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Cerro Las Minitas Project

NI 43-101 Technical Report Preliminary Economic Assessment

of the Cerro Las Minitas Project, Durango State, Mexico

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DATE AND SIGNATURES PAGE

The effective date of this report is August 29, 2022. See Appendix A, of the NI 43-101 Technical Report Preliminary Economic Assessment Contributors and Professional Qualifications, for certificates of qualified persons. These certificates are considered the date and signature of this report in accordance with NI 43-101.

CERRO LAS MINITAS PROJECT
NI 43-101 TECHNICAL REPORT

TABLE OF CONTENTS

SECTION **PAGE**

LIST OF FIGURES AND ILLUSTRATIONS

FIGURE DESCRIPTION PAGE

LIST OF TABLES

TABLE **DESCRIPTION** **PAGE**

LIST OF APPENDICES

1 SUMMARY

This Technical Report presents a Preliminary Economic Assessment (PEA) for the Cerro Las Minitas project owned by Southern Silver Exploration. Southern Silver Exploration is a precious and base metal exploration company based in Vancouver, Canada and a member of the Manex Resource Group, and it is listed on the TSX-V (trading symbol: SSV), SSEV (trading symbol: SSVCL) and on OTCQX (trading symbol: SSVFF).

This PEA was developed by M3 Engineering & Technology Corp. (M3), Kirkham Geosciences Ltd. (KGL), Entech Mining Limited (Entech), and Metallurgical Process Consultants Limited (MPC).

1.1 PROPERTY DESCRIPTION

The Cerro Las Minitas property is located 70 km northeast of the City of Durango, the capital of the state of Durango, and 6 km north of the town of Guadalupe Victoria, in the municipality of Guadalupe Victoria, Durango, Mexico. The claims are located in the Minitas mining district in the Guadalupe Victoria mining region. The property consists of 26 mining concessions encompassing 34,427.45 ha.

1.2 GEOLOGY

From 2010-2021 Southern Silver completed programs of geological mapping, surface geochemical sampling and airborne and ground geophysical surveys in support of 80,904 m of core drilling in 186 holes resulting in the delineation of six mineral deposits: the Blind; El Sol, Las Victorias, Skarn Front, South Skarn and Mina La Bocona deposits on the Cerro Las Minitas Property.

The Blind, El Sol and Las Victorias deposits comprise multiple sub-vertical northwest-southeast trending zones of semi-massive to massive sulphide mineralization. Mineralization is hosted in the skarnoid- and hornfels-altered margins of monzonite and felsite dykes and may be localized along through-going structures or occur as replacements within stratigraphic units. The mineralized zones can be traced for up to 1000 m along strike and up to 800 m down dip.

Sulphide mineralization in the Skarn Front deposit is localized at the outer boundary of the skarnoid alteration zone surrounding the Central Monzonite Intrusion at or near the transition to the recrystallized/marbleized carbonate sediments (marmorized zone). The Skarn Front deposit can be traced for up to 1,100 m along strike and up to 1,000 metres depth. Geological modelling suggests that intersections between the sub-vertical, northwest-trending Blind and El Sol mineralized zones and the generally more shallowly dipping Skarn Front may localize higher-grade shoots of mineralization.

Drilling in 2020-22 confirmed laterally extensive skarnoid-style mineralization within the altered halo around the central intrusion in the South Skarn, La Bocona and North Felsite deposits. Mineralization occurs adjacent to the central intrusion and features similar replacement styles as is observed in the Skarn Front deposit. The skarnoid-style mineralization in the La Bocona and South Skarn deposits show a similar variability in metal assemblages as is identified in the Skarn Front deposit, but tends to be more galena biased and is generally associated with elevated silver values when compared to the Skarn Front mineralization. Mineralization in the North Felsite also show a similar variability in metal assemblage, but drilling is currently insufficient to define the mineral zonation accurately.

Drilling also identified manto-styled mineralization within the La Bocona deposit which occurs as replacements in the hanging wall of the skarnoid mineralized zone within variably altered marble-skarn-hornfels. The mineralization is strongly silver enriched with elevated lead, arsenic, and gold values. The upper portion of the mineralized zone is strongly oxidized and makes up in part the small oxide resource identified in the current mineral resource update.

1.3 EXPLORATION AND DRILLING

Exploration in 2020-21 has fulfilled a number of the recommendations of the 2019 NI 43-101 technical report. Two new higher grade mineral deposits were identified on the eastern side of the Central Monzonite Intrusion which added to the Mineral Resource base and further drilling was conducted on the Las Victorias target. Metallurgical and variability test work was advanced significantly, to allow the development of a robust metallurgical process flowsheet and the updated mineral resource estimate to be expressed on a NSR valuation basis. Further engineering work and some additional metallurgical test work is in process to further de-risk the project and advance the project toward a Preliminary Economic Assessment.

More claims were added to the CLM West claim group in 2018 which now totals 34,450 ha. Over 6,400 float and rock chip samples have been collected in the CLM West claims to date and identify a +12-km northwest-southeast trending corridor of anomalous precious metal and pathfinder values that display a distinct zoning pattern consistent with modelled vertical and lateral zonation within a large epithermal vein system. Multiple distinct clusters and trends are seen in the metal distribution in the samples which provide potential future targets for further exploration on the property. 10 holes were drilled on the larger property for a total of 3,525 m resulting in the discovery of several zones of anomalous precious and pathfinder elements. The highlight of this drilling was hole 18CLMW-007 which intercepted a 3-m downhole interval of 168 g/t silver.

Since acquisition of the property in 2010, Southern Silver, both self-funded and funded by option partners, has completed diamond drilling; geological mapping; geochemical rock, soil and acacia sampling; shallow and deep-seeing IP surveys; a ground gravity survey; and an airborne magnetic survey.

Core drilling took place between 2011 through 2021 and was contracted out to BD Drilling Mexico, S.A. de C.V. (BDD) of EL Salto, Jalisco up to 2018 and by Intercore Operaciones, S de RL de CV (Intercore) of Tlajomulco de Zuniga, Jalisco Mexico during 2020 and 2021 Drilling was completed using both NQ and HQ coring equipment capable of recovering a core 45.1 to 61.1 mm in diameter. The 186 drill holes in the database were supplied in electronic format by Southern Silver. This included collars, downhole surveys, lithology data and assay data (i.e., Ag g/t, Au g/t, Cu%, Pb%, Zn%).

1.4 MINERAL PROCESSING AND METALLURGICAL TESTING

The testwork performed is more than adequate for recovery plant design purposes and estimation of grades and recoveries. No further flotation work is envisaged. Further recovery efforts will focus on preconcentration options. Table 1-1 is a summary of all of the applicable recovery and off-site factors that influence the Net Smelter Return (NSR) valuation for sulphide and oxide rock types and for typical Skarn Front or Blind-El Sol type sulphides.

Table 1-1: NSR Factors Used in Block Valuations for Resource Estimates

Item	Sulfides					Oxides
	Pb Concentrate		Zn Concentrate		Cu Conc.	Ag-Au Leach
Mineral Type	**Skarn**	**BESS**	**Skarn**	**BESS**	**Skarn**	
Pb Recovery	84%	90%				
Zn Recovery			95%	87%		
Cu Recovery					60%	
Ag Recovery	77%	87%	8%	3%	7%	74%
Au Recovery						70%
Payable Metals	Pb, Ag	Pb, Ag	Zn, Ag	Zn, Ag	Cu, Ag	Au, Ag
Concentrate Grade (primary base metal)	65%	70%	54%	52%	27%	
Transport, Treatment, Penalty Charges, $ dmt	230	267	358	364	183	
Base metal Concentrate Grade Deduction	3 units	3 units	8 units	8 units	1 unit	
Ag Concentrate Grade Deduction, g/t	50	50	93	93		
Ag Refining charge, $/oz	0.6	0.6			0.4	
Base metal Refining, $/lb					0.107	
Ag payable					90%	

1.5 MINERAL RESOURCE

The updated Mineral Resource estimate features increased sulphide resources from two new mineral deposits, a small oxide resource in one of the new deposit areas and an update of the previously reported deposits utilizing new metal pricing and metallurgical recoveries. Resource reporting now utilizes an NSR cut-off, as detailed in Table 1-2 and Table 1-3, and reports average grades on a AgEq, ZnEq and $US/t NSR basis.

Table 1-2: Base-Case Sulphide Mineral Resources at a US$60 NSR Cut-off

Indicated Resources		Average Grade							
Zone	Tonnes (Kt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Cu (%)	AgEq (g/t)	ZnEq (%)	NSR (US$/t)
Blind Zone	2,347	97	0.04	1.9	2.1	0.11	295	7.2	108
El Sol Zone	1,154	80	0.04	2.2	2.0	0.09	279	6.8	100
Skarn Front Zone	7,254	108	0.06	0.8	4.2	0.19	383	9.3	140
La Bocona Zone	1,571	132	0.19	2.2	1.6	0.17	302	7.3	136
Total	**12,325**	**106**	**0.07**	**1.3**	**3.3**	**0.16**	**347**	**8.4**	**130**

Inferred Resources		Average Grade							
Zone	Tonnes (Kt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Cu (%)	AgEq (g/t)	ZnEq (%)	NSR (US$/t)
Blind Zone	1,347	83	0.14	1.4	1.8	0.06	248	6.0	88
El Sol Zone	863	65	0.03	1.8	2.3	0.05	263	6.4	90
Las Victorias Zone	1,083	148	0.66	2.1	2.6	0.14	431	10.5	145
Skarn Front Zone	11,466	115	0.05	0.7	2.7	0.32	318	7.7	126
South Skarn Zone	3,789	140	0.18	2.0	1.3	0.09	309	7.5	130
La Bocona Zone	1,057	106	0.20	1.3	2.2	0.18	293	7.1	117
Total	**19,605**	**117**	**0.12**	**1.2**	**2.3**	**0.23**	**314**	**7.6**	**123**

Source: Kirkham 2021

Notes:

1) The current Resource Estimate was prepared by Garth Kirkham, P.Geo., of Kirkham Geosystems Ltd.
2) *All mineral resources have been estimated in accordance with Canadian Institute of Mining and Metallurgy and Petroleum ("CIM") definitions, as required under National Instrument 43-101 ("NI43-101").*
3) Mineral resources were constrained using continuous mining units demonstrating reasonable prospects of eventual economic extraction.
4) Silver Equivalents were calculated from the interpolated block values using relative recoveries and prices between the component metals and silver to determine a final AgEq value. The same methodology was used to calculate the ZnEq value.
5) Mineral resources are not mineral reserves until they have demonstrated economic viability. Mineral resource estimates do not account for a resource's mineability, selectivity, mining loss, or dilution.
6) An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
7) All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely.
8) The $60/t NSR cut-off value was calculated using average long-term prices of $20/oz. silver, $1,650/oz. gold, $3.25/lb. copper, $1.0/lb. lead and $1.20/lb. zinc. Metallurgical work from locked cycle testwork produced three saleable concentrates for the Skarn zone and testwork on a composite of the Blind, El Sol and Las Victorias Zones produced two saleable concentrates. This work, along with marketing studies were used to decide the NSR cut-off value. Concentrate grades and other parameters used to calculate the cut-off and NSR values are shown in Table 3. All prices are stated in $USD.

Table 1-3: Oxide Mineral Resource Estimate for CLM Project Utilizing a US$60/t NSR Cut-off Value

La Bocona		Average Grade			Contained Metal	
	Tonnes (kt)	Ag (g/t)	Au (g/t)	NSR (US$/t)	Ag TrOz (koz)	Au TrOz (koz)
Indicated	65	28	2.2	93	58	4.5
Inferred	219	120	0.8	88	844	5.6

Source: Kirkham 2021

Notes: The $60/t NSR cut-off value was calculated using average long-term prices of $20/oz. silver, $1,650/oz. gold. Base metals were not recovered in the leach circuit. Metallurgical work from batch test work recovered 74% silver from oxidized composites from the Blind – El Sol zones. Gold recovery was not assessed and is estimated at 70% for the purposes of this report. This work, along with marketing studies were used to decide the NSR cut-off value. All prices are stated in $USD.

1.6 MINING METHODS

The mineral resources considered in the mine plan support a bulk, productive project and preliminary schedules indicate that a production rate of 4,500 to 5,000 tonnes per day (t/d) is achievable contributed from two mines as illustrated in Figure 1-1. Production levels are proposed to be spaced at 25 metre (m) intervals with stoping panels 20 m long and up to 20 m wide. Material is proposed to be mined using a large and modern fleet consisting of 63-t trucks and 21-t loaders. A contractor model was selected for the study to minimise upfront capital.

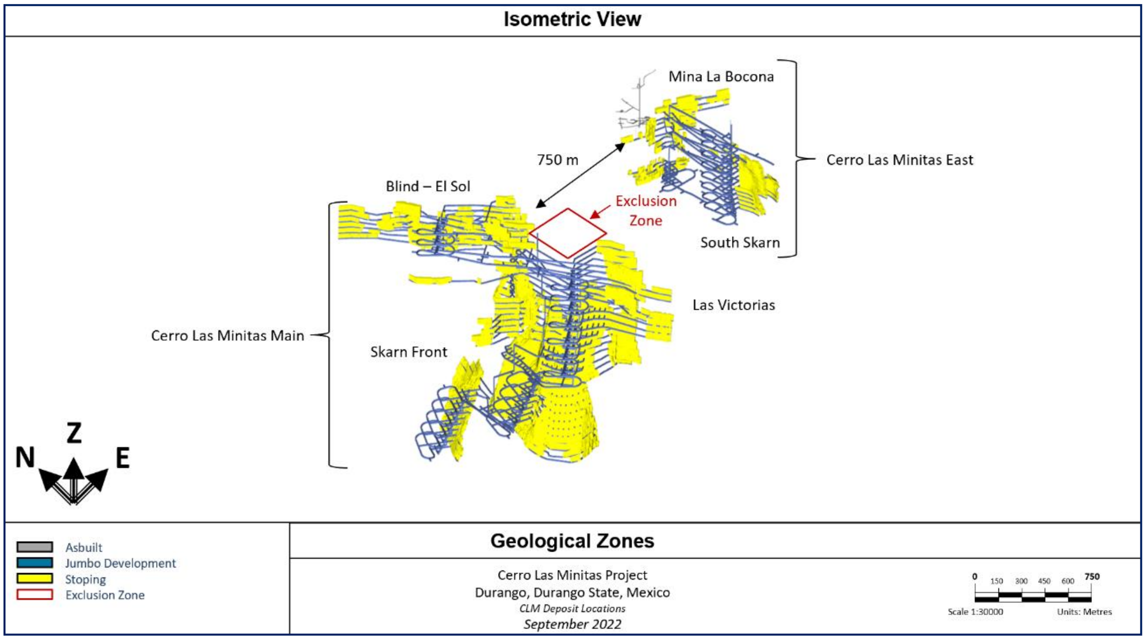


Figure 1-1: Mining Locations for Cerro Las Minitas

Datamine Mineable Stope Optimiser® (MSO) was used to create stope shapes for mine planning purposes and stope that were above the estimated cut-off value (COV) of US$64/t. Unplanned dilution in rock was included in the MSO analysis (0.5 m from hangingwall and footwall contacts), with additional dilution from backfill. The dilution and recovery values used in the mine plan are summarised in Table 1-4 resulting in a resource being selected for mining as summarised by category in Table 1-5.

Table 1-4: Dilution and Recovery Summary

Description	Value
Total Rock Dilution - Stoping[1]	24.6%
Total Rock Dilution - Development[2]	5%
Fill Dilution – Top Down[3]	4.5%
Fill Dilution – Bottom Up[3]	3.5%
Development Recovery	97%
Stoping Recovery	93%

[1]Included in MSO Shape as Planned and Unplanned Dilution (stoping only)
[2]Applied to Development only (mineralisation only)
[3]Applied as Factor to the volume of the shape (assumed density of backfill 2.0 t/m^3)

Table 1-5: Mining Resource Category Summary

Classification	%	Tonnes (kt)	Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)
Measured	0.0	-	-	-	-	-	-
Indicated	36.0	8,804.1	0.17	1.21	3.54	0.08	110.5
Inferred	54.3	13,283.8	0.26	1.18	2.38	0.12	129.1
Dilution[1]	9.7	2,362.8	0.0	0.0	0.0	0.0	0.0
Total	100	**24,451**	0.20	1.07	2.57	0.09	109.9

Note 1: Dilution is non-mineralised material outside of the proposed stopes that already include planned and unplanned dilution

1.7 RECOVERY METHODS

The process plant design is based on an average daily mill feed rate of 4,500 t/d and an average LOM head grade of 0.2% Cu, 1.07% Pb, 110 g/t Ag, and 2.57% Zn. The plant feed characteristics and metallurgical performance is summarized in Table 1-6.

Table 1-6: Plant Feed Characteristics and Metallurgical Performance

Criteria	Units	Value		Source
		Range	Design	
Mineralized Solids Dry Bulk Density	g/cm^3	2.35 to 4.15	2.96	
Design Mill Head Grade	%Cu	0.01 to 0.60	0.26	
Design Mill Head Grade	%Pb	0.27 to 2.35	1.22	
Design Mill Head Grade	%Zn	0.61 to 6.44	5.56	
Design Mill Head Grade	g Ag/t	47 to 184	111	
Mill Treatment Capacity	kt/y	-	1,642,500	
Cu Recovery to Cu Concentrate	%	-	60	
Pb Recovery to Pb Concentrate	%	-	88	
Ag Recovery to Pb Concentrate	%	-	84	
Zn Recovery to Zn Concentrate	%	-	93	
Cu Concentrate Grade	%Cu	-	27	
Pb Concentrate Grade	%Pb	-	65	
Ag Grade in Pb Concentrate	g/t		5,504	
Zn Concentrate Grade	%Zn	-	54	
Cu Concentrate Production LOM	kt/y	-	109	
Pb Concentrate Production LOM	kt/y	-	357	
Zn Concentrate Production LOM	kt/y	-	1,093	

The metallurgical process consists of a two-stage crushing circuit followed by a single stage ball mill grinding circuit followed by sequential, selective copper, lead, and zinc flotation circuits. The process generates separate copper, lead/silver, and zinc concentrates. The copper, lead/silver, and zinc concentrates will be shipped off site for sale to market.

The zinc rougher tailing are treated in a flotation stage to produce a low-mass high sulfide sulfur (HS) stream and high-mass non acid-generating (NAG) tailing. All the HS tailing will be dewatered, filtered, and stockpiled separately from the plant tailing. The NAG tailing will be thickened, filtered, and conveyed to the tailing storage facility or to the tailing paste backfill plant to be placed underground.

The equipment that was selected for the processing plant represents well established technology, such as cone crushers, ball mills, column and tank flotation cells. Initial dewatering is performed in high-rate thickeners followed by filter presses for the flotation concentrates and for the LS tailing stream.

The plant will employ a standard reagent suite consisting of sulphide collectors/promoters dialkyl thionocarbamate (A-3894), dialkyl dithiophosphinate (Aerophine 3418A), sodium isopropyl xanthate (SIPX), frother methyl isobutyl carbinol (MIBC), depressants Sodium Metabisulfite (SMBS), zinc sulfate ($ZnSO_4 \cdot 7H_2O$), sodium cyanide (NaCN), activator copper sulfate ($CuSO_4$), and pH modifier lime. Flocculants will be employed to assist in the dewatering of the concentrate and tailing streams. Antiscalant will be employed to inhibit scaling.

The total connected power is 18.7 MW with 79% drawn. It is assumed at this time that electrical power will be supplied through the electrical grid.

1.8 PROJECT INFRASTRUCTURE

The Cerro Las Minitas project is located about 70 km to the northeast of the city of Durango in Durango State, Mexico, approximately 5 km from Guadalupe Victoria, a city of 16,500 people. The project site is 1 km alongside Federal Highway 40D, a four-lane divided paved toll highway. In the project vicinity, paved Federal Highway 40 runs through Guadalupe Victoria and parallel to Highway 40D. There is a road from Guadalupe Victoria to the site with a bridge over 40D. There is also FFCC rail service to Guadalupe Victoria operated by Linea Coahuila Durango, S.A. de C.V. which feeds into or from the Ferromex network.

The Cerro Las Minitas process plant and mine has a 20 MW demand load. A 115 kV overhead electrical power transmission line, 10.4 km in length will run on self-supported steel towers to site from CFE Substation Guadalupe Victoria.

Process make-up and domestic water will be supplied from sub-surface wells. The project requires a water supply of approximately 1,500 m^3/d. The amount of aquifer water available for the project is presently unknown. Preliminary studies are ongoing to identify the hydrogeological availability and characteristics of the water aquifers in the region.

The port infrastructure and roads leading to the project are currently in good condition to handle the volumes and types of shipments needed. Because of its proximity to the project, transportation by rail may also be an option for the project.

The Cerro Las Minitas tailings facility is designed and operated as a dry-stack, in which dewatered tailings are spread, compacted and graded for erosion control and stability. Dry-stacking of tailings was selected and is implemented as an effective way to create a safe facility that will, upon closure, become a long-term stable geomorphic form in the landscape.

1.9 MARKET STUDIES

No market studies were performed and no sales contracts are in place. The commodities involved in this project are commonly traded on the open market.

1.10 ENVIRONMENTAL

Mining in Mexico is subject to a well-developed system of environmental regulation that applies from the exploration stage to mine development, operation, and ultimately through mine closure. The only known environmental liabilities are associated with the exploration site activities, past mining activities, and access roads.

Environmental studies of the Project area are limited to desktop evaluation of the surface and groundwater hydrology. The project is situated on the boundary between two aquifer basins that are both over exploited. Water rights will likely need to be purchased from existing concessions, augmented by dewatering production from the underground workings. Water quality for the Project area needs to be investigated, but preliminary sampling from existing underground workings indicates that the water quality is adequate for process use.

The permitting process is dominated by federal requirements in Mexico that are delineated in Section 20.2 of this technical report.

Social and community impacts are being evaluated and community interactions are being facilitated by Southern Silver's subsidiary Minera Plata del Sur. The Project is situated adjacent to two communities, Guadalupe Victoria Ejido and Ignacio Ramirez Ejido. The project has the potential to offer direct employment for over 200 full-time workers, with following on employment for many more.

Closure and reclamation planning has yet to begin but will follow established guidelines and be included in the permitting process.

1.11 CAPITAL AND OPERATING COSTS

Table 1-7 summarizes the initial capital costs. Total initial capital investment in the project is estimated to be $341 million and includes $55 million contingency, which represents the total direct and indirect cost for the development of the project, including associated infrastructure.

Table 1-7: Initial Capital Cost Summary

Item	Total ($M)
Process Plant and Infrastructure	
Project Directs including freight	$185
Project Indirects	$35
Contingency	$55
Sub-Total	**$275**
Process Pre-production	**$3**
Mining	
Pre-Production Capital Costs	$63
Total Initial Capital Costs	**$341**
Sustaining Capital	$168
Total Capital Costs	**$509**

The operating costs for the Cerro Las Minitas project are comprised of the following components: mining, process plant, and general & administration. An operating cost summary is shown in Table 1-8.

Table 1-8: Operating Cost Summary

Area	US$/t plant feed processed
Mine Operating Cost	$38.74
Process Plant Operating Cost	$15.12
G & A	$3.59
Treatment & Refining Charges	$22.66
Operating Cost	**$80.10**
Royalties - Revenue	$0.32
PTU-Profit Sharing	$4.15
Closure & Salvage Value	$0.17
Other Production Cost	**$4.63**
Total	**$84.74**

1.12 ECONOMIC ANALYSIS

The CLM project demonstrates project-life revenues over 15 years of production and after-tax Net Present Value at an 8% discount rate (NPV8%) of $220.4 million. Projected maximum cash outlay for the project is estimated to be $341.0 million and project payback is approximately 60 months. Table 1-9 below summarizes the economic results.

Table 1-9: Summary of Economic Results

Item	Units	Base Case
Revenue	$M US	$3,705
Total Cost (excluding income tax & EBITDA Royalty)	$M US	$2,581
LOM pre-tax cash flow	$M US	$1,124
LOM after-tax cash flow	$M US	$696
NPV pre-tax (8% Discount)	$M US	$431
IRR pre-tax (%)	%	25.4%
NPV after-tax (8% Discount)	$M US	$220
IRR after-tax (%)	%	17.9%
Max Cash Outlay	$M US	$341
Payback (discounted, after-tax)	months	60

1.13 CONCLUSIONS AND RECOMMENDATIONS

The overall conclusions and recommendations for this report are:

- The outcome of the PEA is sufficiently positive to go to the next level; the Qualified Persons recommend proceeding to the next level of study.
- Further drilling is recommended.
- Testwork is limited to tradeoff studies and ore sorting.
- Proceed with various technical studies as recommended by the QP.

The main risks are:

- Negotiation of mining rights,
- Water rights and availability,
- Community acceptance,
- Environmental permitting,
- Geotechnical impacts (increase in mineralization loss and dilution), and
- High costs of mining due to poor geotechnical conditions, increases in water flows, inflation in mining costs, and poor mining productivities.

The main opportunities are:

- Increased drilling may result in increased resources and potentially more favorable economics, and
- Increased margin of mined material with additional studies, including ore sorting.

Detailed discussion of these items is included in Sections 25 and 26 of this report.

2 INTRODUCTION

The Cerro Las Minitas Project is an exploration and resource development project located in Mexico, 70 km northeast of the City of Durango, capital of the state of Durango, and 6 km northwest of the town of Guadalupe Victoria, in the municipality of Guadalupe Victoria, Durango. The project encompasses several prospects on a 34,427.45 ha property that is owned and operated by Southern Silver Exploration Corp. (Southern Silver).

Southern Silver requested that M3 Engineering & Technology Corporation (M3) coordinate the preparation of a Preliminary Economic Assessment (PEA) of the property using the previously published Mineral Resource as a basis.

The Cerro Las Minitas PEA is preliminary in nature and 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 PEA will be realized.

2.1 SOURCES OF INFORMATION

A prior mineral resource estimate was filed on the Cerro Las Minitas Project titled "NI 43-101 Technical Report, Mineral Resource Estimate for Cerro Las Minitas Project, Durango State, Mexico," dated effective October 27, 2021 by Kirkham Geosystems Ltd. (KGL). The resource was used as the basis for this PEA and the information was vetted by the Qualified Persons (QPs) discussed in Section 2.2. The QPs performed additional work required for providing an initial assessment of the project's viability.

2.2 QUALIFIED PERSONS AND PERSONAL INSPECTIONS

Table 2-1 shows the Qualified Persons (QP) for this Technical Report and their associated areas of responsibility.

Table 2-1: Qualified Persons and Areas of Responsibility

Name of Qualified Person	Registration	Company	Date of Site Visit	Area of Responsibility
Daniel Roth	P.E., P. Eng.	M3	No Site Visit	Sections 2, 3, 18, 19, 21 (except 21.1.5 and 21.3), 22, 24, and corresponding sections of 1, 25, 26 and 27.
Laurie Tahija	QP-MMSA	M3	No Site Visit	Sections 17, 21.3.1, 21.3.2 and corresponding sections of 1, 25, 26 and 27.
Richard Zimmerman	SME-RM	M3	No Site Visit	Section 20 and corresponding sections of 1, 25, 26 and 27.
Garth Kirkham	P.Geo.	KGL	August 16, 2021	Sections 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 23, and corresponding sections of 1, 25, 26 and 27.
Arthur Barnes	P.Eng; FSAIMM	MPC	No Site Visit	Section 13 and corresponding sections of 1, 25, 26 and 27.
Jason Allen	P.Eng.	Entech	July 6, 2022	Sections 16, 21.1.5, 21.3.3 and corresponding sections of 1, 25, 26 and 27.

Garth Kirkham, P. Geo., visited the property several times between March 31 through April 2, 2015, then again on January 14 through January 19, 2019, and most recently on August 16, 2021. The site visits included an inspection of the property, offices, drill sites, outcrops, trenches, drill collars, core storage facilities, core receiving area, and tours of major centres and surrounding villages most likely to be affected by any potential mining operation. In addition, the January 2019 site visit included a tour of the Puro Corazon site and processing facilities.

The tour of the office and storage facilities showed a clean, well-organized, professional environment. On-site staff led the QP through the chain of custody and methods used at each stage of the logging and sampling process. All methods and processes are up to industry standards and reflect best practices, and no issues were identified.

A visit to the collar locations showed that the collars were well marked and labelled; therefore, they were easily identified. The previous drill holes were cased.

In 2015, Garth Kirkham selected four complete drill holes at random from the database and they were laid out at the core storage area. Site staff supplied the logs and assay sheets for verification against the core and the logged intervals. The data correlated with the physical core and no issues were identified. In addition, the QP toured the complete core storage facilities, selecting and reviewing core throughout. No issues were identified, and recoveries appeared to be very good. For the 2019 site visit, all significant intersections encountered in the 2017 and 2018 drill programs were laid out, inspected and compared against drill logs and assay sheets. For the 2021 site visit, all significant intersections encountered in the 2021 drill programs were laid out, inspected, and compared against drill logs and assay sheets. In addition, the methods and procedures for specific gravity measurements were reviewed and approved.

The core is accessible, and the core is stored in a secure warehouse. The core facilities are clean and well organized for easy access and analysis by way of a core map.

Jason Allen, P.Eng. visited the project site on July 6, 2022, and visited the core facility located in Guadalupe Victoria located adjacent to the property. He also visited the project site reviewing potential portal locations, general layout, and the historic La Bacona workings.

2.3 ABBREVIATIONS

Table 2-2 shows a list of abbreviations used in this report.

Table 2-2: Abbreviations Used in this Report

Abbreviation	Term	Abbreviation	Term
$	United States dollars	Cu	Copper
$/lb	dollars per pound	$CuSO_4$	copper sulfate
$/oz	dollars per ounce	dmt	dry metric tonne
$/t	US dollars per metric tonne	Electrum	The Electrum Group LLC
$M US	million US dollars	Entech	Entech Mining Limited
%	percent	FMEC	Freeport-McMoRan Exploration Corporation
A-3894	dialkyl thionocarbamate	G & A	General and Administrative
Aerophine 3418A	dialkyl dithiophosphinate	g/cm^3	grams per cubic centimetre
Ag	Silver	g/t	grams per tonne
Au	Gold	GPS	Global Positioning System
BDD	BD Drilling Mexico, S.A. de C.V.	ha	hectares
CDN	CDN Resource Laboratories Ltd.	HS	high sulfide sulfur
CRM	Consejo de Recursos Minerales	ICP-AES	Inductively coupled plasma atomic emission spectroscopy

Abbreviation	Term
kg/t	kilogram per tonne
KGL	Kirkham Geosciences Ltd.
km	kilometres
kt	one thousand tonnes
kt/y	thousand tonnes per year
kV	kilovolt
m	metre
M3	M3 Engineering & Technology Corp.
MIBC	methyl isobutyl carbinol
mm	millimetre
MPC	Metallurgical Process Consultants Limited
MRV	Minera Real Victoria
Mt	million tonnes
MW	megawatt
NaCN	sodium cyanide
NAG	non acid-generating
Noranda	Minerales Noranda, S.A. de C.V.

Abbreviation	Term
NPV	Net Present Value
NSR	Net Smelter Return
NW	northwest
Pb	Lead
PEA	Preliminary Economic Assessment
QP	Qualified Person
SIPX	sodium isopropyl xanthate
SMBS	Sodium Metabisulfite
Southern Silver	Southern Silver Exploration Corp.
t	metric tonne
t/d	metric tonnes per day
t/m^3	metric tonnes per cubic metre
TrOz	Troy Ounce
US$	United States Dollars
Zn	Zinc
ZnEq	Zinc Equivalent
$ZnSO_4 \cdot 7H_2O$	zinc sulfate

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by the Qualified Persons (QP) listed in Section 2 for Southern Silver. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to the QPs at the time of preparation of this report;
- Assumptions, conditions, and qualifications as set forth in this report; and
- Data, reports, and other information supplied by Southern Silver and other third-party sources.

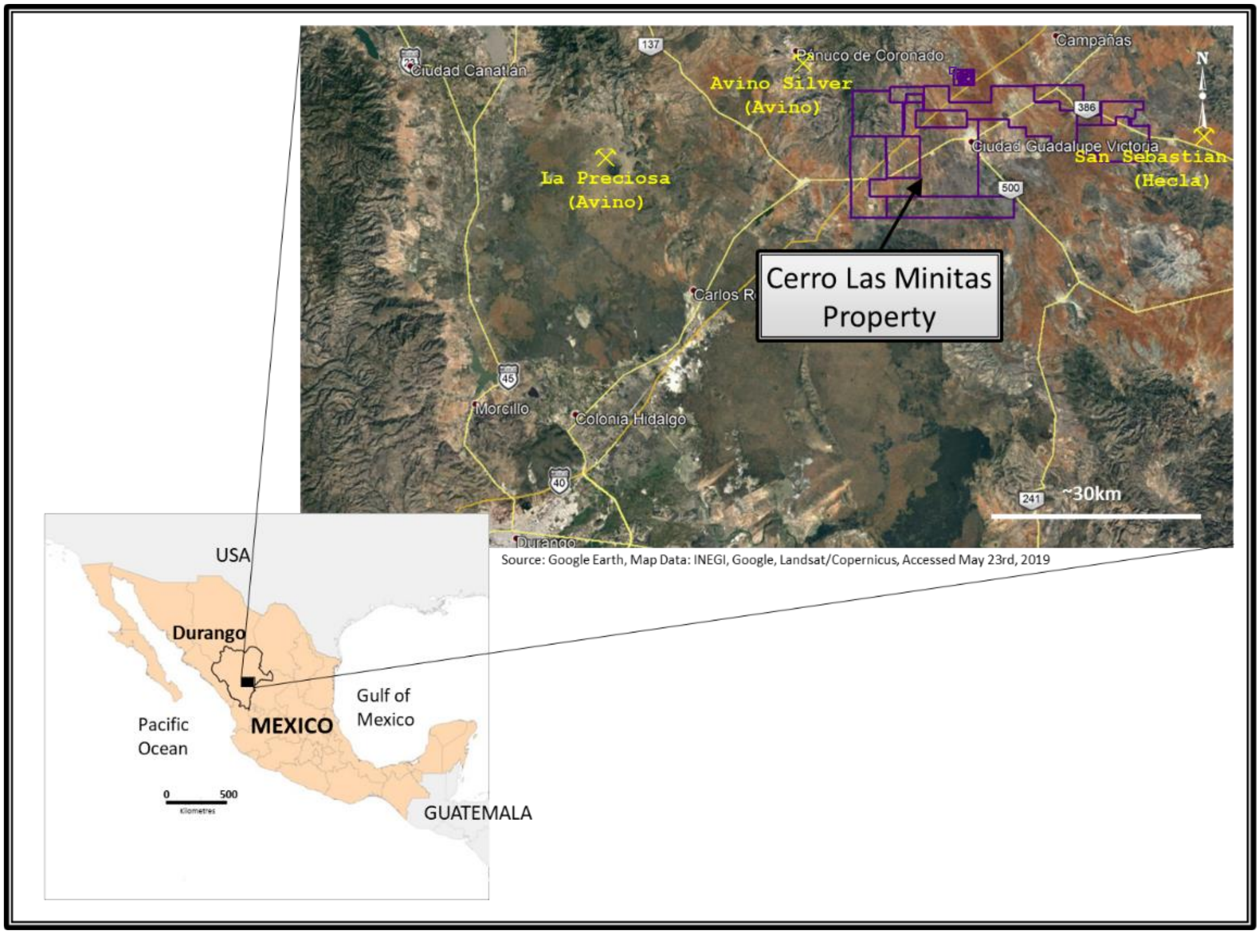
Reports received from other experts who are not QPs of this technical report have been reviewed for factual errors by the QPs. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statements and opinions expressed in these documents are given in good faith and in the belief that such statements and opinions are not false or misleading at the date of this report.

Portions of Section 4 that deal with the types and numbers of mineral tenures and licenses; the nature and extent of Southern Silver's title and interest in the Cerro Las Minitas property; and the terms of any royalties, back-in rights, payments or other agreements and encumbrances to which the property is subject are only descriptive in nature and are provided by J. Alfredo Pérez Rascón from APR Consultores Mineros in the report titled, "Informe de Concesiones Mineras Proyecto "Cerro Las Minitas", Ubicado en el Municipio de Guadalupe Victoria, en el Estado de Durango, Mexico" and by Mauricio Heiras Garibay attorney at law in the Republic of Mexico, in the letter of current legal status of 19 mining concessions that cover the Cerro Minitas Project, and the plan for Lots C Las Minitas titled, "Plano de Concesiones Mineras".

Southern Silver reported to the QP that, to the best of its knowledge, there are no known litigations that could potentially affect the Cerro Las Minitas Project.

4 PROPERTY DESCRIPTION AND LOCATION

The Cerro Las Minitas property is located 70 km northeast of the City of Durango, the capital of the state of Durango, and 6 km northwest of the town of Guadalupe Victoria, in the municipality of Guadalupe Victoria, Durango, Mexico (Figure 4-1). The claims are located in the Minitas mining district in the Guadalupe Victoria mining region. The property consists of 26 mining concessions encompassing 34,427.45 ha (Figure 4-2). Table 4-1 shows the details of the 26 concessions.



Source: Southern Silver, 2022

Figure 4-1: Cerro Las Minitas Location Map

4.1 MINERAL TENURE

In December 2010, Southern Silver announced its agreement with a private vendor that granted Southern Silver the right to acquire 100% interest in the project by making scheduled payments totalling US$4 million over a three-year period. Initial consideration was a US$300,000 cash payment with escalating payments every six months for the term of the option.

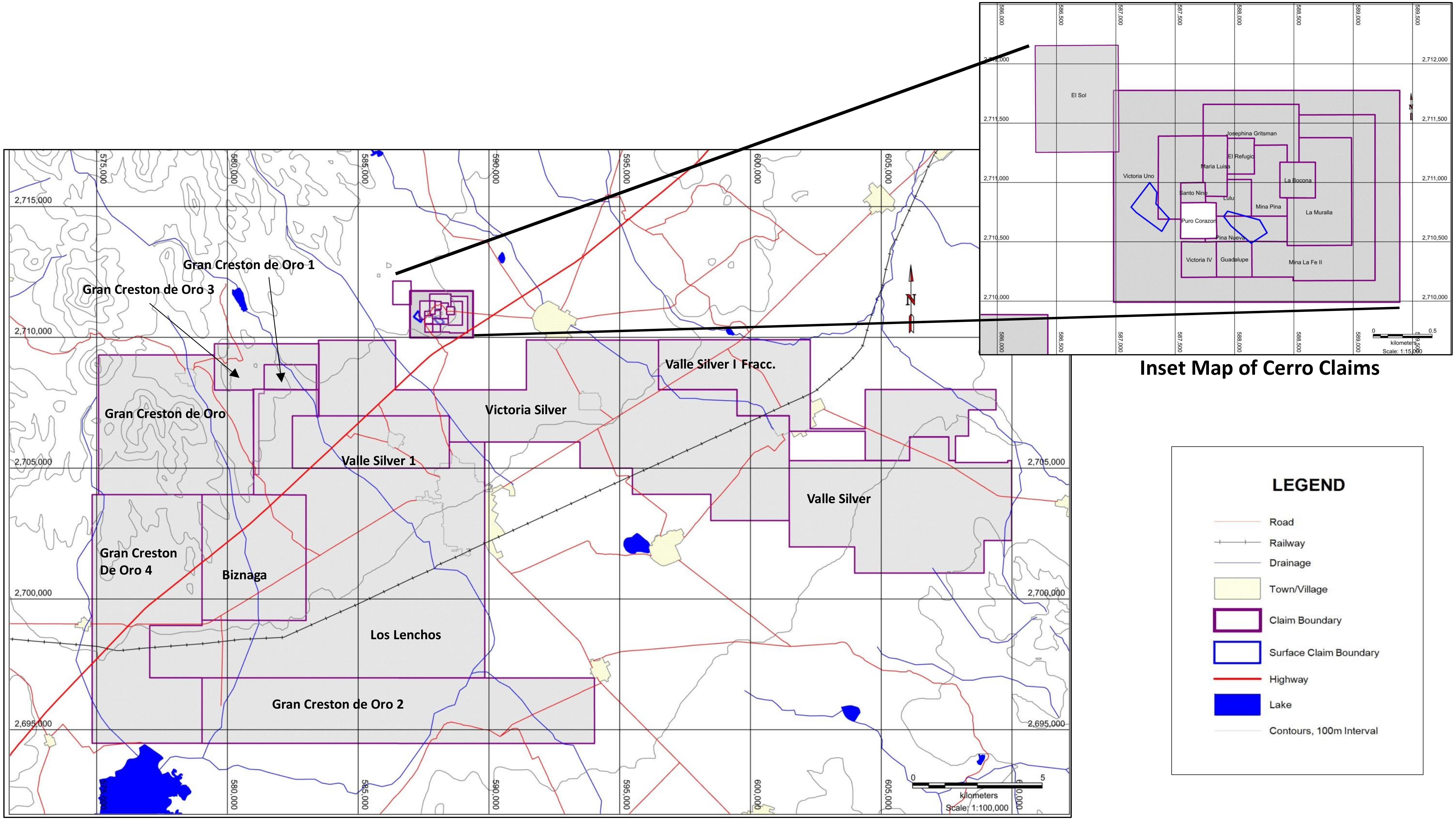
In December 2012, the Company re-negotiated the option to extend certain payments to November, 2013 and also to reduce total payment to US$3,600,000 in the event that the optionor fails to deliver registered title to a claim adjacent to the core group of claims. To date, title to that claim has not been delivered.

In November 2014, the Company announced that, through its subsidiary Minera Plata del Sur, S.A. de C.V. ("MPS"), it had completed the final payment to acquire a 100% interest in the claims. MPS is now the registered title holder of the claims.

In a letter dated April 12, 2017, Maurico Heiras Garibay, attorney -at-law registration number 3733123 provided a legal opinion regarding the 19 mining concessions (Table 4-1) that comprise the core of the Cerro Las Minitas holdings. He states, "The records of the Mining Public Registry in Mexico show that Mineral Plata del Sur, S.A. de C.V., is registered as the title holder of said Mining Concessions. Minera Plata del Sur, S.A. de C.V. is the owner of the Mining Concessions, without reservation or limitation of any kind, free and clear of liens, encumbrances."

In 2017/18, the company acquired seven contiguous concessions by staking. One of these claims is subject to a finder's fee whereby minimum payments are due on a semi-annual basis accelerating from US $5,000 to US $25,000 over a ninety-six month period and a 1% NSR with such periodic payments being credited to NSR payments. After payment of US $5,000,000 in NSR payments the royalty is reduced to 0.5%. These claims are in the process of being registered and do not yet have title numbers.

The individual claims are summarized in Table 4-1.



Source: Southern Silver, 2022

Figure 4-2: Cerro Las Minitas Concession Map

Table 4-1: Concession Summary

TITLE #	TYPE	FILE #	CLAIM NAME	AREA (Ha)	DATE ISSUED	EXPIRY DATE
164061	EXPLOIT.	09/4375	LA BOCONA	9.00	21/02/1979	20/02/2029
191775	EXPLOIT.	321.1/2-602	MINA PIÑA	17.02	19/12/1991	18/12/2041
186434	EXPLOIT.	321.1/2-603	PIÑA NUEVA	12.73	30/03/1990	29/03/2040
193482	EXPLOIT.	321.1/2-482	LULU	8.36	19/12/1991	18/12/2041
193483	EXPLOIT.	321.1/2-472	VICTORIA UNO	189.33	19/12/1991	18/12/2041
213288	EXPLOR.	025/25591	VICTORIA IV	9.00	2001-10-04	2051-09-04
214313	EXPLOR.	025/25543	LA MURALLA	39.10	2001-06-09	2051-05-09
196146	EXPLOIT.	321.1/2-069	JOSEFINA GRISSTMAN	26.44	16/07/1993	15/07/2043
209851	EXPLOR.	025/23151	MINA LA FE II	61.67	17/08/1999	16/08/2049
227317	MINING	025/32609	GUADALUPE	9.00	09/06/2006	08/06/2056
167210	EXPLOIT.	025/4133	EL SANTO NIÑO	3.32	22/10/1980	21/10/2030
167906	EXPLOIT.	09/14559	EL REFUGIO	6.95	16/12/1980	15/12/2030
167212	EXPLOIT.	025/4374	AMPLIACION DE SANTO NIÑO	21.36	22/10/1980	21/10/2030
167211	EXPLOIT.	025/4134	MARIA LUISA	9.85	22/10/1980	21/10/2030
233341	MINING	025/33338	VICTORIA SILVER	6171.62	13/02/2009	12/02/2059
233343	MINING	025/33413	VALLE SILVER	3394.09	13/02/2009	12/02/2059
241477	MINING	025/38052	VALLE SILVER - I	1200.00	19/12/2012	18/12/2062
241649	MINING	025/38052	VALLE SILVER - I FRACC.	2429.00	30/01/2013	29/01/2063
195064	EXPLOIT.	2/1.10/969	EL SOL	63	26/08/1992	25/08/2042
PENDING	MINING	025/39062	LA BIZNAGA	2000.00	PENDING	PENDING
PENDING	MINING	025/39063	LOS LENCHOS	7600.00	PENDING	PENDING
PENDING	MINING	025/39112	GRAN CRESTON DE ORO	2966.40	PENDING	PENDING
PENDING	MINING	025/39149	GRAN CRESTON DE ORO 1	194.20	PENDING	PENDING
PENDING	MINING	025/39150	GRAN CRESTON DE ORO 2	3800.00	PENDING	PENDING
PENDING	MINING	025/39158	GRAN CRESTON DE ORO 3	596.00	PENDING	PENDING
PENDING	MINING	025/39157	GRAN CRESTON DE ORO 4	3590.00	PENDING	PENDING
			Total	**34427.45**		

Source: Southern Silver, 2022

A small inlying claim known as the Puro Corazon claim (9 ha) is not owned or controlled by Southern Silver (see inset map of the Northern claims in Figure 4-2). This is the site of the historic small-scale Puro Corazon mine.

On October 24, 2011, Minera Plata del Sur, S.A. de C.V., entered into a Property Purchase Agreement with Mr. Julio Cesar Rosales Badillo to acquire a 100% interest in a 5-hectare surface lot which overlies a portion of the mineral claims. The property was acquired to provide a site for construction of a mill or other facilities if warranted and was acquired in consideration for a cash payment of $US40,000 and issuance of 50,000 common shares of the company. Title to this property is now registered in Southern Silver's name.

In October 2012, the Southern Silver granted Freeport-McMoRan Exploration Corporation ("FMEC") the right to earn an indirect 70% interest in the property.

FMEC had the option to earn respective 51% and 19% indirect interests in the property through the acquisition of common shares of a subsidiary of the Company which has the right to purchase a 100% interest in the property.

On September 11, 2014, the Southern Silver received notice from FMEC of termination of the earn-in agreement. As part of the termination, FMEC assigned to the Company, for no consideration, its option to acquire a 100% interest in the El Sol Concession, which is situated contiguous to the northwest boundary of Cerro Las Minitas. On July 20, 2015, the Company relinquished its interest in the option of the El Sol concession. During April 2020, the Company entered into an agreement to again purchase the El Sol Claim. The claim totals 63 ha and is situated contiguous with Cerro Las Minitas to the Northwest (Figure 4-2 and Table 4-1) Total acquisition cost was US$300,000, plus applicable local taxes of 16%, which is fully paid. The property is subject to a 2% NSR payable to the optionor who has granted the Company an option to purchase the NSR at any time for US$1,000,000.

Pursuant to agreements dated July 7 and July 8, 2015, Southern Silver through its Mexican subsidiary, Minera Plata del Sur, S.A. de C.V., signed an Equipment and Property Purchase Agreement with Sr. Jaime Muguiro Peña to acquire 100% interest in a 5.9 ha surface lot partially covering the Blind and El Sol Deposits for staged payments totaling US$200,000. Final Payment has been made and the deed registered with the Mexican authorities.

In April 2015, Southern Silver granted The Electrum Group LLC ("Electrum") the right to earn an indirect 60% interest in the Cerro Las Minitas property by funding exploration and development expenditures of US$5 million on the Property over a maximum four-year period. Electrum would earn indirect interests in the Property through the acquisition of common shares of a Southern Silver subsidiary company which owns the Mexican company ("MPS") holding a 100% interest in the Property.

Electrum completed their earn-in in October 2016 and the project operated as a joint venture with Southern Silver Exploration Corp. ("Southern Silver") at 40% interest and Electrum Global Holdings LP ("Electrum") at a 60% interest with Southern Silver acting as operator of the project.

In 2017/18, seven additional claims were staked totalling 20,746.60 ha to the south and west of the existing claims to cover prospective, gravel-covered ground discovered by local prospectors. These claims are collectively called the CLM West claims and are composed of the Las Biznagas claim, the Los Lenchos claim and the Gran Creston de Oro claims.

In June 2020, Southern Silver announced an agreement to purchase Electrum's 60% indirect working interest in the CLM project for payment of US$15 million, payable in cash and Southern Silver common shares. Payments were in three tranches as follows:

- At closing (on or about September 9, 2020): US$5.0M in cash and US$2.0M ((based on the greater of the prior 20-day VWAP and the DMP)
- Six months from closing: US$2.0M in cash and US$2.0M in shares (based on the greater of the prior 20-day VWAP and the DMP).
- 12 months from closing: US$2.0M in cash and US$2.0M in shares (based on the greater of the prior 20-day VWAP and the DMP).

In September 2021, the company announced that it had completed final payment to Electrum and therefore increased its working interest in the Project from 40% to 100%.

4.2 PERMITTING

Throughout the exploration process, Minera Plata del Sur (MPS) has negotiated and executed Exploration Access agreements with Ejidos having jurisdiction over lands contained within original Cerro Las Minitas claim group and the newly staked CLM West Claim Group. This is a time-consuming process requiring strict adherence to Mexican Law pertaining to the manner of conduct of a series of meetings allowing the respective populace to give informed consent to access and use of the surface of Ejido lands for exploration purposes of the underlying mineral claims. The Consent Agreements are submitted, together with other information and documents such as an Environmental Report (re: Permit application) to SEMARNAT, the relevant Mexican permitting authority.

Exploration on the original Cerro las Minitas claim group operated under a four-year SEMARNAT permit. The permit was issued on October 20, 2016 and allows for 150 drill holes and 40 trenches.

Exploration on the Cerro las Minitas claim group now operates under an eight-year SEMARNAT permit. The permit was issued on October 08, 2020 and allows for 155 core holes, 74 RC holes and 68 trenches and covers exploration activities on the original Cerro las Minitas claims and two more recently staked claims from the CLM West group known as El Gran Creston De Oro 1 and Gran Creston de Oro 3 claims. The project remains in good standing and continues to follow the reclamation and environmental plan laid out in the permit.

Exploration on the CLM West claim group operated under two four-year SEMARNAT permits. The permits were issued in March and April of 2018.

The Cerro Las Minitas West permit, effective March 13, 2018 and which covers portions of the Guadalupe Victoria and Librado Rivera Ejidos, allows for 150 core and RC drill holes, 40 trenches and 12.5 km of new roads.

The Cerro Las Minitas West II permit, effective April 10, 2018 and which covers portions of the Francisco I. Madero and Geronimo Hernandez Ejidos, allows 36 core and RC holes and 22 trenches.

The CLM West permits lapsed in early 2022 with work on the two most prospective claims from the CLM West group now authorized under the Cerro Las Minitas permit effective October 8, 2020.

4.3 ENVIRONMENTAL AND SOCIOECONOMIC

The surface access to the area of the mineral resource is controlled by the Ejidos of Guadalupe Victoria and Ignacio Ramirez. Southern Silver's Mexican subsidiary Minera Plata del Sur S.V. has 25-year surface access exploration agreements covering the common ground of the Guadalupe Victoria Ejido and the Ignacio Ramirez Ejido that lies within the Cerro Las Minitas concessions. Agreements with individual Ejido landowners are negotiated as needed to cover deeded lands.

On the CLM West claims, surface rights are owned by the Ejido communities of Francisco I Madero, Geronimo Hernandez, Librado Rivera and Guadalupe Victoria. Exploration agreements with these Ejido communities are in the process of being finalized and are summarized below. Similarly, agreements with individual Ejido landowners are negotiated as needed to cover deeded lands.

The status of the agreements with each relevant stakeholder is as follow:

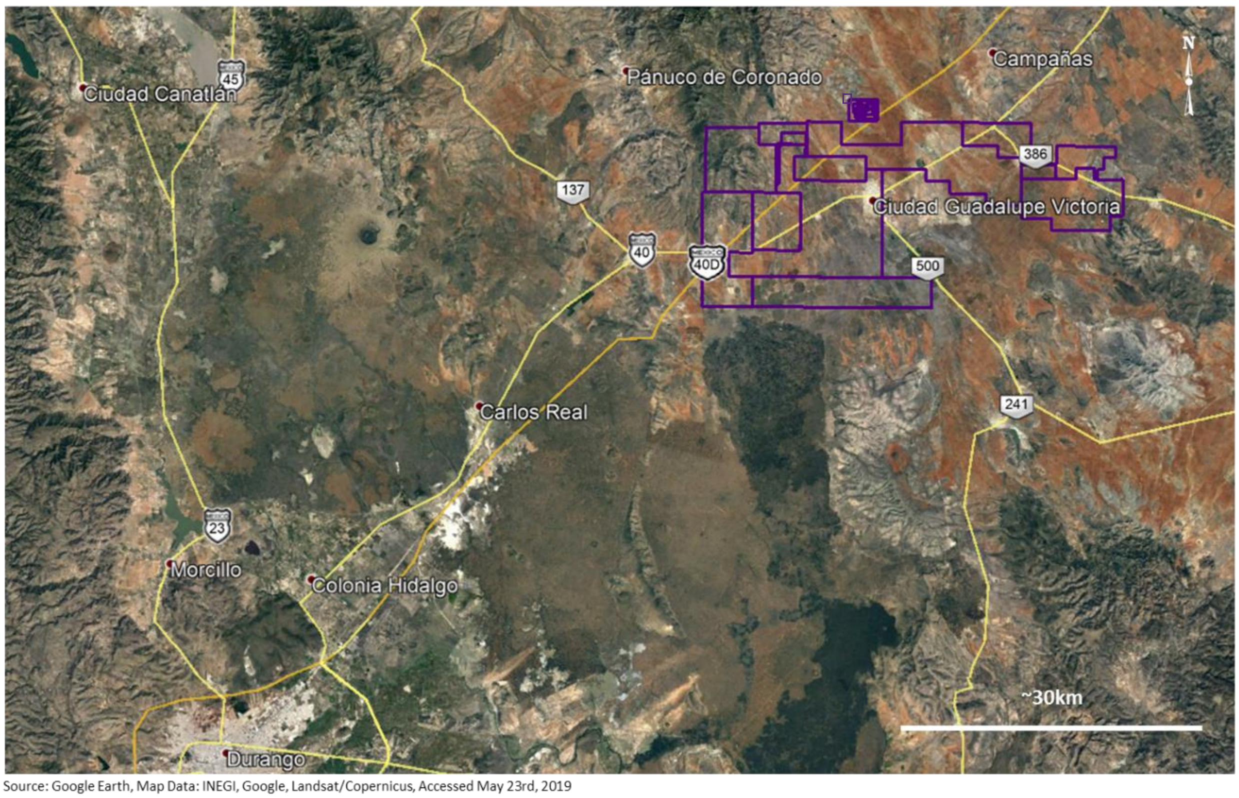
- **Guadalupe Victoria:** Signed and registered 25-year Exploration Access Agreement, 2016. This was completed as part of permitting for core drilling in the Area of the Cerro Las Minitas Project.
- **Ignacio Ramirez:** Signed and registered 25-year Exploration Access Agreement, 2018. This was completed as part of permitting for core drilling in the Area of the Cerro Las Minitas Project.
- **Librado Rivera:** Signed and registered 5-year Exploration Access Agreement, Dec 2017.
- **Francisco I Madero:** Signed and registered (submitted, notice of registration pending) 5-year Exploration Access Agreement, January 2018.
- **Geronimo Hernandez:** Signed and registered 5-year Exploration Access Agreement, Feb 2018.
- Discussions with the private ranch owners are ongoing. Exploration activity is approved in most cases.

The Qualified Person is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESSIBILITY

The Cerro Las Minitas property is located in the Minitas mining district, approximately 6 km northwest of the town of Guadalupe Victoria, Durango and 70 km northeast of the City of Durango, the capital of the state of Durango. The property can be reached from the City of Durango via Interstate Highway 40 (toll road) and Highway 40 (free access), the road from Francisco I. Madero to Cuencamé (Figure 5-1). There is no access to Interstate Highway 40 from Cerro Las Minitas, although the highway bisects the property. A small overpass affords access between the northern and southern portions of the property. From Guadalupe Victoria, a graded dirt road leads north to the property. The property is transected by Interstate Highway 40 (a limited-access freeway) and an overpass over the highway affords access between the north and southern portions of the property.



Source: Southern Silver, 2022

Figure 5-1: Cerro Las Minitas Location

5.2 CLIMATE

The climate is generally dry with sporadic, occasionally violent rainstorms in the hot summer months (between June and September). The average precipitation in the property area between May and October is about 600 mm. The winter months are cool and dry, and snow is rare, but nighttime temperatures below the freezing mark are common in December and January. The average annual temperature is about 25°C. Grasses, small trees and shrubs, and several varieties of cacti make up most of the vegetation on the steep hillsides, and larger trees are found near springs and streams.

5.3 LOCAL RESOURCES AND INFRASTRUCTURE

The broad valley south of the Cerro Las Minitas property is relatively densely populated and well developed. The town of Guadalupe Victoria is a growing farm community (population of about 35,000) that offers most basic services. The quality of infrastructure improves, and the population density increases towards the City of Durango, 70 km to the southwest.

The nearby towns of Guadalupe Victoria and Ignacio Ramirez are serviced by the commercial electrical grid and a regional transmission line of the Comisión Federal de Electricidad (CFE) follows Interstate Highway 40. A 33,000-kVA power drop has been extended from the CFE line to the Mina Piña shaft, and it is serviceable but in need of minor repair.

Any of the materials, supplies, and labour required to support exploration and mining activities are available in the City of Durango and the surrounding region. Telephone service, Internet access, and necessities are available in Guadalupe Victoria.

5.4 PHYSIOGRAPHY

The Cerro Las Minitas property lies near the western edge of the Mexican Altiplano, an extensive volcanic plateau characterized by narrow, northwest-trending fault-controlled ranges separated by wide flat-floored basins. In the Durango area, the basins have elevations of 1,900 m to 2,100 m, and the higher peaks rise to 3,000 m.

5.5 WATER RESOURCES

Potable water is readily available in nearby towns, and water for drilling and other exploration activities can be obtained from old workings on the property.

6 HISTORY

Minimal documentation exists regarding the history and production at Cerro Las Minitas; however, the local legend is that Spaniards from the city of Victoria de Durango (now the City of Durango) originally discovered the silver mineralization at Cerro Las Minitas. The historical information presented herein has been gleaned from discussions with local miners and operators and information found in existing reports relating to the property (Minas de Bacis, 1995; Enriquez, 2005; Proyectos Mineros y Topografia, 2001).

No reliable record of historical production has been found, but local miners and operators report that the mines have been intermittently active since the early 1960s. The properties have passed from hand to hand without documentation. However, concessions that cover the properties have been maintained in good standing since the early 1960s.

The only two areas with significant exploitation in the district are the Santo Niño-Puro Corazón and Mina Piña-La Bocona areas. Informal estimates have been made based on historical and non-verifiable information so they are not included here.

In 1960, Carlos Villaseñor discovered silver-lead-zinc-copper mineralization in the Santo Niño-Puro Corazón area. He explored the deposits and conducted minor exploitation until 1971 when he built a small mill in the Velardeña district. When the mill became operational, mining efforts were stepped up and ore was shipped to the Velardeña mill to be processed. The operations at Villaseñor generated interest in the area, resulting in the discovery of the deposits in the Mina Piña-La Bocona area to the east.

The majority of the mining at Cerro Las Minitas is reported to have occurred between 1970 and 1981, but intermittent mining continues to this day. From 1997 to 2002, the mines were idle due to problems with mine water and a drop in metal prices. Intermittent, small-scale exploitation of the deposits in the Santo Niño-Puro Corazón area continued until 2005 and operations in the Mina Piña-La Bocona area continued into late 2006. Based on the size of the mine workings and the limited sampling, Enriquez (2005) estimated that 0.7 million tonnes were produced from the Santo Niño-Puro Corazón area, and 0.5 million tonnes were produced from the Mina Piña-La Bocona area, for a total production of 1.2 million tonnes.

Since 1977, the Consejo de Recursos Minerales (CRM) has supported miners in the area. In 1979, CRM completed 834.55 m of diamond drilling in seven holes in the Mina Piña area, which belonged, at that time, to Santiago Valdez. Valdez exploited the mine until 1997, when he suspended operations due to a drop in metal prices. CRM discovered additional mineralization in its drilling, but no further exploration or development was completed. CRM delivered drilling and assay data to the operators in the district without interpretation.

In 1981, CRM continued to support the development of the district, completing 77 m of shaft and 80 m of crosscut to cut the upper, oxidized portion of the La Bocona deposit. Following that work, Jaime Muguiro deepened the Mina Piña shaft by 59 m to reach the 210 m level. A 140 m crosscut was driven, encountering a number of thin mineralized horizons and the Huisache mineralized chimney. Muguiro then suspended operations due to problems with water inflow.

From 1999 to 2000, Minerales Noranda, S.A. de C.V. (Noranda) optioned the properties and completed an exploration program, including 861 soil and rock samples, an aeromagnetic survey covering the entire district, and seven widely spaced diamond drill holes (3,886 m in total) within the Cerro Las Minitas dome. Results were encouraging but fell short of Noranda's expectations, so it abandoned the property. Unfortunately, none of the original Noranda data have been found, except for fragmented data presented in a summary report by Proyectos Minerales y Topografia, S.A. de C.V. (2001).

