant.
- Additional studies and work required to advance the Project to a preliminary feasibility study (PFS) and Reserves includes but is not limited to:
  - Geotechnical drilling and stability analysis gained from historic core and new core if needed;
  - Hydrogeologic analysis;
  - Waste rock geochemical determination;
  - Increased accuracy of closure cost estimation;
  - Base line environmental studies and permitting;
  - Increased accuracy of estimation for site infrastructure requirements;
  - Surface water management analysis and handling requirements;
- Further explore the property to develop a resource that would support building an on-site processing plant. No single recommendation could affect the project more than having an on-site processing plant.

The following phased budget for addressing the preceding recommendations is summarized in **Table 26-1**: Preliminary Budget for Future Work.

Table 26-1: Preliminary Budget for Future Work

DESCRIPTION	PRELIMINARY BUDGET
Phase I Suggested Work	
Current Resource Confidence Drilling	$500,000
Geotechnical Studies	$25,000
Hydrogeologic Analysis	$50,000
Waste rock geochemical determination	$50,000
Closure cost estimation	$10,000
Environmental studies and permitting	$200,000
Next level site infrastructure	$20,000
Surface water management analysis	$50,000
Total Phase I Suggested Work	**$905,000**
Phase II Suggested Work	
Exploration to Support Plant Construction	$1,500,000
Preliminary Plant Design	$50,000
Preliminary Ptailing Pond Design	$40,000
Total Phase II Suggested Work	**$1,590,000**

The results of the Phase I suggested work would be analyzed to determine whether the underground development of the project should be financed and undertaken. The Phase II suggested work, that would be considered after positive results from the Phase I suggested work, would be focused on developing a resource to support building an on-site processing plant. The Phase II work will also include the preliminary design and budget for the proposed plant and tailing pond.

26.1 Geology and Resources

It is recommended drilling continues for purposes of class conversion, Inferred to Indicated, as well as along-strike extension and expansion. Exploration underground through development, drifts and crosscuts, is recommended to confirm the drilling programs, define the mineralized zones (widths and grades), and confirm the mineralized structures continuity. These workings may elevate some of the Mineral Resources to Reserves.

It is recommended that mineral leases are secured for concessions where down-dip expansion potential exists. Without additional concessions, significant Resource expansion is limited.

26.2 Metallurgy and Process

It is recommended that agitated leach testing, bottle rolls be performed to gain results for the following parameters:

a) Additional testing of oxide material to determine a satisfactory grade recovery curve at the optimum grind size.
b) Additional testing of the transition material (Mixto) to determine a satisfactory grade recovery curve at the optimum grind size.
c) Additional testing of the sulphide material to determine a satisfactory grade recovery curve at the optimum grind size.
d) Continued flotation testing of the transition and sulphide materials.

26.3 Mining

26.3.1 Geotechnical and Geohydrological Evaluation

Mineral Resources Engineering recommends Fabled commission a geotechnical and hydrogeological study to confirm rock conditions for the underground mining. The extension of mining to depth should be evaluated in terms of potential rock stress issues.

26.3.2 Ventilation

A more detailed ventilation plan should be developed when the mine design has been advanced and the equipment fleet analysis more solid. This can be done in-house providing Fabled has mining engineers on their staff.

26.3.3 Equipment Requirements

It is recommended that most of the pieces of equipment outlined in the PEA are reviewed with trade-off studies to ensure the equipment selected are the best fitted and most economical for the project. This can be done in-house providing Fabled has mining engineers on their staff.

26.4 Environmental and Permitting

It is recommended that a local environmental consulting firm, experienced in permitting and societal issues in the area, be retained to assist in baseline and background work that will be required as inputs into the feasibility and mine planning process. Additional work that shall be conducted, at a minimum, includes:

- Continued characterization of groundwater quality to include extracting samples from the sulfide zones of the mine;
- Surface water features and streams in the mine should also be characterized for water quality to support continued mine planning for environmental concerns;
- A small number of core samples of both host rock and from the ore vein should be submitted for initial static geochemical testing for acid base accounting (ABA). Dynamic humidity cell tests would not be recommended;
- Preventive Report (Informe Preventivo, or IP). At the beginning of the permitting process, SEMARNAT should visit the site to recommend whether an IP only, or an IP and an MIA will be needed for the mine preparation and production stage. This report is intended to provide general information about the Project and determine requirements of an MIA, and on what basis (regional or specific); and
- Clarify with current regulatory authorities where activities by previous operators on the property could be the liability of the current or future operator.

27 References

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28 CERTIFICATES OF QUALIFIED PERSONS

CERTIFICATE OF QUALIFIED PERSON

DAVID DRIPS,

I, David Drips, do hereby certify that:

1. This certificate applies to the technical report entitled "NI 43-101 Technical Report: Preliminary Economic Assessment, Santa Maria Project, Parral, Chihuahua, Mexico (Amended) (this "Technical Report") with an effective date of December 2, 2020 and a signature date of November 8, 2021, prepared for Fabled Copper Corp (now Fabled Silver Gold Corp.);

2. I am a principle/owner of Mineral Resources Engineering of 4709 Millrace Lane, Salt Lake City, Utah.

3. I am a graduate of Colorado School of Mines in 1980 with a Bachelors of Science Degree in Mining Engineering.

4. I am registered with the Mining and Metallurgical Society of American (#01525QP Mining and Minerals Project Costing, Infrastructure, Management), and (#01525QP Mining). I have worked as a geologist for a total of 40 years since my graduation. My relevant experience for the purpose of this Technical Report is:
    a. Mine planning and design, and experience on projects from conceptual to operating status of both open pit and underground operation, both metal and non-metal facilities.
    b. Managed the construction and initial development of mines ranging from a couple of hundred tonnes per day to 10,000 tonnes per day.
    c. Developed required metallurgical testing programs, detailed plans of mine infrastructure, refined construction schedules and prepared funding level budgets.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("**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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I visited the Santa Maria Project site from July 20 to July 21, 2019.