In 2005, Minera Real Victoria (MRV) acquired leases on concessions in the Santo Niño-Puro Corazón area and began an exploration and development program. In May 2005, MRV began driving a 2.5 m × 2.5 m decline into the old Santo

Niño-Puro Corazón workings to develop the expected resources. MRV drove 170 m of workings to connect to Level 2 of the Puro Corazón workings and conduct a preliminary exploration of the near-surface portion of the La Chiva mineralized zone. That work was halted in November 2005 when MRV entered into negotiations with Silver Dragon Resources Inc. (Silver Dragon) to acquire the property.

In December 13, 2005, Silver Dragon announced that it had entered into agreements to purchase 100% interest in the Cerro Las Minitas property. In March 2006, Silver Dragon consolidated landholdings in the district, and the claims were held by Silver Dragon Mining de Mexico, S.A. de C.V., a wholly owned Mexican subsidiary of Silver Dragon Resources Inc. by virtue of the fifteen mining concession "Agreements to Purchase."

Work by Silver Dragon in 2006-07 consisted of sampling and mapping of the old workings in the Santo Niño – Puro Corazón area, as well as limited diamond drilling to test the continuity at depth of the mineralized contact zone that historically has hosted the bulk of the known deposits around the Cerro Las Minitas Dome. Eleven holes were drilled for an approximate total depth of 2,915 metres. Reconnaissance mapping revealed evidence of both contact metasomatic and manto mineralization in a number of areas surrounding the central intrusive complex. The work concluded that the newly discovered manto mineralization may offer substantial potential for high-grade Ag production in the district and that further work was required to delineate that style of mineralization on the property. Furthermore, the work concluded that additional skarnoid and chimney deposits remain to be discovered in the contact skarn zone at surrounding the Cerro Las Minitas Dome.

In June 2009, Silver Dragon signed a toll-milling agreement with Besmer S.A. de C.V. of Mexico to process up to 12,000 tonnes of ore over 12 months from Cerro las Minitas. During the first two months of toll-milling, 790 tons of ore were processed, yielding 28.382 tons of silver/lead concentrates and 15.618 tons of zinc concentrates.

In October 2010 Silver Dragon was made aware of land title issues regarding the Cerro las Minitas project and related concessions. In December 2010, Silver Dragon Mining de Mexico S.A. de C.V. counsel filed motions with a tribunal in Durango State court to unseal the judicial file of the foreclosure proceedings initiated by Mr. Jaime Muguiro Pena. SDMM instructed its counsel to assert a Constitutional Rights Claim before the Federal Court in the City of Durango, premised on procedural irregularities in the foreclosure proceedings, for the purposes of re-opening the case. As a result of the foreclosure proceedings, Mr. Muguiro obtained rights to the concessions.

On December 1, 2010, Southern Silver Exploration Corp. announced that it had entered into an option agreement to acquire the mining concessions with Mr. Muguiro.

6.1 SGS METALLURGICAL REPORT

Although artisanal miners have been producing ore from Cerro Las Minitas since the early 1960s, no reliable records of either production or mineral processing data have been found. Enriquez (2005) reported that historical recoveries from sulfide ores treated by flotation are on the order of 85% for silver, 75% for gold, 65% for lead, and 75% for zinc. Enriquez did not present any supporting data for the recoveries.

In 1995, Minas de Bacis completed a 30-day review of available data. It reported metal recovery data for sulfides from the La Bocona Mine, and sulfides and oxides from the Puro Corazón Mine. It is uncertain how they obtained this data, but local operators say it was obtained from the artisanal mills that were treating the ore in the Velardeña district. These data are not considered reliable and are reported as historical data (Table 6-1).

Table 6-1: Historical Metal Recovery Data for Selected Mines at Cerro Las Minitas

	La Bocona Mine Sulfide Ores	Puro Corazón Mine Sulfide ores	Puro Corazón Mine Oxide Ores
	% Recovery		
Au	51	-	-
Ag	80	75	70
Pb	65	75	91
Cu	82	77	44
Zn	88	92	68

Source: Minas de Bacis, 1995

Silver Dragon commissioned a metallurgical testing program to support the decision to purchase a crushing and flotation plant. The report indicates over 70% recovery for sulfide silver using a conventional two-stage crushing and flotation facility. The report indicated that cyanide extraction will yield similar recoveries for oxide ore.

Silver Dragon Mining de Mexico, S.A. de C.V. commissioned the metallurgical laboratory, SGS de Mexico, S.A. de C.V., to perform metallurgical testing on samples from the Cerro Las Minitas property. Six drill samples were received from Silver Dragon de Mexico, S.A. of C.V. to the laboratory facility in Durango, Mexico. The samples were dried at 50°C and crushed to approximately 80% passing -¼-in. in a two-stage process using a jaw crusher and a cone crusher. Two composites were formed, one sulfide and one oxide. Samples were reduced to -10 mesh.

Silver head assays for both composites were greater than 300 g/t, with very little gold, which is representative of Cerro Las Minitas mineralization.

Results for the sulfide flotation were much more favourable than the oxide flotation. Recoveries for the sulfide flotation were 75% for silver, 84% for lead, and 76% for zinc. Recoveries for the oxide cyanide flotation were moderately favourable, with silver recovery of 73% with reagent consumption of 8.25 kg/t sodium cyanide and 1.05 kg/t for lime.

6.2 HISTORICAL RESOURCES

There are no historical resource estimates for the property.

7 GEOLOGICAL SETTING AND MINERALIZATION

Cerro Las Minitas Property straddles the geomorphic provinces of the Sierra Madre Occidental and the Mesa Central (Altiplano) of Mexico in the State of Durango. In Durango, the Mesa Central is an elevated plateau at about 2,000 metres elevation traversed by NW-trending mountain ranges and separated by broad NW-trending valleys. Within this province, Cerro Las Minitas occurs within a belt of prolific Au, Ag, Pb, Zn and Cu deposits that stretches from the highly productive vein deposits of Fresnillo in Zacatecas in the south, to the massive manto deposits of Santa Eulalia in Chihuahua to the north. This belt includes the productive replacement deposits of San Martin, Valerdena, Santa Eulalia and Naica as well as the rich vein deposits of Fresnillo, El Bote, San Jose, Cerro Los Gatos and various others.

Terrane terminology in Mexico has evolved over the last several decades. Recent interpretations as adopted by the Servicio Geologico Mexicano (in the Geological-Mining Monograph of the State of Durango, 2013) have the Cerro Las Minitas property located within the Guerrero Terrane near the regional fault which marks its eastern boundary with the Sierra Madre Occidental Terrane. Basement rocks are not exposed in the area, but are now known to be composed of an assemblage of tectono-stratigraphic terranes derived from the Paleozoic Appalachian orogeny and the Mesozoic of the Atlantic and Gulf of Mexico combined with basement rocks of the North American Cordillera (Campa & Coney, 1983, 1987; Figure 7-1). The assemblage includes deformed Pre-Cambrian intrusive and sediments, deformed Lower to Middle Paleozoic sediments and Lower Mesozoic sediments which are all covered with a thick succession of Mesozoic-Cenozoic sedimentary and volcanic strata.

The Tertiary rocks are considered a shared cover (overlapping the Guerrero Terrane) and includes continental sedimentary sequences, rocks associated with the Sierra Madre Occidental magmatism and later Quaternary Magmatism (SGM Monograph of Durango, 2013).

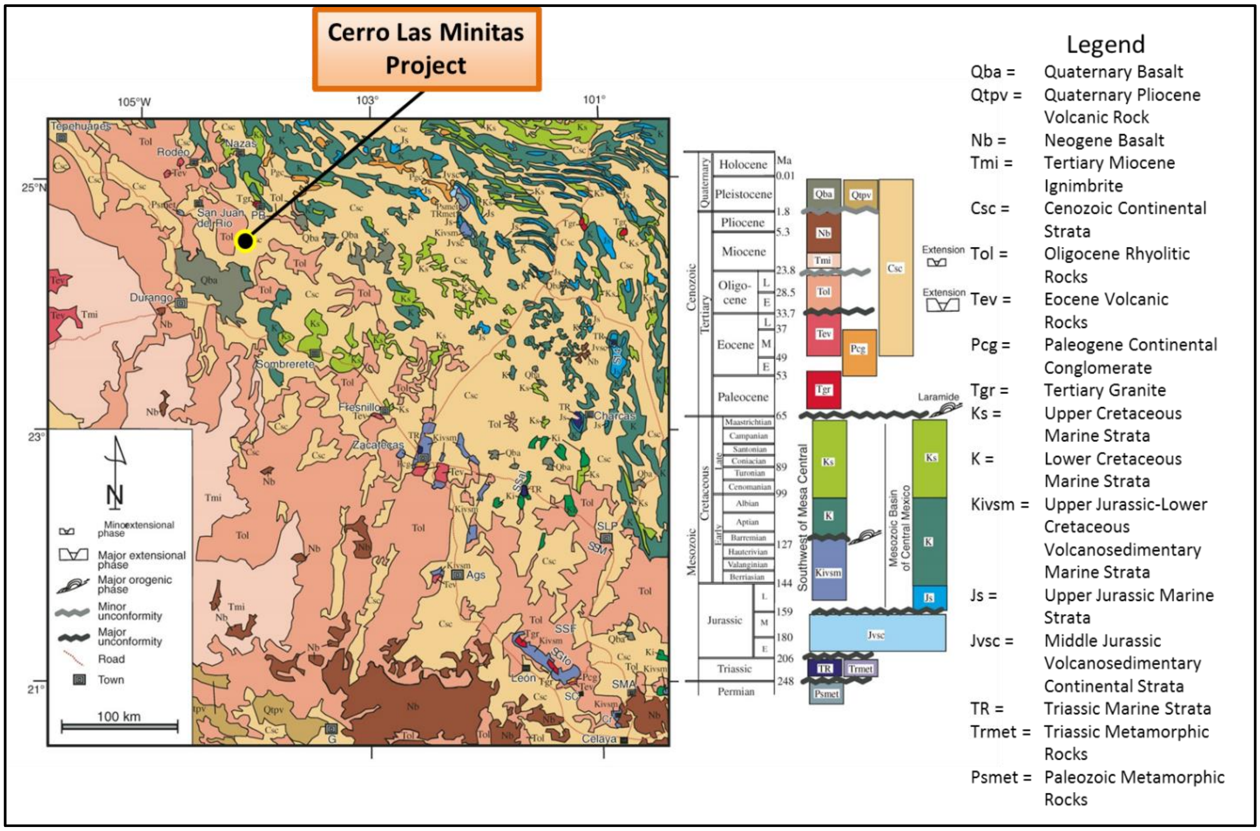
The Guerrero Terrane is the largest exposed in the state of Durango and is considered a tectono- stratigraphic element that was part of a series of Mesozoic inter-oceanic island arcs. The Terrane is characterized by a thick Cenozoic sequence of continental volcanics and related sediments, overlying an Upper Mesozoic platformal carbonate sequence deposited on Lower Mesozoic, (arc-related) sedimentary and volcanic strata and is host to some of Mexico's more significant Au, Ag, Pb, Zn and Cu replacement deposits/districts, including San Martin, Velardena and La Parilla. Geological evidence suggests that the arc was accreted to the continent during the Laramide Orogeny.

(Source: Campa and Coney, 1983, 1987)

Figure 7-1: Tectono-Stratigraphic Terranes of Mexico

The Cerro Las Minitas project is located within the Guadalupe Victoria Mining Region, which includes the districts of Avino (Avino Gold and Silver Mines Ltd.), San Sebastian (Hecla Mining Ltd.) and Cerro Las Minitas that constitute a trend of deposits and workings along a 50-kilometre northwest trend. The Cerro Las Minitas property lies within the Minitas Mining District.

The Cerro Las Minitas property sits within a broad W-NW–trending valley and is covered with a thick succession of Tertiary continental deposits and gravel. The valley is flanked on the north and south by Eocene andesite flows and Oligocene to Miocene felsic volcanic rocks and to the southwest by Miocene – Pliocene basalt flows. Except for the later basalt flows, the volcanic rocks consist principally of dacites, rhyolites and various volcanic breccias and ash flows with minor andesite units (Figure 7-2).



(Source: Nieto-Samaniego Et Al., 2007)

Figure 7-2: Regional Geologic Map

Within the valley, marine sediments of the Lower to Mid Cretaceous Mezcalera and Baluarte Formations crop out locally. Calcareous and clastic rocks of the Baluarte Formation have been structurally uplifted around a central intrusive neck at Cerro Las Minitas that rises about 150 metres above the surrounding plain. The intrusive consists of an unknown number of phases that range in composition from diorite to quartz-monzonite, associated with numerous dykes that range in composition from andesite to rhyolite (Figure 7-3).

An aureole of contact metasomatic and replacement deposits of Au, Ag, Pb, Zn, and Cu was produced during the emplacement of the intrusives and is the subject of past mining activities and exploration currently underway at the Cerro Las Minitas Project.

(Source: Modified from Bañales Et Al, 2003)

Figure 7-3: Geological Cross-Section Across the Northern Part of the Property

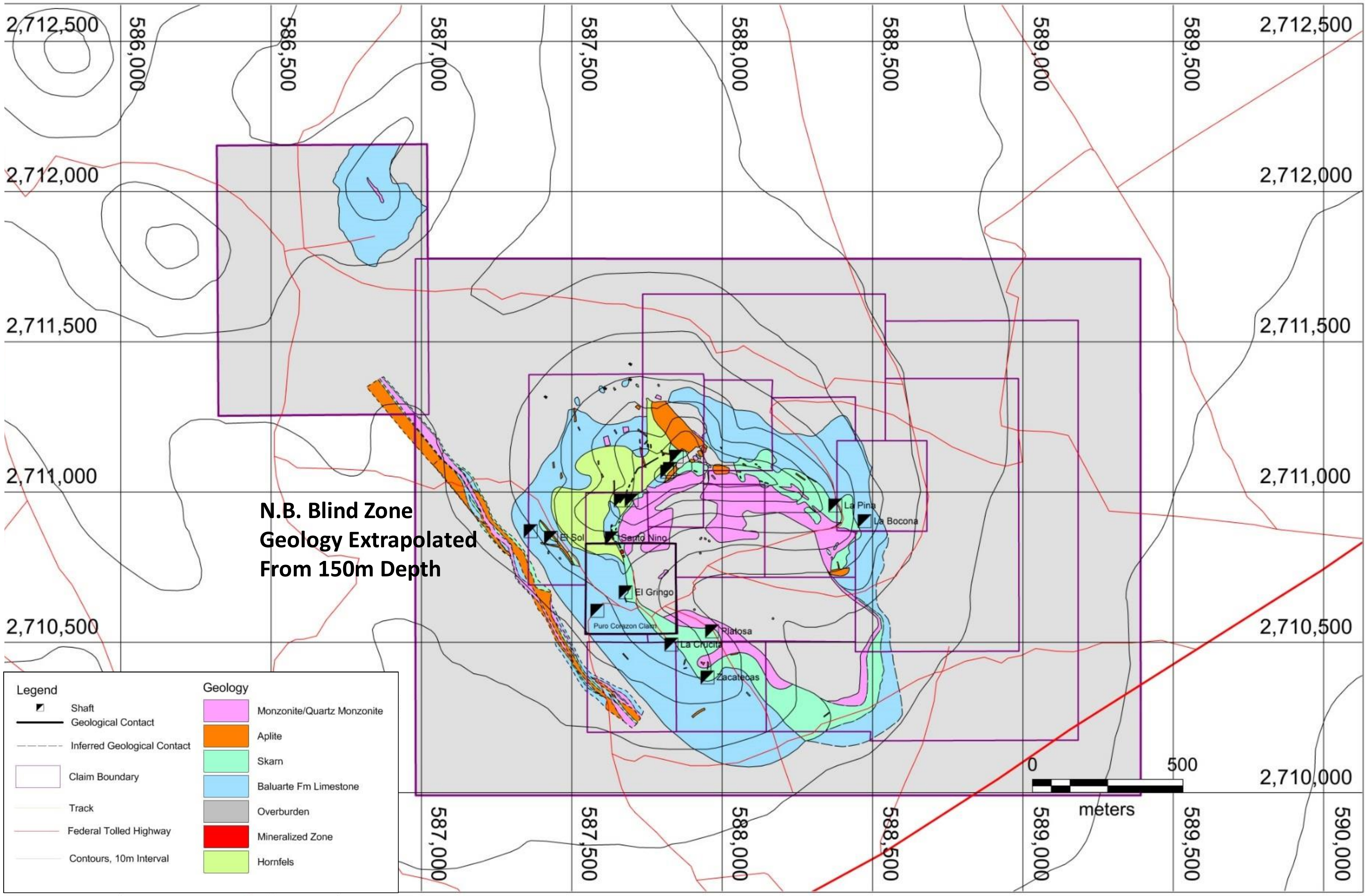
7.1 MINITAS MINING DISTRICT GEOLOGY

Portions of the geology of the northern portion of the Cerro Las Minitas concessions were mapped by the Consejo de Recursos Minerales (CRM) in 1988 and Noranda in 1999 and modified by Erme Enriquez in 2005 and Southern Silver's consultants from 2011-22 (Figure 7-4). The geological setting and stratigraphy were originally defined by the Consejo de Recursos Minerales (1993) and later modified when the distinctions within the Cretaceous sedimentary stratigraphy became better defined (Consejo de Recursos Minerales, 1998).

No outcrops are known in the much larger southern portion of the property and the claims in this area covers fields under cultivation that are part of the Guadalupe Victoria Ejido. Prospecting following biogeochemical sampling conducted by Freeport MacMoran, identified significant volcanic float in both the western and eastern portions of the claims likely related to Cenozoic cover rocks. Drilling in 2018 identified Eocene Andesitic volcanic rocks and Oligocene rhyolites and ignimbrites underlying between 10-250 metres of quaternary alluvium in the western part of the claims and Neogene conglomerates underneath 100 metres of quaternary alluvium in the eastern part of the claims.

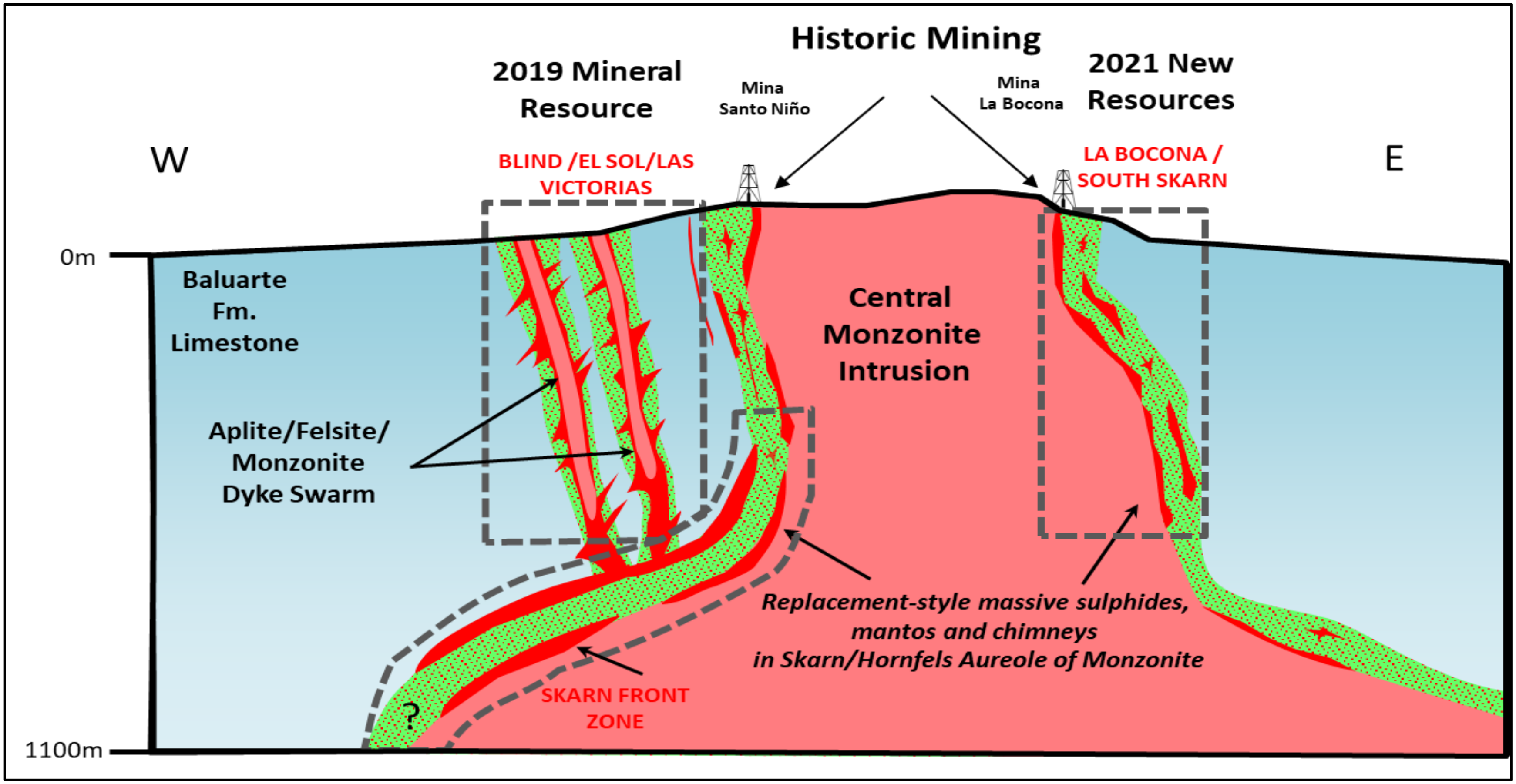
The northern portion of the property is dominated by a NW-SE elongated domal uplift of Cretaceous marine sediments cored by an intrusive porphyry complex. Contact metasomatic (skarnoid) deposits of Au, Ag, Zn, Pb, Cu and W are known to occur at various locations in the contact zone around the central intrusive complex, as well as at the margins of some dikes that emanate from the main intrusive complex. More distal from the main intrusive contact, manto-style Ag, Pb, Zn deposits have been discovered replacing recrystallized carbonate strata.

The domal uplift of Cretaceous sediments is the principal topographic feature on the property and has been the focus of all previous exploration and production there. Past production has occurred principally from contact deposits in the Puro Corazón – Santo Niño and Mina Piña – La Bocona areas. The stratigraphic units in the region of Cerro Las Minitas are described below (see Figure 7-6).



Source: Southern Silver, 2022

Figure 7-4: Geologic Map of the North Portion of Cerro Las Minitas Property, Durango, Mexico

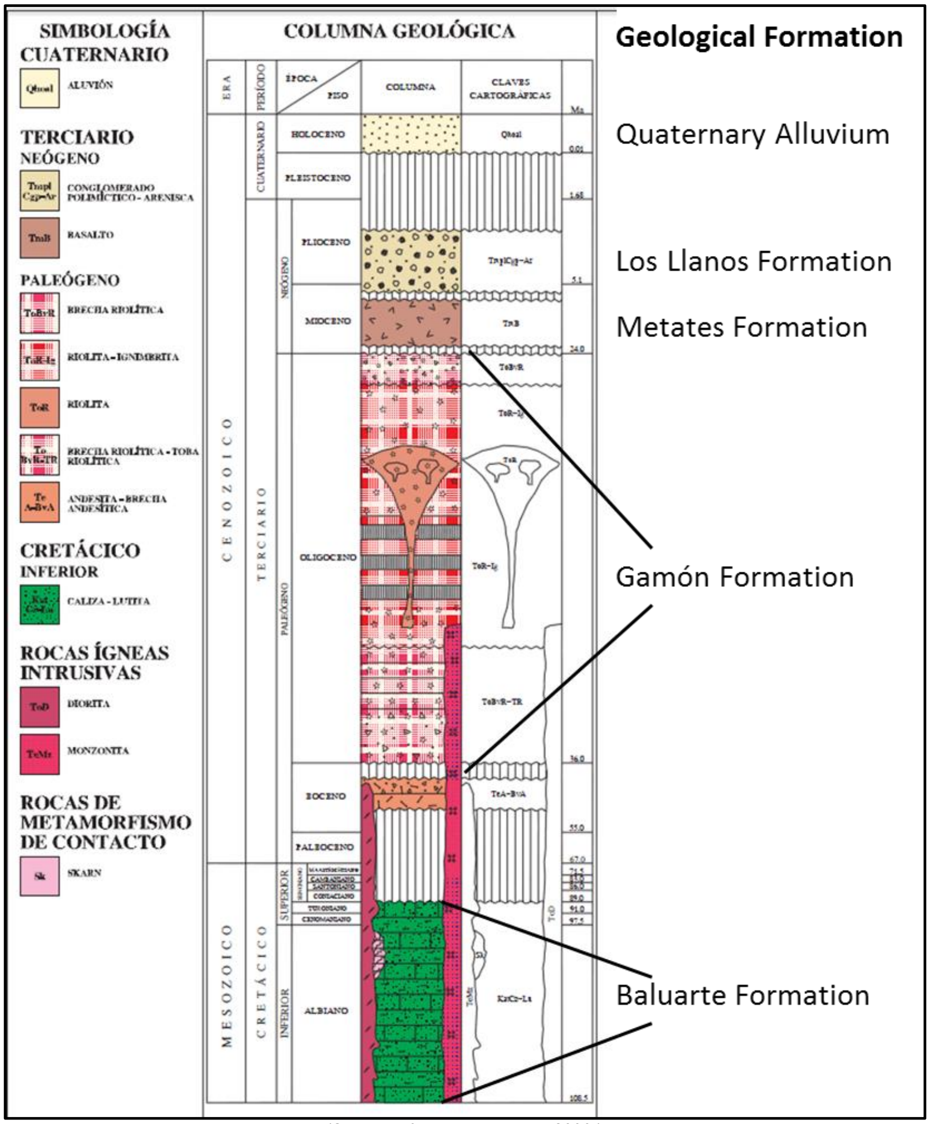


Source: Southern Silver, 2021

Figure 7-5: Schematic Geologic Cross-Section of the North Portion of the Cerro Las Minitas Property, Durango, Mexico

7.2 PROPERTY GEOLOGY

Stratigraphy in the Cerro Las Minitas property has not been defined in detail. Detailed mapping, as well as detailed study of drill cores available, will be necessary to define the stratigraphic units and their relationships. Inspection of underground workings indicates that there is a strong stratigraphic control of mineralization on the property, especially in regard to the manto-style mineralization.



(Source: After Bañales Et Al, 2003.)

Figure 7-6: Stratigraphy in the Region of Cerro Las Minitas

Regional stratigraphy has been defined by the 2003 1:50,000 geological map covering the northern claims (G13D63) and provides a starting point for definition of the stratigraphy in the Minitas District.

7.2.1 Baluarte Formations

Strata currently assigned to the Baluarte formation are the oldest rocks exposed in the Minitas Mining District (CRM, 1998). Limestone of the formation is black to light grey in colour, very fine-grained and predominantly massive. The limestone units appear to transition outboard from the central intrusion into a mixed carbonate-siliciclastic sequence that contains increasing amounts of thin to medium bedded shales and sandstones which seems to represent lateral facies change from a carbonate platformal to clastic, deeper water environment. Siltstone and shale interbeds are generally 1-20 cm and convoluted in places. Diagenetic pyrite is common.

Where affected by contact metamorphism, the limestone beds are typically recrystallized and bleached and are the preferred hosts for both contact metasomatic and manto-style mineralization. More siliceous units are hornfelsed. Limestones containing a quartz sand component have been metamorphosed to garnet (predominantly grossularite) - pyroxene – wollastonite - epidote aggregates. Some of the more siliceous units are hornfelsed and their mineralogic composition is yet to be determined. At the intrusive contact, small amounts of hedenbergite and diopside have been identified, but only rarely. Metamorphism of the calcareous sediments typically only reaches the grade properly described as skarnoid, which is typical of zinc skarns.

Siltstone and shale inter-beds in the limestone are generally darker and contains an increased amount of tiny bioclasts. It is commonly graphitic and individual beds range from 1 mm to ~10 cm.

7.2.2 Intrusive Rocks

Monzonite with minor phases of quartz monzonite and diorite occur as an intrusive stock (Central Intrusion) in the core of the domal uplift and as dykes or sills associated with felsic intrusives within the limestone outboard of Central Intrusion. Contact skarn/hornfels alteration, from several 10s to +100 metres in thickness, wraps around the intrusive neck and hosts most of the historically mined mineralization in the area and forms the weather resistant “cerro” in the topography. Similarly, skarn/horfels margins also form along dyke contacts.

The monzonite and associated phases are light grey in colour and exhibit mainly porphyritic texture which varies to holocrystalline locally. Phenocrysts range in size from ~0.5mm to almost 1cm in size and consist of quartz, (generally larger) plagioclase laths, alkali feldspar, hornblende and biotite (both primary and secondary). Areas of the monzonite that are richer in quartz phenocrysts have a quartz monzonite composition.

The central monzonite contains broad areas of potassic alteration (chlorite-magnetite-biotite) with areas of argillic alteration (clay alteration of feldspars) occasional phyllic alteration (quartz-sericite-pyrite) and a common propylitic overprint (carbonate-chlorite-epidote veins.) Logging and mapping has not been completed in sufficient detail to distinguish alteration zoning patterns at this time.

Disseminated and vein pyrite with minor chalcopyrite and molybdenite occur throughout the intrusive. Pyrite content can range up to 10% locally but chalcopyrite and molybdenite content is generally low throughout the intrusive.

Several phases of veining are present throughout the porphyry, including chlorite-epidote-pyrite+/-chalcopyrite+/-calcite veins, quartz+/-pyrite+/-chalcopyrite+/-molybdenite veins, pyrite veinlets. Veining is low to medium density with rare areas of developed stockwork veining.

7.2.3 Felsite and Monzonite Intrusions Outboard of the Central Monzonite

Various intrusions occur outboard of the Central Intrusive stock. Where traceable, they are sub-vertical, northwest-trending and range from 1 centimetre to +100 metres in thickness. A series of monzonite/felsite dykes form along the full 1000 metre projection of the Blind zone with much of the modelled mineralization associated with the Blind zone hosted in the skarn/hornfels margins of the dykes and to a lesser extent in fractures and possible endoskarn within the intrusions.

The Aplite/Felsite intrusions are light grey to white in colour and mostly aphanitic. Some areas contain feldspar phenocrysts altered to calcite. Veining is confined to sporadic late calcite veins as well as kspar veins.

Alteration in the aplite/felsite consists of silicification, local kaolinization (clay alteration of feldspars,) weak chlorite alteration as well as iron oxidation of sulphides to hematite and MnOx+/-AsOx, which stains the rock orange and red along fractures. Much of the aplite is heavily fractured.

Mineralization in the aplite/felsite consists of disseminate pyrite, oxidized in most areas+/-disseminate galena/sphalerite up to ~2% sometimes slightly more in areas as well as massive sulphides, commonly near the margins, up to 30% combined galena/sphalerite.

The monzonite intrusions particularly in the Blind Zone are light green in colour and similar in composition and texture to the central monzonite intrusion with a mixture of quartz monzonite and monzonite. Alteration consists of kspar in fractures as well as retrograde chlorite-calcite and hematite in fractures with disseminate magnetite in some areas. Mineralization in the monzonite consists of disseminate pyrite+/-pyrrhotite with galena/sphalerite varying from trace to up to ~5% combined. Locally, sulphide-rich structures form at the edges of the monzonite in contact with the aplite with up to ~20% combined galena/sphalerite. Veining comprises late calcite veinlets as well as occasional quartz+/-pyrite veinlets.

7.2.4 Post-mineral Andesite Dykes

Throughout the drill core, several dark green aphanitic andesite dykes intrude the limestone, some with feldspar phenocrysts. They are weakly altered to chlorite as well as hematite in some areas and heavily oxidized nearer the surface. Mineralization consists of weak disseminate pyrite.

7.2.5 Alluvium

The alluvium is composed principally of red soil overlying caliche deposits that conceal underlying rocks in the areas of lower relief on the property. The alluvium contains gravel to boulder sized clasts of weathered rock. In some areas, the clasts seem to be derived from underlying rocks and in other areas they appear to be alluvium derived from upslope. Mapping on the property is of insufficient detail to distinguish those areas.

7.3 STRUCTURE

Detailed mapping of the Cerro Las Minitas property has been completed. Existing mapping was done by CRM in 1980 and modified by Noranda geologists in 1999 and consultants to Silver Dragon Mining de Mexico, S.A. de C.V. in 2006. A revised structural map was created in 2022.

Accordingly, to CRM (1993), the Minitas district, like the neighboring districts Avino, La Preciosa and San Sebastian, lie in a graben formed by the NW-trending Rodeo fault to the west and the NW-trending San Lorenzo fault to the east. Faults were formed by post-Laramide extensional stress that affected the western margin, and in some cases, the central part of Mexico.

Locally, Upper Cretaceous strata were folded about northwest trending axes when they were emplaced as a regional allochthon during Laramide compression. Injection of the Tertiary (?) intrusive complex that forms the core of Cerro Las Minitas further deformed the rocks locally into an elliptical, NW-SE trending dome. As the invading intrusives shouldered aside the sediments, substantial radial and low-angle faulting as well as intense folding of the sediments occurred. As well as the predominant NW-SE trending axial planes, folding along NE-SW axis appears to have refolded some of the NW-SE structures. Additionally on the Northwestern side of the map, tight isoclinal folds with NNW-SSE axial planes have been mapped. Map data from underground workings shows that the faulting at Cerro Las Minitas occurred before, during and after the mineralizing events. Although faults of almost every orientation occur on the property, the dominant trends are northwest and northeast, reflecting the prominent regional structures. Rare N-S trending faults were also mapped, predominantly steeply east dipping.

Much of mineralization appears to be localized at the Skarn-Marble boundary, where many of the radial faults/fractures are located. Good structural preparation explains the consistency of mineralization within drillholes around the central intrusion. Although detailed structural paragenetic interpretation is ongoing, intersection of N-S, NE-SW and NW-SE structures with the radial faults and fractures around the circumference of the central intrusion appear to localize thicker and higher-grade zones of mineralization. A major regional NW-SE structure localizes a suite of monzonite and felsite dykes in the Blind-El Sol Zone. Mineralization occurs as replacements on dyke margins and in sub-vertical structures that locally channel the intrusions. Here as well, structural intersection may localize thicker and higher grade skarn mineralization. Other Aplite-Monzonite dyke swarms have been mapped around the central intrusion with NNW-SSE and WSW-ENE orientations and may explain some of the hanging wall mineralization drilled outboard of the skarn front. Many dykes are identified outboard of the central intrusion and have not been well drilled and provide other shallow, but higher risk exploration targets.

Close to tight, sub-vertical isoclinal folding of the carbonate stratigraphy occurs at the margins of the central intrusion and locally may result in the duplication of prospective stratigraphy and thickening of marbles at axial planes and focusing mineralized fluids.

7.4 ALTERATION

Three distinct alteration assemblages have been recognized at Cerro Las Minitas: Skarnoid, Marmorization (Distal and Non-selective), as well as Late-Stage Alteration.

7.4.1 Skarnoid

The skarnoid alteration assemblage is a contact metasomatic phenomenon that is genetically intermediate between a purely metamorphic hornfels and a purely metasomatic, coarse-grained skarn and includes variants of both end-members.

At Cerro Las Minitas, alteration is generally zoned around the central monzonite intrusion. Proximal alteration consists of three types of skarnoid alteration. Coffee brown grossularite dominated skarn is common, as well as olive green andradite dominated skarn and retrograde chlorite+-epidote and amphibole altered skarn. Mineralization is predominantly located with olive green andradite skarn, with higher grades commonly occurring where retrograde, chlorite dominant alteration is observed. Alteration styles appear interfingered with each other, with detailed interpretation of the different zones ongoing.

Outboard to the garnetization of the rocks is a widespread recrystallization of the carbonate rocks (marmorization), generally accompanied by moderate to intense bleaching. In many drill intersections, the original carbon content of the rocks is seen to have migrated, at least in part, into stylolites also causing a slight bleaching of the host rocks. The intensity of garnetization and marmorization of the carbonate rocks decreases with distance from the contact with the central intrusive complex as well as away from the contacts of some larger dykes. The transition from skarnoid alteration to marmorization appears to be an important exploration guide at Cerro Las Minitas as a large percentageof mineralization around the central intrusion appears to be at or near these transitions.

7.4.2 Distal Marmorization

It is clear that much recrystallization of carbonate rocks occurred during the intrusion of the central intrusive complex at Cerro Las Minitas. However, there are numerous field exposures of recrystallized carbonate rocks at considerable distance from intrusive contacts and it is not clear that the recrystallization seen there is associated with the primary metasomatic event. Distal marmorization has therefore been recognized as a distinct form of alteration at Cerro Las Minitas. Two types of marmorization have been recognized.

7.4.3 Non-selective Marmorization

This is seen as a widespread recrystallization of carbonate rocks which shows little or no preference for individual strata. It is a bulk recrystallization most closely associated with the primary metasomatic event.

Selective marmorization. This is a visually distinct form of marmorization that is commonly seen to be very bed-selective. Even though it may be confined to thin beds within carbonate rocks that have been only very weakly recrystallized, it is a very strong form of recrystallization that may produce very large grain sizes. When this form of marmorization is well-advanced, a central core of dark brown recrystallized calcite is often seen in the middle of the affected bed. This form of marmorization has now been recognized to be present lateral to Ag-Pb-Zn manto mineralization discovered on the property.

7.4.4 Late-Stage Alteration

This is a form of alteration that is as yet poorly defined at Cerro Las Minitas. It has been seen only in few drill intersections and in poor field exposures. It has been distinguished from other forms of alteration there because it features strong silicification, sericitization of feldspars and pyritization. Little study of late-stage alteration has been made yet, but it appears to represent a later stage of alteration that occurred in a very near-surface environment. It is currently unknown if this form of alteration is associated with mineralization of interest.

8 DEPOSIT TYPES

To date, mineralization at Cerro Las Minitas has been classified into four types based on surface and underground field observations and the examination of drill core. Although production records from the area are incomplete, sufficient sampling of core dumps, underground exposures and drill core has been completed to estimate typical grades in each of the four deposit types: skarnoid, chimney, manto, and dyke margin.

8.1 SKARNOID

Skarns can form during regional or contact metamorphism and from a variety of metasomatic processes involving fluids of magmatic, metamorphic, meteoric, and/or marine origin. They are found adjacent to plutons, along faults and major shear zones, in shallow geothermal systems, on the bottom of the seafloor, and at lower crustal depths in deeply buried metamorphic terrains.

What links these diverse environments, and what defines a rock as skarn, is the mineralogy. This mineralogy includes a wide variety of calc-silicate and associated minerals but usually is dominated by garnet and pyroxene. Skarns can be subdivided according to several criteria. Exoskarn and endoskarn are common terms used to indicate a sedimentary or igneous protolith, respectively.

Skarnoid is a descriptive term for calc-silicate rocks which are relatively fine-grained, iron-poor, and which reflect, at least in part, the compositional control of the protolith (Korzkinskii, 1948; Zharikov, 1970). Genetically, skarnoid is intermediate between a purely metamorphic hornfels and a purely metasomatic, coarse-grained skarn.

At Cerro Las Minitas, contact metasomatic gold, silver, zinc, lead and copper mineralization formed within the altered sediments adjacent to contacts with the central intrusive complex or larger dykes. These deposits are characterized by substantial pyrite content, higher copper content, zinc levels that are greater than lead levels, and sphalerite with high iron content. The deposits have been exploited mainly for silver, zinc, lead, and copper by artisanal miners at Cerro Las Minitas, especially in the Santo Niño-Puro Corazón area. The deposits occur as massive replacements of remnant carbonate bodies and disseminated calcite present in the garnet-wollastonite-pyroxene-epidote skarnoid assemblage. The mined bodies were variable in form and distribution. Typical grades in the skarnoid mineralization were 80–300 g/t silver, 2–8% zinc, 2–4% lead, and 0.5–2% copper. Characteristics of this style of mineralization suggest that it is properly classified as zinc skarn (Megaw, 1998).

Drilling in 2016/17 by Southern Silver discovered that skarnoid mineralization is more continuous at depth, beneath the projections of the Blind and El Sol mineralized zones. Mineralization is localized at the outer boundary of the garnet-pyroxene-wollastonite-epidote skarnoid assemblage at or near the transition to the recrystallized/marbleized carbonate sediments (marmorized zone) in an area referred to as the Skarn Front. Mineralization at the outer edge of the Skarn Front tends to be more lead and silver-enriched while mineralization deeper in the skarnoid zone (and adjacent to the central intrusion) more zinc enriched.

Drilling in 2020-22 confirmed laterally extensive skarnoid-style mineralization within the altered halo around the central intrusion in the South Skarn, La Bocona and North Felsite deposits. Mineralization occurs adjacent to the central intrusion and features similar replacement styles as is observed in the Skarn Front deposit. The skarnoid-style mineralization in the La Bocona and South Skarn deposits show a similar variability in metal assemblages as is identified in the Skarn Front deposit, but tends to be more galena biased and is generally associated with elevated silver values when compared to the Skarn Front mineralization. Mineralization in the North Felsite also show a similar variability in metal assemblage, but drilling is currently insufficient to define the mineral zonation accurately.

8.2 CHIMNEY

Pipe-like bodies of massive to semi-massive zinc, copper, and lead sulfides, often with high silver values, that have been found in and near the intersection of high-angle mineralized structures and the more moderately dipping skarnoid zone. These produced the richer ores in the Santo Niño-Puro Corazón area. Mineralogically, these deposits show characteristics of both the skarnoid and manto styles of mineralization and are believed to have been formed by multiple mineralizing events. The ores consisted mainly of massive to semi-massive aggregates of pyrite, sphalerite, galena, chalcopyrite and bornite replacing recrystallized calcite or filling open spaces. Typical grades in the chimneys were 200–400 g/t silver, 2–10% zinc, 2–6% lead, and 0.5–1.5% copper.

Portions of the newly identified hangingwall lens of the South Skarn deposit has similarity with the chimney-style deposits. Mineralization occurs at or just outboard of the lower Skarnoid alteration zone and is characterized by both replacement textures and mineralized hydrothermal breccias.

8.3 MANTO

Manto-style silver, lead, zinc, and copper deposits as replacements of carbonate strata peripheral to or outside of the skarnoid aureole. The deposits are typically restricted to selected carbonate strata (favourable beds) that have been replaced by massive to semi-massive lead and zinc sulfides with accessory pyrite, and small amounts of copper sulfides. Drilling in 2020-21 identified manto-styled mineralization within an area of the La Bocona deposit known as the Muralla Chimney. Mineralization occurs as replacements in the hanging wall of the skarnoid mineralized zone within variably altered marble-skarn-hornfels. The thickest zone of sulphide mineralization occurs in the footwall of a thick monzonite dyke. The mineralization is strongly silver-enriched with elevated lead, arsenic and gold values. The upper portion of the mineralized zone is strongly oxidized and makes up in part the small oxide resource identified in the current mineral resource update.

8.4 DYKE MARGIN

Replacement mineralization located alongside dykes of various compositions outside the skarnoid aureole of the central intrusive complex. Massive to disseminated sulfides of lead, zinc, and copper are seen replacing carbonate and carbonate-bearing rocks, with or without associated skarnoid alteration. This is a dominant style of mineralization occurring with the Blind, El Sol and Las Victorias deposits.

Of these four deposit types, the skarnoid and chimney deposits have been reported to have produced the bulk of ore exploited in the district and such observation appears to be born out in the most recent drilling and resource modelling by Southern Silver.

9 EXPLORATION

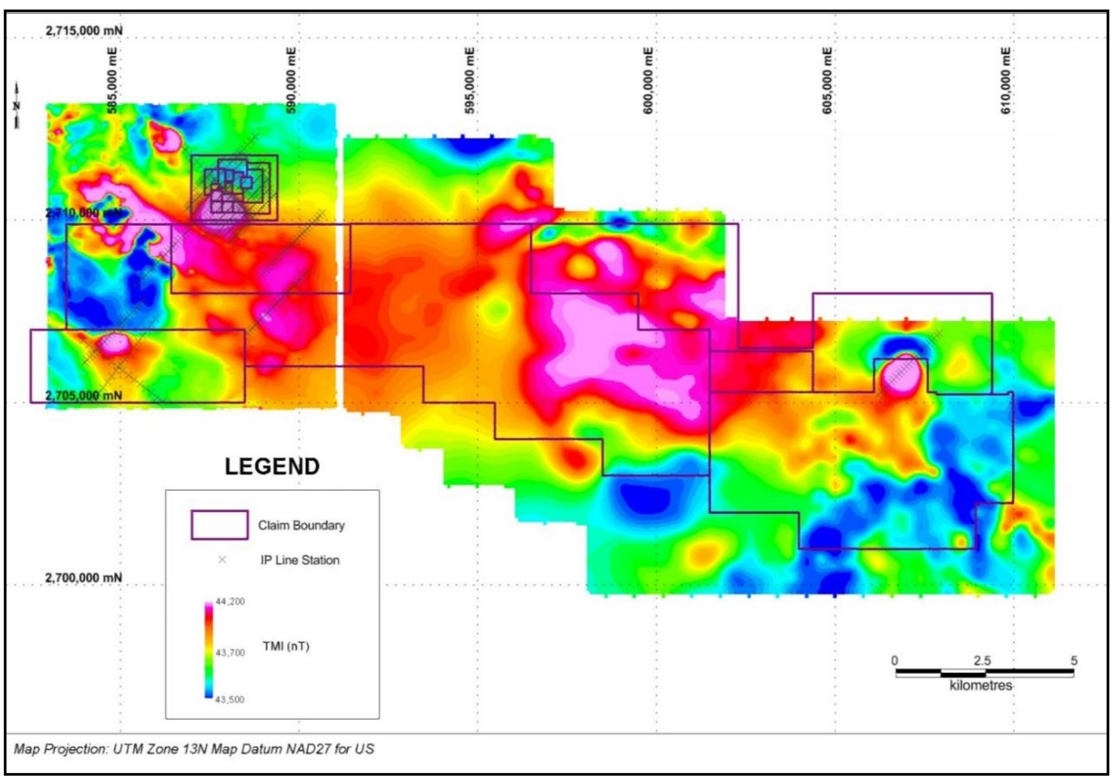
9.1 EXPLORATION ON THE CERRO LAS MINITAS PROPERTY

Since acquisition of the property in 2010, Southern Silver, both self-funded and funded by option partners, has completed diamond drilling; geological mapping; geochemical rock, soil and acacia sampling; shallow and deep-seated IP surveys; a ground gravity survey; and an airborne magnetic survey.

Between 2011 and 2012, Southern Silver explored the property without an option partner. Initially, a program of geophysics and geological mapping was conducted to define and delineate targets for exploration drilling.

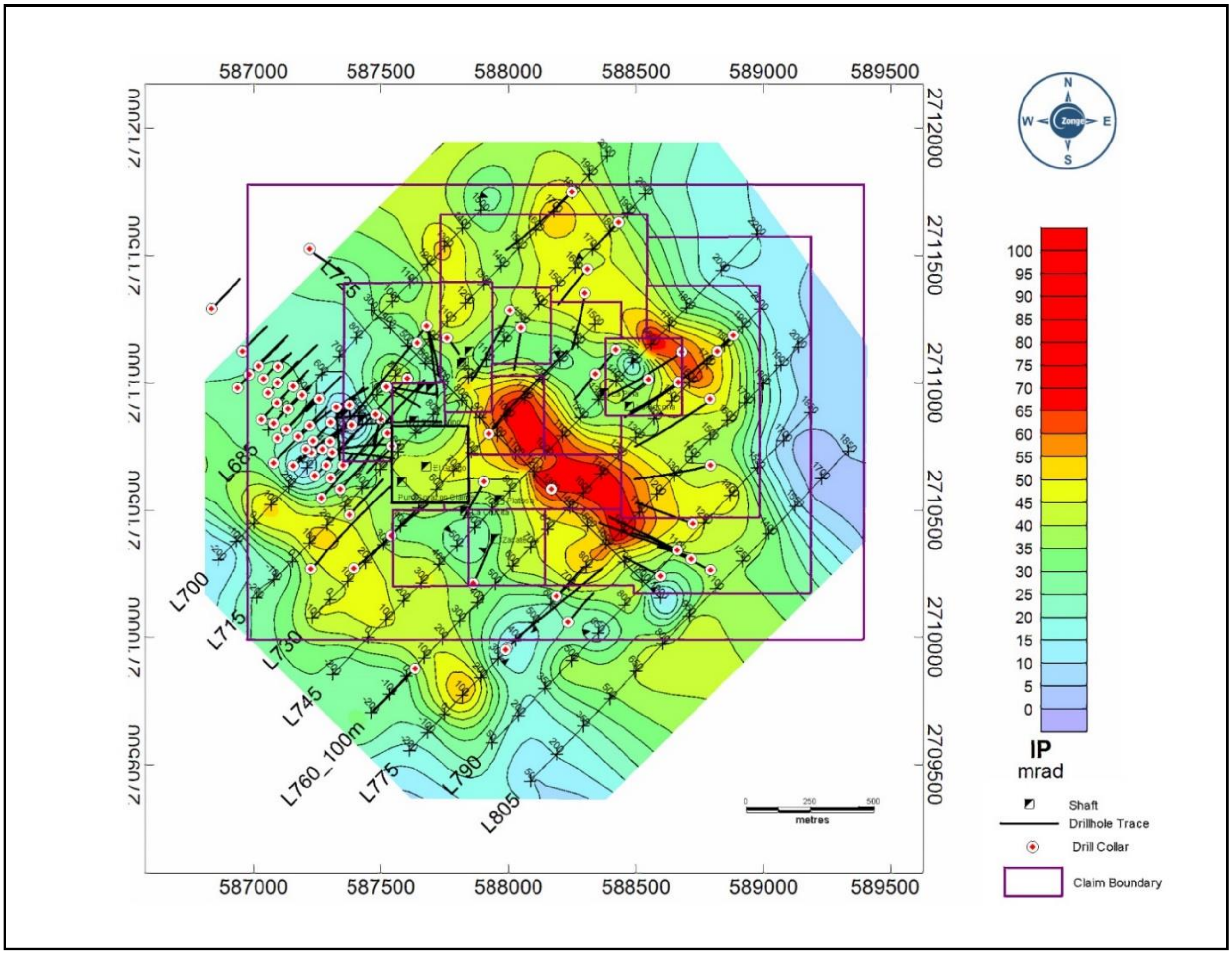
The property was surveyed between February 19 and February 22, 2011 with a three-axis helicopter-borne magnetic gradiometer (Geotech Ltd., 2011). A total of 1,191 line-km of data was acquired during this survey, which was split into the west block and the east block. The west block (over the Cerro) was flown with north-south lines 100 m apart and east-west tie lines 1,025 m apart. The east block (over the majority of the property) was flown with north-south lines 400 m apart and east-west tie lines 200 m apart (Figure 9-1).

Six magnetic targets were delineated on the property; the most prevalent was the Cerro in the northern block. A series of northeast-southwest IP lines with a northwest-southeast baseline was designed to further explore the magnetic target over the Cerro and delineate targets for drilling. Between February 23 and April 21, 2011, Zonge International Inc. collected dipole-dipole complex resistivity data on 13 lines for a total of 30.6 line-km and 244 receiver stations (Zonge, 2011). Of these 13 lines, 10 were in the area of the Cerro and three were over other magnetic targets on the property. The majority of the IP lines crossing the Cerro were conducted using 100 m dipoles, with 2 lines conducted using 150 m dipoles. The other exploratory lines were conducted using 200 m dipoles. The IP survey delineated several targets which were subsequently drilled (Figure 9-2).



Source: Southern Silver 2016

Figure 9-1: Geophysics – Magnetic



Source: Southern Silver 2016

Figure 9-2: Geophysics – Induced Polarization at 250 m Depth

From 2011 to 2012, Southern Silver completed 62 core holes on the property totalling 15,845 m. Drilling focused on an early new discovery outboard of the central intrusion and zones of historic mineralization known as the Blind Zone: a gravel covered, previously unrecognized mineral zone which was then delineated to an approximate 600 m strike-length and to depths of up to 350 m. Other drilling targeted the Mina Piña-La Bocona area, the north skarn and south skarn targets, resulting in several notable silver-gold-lead-zinc-copper mineralized intervals. The details of the drill program are discussed in Section 10.

In October 2012, Freeport optioned the property, and, between 2013 and 2014, it conducted additional diamond drilling, deep penetrating IP surveys, 3D inversions on existing geophysics and gravity surveys. It also collected soil samples and initiated a property-wide acacia biogeochemical survey.

A soil geochemical survey was conducted over three of the pre-existing lines at 25 m intervals, where possible, to investigate whether the Blind Zone had a surface geochemical expression. A total of 125 samples were taken, resulting in a significant surface expression of silver, lead and zinc above many of the known zones of mineralization. The soil survey was followed by an IP survey, where three pre-existing IP lines were surveyed with a deep penetrating 300 m spaced dipole-dipole survey, which confirmed continuity of the IP anomalies at depth. A ground gravity survey was conducted on a 3,000 m x 2,000 m area centred on the Cerro, which outlined gravity highs corresponding to the mapped skarn around the central intrusion. Interestingly, the hornfels mapped to the northwest of the central intrusion also shows a distinct gravity high, suggesting the potential for buried sulfide mineralization (Robles et al., 2013).

On the larger property, a reconnaissance IP survey was conducted employing three different dipoles. Anomalous responses were detected, but major roads and cultural features might have influenced the results, so caution should be taken during interpretation.

Freeport completed an orientation biogeochemical survey over the area of the Cerro and then expanded the program to cover the entire property. A total of 311 samples were taken from acacia trees with encouraging results. Several anomalies were outlined that warranted follow-up.

The central intrusion and south skarn areas were drilled by Freeport in 2013–14 to investigate the potential for a copper porphyry source to the shallower silver-lead-zinc-enriched mineralization as well as extending the known zones of mineralization to depth. Freeport completed 13 core holes and two holes were extended for a total of 7,877 m. In October 2014, Freeport terminated the option agreement with Southern Silver because it discovered only weak copper mineralization in the central intrusion after drilling to a vertical depth of 1,000 m.

In May 2015, Electrum Global Holdings L.P. signed an option agreement to earn a 60% indirect interest in the Cerro Las Minitas property. In the subsequent 2015 exploration program, additional rock, soil and acacia samples were collected and further diamond drilling was conducted.

In the area of the Cerro, an additional 595 soil samples were collected to identify additional geochemical targets for drilling. The survey was highly successful in outlining areas of known mineralization with silver, lead, and zinc anomalies as well as defining a gold anomaly outboard of the known mineralization, the source of which is yet to be discovered. A total of 45 rock samples were collected in targeted areas, which were again successful in identifying targets for drilling.

Diamond drilling in 2015 consisted of 11 holes and the extension of three earlier holes for a total of 9,135 m of drilling. The focus was large offsets of the known mineralization in the Blind Zone and the El Sol Zone with the goal of aggressively expanding the property potential. The maiden resource estimate on the property, based on all drilling up to this point on the Blind, El Sol and Santo Nino zones (later discovered to be part of the Skarn Front Zone) was released on March 1, 2016.

Follow-up was also conducted on the regional acacia survey conducted in 2011. An additional 321 soil samples were collected over the geochemically anomalous areas at 25 m spacing in 7 lines across the property. An additional 118 acacia samples were collected over the rest of the property, resulting in several supplementary targets that warrant follow-up.

Follow-up drilling was conducted between 2016 and 2017 on the Blind Zone, the El Sol Zone and the Bocona Zone, which resulted in the discovery of the Las Victorias Deposit and the Skarn Front Deposit, where a maiden resource estimate was released on January 8, 2018.

Aggressive step-out drilling was conducted in 2018 to expand the resource and fill in holes in the block model, which resulted in an updated resource estimate for the Blind Zone, the El Sol Zone, the Skarn Front Zone and the Las Victorias Zone, which was released on May 9, 2019.

In July 2020, a surface trenching program consisting of seven trenches across the strike length of the skarnoid alteration in the Bocona zone was conducted to define the surface trace of the mineralization at the Bocona Zone. Details of this trenching program are discussed in Section 10.

On June 22, 2020, Southern Silver signed an agreement to purchase Electrum's 60% indirect working interest on the Cerro Las Minitas property. In the subsequent exploration program, an additional 85 holes totaling approximately 33,756 m which resulted in the delineation of the South Skarn Zone and the La Bocona Zone as well as discovery of the North Felsite Zone. Details for drilling are discussed in Section 10.

9.2 EXPLORATION ON THE CLM WEST AND CLM EAST CLAIMS

Southern Silver conducted surface float and rock chip sampling on the Gran Creston de Oro, Los Lenchos and Biznagas claims (collectively known as the CLM West claim group), throughout the latter part of 2017 and into 2018. Work in the claims involved initial reconnaissance float sampling followed by grid float sampling over targeted areas on a 100m x 100m pattern. Where encouraging geochemistry was discovered, smaller areas were sampled on a 25m x 25m pattern.

During 2018, an extensive regional scale surface sampling, mapping and VLF-EM geophysical exploration program, followed by an exploratory drill program, was conducted on the CLM West and CLM East Claims. The objective of this program was to assess the potential for epithermal vein systems in the Tertiary stratigraphy similar to the nearby deposits at Avino, San Sebastian and La Preciosa.

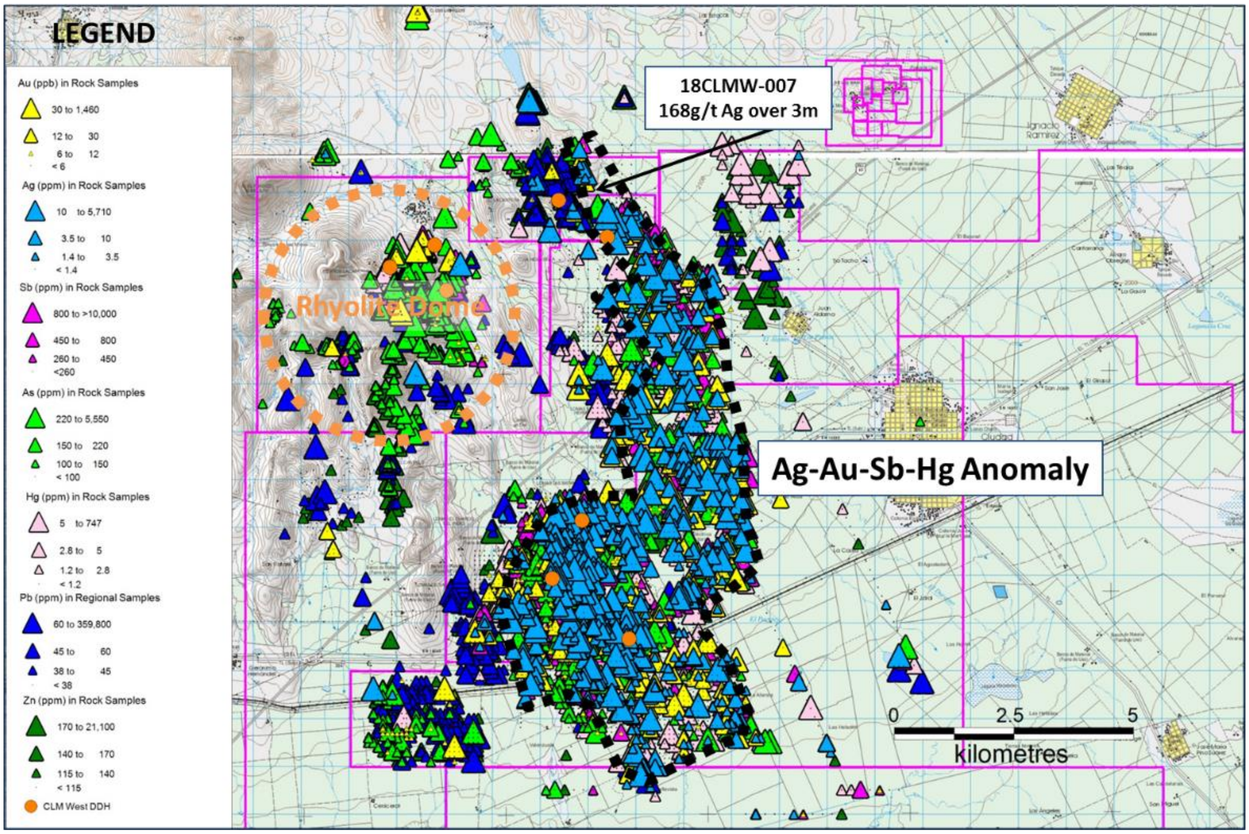
A total of over 6,400 surface samples and 94.3-line km of VLF-EM readings were taken throughout the property. VLF-EM lines were run taking readings every 25 m with 100 m line spacing over the most promising geochemical targets, resulting in a more than 12-km-long northwest-southeast-trending corridor of anomalous precious-metal and pathfinder values that display a distinct zoning pattern consistent with modelled vertical and lateral zonation within large epithermal vein systems. Results were encouraging, with maximum silver values reaching 5,710 g/t and gold reaching 1.48 g/t as well as very high pathfinder values with As reaching 5,550 ppm, Sb reaching >10,000 ppm and Hg reaching 747,000 ppb.

See Figure 9-3 for the distribution of these results.

Subsequent drill testing of the best anomalies in 2018 produced several interesting pathfinder anomalies as well as a shallow downhole intercept of 3 m of 168 g/t Ag in hole 18CLMW-007 which warrants follow-up in subsequent exploration programs.

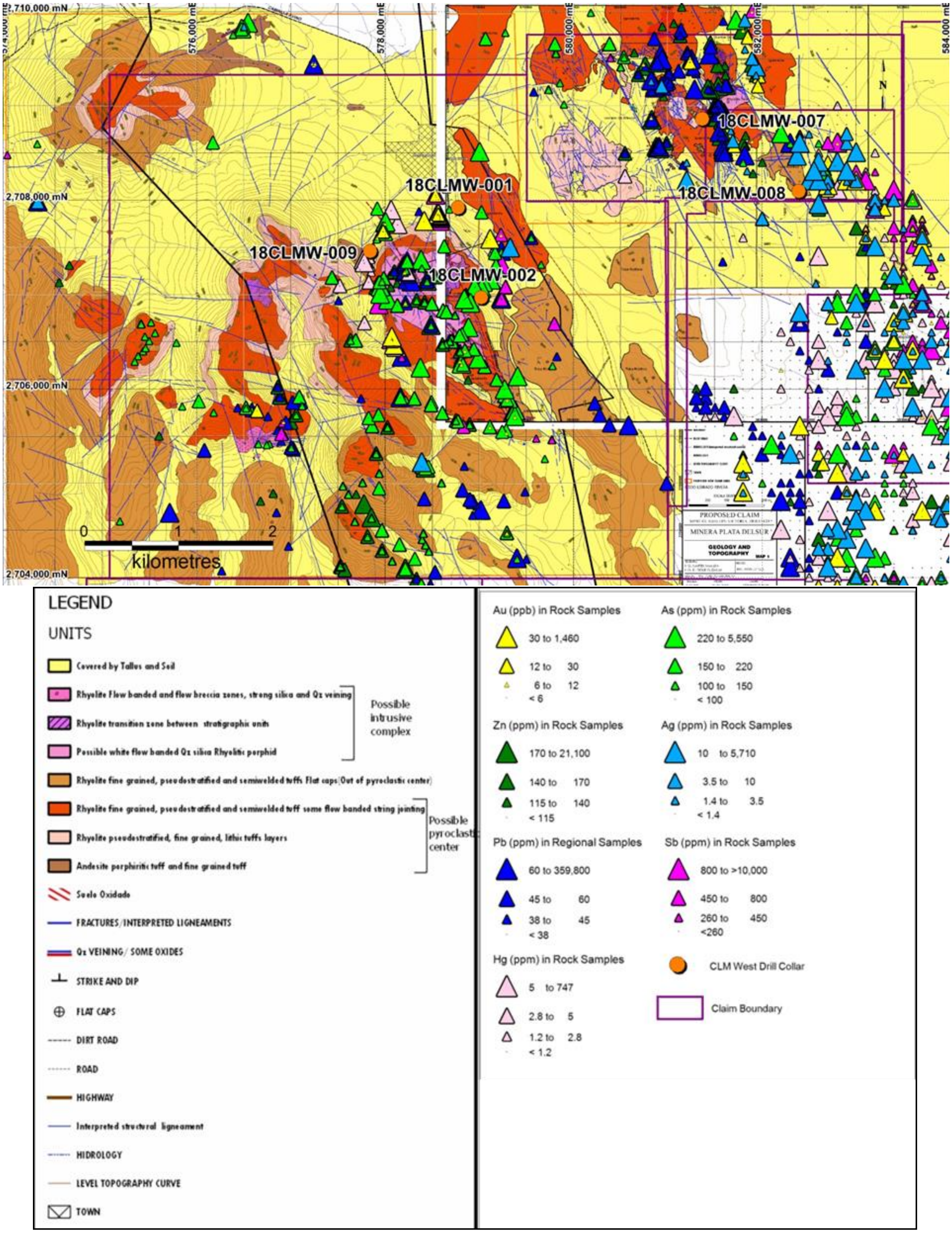
The results of this initial exploration program identified several promising drill targets. Follow-up drilling was conducted in the form of 9 drillholes on the CLM West claims for a total of 3,171.5 m and a single drillhole on the easternmost claim for a total of 354 m.

Although the majority of the larger property is covered in quaternary gravel, the far northwestern area of the claims contains more exposures. This area was mapped in detail in 2018. Figure 9-4 is a geological map of the northwestern area of the claims.



Source: Southern Silver 2019

Figure 9-3: Surface Sampling on the CLM West Claim Group



Source: Southern Silver 2019

Figure 9-4: Surface Geology and Surface Sampling Results of the Northern CLM West Claim Group

The northern area of the CLM West claim group is underlain by an early to mid-Tertiary bimodal felsic-intermediate volcanic sequence of the Gamon formation which has been affected by regional north-northwest and east-west fault structures.

The stratigraphic package includes a basal polymict conglomerate; a lower Tertiary andesite with crystal rhyolite tuff layers overlain by mid-Tertiary rhyolitic to rhyo-dacitic ignimbrites, flows, breccias and tuffs.

Three predominant structural zones were mapped and sampled on surface, ranging in strike length between 1.5 and 5.0 km. The Marro Breccia was targeted by hole 18CLMW-007 and the El Durazno breccia with hole 18CLMW-008. Holes CLMW-001, -002 and CLMW-009 targeted quartz veins and projected vein intersections in the more southwesterly structural zone. Drilling targeted the down-dip projections of the veins particularly as they as they extend into the lower andesitic volcanic sequence as this is the stratigraphic position of the Avino vein systems located several kilometres to the northwest. None of the drillholes tested the veins within the lower andesite rock package.

Results of the 2018 regional exploration program identified several targets worthy of follow-up and several geochemical anomalies remain untested by drilling.

9.3 EXPLORATION ON THE EL SOL CLAIM

The El Sol concession is a single 63 ha claim strategically located on the northwestern boundary of the Bocona block of claims and is adjacent to the Area of the Cerro which hosts the six mineral deposits currently identified within the Cerro Las Minitas claim package. It covers the northwest projection of the Blind-El Sol deposits and potentially at least one additional mineralized structure.

The claim is largely gravel covered with previous work including: airborne magnetic geophysics; surface soil and acacia sampling; limited dump sampling of historic artisanal workings and a single core hole in the southeastern end of the property.

Select dump sampling of artisanal workings located to the northeast of the Blind Zone structure returned anomalous values from several strongly oxidized and silicified rocks including one sample which returned 0.67 g/t Au, 559 g/t Ag, 3.3% Pb and 4.3% Zn. These workings do not appear to be related to the Blind Zone mineralization and represent a second potential high-grade target for priority follow-up.

Eight holes totaling 2,920 m have been completed in 2021-22 to test a series of targets defined by earlier surface mapping, rock and soil sampling and proximity to artisanal workings. Details of the drilling results are in Section 10.

10 DRILLING

Core drilling from 2011 through 2018 was contracted out to BD Drilling Mexico, S.A. de C.V. (BDD) of EL Salto, Jalisco. Core drilling from 2020 to 2022 was contracted out to Intercore Operaciones, S de RL de CV (Intercore) of Tlajomulco de Zuniga, Jalisco Mexico. Drilling was completed using both NQ and HQ coring equipment capable of recovering core 45.1 to 61.1 mm in diameter. Table 10-1 shows the drilling by year, the number of drillholes and meterage achieved.

The purpose of the drilling programs was to identify new mineral deposits on the property and to expand on the results of historic drilling performed by previous operators including CRM, Noranda and Silver Dragon Resources as the historic data could not be adequately validated and verified particularly for inclusion for a current resource estimate. The initial drilling focused on delineating and expanding the known structures at the El Sol, Santo Nino, Mina La Bocona, South Skarn and the North Skarn zones. In addition, exploration drilling was performed to test surface exploration programs which included soil and rock chip sampling, and Induced Polarization and gravity geophysics.

Initial drilling in 2011 targeted skarn and replacement deposits in the margin of the central Intrusion in the Santo Nino, Mina La Bocona and the North Skarn zones and also tested several Induced Polarization geophysical targets both within the Central Intrusion and outboard of the known zones of mineralization in gravel covered areas. This initial 11-hole drill program successfully identified extensions to the Santo Nino zone mineralization approximately 100 m vertically underneath the lowest historic workings, confirmed previous drill results at the North Skarn and Mina La Bocona targets and resulted in the discovery of the Blind zone, a new high-grade target outboard of the El Sol shaft in a gravel covered field.

The Blind Zone was initially discovered with hole 11CLM-008, which intersected a 10.9 m down hole interval averaging 268 g/t Ag, 4.5% Pb and 3.8% Zn of polymetallic mineralization adjacent to an aplite-monzonite dyke complex outboard of the central intrusion. Subsequent drilling resulted in the discovery in hole 11CLM-011 of a similar sub-parallel zone underneath the El Sol surface showing, which soon developed into the El Sol Zone. The majority of the 2011-12 drillholes were designed to offset these discovery holes at 50-100 m intervals.

Other notable targets that returned high-grade polymetallic mineralization include the North Skarn Zone, (discovery hole 11CLM-003), the South Skarn Zone (discovery hole 12CLM-055), which was offset by Freeport McMoran Exploration Corp in 2013/14.

Drilling in 2015 continued to expand the overall size of the Blind and El Sol deposits and identify new zones of high-grade mineralization. Noteworthy milestones from the 2015 drilling program include: the identification of new high-grade Ag-Pb-Zn discoveries in the Mina La Bocona area (e.g.: 15CLM-078) and outboard of the Blind–El Sol zone (e.g.: 15CLM-081); the identification of potential new extensions to high-grade mineralization at the Santo Niño Mine (e.g.: 15CLM-023A); and the identification of thick zones of massive and semi-massive sulphide at depth in the Blind – El Sol zone (e.g.: 15CLM-077, 15CLM-081 and 11CLM-025).

Drilling in 2016/17 by Southern Silver completed 20 core holes totaling approximately 16,647 m and successfully outlined the Skarn Front as a zone of mineralization, located at depth beneath the Blind and El Sol Zones. Mineralization occurs on the outer edge of the skarn alteration zone surrounding the Central Monzonite Intrusion at or near the transition into marble and forms the primary geological control on the distribution of sulphide mineralization. Geological modelling suggests that intersections between the sub-vertical, northwest-trending Blind and El Sol mineralized zones and the generally more shallowly dipping Skarn Front may localize higher-grade shoots of mineralization which may be in part responsible for higher grade intervals identified in some of the 2017 drilling.

Drilling in 2018 by Southern Silver completed 25 holes totaling approximately 10,388 m and successfully extended the Skarn Front Zone into the Las Victorias and North Skarn areas as well as infilling areas of the 2018 resource model with inadequate drill spacing. Further geological modelling continued to extend the zones of mineralized skarn wrapping around the central monzonite intrusion.

Drilling between 2020 and 2022 completed 68 holes totaling approximately 26,285 m which continued to extend, laterally and down dip, the Mina La Bocona Zone and South Skarn Zone as well as delineating the North Felsite Zone. Three holes were completed on the west side of the intrusive to test the southeastern extension of the Las Victorias Zone. Geological modelling confirmed the architecture of the skarn wrapping around the central monzonite intrusion.

For a list of significant intercepts from 2011 to 2022, refer to Table 10-5.

Borehole locations were planned and marked by Southern Silver geologists using a handheld GPS and subsequently surveyed with a differential GPS at the end of each year. A compass was used to determine borehole azimuth and inclination. Boreholes were drilled at an angle of between 90 and 45 degrees from the horizontal, depending upon the target. Downhole surveys were completed for all boreholes using a Reflex EZ-Shot® electronic single shot (magnetic) device. Downhole deviation of boreholes was measured using these tools at nominal 50-m intervals.

The drill core is retrieved from boreholes, boxed at the drill site by the Southern Silver geologists and moved to a secure core warehouse on the property. Once at the warehouse, the core is quick logged, photographed, measured and, if the geologist deems it necessary, marked for sampling. Once logging is completed, the core that has been marked for sampling is sawn in half at the warehouse by labourers employed by Southern Silver and placed in sample bags, which are marked and secured by the sampler and checked by the geologist.

All descriptive information was captured digitally on-site using a Microsoft Access database. A listing of Southern Silver drilling is shown in Table 10-2 and Table 10-3. Table 10-5 lists the significant intervals encountered during the 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2020, 2021 and 2022 drilling campaigns.

Table 10-1: Drill Hole Summary by Year

Year	# Holes	Drilling (m)
2011	29	7,958
2012	33	7,887
2013	11	5,950
2014	2	1,771
2015	13	9,135
2016	5	4,415
2017	15	12,232
2018	25	10,388
2020	17	7,470
2021	53	18,907
2022	15	7,379
Total	**218**	**93,668**

Table 10-2: Cerro Las Minitas Drill Hole Summary

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
11CLM-001	587926	2710799	2147.6	37.94	-60	928.5
11CLM-002	588342	2711032	2170.6	217.94	-48	198
11CLM-003	587682	2711222	2206.6	162.94	-65	453
11CLM-004	587682	2711221	2206.6	167.94	-45	400

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
11CLM-005	587762	2711174	2214.6	140.94	-71	223
11CLM-006	587389	2710834	2153.6	87.94	-55	600
11CLM-007	587907	2710611	2132.6	207.94	-45	237
11CLM-008	587275	2710739	2133.6	40.94	-60	243
11CLM-009	588880	2711185	2088.6	224.94	-45	147.1
11CLM-010	588818	2711122	2091.6	227	-60	843
11CLM-011	587239	2710771	2134.6	42.94	-45	327
11CLM-012	587290	2710675	2130.6	42.94	-45	261
11CLM-013	587179	2710789	2132.6	42.94	-45	225
11CLM-014	587161	2710672	2125.6	51.94	-50	393
11CLM-015	587308	2710845	2138.62	42.94	-45	261
11CLM-016	587307	2710626	2128.62	42.94	-55	208.7
11CLM-017	587345	2710582	2128.62	42.94	-45	186
11CLM-018	587135	2710817	2132.62	42.94	-45	240
11CLM-019	587211	2710739	2131.62	42.94	-55	271
11CLM-020	587524	2710986	2189.62	123.94	-45	220
11CLM-021	587264	2710940	2147.62	222.94	-45	105
11CLM-022	587083	2710840	2130.62	42.94	-45	270
11CLM-023	587271	2710547	2122.62	42.94	-45	339
11CLM-024	587381	2710481	2125.62	42.94	-45	291
11CLM-025	587400.9	2710272	2110.94	53	-45	620
11CLM-026	587099	2710998	2136.62	42.94	-45	168
11CLM-027	587528	2710800	2168.62	222.94	-68	468
11CLM-028	587026	2711065	2133.62	42.94	-45	227.5
11CLM-029	587261	2710935	2147.62	42.94	-45	171
12CLM-030	587246	2710633	2125.62	42.94	-55	381
12CLM-031	588192	2710161	2103.62	42.94	-50	246
12CLM-032	587099	2710781	2128.62	42.94	-55	468
12CLM-033	588237	2710060	2094.62	42.94	-55	261
12CLM-034	587329	2710904	2143.62	177.94	-45	309
12CLM-035	588421	2711127	2134.62	218.94	-56	287
12CLM-037	588549	2711011	2120.62	228.94	-45	345
12CLM-038	587550	2710750	2159.62	222.94	-55	281.5
12CLM-039	588309	2711442	2126.62	222.94	-45	258
12CLM-040	587867	2710213	2119.62	24.94	-50	315
12CLM-041	587141	2710896	2136.62	42.94	-45	162
12CLM-042	587544	2710400	2126.62	42.94	-45	204
12CLM-043	587097	2710921	2134.62	42.94	-45	210

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
12CLM-044	587503	2710857	2179.62	197.94	-45	147
12CLM-045	587063	2710960	2134.62	42.94	-50	399
12CLM-046	587503	2710858	2179.62	197.94	-65	237
12CLM-047	587044	2711014	2133.62	42.94	-50	204
12CLM-048	587484	2710875	2179.62	264.94	-45	210
12CLM-049	586989	2711032	2131.62	42.94	-45	231
12CLM-050	587524	2710984	2189.62	97.94	-50	288.7
12CLM-051	587159	2710986	2140.62	42.94	-45	117
12CLM-052	588431	2711628	2110.62	222.94	-45	210
12CLM-053	587100	2711062	2137.62	42.94	-45	104
12CLM-054	586962	2711122	2133.62	42.94	-45	195
12CLM-055	588663	2710341	2086.3	297.94	-45	421.5
12CLM-056	587355	2710676	2133.62	42.94	-45	87
12CLM-057	586942	2710980	2129.62	42.94	-45	372
12CLM-058	588051	2711215	2171	186.94	-45	240
12CLM-059	587194	2710950	2142.62	42.94	-45	75
12CLM-060	587305	2710768	2138	42.94	-45	90
12CLM-061	587224	2710832	2139	42.94	-45	120
12CLM-062	587037	2710856	2130	42.94	-45	303
13CLM-063	588793	2710263	2080.3	297.74	-65	531
13CLM-064	588171	2710581	2119	0	-90	456
13CLM-065	587638	2709879	2095	222.74	-45	321
13CLM-066	587315	2710725	2135	90	-70	690
13CLM-067	588598	2710240	2086.7	297.74	-65	387
13CLM-068	588725	2710445	2086	290.74	-50	369
13CLM-069	588722.4	2710310	2083.36	292.74	-55	456
13CLM-070	587220.7	2711526	2132.18	132.74	-50	256
13CLM-071	587228.8	2710719	2126.88	81	-69	816
13CLM-072	586840.3	2711288	2132.95	42.74	-45	231
13CLM-073	588000.7	2709956	2091.03	42.74	-65	1314
14CLM-074	588719	2710307	2083.45	297.64	-65	829
14CLM-075	587992.6	2709953	2091.22	0	-90	942
15CLM-023A	587271	2710547	2122.58	42.94	-45	879
15CLM-076	587085.2	2710685	2118.84	42.55	-60	750
15CLM-077	587604.85	2711015.91	2196.66	222.5	-61	986
15CLM-078	588668.89	2710994.09	2099.99	237.4	-61	531
15CLM-079	588793.31	2710672.95	2084.81	257.6	-61	621
15CLM-080	588301.28	2711350.64	2128.45	192.6	-60	474

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
15CLM-081	587233.63	2710267	2104.4	41.34	-55	834
15CLM-082	588792.79	2710929.59	2088.64	237.5	-60	702
15CLM-083	588678.6	2711115.79	2098.05	236.34	-60	648
15CLM-084	587673.86	2711211.18	2202	219.24	-48.5	894
15CLM-085	588251.78	2711751.75	2111.76	221.96	-45	492
15CLM-086	588007.9	2711279.07	2171.74	207.5	-57	570
16CLM-087	587231.04	2710073.34	2099.02	43.34	-50	850
16CLM-088	587233.21	2710266.83	2104.41	39.64	-75	798
16CLM-089	587221.86	2709923.41	2093.9	42	-55	1052
16CLM-090	588641.63	2711092.44	2101.79	229.14	-60	403.5
16CLM-091	587305.17	2710480.61	2117.01	42.3	-75	775
17CLM-092	588490.05	2711179	2116.34	195	-55	444
17CLM-093	588676.76	2711118.32	2098.28	202.04	-60	705
17CLM-094	587176.77	2710396.74	2108.89	42.54	-75	935
17CLM-095	587272.14	2710545.4	2118.37	45	-75	1017.5
17CLM-096	587190.19	2710225.42	2102.47	37	-85	1021
17CLM-097	587001.68	2710424.5	2106.76	37	-75	1206
17CLM-098	586977.57	2710609.55	2112.47	38	-60	1168
17CLM-099	586971.61	2710782.17	2119.17	40	-60	752.5
17CLM-100	587265.31	2710933.07	2143.35	92	-70	846
17CLM-101	587568.51	2710232.4	2109.24	46.04	-60	528
17CLM-102	587660.23	2711168.28	2213.03	100	-56	436
17CLM-103	587178.37	2710788.33	2128.66	85	-76	1035
17CLM-104	587659.67	2711168.74	2212.99	60	-57	426.8
17CLM-105	587511.67	2710187.64	2105.24	42	-60	601
17CLM-106	587078.72	2710838.14	2125.91	96	-72	1110.5
18CLM-107	587569.18	2710230.09	2109.12	38.3	-45	480
18CLM-108	587602.51	2710100.42	2101.45	38.5	-45	528
18CLM-109	587602	2710099.92	2101.38	38.5	-60	579
18CLM-110	587383.18	2710480.2	2120.84	80	-70	489
18CLM-111	587321.53	2711014.96	2151.41	100	-54	654
18CLM-112B	587407.07	2710891.06	2157.89	92	-51	445
18CLM-113	587320.88	2711013.18	2151.11	94.5	-64.3	684
18CLM-114	587328.96	2711217.11	2150.02	110.5	-51	714
18CLM-115	587180.4	2710397.67	2108.97	63	-70.5	747
18CLM-116	587275.1	2710571.32	2119.42	77	-67	640.4
18CLM-117	587570.2	2710025.62	2097.12	33.9	-63	689.5
20CLM-118	588635.9	2710613.14	2093.57	258	-55	280

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
20CLM-119	588636.1	2710613.71	2093.54	284	-66	360
20CLM-120	588825.6	2710525.11	2081.44	268.7	-51	473.4
20CLM-121	587511.5	2709877.19	2090.15	43	-50	756.25
20CLM-122	588825.1	2710525.46	2081.47	285.5	-47	501
20CLM-123	587527.2	2710268.92	2110.82	33.9	-49.5	453.7
20CLM-124	588827.5	2710525.7	2081.4	269.9	-60	579.1
20CLM-125	588706	2710939.32	2095.97	269	-60.5	360.2
20CLM-126	588826.5	2710527.69	2081.45	285	-64.5	636.45
20CLM-127	588705.8	2710939.32	2095.97	269	-53	330.5
20CLM-128	588503.6	2711099.06	2119.1	209.5	-60	372.55
20CLM-129	588503.8	2711099.18	2119.08	202.9	-62	350
20CLM-130	588826.3	2710529.46	2081.47	260	-65	606.7
20CLM-131	588504	2711099.75	2119.08	201.6	-66	369
20CLM-132	588504.2	2711098.83	2119.04	199.5	-56	309
20CLM-133	588607.4	2710696.88	2099.53	285	-67.5	352.5
20CLM-134	588670.2	2710992.33	2099.84	249.2	-59	379.15
21CLM-135	588559.9	2711143.63	2109.35	210	-59.5	464.35
21CLM-136	588752	2710938.78	2091.93	270	-58	399.8
21CLM-137	588753.7	2710939.13	2091.72	230	-45	243.25
21CLM-138	588559.8	2711142.36	2109.31	200	-49	345
21CLM-139	588754.2	2710939.55	2091.69	230	-60	222.9
21CLM-140	588707	2710899	2098	276.7	-61	364.35
21CLM-141	588562	2711144.77	2109.02	217.5	-61.5	513.5
21CLM-142	588705.1	2710895.68	2095.62	269	-62.5	411
21CLM-143	588745.3	2710939.31	2092.52	264	-59.5	414
21CLM-144	588563	2711144.04	2109.06	205	-59.5	430.75
21CLM-145	588589.4	2711280.16	2104.4	200	-49	277.1
21CLM-146	588702.5	2711084.29	2096.03	234	-55	382.8
21CLM-147	588683.7	2711117.63	2097.63	227.2	-60	462.5
21CLM-148	588701.6	2711084.06	2096.13	232	-63	419.45
21CLM-149	588684.1	2711117.51	2097.61	218.8	-66	483
21CLM-150	588667.2	2710771.5	2096.61	235.8	-64	400.65
21CLM-151	588562.2	2711147.6	2108.91	207	-63.5	539.05
21CLM-152	588668.2	2710770.61	2096.49	232	-71	456
21CLM-153	588875.4	2710860.9	2082.47	283	-52	555.8
21CLM-154	588811.3	2710457.82	2081.57	270	-50	450
21CLM-155	588819.3	2710523.85	2081.8	252	-55.5	532.9
21CLM-156	588371.3	2711112.53	2142.79	208.2	-45.3	255

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
21CLM-157	588585.4	2710538.62	2093.67	270	-45	180.8
21CLM-158	588371.8	2711112.58	2142.71	190	-53	263.75
21CLM-159	588586.2	2710538.17	2093.63	241	-63.5	308.5
21CLM-160	588609.3	2710693.75	2099.23	256	-53	233.4
21CLM-161	588371.2	2711112.97	2142.78	225	-55	258
21CLM-162	588371.5	2711112.83	2142.77	215	-62	282
21CLM-163	588608.9	2710694.83	2099.23	297	-49	304
21CLM-164	588424.3	2711129.16	2129.98	215	-62	360.9
21CLM-165	588488.1	2711178.04	2116.39	208	-50	279
21CLM-166	588423.8	2711129.14	2129.99	231	-61.5	351.5
21CLM-167	588487.6	2711178.23	2116.41	225	-54.5	425.25
21CLM-168	588317.2	2711240.8	2136.19	210	-50	390
21CLM-169	587806.1	2710266.95	2119.72	19	-52	354
21CLM-170	588317.4	2711241.19	2136.18	210	-60	430.1
21CLM-171	587806.3	2710267.22	2119.74	5	-63	371.4
21CLM-172	588237.9	2711259.56	2142.85	210	-50	315.6
21CLM-173	588237.9	2711259.56	2142.85	210	-60	405
21CLM-174	588111.5	2711270.31	2153.67	210	-50	252
21CLM-175	588111.5	2711270.31	2153.67	210	-60	279.8
21CLM-176	588109.6	2711355.01	2146.19	182.5	-53	390.6
21CLM-177	588109.6	2711355.01	2146.19	210.5	-54	376
21CLM-178	587920.9	2711426.40	2154.54	180	-45	432
21CLM-179	587920.9	2711426.40	2154.54	173	-57	444.8
21CLM-180	588109.6	2711355.01	2146.19	196	-65	450
21CLM-181	587983.5	2711447.91	2147.00	180	-60	550.3
22CLM-182	587852	2711460.74	2157.53	165	-60	543
22CLM-183	587852	2711460.74	2157.53	162	-66	627.8
22CLM-184	588094.9	2711452.75	2139.43	201	-51	481.4
22CLM-185	588094.9	2711452.75	2139.43	190	-60	543
22CLM-186	588215	2711420.29	2131.74	198	-50	497.3
22CLM-187	588215	2711420.29	2131.74	200	-55	533
22CLM-188	587724.5	2711431.62	2162.22	150	-55	495
22CLM-189	587724.5	2711431.62	2162.22	149	-61	530.1
22CLM-190	587648.7	2711316.56	2179.06	137	-62	340.1
22CLM-190A	587648.7	2711316.56	2179.06	137	-62	313.5
22CLM-191	587648.7	2711316.56	2179.06	153	-58	600.3
22CLM-192	587648.7	2711316.56	2179.06	150	-64	610.3
22CLM-193	587648.7	2711316.56	2179.06	136	-67	522

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
22CLM-194	588016.8	2711354.02	2156.77	190	-55	399
22CLM-195	588156.5	2711254.53	2151.73	197	-59	342.9

Source: Kirkham, 2022

Table 10-3: CLM West and CLM East Drill Hole Summary

DDH Name	Easting	Northing	Elevation	Azimuth	Dip	Depth
18CLME-001	608340	2707324	2100	220	-50	354
18CLMW-001	578783	2707912	2214	245	-45	384
18CLMW-002	579030	2706958	2223	280	-45	350
18CLMW-003	582855	2699670	2011	275	-45	329.5
18CLMW-004	582855	2699670	1928	235	-55	300
18CLMW-005	581250	2700925	2000	90	-45	259
18CLMW-006	581870	2702146	2000	45	-45	250
18CLMW-007	581375	2708850	2165	90	-50	507
18CLMW-008	582400	2708084	2096	50	-50	354
18CLMW-009	577852	2707451	2230	55	-50	438
21CLME-002	608340	2707324	2100	220	-70	523.4
21CLMW-010	584160	2706247	2100	45	-55	408.7
21CLMW-010A	584160	2706247	2100	45	-55	185.4

Source: Kirkham, 2022

Table 10-4: Trench Summary

Trench	Easting	Northing	Elevation	Azimuth	Dip	Depth
T-1	588664.23	2710838.38	2099.1	17.4	-0.8	35.9
T-2	588412	2710873	2147.9	67.3	-11.5	35.62
T-3	588423.66	2710844.15	2139.5	103.1	-16.8	39.44
T-4	588426.94	2710782.27	2128.2	278.8	9.7	56.84
T-5	588384.07	2710896.17	2162.5	46	-12.3	79.17
T-6	588300.88	2710928.8	2184	35.3	17.4	90.25
T-7	588262.57	2710964.19	2198.3	32.1	15.9	102.94

Table 10-5: Cerro Las Minitas Significant Assay Intervals

2011 Drill Highlights										
Hole No.	From m	To m	Interval m	Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
11CLM-003	419.6	436.2	16.6	UNK	55	0.0	0.8	0.3	1.5	North Skarn
inc.	428.8	430.3	1.5	UNK	72	0.0	**1.5**	0.5	1.6	
11CLM-006	424.2	427.9	3.7	2.0	184	0.0	**2.0**	0.3	**18.4**	Santo Niño
11CLM-008	168.4	179.3	10.9	5.5	268	0.1	0.0	4.5	3.8	Blind Zone
inc.	169.6	171.4	1.8	0.9	**1400**	0.3	0.0	**19.7**	**14.5**	
11CLM-011	131.6	136.6	5.0	3.6	224	0.4	0.0	4.2	5.8	Blind Zone
inc.	134.5	135.6	1.2	0.8	**540**	0.5	0.1	9.5	**18.7**	

2011 Drill Highlights

Hole No.	From m	To m	Interval m	Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
11CLM-011	311.0	319.2	8.2	6.4	46	0.0	0.1	2.1	2.6	El Sol Zone
inc.	316.7	319.2	2.4	1.9	75	0.0	0.1	3.6	4.2	
11CLM-016	152.4	164.1	11.7	6.5	114	0.0	0.2	3.3	4.9	Blind Zone
inc.	158.2	159.8	1.6	0.9	**390**	0.1	0.5	**11.9**	**17.1**	
11CLM-023	300.1	312.5	12.4	8.5	134	0.1	0.2	4.0	4.5	Blind Zone
inc.	310.0	311.6	1.6	1.1	**404**	0.0	0.4	**13.2**	**11.5**	
11CLM-027	0.6	25.4	24.8	9.3	124	0.0	0.1	1.9	2.1	El Sol Zone
inc.	9.0	11.8	2.8	1.1	**404**	0.0	0.0	1.4	2.5	

2012 Drill Highlights

Hole No.	From m	To m	Interval m	Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
12CLM-034	170.7	172.2	1.5	0.7	**338**	0.0	0.5	**11.1**	**15.9**	Blind Zone
12CLM-041	138.5	143.1	4.6	3.1	203	0.0	0.3	4.9	4.2	Blind Zone
inc.	141.9	143.1	1.2	0.8	**499**	0.1	0.4	**10.4**	**10.4**	
12CLM-044	57.6	83.6	26.1	17.3	67	0.0	0.1	2.8	3.3	El Sol Zone
inc.	78.3	80.7	2.5	1.6	153	0.1	0.1	6.3	7.5	
12CLM-047	162.6	167.0	4.4	3.0	186	0.0	0.2	5.6	4.6	Blind Zone
inc.	162.6	165.5	2.9	1.9	254	0.0	0.2	7.8	4.9	
12CLM-051	50.9	70.9	20.0	14.7	143	0.0	0.0	2.4	0.6	Blind Zone
12CLM-055	224.1	228.4	4.3	2.7	89	1.4	**1.8**	0.1	0.2	South Skarn
12CLM-056	12.7	18.4	5.7	4.0	**335**	0.1	0.8	**16.3**	4.5	Blind Zone
inc.	13.6	17.8	4.2	2.9	**409**	0.1	**1.0**	**20.5**	4.0	
12CLM-061	86.3	96.8	10.6	8.6	114	0.0	0.0	2.8	0.9	Blind Zone
inc.	86.3	87.5	1.3	1.0	**382**	0.0	0.2	9.9	5.1	

2013/14 Drilling Highlights

Hole No.	From m	To m	Interval m	Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
13CLM-063	228.6	230.2	1.6	1.0	160	1.0	0.1	3.3	0.4	South Skarn
13CLM-066	88.4	97.5	9.2	3.1	**401**	0.1	0.1	8.5	5.1	Blind Zone
inc.	92.9	95.0	2.1	0.7	**1190**	0.2	0.0	**21.6**	**13.0**	
and	534.6	585.2	50.6	8.9	41	0.0	0.0	0.7	5.3	El Sol Zone
inc.	573.0	585.2	12.2	2.1	45	0.0	0.0	1.7	**10.8**	
and	633.3	642.6	9.3	1.6	9	0.0	0.1	0.1	**13.0**	El Sol Zone
inc.	638.2	640.4	2.1	0.4	14	0.0	0.4	0.0	**20.6**	
13CLM-068	285.4	299.3	13.9	8.4	136	0.2	0.0	2.4	1.3	South Skarn
inc.	285.4	287.8	2.4	1.5	**546**	0.2	0.1	**10.3**	3.8	

2015 Drill Highlights

Hole No.	From m	To m	Interval m	Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
15CLM-077	712.6	714.2	1.6	0.9	**569**	0.1	0.0	3.4	1.1	Blind Zone
inc.	712.6	713.3	0.6	0.3	**1380**	0.1	0.0	7.9	2.4	
15CLM-078	77.8	85.6	7.8	3.9	37	**13.5**	0.0	2.2	1.7	La Bocona
inc.	77.8	79.7	1.9	1.0	74	**27.7**	0.0	6.4	3.5	
and	195.0	211.5	16.5	8.2	150	0.5	0.0	3.4	0.7	La Bocona
inc.	196.1	196.9	0.8	0.4	**1170**	1.1	0.0	**21.9**	1.2	
and	222.2	231.5	9.3	4.6	275	0.9	0.0	4.3	1.9	La Bocona
inc.	222.2	224.2	2.0	1.0	**808**	2.3	0.0	**12.4**	3.0	

2015 Drill Highlights										
Hole No.	From m	To m	Interval m	Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
and	255.4	259.9	4.5	2.2	**903**	0.2	0.1	**16.1**	2.2	La Bocona
inc.	256.3	258.0	1.7	0.8	**1180**	0.4	0.1	**20.5**	2.1	
and	326.7	331.7	4.3	2.2	**405**	0.2	0.0	**10.0**	1.1	La Bocona
inc.	330.9	331.7	0.8	0.4	**903**	0.8	0.1	**20.8**	1.1	
15CLM-079	395.0	396.0	1.0	UNK	41	**11.7**	0.0	0.1	0.0	South Skarn
15CLM-081	616.1	632.9	16.8	8.7	136	0.0	0.5	0.3	4.5	Blind Zone
inc.	616.1	625.1	9.0	4.7	167	0.0	0.7	0.4	8.2	
15CLM-082	184.3	186.9	2.6	1.3	**322**	**5.0**	0.2	5.7	7.7	La Bocona
15CLM-083	484.3	490.1	5.8	3.1	275	0.2	0.5	1.1	3.4	La Bocona
inc.	487.4	488.3	0.9	0.5	**1050**	1.0	**1.2**	4.3	7.7	
15CLM-084	800.2	808.5	8.4	5.0	112	0.2	0.0	0.5	0.4	Blind Zone
11CLM-010 (extension)	503.5	509.3	5.8	3.5	130	0.4	**1.1**	1.3	9.3	La Bocona
	503.5	506.5	3.0	1.8	196	0.1	**1.1**	2.3	**15.1**	
15CLM-023A	284.7	299.5	14.8	10.1	231	0.3	0.2	4.5	3.7	Blind Zone
inc.	284.7	286.0	1.3	0.9	**891**	0.6	0.1	**11.3**	5.7	
15CLM-023A	677.0	685.4	8.4	5.7	143	0.1	0.3	1.2	6.2	Santo Niño
inc.	681.9	685.4	3.5	2.4	263	0.1	0.3	2.4	**12.2**	
11CLM-025 (extension)	488.9	499.7	10.8	6.9	181.7	1	0.5	**1.6**	6.4	El Sol Zone
inc.	493.55	496.0	2.4	1.5	534.0	0	1.8	**4.6**	**14.2**	

2016-18 Drill Highlights										
Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
16CLM-088	683.7	714.0	30.4	29.5	107	0.1	0.4	1.1	2.3	Skarn Front
inc.	683.7	691.0	7.3	7.1	190	0.1	0.4	3.4	5.5	
16CLM-091	662.8	677.9	15.1	14.8	39	0.0	0.05	0.1	**10.2**	Skarn Front
inc.	667.5	672.3	4.8	4.7	39	0.0	0.12	0.1	**23.2**	
17CLM-094	788.8	798.6	9.8	6.8	65	0.0	0.02	0.3	5.0	Skarn Front
inc.	794.2	798.6	4.4	3.1	92	0.0	0.02	0.4	7.1	
17CLM-095	691.3	700.3	9.0	8.0	**602**	0.1	0.05	7.1	**17.9**	Skarn Front
	693.0	700.3	7.3	6.5	**737**	0.0	0.06	8.6	**21.8**	
17CLM-098	1086.5	1101.0	14.5	8.7	288	0.0	**2.03**	0.8	1.2	Skarn Front
	1092.6	1096.7	4.1	2.5	**686**	0.1	**3.65**	1.0	1.7	
17CLM-101	229.9	247.4	17.6	12.5	154	2.0	0.21	3.2	3.9	Las Victorias
inc.	235.4	241.0	5.7	4.0	261	**4.0**	0.2	6.0	6.9	
and	452.5	462.6	10.1	9.2	220	0.0	0.3	3.6	5.4	Skarn Front
inc.	456.9	459.2	2.3	2.1	**373**	0.1	0.88	7.4	**10.3**	
17CLM-103	859.3	864.4	5.2	3.3	27	0.0	0.01	0.4	2.6	Skarn Front
inc.	859.3	860.2	1.0	0.6	126	0.0	0.00	1.7	8.2	
17CLM-105	356.9	367.8	10.9	6.8	194	0.8	0.12	4.4	2.0	Las Victorias
inc.	358.2	359.1	0.9	0.6	**1100**	1.5	0.4	**23.2**	5.9	
and	507.6	520.9	13.3	13.0	105	0.1	0.1	0.5	0.4	Skarn Front
inc.	510.6	513.2	2.5	2.5	**318**	0.1	0.41	1.4	0.8	
17CLM-106	889.3	891.7	2.5	2.1	88	0.0	0.04	0.2	**10.3**	Skarn Front
and	921.3	930.4	9.1	7.7	22	0.0	0.0	0.0	3.6	
inc.	926.2	930.4	4.2	3.5	30	0.0	0.0	0.1	5.8	
and	941.6	943.4	1.8	1.5	30	0.1	0.11	0.0	**20.7**	
18CLM-107	353.8	354.6	0.9	0.6	79	0.4	**1.2**	0.1	**14.1**	Skarn Front
18CLM-110	450.0	468.9	18.9	15.1	260	0.0	0.18	0.9	0.1	Skarn Front
inc.	450.0	455.5	5.5	4.4	**598**	0.1	0.40	2.1	0.1	

2016-18 Drill Highlights

Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	Zone
18CLM-111	256.9	257.5	0.6	0.4	**506**	0.2	0.1	**14.1**	**15.1**	El Sol Zone
18CLM-112	387.5	390.9	3.4	2.8	191	0.0	0.86	3.7	9.4	Skarn Front
inc.	387.5	388.7	1.1	1.0	260	0.0	0.81	5.6	**16.4**	
18CLM-113	398.5	399.5	1.0	0.8	154	0.0	0.23	7.3	9.2	El Sol Zone
and	643.5	645.9	2.4	1.7	139	0.0	0.39	0.4	4.1	Skarn Front
18CLM-115	649.6	652.3	2.6	2.0	**409**	0.6	0.9	0.8	8.4	Skarn Front
inc.	649.6	650.2	0.6	0.5	**477**	2.2	**3.7**	0.6	**32.3**	
and	664.2	674.1	10.0	7.5	55	0.4	0.3	0.1	1.0	
inc.	671.2	672.6	1.5	1.1	140	0.0	**1.1**	0.1	5.3	
and	683.2	684.2	1.0	0.8	**640**	0.0	**1.03**	**16.7**	**22.4**	
18CLM-116	528.3	529.3	1.0	0.9	195	0.0	0.1	1.6	8.7	Skarn Front
18CLM-117	461.7	463.9	2.3	1.2	202	1.6	0.01	3.8	1.8	Las Victorias
inc.	462.7	463.9	1.2	0.7	**333**	2.7	0.02	6.6	3.2	

2018 CLM West Drill Highlights

Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	As g/t	Sb g/t	Au g/t
18CLMW-007	126.0	129.0	3.0	UNK	**168.0**	31	-	-
and	164.2	182.0	17.9	UNK	0.4	**144**	49	-
and	333.7	366.0	32.3	UNK	-	**1073**	**771**	-
inc.	351.0	354.0	3.0	UNK	4.9	**1145**	**676**	-
18CLMW-008	333.0	354 (EOH)	21.0	UNK	0.8	**136**	7	-
18CLMW-009	341.0	438 (EOH)	97.0	UNK	-	**205**	50	0.014
inc.	345.7	351.3	5.6	UNK	2.1	**629**	68	**0.063**

2020 Drill Highlights

Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	
20CLM-118	170.1	177.0	6.9	4.0	109	0.1	0.0	1.8	2.1	South Skarn
inc.	174.2	175.4	1.2	0.9	**412**	0.1	0.1	7.8	9.2	
20CLM-119	226.1	235.1	9.0	6.7	**625**	0.1	0.03	**11.8**	7.5	South Skarn
inc.	226.1	228.4	2.3	1.7	**1338**	0.2	0.04	**25.9**	**17.6**	
and inc.	232.0	233.3	1.3	0.9	**1480**	0.1	0.04	**26.5**	**16.8**	
20CLM-120	429.0	432.6	3.7	2.7	**511**	0.1	0.13	5.0	3.7	South Skarn
inc.	431.8	432.6	0.9	0.6	**902**	0.1	0.16	7.8	8.4	
and	450.8	452.9	2.1	1.6	182	0.2	0.21	4.4	4.1	
20CLM-121	678.6	679.1	0.5	0.4	155	1.8	**2.28**	0.1	**22.8**	Skarn Front
20CLM-122	435.0	442.8	7.8	5.8	66	0.0	0.02	0.4	0.2	South Skarn
inc.	442.1	442.8	0.6	0.5	237	0.1	0.02	0.9	0.2	
20CLM-124	397.2	402.1	5.0	3.3	**304**	0.1	0.18	4.8	1.9	South Skarn
inc.	400.1	401.0	0.8	0.6	**607**	0.2	0.49	**11.0**	3.4	
and	475.0	490.6	15.6	10.4	172	0.1	0.15	3.8	3.7	South Skarn
inc.	475.0	483.7	8.7	5.8	286	0.1	0.27	6.4	5.8	
inc.	475.0	475.9	0.9	0.6	**975**	0.1	**1.3**	**21.2**	**18.5**	
and	498.0	499.9	1.9	1.2	**303**	0.0	0.0	7.1	5.8	South Skarn
inc.	499.0	499.9	0.9	0.6	**544**	0.0	0.02	**13.1**	9.1	
20CLM-125	23.8	80.6	56.8	30.9	24	0.9	0.02	0.6	0.4	Oxide Gold/Silver
	31.4	34.1	2.8	1.5	72	**5.1**	0.08	1.0	0.5	

2020 Drill Highlights

Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	
and	216.8	267.4	50.6	33.2	224	0.3	0.03	3.6	1.8	Bocona
inc.	221.8	227.8	6.1	4.0	**421**	0.5	0.01	5.5	1.9	
and inc.	237.8	247.1	9.3	6.1	**344**	0.6	0.04	5.7	3.9	
and	326.7	328.2	1.4	1.0	**1070**	0.1	0.12	**23.3**	3.2	Bocona
20CLM-126	559.2	565.8	6.6	4.4	95	0.1	0.06	0.7	1.2	South Skarn
inc.	564.8	565.8	1.0	0.7	**398**	0.2	0.24	2.7	4.0	
20CLM-127	44.7	56.1	11.4	7.0	24	0.9	0.01	0.5	0.7	Oxide Gold/Silver
and	132.5	175.7	43.2	26.5	26	0.4	0.0	0.5	0.4	Oxide Gold/Silver
inc.	132.5	134.6	2.1	1.3	131	2.6	0.2	4.3	3.6	
and	214.2	224.2	10.0	6.1	162	0.6	0.01	3.2	1.3	Bocona
20CLM-128	254.2	255.1	0.9	0.6	**460**	0.2	0.24	9.4	**12.6**	Bocona
and	265.8	267.0	1.3	0.8	**423**	0.2	0.2	7.5	2.9	Bocona
and	284.9	291.3	6.4	4.3	146	0.2	0.0	2.9	1.6	Bocona
inc.	290.5	291.3	0.8	0.5	**809**	0.4	0.11	**17.1**	9.1	
20CLM-129	244.3	265.2	20.9	9.0	212	0.6	0.06	3.7	3.3	Bocona
inc.	248.3	255.7	7.4	3.2	287	1.6	0.09	4.6	4.8	
20CLM-130	207.8	209.3	1.6	1.0	**327**	0.0	0.03	5.6	**11.5**	South Skarn HW
and	563.1	571.7	8.6	5.5	58	0.0	0.09	0.1	2.3	South Skarn
inc.	563.7	564.1	0.5	0.3	89	0.1	0.16	0.1	9.0	
20CLM-131	299.9	315.0	15.1	8.0	**1072**	0.6	0.39	**18.8**	7.5	Bocona
inc.	303.4	307.6	4.3	2.3	**1084**	1.6	0.5	**20.2**	**12.9**	
and inc.	310.7	311.8	1.1	0.6	**3180**	0.3	0.3	**58.8**	2.3	
and	319.3	335.4	16.1	8.5	121	0.1	0.1	2.5	2.5	Bocona
inc.	330.7	333.7	3.0	1.6	**413**	0.2	0.4	8.7	9.3	
and	347.1	351.4	4.3	2.3	36	0.2	**1.47**	0.1	0.1	Bocona
20CLM-132	238.4	241.6	3.2	2.0	20	0.0	0.1	0.0	6.5	Bocona
20CLM-133	228.0	229.3	1.3	0.8	**373**	0.5	0.04	3.9	3.6	South Skarn
and	232.4	233.2	0.8	0.5	281	0.1	0.09	2.8	4.2	South Skarn
20CLM-134	69.5	73.6	4.1	1.8	46	1.9	0.01	3.4	2.3	Oxide Gold/Silver
inc.	72.0	73.6	1.6	0.7	85	**4.3**	0.0	7.4	5.4	
and	215.1	215.5	0.4	0.2	**1230**	0.1	0.1	**28.9**	8.5	Bocona
and	248.4	257.6	9.2	4.1	205	0.2	0.0	4.0	0.9	Bocona
inc.	251.7	252.9	1.3	0.6	**575**	0.1	0.01	9.9	2.2	

2021 Drill Highlights

Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	
21CLM-135	384.0	396.1	12.1	6.3	134	0.5	**2.3**	0.3	0.6	Bocona
inc.	385.9	388.0	2.1	1.1	**567**	2.3	**11.2**	0.6	2.0	
21CLM-136	170.3	176.3	6.0	4.2	241	1.4	0.05	7.3	2.5	Bocona
inc.	174.5	176.3	1.8	1.3	**525**	**3.5**	0.01	**15.1**	2.4	
and	291.0	296.5	5.4	3.8	217	0.3	0.06	3.3	0.7	Bocona
21CLM-137	37.1	41.5	4.4	2.5	10	1.6	0.00	0.9	0.2	Oxide Gold/Silver
inc.	37.6	38.7	1.2	0.7	9	**4.6**	0.01	0.9	0.3	
21CLM-139	50.3	53.1	2.8	1.4	31	1.1	0.01	1.2	0.7	Oxide Gold/Silver
inc.	50.3	51.6	1.3	0.7	53	2.2	0.02	2.1	0.5	

2021 Drill Highlights										
Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	
21CLM-140	329.4	338.0	8.6	7.5	261	0.1	0.02	7.0	1.7	Bocona
inc.	331.8	336.9	5.1	4.5	**324**	0.2	0.02	8.8	2.4	
21CLM-141	397.4	417.8	20.4	12.5	51	0.1	0.88	0.0	0.1	Bocona
inc.	399.5	412.4	12.9	7.9	60	0.2	**1.16**	0.0	0.1	
21CLM-143	110.4	117.5	7.1	4.0	57	2.2	0.1	2.3	0.9	Oxide Gold/Silver
and	137.5	138.0	0.5	0.3	**770**	0.2	0.1	**17.9**	**11.1**	Bocona
and	159.7	168.0	8.3	4.7	58	2.2	0.0	1.7	1.6	Bocona
inc.	162.8	165.8	2.9	1.7	108	**5.2**	0.05	3.2	3.3	
and	275.3	282.4	7.1	4.0	161	0.2	0.01	3.1	0.4	Bocona
inc.	281.9	282.4	0.5	0.3	**594**	0.0	0.01	**10.5**	1.6	
and	368.9	373.1	4.2	2.4	**335**	0.2	0.26	5.3	2.4	Bocona
inc.	371.7	373.1	1.4	0.8	**636**	0.4	0.45	**10.5**	2.8	
and	390.4	393.6	3.2	1.8	167	0.3	0.33	4.0	3.3	Bocona
inc.	391.8	392.2	0.5	0.3	**696**	1.3	**1.91**	**20.6**	**11.0**	
21CLM-144	363.0	366.5	3.6	2.9	174	0.6	0.14	4.3	5.0	Bocona
inc.	363.0	363.9	0.9	0.8	**361**	1.5	0.32	8.9	**11.7**	
21CLM-146	236.4	240.3	3.9	1.5	118	0.1	0.01	1.8	0.8	Bocona
inc.	239.8	240.3	0.5	0.2	**528**	0.6	0.00	9.3	4.5	
21CLM-147	279.4	282.3	2.9	1.7	116	0.0	0.02	2.4	2.0	Bocona
inc.	281.9	282.3	0.4	0.2	**358**	0.0	0.1	7.9	8.5	
and	424.6	438.1	13.5	7.9	74	0.1	0.1	1.2	1.8	Bocona
inc.	432.1	435.8	3.8	2.2	149	0.3	0.22	2.3	3.4	
21CLM-148	353.3	357.6	4.3	2.6	159	0.1	0.07	2.4	3.5	Bocona
inc.	353.3	353.8	0.5	0.3	**428**	0.2	0.1	6.1	1.5	
and	379.1	388.3	9.2	5.6	59	0.2	0.1	1.4	1.9	Bocona
inc.	379.1	382.0	2.9	1.7	139	0.4	0.09	3.1	3.8	
21CLM-149	344.7	346.3	1.6	1.0	**375**	0.2	0.14	7.3	0.4	Bocona
and	429.7	438.8	9.1	5.4	121	0.0	0.39	0.7	0.5	
21CLM-150	348.0	349.5	1.6	1.1	**311**	0.2	0.0	0.3	0.0	South Skarn
21CLM-151	385.0	387.2	2.1	1.8	161	0.1	0.0	4.9	3.0	Bocona
inc.	386.7	387.2	0.5	0.4	**422**	0.4	0.1	**13.2**	9.1	
and	420.5	449.3	28.8	24.1	17	0.0	0.3	0.0	0.1	Bocona
inc.	424.7	426.9	2.2	1.8	69	0.1	**1.85**	0.0	0.2	
21CLM-152	212.5	214.4	1.9	1.1	71	0.1	0.12	1.2	2.4	South Skarn
inc.	212.5	213.1	0.6	0.3	172	0.1	0.19	2.8	5.1	
21CLM-153	311.8	313.4	1.6	0.9	**333**	0.2	0.0	0.1	0.2	Bocona
21CLM-154	133.3	138.3	5.0	3.3	57	0.4	0.0	4.2	1.1	South Skarn
inc.	134.5	137.2	2.7	1.8	61	0.4	0.0	6.9	1.4	
and	400.7	403.6	2.9	2.5	106	0.2	0.0	2.8	1.3	South Skarn
and	413.6	415.8	2.3	1.9	159	0.1	0.0	1.2	1.0	South Skarn
inc.	413.6	414.6	1.0	0.9	289	0.1	0.07	1.8	0.7	
21CLM-155	319.3	320.7	1.4	1.1	149	**8.8**	0.0	1.5	1.1	South Skarn
and	345.1	363.2	18.1	14.0	162	0.2	0.0	1.4	0.5	South Skarn
inc.	362.7	363.2	0.6	0.4	**1150**	0.1	0.3	6.0	2.7	
and	485.4	488.2	2.8	2.3	118	0.0	0.2	1.0	1.2	South Skarn
inc.	485.4	486.3	0.9	0.7	231	0.1	0.52	1.3	2.5	
21CLM-156	168.9	170.9	1.9	1.4	37	0.0	0.19	1.2	6.8	Bocona
and	177.0	185.6	8.6	6.1	32	0.1	0.05	1.1	0.8	
21CLM-157	95.6	103.6	8.0	6.3	**41**	0.1	0.0	1.7	0.7	South Skarn
21CLM-158	102.0	102.8	0.8	0.5	**452**	0.5	0.1	2.8	0.6	Bocona
21CLM-159	174.7	176.7	2.0	1.4	184	0.3	0.1	3.3	2.7	South Skarn
and	181.2	186.2	5.0	3.6	93	0.1	0.0	2.0	1.6	South Skarn

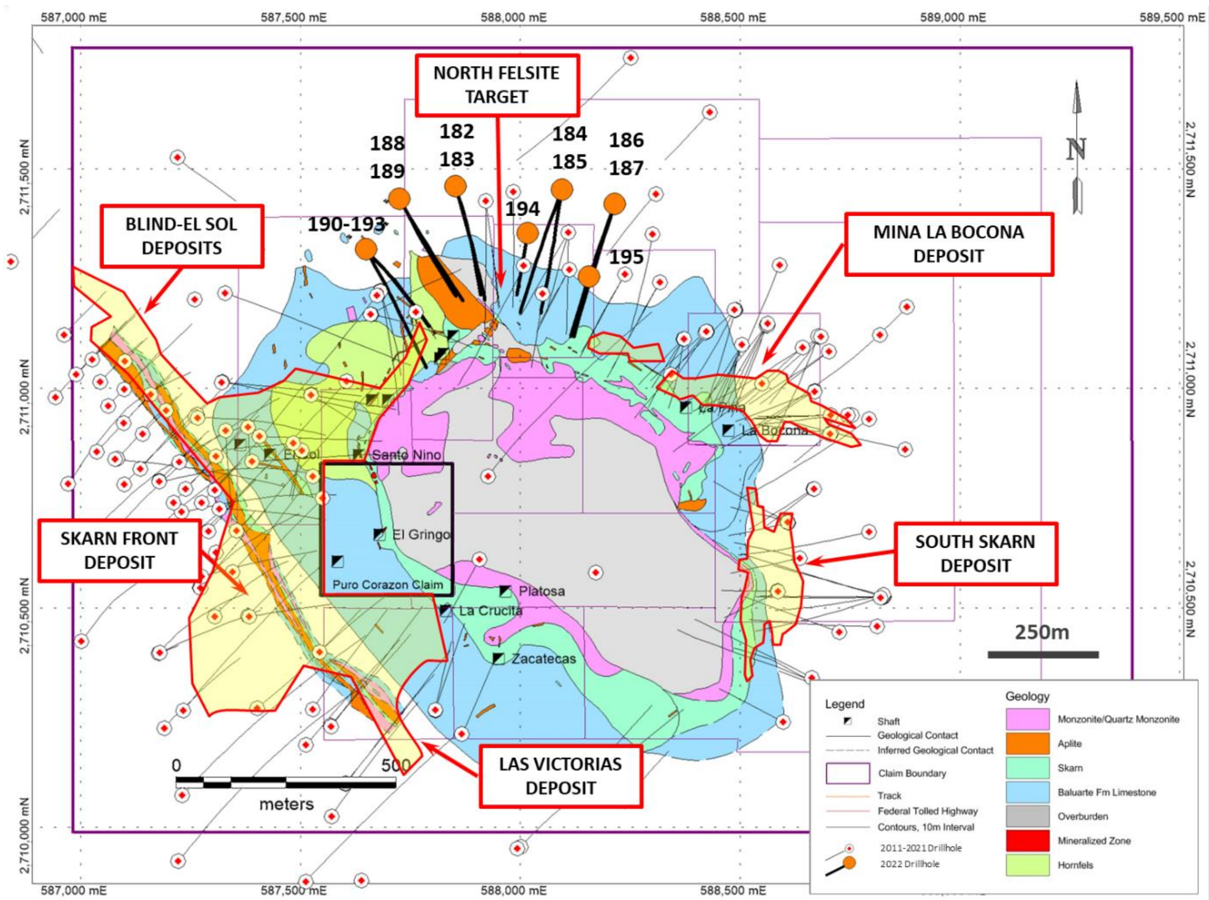
2021 Drill Highlights										
Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	
and	190.0	192.0	2.0	1.4	**719**	0.0	0.0	**14.2**	**16.0**	South Skarn
inc.	190.0	191.5	1.5	1.1	**946**	0.0	0.0	**18.7**	**21.1**	
and	195.2	199.2	4.0	2.8	97	0.2	0.0	1.6	2.7	South Skarn
and	205.4	208.2	2.8	2.0	144	0.1	0.0	2.2	1.2	South Skarn
inc.	207.7	208.2	0.5	0.4	**541**	0.0	0.09	8.8	4.0	
21CLM-160	154.1	155.2	1.1	0.7	**99**	0.1	0.0	1.2	1.2	South Skarn
21CLM-161	128.0	131.7	3.7	2.5	132	0.1	0.51	2.0	0.3	Bocona
Inc.	130.3	131.7	1.3	0.9	**312**	0.1	0.80	5.3	0.3	
and	181.7	190.0	8.3	5.6	55	0.1	0.03	1.2	0.5	Bocona
21CLM-162	154.5	156.4	1.9	1.5	**602**	0.1	**2.0**	0.7	0.3	Bocona
21CLM-164	285.1	286.5	1.3	0.9	**414**	0.1	0.15	8.2	3.6	Bocona
and	293.7	309.9	16.3	10.8	102	0.0	0.05	1.8	1.7	Bocona
Inc.	297.5	299.7	2.1	1.4	**383**	0.1	0.13	7.9	**10.2**	
21CLM-165	143.0	143.7	0.7	0.4	**149**	0.2	0.0	3.9	2.9	Bocona
21CLM-166	279.2	280.4	1.2	0.8	**96**	0.1	0.1	1.1	0.2	Bocona
21CLM-167	239.4	241.0	1.7	1.3	263	0.2	0.01	6.0	1.2	Bocona
inc.	240.3	241.0	0.7	0.6	**543**	0.4	0.02	**12.7**	1.0	
21CLM-168	326.5	330.9	4.4	3.7	69	0.0	0.11	0.7	0.2	Bocona
inc.	329.8	330.9	1.1	1.0	173	0.0	0.11	0.5	0.2	
21CLM-170	328.7	331.4	2.8	2.5	7	0.0	0.13	0.0	**10.6**	Bocona
21CLM-171	99.5	100.6	1.1	0.7	89	0.1	0.06	0.8	0.4	Zacatecas
21CLM-172	210.5	211.2	0.7	0.4	**313**	0.2	0.07	7.0	1.3	Bocona West
and	287.8	288.7	0.9	0.5	180	0.1	0.36	3.7	0.5	Bocona West
21CLM-173	249.6	250.1	0.5	0.3	87	0.4	0.06	2.2	**11.9**	Bocona West
21CLM-174	157.1	157.6	0.5	0.3	147	0.0	0.00	2.1	0.1	North Felsite
21CLM-175	224.0	226.7	2.7	1.9	**599**	0.1	0.03	**16.9**	**10.2**	North Felsite
inc.	224.0	225.2	1.2	0.8	**760**	0.1	0.03	**23.2**	**17.4**	
21CLM-176	291.3	295.1	3.8	2.6	78	1.1	0.03	1.1	0.4	North Felsite
inc.	291.3	291.6	0.4	0.2	24	**11.2**	0.01	0.3	0.1	
and	319.2	320.2	1.1	0.7	142	0.0	0.01	3.6	0.8	North Felsite
and	362.7	371.1	8.5	5.8	151	0.1	0.08	3.1	1.0	North Felsite
inc.	362.7	363.7	1.1	0.7	**487**	0.2	0.22	**12.9**	3.0	
21CLM-177	239.8	242.3	2.5	2.0	193	0.0	0.04	4.3	0.5	North Felsite
and	294.9	296.8	1.9	1.5	194	0.2	0.04	4.3	2.5	North Felsite
and	303.2	318.0	14.8	11.8	185	0.2	0.06	2.8	1.0	North Felsite
inc.	303.2	307.0	3.8	3.0	**354**	0.7	0.11	6.1	2.6	
21CLM-178	245.2	250.2	5.0	4.6	63	2.0	0.12	0.8	0.5	North Felsite
inc.	245.2	246.3	1.1	1.0	21	**5.3**	0.03	0.1	0.1	
and	338.5	340.5	2.0	1.8	160	0.1	0.16	0.4	0.1	North Felsite
21CLM-179	256.4	259.3	2.9	2.6	140	0.9	0.10	3.6	5.7	North Felsite
and	345.7	348.0	2.4	2.1	109	0.0	0.01	1.9	1.4	North Felsite
and	359.7	360.0	0.4	0.3	275	0.0	0.02	**10.7**	4.8	North Felsite
21CLM-180	400.3	400.9	0.6	0.4	**1430**	1.2	**1.24**	9.7	**11.5**	North Felsite
and	404.0	405.8	1.8	1.2	79	0.1	0.39	0.2	5.1	North Felsite
inc.	405.3	405.8	0.6	0.4	129	0.1	**1.12**	0.2	**13.8**	
21CLM-181	321.9	327.0	5.1	3.7	174	0.5	0.13	1.5	0.9	North Felsite
Inc.	324.9	325.6	0.7	0.5	**914**	2.1	0.96	7.2	4.8	
21CLM-181	459.5	463.1	3.6	2.6	146	0.3	0.45	0.4	3.0	North Felsite
and	468.0	476.0	8.0	5.7	234	0.1	0.30	1.1	2.0	North Felsite
inc.	470.3	471.4	1.1	0.8	**661**	0.2	**1.08**	2.0	6.2	
and	482.9	484.2	1.3	0.9	280	0.1	0.13	3.8	4.5	North Felsite
inc.	483.4	483.8	0.4	0.3	**852**	0.3	0.42	**11.0**	**14.8**	

2022 Drill Highlights										
Hole No.	From m	To m	Interval m	Est. Tr. Thck. m	Ag g/t	Au g/t	Cu %	Pb %	Zn %	
22CLM-182	333.8	351.1	17.3	14.1	55	0.72	0.09	0.4	0.7	North Felsite
inc.	350.7	351.1	0.4	0.3	442	1.25	0.83	2.9	4.0	
and	497.7	500.9	3.2	2.6	195	0.05	0.09	0.6	2.5	North Felsite
22CLM-183	535.4	538.4	3.0	2.2	85	0.03	0.01	1.6	3.6	North Felsite
22CLM-184	378.8	396.3	17.5	11.7	7	1.13	0.00	0.1	0.2	North Felsite
inc.	384.5	385.9	1.4	1.0	19	5.63	0.00	0.3	0.1	
and	418.3	427.3	8.9	6.0	117	0.07	0.14	1.1	1.0	North Felsite
inc.	418.3	418.8	0.5	0.3	302	0.22	0.50	1.1	10.7	
22CLM-185	472.2	474.5	2.3	1.8	1001	0.33	0.78	2.4	3.3	North Felsite
inc.	473.3	474.5	1.2	1.0	1785	0.47	1.42	3.1	5.9	
22CLM-186	410.2	411.0	0.8	0.6	107	6.98	0.04	7.6	4.9	North Felsite
and	481.0	481.6	0.6	0.5	649	0.13	0.86	5.1	4.4	North Felsite
22CLM-187	494.7	496.9	2.2	1.9	162	0.63	0.26	1.5	0.6	North Felsite
22CLM-188	441.8	457.8	16.0	12.7	128	0.03	0.04	0.8	1.1	North Felsite
inc.	455.6	457.2	1.6	1.3	675	0.03	0.26	5.5	3.4	
22CLM-189	86.2	92.9	6.7	5.4	30	0.49	0.18	0.6	1.2	North Felsite
and	469.5	470.0	0.5	0.4	1130	0.06	2.12	9.8	11.9	North Felsite
22CLM-190A	342.6	343.4	0.8	0.6	462	0.03	0.11	11.1	3.0	North Felsite
22CLM-191	453.2	460.4	7.2	4.7	123	0.02	0.81	0.4	0.6	North Felsite
inc.	455.6	456.2	0.6	0.4	848	0.01	5.61	0.7	2.6	
	474.7	478.7	4.0	2.6	77	0.02	4.44	0.2	0.9	North Felsite
inc.	474.7	476.2	1.5	1.0	165	0.05	11.45	0.1	0.4	

Source: Southern Silver, 2022

Table 10-6: El Sol Claim Significant Assay Intervals

El Sol Claim Drill Highlights								
Hole No.	From m	To m	Interval m	Ag g/t	Au g/t	Cu %	Pb %	Zn %
21SOL-001	29.7	34.3	4.7	39	0.1	0.0	1.7	1.1
21SOL-002	332.3	333.0	0.8	52	0.3	0.0	0.9	2.3
21SOL-003	**132.4**	**135.8**	**3.5**	**549**	**0.2**	**0.0**	**8.6**	**3.6**
inc.	**135.0**	**135.8**	**0.8**	**1760**	**0.9**	**0.1**	**23.6**	**1.2**
and	161.0	161.4	0.4	129	0.6	0.0	3.9	6.2
21SOL-004	299.6	300.4	0.8	15	0.1	0.0	0.7	2.1
22SOL-006	136.5	136.9	0.3	11	1.1	0.0	0.4	5.8
22SOL-006	263.1	263.8	0.6	20	0.2	0.0	3.6	0.9
22SOL-007	181.5	184.7	3.3	68	0.1	0.0	0.2	1.1



Source: Southern Silver, 2022

Figure 10-1: Cerro Las Minitas Drill Hole Locations Highlighting Late 2021 to 2022 Drill Holes

10.1 DRILLING ON THE EL SOL CLAIM

Five core holes were completed on the El Sol claim in late 2021 to test a series of targets defined by earlier surface mapping, rock and soil sampling and proximity to artisanal workings. Drill hole 21SOL-003 returned:

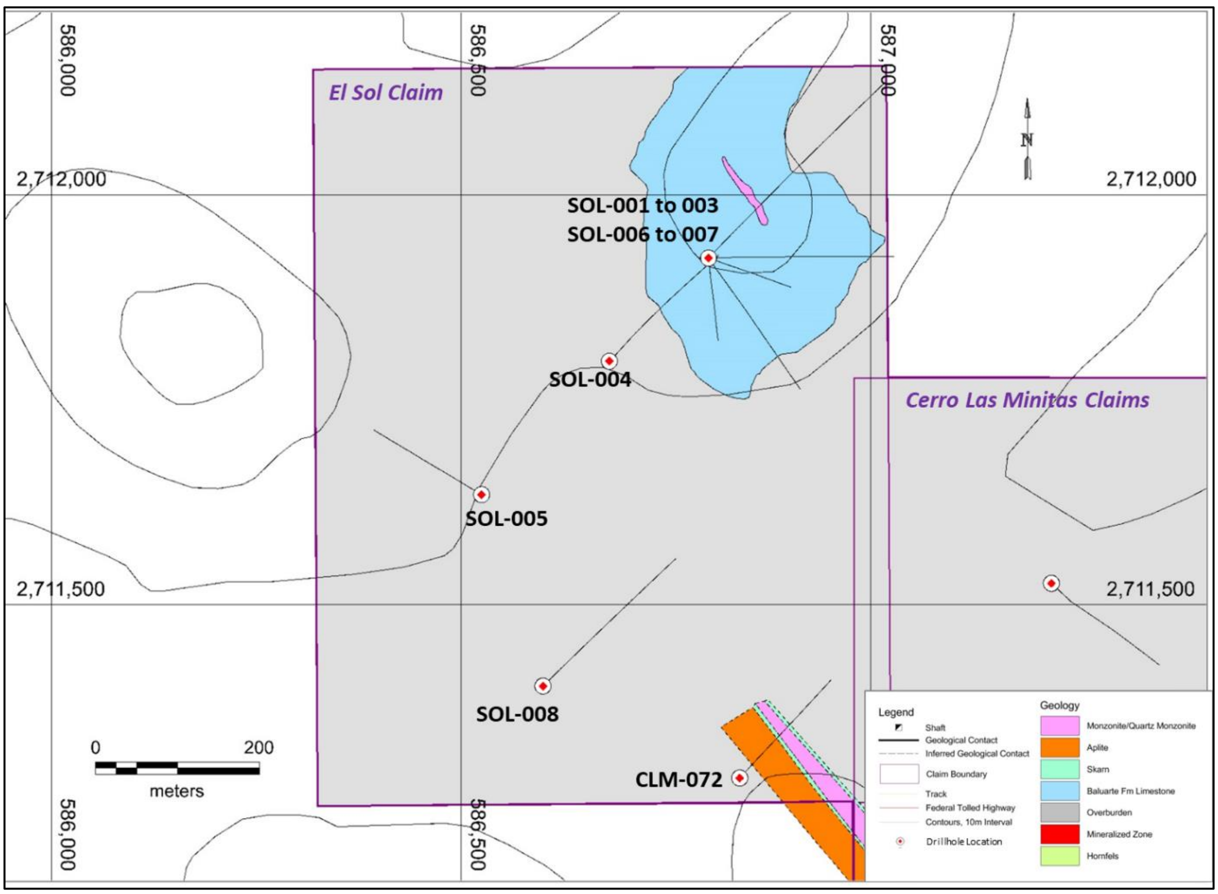
- a 0.8 metre interval grading 1,760 g/t Ag, 0.9 g/t Au, 23.6% Pb and 1.2% Zn (2,622 g/t AgEq) within a 3.5 m interval averaging 549 g/t Ag, 0.3g/t Au, 8.6% Pb and 3.6% Zn (982 g/t AgEq) from drill hole 21SOL-003.