7. I am responsible for Sections 1, 2, 3, 4, 12 (partial),15, 16 (partial),17, 18, 19, 20, 21, 22, 23, 24, 25, 26 of this Technical Report.

8. I am independent of each of the Issuer, the vendor of the Property and the Property applying the test set out in Section 1.5 of NI 43-101.

9. I have prior involvement with the Santa Maria that included performing minor stope design opinions for Golden Minerals Corp in 2017.

10. I have read NI 43-101, and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

11. At the effective date of this Technical Report, to the best of my knowledge, information, and belief, the sections of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: December 6, 2020
Signature Date: November 8, 2021

(Original signed and sealed) "David E. Drips"

David E. Drips, MMSA QP

CERTIFICATE OF QUALIFIED PERSON

JOHN E. THOMPSON,

I, John E. Thompson, do hereby certify:

1. This certificate applies to the technical report entitled "NI 43-101 Technical Report: Preliminary Economic Assessment, Santa Maria Project, Parral, Chihuahua, Mexico (Amended) (this "Technical Report") with an effective date of December 2, 2020 and a signature date of November 8, 2021, prepared for Fabled Copper Corp (now Fabled Silver Gold Corp.);

2. I am an independent Mining Consultant with John E. Thompson, LLC with an office at 2622 Driftwood Lane, Rock Springs, Wyoming 82901 and am a consultant to Mineral Resources Engineering of 4709 Millrace Lane, Salt Lake City, Utah for the purposes of this Technical Report.

3. I am a graduate of New Mexico Institute of Mining and Technology in 1968 with a Bachelors Degree in Mining Engineering.

4. I am registered with the Mining and Metallurgical Society of America (#1448QP). I have worked as a mining engineer for a total of 52 years since my graduation. My relevant experience for the purpose of this Technical Report is**:**
   a. Mine planning and design, and experience on projects from conceptual to operating status of both open pit and underground operation.
   b. Due Diligence studies for various financial and investment firms concerning investment and financing of mining projects.
   c. Review and report as a consultant on numerous exploration, development, and producing mining projects in North and South America for due diligence and regulatory requirements**.**

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("**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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I have not visited the Santa Maria site.

7. I am responsible for Section 16.1, 16.2 16.3,16.4,16.5, 16.6,16.7 and 16.8 of this Technical Report.

8. I am independent of each of the Issuer., the vendor of the Property and the Property applying the test set out in Section 1.5 of NI 43-101.

9. I have prior involvement with the Santa Maria project having performed a desktop review of resources, infrastructure, location, permitting and preliminary development and production plan.

10. I have read NI 43-101, and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

11. At the effective date of this Technical Report, to the best of my knowledge, information, and belief, the sections of this Technical Report which I have reviewed contain all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: December 6, 2020
Signature Date: November 8, 2021

(Original signed and sealed) "John E. Thompson"

John E. Thompson, MMSA QP

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333 West 17th Street
North Vancouver, B.C.
Canada V7M 1V9
(604) 374-1629

AUTHOR'S CERTIFICATE

I, Marc Jutras, P. Eng., M.A.Sc., do hereby certify that:

1. This certificate applies to the technical report entitled "NI 43-101 Technical Report: Preliminary Economic Assessment, Santa Maria Project, Parral, Chihuahua, Mexico (Amended) (this "Technical Report") with an effective date of December 2, 2020 and a signature date of November 8, 2021, prepared for Fabled Copper Corp (now Fabled Silver Gold Corp.);

2. I am currently employed as Principal, Mineral Resources with Ginto Consulting Inc. with an office at 333 West 17th Street, North Vancouver, British Columbia, V7M 1V9;

3. I am a graduate of the University of Quebec in Chicoutimi in 1983, and hold a Bachelor's degree in Geological Engineering. I am also a graduate of the Ecole Polytechnique of Montreal in 1989, and hold a Master's degree of Applied Sciences in Geostatistics;

4. Since 1984, I have worked continuously in the field of mineral resource estimation of numerous international exploration projects and mining operations. I have been involved in the evaluation of mineral resources at various levels: early to advanced exploration projects, preliminary studies, preliminary economic assessments, prefeasibility studies, feasibility studies and technical due diligence reviews;

5. I am a Registered Professional Engineer with the Engineers and Geoscientists British Columbia (license # 24598) and Engineers and Geoscientists Newfoundland and Labrador (license # 09029). I am also a Registered Engineer with the Quebec Order of Engineers (license # 38380);

6. I have read the definition of "qualified person" set out in National Instrument 43-101 (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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101;

7. I have not visited the project site due to travel restrictions during the Covid-19 pandemic;

8. I am responsible for Sections 5, 6, 7, 8, 9, 10, 11, 12 (partial), 13, 14 of this Technical Report;

9. I am independent of the Issuer, the vendor of the Property and the Property and any related companies of the same applying all of the tests in Section 1.5 of the NI 43-101;

10. I have had no prior involvement with the property that is the subject of this Technical Report;

Effective Date: December 6, 2020
Signature Date: November 8, 2021

(Original signed and sealed) "Marc Jutras, P. Eng., M.A.Sc."

Marc Jutras, P. Eng., M.A.Sc.

Principal, Mineral Resources, Ginto Consulting Inc.