The highlight interval intersected down-dip of historic workings located on a northeast-southwest trending structure which has been traced on surface for up to 300 m laterally before plunging under gravel cover.

Drill crews mobilized to complete an additional three core holes in January 2022. Eight holes totaling 2,920 metres have now been completed to date. Table 10-7 shows the location of these drillholes. Two holes tested down dip of 21SOL-003 and a third hole tested an extension of the Blind - El Sol zone located in the southwestern part of the claim. Table 10-6 shows highlight assays from this drilling and Figure 10-2 shows the location of the drillholes.

Table 10-7: Location of Drillholes on the El Sol Claim

DDH Name	Easting	Northing	Azimuth	Dip	Depth
21SOL-001	586802	2711923	45	-55	530.1
21SOL-002	586802	2711923	90	-55	388.1
21SOL-003	586802	2711923	145	-65	445.9
21SOL-004	586681	2711797	45	-55	321.35
21SOL-005	586525	2711634	300	-55	270.15
22SOL-006	586802	2711923	173	-70	300.4
22SOL-007	586802	2711923	111	-67	313.2
22SOL-008	586600	2711400	45	-45	351
13CLM-072	586840	2711288	45	-45	231



Source: Garth Kirkham, 2022

Figure 10-2: El Sol Geology and Drillholes

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 CHAIN OF CUSTODY

The drill core is retrieved from boreholes, boxed at the drill site by the Southern Silver geologists and moved to a secure core warehouse on the property where it is quickly logged, photographed, measured and marked for sampling. Once logging is completed, the core that has been marked for sampling is sawn in half at the warehouse by labourers employed by Southern Silver. The core is placed in sample bags, which are marked and secured by the sampler and checked by the geologist. Blanks are inserted at a rate of 1 blank for every 20 samples. The blank material is taken from a local outcrop of barren limestone. Core duplicates are taken at a rate of 1 for every 20 samples by quarter-splitting the sampled half core and inserting each quarter into a separate sample bag. Blank, marked bags are prepared and inserted into the sample stream at a rate of 1 in every 10 samples for insertion of standards in the North Vancouver laboratory. Note: In Mexico, there are export restrictions that prohibit this final standards step, so it must occur out of country; therefore, once the samples arrive at the laboratory, the standards, which are stored at the Southern Silver offices, are delivered and inserted into the sample stream.

In Mexico, samples are stored in the secure warehouse. When enough samples have been taken, the samples are driven to ALS Minerals laboratories, Lomas Bizantinas, Zacatecas, Mexico and delivered by the Southern Silver geologist. The samples are bar-coded, weighed and pulverized to 70% passing 2 mm, where a 250 g sample is split and pulverized to 85% passing 75 microns.

The prepared pulps are then shipped by ALS Minerals to its laboratory in North Vancouver, Canada. All core, trench, and grab samples collected between 2011 and 2017 were submitted to ALS Minerals for preparation and assaying. The management system of the ALS Group of Laboratories is accredited ISO 9001:2000 by QMI–Management Systems Registration. Samples were crushed and pulverised by the Zacatecas preparation facility and shipped to North Vancouver for assaying. The North Vancouver laboratory is accredited ISO/IEC 17025:2005 by the Standards Council of Canada for certain testing procedures, including those used to assay samples submitted by Southern Silver.

Standards manufactured by CDN Resource Laboratories Ltd. (CDN), Langley, BC, Canada, and prepared blanks manufactured by OREAS (Ore Research & Exploration Pty Ltd) of North Bayswater, Australia that have been securely stored at the head office of Southern Silver in Vancouver, Canada, are then inserted into sample bags, marked and secured by the Southern Silver geologist in Vancouver and sent by corporate courier to ALS Minerals in North Vancouver for insertion into the pulp sample stream.

Prepared samples are then transferred to ALS Minerals laboratory in North Vancouver where they are assayed for gold using a conventional fire assay procedure (ICP-AES) on 30 g subsamples. The samples are also submitted for a suite of 35 elements using a four-acid digestion and ICP-AES finish on 0.25 g subsamples.

11.2 QUALITY ASSURANCE AND QUALITY CONTROL

At the Cerro Las Minitas Project, inserting quality control samples takes place in the core shack before samples are shipped to the lab, with the exception of the standards for the reasons discussed in Section 11.1. These samples are routinely inserted and are used to check for accuracy, precision and cleanliness in the analytical laboratory. At the beginning of the sampling process, sample tags are pre-marked before logging with locations for standards, core duplicates, and field blanks.

The process is as follows:

- Core duplicate samples are taken every 20 samples within the sample series (5%). Core duplicate samples are used to evaluate combined field, preparation and analytical precision. The core duplicate samples are quarter-spilt cores sampled on site before the samples leave camp.

- Field blanks are non-mineralized limestone material collected from a local source, broken with a hammer, and inserted into the sample series every 20 samples (5%). Field blanks are inserted to test for any potential carry-over contamination which might occur in the crushing phase of sample preparation, as a result of poor cleaning practices.

- Standards and prepared blanks are used to test the accuracy of the assays and to monitor the consistency of the laboratory over time. Commercially available multielement assay standards were purchased from CDN. Prepared blanks were purchased from Analytical Solutions Ltd. These standards and prepared blanks are inserted into the sample sequences approximately once every 10 samples (10%). The standards and prepared blanks are stored at the Southern Silver offices in Vancouver and delivered to the laboratory and inserted into the sample stream. This is due to Mexican export restrictions and must occur out of country.

Commercial standards sourced from CDN and prepared blanks from Oreas North America Inc. (Formerly Analytical Solutions Ltd.) are used to test the accuracy of the assays and to monitor the consistency of the laboratory over time. All standards listed here are multielement standards with recommended values (between-lab mean ± 3 standard deviations) for silver, copper, gold, lead and zinc. All prepared blanks are certified values with absolute and relative standard deviations, as well as 95% confidence intervals. In the case of the certified blanks, 3 standard deviations were chosen as a guide to flag samples for QAQC analysis. Looking at the surrounding samples, a sample bleed of <1% was used as a tolerance level for reanalysis. These standards and prepared blanks were randomly inserted into the sample sequences approximately once every 10 samples. Table 11-1 show the standards and prepared blanks used for the Cerro Las Minitas Project, along with their recommended mean metal concentrations.

For the collection of surface rock samples, the same procedure is followed as above but the insertion rates are approximately 1 standard, 1 prepared blank, 1 field duplicate and 1 field blank for every 60 samples.

Table 11-1: Recommended Metal Concentrations of Standards Used at Cerro Las Minitas

STANDARD	Gold (g/t)	Silver (g/t)	Copper (%)	Lead (%)	Zinc (%)
CDN-ME-5	1.07**	205.6	0.84	2.13	0.579
CGS-26	1.64		1.58		
CDN-ME-1605	2.85	274	0.38	4.45	2.15
CDN-ME-1302	2.412	418.9	0.579	4.68	1.2
CDN-ME-17	0.452**	38.2	1.36	0.676	7.34
CDN-ME-1414	0.284	18.2	0.219	0.105	0.732
CDN-ME-1413	1.01	52.2	0.452	0.698	0.604
CDN-ME-1201	0.125**	37.6	1.572	0.465	4.99
CDN-ME-1901	7.85	373	0.637	2.56	2.89
CDN-ME-1902	5.38	349	0.781	2.2	3.66
OREAS 22e (Blank)	<0.001	<0.05	0.000797	<0.0001	0.000433
OREAS 21e (Blank)	<0.001	<0.05	0.000568	<0.0001	0.000291
OREAS 22h (Blank)	<0.001	<0.05	0.00062	0.000083	0.000269
OREAS 20a (Blank)	<0.003	0.061	0.00454	0.00219	0.0069

** Provisional Value Only
Source: Kirkham 2022

11.2.1 Analytical Laboratory Procedures

Prepared samples are then transferred to ALS Minerals laboratory in North Vancouver where they are assayed for gold using a conventional fire assay procedure (ICP-AES) on 30-gram subsamples. The samples are also submitted for a suite of 35 elements using a four-acid digestion and ICP-AES finish on 0.25-gram subsamples.

11.2.2 Evaluation of QA/QC Results

Standards, field blanks, and duplicate samples are discussed in the following subsections.

11.2.3 Standards

Failure of a standard implies that all routine samples within its sphere of influence are also considered to have failed and must be re-analyzed at the same primary laboratory. Standards are considered to have failed if the reported gold, silver, copper lead or zinc assay concentration is greater or less than 3 standard deviations from the recommended mean value for that standard.

In the case of failure of any standard, the failure is recorded, and a determination is made as to whether the failure is within the proximity of any mineralized intervals. If so, the procedure is to re-assay the block of samples within its sphere of influence. In practice, this means that all consecutively listed samples, down list from the failing standard to the next passing standard, and up list from the failing standard to the next prior passing standard, are considered to have failed, and must be re-assayed. Table 11-2 shows the standards performance listing number of failures for all metals.

Table 11-2: Standards Performance – Failures

STANDARD	#	GOLD (g/t)	%	SILVER (g/t)	%	COPPER (%)	%	LEAD (%)	%	ZINC (%)	%
CDN-ME-5	53	5	9%	3	6%	1	2%	0	0%	5	9%
CGS-26	47	0	0%	N/A	N/A	1	2%	N/A	N/A	N/A	N/A
CDN-ME-1302	86	1	1%	6	7%	11	13%	0	0%	6	7%
CDN-ME-17	176	*13*	*7%*	1	1%	1	1%	2	1%	3	2%
CDN-ME-1413	16	0	0%	2	13%	2	13%	1	6%	1	6%
CDN-ME-1414	40	2	5%	2	5%	1	3%	1	3%	4	10%
CDN-ME-1605	95	3	3%	0	0%	14	15%	0	0%	2	2%
CDN-ME-1901	82	8	10%	0	0%	8	10%	0	0%	0	0%
CDN-ME-1201	139	*14*	*10%*	1	1%	0	0%	0	0%	0	0%
CDN-ME-1902	34	*0*	*0%*	0	0%	3	9%	0	0%	0	0%
OREAS 22e (Blank)	175	5	3%	0	0%	3	2%	13	7%	6	3%
OREAS 21e (Blank)	95	3	3%	0	0%	1	1%	2	2%	4	4%
OREAS 22h (Blank)	101	9	9%	0	0%	0	0%	3	3%	2	2%
OREAS 20a (Blank)	91	19	21%	0	0%	1	1%	1	1%	3	3%

Source: Kirkham, 2022

There seems to be a relatively high failure rate which appears to be attributable to two specific standards: the CDN-ME-5 standard with a failure rate of 9% gold, 9% zinc, and 6% silver, and the CDN-1302 standard with a failure rate of 5% silver, 13% copper, 14% lead, and 9% zinc. In addition, CDN-ME-1605 has a failure rate of 15% copper only.

CDN-ME-5 and the CDN-1302 standard is no longer used at the project. In addition, the laboratory has been informed of the failures in order to address potential quality assurance and quality control problems at the lab as all identified failures are not all attributable to problems with the standards.

With the exception of the high failure rate of two standards, the QP finds the levels of sampling, security, and analytical procedures to be satisfactory particularly as CDN-ME-5 is no longer in use.

11.2.4 Preparatory Blanks

For the 2016/17 field season and beyond, additional QAQC was inserted in the form of blind prepared blanks inserted in the same way as the standards at a rate of 1 for every 20 samples (5%). The blank was sourced from Oreas North America Inc. (Formerly Analytical Solutions Ltd.) and produced by OREAS (Ore Research & Exploration Pty Ltd) of North Bayswater, Australia.

11.2.5 Field Blanks

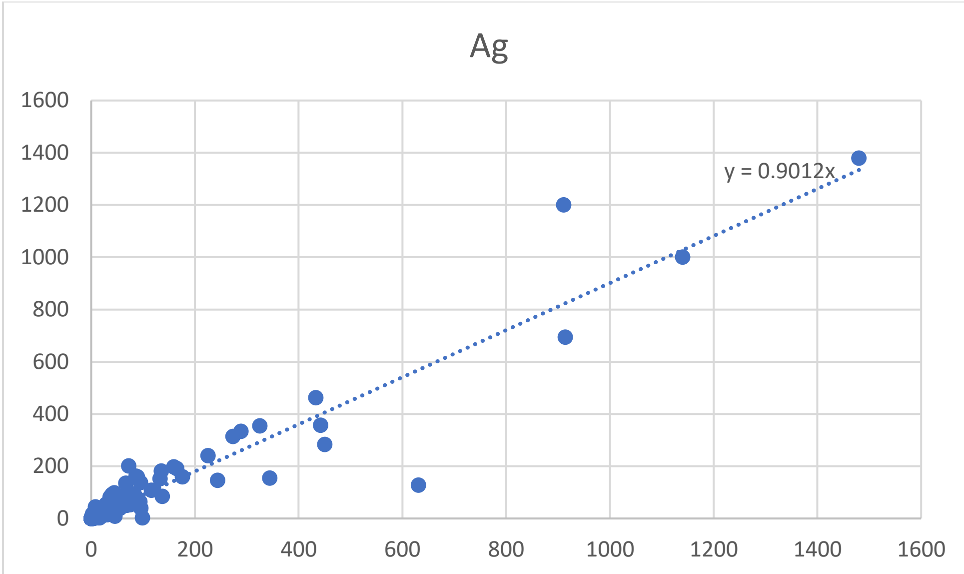
Field blanks are used to check the level of cleanliness at a laboratory, and more specifically to check for the presence of any carry-over contamination during the crushing phase of sample preparation. Proper cleaning of the coarse crushers between samples, and between sample batches, should ensure that there is no carry-over of material between samples that could produce negligible gold, silver, lead, zinc and copper results on a consistent basis. Field blanks are typically created from barren rock material, preferably of similar hardness to the target lithologies. At Cerro Las Minitas, non-mineralized rock is collected from a local source, and inserted into the sample series every 20 samples (5%).

In general, field blanks exhibit a failure rate of 0% for silver analysis, 8% for gold, between 4% for lead and 3% for copper and zinc which indicates that some carry-over contamination at the crusher stage might be occurring. An investigation as to the cause of the high gold failures is recommended. As gold is not a significant contributor to the Cerro Las Minitas resource, the issue is not deemed significant nor material at this time.

Towards the end of 2017, a procedure was introduced to request that the lab use preparation blanks in between samples with visible high-grade Cu-Pb-Zn sulphides. In 2018, there was only one copper failure. In general, current field blanks and related procedures exhibit acceptable results.

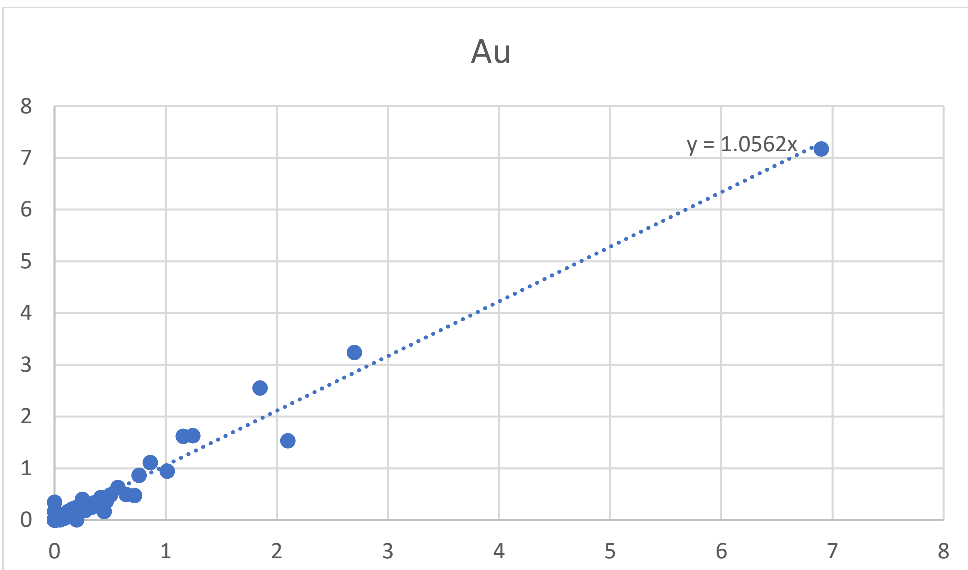
11.2.6 Duplicate Samples

Field duplicate samples are added to the assay batches. ALS Minerals laboratories prepared pulp duplicates and inserted these at a rate of one every 20 samples. Figure 11-1 through Figure 11-5 show the results of the duplicate comparison for silver, gold, copper, lead, and zinc, respectively. All metals show an excellent correlation.



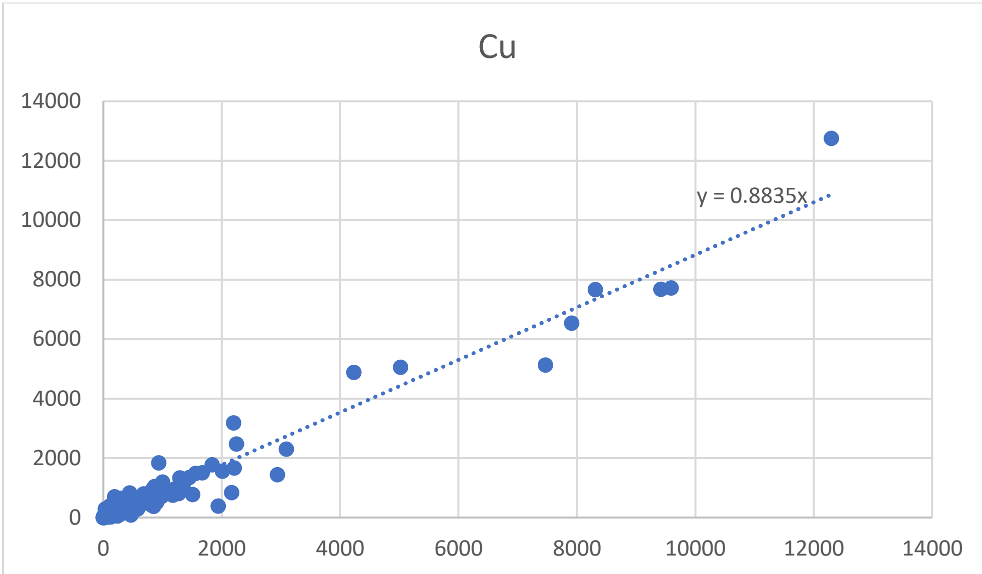
Source: Kirkham Geosystems, 2022

Figure 11-1: Field Duplicate Results – AG



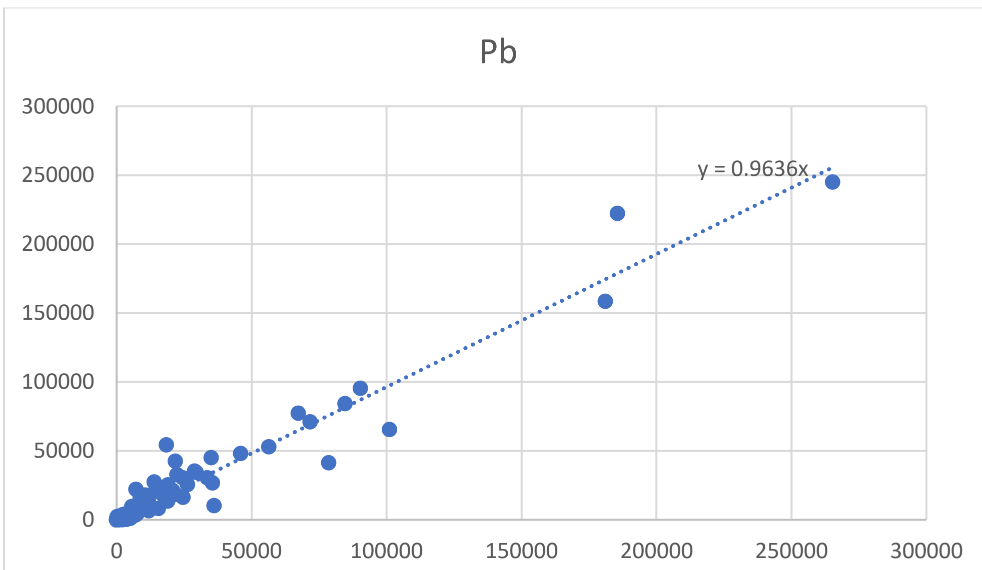
Source: Kirkham Geosystems, 2022

Figure 11-2: Field Duplicate Results – AU



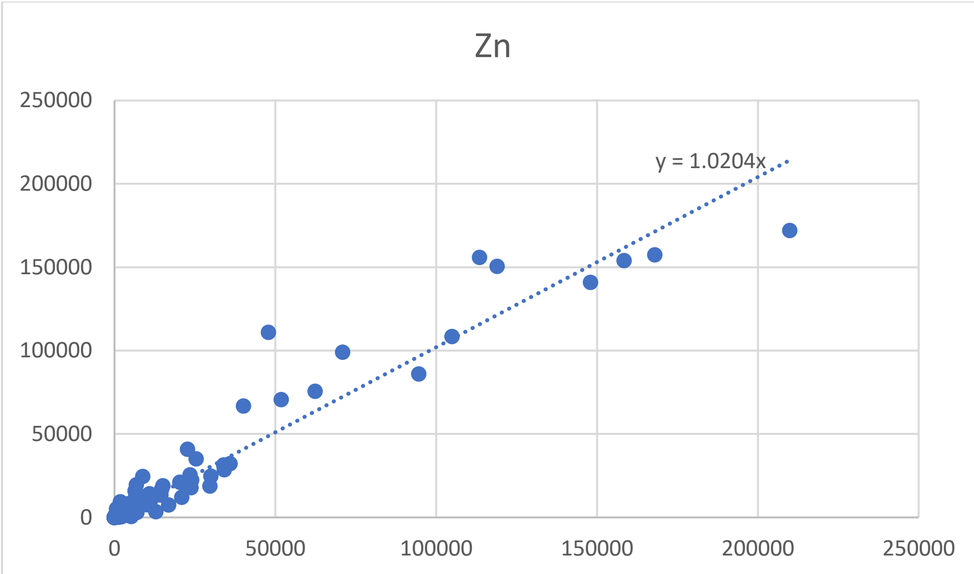
Source: Kirkham Geosystems, 2022

Figure 11-3: Field Duplicate Results – Cu



Source: Kirkham Geosystems, 2022

Figure 11-4: Field Duplicate Results – Pb



Source: Kirkham Geosystems, 2022

Figure 11-5: Field Duplicate Results – Zn

11.3 COMMENTS

With the exception of the high failure rate of two standards, both of which are no longer used, the QP finds the levels of sampling, security, and analytical procedures to be satisfactory. In the opinion of the QP, the sample preparation, security, and analytical procedures used by Southern Silver are consistent with generally accepted industry best practices and are, therefore, adequate for the purpose of mineral resource estimation.

12 DATA VERIFICATION

Garth Kirkham, P. Geo., visited the property several times between March 31 through April 2, 2015, then again on January 14 through January 19, 2019 and most recently on August 16, 2021. The site visits included an inspection of the property, offices, drill sites, outcrops, trenches, drill collars, core storage facilities, core receiving area, and tours of major centres and surrounding villages most likely to be affected by any potential mining operation. In addition, the January 2019 site visit included a tour of the Puro Corazon site and processing facilities.

The tour of the office and storage facilities showed a clean, well-organized, professional environment. On-site staff led the QP through the chain of custody and methods used at each stage of the logging and sampling process. All methods and processes are up to industry standards and reflect best practices, and no issues were identified.

A visit to the collar locations showed that the collars were well marked and labelled; therefore, they were easily identified. The previous drill holes were cased.

In 2015, the QP selected four complete drill holes at random from the database and they were laid out at the core storage area. Site staff supplied the logs and assay sheets for verification against the core and the logged intervals. The data correlated with the physical core and no issues were identified. In addition, the QP toured the complete core storage facilities, selecting and reviewing core throughout. No issues were identified, and recoveries appeared to be very good. For the 2019 site visit, all significant intersections encountered in the 2017 and 2018 drill programs were laid out, inspected and compared against drill logs and assay sheets. For the 2021 site visit, all significant intersections encountered in the 2021 drill programs were laid out, inspected, and compared against drill logs and assay sheets. In addition, the methods and procedures for specific gravity measurements were reviewed and approved.

Based on the site visit and an inspection of all aspects of the project, the QP is confident that the data and results are valid, including all methods and procedures. It is the opinion of the QP that all work, procedures, and results have adhered to best practices and industry standards required by NI 43-101. No duplicate samples were taken to verify assay results, but the QP believes that the work is being performed by a well-respected, multi-national company that employs competent professionals that adhere to industry best practices and standards.

The core is accessible, and the core is stored in a secure warehouse. The core facilities are clean and well organized for easy access and analysis by way of a core map.

The QP is confident that the data and results are valid based on the site visit and inspection of all aspects of the project, including methods and procedures used. It is the opinion of the independent QP that all work, procedures, and results have adhered to best practices and industry standards required by NI 43-101. No duplicate samples were taken during either the April 2015, January 2019 or August 2021 site visit to verify assay results and the QP was satisfied with the results from previous verification sampling. In addition, there were no limitations with respect to validating the physical data or computer-based data. The QP is of the opinion that the work was being performed by a well-respected, multi-national company that employs competent professionals that adhere to industry best practices and standards.

The data verification process did not identify any material issues with the Cerro Las Minitas sample and assay data. The QP is satisfied that the assay data is of suitable quality to be used as the basis for this resource estimate.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 METALLURGICAL TESTING OVERVIEW

Four phases of metallurgical testwork have been conducted on mineralization from the Cerro Las Minitas project on behalf of Southern Silver. The work includes:

- Initial testwork in 2015 on a high-grade sulphide composite of dump samples from shallow workings on the Blind zone. The work was performed at Dawson Metallurgical Laboratories of Midvale, Utah.
- More comprehensive testwork in 2017-18 on representative composites of the Blind-El Sol sulphide mineralization, Blind-El Sol oxide mineralisation, and Skarn Front sulphide mineralization. The work included kinetic (grindability) tests, a series of batch flotation tests, probe-work and some ICP analyses to determine levels of deleterious metals within the composites and was performed by Blue Coast Research (BCR) of Parksville, BC. Direct cyanidation testing of oxide material was conducted.
- Further testwork on Skarn Front material at BCR, completed in 2018, focused on optimizing the flotation sequence in order to upgrade the zinc concentrate by removing chalcopyrite and if possible, creating a separate copper concentrate. These tests showed significantly improved results for Skarn Front.
- Locked Cycle testing in late 2019 was conducted on an updated Skarn Front sulphide composite corresponding to the average grade of the updated Indicated Skarn Front sulphides at the time of sampling. The testwork was performed using the optimised flotation sequence developed in 2018. In addition, seven (7) variability samples of Skarn Front sulphide were tested to confirm the robustness of the optimised flowsheet in handling extremes of grade and varying base metal ratios. The testwork returned improved grades and recoveries over previous results.
- In addition to the testwork already completed, additional testing of higher gold content oxide mineralized material was conducted in 2022 to determine gold and silver recoveries by direct cyanidation.
- In 2021 a program on recently drilled La Bocona (BESS type mineralized material) confirmed the applicability of the 2018 flotation design to BESS-type mineralized material, with the same improved results over the 2017 BESS testwork. Higher grades and recoveries were obtained.
- In addition, high arsenopyrite content sulphides rejected from zinc flotation were also tested via the optimised circuit, to confirm arsenic elimination from base metal concentrates
- The viability of gold recovery from pyrite and arsenopyrite-rich float tails was tested. Preliminary results were encouraging.

13.2 2017-18 BCR TESTWORK

For the 2017-18 BCR testwork, a total of 200 kg of representative samples of the Blind–El Sol oxides and sulphides as well as the Skarn Front sulphides were collected from drill core and combined into three distinct composites to represent the three different styles of mineralization currently identified on the project. Testwork included sample characterization and batch flotation tests. A limited cyanidation test program was conducted on the Blind–El Sol oxide composite.

Sample characterization of the composites included head analyses, chemical characterization, modal mineralogy determinations (including microprobe work) and Bond Ball Work Index tests.

The dominant mineral phases in the sampled material are calcite and orthoclase, with significant quantities of garnet and quartz. Sulphide minerals represent 18.1% of the Skarn Front composite and 23.5% of the Blind-El Sol sulphide composite. Major sulphide minerals include sphalerite, pyrite and galena. Significant arsenopyrite is present in the Blind – El Sol sulphide composite but was effectively rejected during flotation.

A single Bond Ball Work test was conducted on each composite. Bond Work Mill Indices ranged from 12.3 to 12.8 kilowatt hours per tonne (kWh/t) for the two sulphide composites.

Regarding mineralogy, electron microprobe analysis provided an understanding of the base metal mineral species present in the two sulphide samples. This assisted in determining both the maximum concentrate grades achievable and elements likely to incur penalties from toll smelters. For zinc the maximum is 59.2% Zn, with Fe, Mn and Cd being in solution. The galena was very high grade (86.2% Pb) with Sb and Zn being the only significant diluents (other than Ag) Table 13-1 and Table 13-2 show the values.

Table 13-1: Blind El Sol Sulphide Mineralogy

Blind El-Sol Sulphide	S	Ca	Mn	Fe	Cu	Zn	As	Cd	Sb	Pb	Total
Pyrite	53.10	0.12	0.00	44.90	0.00	0.00	1.88	0.00	0.00	0.00	100.0
Sphalerite	34.96	0.04	0.55	6.49	0.00	57.09	0.00	0.87	0.00	0.00	100.0
Galena	13.47	0.00	0.02	0.00	0.02	0.13	0.00	0.00	0.25	86.12	100.0

Table 13-2: Skarn Front Sulphide Mineralogy

Skarn Front	Al	S	Ca	Mn	Fe	Cu	Zn	Cd	Sb	Pb	Total
Pyrite	0.18	54.15	0.19	0.00	45.48	0.00	0.00	0.00	0.00	0.00	100.0
Sphalerite	0.00	35.05	0.21	0.26	4.46	0.03	59.21	0.78	0.00	0.00	100.0
Galena	0.00	12.56	0.00	0.00	0.51	0.00	0.70	0.00	0.00	86.23	100.0

The skarn front sample used for the flotation composite contained some chalcopyrite from a specific high copper drill core intersection. This copper reported to the zinc concentrate, resulting in a lower Zn grade than desirable, and triggered the investigation into the Cu-Pb-Zn flotation program.

The Blind - El Sol oxide composite was subjected to a limited test program. Whole mineralized material cyanidation tests averaged 74% Ag recovery. Lack of sulphide minerals in the oxide material meant that flotation was ineffective and resulted in poor recoveries for lead and zinc.

Batch flotation testwork was successful in separating lead and zinc concentrates from the Blind – El Sol deposits and copper, lead and zinc concentrates from the Skarn Front deposit and provided the following recoveries:

13.3 2018 Sequential Flotation Test on Skarn Front for Copper Removal

The summary results were as follows:

- Blind–El Sol Zone:
  - Lead Concentrate (avg of 2): 82% Ag, 90% Pb and 4% Zn recovery assaying 2880 ppm Ag, 68% Pb and 2% Zn; and
  - Zinc Concentrate: 78% Zn recovery at a grade of 52% Zn.
- Skarn Front Zone:

- Copper Concentrate: 67.7% Cu and 15.1% Ag recovery assaying 27.9% Cu and 1661 g/t Ag (3 stages of cleaning);
- Lead Concentrate: 85.2% Pb and 67.3% Ag recovery assaying 60.8% Pb and 4596 g/t Ag (one stage of cleaning); and
- Zinc Concentrate: 89% Zn and 8.2% Ag recovery assaying 50.7% Zn and 111 g/t Ag (3 stages of cleaning).

13.4 2019 LOCKED CYCLE TESTING

Following the success of the sequential Cu-Pb-Zn flowsheet, a locked cycle test on a master composite was undertaken. A composite was created from 8 different selected continuous portions of drill core and blended to create a master composite conforming as closely as possible to the Resource grades at the time, based on the NSR valuation performed. A total of 219 kg were selected such that 120 kg was used for the master composite, and 99 kg for the 7 variability tests intended to test the robustness of the flowsheet The calculated head grade based on drill core is shown in Table 13-3.

Table 13-3: Calculated Master composite head grades

Ag(ppm)	Pb (%)	Zn (%)	Cu (%)
130	1.17	5.52	0.24

Table 13-4 shows the final assayed results on the master composite using both different labs and alternative analytical methods.

Table 13-4: Final Composite Head Assays

Laboratory	BCR	BCR	Actlabs	BCR	BCR	Actlabs	BCR	BCR	Actlabs	BCR	BCR	Actlabs	BCR	BCR	Actlabs	BCR	BCR
Method	AR-AA	AR-ICP	AR-ICP	AR-AA	AR-ICP	AR-ICP	AR-AA	AR-ICP	AR-ICP	AR-AA	AR-ICP	AR-ICP	AR-AA	AR-ICP	AR-ICP	ELTRA	FA-AA
Composite ID	Cu (%)	Cu (%)	Cu (%)	Pb (%)	Pb (%)	Pb (%)	Zn (%)	Zn (%)	Zn (%)	Fe (%)	Fe (%)	Fe (%)	Ag (g/t)	Ag (g/t)	Ag (g/t)	S (%)	Au (g/t)
Master Comp Head	0.233	0.227	0.216	1.206	1.136	1.170	5.65	5.58	5.36	8.34	8.15	8.74	107.5	109.8	109.0	6.406	0.044

The locked-cycle testing on a 6-cycle test produced the following average results:

- Copper concentrate after 3 stages of cleaning: 27% Cu grade at 60.2% Cu recovery and 6.5% Ag recovery at a grade of 1255 g/t.
- Lead Concentrate after 3 stages of cleaning: 65.08% Pb grade at 83.6% Pb recovery and 5504 g/t Ag at 77.3% Ag recovery.
- Zinc Concentrate after 3 stages of cleaning: 53.95% Zn grade at 94.7% Zn recovery.

These results confirmed not only improved base metal grades, but also improved deportment of silver into the lead concentrate. Concentrate values on a $/t concentrate were improved for all 3 concentrates.

Table 13-5: Projected Metallurgy from Skarn Master Composite

Product	Weight (%)	Assays					% Distribution				
		Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	S (%)	Cu	Pb	Zn	Ag	S
Cu Cleaner 3 Conc	0.6	27.00	9.64	5.07	1255	31.84	60.2	4.5	0.5	6.5	2.9
Pb Cleaner 3 Conc	1.6	2.07	65.08	5.37	5504	16.07	12.6	83.6	1.5	77.3	4.0
Zn Cleaner 3 Conc	9.7	0.45	0.67	53.95	92	33.97	17.2	5.4	94.7	8.0	52.4
Zn Cleaner 1 Tails	6.6	0.13	0.42	2.02	66.50	17.91	3.4	2.2	2.4	3.9	18.6
Zn Rougher Tails	81.6	0.02	0.06	0.06	5.87	1.71	6.5	4.2	0.9	4.3	22.1
Feed	100	0.26	1.22	5.56	111	6.32	100	100	100	100	100

The master composite testwork indicated that:

- Separate copper, lead and zinc products could be generated from Skarn Front material containing a copper head grade as low as 0.24% Cu.
- Copper concentrates grading 27% Cu could be produced with copper recovery of 60 -67%. Silver recovery to the copper concentrate is expected to be 6.5%
- Lead recovery to lead concentrate of nearly 84% could be achieved at concentrate grades of 65% Pb. Silver recovery to the lead concentrate is expected to be 77% at a grade of 5504 g/t Ag.
- Zinc recovery of almost 95% zinc can be achieved at a zinc concentrate grade of 54%.

The complete results are shown in Table 13-6.

Table 13-6: Mass balances for Locked cycle tests

Metallurgical Balance

Product	Weight		Assays					% Distribution				
	g	%	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	S (%)	Cu	Pb	Zn	Ag	S
Cycle 1 Cu Rougher Conc	28.4	0.24	10.91	3.82	8.95	626.0	17.8	10.2	0.8	0.4	1.4	0.7
Cycle 2 Cu Rougher Conc	28.6	0.24	11.65	3.80	9.19	597.0	18.9	11.0	0.8	0.4	1.3	0.7
Cycle 3 Cu Rougher Conc	29.7	0.25	11.35	4.70	9.15	648.5	18.5	11.1	1.0	0.4	1.5	0.7
Cycle 4 Cu Rougher Conc	31.4	0.26	10.87	3.98	8.76	574.0	18.4	11.2	0.9	0.4	1.4	0.8
Cycle 5 Cu Rougher Conc	31.2	0.26	10.66	4.10	8.37	578.5	17.2	10.9	0.9	0.4	1.4	0.7
Cycle 6 Cu Rougher Conc	32.3	0.27	10.98	4.65	10.33	659.5	19.4	11.7	1.0	0.5	1.6	0.8
Cycle 1 Pb Cleaner 3 Conc	26.1	0.22	1.78	71.85	3.24	5825.0	14.9	1.5	13.1	0.1	11.6	0.5
Cycle 2 Pb Cleaner 3 Conc	28.5	0.24	1.33	67.61	5.99	5635.0	16.9	1.2	13.4	0.3	12.2	0.6
Cycle 3 Pb Cleaner 3 Conc	30.3	0.25	1.31	66.20	6.50	5545.0	15.9	1.3	14.0	0.3	12.8	0.6
Cycle 4 Pb Cleaner 3 Conc	29.2	0.24	1.37	68.70	5.12	5780.0	15.6	1.3	14.0	0.2	12.8	0.6
Cycle 5 Pb Cleaner 3 Conc	29.9	0.25	1.11	67.64	5.27	5650.0	15.4	1.1	14.1	0.2	12.9	0.6
Cycle 6 Pb Cleaner 3 Conc	28.6	0.24	1.00	70.23	4.45	5785.0	15.4	0.9	14.0	0.2	12.6	0.6
Cycle 1 Zn Cleaner 3 Conc	149.0	1.25	0.38	0.38	56.74	57.0	34.2	1.9	0.4	12.8	0.6	6.8
Cycle 2 Zn Cleaner 3 Conc	190.0	1.59	0.47	0.79	54.90	107.0	34.9	2.9	1.0	15.7	1.5	8.8
Cycle 3 Zn Cleaner 3 Conc	185.1	1.55	0.42	0.64	54.05	87.5	34.4	2.6	0.8	15.1	1.2	8.5
Cycle 4 Zn Cleaner 3 Conc	188.4	1.58	0.44	0.63	54.50	88.5	34.7	2.7	0.8	15.5	1.3	8.7
Cycle 5 Zn Cleaner 3 Conc	192.7	1.61	0.49	0.70	53.91	100.5	34.3	3.1	0.9	15.7	1.5	8.8
Cycle 6 Zn Cleaner 3 Conc	183.9	1.54	0.42	0.71	55.55	87.5	34.2	2.6	0.9	15.4	1.2	8.4
Cycle 1 Zn Cleaner 1 Tails	111.4	0.93	0.19	0.50	7.71	83.5	22.8	0.7	0.4	1.3	0.7	3.4
Cycle 2 Zn Cleaner 1 Tails	95.6	0.80	0.10	0.31	0.92	49.5	17.0	0.3	0.2	0.1	0.4	2.2
Cycle 3 Zn Cleaner 1 Tails	115.6	0.97	0.14	0.46	2.35	74.5	20.7	0.5	0.4	0.4	0.7	3.2
Cycle 4 Zn Cleaner 1 Tails	130.5	1.09	0.13	0.40	1.47	64.5	18.5	0.5	0.4	0.3	0.6	3.2
Cycle 5 Zn Cleaner 1 Tails	109.9	0.92	0.15	0.44	1.67	72.5	18.9	0.6	0.3	0.3	0.6	2.8
Cycle 6 Zn Cleaner 1 Tails	115.4	0.97	0.17	0.54	3.30	84.0	20.9	0.6	0.4	0.6	0.7	3.2
Cycle 6 Pb Cleaner 3 Tail	2.3	0.02	0.66	7.64	15.33	784.5	16.9	0.0	0.1	0.1	0.1	0.1
Cycle 6 Pb Cleaner 2 Tail	6.3	0.05	0.35	3.35	12.64	340.5	13.7	0.1	0.1	0.1	0.2	0.1
Cycle 6 Pb Cleaner 1 Tail	21.2	0.18	0.24	1.51	12.39	164.5	13.4	0.2	0.2	0.4	0.3	0.4
Cycle 6 Zn Cleaner 3 Tail	15.4	0.13	0.54	1.42	30.24	211.5	33.7	0.3	0.2	0.7	0.2	0.7
Cycle 6 Zn Cleaner 2 Tail	34.3	0.29	0.38	1.07	14.40	166.5	29.0	0.4	0.3	0.7	0.4	1.3
Cycle 1 Zn Rougher Tail	1612.8	13.49	0.02	0.06	0.06	5.9	1.5	1.1	0.6	0.2	0.7	3.3
Cycle 2 Zn Rougher Tail	1636.7	13.69	0.02	0.06	0.07	6.3	1.7	1.1	0.7	0.2	0.8	3.8
Cycle 3 Zn Rougher Tail	1624.5	13.59	0.02	0.06	0.06	5.7	1.6	1.1	0.7	0.2	0.7	3.5
Cycle 4 Zn Rougher Tail	1602.5	13.41	0.02	0.06	0.06	5.4	1.6	1.1	0.7	0.1	0.7	3.3
Cycle 5 Zn Rougher Tail	1639.4	13.71	0.02	0.07	0.07	6.2	1.8	1.1	0.8	0.2	0.8	4.0
Cycle 6 Zn Rougher Tail	1637.3	13.70	0.02	0.06	0.06	6.0	1.8	1.1	0.7	0.2	0.7	3.8
Head (calc.)	11954.3	100.0	0.25	1.20	5.54	110.04	6.3	100.0	100.0	100.0	100.0	100.0
Head (direct)	12000.0	99.62	0.24	1.27	5.77	111.00	6.4					
Reconciliation, %			106.6	94.4	96.0	99.1	98.3					

Combined Products

Product	Weight		Assays					% Distribution				
	g	%	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	S (%)	Cu	Pb	Zn	Ag	S
Cu Rougher Conc 1-3	86.7	0.7	11.30	4.12	9.10	624.13	18	32.2	2.5	1.2	4.1	2.1
Cu Rougher Conc 4-6	94.9	0.8	10.84	4.25	9.17	604.61	18	33.8	2.8	1.3	4.4	2.3
Cu Rougher Conc 1-6	181.6	1.5	11.06	4.18	9.13	613.93	18	66.1	5.3	2.5	8.5	4.4
Pb Cleaner 3 Conc 1-3	85.0	0.7	1.46	68.41	5.33	5661.34	15.9	4.1	40.5	0.7	36.6	1.8
Pb Cleaner 3 Conc 4-6	87.6	0.7	1.16	68.84	4.95	5737.25	15.5	3.3	42.0	0.7	38.2	1.8
Pb Cleaner 3 Conc 1-6	172.6	1.4	1.31	68.63	5.14	5699.88	15.7	7.4	82.6	1.3	74.8	3.6
Zn Cleaner 3 Conc 1-3	524.1	4.4	0.43	0.62	55.12	85.90	34.5	7.3	2.3	43.6	3.4	24.0
Zn Cleaner 3 Conc 4-6	565.0	4.7	0.45	0.68	54.64	92.27	34.4	8.4	2.7	46.6	4.0	25.8
Zn Cleaner 3 Conc 1-6	1089.1	9.1	0.44	0.65	54.87	89.20	34.5	15.7	5.0	90.2	7.4	49.9
Zn Cleaner 1 Tails 1-3	322.5	2.7	0.14	0.43	3.78	70.20	20.3	1.5	1.0	1.8	1.7	8.7
Zn Cleaner 1 Tails 4-6	355.7	3.0	0.15	0.46	2.12	73.30	19.4	1.7	1.1	1.1	2.0	9.2
Zn Cleaner 1 Tails 1-6	678.2	5.7	0.15	0.45	2.91	71.82	19.8	3.3	2.1	3.0	3.7	17.9
Zn Rougher Tail 1-3	4874.0	40.8	0.02	0.06	0.06	5.97	1.63	3.3	2.0	0.5	2.2	10.6
Zn Rougher Tail 4-6	4879.2	40.8	0.02	0.06	0.06	5.87	1.7	3.3	2.2	0.5	2.2	11.1
Zn Rougher Tail 1-6	9753.2	81.6	0.02	0.06	0.06	5.92	1.7	6.5	4.2	0.9	4.4	21.7

13.5 VARIABILITY TESTING

As mentioned in the previous paragraph, variability testing on selected samples showing extremes in terms of Pb/Zn ratio and total sulphide content, varying from very low grade to massive sulphide intersections were tested. The description of the samples and their grades are shown in Table 13-7.

Table 13-7: Variability Samples – Head Grades

Composite	Description	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	S (%)
VAR-1	Hi Zn/ Pb	0.235	0.103	12.32	50.4	7.53
VAR-2	Hi Pb/ Zn	0.139	0.777	0.074	235.8	4.24
VAR-3	High Grade	0.927	9.160	23.00	728.3	18.10
VAR-4	Low Grade	0.093	0.384	0.512	28.8	1.78
VAR-5	Medium Grade	0.488	2.979	6.02	177.5	10.36
VAR-6	Below Ave Grade	0.378	0.373	1.39	73.5	8.50
VAR-7	Below Ave 2	0.131	0.679	2.61	68.3	2.25

Figure 13-1 shows both the total sulphide mineral content as well as the individual sulphide fractions in the variability samples and the master composite.

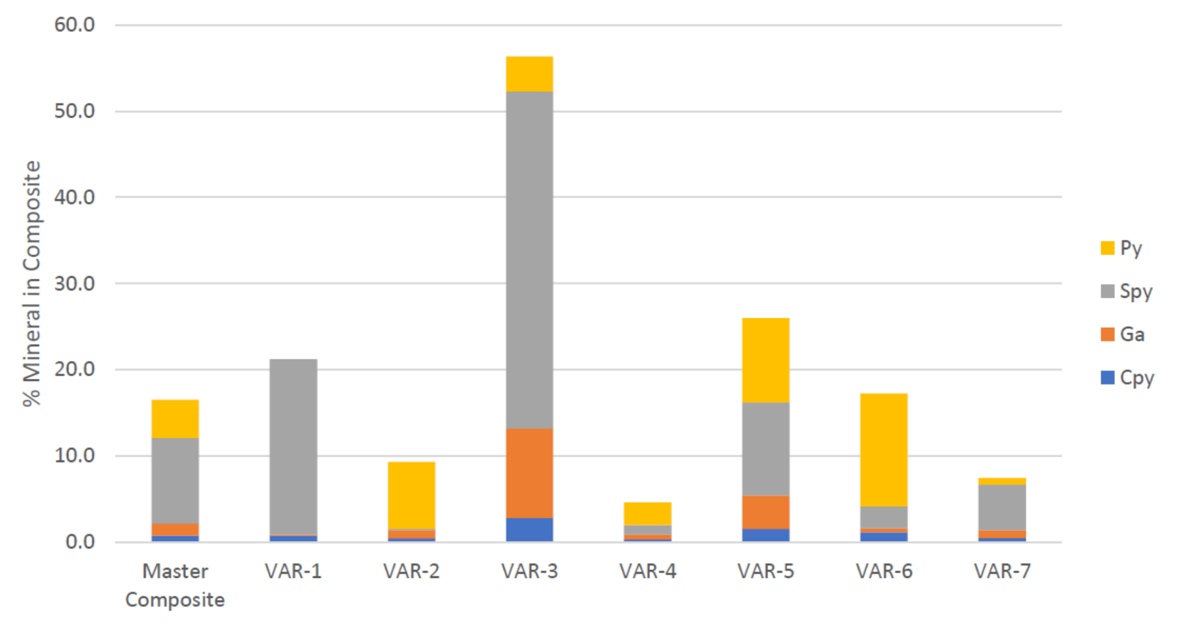


Figure 1: Estimated Sulphide Mineral Distribution in CLM Variability Composites

Figure 13-1: Sulphides in Variability samples

Some highlights of the variability testing included:

- Confirmation of the ability of the flowsheet to deal with large variations in grade: from a low grade 0.4% Pb; 0.5% Zn; 29 g/t Ag; 1.8% S to a 0.9% Cu; 9.2% Pb; 23% Zn; 18.1% S massive sulphide, the flowsheet was able to deal with extremes using only reagent dosage adjustments and adjusted flotation times to achieve results comparable to the Locked Cycle Tests.

- The ability of the flowsheet to reject pyrite: VAR 6 sulphides were almost 80% pyrite, with low galena and silver content yet high copper and zinc recoveries (74.8% and 84.4% respectively were achieved at saleable grades. (26.4% Cu and 46.2% Zn respectively)
- The ability of the lead concentrate to collect silver: VAR2 contained only 0.78% Pb, 0.14% Cu but 236 g/t Ag. The Pb concentrate contained 81% of the Ag at a grade of 17,883 g/t Ag.
- Confirmation that the proposed flowsheet is well suited to a ROM feed from multiple stopes with only minor stockpile grade control being required. Coupled with the LCT work the variability tests confirmed that the recycling of cleaner tails to the rougher circuit improves overall recoveries while dampening the effects of minor swings in feed grade and mineralization.

The following key observations were made during the Cerro Las Minitas Variability testwork:

- All composites responded favorably to the Cu-Pb-Zn flowsheet (or a modified Pb-Zn) flowsheet at the standard primary grind size of 80% passing approximately 100 µm. Liberation did not appear to be an issue.
- Metallurgical performance could be fine-tuned with reagents alone.
- All composites where zinc flotation was attempted produced zinc concentrates grading in excess of 50% zinc, with one exception. VAR-6 produced a zinc concentrate grading 46% zinc. This composite carried the lowest overall zinc head grade (1.39% Zn).
- Four composites produced lead concentrate grading less than the standard benchmark of 60% lead after 3 stages of cleaning. Of these:
    - VAR-2 graded 53% Pb, however the silver grade of 17,883 g/t is expected to make this concentrate attractive.
    - VAR-4 graded 52% Pb. This was a very low grade composite with a head grade of 0.38% Pb and 28 g/t Ag.
    - VAR-6 graded 55% Pb. This was another low grade composite with a head grade of 0.37% Pb.
    - VAR-7 graded 42% Pb. Another lower grade composite with some copper dilution to the lead concentrate. The addition of sodium cyanide to the depressant suite of this composite will likely push additional copper units into the zinc concentrate thereby allowing the lead concentrate grade to likely increase to the mid to high 50% range.
- Four of the composites had copper grades in excess of 0.20% Cu. Copper flotation was attempted on these composites. All of these composites produced copper concentrates in excess of 22% Cu after three stages of cleaning and two of those concentrates graded in excess of 25% Cu.
- The variability results confirm that the current flowsheet is robust across a wide range of head grades and metal ratios and that and that with appropriate adjustments to reagent dosages reasonable metallurgy may be expected. Some lower grade composites did not achieve the benchmark 60% lead concentrate grade; however, these composites could likely be blended with higher grade material as they are less than the resource grade of the Skarn front. A review of the proposed mine plan should be undertaken in the future to determine potential variability in the mill feed, and a follow up variability program should be undertaken which matches composite grades to that expected in the mill feed.

Table 13-8: Summary of Open Circuit Cleaner Tests on Variability Composites

Test ID	Composite	Product	Grade					Recovery (%)				
			Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	S (%)	Cu	Pb	Zn	Ag	S
F-23	VAR-1	Cu/Pb Conc	26.84	4.89	4.92	3570	31.75	52.0	26.0	0.2	35.5	2.1
		Zn Conc	0.27	0.21	59.43	99.5	34.61	20.0	44.0	93.9	38.4	88.7
F-24	VAR-2	Pb Conc	5.84	52.79	1.13	17883	20.62	51.6	79.1	21.5	81.0	5.7
F-25	VAR-3	Cu Conc	24.34	3.60	13.16	571	32.92	45.3	0.7	1.1	1.3	3.2
		Pb Conc	0.28	75.49	4.51	6410	14.01	3.1	89.8	2.2	86.1	8.2
		Zn Conc	0.70	0.65	53.40	99	33.59	25.1	2.5	84.2	4.4	64.0
F-34	VAR-4	Pb Conc	8.53	52.15	5.06	3745	20.03	62.5	86.8	6.4	81.2	8.0
		Zn Conc	2.79	1.26	51.40	205	33.49	23.4	2.4	74.9	5.1	15.3
F-31	VAR-5	Cu Conc	22.15	4.80	5.95	526	31.67	36.2	1.2	0.8	2.1	2.4
		Pb Conc	4.17	65.47	4.70	3780	17.57	35.3	86.1	3.2	78.8	7.0
		Zn Conc	0.85	1.08	52.84	113	34.42	18.0	3.6	90.6	5.9	34.4
F-33	VAR-6	Cu Conc	26.44	5.69	4.15	1631	30.67	74.8	16.9	3.0	23.1	3.8
		Pb Conc	1.40	54.72	4.12	8685	17.73	1.2	48.1	0.9	36.4	0.7
		Zn Conc	1.14	0.83	46.19	231	32.38	8.1	6.2	84.4	8.2	10.2
F-26	VAR-7	Pb Conc	6.95	42.48	14.35	4833	22.55	50.0	63.4	5.6	64.4	10.7
		Zn Conc	0.70	0.85	51.19	115	34.57	20.3	5.1	80.3	6.2	66.0

13.6 2021 SEQUENTIAL FLOWSHEET TESTING ON LA BOCONA (BESS-TYPE) MINERALIZED MATERIAL

By late 2021 an updated Resource Estimate including holes from the La Bocona and Murilla chimney areas in the (NE) portion of the exploration target had been completed, and since this fresh material was mainly of the Blind-El Sol mineralisation, the opportunity was taken to confirm whether the flowsheet used for the locked cycle tests was adequate for BESS mineralized material as well. Since BESS mineralized material contains more pyrite and arsenopyrite, this material was also important for testing whether elimination of arsenic from the zinc concentrate would improve the Zn grade, and whether the Au, thought to be associated with arsenopyrite, could be concentrated into the arsenopyrite concentrate Since the 2021 holes had intersected higher gold grades than any in the South Skarn zone, this also provided an opportunity to perform direct cyanidation tests on both oxide and sulphide material. 36 kg of quarter core from 4 holes was used for these tests. Table 13-9 shows a summary of the results as well as the head grade of the composite.

Table 13-9: 2021 Summary Flotation testing results of La Bocona "BESS" type mineralized material

	Weight	Assays							% Distribution						
	%	Au	Ag	As	Pb	Zn	Fe	Stot	Au	Ag	As	Pb	Zn	Fe	Stot
Head Grade	100.0	**0.69**	**157.13**	**5.56**	**3.47**	**2.48**	**7.72**	**6.13**	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Pb Rougher	6.4	1.5	2306.9	2.2	53.6	6.3	4.5	15.9	12.4	88.9	2.7	91.6	15.3	3.5	16.4
Pb Cleaner	**4.8**	1.14	**2901**	1.72	**64.0**	4.12	2.76	16.3	8.6	**86.5**	1.4	**88.8**	8.0	1.8	12.9
Zn Rougher	7.3	2.1	123.4	14.3	1.9	29.0	20.4	27.6	19.8	5.4	20.0	3.8	81.0	18.2	32.6
Zn Cleaner	**4.1**	0.6	169.4	2.0	2.2	52.7	9.4	33.3	4.1	4.4	1.4	2.7	87.3	5.2	22.1
AsPy rougher	6.5	2.2	138.8	10.6	2.2	29.3	15.6	27.5	11.8	6.3	13.1	4.7	84.3	12.9	28.8
AsPy cleaner	**7.9**	3.8	44.3	35.3	0.7	0.5	39.5	25.3	38.7	2.1	53.6	1.5	1.4	38.2	32.4
Tails	83.2								48.6	7.0	43.5	7.1	3.3	54.8	32.6

Table 13-10: Lead Cleaner Tests

Test	Product	Weight		Assays							% Distribution						
		g	%	Au	Ag	As	Pb	Zn	Fe	Stot	Au	Ag	As	Pb	Zn	Fe	Stot
			units	g/t	g/t	%	%	%	%	%							
F7	Pb Cleaner 3 Conc	84.23	4.23	0.9	3193.8	1.2	72.1	2.4	1.8	15.6	5.9	81.5	0.9	84.4	3.9	1.1	10.8
F8	Pb Cleaner 3 Conc	97.48	4.90	1.7	2823.7	1.6	64.0	4.8	2.6	16.3	11.9	87.4	1.4	89.4	9.3	1.8	13.3
F9	Pb Cleaner 3 Conc	96.03	4.83	1.1	2869.4	1.7	61.8	3.6	2.7	16.5	8.6	87.7	1.4	89.7	7.1	1.7	12.9
F10	Pb Cleaner 3 Conc	98.84	4.98	1.2	2895.5	1.9	62.2	4.2	3.1	16.2	9.2	88.3	1.6	90.4	8.2	1.9	13.0
F11	Pb Cleaner 3 Conc	99.3	4.99	0.9	2722.8	2.2	60.0	5.7	3.6	16.9	7.4	87.7	1.9	89.8	11.3	2.4	14.4
	Average:		**4.79**	**1.1**	**2901.0**	**1.7**	**64.0**	**4.1**	**2.8**	**16.3**	**8.6**	**86.5**	**1.4**	**88.8**	**8.0**	**1.8**	**12.9**
	Max		4.99	1.7	3193.8	2.2	72.1	5.7	3.6	16.9	11.9	88.3	1.9	90.4	11.3	2.4	14.4
	Min		4.23	0.9	2722.8	1.2	60.0	2.4	1.8	15.6	5.9	81.5	0.9	84.4	3.9	1.1	10.8
	Std Dev		0.28	0.3	157.8	0.3	4.2	1.1	0.6	0.4	2.0	2.5	0.3	2.2	2.4	0.4	1.2

Table 13-11: Zn Cleaner Tests

Test	Product	Weight		Assays							% Distribution						
		g	%	Au	Ag	As	Pb	Zn	Fe	Stot	Au	Ag	As	Pb	Zn	Fe	Stot
F7	Zn Cleaner 3 Conc	47.24	2.37	0.7	362.3	0.5	3.7	56.4	7.3	34.1	2.6	5.2	0.2	2.4	51.8	2.4	13.2
F8	Zn Cleaner 3 Conc	63.69	3.20	0.56	105.3	1.5	0.9	56.6	9.2	34.0	2.6	2.1	0.9	0.8	72.3	4.2	18.1
F11	Zn Cleaner 3 Conc	70.52	3.54	0.6	120.9	1.7	1.4	57.7	9.6	33.9	3.7	2.8	1.0	1.5	81.7	4.5	20.5
F9	Zn Cleaner 3 Conc	81.67	4.11	0.62	169.4	2.0	2.2	52.7	9.4	33.3	4.1	4.4	1.4	2.7	87.3	5.2	22.1

13.7 ARSENOPYRITE REJECTION FROM ZINC- IMPLICATIONS FOR AU RECOVERY.

From Table 13-9 it can be seen that 38% of the Au and 53.6% of the Arsenic reports to the “arsenopyrite” concentrate which constitutes 7.9% of the feed material. The final tails (83.2% of the feed) contain 48% of the Au and 43.5% of the As. The only payable level of gold recovered in the primary concentrates was 8% into the Pb concentrate at a grade of 1.14 g/t. Since the deduction for Au in Pb concentrates is 1 g/t the value of Au in base metal concentrates is negligible, and for the purposes of the PEA, no Au revenue has been included. Direct cyanidation tests on the arsenopyrite returned poor results as shown in Table 13-12, indicative of highly refractory gold.

Table 13-12: Cyanidation of Arsenopyrite Concentrate

Product		Amount g, mL	Assay mg/L, g/t		Distribution %	
			Au	Ag	Au	Ag
2	**Hr PLS**	172.2	**0.02**	**3.8**	1.3	24.4
6	**Hr PLS**	148.4	**0.03**	**4.1**	1.6	24.6
24	**Hr PLS**	141.7	**0.04**	**4.8**	2.7	29.6
Residue		**91.2**	**2.75**	**20.7**	97.3	70.4
Calculated Head			2.82	29.38		
Direct Head		93	3.3	32.7		
Accountability			86	90		

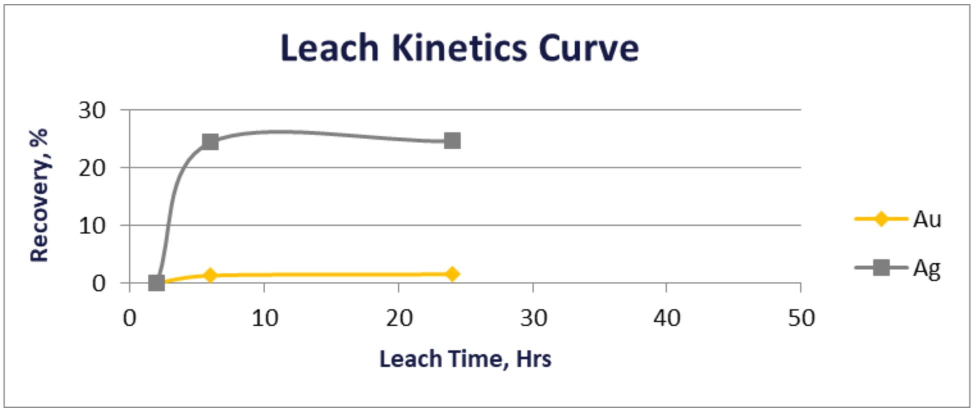


Figure 13-2: Leach Kinetics of Concentrate Cyanidation

The relatively high deportment of Au to the final tails suggests that the non refractory gold is associated with oxide material.

13.8 2021 LA BOCONA HIGH AU OXIDE MINERALIZED MATERIAL CYANIDATION TESTING

In order to test the amenability of oxide mineralized material to cyanidation, two samples of La Bocona oxide mineralized material were collected—one of relatively low, but measurable Au content and one of high Au content. These were both subjected to standard bottle roll cyanidation tests at two different grind sizes (80% passing 75 micron and 80% passing 125 micron) and for up to 48 hours of leach time. The 24-hour leach results are summarized in Table 13-13.

Table 13-13: Direct Cyanidation Results on La Bocona Oxide Mineralized Material

Sample	Head Assay									Results	g/L	%@24h	%	(micron)	g/L	%	%
Composite ID	Au (g/t)	Ag (g/t)	As (%)	Pb (%)	Zn (%)	Fe (%)	S (%)	S2- (%)	Ctot (%)	Corg (%)	Grind Size	NaCN	Au Rec	Ag Rec	Grind Size	NaCN	Au Rec	Ag Rec
High grade oxide	2.20	46.55	3.73	1.09	0.74	2.96	0.00	0.02	7.22	0.02	125.00	1.00	78.70	39.66	75.00	1.00	80.07	45.39
Low grade oxide	0.78	36.07	2.94	0.97	0.67	2.93	0.53	0.52	7.64	0.09	125.00	1.00	29.92	54.82	75.00	1.00	32.10	58.93

The Au in the low-grade sample appears associated with a small amount of sulphide, as shown by the assay and is refractory. The high-grade sample returned acceptable leach extraction of 78.7% suggesting that the oxide Au is not refractory. This is encouraging from the perspective of the Au in float tails which suggest that about 48% of the gold is oxide, and 78% of that could be recovered by cyanidation.

13.9 METALLURGICAL DATA FROM BCR TESTWORK

13.9.1 Bond Work Index

The bond work indices were as follows:

- Skarn Front Sulphide Mineralisation 12.8
- Blind, El Sol Sulphide 12.3
- Skarn Oxide 14.5
- South Skarn sulphide not tested, expect similar to Blind, El Sol
- La Bocona sulphide not tested
- La Bocona oxide, Murilla not tested

13.9.2 Reagents for flotation

A conventional flowsheet and reagent scheme was utilized during the testwork. The reagent scheme consisted of:

- Lime – for pH control and pyrite depression. Primarily added during zinc flotation.
- Sodium metabisulphite ($Na_2S_2O_5$) – for galena depression during copper flotation
- Zinc Sulphate ($ZnSO_4.7H_2O$) – for zinc depression during copper and lead flotation. Added in the heptahydrate form.
- Sodium Cyanide (NaCN) – secondary zinc and pyrite depressant added during lead flotation
- A-3893 – a dialkyl thionocarbamate based collector used for selective copper flotation.
- 3418A – a dialkyl dithiophosphinate collector used for selective galena flotation.
- Copper Sulphate ($CuSO_4$) – sulphide mineral activator, used to activate sphalerite prior to zinc flotation
- Sodium Isopropyl Xanthate (SIPX) – medium length xanthate-based collector, used for zinc flotation.
- Methyl Isobutyl Carbinol (MIBC) – low persistence alcohol based frother used to maintain a stable froth.

13.9.3 Reagent Dosages and Process Conditions

Grind was set at a P_{80} of 100 microns. Slurry during grinding is 60% solids. Testwork was conducted in a 4-litre capacity float cell using 2 kg solid charges. Grinding media was stainless in order to control Eh and ensure activation of chalcopyrite which is otherwise misplaced into the zinc concentrate.

13.9.4 Flowsheet (Cu-Pb-Zn)

The flowsheet used for the sequential Cu-Pb-Zn flotation is shown in Figure 13-3.

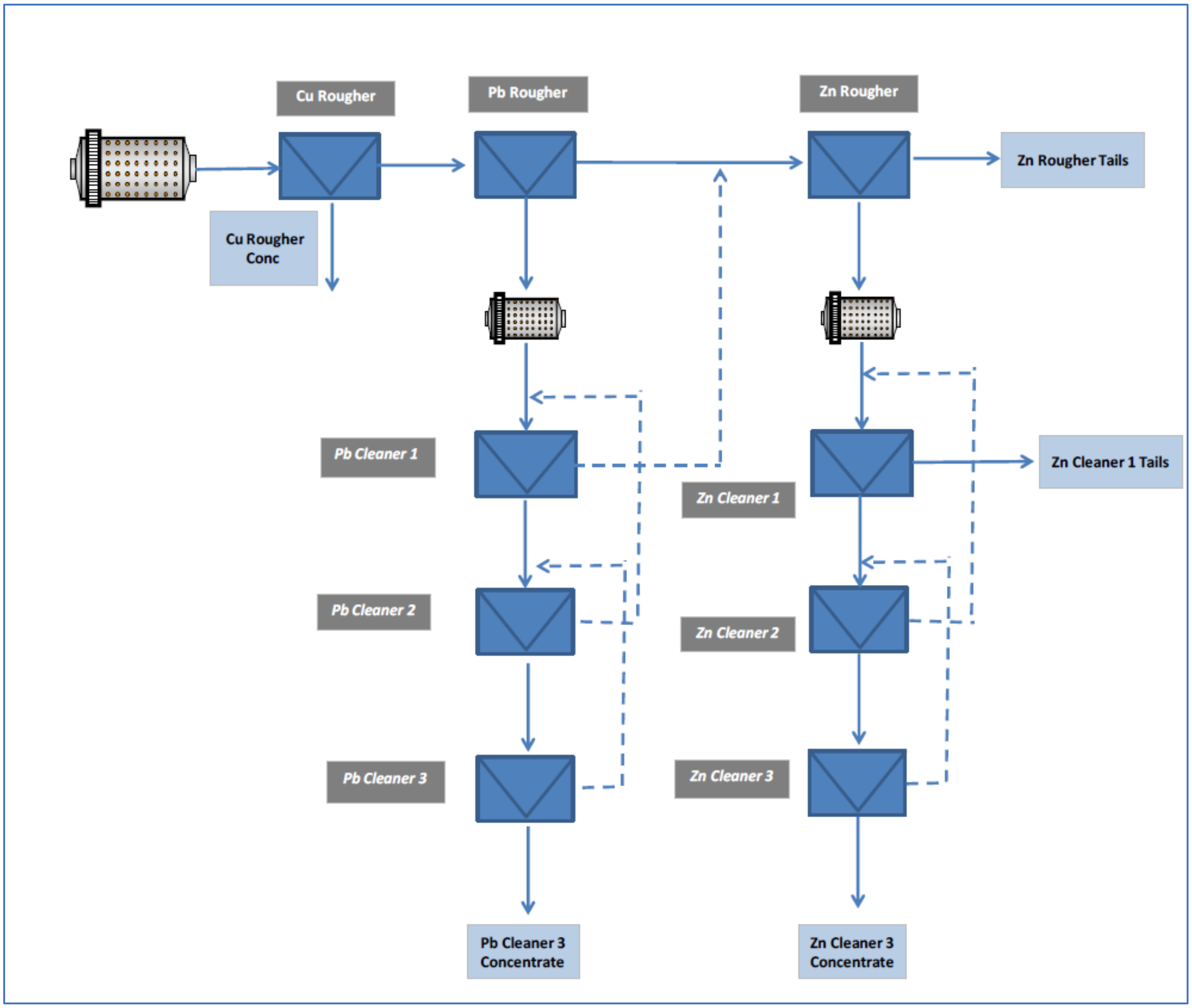


Figure 13-3: Sequential Cu-Pb-Zn Flowsheet

13.9.5 Off-site Smelting and Refining (Concentrate toll treatment)

Smelting and refining facilities for concentrate treatment do not form part of the owned infrastructure. Toll treatment by third party smelters and refiners will be utilised. Prior investigations in 2018 revealed reasonable agreement in the market on toll charges (treatment charges and refining charges "TC & RC's"). While no contractual agreements have been signed, quotes for all three concentrates have been received from Trafigura.

The NSR calculations utilize indicative terms provided by Trafigura, a metals trading company with a strong presence in Mexico, for purchasing all three concentrates on a "free at warehouse in Mexico" basis which includes rail transport costs from mine-site to warehouse. In each case the specific terms offered for the Smelter Treatment charges (TC's) and refining charges (RC's) including sea freight to overseas refinery are included. The over-riding assumption is that the moisture content of any of the concentrates will not exceed a reasonable value (8%), and which is regarded as reasonably achievable on the basis of the particle sizes used in testwork.

Grades and recoveries of composites from each of the Skarn Front and the Blind-El Sol-Las Victorias (BESS) deposits were used to determine NSR valuations of the resource model as a function of deposit type. The terms quoted are tabled below for each concentrate of interest (Table 13-14 and Table 13-15).

Table 13-14: Penalty charges for tramp elements

				CLM Grades					
Pb Concentrate				Skarn			Bess		
	Charge	unit	Above	Grade	Penalty	Deduction	Grade	Penalty	Deduction
Element	US$	% or g/t	% or g/t	% or g/t	% or g/t	$	% or g/t	% or g/t	$
Sb	1.5	0.1	0.7	0.01	0	0	4.45	3.75	56.25
As	1.5	0.1	0.5	0.06	0	0	1.03	0.53	7.95
Bi	2	0.1	0.25	1.6	1.35	27	0.2	0	0
Se	2	100	500	144	0	0	425	0	0
Cl+F	1.5	100	500	0	0	0	0	0	0
Total Penalty						27			64.2
Zn Concentrate									
	Charge	unit	Above	Grade	Penalty	Deduction	Grade	Penalty	Deduction
Element	US$	% or g/t	% or g/t	% or g/t	% or g/t	$	% or g/t	% or g/t	$
Cd	1.5	0.1	0.3	0.562	0.262	3.93	0.617	0.317	4.76
As	1.5	0.1	0.5	0.06	0	0	0.87	0.37	5.55
Co	1.5	100	500	300	0	0	54	0	0
Fe	1.5	1	8	7.86	0	0	6.98	0	0
SiO2	1.5	1	3.5	0.2	0	0	0.2	0	0
Hg	1.5	100	300	1.04	0	0	3.96	0	0
Cl+F	1.5	100	500	400	0	0	0	0	0
Se	1.5	100	500	140	0	0	40	0	0
Total Penalty						3.93			10.31

Table 13-15: Off-site transport, smelting and refining charges

Item	type	US$		% H2O	Cost /t dy conc
Concentrate Transport		/t shipped		(assumed)	US$
	Copper	96		7	102.72
	Lead	96		7	102.72
	Zinc	106		7	113.42
Smelter Treatment charges			Range	Units	
	Copper	80	40-80	US$/dry ton	
	Lead	100	80-100	US$/dry ton	
	Zinc	240	220-240	US$/dry ton	
Refining Charges					
	Copper	0.107		Usc/lb Cu	
Silver	in copper con	0.4		US$/g	
	in Pb con	0.6		US$/g	
Grade Deducibles					
	Copper	1%			
	Lead	3%			
	Zinc	8%			

13.9.6 Comparison Between AgEq and NSR

While developing the Net Smelter Return (NSR) valuations it became evident that the relationship between NSR and silver equivalent was producing occasional discrepancies in block valuation. Closer investigation revealed two contributing factors:

1. The prices used in the original Ag equivalent values for core intersections were based on 2015 prices, carried forward for consistency of reporting comparisons. The metal prices for the NSR calculation used 2019 metal prices.
2. The original Ag equivalent values included gold values, whereas the NSR calculation ignored gold values because the assay method used previously was not accurate. The relatively high Ag equivalent value for Au (given Au=71x Ag) resulted in some very large outliers in the Ag equivalent vs NSR comparison.

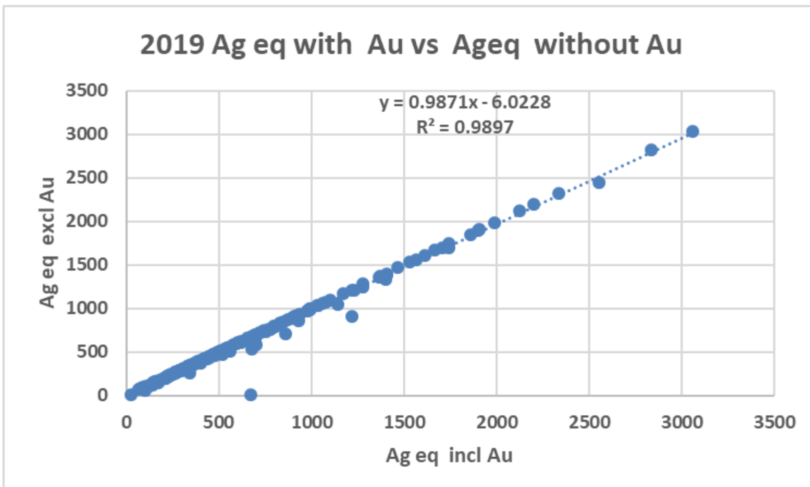


Figure 13-4: Comparison of AgEq Values with and without Au (2019 valuation)

In most cases, because the Au levels are low, there is very little difference, but in cases where the gold content is above approximately 2 ppm, the difference becomes significant. The outlier values in Figure 13-4 are examples of such situations. Note that payment terms for Au in concentrates only apply for values above 1 g/t in concentrate. For this reason, from a Resource valuation perspective the NSR method provides a slightly more realistic representation of the revenue earning potential of any given block than the AgEg method.

In principle, the Ag equivalent valuation method is an “in situ” maximum gross value of the material, free of any cost or recovery factors specific to the concentrate processing rote. For ease of comparison the calculated in-situ $/t value is included in the NSR tables.

The success of the revised flowsheet, which recovers a separate copper concentrate, and which is an excellent collector for gold does minimize the gap between the earlier NSR values and the AgEq values for blocks containing gold.

13.9.7 Comparison Between Methods (2019 Values)

The NSR valuation based on the NSR methodology outlined represents the best efforts to produce a realistic valuation of a mineral resource based on single sets of metallurgical test data using an NSR method. In spite of the limitations created by the limited metallurgical performance data, the results show a very high level of agreement with the results based on Ag equivalent. Figure 13-5 shows the correlation for Skarn Front material between the 2019 AgEq values and NSR values.

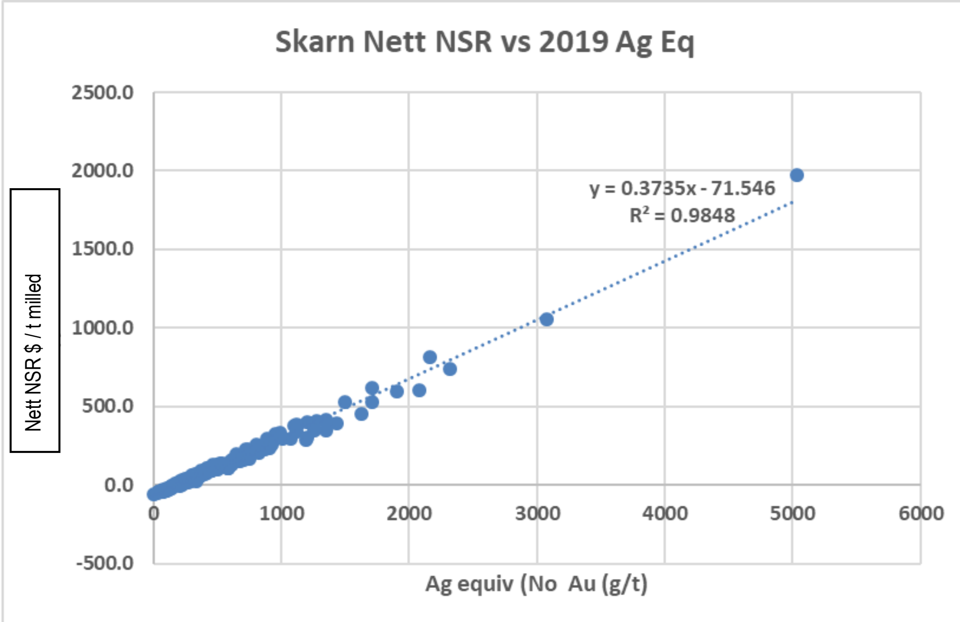


Figure 13-5: Correlation Between NSR and Ag Equivalent Valuation for Skarn Front

The validity of the NSR method is further confirmed by considering the economic cut-off grade: An NSR valuation of $0 for a block implies that mining and processing the block results in no net revenue or net cost; it breaks even. Similarly, processing rock with 0 AgEq would result in the expenditure of $58.50 in site costs (estimated on the basis of the estimated on-site costs of similar operations in the region) but zero tonnage, as no concentrate is produced and hence no additional off-site TC's and RC's are incurred, resulting in an NSR value of -$58.50.

The economic cut-off grade for Skarn material had previously been estimated at between 150 and 175 g/t AgEq. Figure 13-6 shows the correlation for Skarn front material based on 2019 values disregarding Au.

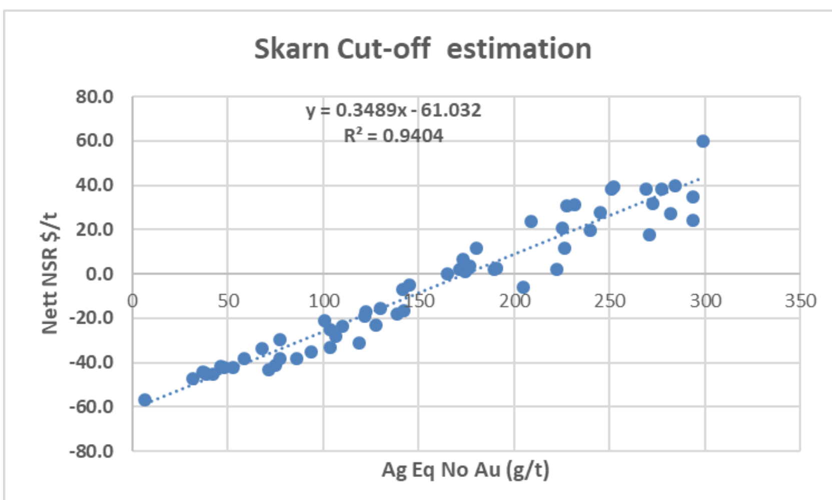


Figure 13-6: AgEq Cut-off Grade Estimation Using NSR

13.9.8 Applicable Values for NSR Block Valuations

Metallurgical testwork performed using the optimized 3-stage sequential Cu-Pb-Zn flotation sequence confirmed that when copper content is low, no saleable copper concentrate is produced, and the need to apply a copper head grade cut-off value to blocks is eliminated, greatly simplifying the NSR calculation. Further testwork on BESS material recently completed indicates that BESS-type mineralisation also benefits from the optimized circuit and results in reducing arsenic penalties previously applied to BESS Pb concentrates., The final results are presented in Table 13-10 and Table 13-11 for lead and zinc concentrates respectively.

Similarly additional cyanide leach testing of Au-bearing oxides was completed, and reagent consumption was modest as reported in Table 13-13, confirming the assumed on-site processing costs applied for oxide ore at $60/t to produce bullion.

Table 13-16 is a summary of the applicable recovery and off-site factors that influence the NSR valuation for sulphide and oxide rock types and for typical Skarn Front or Blind-El Sol type sulphides as used in the 2021 Resource Estimate.

Table 13-16: NSR Factors Used in Block Valuations for Resource Estimates (as per 2021 Resource Statement)

Item	Sulfides					Oxides
	Pb Concentrate		Zn Concentrate		Cu Conc.	Ag-Au Leach
Mineral Type	Skarn	BESS	Skarn	BESS	Skarn	
Pb Recovery	84%	90%				
Zn Recovery			95%	78%		
Cu Recovery					60%	
Ag Recovery	77%	79%	8%	12%	7%	74%
Au Recovery						70%
Payable Metals	Pb, Ag	Pb, Ag	Zn, Ag	Zn, Ag	Cu, Ag	Au, Ag
Concentrate Grade (primary base metal)	65%	64%	54%	52%	27%	
Transport, Treatment, Penalty Charges, $ dmt	230	267	358	364	183	
Base metal Concentrate Grade Deduction	3 units	3 units	8 units	8 units	1 unit	
Ag Concentrate Grade Deduction, g/t	50	50	93	93		
Ag Refining charge, $/oz	0.6	0.6			0.4	
Base metal Refining, $/lb					0.107	
Ag payable					90%	

The improved silver deportment to the more profitable Pb-concentrate achieved on BESS-type ore in the 2022 testwork necessitated a revision of the metallurgical factors influencing the revenues estimated in the PEA. Table 13-17 provides the updated grades and recoveries for BESS-type ore using the Skarn-front metallurgical framework. The plant design and financial estimates assumed an 80/20 split between Skarn front (lower As and pyrite) material and BESS (higher As and pyrite content) material over the life of mine.

Table 13-17: Metallurgical Factors Used in Plant Design and Financials

Item	Sulfides					Oxides
	Pb Concentrate		Zn Concentrate		Cu Conc.	Ag-Au Leach
Mineral Type	Skarn	BESS	Skarn	BESS	Skarn	
Pb Recovery	84%	90%				
Zn Recovery			95%	87%		
Cu Recovery					60%	
Ag Recovery	77%	87%	8%	3%	7%	74%
Au Recovery						70%
Payable Metals	Pb, Ag	Pb, Ag	Zn, Ag	Zn, Ag	Cu, Ag	Au, Ag
Concentrate Grade (primary base metal)	65%	64%	54%	52%	27%	
Transport, Treatment, Penalty Charges, $ dmt	230	267	358	364	183	
Base metal Concentrate Grade Deduction	3 units	3 units	8 units	8 units	1 unit	
Ag Concentrate Grade Deduction, g/t	50	50	93	93		
Ag Refining charge, $/oz	0.6	0.6			0.4	
Base metal Refining, $/lb					0.107	
Ag payable					90%	

14 MINERAL RESOURCE ESTIMATES

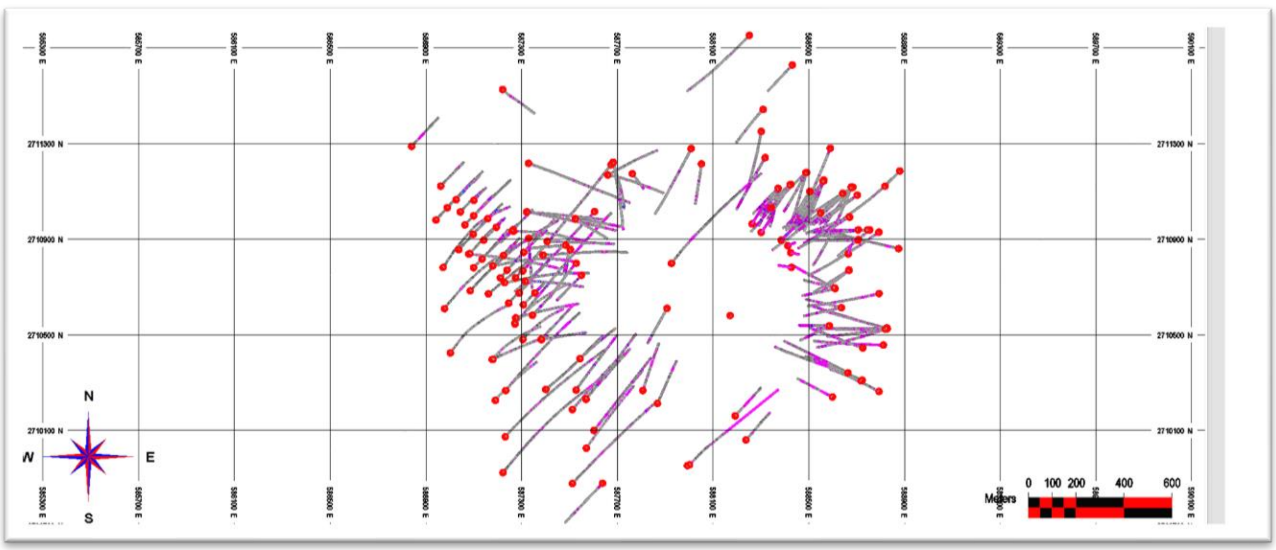
14.1 INTRODUCTION

The purpose of this report is to document the resource estimations for the Cerro Las Minitas deposit. This section describes the work undertaken by Kirkham Geosystems, including key assumptions and parameters used to prepare the mineral resource models for Blind, El Sol, Las Victorias and Skarn Zones which were reported in 2019 however are updated herein to be reporting using Net Smelter Royalty (NSR) cut-offs based upon updated commodity pricing and operating costs.

In addition, this Technical Report serves as a first-time disclosure for mineral resources for the South Skarn and La Bocona Zones, together with appropriate commentary regarding the merits and possible limitations of such assumptions.

14.2 DATA

The 186 drill holes and seven (7) trenches in the database were supplied in electronic format by Southern Silver. This included collars, downhole surveys, lithology data and assay data (i.e., Ag g/t, Au g/t, Cu%, Pb%, Zn%, SG). Validation and verification checks were performed during importation of data to ensure there were no overlapping intervals, typographic errors or anomalous entries. Anomalies and errors were validated and corrected. Figure 14-1 shows a plan view of the supplied drill holes.

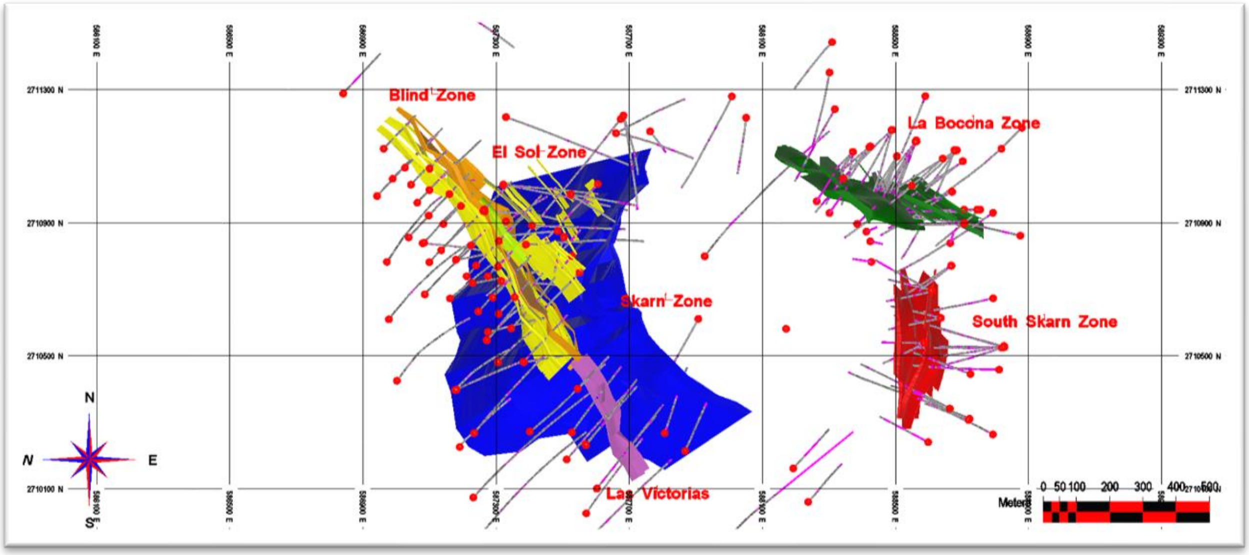


Source: Kirkham 2021

Figure 14-1: Plan View of Cerro Las Minitas Drill Holes

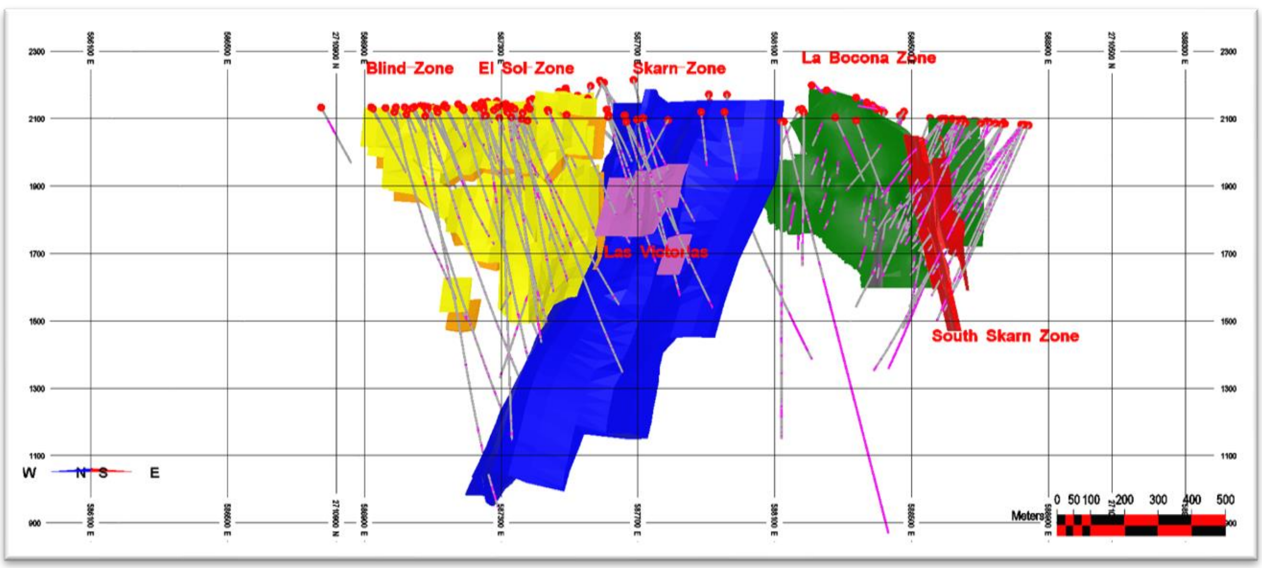
14.3 GEOLOGY MODEL

Solid models (Figure 14-2 and Figure 14-3) were created from sections and based on a combination of lithology, silver equivalent grades and site knowledge. It is important to note that the understanding and interpretation has evolved to be that of a significant Skarn Zone flanked by the El Sol, Blind and Las Victorias zones on the west side of the intrusion and the South Skarn and La Bocona zones to the east.



Source: Kirkham 2021

Figure 14-2: Plan View of Cerro Las Minitas Mineralized Zones and Drill Holes



Source: Kirkham 2021

Figure 14-3: Section View of Cerro Las Minitas Mineralized Zones and Drill Holes looking 325 degrees Azimuth

All zones were modelled based on current drilling and assay data using LeapFrog™ and then imported into MineSight for interpretation and refinement. As the Skarn zone extends through the adjacent Puro Corazon property, the available data within that area is primarily the historic Silver Dragon drillhole data. It is important to note that the historic Silver Dragon drillholes were used to guide, confirm and ensure continuity of the Skarn zone through the Puro Corazon claims. The Puro Corazon volumes and tonnages are not reported as resources. In addition, at La Bocona, the historic underground workings were masked out to be excluded from the resource. This included a reasonable buffer to ensure sufficient pillars are accounted for.

Thirteen Silver Dragon drill holes were used to project the wireframe through the Puro Corazon claim; effectively tracing the contact with the central intrusion to identify the footwall of the Skarn Front zone. In four cases, where down hole data was not available, core photos were used to trace the contact. In other instances, down hole geology/mineralization was compared to geological projections from SSV drilling and known areas of mine activity at Santo Nino and Puro Corazon. This is the basis of the 2019 wireframe as it projects through the Puro Corazon claim. In comparison, the earlier 2017 wireframe typically projects 30 metres to 50 metres horizontally east of the identified Skarn Front zone in the Silver Dragon drilling, and as significantly, projects a similar distance east of the Rampa Guadalupe workings.

Every intersection was inspected, and the solid was then manually adjusted to match the drill intercepts. Once the solid model was created, it was used to code the drill hole assays and composites for subsequent statistical and geostatistical analysis. The solid zone was used to constrain the block model by matching assays to those within the zones. The orientation and ranges (distances) used for search ellipsoids in the estimation process were derived from strike and dip of the mineralized zone, site knowledge and on-site observations by Southern Silver geological staff.

14.4 DATA ANALYSIS

The database was numerically coded by solids for the Blind, El Sol and Santo Nino mineralized zones. The database was then manually adjusted, drill hole by drill hole, to ensure accuracy of zonal intercepts. Table 14-1 shows the statistics for the silver equivalent, silver, gold, copper, lead and zinc assays. In addition, basic statistics for the La Bocona Sulphide, La Bocona Oxide and South Skarn zones are shown in Table 14-2, Table 14-3 and Table 14-4, respectively.

Note that the Blind and Skarn zones have a high degree of variability which is evidenced by the high Coefficient of Variation (CV) which is a unit independent quantitative measure of variability. With CV's ranging for a moderately high value of >2 to very high values of approximately 3.5, the goal of compositing and grade cutting will be to reduce these to reasonable range of 1 to 2. It should be noted that CV's for gold are extremely high to a maximum of 6.0 however the gold is also extremely low grade and as such, using CV as a measure of variability is not recommended and not valid.

The Las Victorias and El Sol zones have CV's that range between 1 and 2 which are moderate and will also be reduced to more reasonable levels with a goal of tuning them to less than 1.

Table 14-1: Statistics Silver, Gold, Copper, Lead and Zinc for the Blind, Las Victorias, Skarn and El Sol Zones

CODE	Zone	Metal	#	Length (m)	Max	Mean	CV
1	BZ1	AG	185	443.52	1,040.00	24.03	2.8
		AU	185	443.52	0.52	0.017	3.1
		CU%	185	443.52	1.12	0.0236	3.2
		PB%	185	443.52	18.5	0.55	3.1
		ZN%	185	443.52	20.3	0.487	3.2
2	BZ2	AG	273	596.18	1,380.00	38.041	2.9
		AU	273	596.18	5.32	0.0519	5.6
		CU%	273	596.18	3.27	0.0478	3.3
		PB%	273	596.18	28.35	0.976	2.9
		ZN%	273	596.18	17.1	0.833	2.6
3	BZ3	AG	222	383.22	1,400.00	46.179	2.8
		AU	222	383.22	0.555	0.0327	2.6
		CU%	222	383.22	1.105	0.0414	2.8
		PB%	222	383.22	19.7	1.003	2.3
		ZN%	222	383.22	18.7	0.906	2.6
4	BZ4	AG	79	152.1	247	12.433	2.1
		AU	79	152.1	0.035	0.0053	1.0
		CU%	79	152.1	0.335	0.0196	2.7
		PB%	79	152.1	6.46	0.384	2.2
		ZN%	79	152.1	5.06	0.361	2.2
5	Las Victorias Zone	AG	49	71.5	1,100.00	89.836	1.8
		AU	49	71.5	6.26	0.8146	1.6
		CU%	49	71.5	0.985	0.0909	1.9
		PB%	49	71.5	23.19	1.765	1.9
		ZN%	49	71.5	8.69	1.591	1.5
20	Skarn Zone	AG	643	1,054.46	1,415.00	43.984	2.6
		AU	643	1,054.46	6.9	0.046	6.0
		CU%	643	1,054.46	5.56	0.1629	2.9
		PB%	643	1,054.46	16.7	0.338	3.6
		ZN%	643	1,054.46	37.33	1.645	2.5
11	ES1	AG	31	49.65	276	39.012	1.3
		AU	31	49.65	0.1	0.0124	1.5
		CU%	31	49.65	0.326	0.0403	1.6
		PB%	31	49.65	10.6	1.099	1.9
		ZN%	31	49.65	5.6	1.077	1.3

CODE	Zone	Metal	#	Length (m)	Max	Mean	CV
12	ES2	AG	65	120.02	745	32.663	2.2
		AU	65	120.02	0.181	0.0144	1.6
		CU%	65	120.02	5.1	0.0909	4.5
		PB%	65	120.02	12.4	0.923	1.9
		ZN%	65	120.02	12.85	0.924	1.8
13	ES3	AG	24	37.85	238	62.962	1.0
		AU	24	37.85	0.074	0.0214	1.0
		CU%	24	37.85	0.605	0.1083	1.3
		PB%	24	37.85	7.84	2.581	1.0
		ZN%	24	37.85	9.05	3.288	1.0
14	ES4	AG	23	41.38	391	90.833	1.1
		AU	23	41.38	0.247	0.0262	2.1
		CU%	23	41.38	0.239	0.0748	1.1
		PB%	23	41.38	9.42	1.864	1.1
		ZN%	23	41.38	8.12	1.996	0.9
15	ES5	AG	15	23.05	58.2	17.474	0.8
		AU	15	23.05	0.018	0.006	0.9
		CU%	15	23.05	0.216	0.064	1.1
		PB%	15	23.05	2.85	0.732	0.9
		ZN%	15	23.05	3.21	0.767	1.1
16	ES6	AG	20	27.55	650	123.091	1.5
		AU	20	27.55	0.66	0.1027	1.7
		CU%	20	27.55	0.321	0.0565	1.3
		PB%	20	27.55	16	2.641	1.7
		ZN%	20	27.55	15.1	1.356	1.8
17	ES7	AG	8	11.85	154	37.946	1.4
		AU	8	11.85	0.023	0.0096	0.8
		CU%	8	11.85	0.234	0.0361	1.7
		PB%	8	11.85	7.28	1.268	1.6
		ZN%	8	11.85	9.23	1.179	2.1
18	ES8	AG	5	8.8	214	30.699	1.9
		AU	5	8.8	0.01	0.0057	0.5
		CU%	5	8.8	0.031	0.0086	1.4
		PB%	5	8.8	7.23	1.053	2.0
		ZN%	5	8.8	3.51	0.902	1.5

Source: Kirkham 2021

Table 14-2: Statistics for Silver, Gold, Copper, Lead and Zinc by Vein at the La Bocona Zone Sulphide

CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV
1	La Bocona HW1	AU	22	28.75	0.002	3.02	0.14	3.4
		AG	22	28.75	1.1	602	71.11	2.2
		CU%	22	28.75	0.003	1.965	0.30	1.6
		PB%	22	28.75	0	5.31	0.37	3.0
		ZN%	22	28.75	0.01	0.48	0.17	1.0
2	La Bocona HW2	AU	23	25.1	0.002	0.413	0.05	1.4
		AG	23	25.1	0.5	530	72.44	2.0
		CU%	23	25.1	0.002	0.54	0.07	1.9
		PB%	23	25.1	0	13.15	1.26	2.2
		ZN%	23	25.1	0.02	32.18	1.04	3.8
3	La Bocona HW3	AU	5	3.55	0.011	0.421	0.13	1.2
		AG	5	3.55	12.8	543	140.15	1.4
		CU%	5	3.55	0.005	0.022	0.01	0.7
		PB%	5	3.55	0.38	12.7	3.22	1.5
		ZN%	5	3.55	0.1	1.34	0.72	0.7
4	La Bocona Main Sulphide	AU	460	594.25	0.002	4.71	0.12	3.4
		AG	460	594.25	0.25	3,180	85.56	2.9
		CU%	461	601.85	0	11.2	0.19	3.8
		PB%	461	601.85	0	58.81	1.36	3.2
		ZN%	461	601.85	0	21.5	1.07	2.5
10	Muralla Gold Sulphide	AU	2	1.4	0.009	0.224	0.09	1.2
		AG	2	1.4	0.8	770	275.51	1.3
		CU%	2	1.4	0.004	0.096	0.04	1.2
		PB%	2	1.4	0.02	17.9	6.41	1.3
		ZN%	2	1.4	0.21	11.1	4.10	1.3
20	Muralla Main	AU	34	35.45	0	5.35	0.84	1.8
		AG	34	35.45	0	528	97.63	1.5
		CU%	34	35.45	0	0.254	0.04	1.7
		PB%	34	35.45	0	15.1	2.44	1.5
		ZN%	34	35.45	0	8.5	1.13	1.3
21	Muralla HW1	AU	71	78.6	0.002	2.7	0.20	2.2
		AG	71	78.6	0.6	1,190	169.93	1.6
		CU%	71	78.6	0.001	0.232	0.02	1.6
		PB%	71	78.6	0	23.44	3.09	1.6
		ZN%	71	78.6	0.02	29.5	0.90	2.3
22	Muralla HW2	AU	134	134.3	0.002	7.84	0.39	2.3
		AG	134	134.3	0.25	2,430	138.13	1.9
		CU%	134	134.3	0.001	0.365	0.02	1.7
		PB%	134	134.3	0	53.53	2.31	2.0
		ZN%	134	134.3	0	14.15	1.11	2.1

Source: Kirkham 2021

Table 14-3: Statistics for Silver, Gold, Copper, Lead and Zinc by Vein at the La Bocona Zone Oxide

CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV
40	Muralla Gold Oxide	AU	92	121	0	34.6	1.70	2.5
		AG	92	121	0	107	25.00	1.0
		CU%	92	121	0	0.132	0.02	1.5
		PB%	92	121	0	8.74	0.78	1.8
		ZN%	92	121	0	5.98	0.56	1.6
41	Muralla HW1	AU	8	13.85	0.006	0.108	0.05	0.8
		AG	8	13.85	1.1	125	43.12	1.1
		CU%	8	13.85	0.001	0.011	0.00	0.8
		PB%	8	13.85	0	0.46	0.12	1.5
		ZN%	8	13.85	0.09	1.27	0.53	0.8
42	Muralla HW2	AU	13	18.8	0.021	2.82	0.55	1.4
		AG	13	18.8	6.8	236	28.50	1.7
		CU%	13	18.8	0.001	0.23	0.02	2.2
		PB%	13	18.8	0.01	6.25	0.58	2.5
		ZN%	13	18.8	0.05	5.44	0.55	2.2
44	La Bocona Main Oxide	AU	81	130.3	0.002	2.14	0.12	2.7
		AG	81	130.3	0.8	358	34.70	1.8
		CU%	81	130.3	0.001	1.875	0.09	3.0
		PB%	81	130.3	0	2.46	0.47	1.4
		ZN%	81	130.3	0.01	12	0.95	2.0

Source: Kirkham 2021

Table 14-4: Statistics for Silver, Gold, Copper, Lead and Zinc by Vein at the South Skarn Zone

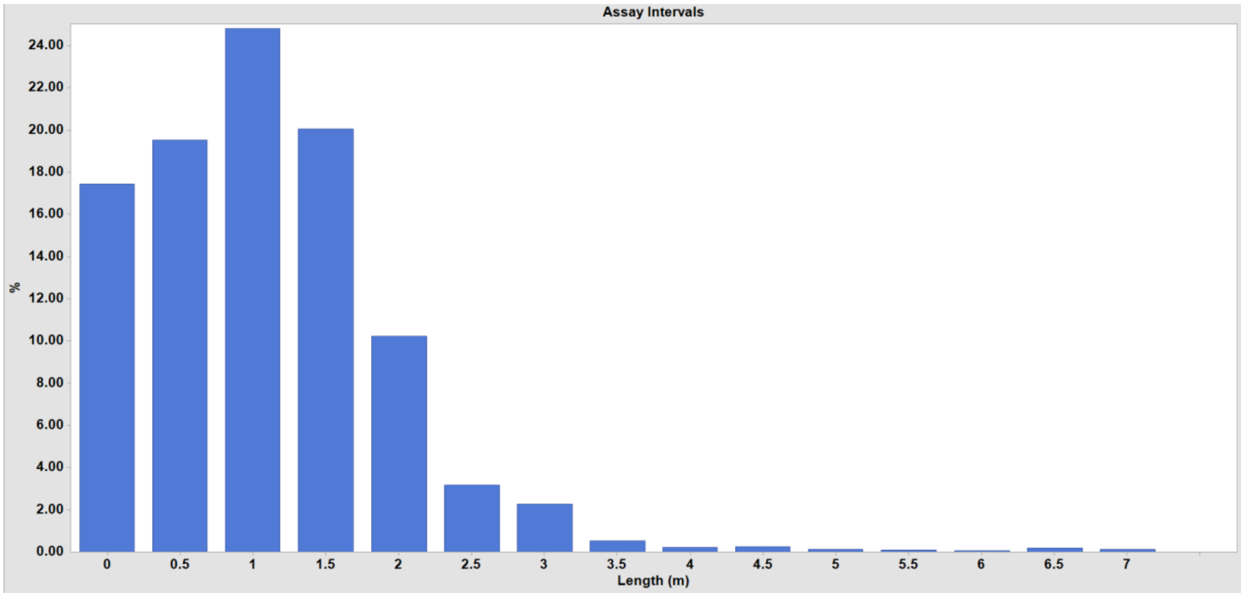
CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV
30	South Skarn FW1	AU	9	6.9	0.002	0.484	0.17	1.1
		AG	9	6.9	4.3	305	121.92	1.0
		CU%	9	6.9	0.004	1.08	0.29	1.4
		PB%	9	6.9	0.05	4.39	2.24	0.9
		ZN%	9	6.9	0.05	4.12	1.90	0.9
31	South Skarn HW1	AU	115	123.2	0.002	11.7	0.36	3.3
		AG	115	123.2	0.25	1,150	58.31	2.3
		CU%	115	123.2	0.001	0.516	0.02	2.9
		PB%	115	123.2	0.003	10.95	0.75	2.1
		ZN%	115	123.2	0.01	5.08	0.37	2.0
32	South Skarn Main	AU	392	402.4	0	2.04	0.08	2.4
		AG	392	402.4	0	1,480	73.09	2.5
		CU%	392	402.4	0	2.5	0.06	3.8
		PB%	392	402.4	0	26.52	1.11	3.0
		ZN%	392	402.4	0	22.6	0.98	2.9

Source: Kirkham 2021

14.5 COMPOSITES

It was determined that a 1.5 m composite length offered the best balance between supplying common support for samples and minimizing the smoothing of the grades with ~85% of the samples within the mineralized zones being

<2 m in length. The 1.5 m sample length also was consistent with the distribution of sample lengths within the mineralized domains as shown in the histogram of assay lengths in Figure 14-4.



Source: Kirkham 2021

Figure 14-4: Assay Interval Lengths

Table 14-5 shows the basic statistics for the 1.5 m copper composite grades within the mineralized domains. It should be noted that although 1.5 m is the composite length, any residual composites of lengths greater than 0.5 m and less than 1.5 m were retained to represent a composite, while any composite residuals less than 0.5 m were combined with the previous composite.

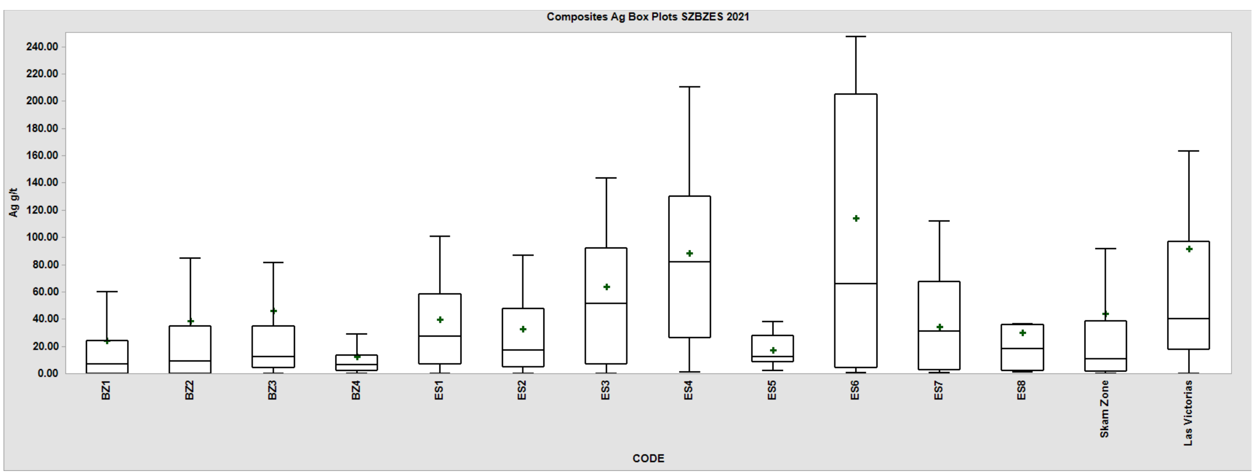
At the Blind, Las Victorias, Skarn and El Sol zones there is a total of 1,052, 49, 702 and 214 composites respectively, for a total of 2,017 as shown in Table 14-5.

The box plots for the silver, zinc and lead composites shown in Figure 14-5, Figure 14-6 and Figure 14-7 illustrate that the four Blind Zone units, the eight El Sol units, the Las Victorias and Skarn Front zone and their statistical relationship to each other. The box plots show that there are grade similarities within the zone groupings where the remaining Blind Zone solids and the El Sol Zone solids are similar, and, therefore, it is acceptable to treat them in a similar manner. The Skarn Front and Las Victorias zones are statistically different from all other zones and as such understandably that it is estimated separately.

Table 14-5: Composite Statistics Weighted by Length for the Blind, Las Victorias, Skarn and El Sol Zones

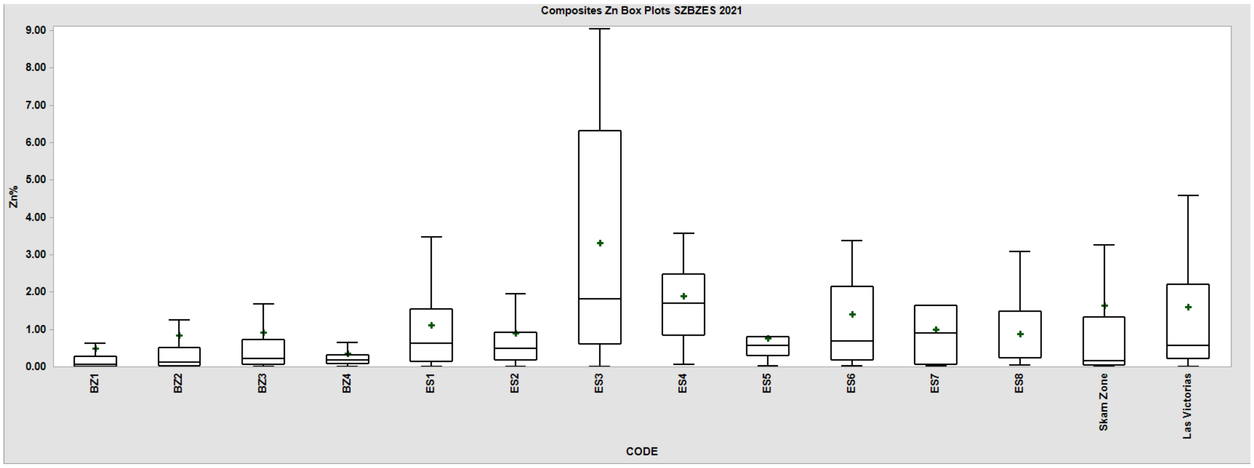
CODE	Zone	Metal	#	Length (m)	Max	Mean	CV	CODE	Zone	Metal	#	Length (m)	Max	Mean	CV
1	BZ1	AG	296	443.52	409.37	24.03	2.0	12	ES2	AG	80	120.02	399.23	32.663	1.6
		AU	296	443.52	0.388	0.017	2.7			AU	80	120.02	0.122	0.0144	1.4
		CU%	296	443.52	0.447	0.0236	2.3			CU%	80	120.02	2.654	0.0909	3.3
		PB%	296	443.52	12.39	0.55	2.3			PB%	80	120.02	8.72	0.923	1.6
		ZN%	296	443.52	8.72	0.487	2.4			ZN%	80	120.02	9.05	0.923	1.4
2	BZ2	AG	398	596.18	1,152.41	38.041	2.5	13	ES3	AG	26	37.85	238	62.962	0.9
		AU	398	596.18	2.558	0.0519	4.2			AU	26	37.85	0.074	0.0215	0.9
		CU%	398	596.18	1.615	0.0478	2.8			CU%	26	37.85	0.445	0.1083	1.1
		PB%	398	596.18	26.27	0.975	2.7			PB%	26	37.85	7.1	2.581	0.9
		ZN%	398	596.18	12.56	0.833	2.3			ZN%	26	37.85	9.05	3.288	0.9
3	BZ3	AG	257	383.22	1,400.00	46.179	2.5	14	ES4	AG	28	41.38	391	90.832	0.9
		AU	257	383.22	0.541	0.0327	2.4			AU	28	41.38	0.226	0.0262	1.8
		CU%	257	383.22	1.105	0.0414	2.5			CU%	28	41.38	0.232	0.0748	0.9
		PB%	257	383.22	19.7	1.003	2.0			PB%	28	41.38	6.93	1.864	1.0
		ZN%	257	383.22	15.35	0.906	2.2			ZN%	28	41.38	6.02	1.996	0.8
4	BZ4	AG	101	152.1	80.5	12.433	1.4	15	ES5	AG	15	23.05	38.2	17.474	0.6
		AU	101	152.1	0.025	0.0053	0.8			AU	15	23.05	0.018	0.006	0.8
		CU%	101	152.1	0.275	0.0196	2.2			CU%	15	23.05	0.212	0.0641	1.0
		PB%	101	152.1	3.66	0.385	1.6			PB%	15	23.05	2.11	0.732	0.7
		ZN%	101	152.1	4.05	0.362	1.8			ZN%	15	23.05	2.22	0.767	0.9
5	Las Victorias Zone	AG	49	71.5	618.8	89.837	1.5	16	ES6	AG	18	27.55	551.86	123.091	1.1
		AU	49	71.5	5.623	0.8147	1.3			AU	18	27.55	0.555	0.1027	1.5
		CU%	49	71.5	0.985	0.0909	1.8			CU%	18	27.55	0.217	0.0565	1.0
		PB%	49	71.5	14.09	1.765	1.6			PB%	18	27.55	13.71	2.642	1.3
		ZN%	49	71.5	7.58	1.59	1.3			ZN%	18	27.55	6.77	1.356	1.2
20	Skarn Zone	AG	702	1,054.46	1,262.64	43.984	2.4	17	ES7	AG	8	11.85	111.94	37.946	0.9
		AU	702	1,054.46	5.819	0.046	5.3			AU	8	11.85	0.021	0.0096	0.7
		CU%	702	1,054.46	5.185	0.1629	2.6			CU%	8	11.85	0.106	0.0361	1.0
		PB%	702	1,054.46	13.15	0.338	3.3			PB%	8	11.85	3.23	1.268	1.0
		ZN%	702	1,054.46	27.06	1.645	2.3			ZN%	8	11.85	4.08	1.179	1.2
11	ES1	AG	33	49.65	164.93	39.012	1.1	18	ES8	AG	6	8.8	114.55	30.699	1.3
		AU	33	49.65	0.09	0.0125	1.3			AU	6	8.8	0.01	0.0057	0.4
		CU%	33	49.65	0.177	0.0403	1.1			CU%	6	8.8	0.027	0.0087	1.1
		PB%	33	49.65	6.22	1.099	1.7			PB%	6	8.8	3.87	1.055	1.4
		ZN%	33	49.65	4.26	1.077	1.1			ZN%	6	8.8	3.07	0.901	1.2

Source: Kirkham 2021



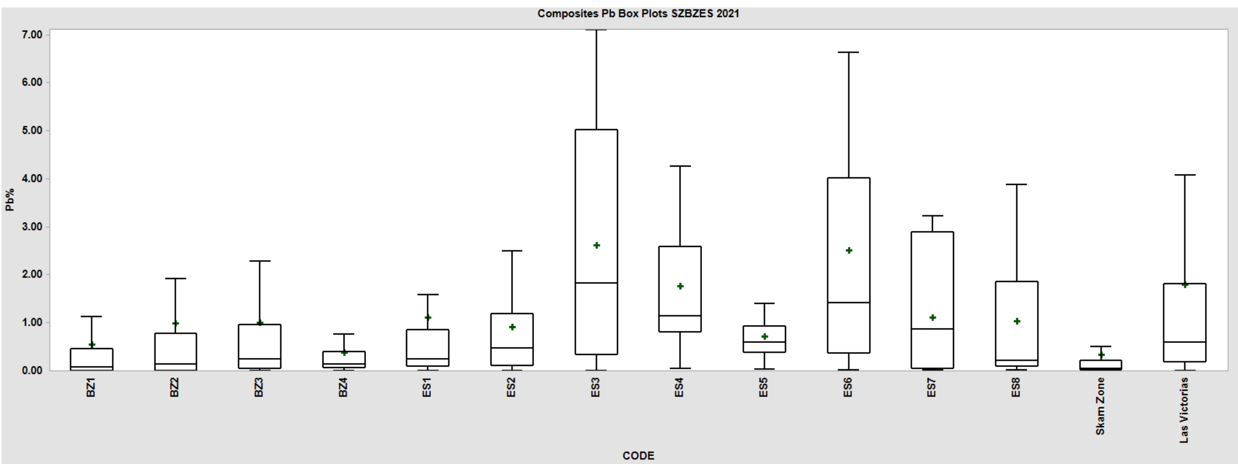
Source: Kirkham 2021

Figure 14-5: Box Plot of Ag Composites for the Blind, El Sol and Skarn Zones



Source: Kirkham 2021

Figure 14-6: Box Plot of Zn Composites for the Blind, El Sol and Skarn Zones



Source: Kirkham 2021

Figure 14-7: Box Plot of Pb Composites for the Blind, El Sol and Skarn Zones

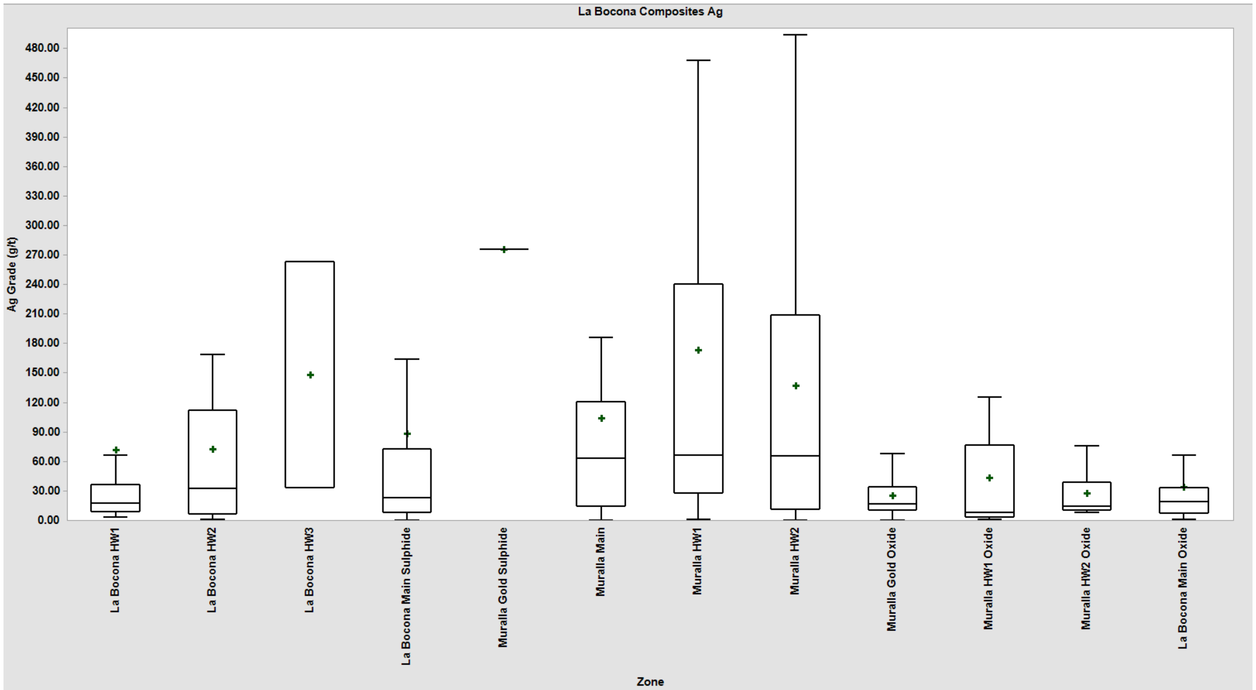
At the La Bocona Sulphide, La Bocona Oxide and South Skarn zones there are 585, 190 and 352 composites, respectively for a total of 1,127 composites, shown in Table 14-6, Table 14-7 and Table 14-8.

The box plots shown in Figure 14-8, Figure 14-9, Figure 14-10 and Figure 14-11 illustrate that the La Bocona zone and their statistical relationship to each other for Ag, Cu, Pb and Zn, respectively. The box plots show that the relative distribution for Ag, Pb and Zn are relatively similar but not enough to conclude that they can be grouped together and are therefore estimated separately using hard boundaries. Furthermore, the copper grades are quite different however the copper grades are do not contribute economically in significant quantities except for the La Bocona HW1 zone which is again estimated separately.

Table 14-6: Composite Statistics Weighted by Length for the La Bocona Zone

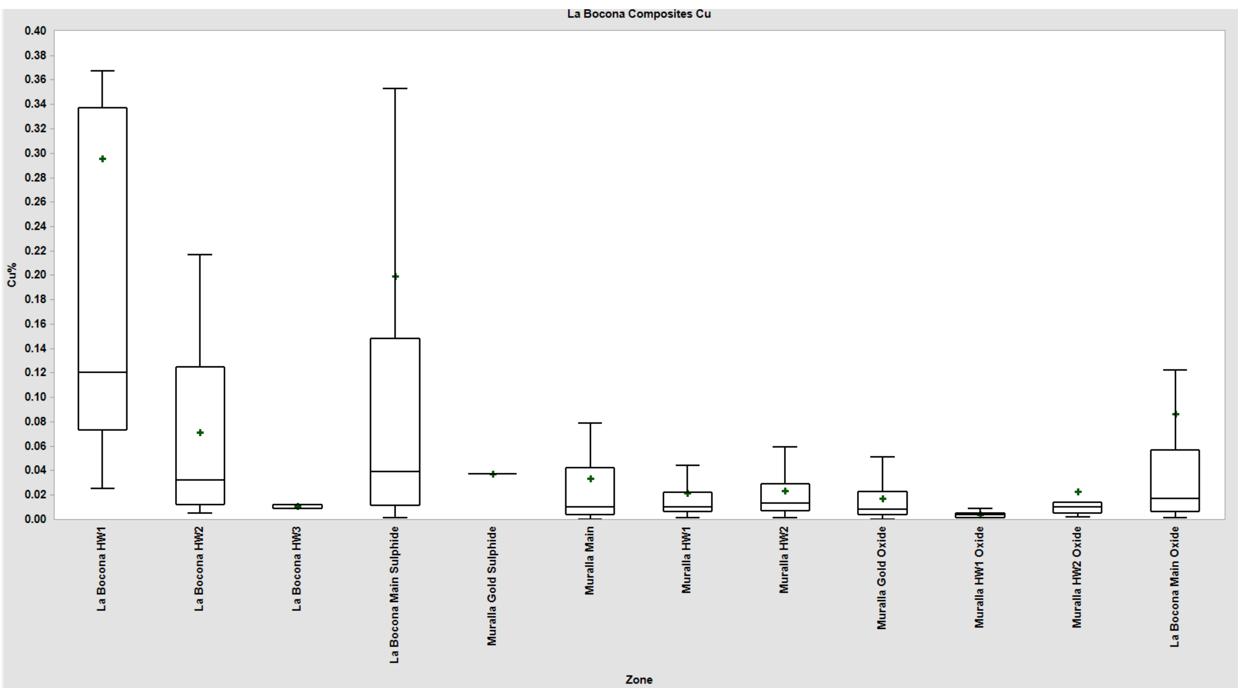
CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV
1	La Bocona HW1	AU	19	28.75	0.003	1.556	0.14	2.6
		AG	19	28.75	3.4	482.28	71.11	1.8
		CU%	19	28.75	0.025	1.577	0.30	1.3
		PB%	19	28.75	0	4.79	0.37	2.8
		ZN%	19	28.75	0.01	0.48	0.16	0.9
2	La Bocona HW2	AU	16	25.1	0.002	0.147	0.05	0.8
		AG	16	25.1	0.54	364.53	72.44	1.3
		CU%	16	25.1	0.005	0.402	0.07	1.4
		PB%	16	25.1	0	5.85	1.26	1.4
		ZN%	16	25.1	0.02	7.09	1.04	1.7
3	La Bocona HW3	AU	2	3.55	0.076	0.185	0.13	0.4
		AG	2	3.55	33.16	263.36	140.15	0.8
		CU%	2	3.55	0.009	0.012	0.01	0.1
		PB%	2	3.55	0.79	6.02	3.22	0.8
		ZN%	2	3.55	0.32	1.19	0.72	0.6
4	La Bocona Main Sulphide	AU	383	574.85	0.002	4.71	0.12	3.0
		AG	383	574.85	0.25	2,323.83	88.34	2.4
		CU%	383	574.85	0.001	11.2	0.20	3.3
		PB%	383	574.85	0	42.79	1.43	2.7
		ZN%	383	574.85	0.01	16.56	1.11	2.1
10	Muralla Gold Sulphide	AU	1	1.4	0.086	0.086	0.09	0.0
		AG	1	1.4	275.52	275.52	275.52	0.0
		CU%	1	1.4	0.037	0.037	0.04	0.0
		PB%	1	1.4	6.41	6.41	6.41	0.0
		ZN%	1	1.4	4.1	4.1	4.10	0.0
20	Muralla Main	AU	23	35.45	0	5.13	0.84	1.7
		AG	23	35.45	0	525	97.63	1.3
		CU%	23	35.45	0	0.216	0.04	1.5
		PB%	23	35.45	0	15.1	2.44	1.3
		ZN%	23	35.45	0	3.3	1.13	1.0
21	Muralla HW1	AU	52	78.6	0.007	1.483	0.20	1.5
		AG	52	78.6	0.6	1,002.93	169.93	1.3
		CU%	52	78.6	0.001	0.145	0.02	1.3
		PB%	52	78.6	0	17.58	3.09	1.3
		ZN%	52	78.6	0.02	6.63	0.90	1.4
22	Muralla HW2	AU	89	134.3	0.002	6.528	0.39	2.0
		AG	89	134.3	0.25	892	138.13	1.2
		CU%	89	134.3	0.001	0.18	0.02	1.2
		PB%	89	134.3	0	14.9	2.31	1.3
		ZN%	89	134.3	0	11.7	1.11	1.8

Source: Kirkham 2021



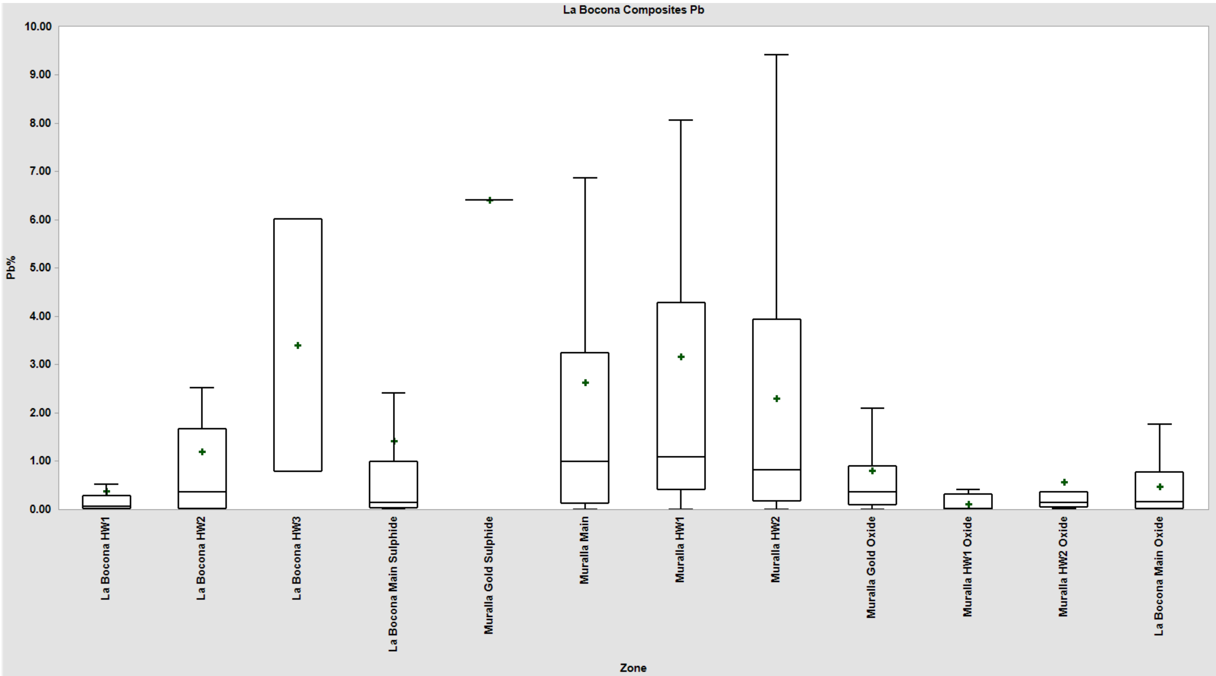
Source: Kirkham 2021

Figure 14-8: Box Plot of Ag Composites by La Bocona Zone



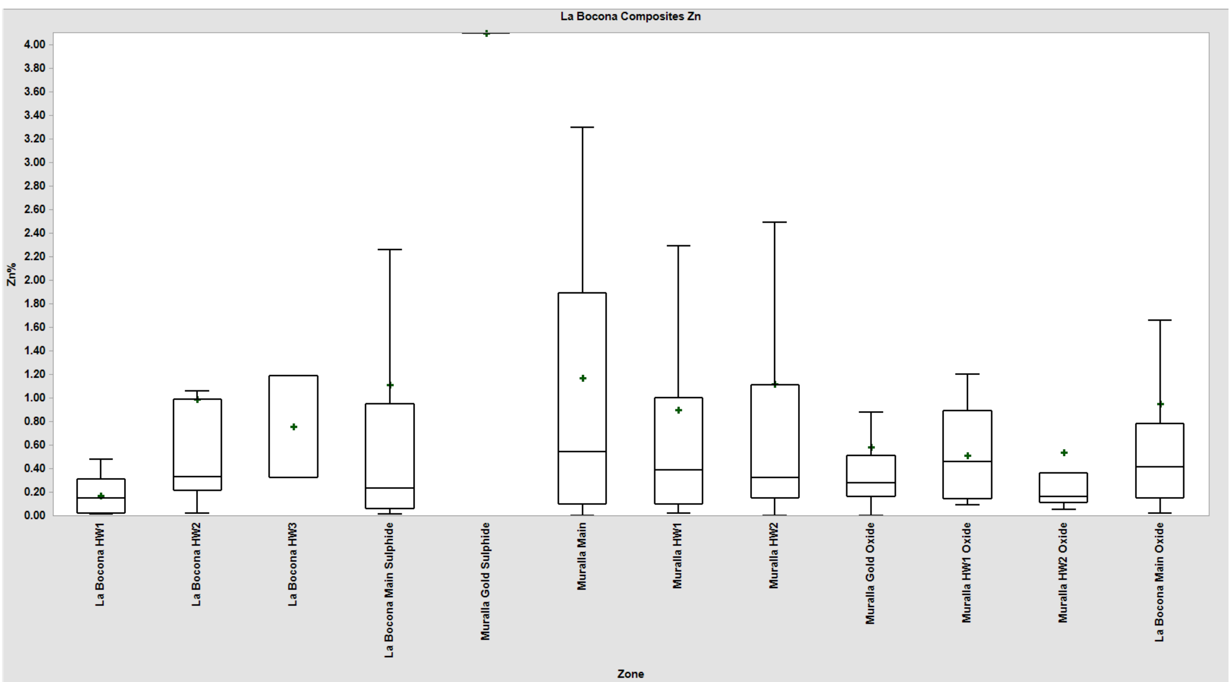
Source: Kirkham 2021

Figure 14-9: Box Plot of Cu Composites for La Bocona Zone



Source: Kirkham 2021

Figure 14-10: Box Plot of Pb Composites for La Bocona Zone



Source: Kirkham 2021

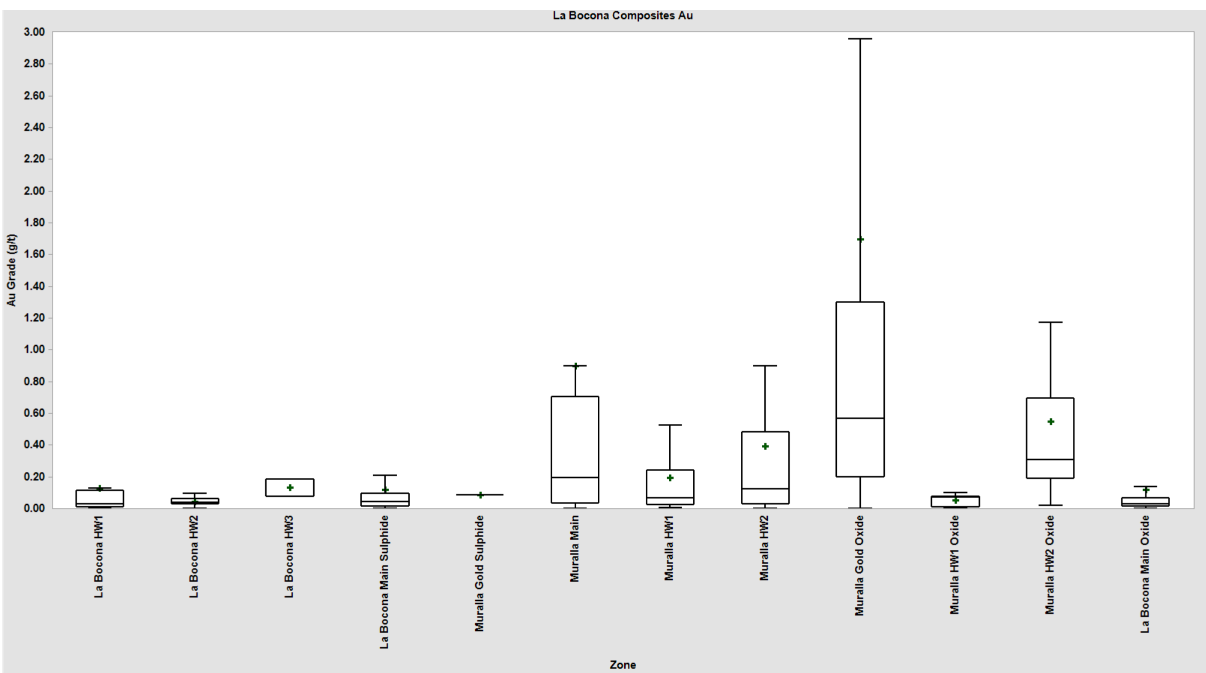
Figure 14-11: Box Plot of Zn Composites for La Bocona Zone

Gold concentrations within the La Bocona zone is relatively low with the exception of the La Bocona Oxide shown in Table 14-7 and illustrated in the Au box plot in Figure 14-12. As the oxide resource is likely to be a leach product, only the gold and silver, as shown in Figure 14-8, will be economic and therefore reported, herein.

Table 14-7: Composite Statistics Weighted by Length for the La Bocona Oxide Zone

CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV
40	Muralla Gold Oxide	AU	82	121	0	31.258	1.699	2.3
		AG	82	121	0	107	25.003	0.9
		CU%	82	121	0	0.13	0.0172	1.4
		PB%	82	121	0	7.59	0.779	1.6
		ZN%	82	121	0	5.36	0.561	1.5
41	Muralla HW1	AU	10	13.85	0.006	0.1	0.0517	0.7
		AG	10	13.85	1.1	125	43.116	1.0
		CU%	10	13.85	0.001	0.009	0.004	0.7
		PB%	10	13.85	0	0.41	0.117	1.4
		ZN%	10	13.85	0.09	1.2	0.525	0.8
42	Muralla HW2	AU	12	18.8	0.021	2.63	0.5456	1.2
		AG	12	18.8	7.91	107.8	28.496	1.1
		CU%	12	18.8	0.002	0.136	0.0231	1.6
		PB%	12	18.8	0.01	3.86	0.579	1.9
		ZN%	12	18.8	0.05	3.18	0.55	1.6
44	La Bocona Main Oxide	AU	86	130.3	0.002	2.14	0.1222	2.5
		AG	86	130.3	1	358	34.697	1.7
		CU%	86	130.3	0.001	1.875	0.0862	2.7
		PB%	86	130.3	0	2.46	0.471	1.2
		ZN%	86	130.3	0.02	10.95	0.953	1.8

Source: Kirkham 2021



Source: Kirkham 2021

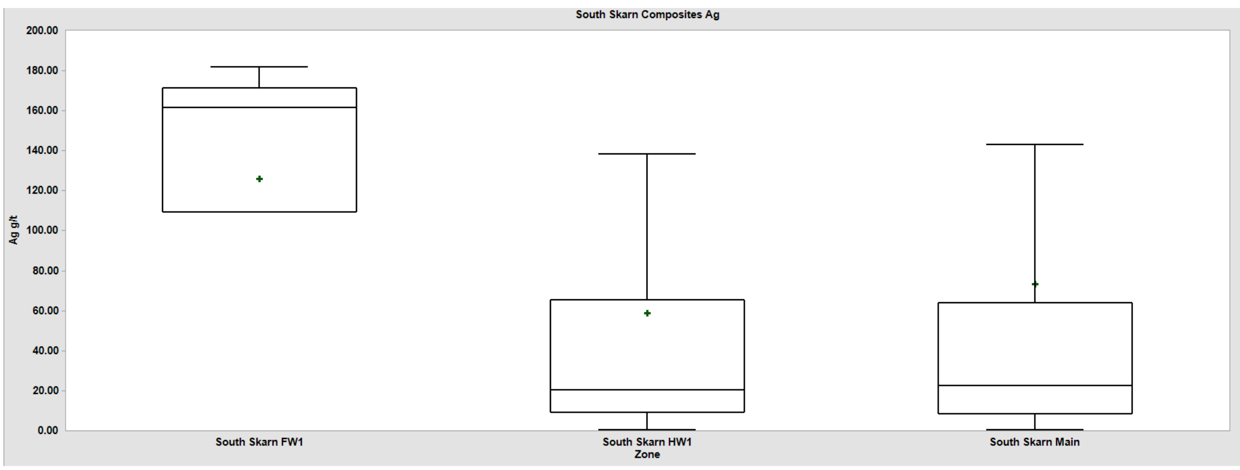
Figure 14-12: Box Plot of Au Composites by Zone for La Bocona

Table 14-8 shows the statistics for the South Skarn zone demonstrating significant silver, lead and zinc grades, particularly within the FW1 domain. Gold is also elevated within the HW1 domain. Based on the box plots as shown in Figure 14-13 through Figure 14-17, the South Skarn Main and HW1 could be considered statistically similar enough to combine, however due to the few numbers of composites, they continue to remain segregated and estimated using hard boundaries. It is clear however that the FW1 is distinctly different and is treated as such.

Table 14-8: Composite Statistics Weighted by Length for the South Skarn Zone

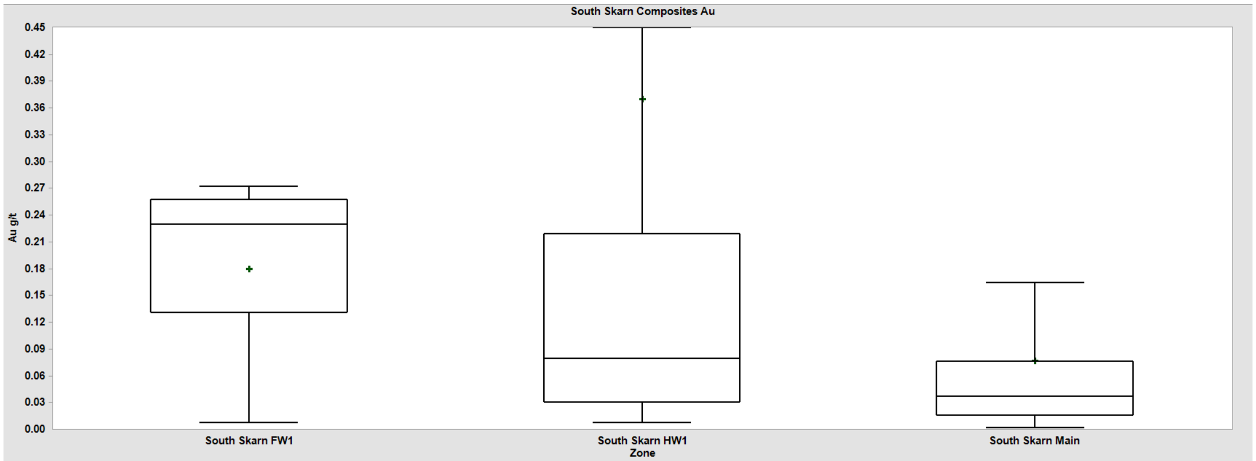
CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV
30	South Skarn FW1	AG	5	6.9	4.95	182	121.92	0.5
		AU	5	6.9	0.007	0.272	0.17	0.6
		CU%	5	6.9	0.004	0.586	0.29	0.8
		PB%	5	6.9	0.1	4.39	2.24	0.6
		ZN%	5	6.9	0.27	4.12	1.90	0.7
31	South Skarn HW1	AG	79	121.1	0.25	555.14	59.18	1.7
		AU	79	121.1	0.007	7.997	0.36	2.8
		CU%	79	121.1	0.001	0.343	0.02	2.3
		PB%	79	121.1	0	7.7	0.76	1.7
		ZN%	79	121.1	0.01	3.34	0.38	1.6
32	South Skarn Main	AG	268	402.4	0.25	1,271.27	73.09	2.1
		AU	268	402.4	0.002	2.04	0.08	2.2
		CU%	268	402.4	0.001	2.5	0.06	3.5
		PB%	268	402.4	0	22.82	1.11	2.5
		ZN%	268	402.4	0.01	16.22	0.98	2.3

Source: Kirkham 2021



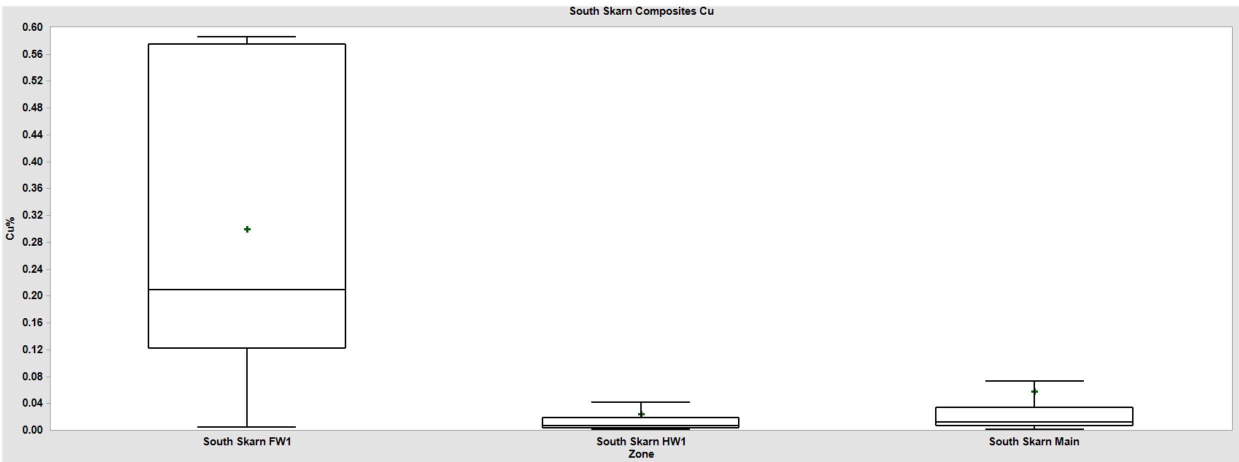
Source: Kirkham 2021

Figure 14-13: Box Plot of Ag Composites by Zone for South Skarn



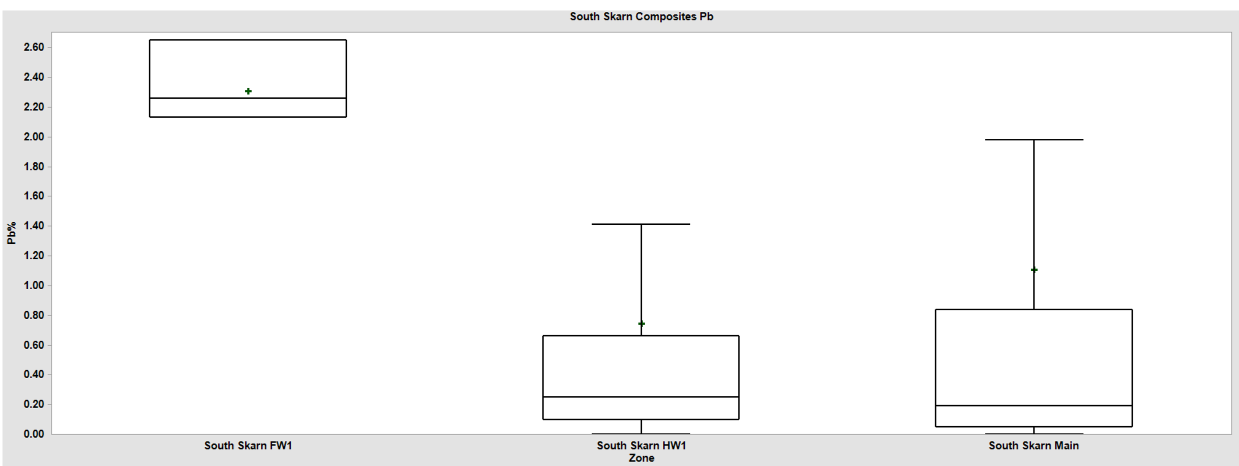
Source: Kirkham 2021

Figure 14-14: Box Plot of Au Composites by Zone for South Skarn



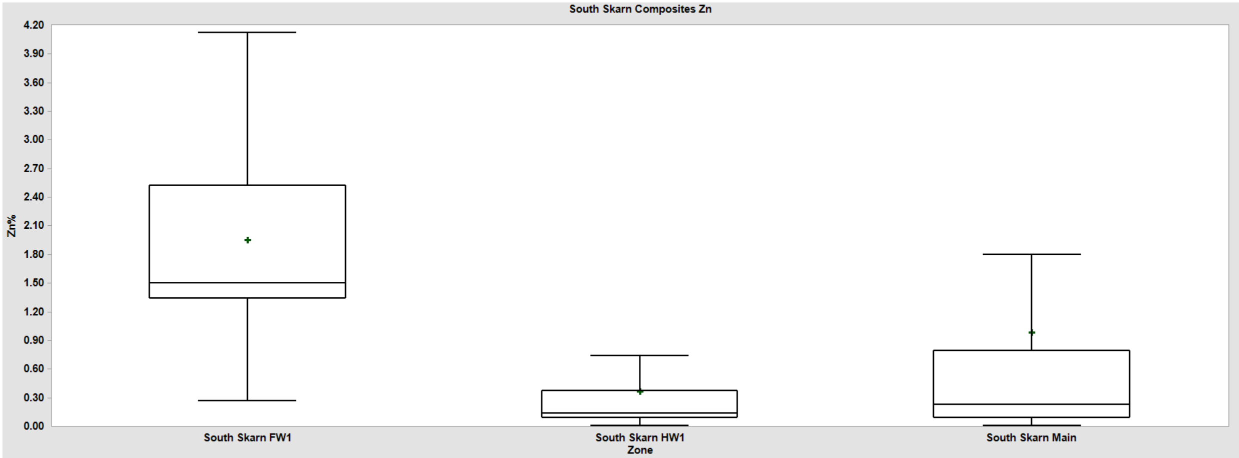
Source: Kirkham 2021

Figure 14-15: Box Plot of Cu Composites by Zone for South Skarn



Source: Kirkham 2021

Figure 14-16: Box Plot of Pb Composites by Zone for South Skarn



Source: Kirkham 2021

Figure 14-17: Box Plot of Zn Composites by Zone for South Skarn

14.6 EVALUATION OF OUTLIER ASSAY VALUES

An evaluation of the probability plots suggests that there may be outlier assay values that could result in an overestimation of resources. Although it is believed that this risk is relatively low, it was considered prudent to cut the silver, gold, copper, lead and zinc composites to 700 g/t, 1.5 g/t, 1.4%, 5% and 19%, respectively within the Skarn, El Sol and Blind zones to reduce the effects of outliers.

As previously discussed, the CV's, which are a unit independent measure of variability, were relatively high for the assay data. This may be mitigated or resolved by 1) compositing and 2) cutting or grade limiting. Table 14-9 illustrates the effect of each process from assay data, composites and cut composites along with the reduction in average grade and corresponding CV. Both the Blind Zone and the Skarn Zone show significant reductions in CV's however the gold remain very high. However, for the Blind, El Sol, Las Victorias and Skarn zones, the gold is extremely low grade to the point that CV is not a good indicator of error or variability. That sated, the other metals that are significant, also have elevated CV's and should be considered a risk due to the uncertainty that is pe=resent as a result.

Table 14-9 Outlier Cutting Analysis for the Blind, El Sol and Skarn Zones

CODE	Zone	Metal	Max	Mean	CV	Max	Mean	CV	Max	Mean	CV	Mean	CV
1	BZ1	AG	1,040.00	24.03	2.8	409.37	24.03	2.0	409.37	24.03	2.0	0%	-30%
		AU	0.52	0.017	3.1	0.388	0.017	2.7	0.388	0.02	2.7	0%	-10%
		CU%	1.12	0.0236	3.2	0.447	0.0236	2.3	0.447	0.02	2.3	0%	-30%
		PB%	18.5	0.55	3.1	12.39	0.55	2.3	5	0.51	2.0	-7%	-34%
		ZN%	20.3	0.487	3.2	8.72	0.487	2.4	8.72	0.49	2.4	0%	-24%
2	BZ2	AG	1,380.00	38.041	2.9	1,152.41	38.041	2.5	700	36.88	2.3	-3%	-22%
		AU	5.32	0.0519	5.6	2.558	0.0519	4.2	1.5	0.05	3.4	-12%	-39%
		CU%	3.27	0.0478	3.3	1.615	0.0478	2.8	1.4	0.05	2.7	-1%	-18%
		PB%	28.35	0.976	2.9	26.27	0.975	2.7	5	0.72	1.8	-26%	-39%
		ZN%	17.1	0.833	2.6	12.56	0.833	2.3	12.56	0.83	2.3	0%	-14%
3	BZ3	AG	1,400.00	46.179	2.8	1,400.00	46.179	2.5	700	43.44	2.0	-6%	-27%
		AU	0.555	0.0327	2.6	0.541	0.0327	2.4	0.541	0.03	2.4	0%	-7%
		CU%	1.105	0.0414	2.8	1.105	0.0414	2.5	1.105	0.04	2.5	0%	-10%
		PB%	19.7	1.003	2.3	19.7	1.003	2.0	5	0.85	1.5	-15%	-33%
		ZN%	18.7	0.906	2.6	15.35	0.906	2.2	15.35	0.91	2.2	0%	-16%
4	BZ4	AG	247	12.433	2.1	80.5	12.433	1.4	80.5	12.43	1.4	0%	-33%
		AU	0.035	0.0053	1.0	0.025	0.0053	0.8	0.025	0.01	0.8	0%	-20%
		CU%	0.335	0.0196	2.7	0.275	0.0196	2.2	0.275	0.02	2.2	0%	-19%
		PB%	6.46	0.384	2.2	3.66	0.385	1.6	3.66	0.39	1.6	0%	-26%
		ZN%	5.06	0.361	2.2	4.05	0.362	1.8	4.05	0.36	1.8	0%	-19%
5	Las Victorias Zone	AG	1,100.00	89.836	1.8	618.8	89.837	1.5	618.8	89.84	1.5	0%	-16%
		AU	6.26	0.8146	1.6	5.623	0.8147	1.3	1.5	0.59	0.9	-28%	-44%
		CU%	0.985	0.0909	1.9	0.985	0.0909	1.8	0.985	0.09	1.8	0%	-3%
		PB%	23.19	1.765	1.9	14.09	1.765	1.6	5	1.34	1.2	-24%	-37%
		ZN%	8.69	1.591	1.5	7.58	1.59	1.3	7.58	1.59	1.3	0%	-11%
20	Skarn Zone	AG	1,415.00	43.984	2.6	1,262.64	43.984	2.4	700	42.40	2.2	-4%	-15%
		AU	6.9	0.046	6.0	5.819	0.046	5.3	1.5	0.04	3.1	-14%	-49%
		CU%	5.56	0.1629	2.9	5.185	0.1629	2.6	1.4	0.14	2.0	-14%	-30%
		PB%	16.7	0.338	3.6	13.15	0.338	3.3	5	0.30	2.6	-12%	-27%
		ZN%	37.33	1.645	2.5	27.06	1.645	2.3	19	1.60	2.2	-3%	-15%
11	ES1	AG	276	39.012	1.3	164.93	39.012	1.1	164.93	39.01	1.1	0%	-18%
		AU	0.1	0.0124	1.5	0.09	0.0125	1.3	0.09	0.01	1.3	1%	-13%
		CU%	0.326	0.0403	1.6	0.177	0.0403	1.1	0.177	0.04	1.1	0%	-27%
		PB%	10.6	1.099	1.9	6.22	1.099	1.7	5	0.98	1.5	-10%	-19%
		ZN%	5.6	1.077	1.3	4.26	1.077	1.1	4.26	1.08	1.1	0%	-15%

CODE	Zone	Metal	Max	Mean	CV	Max	Mean	CV	Max	Mean	CV	Mean	CV
12	ES2	AG	745	32.663	2.2	399.23	32.663	1.6	399.23	32.66	1.6	0%	-26%
		AU	0.181	0.0144	1.6	0.122	0.0144	1.4	0.122	0.01	1.4	0%	-14%
		CU%	5.1	0.0909	4.5	2.654	0.0909	3.3	1.4	0.08	2.2	-17%	-50%
		PB%	12.4	0.923	1.9	8.72	0.923	1.6	5	0.86	1.3	-7%	-31%
		ZN%	12.85	0.924	1.8	9.05	0.923	1.4	9.05	0.92	1.4	0%	-19%
13	ES3	AG	238	62.962	1.0	238	62.962	0.9	238	62.96	0.9	0%	-7%
		AU	0.074	0.0214	1.0	0.074	0.0215	0.9	0.074	0.02	0.9	0%	-13%
		CU%	0.605	0.1083	1.3	0.445	0.1083	1.1	0.445	0.11	1.1	0%	-18%
		PB%	7.84	2.581	1.0	7.1	2.581	0.9	5	2.35	0.8	-9%	-16%
		ZN%	9.05	3.288	1.0	9.05	3.288	0.9	9.05	3.29	0.9	0%	-9%
14	ES4	AG	391	90.833	1.1	391	90.832	0.9	391	90.83	0.9	0%	-14%
		AU	0.247	0.0262	2.1	0.226	0.0262	1.8	0.226	0.03	1.8	0%	-13%
		CU%	0.239	0.0748	1.1	0.232	0.0748	0.9	0.232	0.07	0.9	0%	-11%
		PB%	9.42	1.864	1.1	6.93	1.864	1.0	5	1.74	0.9	-7%	-21%
		ZN%	8.12	1.996	0.9	6.02	1.996	0.8	6.02	2.00	0.8	0%	-12%
15	ES5	AG	58.2	17.474	0.8	38.2	17.474	0.6	38.2	17.47	0.6	0%	-22%
		AU	0.018	0.006	0.9	0.018	0.006	0.8	0.018	0.01	0.8	0%	-9%
		CU%	0.216	0.064	1.1	0.212	0.0641	1.0	0.212	0.06	1.0	0%	-3%
		PB%	2.85	0.732	0.9	2.11	0.732	0.7	2.11	0.73	0.7	0%	-22%
		ZN%	3.21	0.767	1.1	2.22	0.767	0.9	2.22	0.77	0.9	0%	-18%
16	ES6	AG	650	123.091	1.5	551.86	123.091	1.1	551.86	123.09	1.1	0%	-27%
		AU	0.66	0.1027	1.7	0.555	0.1027	1.5	0.555	0.10	1.5	0%	-14%
		CU%	0.321	0.0565	1.3	0.217	0.0565	1.0	0.217	0.06	1.0	0%	-27%
		PB%	16	2.641	1.7	13.71	2.642	1.3	5	1.98	0.9	-25%	-44%
		ZN%	15.1	1.356	1.8	6.77	1.356	1.2	6.77	1.36	1.2	0%	-32%
17	ES7	AG	154	37.946	1.4	111.94	37.946	0.9	111.94	37.95	0.9	0%	-31%
		AU	0.023	0.0096	0.8	0.021	0.0096	0.7	0.021	0.01	0.7	0%	-5%
		CU%	0.234	0.0361	1.7	0.106	0.0361	1.0	0.106	0.04	1.0	0%	-40%
		PB%	7.28	1.268	1.6	3.23	1.268	1.0	3.23	1.27	1.0	0%	-40%
		ZN%	9.23	1.179	2.1	4.08	1.179	1.2	4.08	1.18	1.2	0%	-43%
18	ES8	AG	214	30.699	1.9	114.55	30.699	1.3	114.55	30.70	1.3	0%	-33%
		AU	0.01	0.0057	0.5	0.01	0.0057	0.4	0.01	0.01	0.4	0%	-10%
		CU%	0.031	0.0086	1.4	0.027	0.0087	1.1	0.027	0.01	1.1	1%	-19%
		PB%	7.23	1.053	2.0	3.87	1.055	1.4	3.87	1.06	1.4	0%	-31%
		ZN%	3.51	0.902	1.5	3.07	0.901	1.2	3.07	0.90	1.2	0%	-17%

Source: Kirkham 2021

The cut thresholds applied to La Bocona zone composites are 700 g/t silver, 5 g/t gold, 1.4% copper, 15% lead and 10% zinc and 700 g/t silver, 2.5 g/t gold, 0.5% copper, 15% lead and 8% zinc at the South Skarn zone.

In contrast, the variability that is evident at La Bocona and South Skarn, has been adequately addressed through the grade limiting strategy as shown in Table 14-10 and Table 14-11.

Table 14-10 Outlier Cutting Analysis for the La Bocona Zone

CODE	ZONE	METAL	Max	Mean	CV	Max	Mean	CV	Max	Mean	CV	Mean	CV
1	La Bocona HW1	AG	602	71.11	2.2	482.28	71.11	1.8	482.28	71.11	1.8	0%	-19%
		AU	3.02	0.14	3.4	1.556	0.14	2.6	1.5	0.14	2.6	-3%	-24%
		CU%	1.965	0.30	1.6	1.577	0.30	1.3	1.4	0.29	1.2	-3%	-26%
		PB%	5.31	0.37	3.0	4.79	0.37	2.8	4.79	0.37	2.8	0%	-6%
		ZN%	0.48	0.17	1.0	0.48	0.16	0.9	0.48	0.16	0.9	-1%	-10%
2	La Bocona HW2	AG	530	72.44	2.0	364.53	72.44	1.3	364.53	72.44	1.3	0%	-35%
		AU	0.413	0.05	1.4	0.147	0.05	0.8	0.147	0.05	0.8	0%	-40%
		CU%	0.54	0.07	1.9	0.402	0.07	1.4	0.402	0.07	1.4	0%	-25%
		PB%	13.15	1.26	2.2	5.85	1.26	1.4	5.85	1.26	1.4	0%	-36%
		ZN%	32.18	1.04	3.8	7.09	1.04	1.7	7.09	1.04	1.7	0%	-55%
3	La Bocona HW3	AG	543	140.15	1.4	263.36	140.15	0.8	263.36	140.15	0.8	0%	-43%
		AU	4.71	0.12	3.4	4.71	0.12	3.0	0.185	0.13	0.4	9%	-87%
		CU%	0.022	0.01	0.7	0.012	0.01	0.1	0.012	0.01	0.1	-1%	-79%
		PB%	12.7	3.22	1.5	6.02	3.22	0.8	6.02	3.22	0.8	0%	-45%
		ZN%	1.34	0.72	0.7	1.19	0.72	0.6	1.19	0.72	0.6	0%	-20%
4	La Bocona Main Sulphide	AG	3,180	85.56	2.9	2,323.83	88.34	2.4	700	76.10	1.8	-11%	-36%
		AU	0.421	0.13	1.2	0.185	0.13	0.4	1.5	0.10	2.0	-19%	66%
		CU%	11.2	0.19	3.8	11.2	0.20	3.3	1.4	0.16	1.8	-15%	-52%
		PB%	58.81	1.36	3.2	42.79	1.43	2.7	15	1.26	2.2	-7%	-31%
		ZN%	21.5	1.07	2.5	16.56	1.11	2.1	10	1.06	2.0	-1%	-22%
10	Muralla Gold Sulphide	AG	770	275.51	1.3	275.52	275.52						
		AU	0.224	0.09	1.2	0.086	0.09						
		CU%	0.096	0.04	1.2	0.037	0.04						
		PB%	17.9	6.41	1.3	6.41	6.41						
		ZN%	11.1	4.10	1.3	4.1	4.10						
20	Muralla Main	AG	528	97.63	1.5	525	97.63	1.3	525	97.63	1.3	0%	-17%
		AU	5.35	0.84	1.8	5.13	0.84	1.7	1.5	0.46	1.2	-45%	-33%
		CU%	0.254	0.04	1.7	0.216	0.04	1.5	0.216	0.04	1.5	0%	-10%
		PB%	15.1	2.44	1.5	15.1	2.44	1.3	15	2.44	1.3	0%	-12%
		ZN%	8.5	1.13	1.3	3.3	1.13	1.0	3.3	1.13	1.0	0%	-22%
21	Muralla HW1	AG	1,190	169.93	1.6	1,002.93	169.93	1.3	700	158.21	1.2	-7%	-26%
		AU	2.7	0.20	2.2	1.483	0.20	1.5	1.483	0.20	1.5	0%	-33%
		CU%	0.232	0.02	1.6	0.145	0.02	1.3	0.145	0.02	1.3	0%	-19%
		PB%	23.44	3.09	1.6	17.58	3.09	1.3	15	3.00	1.3	-3%	-21%
		ZN%	29.5	0.90	2.3	6.63	0.90	1.4	6.63	0.90	1.4	0%	-40%
22	Muralla HW2	AG	2,430	138.13	1.9	892	138.13	1.2	700	135.99	1.2	-2%	-36%
		AU	7.84	0.39	2.3	6.528	0.39	2.0	1.5	0.31	1.3	-20%	-45%
		CU%	0.365	0.02	1.7	0.18	0.02	1.2	0.18	0.02	1.2	0%	-27%
		PB%	53.53	2.31	2.0	14.9	2.31	1.3	14.9	2.31	1.3	0%	-36%
		ZN%	14.15	1.11	2.1	11.7	1.11	1.8	10	1.09	1.7	-2%	-19%

Source: Kirkham 2021

Table 14-11 Outlier Cutting Analysis for the South Skarn Zone

CODE	ZONE	METAL	#	Length (m)	Min	Max	Mean	CV	Max	Mean	CV	Max	Mean	CV	Mean	CV
40	Muralla Gold Oxide	AU	92	121	0	34.6	1.70	2.5	31.258	1.70	2.3	5	1.16	1.3	-32%	-49%
		AG	92	121	0	107	25.00	1.0	107	25.00	0.9	107	25.00	0.9	0%	-11%
		CU%	92	121	0	0.132	0.02	1.5	0.13	0.02	1.4	0.13	0.02	1.4	0%	-6%
		PB%	92	121	0	8.74	0.78	1.8	7.59	0.78	1.6	7.59	0.78	1.6	0%	-9%
		ZN%	92	121	0	5.98	0.56	1.6	5.36	0.56	1.5	5.36	0.56	1.5	0%	-10%
41	Muralla HW1	AU	8	13.85	0.006	0.108	0.05	0.8	0.1	0.05	0.7	0.1	0.05	0.7	0%	-10%
		AG	8	13.85	1.1	125	43.12	1.1	125	43.12	1.0	125	43.12	1.0	0%	-7%
		CU%	8	13.85	0.001	0.011	0.00	0.8	0.009	0.00	0.7	0.009	0.00	0.7	3%	-16%
		PB%	8	13.85	0	0.46	0.12	1.5	0.41	0.12	1.4	0.41	0.12	1.4	0%	-9%
		ZN%	8	13.85	0.09	1.27	0.53	0.8	1.2	0.53	0.8	1.2	0.53	0.8	0%	-9%
42	Muralla HW2	AU	13	18.8	0.021	2.82	0.55	1.4	2.63	0.55	1.2	1.5	0.46	0.9	-17%	-35%
		AG	13	18.8	6.8	236	28.50	1.7	107.8	28.50	1.1	107.8	28.50	1.1	0%	-38%
		CU%	13	18.8	0.001	0.23	0.02	2.2	0.136	0.02	1.6	0.136	0.02	1.6	0%	-28%
		PB%	13	18.8	0.01	6.25	0.58	2.5	3.86	0.58	1.9	3.86	0.58	1.9	0%	-26%
		ZN%	13	18.8	0.05	5.44	0.55	2.2	3.18	0.55	1.6	3.18	0.55	1.6	0%	-28%
44	La Bocona Main Oxide	AU	81	130.3	0.002	2.14	0.12	2.7	2.14	0.12	2.5	1.5	0.11	2.3	-6%	-17%
		AG	81	130.3	0.8	358	34.70	1.8	358	34.70	1.7	358	34.70	1.7	0%	-6%
		CU%	81	130.3	0.001	1.875	0.09	3.0	1.875	0.09	2.7	1.4	0.08	2.4	-6%	-19%
		PB%	81	130.3	0	2.46	0.47	1.4	2.46	0.47	1.2	2.46	0.47	1.2	0%	-12%
		ZN%	81	130.3	0.01	12	0.95	2.0	10.95	0.95	1.8	10	0.94	1.8	-1%	-14%

Source: Kirkham 2021

14.7 SPECIFIC GRAVITY ESTIMATION

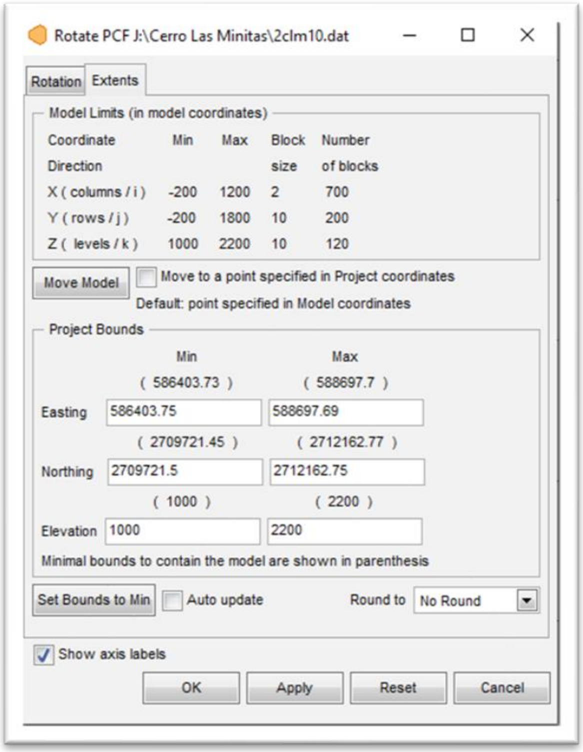
Bulk densities were based on a total of 1,201 individual measurements taken by Southern field personnel from key mineralized zones throughout the La Bocona and South Skarn zones along with the Skarn Front Zone, the Las Victorias Zone and to a lesser extent, the Blind and El Sol Zones. These density values ranged from 1.51 t/m^3 to 5.33 t/m^3 and average to 2.98 t/m^3. Specific gravities were calculated on a block-by-block basis by interpolating the SG measurements using inverse distance to the second power and limited within the individual mineralized zone solids. A default density of 2.8 t/m^3 was assigned to any blocks that were not assigned a calculated value.

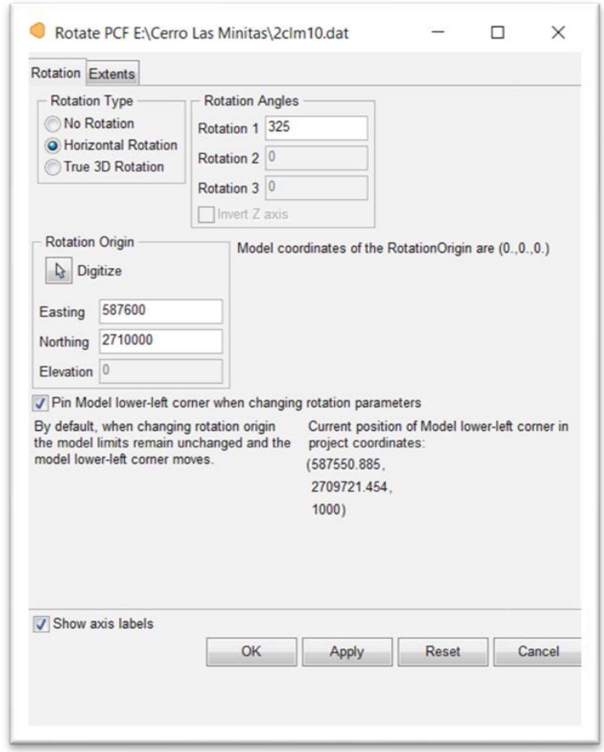
14.8 VARIOGRAPHY

Experimental variograms and variogram models in the form of correlograms were generated for silver, gold, copper, lead and zinc grades. However, the individual zones do not have sufficient data to generate meaningful variogram results. For this reason, it was decided at this time to use inverse distance to the third power for the Skarn zone and inverse distance to the second power for all other zones as the interpolator.

14.9 BLOCK MODEL DEFINITION

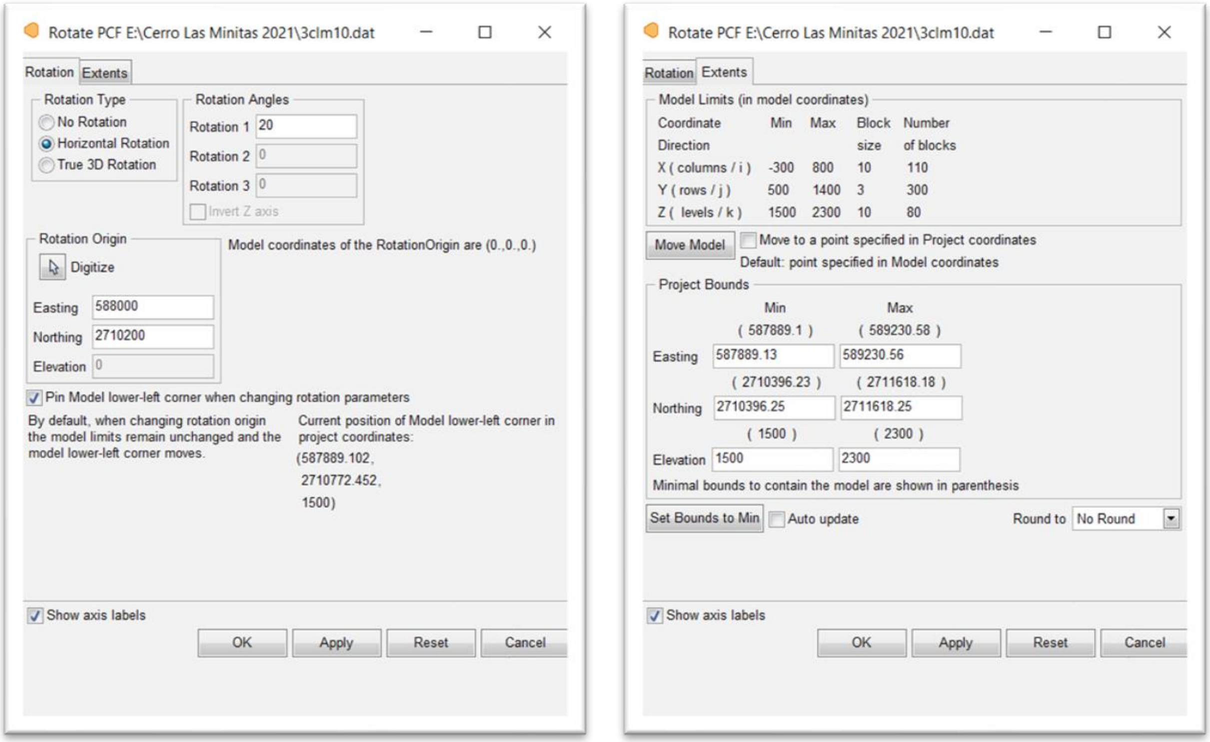
The block model used to estimate the resources was defined according to the limits specified in Figure 14-18, Figure 14-19 and Figure 14-20. The block model is orthogonal and non-rotated, reflecting the orientation of the deposit. The chosen block size was 10 m by 10 m by 2 m, roughly reflecting the drill hole spacing (i.e., 4–6 blocks between drill holes) which is spaced at approximately 50 m centres. Note: MineSight™ uses the centroid of the blocks as the origin.





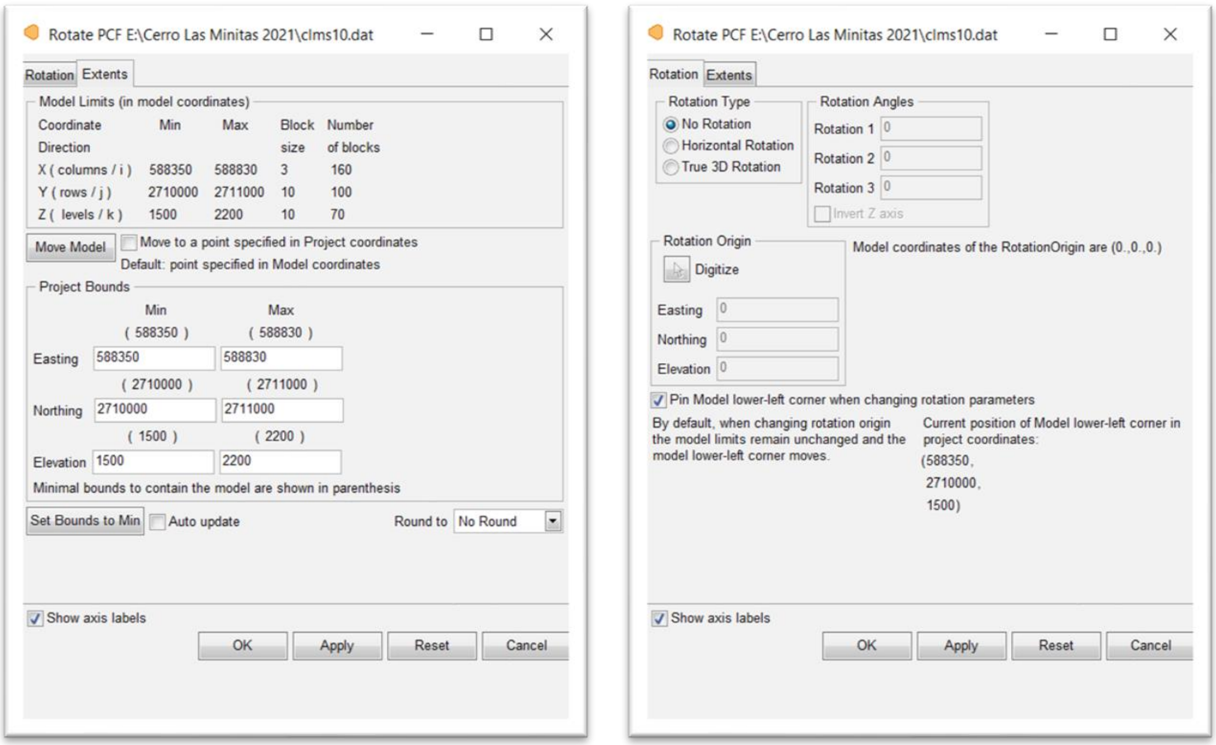
Source: Kirkham 2021

Figure 14-18: Dimensions, Origin and Orientation for the Skarn, Blind and El Sol Zone Block Model



Source: Kirkham 2021

Figure 14-19: Dimensions, Origin and Orientation for the La Bocona Zone Block Model



Source: Kirkham 2021

Figure 14-20: Dimensions, Origin and Orientation for the South Skarn Zone Block Model

14.10 RESOURCE ESTIMATION METHODOLOGY

The resource estimation plan includes the following items:

- Mineralized zone code and percentage of modelled mineralization in each block.
- Estimated block silver, gold, copper, lead, and zinc grades by inverse distance to the third power, using a two-pass estimation strategy for the mineralized zone. The two passes enable better estimation of local metal grades and infill of interpreted solids.
- Interpolation of potentially deleterious elements; arsenic, antimony and iron.
- Interpolation of important contributors to "potential acid mine drainage" such as Calcium% and Sulphur%.

Table 14-12 summarizes the search ellipse dimensions for the two estimation passes for each zone.

Table 14-12: Search Ellipse Parameters for the Cerro Las Minitas Deposit

Zone	Pass	Major Axis	Semi-Major Axis	Minor Axis	1st Rotation Angle Azimuth	2nd Rotation Angle Dip	3rd Rotation Angle	Min. No. Of Comps	Max. No. Of Comps	Max. Samples per Drill Hole
Blind	1	100	100	20	50	-90	0	2	12	4
El Sol	1	100	100	20	225	-80	0	2	12	4
Las Victorias	1	100	100	20	225	-80	0	2	12	4
Skarn*	1	100	100	20	145	-75	0	2	12	4
La Boconas Sulphide	1	100	100	20	50	-90	0	3	9	3
La Boconas Oxide	1	60	60	60	0	0	0	3	9	3
South Skarn	1	100	100	100	0	0	0	2	12	4
La Boconas Sulphide	2	100	100	100	0	0	0	2	9	3
La Boconas Oxide	2	100	100	100	0	0	0	2	9	3
South Skarn	2	100	100	20	225	-80	0	2	12	4
Blind	2	150	150	25	50	-90	0	1	12	4
El Sol	2	150	150	25	225	-80	0	1	12	4
Las Victorias	2	150	150	25	-80	0	0	1	12	4
Skarn*	2	150	150	25	280	-75	0	1	12	4

Source: Kirkham 2021
*See Section 14.11

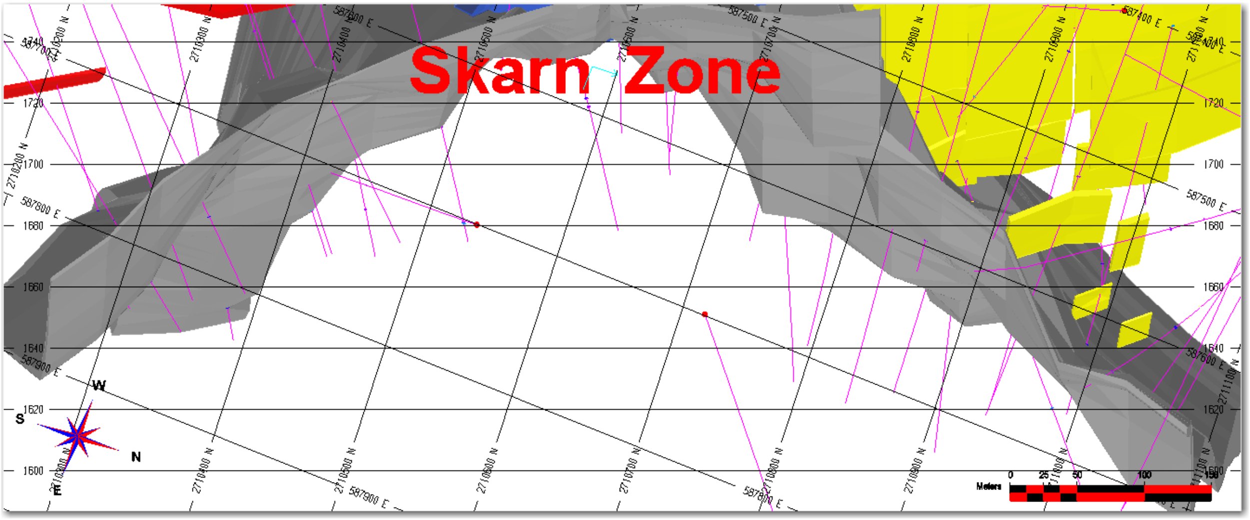
14.11 RELATIVE ELEVATION ESTIMATION FOR SKARN ZONE

The Skarn Zone is a deposit that poses a number of challenges with respect to modeling and interpolation. The first challenge is that, based on data and observations, the mineralization, and more importantly, the grade is layered or banded. In addition, due to the abrupt change in strike of the deposit and undulations as shown in Figure 14-14, using a standard oriented ellipse to guide the estimation process does not account for, nor does it adequately deal with, significant changes in dip, and more importantly, the layered deposits that are angled.

Grades in the model have been estimated using inverse distance. In an attempt to adequately account for the changes in strike and dip, a *relative elevation* modeling approach has been used. Distances relative to the footwall contact of the domains are stored in both model blocks and composited drill hole samples. These Footwall Distance Values (FWDIS) are linked during interpolation to ensure that samples will only correlate with data within its stratigraphic position.

These relative elevations essentially *flatten out* the deposit for interpolation. Using relative elevations are a reflection of the continuity of the mineralization in relation to the orientation of the deposit.

The grade models have been developed using the relative elevation approach (as described in this section) and anisotropic search ellipses.



Source: Kirkham 2021

Figure 14-21: Plan View of Skarn Deposit Illustrating Estimation Challenges

14.12 RESOURCE VALIDATION

A graphical validation was completed on the block model. This type of validation serves the following purposes:

- Checks the reasonableness of the estimated grades based on the estimation plan and the nearby composites;
- Checks that the general drift and the local grade trends compare to the drift and local grade trends of the composites;
- Ensures that all blocks in the core of the deposit have been estimated;
- Checks that topography has been properly accounted for;
- Checks against manual approximate estimates of tonnages to determine reasonableness; and
- Inspects for and explains potentially high-grade block estimates in the neighbourhood of the extremely high assays.

A full set of cross sections, long sections and plans were used to digitally check the block model; these showed the block grades and composites. There was no indication that a block was wrongly estimated, and it appears that every block grade could be explained as a function of the surrounding composites and the applied estimation plan.

The validation techniques included the following:

- Visual inspections on a section-by-section and plan-by-plan basis;
- Use of grade-tonnage curves;
- Swath plots comparing kriged estimated block grades with inverse distance and nearest neighbour estimates; and
- Inspection of histograms showing distance from first composite to nearest block, and average distance to blocks for all composites (this gives a quantitative measure of confidence that blocks are adequately informed in addition to assisting in the classification of resources).

14.13 MINERAL RESOURCE CLASSIFICATION

Mineral resources were estimated in conformity with generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines* (2003). Mineral resources are not mineral reserves and do not have demonstrated economic viability.

The mineral resources may be impacted by further infill and exploration drilling that may result in an increase or decrease in future resource evaluations. The mineral resources may also be affected by subsequent assessment of mining, environmental, processing, permitting, taxation, socio-economic and other factors. There is insufficient information in this early stage of study to assess the extent to which the mineral resources will be affected by factors such as these that are more suitably assessed in a scoping or conceptual study. As such, a Preliminary Economic Assessment is recommended.

Mineral resources for the Cerro Las Minitas deposit were classified according to the *CIM Definition Standards for Mineral Resources and Mineral Reserves* (2014) by Garth Kirkham, P.Geo., an “independent qualified person” as defined by National Instrument 43-101.

Drill hole spacing in the Cerro Las Minitas deposit is sufficient for preliminary geostatistical analysis and evaluating spatial grade variability. Kirkham Geosystems is, therefore, of the opinion that the amount of sample data is adequate to demonstrate very good confidence in the grade estimates for the deposit.

The estimated blocks were classified according to the following:

- Confidence in interpretation of the mineralized zones;
- Number of data used to estimate a block;
- Number of composites allowed per drill hole; and
- Distance to nearest composite used to estimate a block.

The classification of resources was based primarily on distance to the nearest composite; however, all of the quantitative measures, as listed here, were inspected and taken into consideration. In addition, the classification of resources for each zone was considered individually by virtue of their relative depth from surface and the ability to derive meaningful geostatistical results.

Blocks were classified as indicated if they were within approximately 50 m of a composite and were interpolated with a minimum of two drill holes. Note: There were no blocks classified as Measured resources. Blocks were classified as Inferred if the nearest composite was less than 100 m from the block being estimated. Furthermore, an interpreted boundary was created for the indicated and inferred threshold in order to exclude orphans and reduce “spotted dog” effect. The remaining blocks were unclassified and may be considered as geologic potential for further exploration.

Furthermore, in consideration for the requirement for resources to possess a “reasonable prospect of eventual economic extraction” (RP3E), underground mineable shapes were created that displayed continuity based on cut-off grades and classification. Additionally, these RP3E shapes also took into account must-take material that may fall below cut-off grade but will be extracted by mining in the event that adjacent economic material is extracted making below cut-off material by virtue of the mining costs being paid for.

14.14 NSR CALCULATION

As discussed within the Metallurgical Section 13, the reporting of mineral resources are based on the NSR $US/tonne cut-off of US$60. The parameters that were considered for the NSR calculation are listed in Table 14-13.

Table 14-13: NSR Calculation Parameters

Item	Sulfides					Oxides
	Pb Concentrate		Zn Concentrate		Cu Conc.	Ag-Au Leach
Mineral Type	Skarn	BESS	Skarn	BESS	Skarn	
Pb Recovery	84%	90%				
Zn Recovery			95%	78%		
Cu Recovery					60%	
Ag Recovery	77%	79%	8%	12%	7%	74%
Au Recovery						70%
Payable Metals	Pb, Ag	Pb, Ag	Zn, Ag	Zn, Ag	Cu, Ag	Au, Ag
Concentrate Grade (primary base metal)	65%	64%	54%	52%	27%	
Transport, Treatment, Penalty Charges, $ dmt	230	267	358	364	183	
Base metal Concentrate Grade Deduction	3 units	3 units	8 units	8 units	1 unit	
Ag Concentrate Grade Deduction, g/t	50	50	93	93		
Ag Refining charge, $/oz	0.6	0.6			0.4	
Base metal Refining, $/lb					0.107	
Ag payable					90%	

Source: Kirkham 2021

14.15 SENSITIVITY OF THE BLOCK MODEL TO SELECTION CUT-OFF GRADE

The mineral resources are sensitive to the selection of cut-off grade. Table 14-14 shows the total resources for all metals at varying NSR cut-off grades. The reader is cautioned that these values should not be misconstrued as a mineral reserve. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of cut-off grades.

Note: The base case cut-off grades presented in Table 14-15 and Table 14-16 are based on potentially underground, mineable resources at the base case of $60 NSR.

Table 14-14: Sensitivity Analyses at Various NSR Cut-off Grades for Indicated and Inferred Resources

Indicated								
BZESS								
Cutoff	Tonnes	$NSR	Ag g/t	Au g/t	Pb%	Zn%	Cu%	AgEq g/t
40	15,734,534	103.50	81.93	0.05	0.98	2.80	0.14	283.55
50	12,822,746	116.90	92.31	0.05	1.10	3.20	0.15	320.54
60	**10,754,458**	**129.00**	**102.42**	**0.05**	**1.18**	**3.54**	**0.16**	**352.98**
70	9,245,923	139.50	111.22	0.06	1.24	3.84	0.17	381.16
80	7,924,463	150.30	120.47	0.06	1.30	4.15	0.18	410.33
90	6,686,749	162.60	129.43	0.06	1.39	4.55	0.19	445.07
100	5,945,498	171.10	136.93	0.07	1.44	4.79	0.20	467.76
La Bocona								
40	2,047,863	116.27	111.91	0.16	1.84	1.39	0.18	266.73
50	1,811,986	125.61	121.27	0.18	2.01	1.50	0.18	281.75
60	**1,570,866**	**136.49**	**132.43**	**0.19**	**2.23**	**1.62**	**0.17**	**302.44**
70	1,341,070	148.85	145.48	0.21	2.47	1.75	0.17	324.88
80	1,154,029	160.93	157.54	0.22	2.68	1.91	0.17	348.84
90	977,392	174.87	172.86	0.25	2.97	1.98	0.17	372.37
100	873,678	184.47	182.43	0.26	3.15	2.08	0.18	389.52
Total								
40	17,782,397	104.97	85.38	0.06	1.08	2.64	0.14	281.61
50	14,634,732	117.98	95.90	0.07	1.21	2.99	0.15	315.74
60	**12,325,324**	129.95	106.24	0.07	1.32	3.29	0.16	346.54
70	10,586,993	140.68	115.56	0.07	1.39	3.58	0.17	374.03
80	9,078,492	151.65	125.18	0.08	1.47	3.87	0.18	402.51
90	7,664,141	164.16	134.97	0.09	1.59	4.22	0.19	435.80
100	6,819,176	172.81	142.75	0.09	1.66	4.44	0.20	457.74

Inferred								
BZESS								
Cutoff	**Tonnes**	**$NSR**	**Ag g/t**	**Au g/t**	**Pb%**	**Zn%**	**Cu%**	**AgEq g/t**
40	21,912,315	97.90	88.00	0.09	0.76	2.11	0.24	257.13
50	18,522,793	107.80	97.76	0.10	0.84	2.31	0.25	282.17
60	**14,759,386**	**121.50**	**111.72**	**0.10**	**0.93**	**2.60**	**0.26**	**316.32**
70	12,720,476	130.70	121.18	0.11	0.99	2.76	0.28	338.94
80	10,472,784	142.70	133.24	0.12	1.07	3.00	0.30	369.16
90	8,227,003	158.60	147.34	0.13	1.20	3.39	0.32	411.79
100	6,461,741	176.20	165.24	0.15	1.35	3.75	0.33	455.88
La Bocona								
40	1,363,487	101.41	92.23	0.18	1.09	1.89	0.17	255.51
50	1,208,753	108.76	98.49	0.19	1.17	2.06	0.18	273.82
60	**1,056,523**	**116.56**	**105.66**	**0.20**	**1.27**	**2.20**	**0.18**	**292.91**
70	850,024	129.41	117.41	0.23	1.41	2.44	0.20	316.29
80	731,514	138.32	125.59	0.24	1.48	2.62	0.22	338.45
90	608,875	149.44	137.52	0.27	1.64	2.71	0.24	357.82
100	534,544	157.12	145.63	0.29	1.76	2.76	0.26	369.31
South Skarn								
40	5,488,076	105.16	112.90	0.16	1.61	1.08	0.08	250.62
50	4,644,540	116.13	125.09	0.17	1.77	1.19	0.08	276.34
60	**3,789,440**	**130.00**	**139.60**	**0.18**	**2.00**	**1.34**	**0.09**	**309.11**
70	2,873,051	150.87	161.30	0.13	2.40	1.58	0.07	353.18
80	2,354,938	168.01	179.18	0.13	2.71	1.74	0.08	391.92
90	1,891,863	188.60	201.58	0.12	3.05	1.94	0.09	438.25
100	1,670,778	201.08	214.04	0.12	3.29	2.07	0.09	466.88
Total								
40	28,763,878	99.45	92.95	0.11	0.93	1.90	0.21	255.81
50	24,376,086	109.44	103.00	0.12	1.03	2.09	0.22	280.65
60	**19,605,350**	122.88	116.78	0.12	1.16	2.34	0.23	313.67
70	16,443,551	134.16	127.99	0.12	1.26	2.54	0.24	340.26
80	13,559,236	146.86	140.81	0.13	1.38	2.76	0.26	371.46
90	10,727,741	163.37	156.35	0.14	1.55	3.10	0.28	413.39
100	8,667,063	179.82	173.44	0.15	1.75	3.37	0.28	452.66

Source: Kirkham 2021

Notes:

1) The current Resource Estimate was prepared by Garth Kirkham, P.Geo., of Kirkham Geosystems Ltd.
2) *All mineral resources have been estimated in accordance with Canadian Institute of Mining and Metallurgy and Petroleum ("CIM") definitions, as required under National Instrument 43-101 ("NI43-101").*
3) Mineral resources were constrained using mainly geological constraints and approximate 10g/t AgEq grade threshold.
4) AgEq cut-off values were calculated using average long-term prices of $20/oz Ag, $1,650/oz Au, $3.25/lb Cu, $1.0/lb Pb and $1.20/lb Zn and metal recoveries of 82% silver, 86% lead, 80% copper and 80% zinc. Base case cut-off grade assumed $75/tonne operating and sustaining costs. All prices are stated in $USD.
5) Contained metal calculations assume 100% recoveries.
6) An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

7) Mineral resources are not mineral reserves until they have demonstrated economic viability. Mineral resource estimates do not account for a resource's mineability, selectivity, mining loss, or dilution. All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely.

14.16 MINERAL RESOURCE STATEMENT

Table 14-15 shows the Mineral Resource Statement for the Cerro Las Minitas deposit.

The Qualified Person evaluated the resource in order to ensure that it meets the condition of "reasonable prospects of eventual economic extraction" as suggested under NI 43-101. The criteria considered were confidence, continuity and economic cut-off. The resource listed below is considered to have "reasonable prospects of eventual economic extraction".

The Mineral Resource Estimate which updates the previously reported estimate, incorporates data from new drilling conducted in 2020-2021 that successfully delineated a major new deposit on the project and significantly increased the resource base in both the Indicated and Inferred Resource categories.

Table 14-15: Base-case Total Mineral Resources at $60 NSR Cut-off

Indicated Resources		Average Grade							
Zone	Tonnes (Kt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Cu (%)	AgEq (g/t)	ZnEq (%)	NSR (US$/t)
Blind Zone	2,347	97	0.04	1.9	2.1	0.11	295	7.2	108
El Sol Zone	1,154	80	0.04	2.2	2.0	0.09	279	6.8	100
Skarn Front Zone	7,254	108	0.06	0.8	4.2	0.19	383	9.3	140
La Bocona Zone	1,571	132	0.19	2.2	1.6	0.17	302	7.3	136
Total	**12,325**	**106**	**0.07**	**1.3**	**3.3**	**0.16**	**347**	**8.4**	**130**

Inferred Resources		Average Grade							
Zone	Tonnes (Kt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Cu (%)	AgEq (g/t)	ZnEq (%)	NSR (US$/t)
Blind Zone	1,347	83	0.14	1.4	1.8	0.06	248	6.0	88
El Sol Zone	863	65	0.03	1.8	2.3	0.05	263	6.4	90
Las Victorias Zone	1,083	148	0.66	2.1	2.6	0.14	431	10.5	145
Skarn Front Zone	11,466	115	0.05	0.7	2.7	0.32	318	7.7	126
South Skarn Zone	3,789	140	0.18	2.0	1.3	0.09	309	7.5	130
La Bocona Zone	1,057	106	0.20	1.3	2.2	0.18	293	7.1	117
Total	**19,605**	**117**	**0.12**	**1.2**	**2.3**	**0.23**	**314**	**7.6**	**123**

Source: Kirkham 2021

Indicated Resources		Contained Metal						
Zone	Tonnes (Kt)	Ag TrOz (000's)	Au TrOz (000's)	Pb (Mlbs)	Zn (Mlbs)	Cu (Mlbs)	AgEq TrOz (000's)	ZnEq Lbs (Mlbs)
Blind Zone	2,347	7,350	3	99	109	5.5	22,291	371
El Sol Zone	1,154	2,956	2	55	51	2.2	10,337	172
Skarn Front Zone	7,254	25,106	14	126	678	30.7	89,421	1,490
La Bocona Zone	1,571	6,688	10	77	56	6.0	15,275	255
Total	**12,325**	**42,100**	**28**	**358**	**895**	**44**	**137,323**	**2,288**

Inferred Resources		Contained Metal						
Zone	Tonnes (Kt)	Ag TrOz (000's)	Au TrOz (000's)	Pb (Mlbs)	Zn (Mlbs)	Cu (Mlbs)	AgEq TrOz (000's)	ZnEq Lbs (Mlbs)
Blind Zone	1,347	3,582	6	40	55	2	10,749	179
El Sol Zone	863	1,816	1	35	43	1	7,283	121
Las Victorias Zone	1,083	5,152	23	51	62	3	15,006	250
Skarn Front Zone	11,466	42,462	18	177	687	80	117,065	1,951
South Skarn Zone	3,789	17,007	22	167	112	7	37,660	628
La Bocona Zone	1,057	3,589	7	30	51	4	9,950	166
Total	**19,605**	**73,610**	**78**	**500**	**1,009**	**98**	**197,712**	**3,295**

Source: Kirkham 2021

Notes:

1) The current Resource Estimate was prepared by Garth Kirkham, P.Geo., of Kirkham Geosystems Ltd.
2) *All mineral resources have been estimated in accordance with Canadian Institute of Mining and Metallurgy and Petroleum ("CIM") definitions, as required under National Instrument 43-101 ("NI43-101").*
3) Mineral resources were constrained using continuous mining units demonstrating reasonable prospects of eventual economic extraction.
4) Silver Equivalents were calculated from the interpolated block values using relative recoveries and prices between the component metals and silver to determine a final AgEq value. The same methodology was used to calculate the ZnEq value.
5) Mineral resources are not mineral reserves until they have demonstrated economic viability. Mineral resource estimates do not account for a resource's mineability, selectivity, mining loss, or dilution.
6) An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
7) All figures are rounded to reflect the relative accuracy of the estimate and therefore numbers may not appear to add precisely.
8) The $60/t NSR cut-off value was calculated using average long-term prices of $20/oz. silver, $1,650/oz. gold, $3.25/lb. copper, $1.0/lb. lead and $1.20/lb. zinc. Metallurgical work from locked cycle testwork produced three saleable concentrates for the Skarn zone and testwork on a composite of the Blind, El Sol and Las Victorias Zones produced two saleable concentrates. This work, along with marketing studies were used to decide the NSR cut-off value. Concentrate grades and other parameters used to calculate the cut-off and NSR values are shown in Table 3. All prices are stated in $USD.

Table 14-16: Oxide Mineral Resource Estimate for CLM Project Utilizing a US$60/t NSR cut-off value

La Bocona		Average Grade			Contained Metal	
	Tonnes (kt)	Ag (g/t)	Au (g/t)	NSR (US$/t)	Ag TrOz (koz)	Au TrOz (koz)
Indicated	65	28	2.2	93	58	4.5
Inferred	219	120	0.8	88	844	5.6

Source: Kirkham 2021

Notes: The $60/t NSR cut-off value was calculated using average long-term prices of $20/oz. silver, $1,650/oz. gold. Base metals were not recovered in the leach circuit. Metallurgical work from batch test work recovered 74% silver from oxidized composites from the Blind – El Sol zones. Gold recovery was not assessed and is estimated at 70% for the purposes of this report. This work, along with marketing studies were used to decide the NSR cut-off value. All prices are stated in $USD.

14.17 DISCUSSION WITH RESPECT TO POTENTIAL MATERIAL RISKS TO THE RESOURCES

The current political and socio-economic climate in Mexico poses risks and uncertainties that could delay or even stop development as reported within the Fraser Institute Annua Report 2020. It is difficult to gauge or qualify the level or extents of the risks however, all companies working in Mexico must continue to be aware of the potential risks and develop mitigation strategies.

Apart from political and socio-economic risks there are no other known environmental, permitting, legal, taxation, title or other relevant factors that materially affect the resources.

15 MINERAL RESERVE ESTIMATES

There are no reserves to report.

16 MINING METHODS

16.1 INTRODUCTION

The Cerro Las Minitas Project is a deposit that extends from near surface to over one km in depth and ranges in width from approximately 2 m to greater than 20 m. Although some parts of the deposit are near the surface, this deposit has been selected for underground extraction using bulk mining methods. Due to the proximity to an active, albeit a small-scale operation, backfill was considered for both longitudinal and transverse stoping methods. Other bulk mining methods (sub level caving, long hole stoping using pillars) were not considered for this study due to the potential to impact the nearby operation.

16.2 GEOTECHNICAL AND HYDROLOGICAL CONSIDERATIONS

16.2.1 Hydrogeology Considerations

For this Preliminary Economic Assessment, mine water pumping requirements were assumed to be 20-40 l/s throughout the life of the project. As this project continues to advance, data collection, and evaluation on the potential mine water ingress will be completed to improve the accuracy of this assumption.

16.2.2 Geotechnical – Stope Sizes

Observations of core suggests that ground conditions will not be adverse, except for local areas which can be addressed with additional ground support. For this Preliminary Economic Assessment, the maximum span considered for stopes were restricted to practical dimensions that are used at other operations. These dimensions are generally constrained for activities such as drilling, charging, and mucking, rather than geotechnical considerations where ground conditions dictate maximum spans. The stope dimensional considered for the study are summarised in Table 16-1.

Table 16-1: Maximum Stope Spans for Cerro Las Minitas

Method	Height (m)	Length (m)	Width (m)
Longitudinal Longhole Stoping	25	20	<20
Transverse* Longhole Stoping	25	20-25	~20

* Transverse only considered in consistently wide mineralisation over a minimum strike length of 60 m

16.2.3 Geotechnical - Ground Support

Detailed geotechnical studies have not been completed for this study and will be completed as the project advances. For cost estimation purposes, ground support regimes for development were assumed however consistent with other operations that use similar sized openings in good ground conditions. For mine development, ground support consisting of 2.4 m rock bolts and mesh was assumed for all development with cable bolts in all intersections. For intersections in capital and operating development, eight cable bolts (6 m long) and four cable bolts (6 m long) were considered respectively. A summary of the assumed bolting plan is provided in Table 16-2.

Table 16-2: Excavation and Ground Support Standards for Cerro Las Minitas

Excavation Type	Profile			Support Type	Back Support		Wall Support	
	Width	Height	Shape		Length	Spacing	Length	Spacing
Capital Lateral	5.5 m	6.0 m	Arch	Bolts & Mesh	2.4 m	1.2 m	2.4 m	1.2 m
Operating Lateral	5.0 m	5.5 m	Arch	Bolts & Mesh	2.4 m	1.2 m	2.4 m	1.2 m

Support was also considered for stoping activities with six cable bolts (6 m long) assumed for every 20 m panel. Additional work on the geotechnical requirements is recommended and required to advance the project.

16.2.4 Geotechnical - Backfill

The bulk mining methods considered for Cerro Las Minitas are proposed to use paste backfill for stope support. For costing purposes, the following cement binder was considered and has been observed at other operations:

- Stope plug (~8 m) with 6.0 % cement; and,
- Main pour (~17 m) with 3.5 % cement.

The mining study considered all stope voids would be backfilled. Future backfill studies are proposed in future study work to further refine cost estimates. The assumed price for cement is US$150/t.

16.2.5 Geotechnical – Stand-off and Pillar Sizes

Development was positioned to allow for a minimum 2:1 pillar size (minimum lateral offset is 2 x height of opening) where the pillar width was typically a minimum of 10 m. For positioning ramp infrastructure, a minimum of 50 m was considered.

16.3 MINE DILUTION AND MINING RECOVERY

Mining factors are used to account for the combination of dilution and recovery that affects the material quality and quantity of an operation. Dilution is waste material that enters the material movement stream and often has two negative impacts:

- Increased cost (mining, processing, treatment and increasing the storage of tailings); and,
- Increased mined material loss (through processing and impacting on mining recoveries).

There are multiple sources of dilution, which can be classified in the following two categories:

- Planned dilution; and,
- Unplanned dilution.

Planned dilution is additional waste that is deliberately mined concurrently with the target mineralised material, allowing the mineralised material to be recovered albeit at an overall lower grade.

Unplanned dilution is waste material that unintentionally finds its way into the plant-feed during extraction and can be from a variety of sources including:

- Over-break during mining;
- Backfill dilution from adjacent stopes;
- Mucking of waste material (or backfill or road base material) during the mucking of mineralised material;
- Misrouting and dumping of waste material on the plant-feed stockpile; and,
- Misrouting and dumping of waste in mineralized material locations (stockpiles, mineralized material passes) leading to a mixing of mineralised material and waste rock.

Mining loss has a significant impact on the mining business, with a reduction of revenue through the loss of mineralised material. Mining loss can occur in a variety of different ways such as poor blasting, poor recovery of blasted muck, and weak ground conditions impacting on the access to the mineralised material, among others. Mining loss was considered as an allowance for a reduction in production and revenue.

An example of dilution and underbreak, which impacts mining loss, due to blasting performance is illustrated in Figure 16-1. Underbreak in waste is an economic benefit; however, it also reflects that the operation is not achieving the target mining shape.

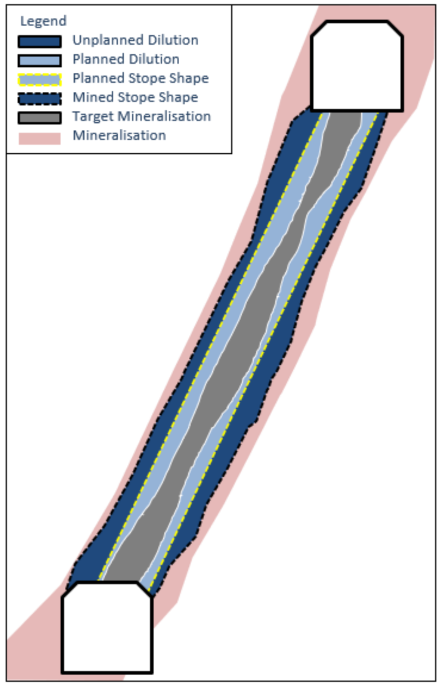


Figure 16-1: Dilution and Mining Loss - Longhole Stoping

For preliminary design at Cerro Las Minitas, planned dilution and unplanned rock dilution was accounted for using the Datamine Mineable Stope Optimiser® (MSO). Unplanned fill dilution and mining loss was applied as a factor to the shapes created by MSO within the schedule. A diagram of the mining shapes and the contact surfaces to which the fill dilution was applied is illustrated in Figure 16-2.

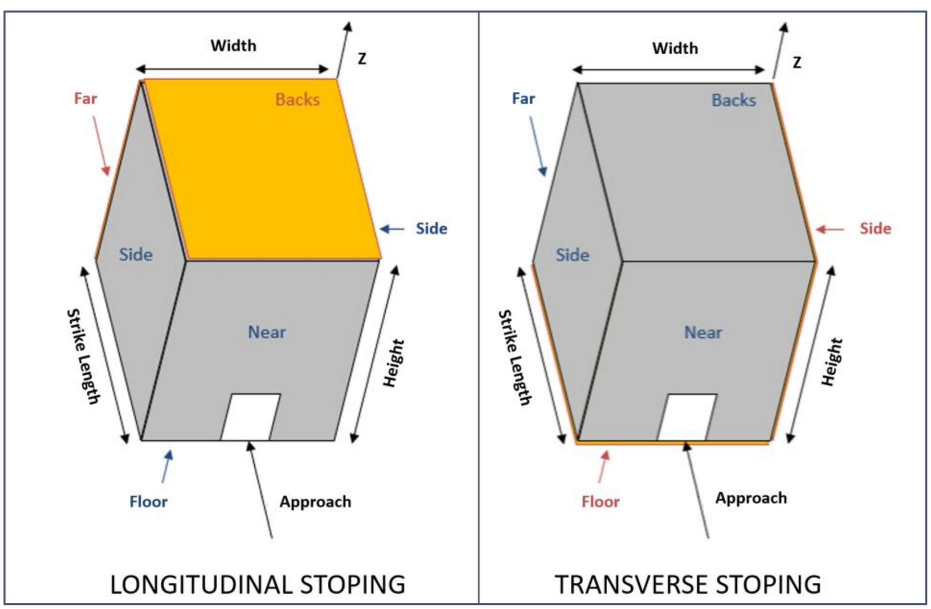


Figure 16-2: Stope Shapes (Longitudinal, left, and Transverse, right) and Fill Dilution Contacts (Orange)

A summary of the surface contacts is shown in Figure 16-2, where mineralisation and waste are included in the mining shape, while fill is added as a factor during post-processing. A summary of the depth of failure by contact type is providing in Table 16-3.

Table 16-3: Mineralisation (M), Waste (W) and Fill (F) Surface Contacts for Each Mining Method

Method	Side	Near	Far	Backs	Floor
Longitudinal Longhole Stoping	W/W	M	F	F	M
Depth of Failure	0.5/0.5	0.0	0.5	0.5	0.0
Transverse Longhole Stoping	M/F	W	W	M	F
Depth of Failure	0.0/0.5	0.5	0.5	0.0	0.25

A prudent approach was taken due to the preliminary nature of the study. Mining recovery for stoping was assumed to be 93% and 97% for development. Unless dilution was interrogated during the MSO process, dilution was assigned zero grade.

Table 16-4: Dilution and Recovery Summary

Description	Value
Total Rock Dilution - Stoping[1]	24.6%
Total Rock Dilution - Development[2]	5%
Fill Dilution – Top Down[3]	4.5%
Fill Dilution – Bottom Up[3]	3.5%
Development Recovery	97%
Stoping Recovery	93%

[1]Included in MSO Shape as Planned and Unplanned Dilution (stoping only)
[2]Applied to Development only (mineralisation only)
[3]Applied as Factor to the volume of the shape (assumed density of backfill 2.0 t/m^3)

16.4 PROPOSED MINING METHODS

Based on the parameters of the deposit, longhole open stoping (LHOS) was selected as the mining method. Two variations of longhole open stoping were considered, depending on the extent and width of the mineralisation. Where the mineralisation is narrower the preferred mining method is longitudinal LHOS, while transverse LHOS is proposed where mineralisation is wider. Both methods are proposed to use paste backfill.

A sublevel spacing of 25 m was selected with a maximum stope strike length of 20 m and maximum widths of approximately 20 m. Due to the size of the excavations, transverse mining will be sequenced bottom-up to minimise backfill failure while longitudinal will be top-down. Table 16-5 summarises the dimensions and mining direction for each method.

Table 16-5: Stope Dimensions by Mining Method

Method	Mineralisation Width	Length	Height	Width	Mining Direction[1]
Longitudinal	≤20 m	20 m	25 m	≤20 m	Top-Down
Transverse	≥20 m	≥20 m	25 m	20 m	Bottom-Up

[1]Predominate direction indicated. Some sequencing variances may occur.

16.4.1 Net Smelter Return (NSR)

A Net Smelter Return (NSR) model was used to estimate the revenue for each block. Preliminary process recoveries, concentrate properties, smelting terms, refining costs, and transportation costs were assumed to determine the final value of metal in each concentrate. The value of each metal was then divided by the estimated feed grade to arrive at a grade multiplier for each metal. These grade multipliers were then applied to the block grades and summed to arrive at the block value.

The unit sales prices of each metal are summarised in Table 16-6. These values differ slightly from the values from the financial model, due to the timing of the study and adjustments to consensus pricing.

Table 16-6: Unit Sale Price per Metal and Exchange Rate

Metal	Unit	Sale Price ($USD) NSR	Sale Price ($USD) Financial Model
Copper	lb	3.64	3.78
Lead	lb	0.95	0.94
Zinc	lb	1.28	1.33
Gold	oz	1,650.00	1,650.00
Silver	oz	21.70	21.95

Based on the NSR values presented in Table 13-7, multipliers estimated by Entech are summarised below in Table 16-7 and were used in the MSO process

Table 16-7: Grade Multipliers ($USD / unit) Used to Estimate NSR in the Block Model

Metal	Unit	Grade Multiplier Skarn Zone	Grade Multiplier Non-Skarn Zone
Copper	$ /%	40.878	Nil
Lead	$ /%	13.651	13.463
Zinc	$ /%	16.399	14.283
Gold	$ /g	Nil	Nil
Silver	$ /g	0.558	0.561

16.4.2 Cut-Off Value

A Cut-Off Value (COV) is used to segregate material by whether the revenue in a block exceeds the costs of extraction and processing of that block. There were three COVs used to assess mining at Cerro Las Minitas: Fully Costed; Incremental; and, Marginal COV.

The fully costed COV represents the mineralized material must meet to cover all the associated operating and sustaining capital costs of extraction and processing.

The incremental COV can be used when the operation has invested in development and access infrastructure and no further investment in development is required to access the material on existing designs. At this stage the COV can exclude the costs of development and partially exclude the costs of sustaining capital. The incremental cut-off would only require that the material value exceed the costs of the incremental surface handing, processing, G&A, mining, and a partial allocation of the sustaining capital.

The marginal COV can be used when the operation has committed to mining and treatment of mineralized material and this process will not generate additional mining costs. At this stage the COV can exclude all mining costs, as these costs will occur whether the material is treated or sent to the waste facility. The marginal COV would only require that the material value exceed the costs of the incremental surface handing, processing, and G&A.

A summary of the included costs in calculating COV are summarised in Table 16-8.

Table 16-8: Costs to be Included in the Various Cut-Off Values

Cut-Off Value	G&A	Processing	Surface Handling	Mining	Sustaining Capital	Operating Development
Fully Costed	Y	Y	Y	Y	Y	Y
Incremental	Y	Y	Y	Y	Partial	N
Marginal	Y	Y	Y	N	N	N

The Cut-Off value was based on previous works completed on Cerro Las Minitas and is summarised in Table 16-9.

Table 16-9: Summary of the Various Cut-Off Values

COV Type	Unit	Sale Price ($USD)
Fully Costed	NSR / t	70
Incremental	NSR / t	64
Marginal	NSR / t	31

16.4.3 Stope Design Parameters

Transverse and longitudinal LHOS both used the same set of stope shapes for design and the key parameters used to generate the shapes are summarised in Table 16-10. Following generation of the shapes, a preliminary evaluation (orphan analysis) was completed to test whether the selected shapes would pay for required development. The parameters used to complete the orphan analysis are summarised in Table 16-11.

Table 16-10: Key MSO Parameters

Parameter	Unit	Value
COV	$/t NSR	64
Minimum Mining Width	m	2.5
Height	m	25
Strike Length	m	5
HW Dilution	m	0.5
FW Dilution	m	0.5

Table 16-11: Key Economic Screening Parameters

Parameter	Unit	Value
Development – Capital – Lateral	$/m	4,500
Development – Operating – Lateral	$/m	4,000
Development – Capital – Vertical	$/m	6,000
Allocated Mining Costs	$/t mined	33
Allocated Milling, G&A Costs	$/t mined	31
Revenue Factor	$ / NSR mined	1

During the orphan process, the stope width was also assessed to considered whether longitudinal or transverse stoping would be preferred. Typically, the wider the stope, the higher productivity can be expected. Figure 16-3 and Figure 16-4 illustrate the stope width as well as whether it was excluded from further analyses during the orphan process. Overall, the average stope width was approximately 16.5 m.

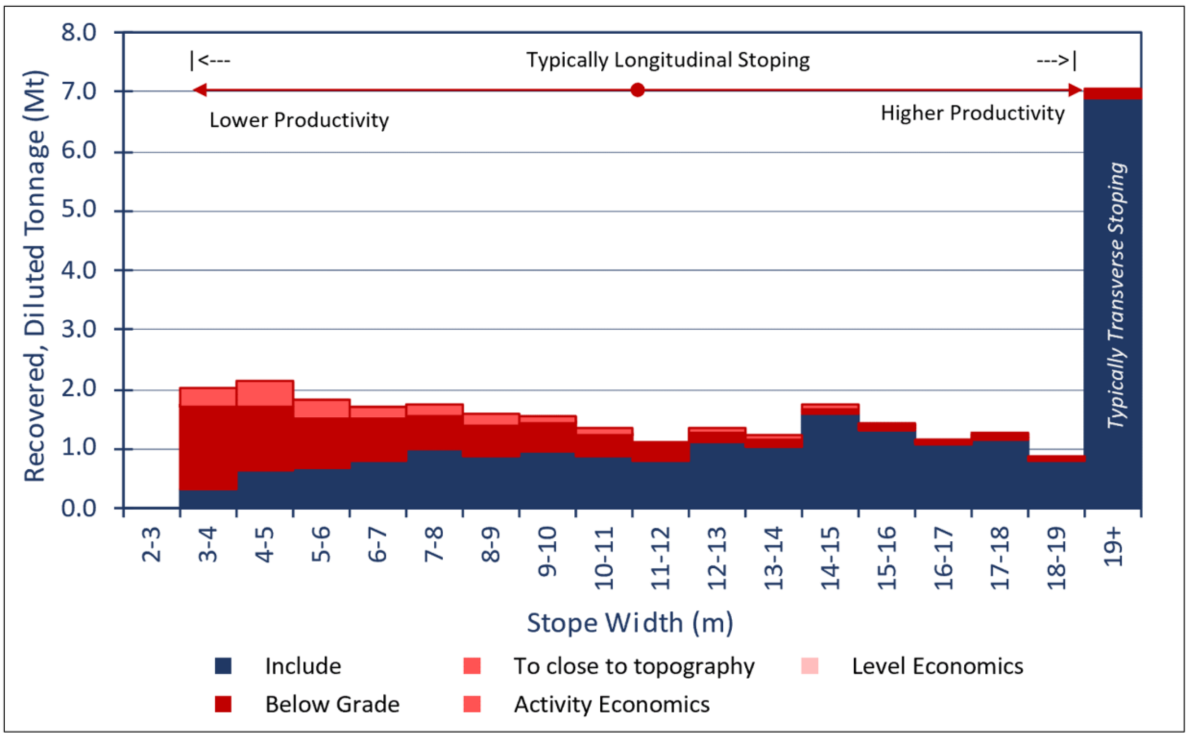


Figure 16-3: MSO Selection following Orphans and Width

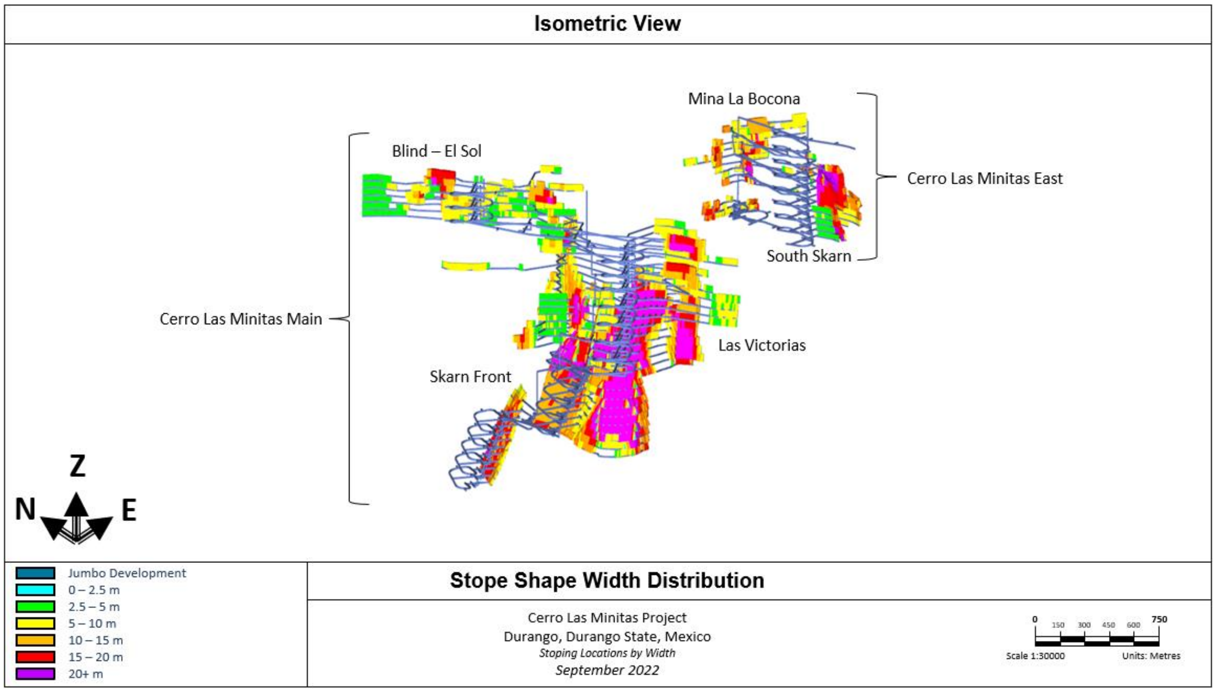


Figure 16-4: Stope Shape Width for Cerro Las Minitas

16.5 UNDERGROUND MINE DESIGN

16.5.1 Mine Operations

Due to the distance between the various geological deposits, the project is separated into two separate underground designs. The Cerro Las Minitas Main, the larger of the two designs, accesses the Blind, El Sol, Las Victorias, and Skarn Front deposits. The Cerro Las Minitas East accesses the Mina La Bocona and South Skarn deposits, and is located to the east of the Cerro Las Minitas Main.

The geological deposits for Cerro Las Minitas are illustrated in Figure 16-5, with a more detailed illustration for Cerro Las Minitas Main and Cerro Las Minitas East in Figure 16-6 and Figure 16-7 respectively.

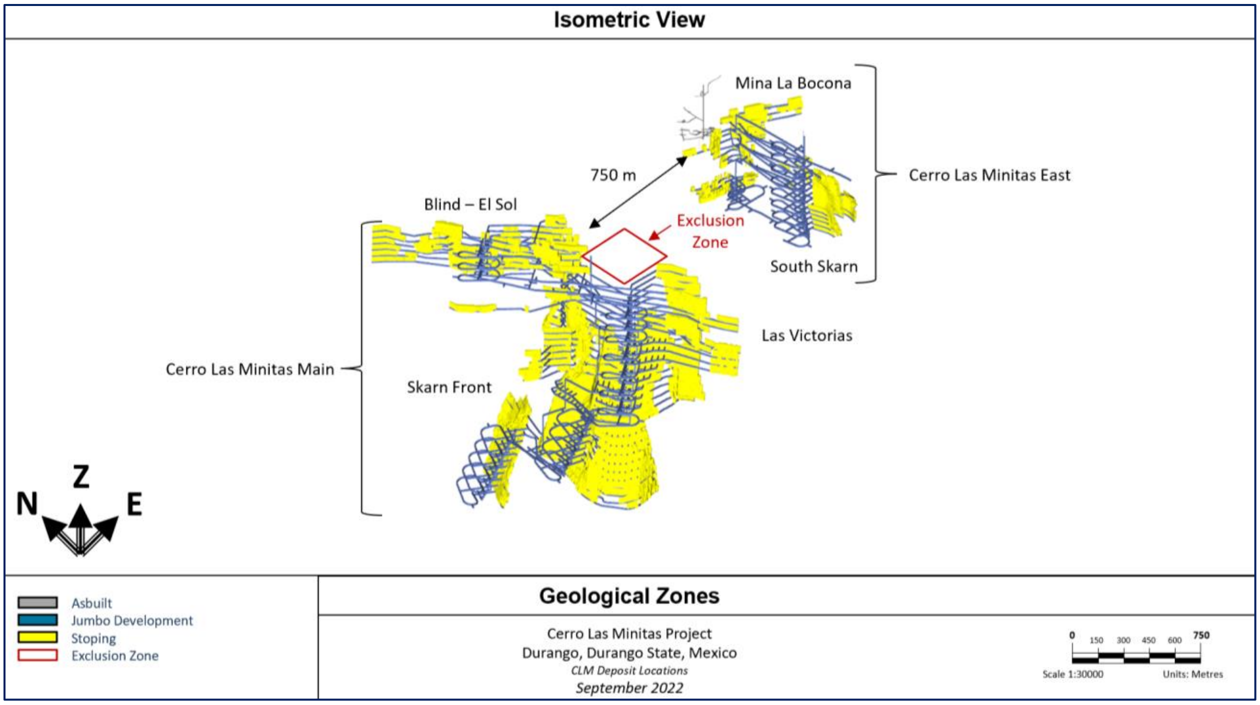


Figure 16-5: Geological Deposits located at Cerro Las Minitas

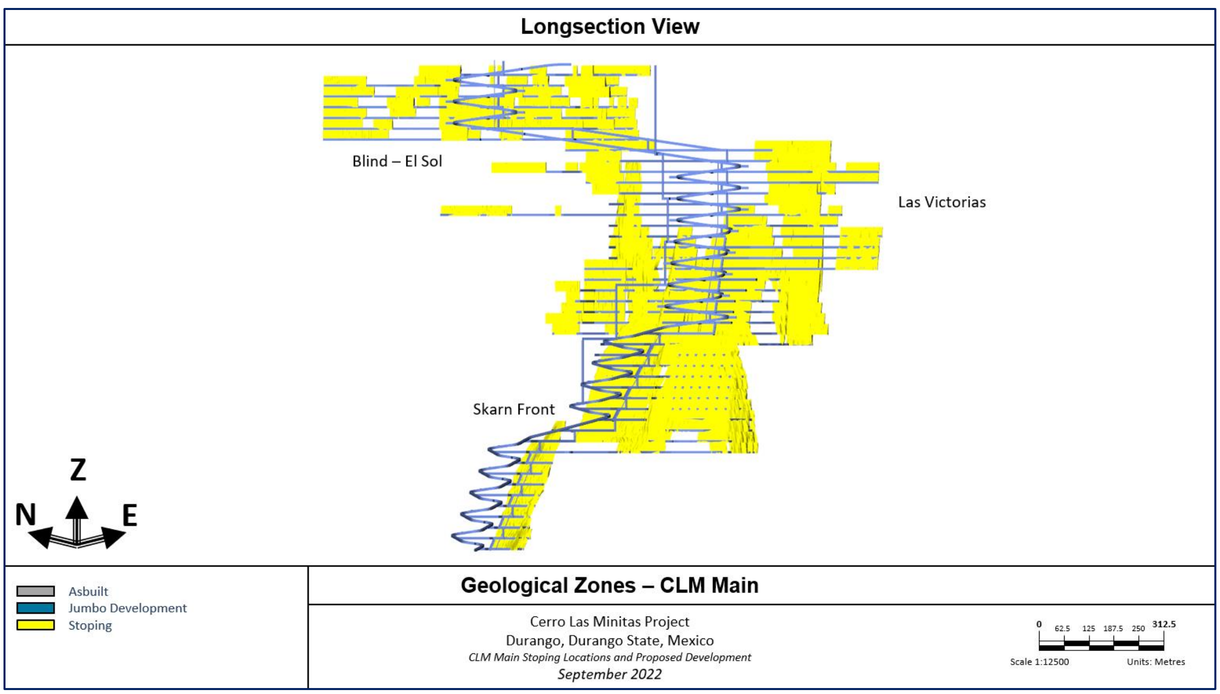


Figure 16-6: Geological Deposits located at Cerro Las Minitas Main

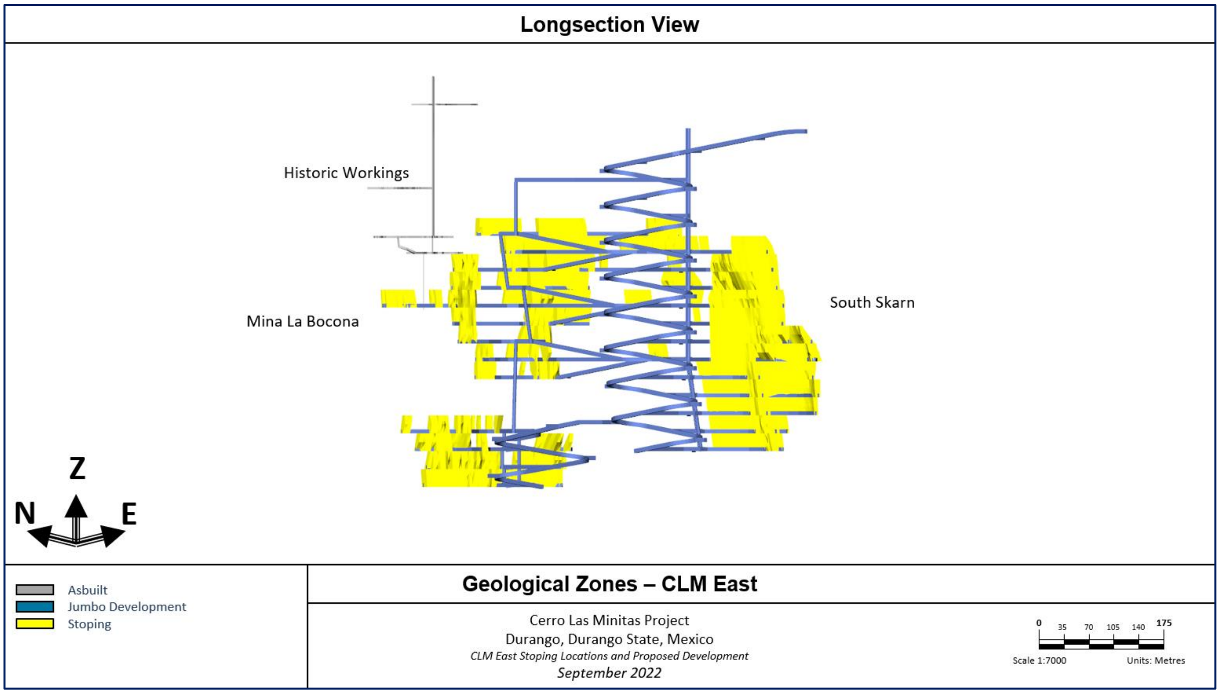


Figure 16-7: Geological Deposits located at Cerro Las Minitas East

16.5.2 Development

The development design incorporates a minimum stand-off distance of 50 m to locate the ramp away from mineralisation. This distance is assumed to avoid damage to the ramp due to ground stress changes and blasting from stope extraction. This stand-off distance also allows sufficient space between the ramp and the mineralized body for the excavation of the level accesses, stockpiles, and sumps.

A ramp mined with an arched profile will be excavated to a width of 5.5 m and a height of 6.0 m. This profile allows sufficient room to accommodate current underground fleet as well as secondary ventilation ducting and service piping. Other planned development includes the following:

- Access drifts;
- Sills (development on mineralisation);
- Operating waste development (sills mining material below cut-off);
- Sumps;
- Escapeways and accesses to the escapeways;
- Return airways and accesses to the return airways;
- Stockpiles; and,
- Footwall drifts, where required.

As illustrated in Figure 16-5, development was positioned on the hanging wall of the deposit. The primarily reason was due to a claim that was not owned by Southern Silver. Typical level layouts for longitudinal and transverse are provided in Figure 16-8 and Figure 16-9 respectively.

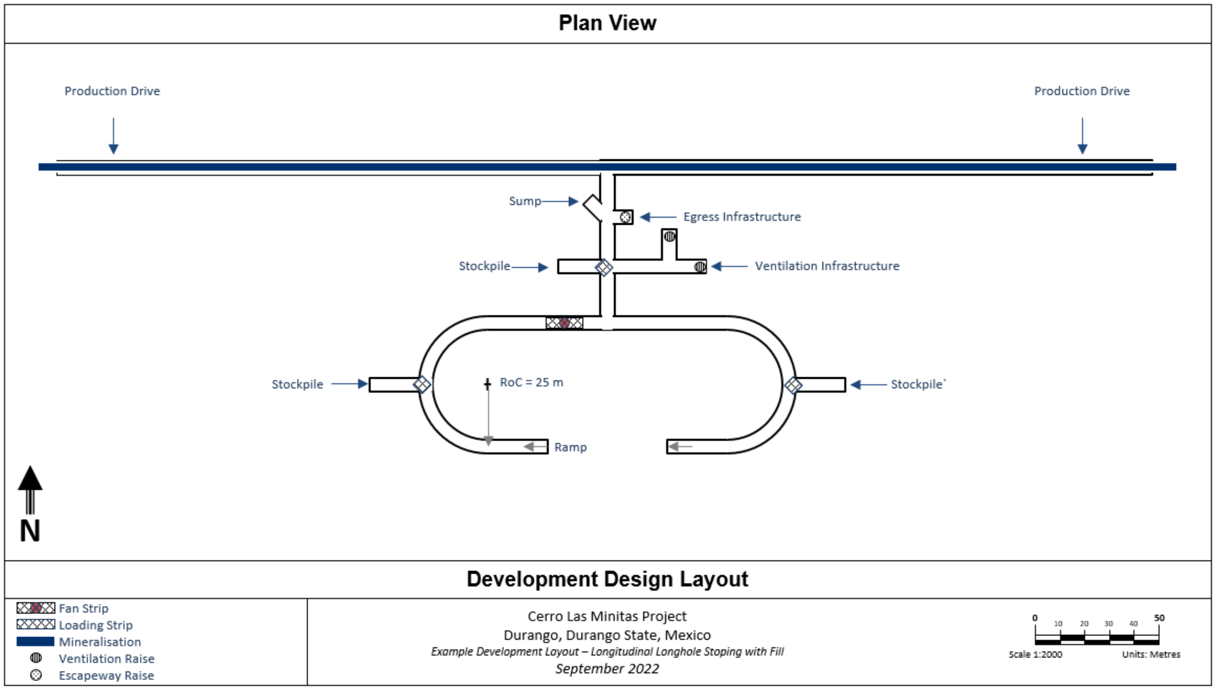


Figure 16-8: Cerro Las Minitas Longitudinal Longhole Stoping Level Layout

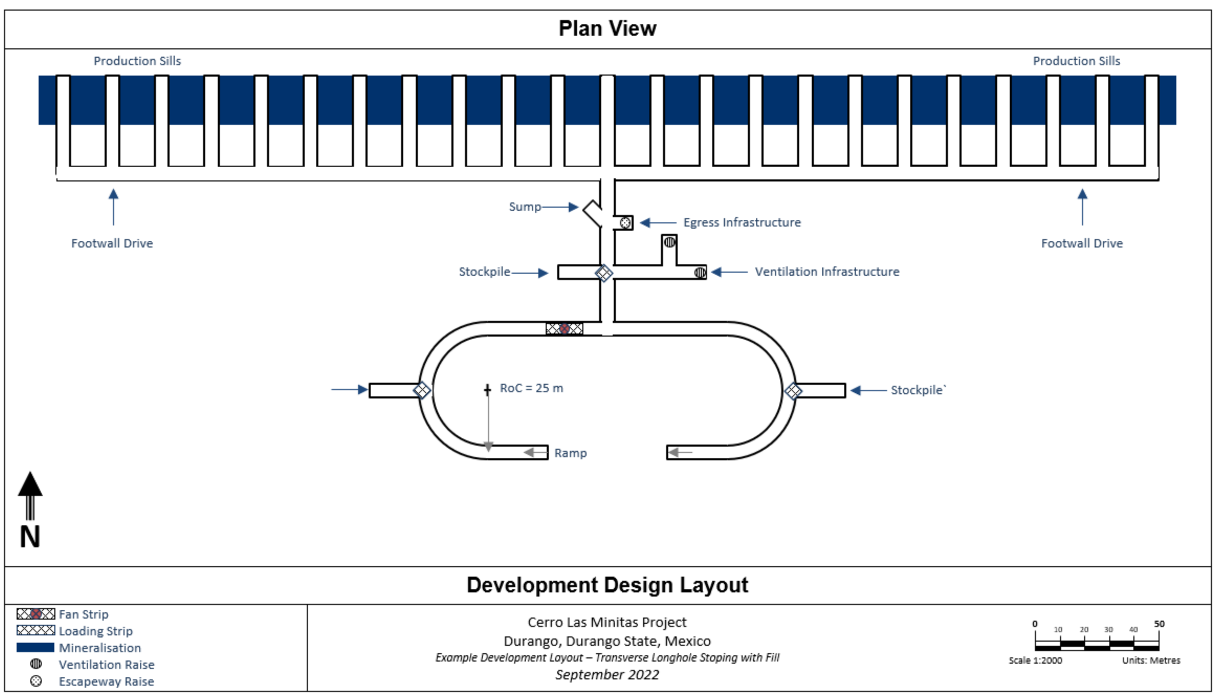


Figure 16-9: Cerro Las Minitas Transverse Longhole Stoping Level Layout

The various development profiles are shown in Table 16-12.

Table 16-12: Development Profiles for Cerro Las Minitas Project

Development Type	Profile Shape	Width (m)	Height (m)
Ramp	Arch	5.5	6.0
Access	Arch	5.5	6.0
Stockpile	Arch	5.5	6.0
Sump	Arch	5.5	5.5
Ventilation Accesses	Arch	5.5	6.0
Escapeway Access	Arch	5.5	6.0
Footwall Drive	Arch	5.5	6.0
Production Drift	Arch	5.0	5.5
Escapeway Raises	Circular	1.8	
Ventilation Raises (> 20 m)	Circular	5.0	
Ventilation Raises (≤ 20 m)	Rectangle	5.0	5.5

16.5.3 Production

The mining methods selected for the different locations within mining blocks are as follows:

- Longitudinal longhole stoping pastefill, where mineralisation is narrow (≤ 20 m width); and,
- Transverse longhole stoping with pastefill, where mineralisation is wide (> 20 m width).

Figure 16-10 and Figure 16-11 illustrate the selected mining method that is proposed for Cerro Las Minitas Main and Cerro Las Minitas East respectively. In addition to the mining methods, the stope shapes coded by NSR are illustrated in Figure 16-12.

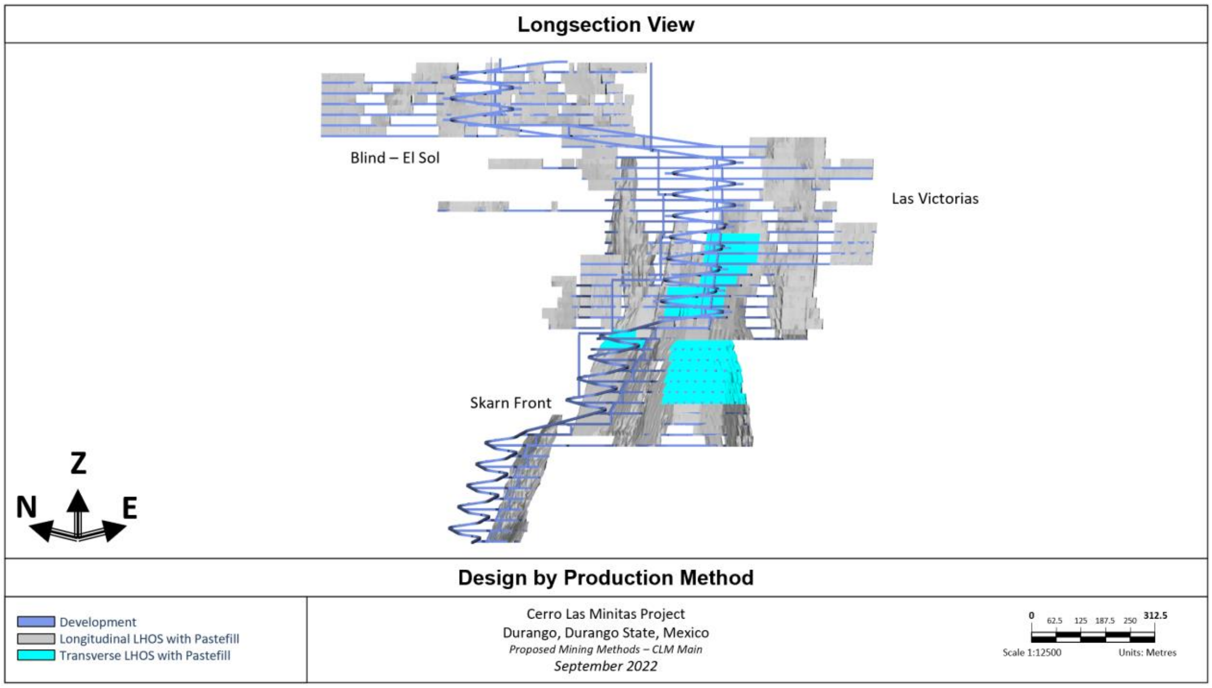


Figure 16-10: Proposed Production Design by Mining Method for Cerro Las Minitas Main

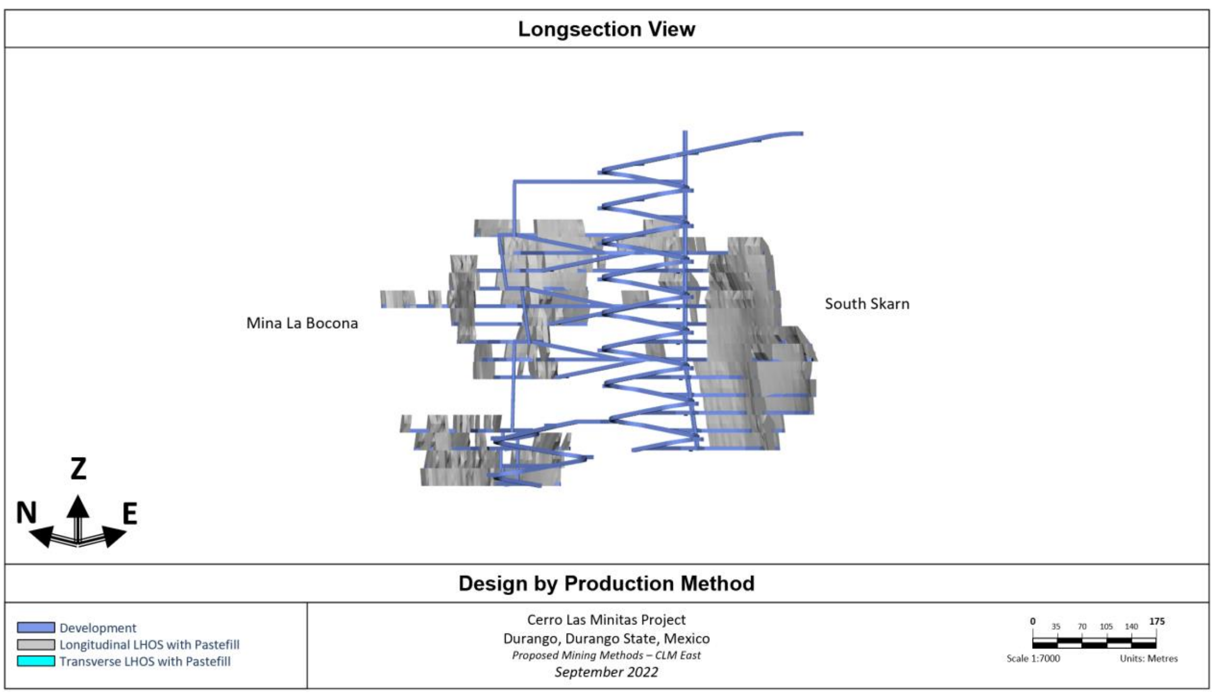


Figure 16-11: Proposed Production Design by Mining Method for Cerro Las Minitas Main

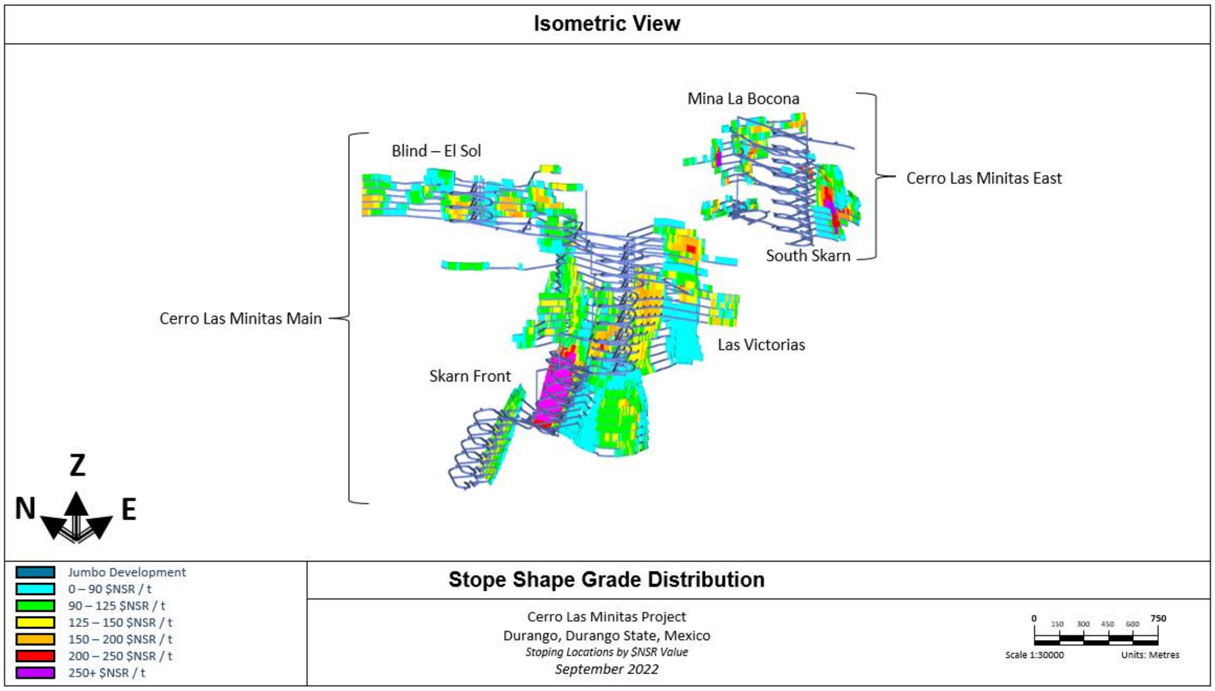


Figure 16-12: Proposed Stope Shapes by NSR ($US /t) for Cerro Las Minitas

16.6 MINE SCHEDULE

16.6.1 Activity and Equipment Rates

Contractor mining is currently proposed for the CLM project to minimise up front capital and achieve higher productivities. The development rates used are inclusive of the time taken to drill, blast, muck, and install ground support. These rates are similar to observations by Entech at other operations in Mexico and similar mining jurisdictions. Contractors would expect to achieve 200 – 250 m/mth per jumbo with the proposed single heading advance rates summarized in Table 16-13.

Table 16-13: Development Activity and Equipment Rates Cerro Las Minitas

Activity	Units	Single Heading Rate
Lateral Development - Capital	m / day	4-6*
Lateral Development - Operating	m / day	2
Vertical Development	m / day	2

*6 m / day is only at the start of the operation, before production levels are established

Production rates are broken into specific activities, due to the longer duration for each. The equipment is set to meet the capacity of each individual activity, which can only be completed sequentially. All drilling activities use a modern longhole drill rig, while both production activities use stope loaders. The truck loading and hauling rates are factored into the production activity rates. These rates are summarized in Table 16-14.

Table 16-14: Production Activity and Equipment Rates Cerro Las Minitas

Activity	Units	Activity Rate
Drilling – Reamer	m / day	125
Drilling – Slot	m / day	125
Drilling – Production	m / day	250
Drilling – Cablebolt	m / day	250
Drilling – Fill/Breather	m / day	125
Stope Mucking - Longitudinal	t / day	425 - 1500
Stope Mucking - Transverse	t / day	1,400
Pastefill	m^3 / day	2000

Stope loader productivity was adjusted based on the loader tram distance for longitudinal stoping. For transverse stoping, the footwall drive profile was selected to allow for truck access and for truck loading at an adjacent drawpoint. The 21-t capable loaders were scaled down to approximately 15 t to allow for efficiency losses (equipment availability, fill factors, and operator effectiveness) for stoping and development mucking activities and scaled down to 16 t for truck loading. It is expected that operators could achieve an average of 50 buckets per shift (scaled down for longer trams) when in production and 60 buckets a shift for development and truck loading.

16.6.2 Lateral Development

There are up to four (4) jumbos proposed for mine for development, which are considered sufficient to meet the estimated annual lateral development requirements.

The annual lateral development schedule is illustrated in Figure 16-13, while the total and initial lateral development schedule is summarized in Table 16-15.

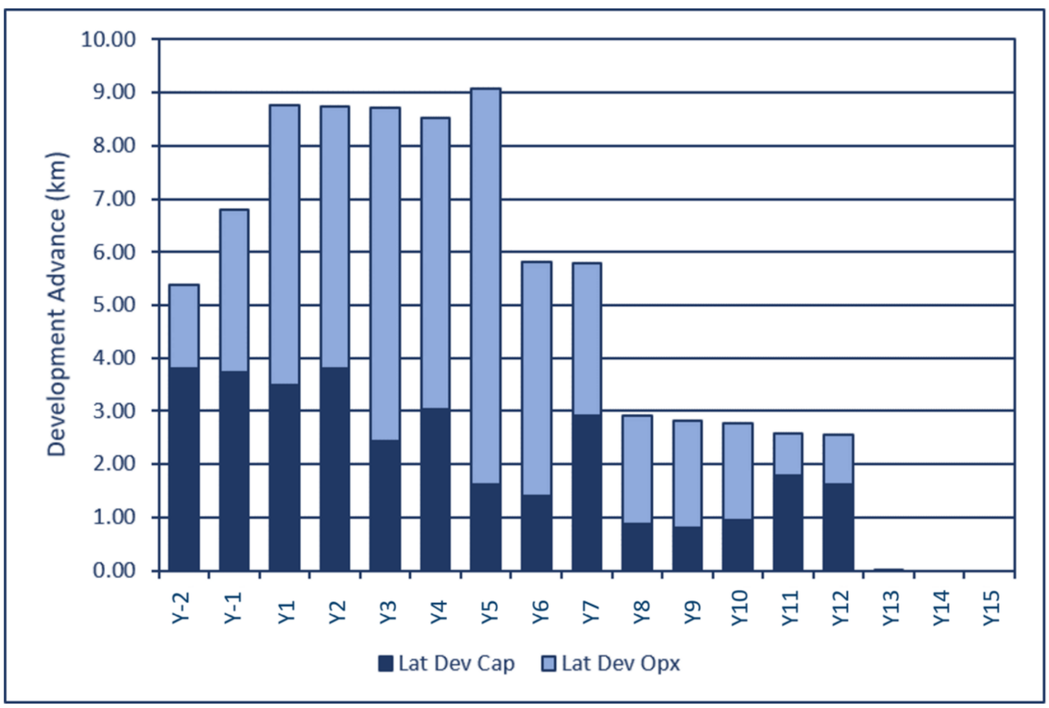


Figure 16-13: Annual Lateral Development Schedule for Cerro Las Minitas

Table 16-15: Total and Annual Lateral Development Schedule for Cerro Las Minitas

Development Lateral	Capital	Ramp	Access	Other	Operating	Sills	Other	Total
	km	km	km	km	km	km	km	km
YEAR \ TOTAL	32.3	11.8	8.7	11.8	49.0	46.8	2.2	81.3
Y-02	3.8	2.1	0.6	1.0	1.6	1.6	-	5.4
Y-01	3.7	1.5	1.2	1.0	3.1	3.1	-	6.8
Y01	3.5	1.2	1.1	1.0	5.3	5.3	-	8.8
Y02	3.8	1.4	1.3	1.0	4.9	4.9	-	8.7
Y03	2.4	0.6	1.1	1.0	6.3	6.1	0.2	8.7
Y04	3.0	1.3	0.5	1.0	5.5	5.4	0.1	8.5
Y05	1.6	0.3	0.2	1.0	7.4	6.9	0.5	9.1
Y06	1.4	0.3	0.3	1.0	4.4	4.1	0.3	5.8
Y07	2.9	0.9	0.8	1.0	2.9	2.6	0.3	5.8
Y08	0.9	0.2	0.2	1.0	2.0	1.7	0.3	2.9
Y09	0.8	0.2	0.2	-	2.0	1.8	0.2	2.8
Y10	0.9	0.4	0.2	-	1.8	1.6	0.2	2.8
Y11	1.8	0.7	0.5	1.0	0.8	0.8	-	2.6
Y12	1.6	0.7	0.5	-	0.9	0.9	-	2.6
Y13	-	-	-	-	0.0	0.0	-	0.0
Y14	-	-	-	-	-	-	-	-
Y15	-	-	-	-	-	-	-	-

16.6.3 Vertical Development

Vertical development is completed by a combination of longhole mining techniques and raiseboring. For ventilation raises greater than 25m in length, a 5.0 m diameter raisebore is proposed. For shorter raises, longhole blasting is proposed to excavate a profile of 5.5 m by 5.0 m. Egress raises will be completed by a 1.8 m diameter raisebore. For scheduling, a development rate of 2 m per day was applied to all vertical development.

The annual vertical development schedule is illustrated in Figure 16-14, while the total and initial lateral development schedule is summarized in Table 16-16.

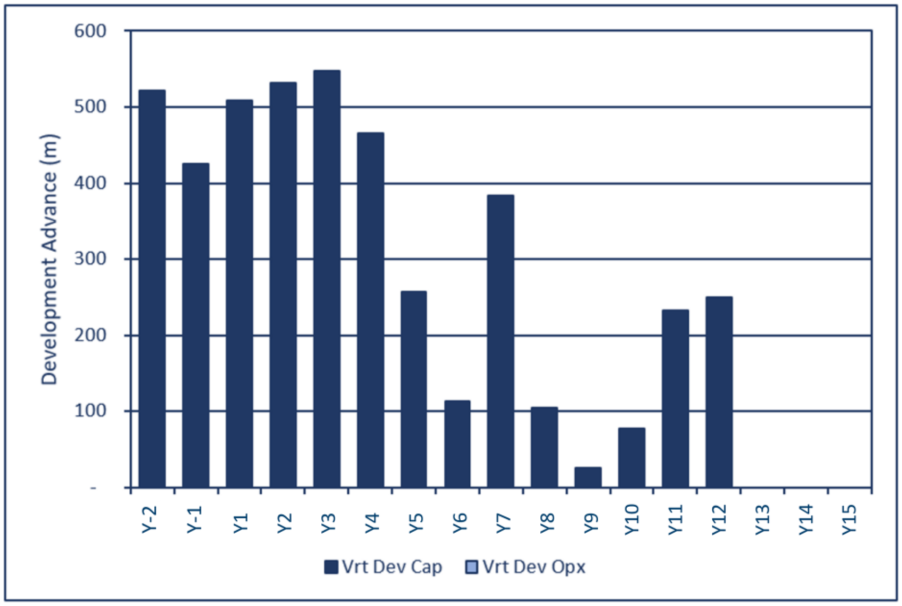


Figure 16-14: Annual Vertical Development Schedule for Cerro Las Minitas

Table 16-16: Total and Annual Vertical Development Schedule for Cerro Las Minitas

Development Vertical	Ventilation	Egress	Other	Other	Total
	m	m	m	m	m
YEAR \ TOTAL	2,841.2	1,602.0	-	-	4,443.2
Y-02	260.0	262.0	-	-	522.0
Y-01	225.0	200.0	-	-	425.0
Y01	385.5	123.1	-	-	508.6
Y02	378.0	153.9	-	-	531.8
Y03	362.6	185.6	-	-	548.2
Y04	345.0	121.0	-	-	466.0
Y05	207.0	50.0	-	-	257.0
Y06	54.2	58.3	-	-	112.5
Y07	258.3	124.5	-	-	382.8
Y08	54.2	50.4	-	-	104.6
Y09	25.0	-	-	-	25.0
Y10	50.0	27.3	-	-	77.3
Y11	104.6	127.3	-	-	231.9
Y12	131.9	118.5	-	-	250.5

16.6.4 Longhole Drilling

Longhole drilling productivity is expected to be 125 – 250 m per day depending on the drilling activity undertaken. For the Cerro Las Minitas mine, up to four longhole drill rigs are estimated to meet the estimated annual drilling requirements.

The annual longhole drilling schedule is illustrated in Figure 16-15 while the total and initial longhole drilling schedule is summarized in Table 16-17.

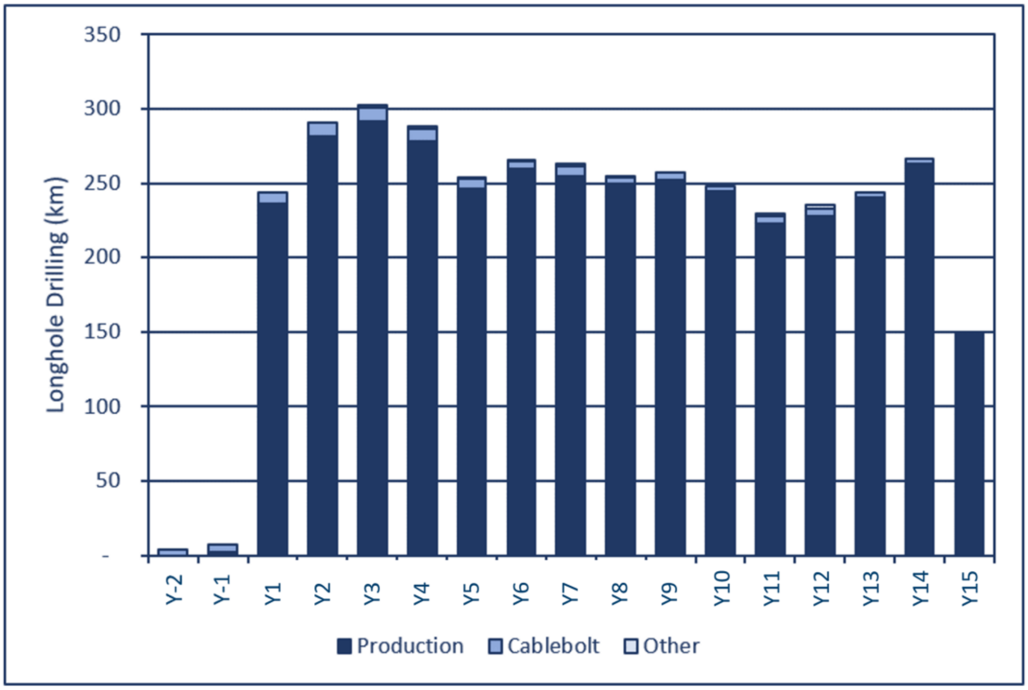


Figure 16-15: Annual Longhole Drilling Schedule for Cerro Las Minitas

Table 16-17: Total and Annual Longhole Drilling Schedule for Cerro Las Minitas

Drilling	Production	Cable bolt	Other	Total
	km	km	km	km
YEAR \ TOTAL	3,700.4	60.9	43.7	**3,804.9**
Y-02	-	0.3	3.5	**3.8**
Y-01	2.4	0.5	4.0	**6.9**
Y01	236.0	4.5	3.3	**243.8**
Y02	281.4	5.7	4.1	**291.2**
Y03	292.1	6.5	4.3	**302.9**
Y04	278.1	5.4	5.0	**288.5**
Y05	246.3	5.5	2.3	**254.0**
Y06	259.8	4.1	2.0	**265.9**
Y07	254.8	4.1	4.3	**263.1**
Y08	249.9	3.7	1.3	**254.9**
Y09	252.6	3.7	0.8	**257.1**
Y10	244.3	3.4	0.7	**248.4**
Y11	223.1	2.8	3.8	**229.7**
Y12	227.8	2.9	4.3	**235.1**
Y13	240.4	3.2	0.0	**243.6**
Y14	263.6	3.0	-	**266.6**
Y15	147.7	1.7	0.0	**149.4**

16.6.5 Material Movement

The load-and-haul fleet is proposed of a large and efficient fleet of 21-t loaders and 63-t trucks. The estimated annual quantities for Cerro Las Minitas are summarized in Table 16-18. Although monthly peak show that 9 trucks may be required, at this Preliminary level of study, these peaks are likely to be smoothed. For costing purposes (diesel, labour), monthly peak estimates were used.

Table 16-18: Load and Haul Fleet for Cerro Las Minitas

Equipment Type	Description	Annual Peak Requirements
Development Loader	LH621	2
Production Loader	LH621	4
Truck Loader	LH621	2
Truck	TH663	7

Annual mineralisation movement is illustrated in Figure 16-16 and summarized in Table 16-19. COVs for the High Grade (HG), Medium Grade (MG), and Low Grade (LG) bins are $150 /t NSR, $100 /t NSR, and $31 /t NSR respectively.

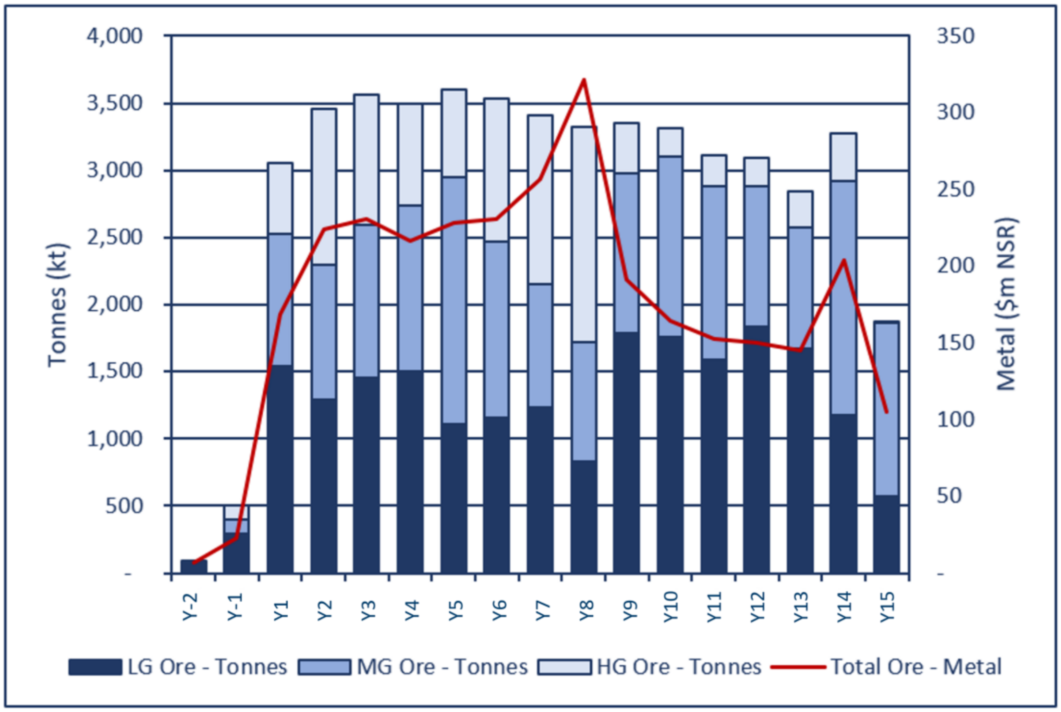


Figure 16-16: Annual Mineralized Material Production Schedule for Cerro Las Minitas

Table 16-19: Total and Annual Material Movement Schedule for Cerro Las Minitas

Mined Material	Waste	Development	Production	Mineralisation	Total
	kt	kt	kt	kt	kt
YEAR \ TOTAL	3,901.4	2,802.3	21,648.3	24,450.7	28,352.1
Y-02	373.0	88.0	-	88.0	461.0
Y-01	357.4	207.4	-	207.4	564.7
Y01	476.3	244.0	1,290.2	1,534.2	2,010.6
Y02	480.4	249.3	1,510.0	1,759.3	2,239.7
Y03	367.8	343.0	1,525.9	1,868.9	2,236.7
Y04	430.3	280.7	1,517.6	1,798.3	2,228.6
Y05	274.6	457.3	1,444.9	1,902.2	2,176.8
Y06	213.7	248.4	1,584.6	1,833.0	2,046.7
Y07	304.2	178.5	1,532.6	1,711.1	2,015.2
Y08	117.1	101.7	1,521.3	1,623.0	1,740.1
Y09	90.1	130.4	1,526.8	1,657.2	1,747.3
Y10	105.0	118.8	1,498.9	1,617.8	1,722.8
Y11	160.7	72.9	1,347.1	1,420.0	1,580.7
Y12	150.3	80.7	1,360.4	1,441.1	1,591.5
Y13	0.4	1.0	1,420.2	1,421.2	1,421.5
Y14	-	-	1,646.3	1,646.3	1,646.3
Y15	-	-	921.6	921.6	921.6

16.6.6 Backfill

As previously mentioned, all production voids will be backfilled and pastefill is currently proposed. When mining top-down, binder content will likely be higher for the plug (the initial pour of approximately 8 m of the 25 m high stope void) to minimise the amount of dilution when the fill is exposed from below. When mining bottom-up, the fill is proposed to have a lower binder content, given that the exposure is primarily to side of the stope.

The annual backfill profile is illustrated in Figure 16-17 while the total and initial annual backfill schedule is summarized in Table 16-20.

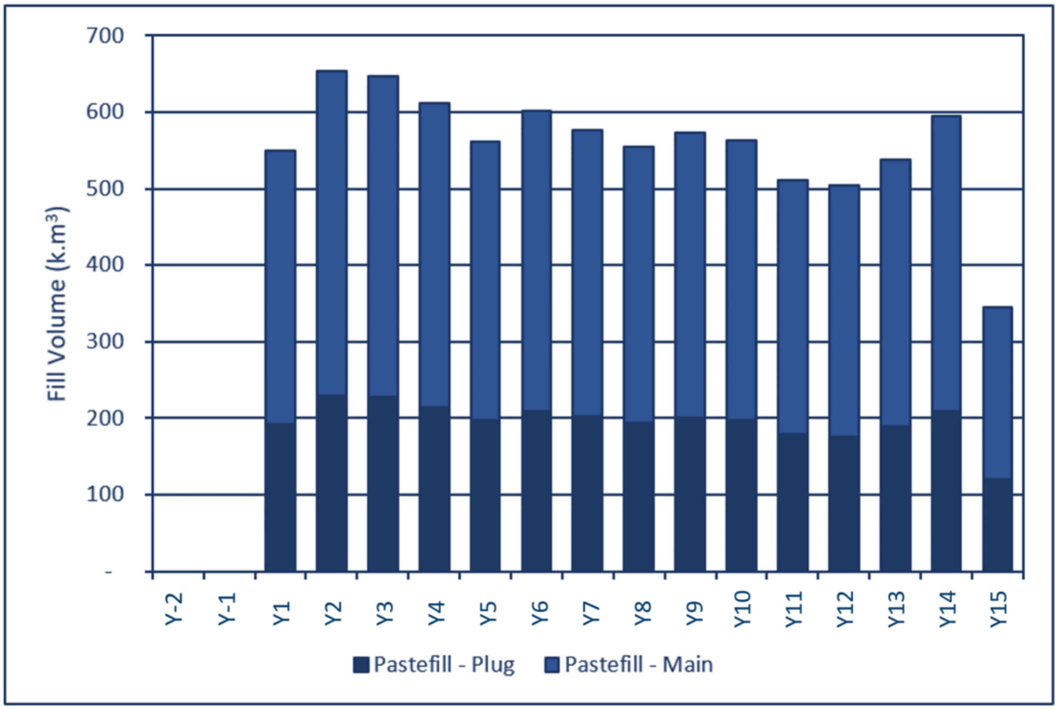


Figure 16-17: Annual Backfill Schedule for Cerro Las Minitas

Table 16-20: Total and Y1-5 Annual Backfill Schedule for Cerro Las Minitas

Backfill	Pastefill (000's m³)	Plug Pour (000's m³)	Body Pour (000's m³)	Total Backfill
YEAR \ TOTAL	8,390.7	2,936.7	5,453.9	8,390.7
Y-02	-	-	-	-
Y-01	-	-	-	-
Y01	550.2	192.6	357.6	550.2
Y02	653.8	228.8	425.0	653.8
Y03	647.8	227.1	420.8	647.8
Y04	612.5	214.4	398.1	612.5
Y05	561.5	197.2	364.4	561.5
Y06	602.2	209.8	392.4	602.2
Y07	576.0	202.0	374.0	576.0
Y08	555.5	194.8	360.7	555.5
Y09	573.8	200.1	373.7	573.8
Y10	563.6	198.1	365.5	563.6
Y11	511.8	178.5	333.3	511.8
Y12	504.3	176.3	328.0	504.3
Y13	537.9	188.3	349.7	537.9
Y14	594.4	209.2	385.2	594.4
Y15	345.4	119.8	225.6	345.4

16.6.7 Processing Feed

Mined mineralisation will be delivered by the underground fleet to a surface stockpile (ROM) for processing. The total and initial annual processing plant feed schedule is summarized in Table 16-21 and the mineral resource breakdown in Table 16-22.

Table 16-21: Annual Processing Plant Feed Schedule for Cerro Las Minitas

	Tonnes (kt)	Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	Cu (M lb)	Pb (Mlb)	Zn (Mlb)	Au (koz)	Pb (Moz)	NSR ($M USD)
YEAR\ TOTAL	**24,451**	0.20	1.07	2.57	0.09	109.9	107.7	579.0	1,383.9	72.2	86.4	**3,019.6**
Y-02	**88**	0.07	1.50	1.51	0.03	68.7	0.1	2.9	2.9	0.1	0.2	**7.1**
Y-01	**207**	0.08	1.85	1.96	0.07	100.0	0.4	8.5	9.0	0.5	0.7	**22.7**
Y01	**1,534**	0.08	1.93	1.61	0.13	108.3	2.6	65.2	54.3	6.5	5.3	**168.9**
Y02	**1,759**	0.12	1.94	2.14	0.16	122.5	4.7	75.2	83.2	8.9	6.9	**224.1**
Y03	**1,869**	0.12	1.84	2.17	0.19	114.4	5.0	75.6	89.5	11.2	6.9	**230.6**
Y04	**1,798**	0.12	1.39	2.48	0.12	105.6	4.9	55.2	98.3	6.8	6.1	**216.2**
Y05	**1,902**	0.18	1.12	2.31	0.11	113.1	7.5	46.9	97.0	7.0	6.9	**228.6**
Y06	**1,833**	0.22	0.87	2.79	0.12	111.6	9.0	35.3	112.7	7.3	6.6	**231.1**
Y07	**1,711**	0.12	0.99	3.57	0.08	132.9	4.6	37.2	134.8	4.2	7.3	**256.7**
Y08	**1,623**	0.12	1.20	5.44	0.05	158.8	4.4	43.0	194.5	2.5	8.3	**321.3**
Y09	**1,657**	0.15	0.69	3.17	0.04	86.9	5.4	25.3	115.9	2.2	4.6	**191.1**
Y10	**1,618**	0.24	0.59	2.25	0.05	85.5	8.4	21.0	80.4	2.5	4.4	**164.4**
Y11	**1,420**	0.28	0.67	2.24	0.06	92.3	8.6	20.8	70.2	2.5	4.2	**152.8**
Y12	**1,441**	0.28	0.67	2.10	0.06	90.4	9.0	21.1	66.8	3.0	4.2	**150.5**
Y13	**1,421**	0.25	0.54	2.48	0.07	80.7	7.8	16.8	77.6	3.3	3.7	**145.1**
Y14	**1,646**	0.39	0.57	2.13	0.05	118.3	14.1	20.6	77.5	2.5	6.3	**203.7**
Y15	**922**	0.54	0.41	0.95	0.05	127.5	11.1	8.3	19.4	1.4	3.8	**104.7**

Table 16-22: Mining Resource Category Summary

Classification	%	Tonnes (kt)	Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)
Measured	0.0	-	-	-	-	-	-
Indicated	36.0	8,804.1	0.17	1.21	3.54	0.08	110.5
Inferred	54.3	13,283.8	0.26	1.18	2.38	0.12	129.1
Dilution[1]	9.7	2,362.8	0.0	0.0	0.0	0.0	0.0
Total	100	**24,451**	0.20	1.07	2.57	0.09	109.9

1-Dilution is non-mineralised material outside of the proposed stopes that already include planned and unplanned dilution

16.7 UNDERGROUND INFRASTRUCTURE AND SERVICES

16.7.1 Portals

There are two (2) portal locations planned for Cerro Las Minitas: one for the main underground mine and one for the eastern underground mine. The eastern mine will be active for the first 8 years of production, while the main mine will be active for 17 years of production.

16.7.2 Primary Ventilation

The proposed ventilation system for CLM is to use a pull system with fresh air being drawn through the main ramps for each mine. For the Cerro Las Minitas Main complex an additional fresh air ventilation raise will be required to supplement airflow and reduce airspeeds on the ramp. Spent air will then exhaust out of the series of exhaust vent raises to surface access from each production level.

The ventilation circuit for each underground project was imported into Ventsim®, an industry-standard software used in ventilation modelling to model the flows predicted for the mine. The ventilation demand was estimated based on Mexican regulations that require a minimum ventilation airflow of 75 CFM per HP (0.047m^3/s per kW) of mobile equipment.

A primary surface fan system sized approximately 2,450 kW is proposed to be installed on surface at Cerro Las Minitas Main, with an additional booster fan sized approximately 160 kW positioned lower in the mine. The booster fan will be moved from the setup at Cerro Las Minitas East to the lower workings of Cerro Las Minitas Main upon completion of the mining activities at Cerro Las Minitas East. The combination of fans is estimated to provide a total of 338 m^3/s to the underground workings. The ventilation demand is summarised in Table 16-23 and the ventilation installations at Cerro Las Minitas Main illustrated in Figure 16-18.

Table 16-23: Ventilation Demand Estimate for Cerro Las Minitas - Main

Equipment / Unit	Model	Quantity (#)	Engine Power (kW)	Utilisation	Requirement (m^3/s)
Truck[1]	TH663i	7	565	79%	149.1
Loader[1]	LH621i	6	375	75%	80.1
Development Drill	DD421	3	122	17%	3.0
Production Drill	DL421	4	122	17%	3.9
Ancillary	Utimec 1600 Agitator	4	170	56%	18.1
Ancillary	Charmec MF 605 D	4	120	40%	9.1
Ancillary	Spraymec 6050 W	2	82	40%	3.1
Ancillary	JCB 527 – 55	4	63	43%	5.1
Ancillary	140H	1	123	60%	3.5
Ancillary	FMX 440 4X4	1	324	21%	3.3
Light Vehicle	Hilux Single Cab	10	122	21%	12.3
Subtotal					290.7
Mine Leakage	16%				46.1
Total					336.8

[1] Available Hours (21/24) multiplied by Mechanical Availability (90% truck, 85% loader)

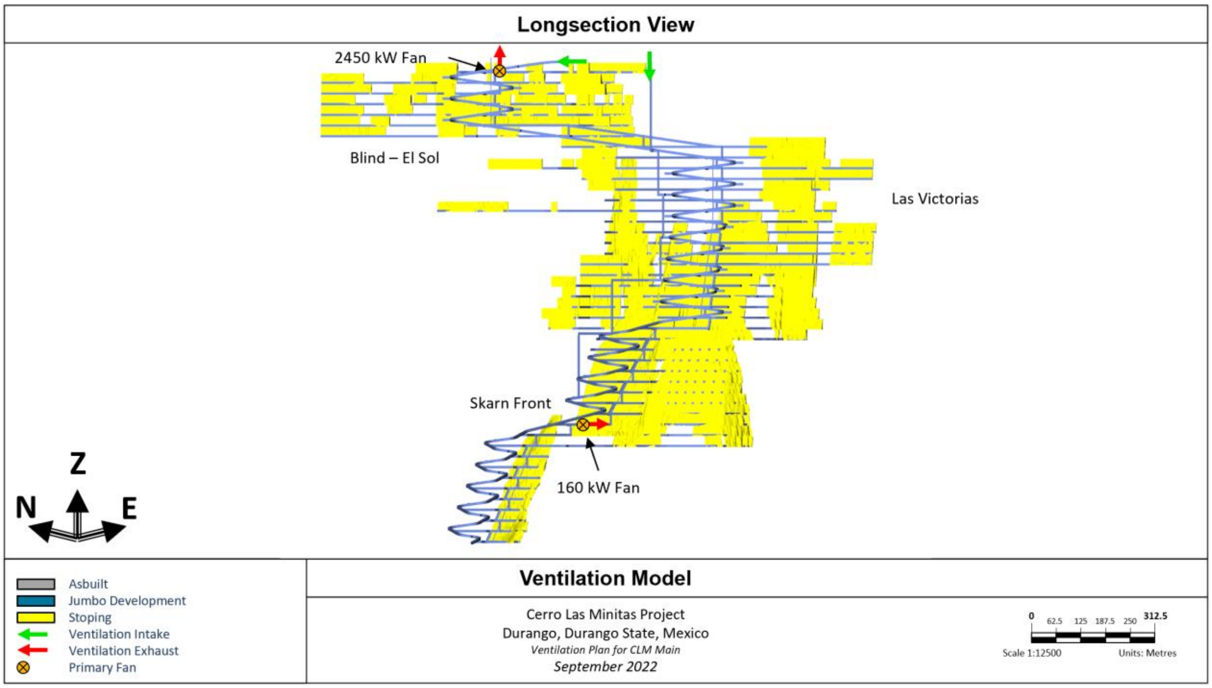


Figure 16-18: Primary Ventilation Layout of Cerro Las Minitas - Main

A primary fan sized approximately 160 kw is proposed to be installed on surface at Cerro Las Minitas East. The setup is estimated to provide a total of 127 m^3/s to the underground workings. The ventilation demand is summarised in Table 16-24 and the ventilation fan installations for Cerro Las Minitas East is illustrated in Figure 16-19.

Table 16-24: Ventilation Demand Estimate for Cerro Las Minitas - East

Equipment / Unit	Model	Quantity (#)	Engine Power (kW)	Utilisation	Requirement (m^3/s)
Truck	TH663i	3	565	79%	63.9
Loader	LH621i	3	375	75%	40.1
Development Drill	DD421	2	122	17%	2.0
Production Drill	DL421	2	122	17%	2.0
Ancillary	Utimec 1600 Agitator	2	170	56%	9.1
Ancillary	Charmec MF 605 D	2	120	40%	4.6
Ancillary	Spraymec 6050 W	1	82	40%	1.6
Ancillary	JCB 527 – 55	2	63	43%	2.5
Ancillary	140H	1	123	60%	3.5
Ancillary	FMX 440 4X4	1	324	21%	3.3
Light Vehicle	Hilux Single Cab	5	122	21%	6.2
Subtotal					138.6
Mine Leakage	16%				22.0
Total					160.6

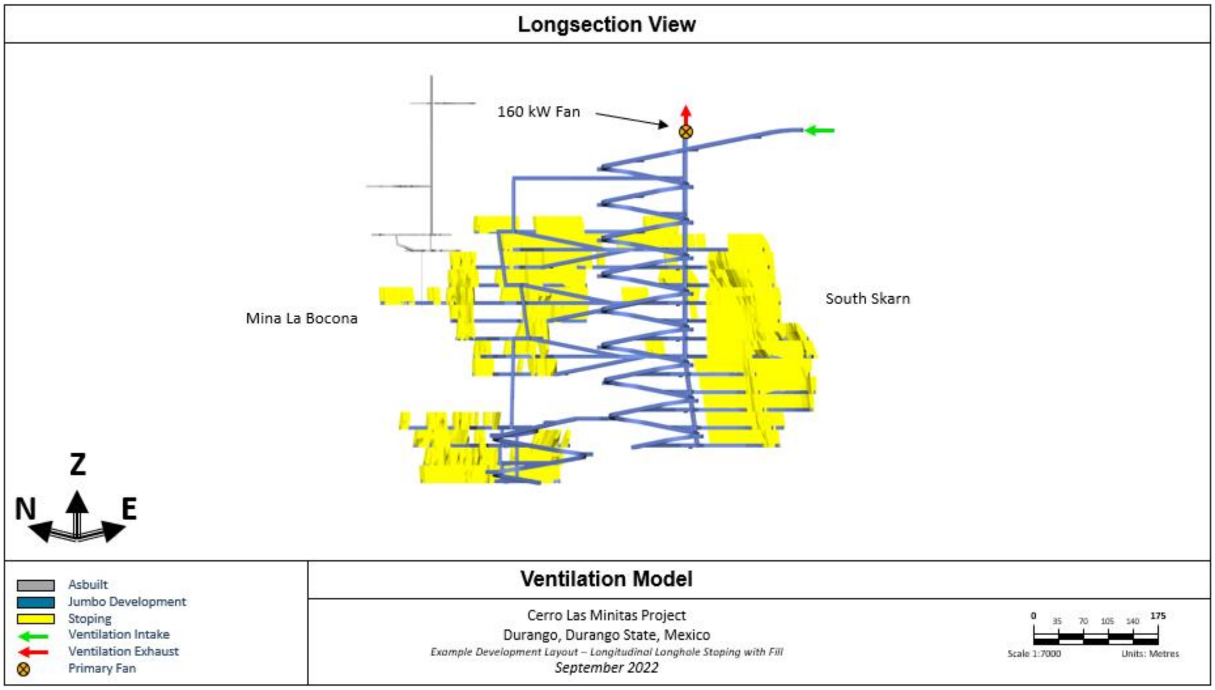


Figure 16-19: Primary Ventilation Layout of Cerro Las Minitas - East

16.7.3 Auxiliary Ventilation

Where headings are located outside of the primary ventilation circuit, auxiliary fans are required to push the air to the working headings. A variety of secondary fans, ranging from 55–110 kW in size, will be installed to deliver the required airflow through flexible ducting to the working headings. The overall aim is to deliver up to approximately 20-30 m^3/s of airflow to the active headings depending on requirements.

16.7.4 Secondary Means of Egress and Refuge Chambers

A secondary means of egress will be excavated between each level, with a connection from the top level of each mine to surface. Egress raises will be developed between levels via raisebore, then outfitted with Safescape emergency egress ladderways and access double doors installed in a wall to reduce entry of smoke and other contaminants.

An emergency alarm system to notify personnel of an emergency, as well as stench gas installed on surface at the entrance to the main ramp and in the compressed air line. The escape routes for both Cerro Las Minitas West and Cerro Las Minitas East East are illustrated Figure 16-20 and Figure 16-21 respectively.

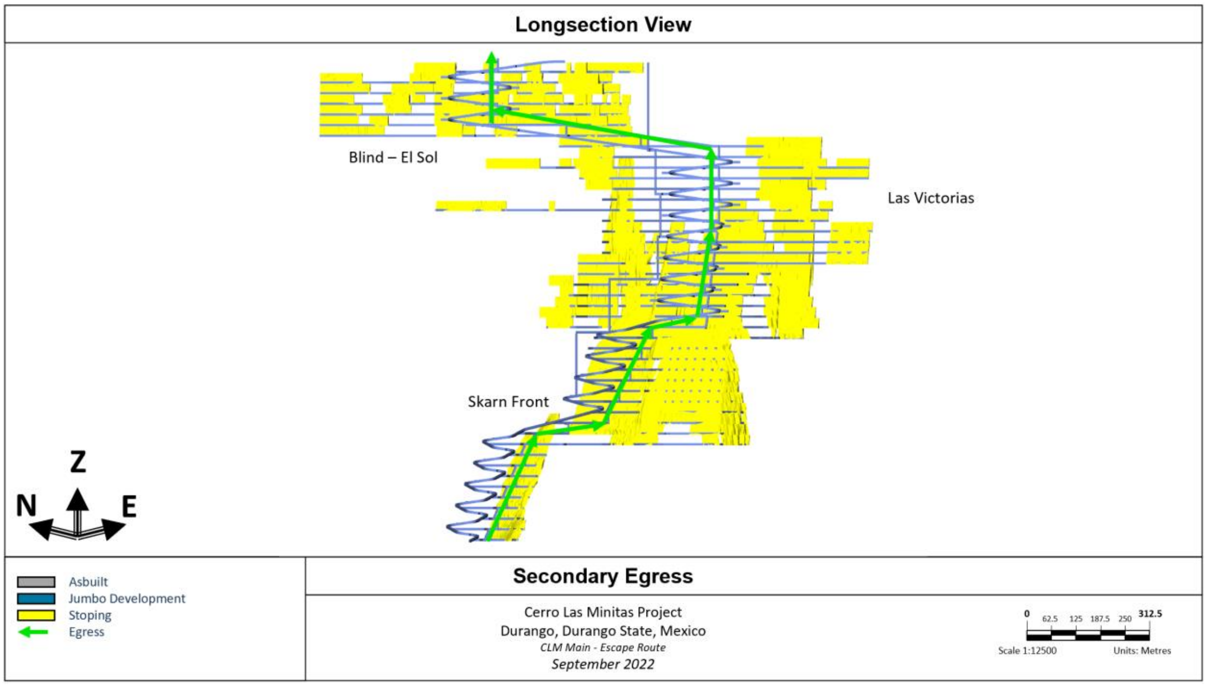


Figure 16-20: Primary Ventilation Layout of Cerro Las Minitas – Main

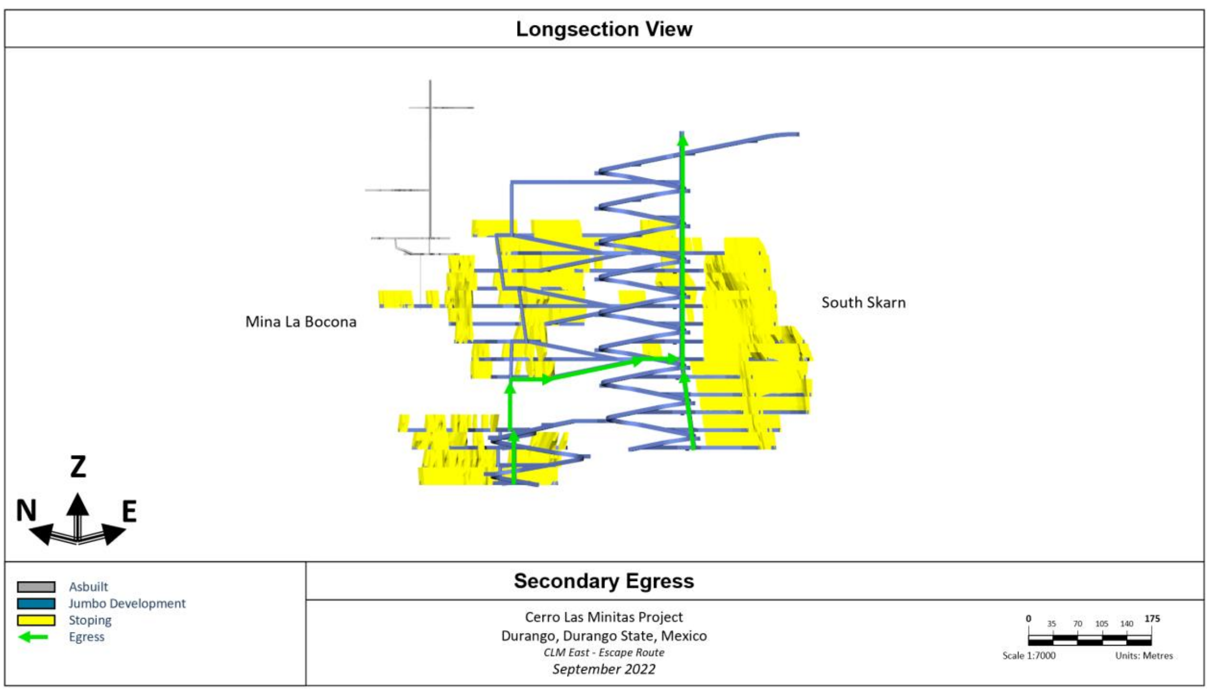


Figure 16-21: Primary Ventilation Layout of Cerro Las Minitas – East

16.7.5 Water Management

Currently propose for the Cerro Las Minitas project is a series of helical rotor pumps capable of pumping mine water up to containing 5% solids. The proposed system is to maintain solids within the pumped water and transport it to surface for desliming and potential use for processing or reuse underground. Both dewatering systems are to incorporate an eight-inch (8”) Schedule 40 steel pipe to surface that is capable of handing approximately 80 l/s. The pumping system is proposed to be comprised of three (3) 75 kw pumps (2 duty, 1 standby) capable of pumping ~40 l/s over 200-240 m of head. For Cerro Las Minitas Main, 5 pump stations are proposed, with three (3) pump stations at Cerro Las Minitas East.

Figure 16-22 and Figure 16-23 illustrate the proposed pumping stations for the project. The primary pump stations will be supported by travelling helical-rotor pumps (skid mounted) that will be periodically moved with the advancing development. Additional 8-15 kW sump pumps with compliment the system and have been included in the cost estimate.

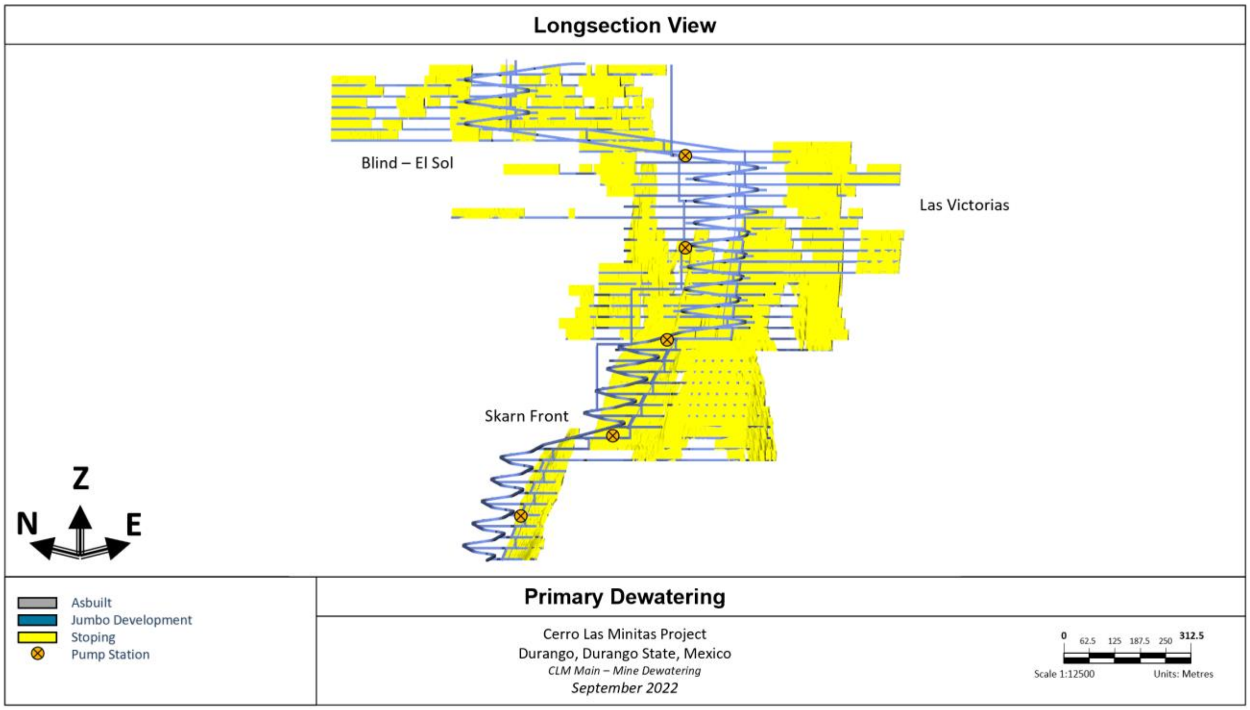


Figure 16-22: Proposed Primary Dewatering - CLM Main

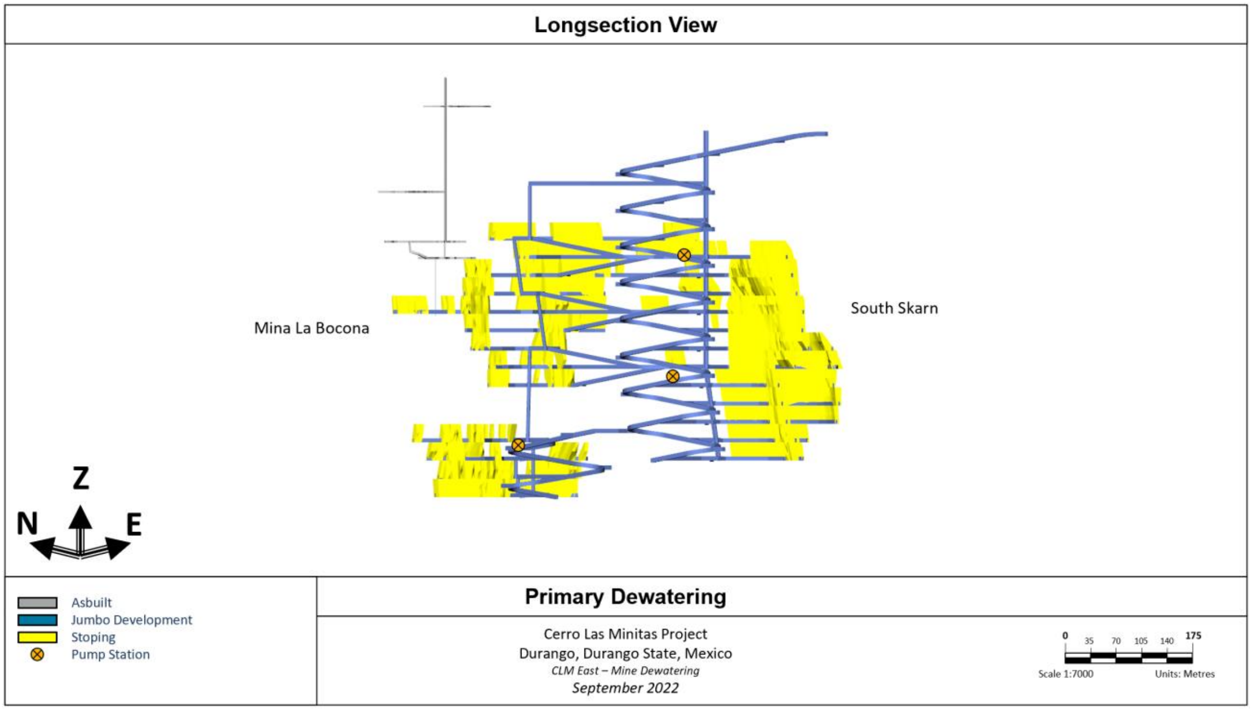


Figure 16-23: Proposed Primary Dewatering - CLM East

16.7.6 Compressed Air

A single air compressor installed on surface at each portal is proposed to support compressed air needs. The compressed air is transferred through a single four-inch pipe that is routed via main ramps and service holes between levels. All compressors will be installed with an air accumulator.

16.7.7 Electrical Power

Electrical power is supplied by the site power station located at the processing facility. The power station produces energy at 4,160 V and is routed through the mine to the primary substations. Power is then stepped down via a transformer to 480 V for use by plant and equipment. Several electrical transformers are strategically located underground to provide the necessary power for mining activities.

An estimate that includes equipment utilisation for plant and the mobile fleet has been summarised in Table 16-25.

Table 16-25: Cerro Las Minitas Power Estimate (Mining Activities Only)

Year	Power Consumption (MWh)	Average Size (kW)
-2	14,526	1,658
-1	19,434	2,218
1	36,012	4,111
2	45,364	5,179
3	46,308	5,286
4	49,637	5,666
5	49,307	5,629
6	46,449	5,302
7	46,060	5,258
8	44,560	5,087
9	44,560	5,087
10	44,044	5,028
11	43,731	4,992
12	43,942	5,016
13	40,873	4,666
14	40,890	4,668
15	29,482	3,366

16.8 MINE PERSONNEL

The Cerro Las Minitas Project is proposed to operate seven (7) days a week with two (2) 12-hr shifts each day of the year. It is assumed that the contractor and operation would select an equal time rotation (for example, 2 weeks on, 2 week off) to attract and retain labour. The maximum labour quantities (mining related only) are summarised in Table 16-26 and illustrated on a monthly basis in Figure 16-24.

Table 16-26: Cerro Las Minitas Mine Personnel Estimate

Position Description	Headcount (max)
Underground Manager	2
Senior Managers	4
Senior Engineers, Geologist, Surveyor, Geotechnical	12
Engineers, Geologists, Surveyors, Geotechnical	36
Samplers, Offsiders, Technicians	36
H&S, Environmental	10
Stores, Administration	10
Mining Supervision	8
Maintenance Supervision	8
Mining Labour	188
Maintenance Labour	82
Total	**396**

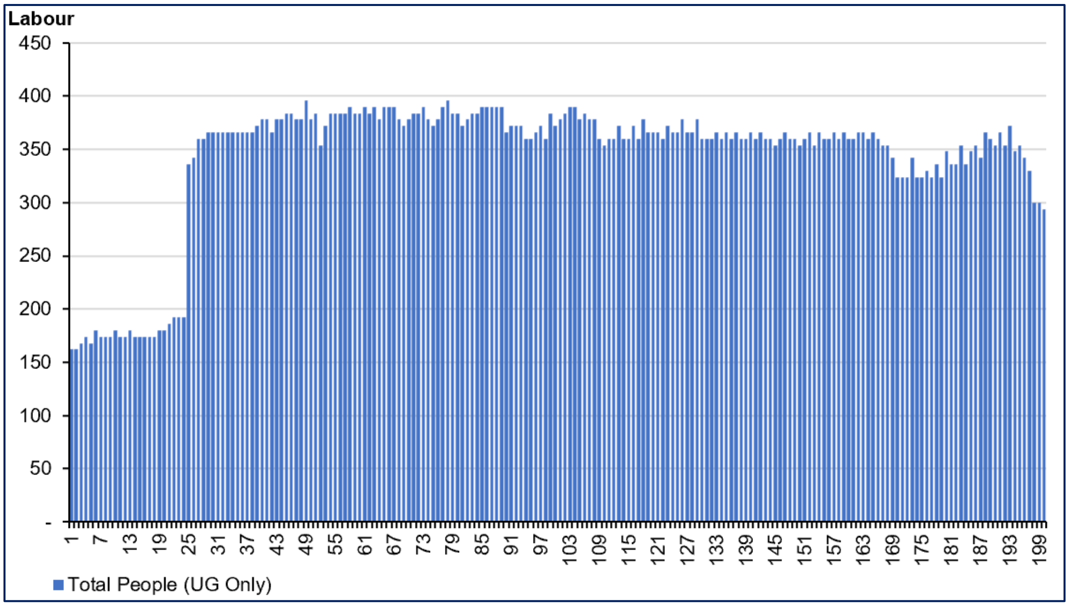


Figure 16-24: Mine Personnel Estimate (monthly, total positions)

17 RECOVERY METHODS

17.1 GENERAL DESCRIPTION

The conceptual design for the processing facility was based on recent metallurgical testwork. Specifically, the basis of the design for the flotation circuit was the results and conditions from a locked cycle test (LCT) completed on Skarn Front Master Composite (PJ5287-LCT1).

Based on the metallurgical test and analyses described in Section 13 of this report, the design of the plant follows modern conventional practice. Cerro Las Minitas is a large polymetallic mineralized skarn deposit (silver, lead, zinc, copper) that will be mined as an underground mine. The Cerro Las Minitas plant will be designed to process 1,642,500 tonnes of plant feed annually (4,500 t/d) to produce copper, lead/silver, and zinc concentrates. The processing plant consists of a two-stage crushing circuit followed by a single stage ball mill grinding circuit followed by copper, lead, zinc, and pyrite flotation circuits to produce copper, lead/silver, zinc, and pyrite concentrates. The process plant will produce on average (LOM) 20 t/d of copper concentrate at 27% Cu, 66 t/d of lead concentrate at 65% Pb, and 201 t/d of zinc concentrate at 54% Zn for sale to market.

The selected process design basis and the main physical features of the mineralized material processing facility are outlined here.

A summary diagram of the overall process flowsheet is presented in Figure 17-1. Process unit operations that will be used include:

- Primary and secondary crushing
- Single stage ball mill and classification
- Sequential flotation for copper, lead, and zinc
    - Rougher flotation, rougher concentrate regrinding, and three stages of cleaner flotation
    - Rougher flotation of zinc rougher tails to produce a pyrite concentrate
- Concentrate thickening, filtering, and loading
- Pyrite concentrate and tailing dewatering, filtering, and disposal

17.2 PROCESS DESIGN CRITERIA

Process design criteria developed for the Project are based on a 4,500 t/d (1,642,500 t/a) plant design. The crushing circuit was designed to operate with an overall availability of 85%. The remainder of the processing facilities were designed to operate with an overall availability of 92%. Table 17-1 is a summary of the main components of the process design criteria used for the study. Table 17-2 is a summary of the major process equipment selected for the study.

Table 17-1: Process Design Criteria

Description	Unit	Value
General		
Type of Deposit	-	polymetallic mineralized skarn deposit
Mining Method	t/a	Underground
Total Mineralized Material Tonnage	Mt	24.4
Life of Mine	Years	15
Plant Throughput		
Overall Plant Feed	t/a	1,642,500
Overall Plant Feed	t/d	4,500
Operating Schedule		
Shift/Day	-	2
Hours/Shift	h	12

Description	Unit	Value
Hours/Day	h	24
Days/Year	d	365
Unit Operation Availability		
Crushing, Primary and Secondary	%	85
Crushing Rate	t/h	221
Grinding and Flotation	%	92
Grinding and Flotation Rate	t/h	204
Concentrate Dewatering and Filtering	%	85
Plant Feed Grade (LOM)		
Copper (Cu)	%	0.20
Lead (Pb)	%	1.07
Zinc (Zn)	%	2.57
Silver (Ag)	g/t	110
Plant Feed Grade (design)		
Copper (Cu)	%	0.26
Lead (Pb)	%	1.22
Zinc (Zn)	%	5.56
Silver (Ag)	g/t	111
Metal Production Schedule		
Copper Concentrate (design)		
Recovery		
Cu	%	**60.2**
Pb	%	4.5
Zn	%	0.5
Ag	%	6.5
Grade		
Cu	%	**27.0**
Pb	%	9.6
Zn	%	5.1
Ag	g/t	1,255
Pb Concentrate		
Recovery		
Cu	%	12.6
Pb	%	**83.6**
Zn	%	1.5
Ag	%	77.3
Grade		
Cu	%	2.1
Pb	%	**65.1**
Zn	%	5.4
Ag	g/t	5,504
Zn Concentrate		
Recovery		
Cu	%	17.2
Pb	%	5.4
Zn	%	**94.7**
Ag	%	8.0
Grade		
Cu	%	0.5
Pb	%	0.7
Zn	%	**54.0**

Description	Unit	Value
Ag	g/t	92.0
Concentrate Produced (LOM)		
Cu	t	141,741
Pb	t	383,068
Zn	t	2,346,321
Plant Feed Characteristics		
Solids Specific Gravity	-	2.96
Percent Moisture (by Weight)	%	3.0
Bond Abrasion Index, Ai	g	TBD
CWI (Crushing)	kWh/t	TBD
BWI (Ball Mill), 80th percentile	kWh/t	12.7
Crushing & Stockpiling		
Design Factors		
Crushing	-	1.0
Conveyors	-	1.6
Feeders	-	1.2
Primary Crushed material Product Size, P_{80}	mm	30
Final Crushed Material Product Size, P_{80}	mm	6
Grinding Plant		
Design Factor		1.2
Feed particle size, F_{80}	mm	6
Product size, P_{80}	microns	100

Table 17-2: Major Process Equipment

Item	Number	Description	Key Criteria (ea.)
Comminution			
Primary Crusher	1	Cone Crusher CS440	220 kW
Secondary Crusher	1	Cone crusher, Model CH840i:01	330 kW
Ball Mill	1	16' x 24', 2900 kW drive	2900 kW
Flotation			
Copper Rougher	2	1.2m Diameter x 8m height	2 x 37 kW
Copper 1st Cleaner		0.5 m^3 tank cell, FB +4 arrangement	4 kW
Copper 2nd Cleaner		0.5 m^3 tank cell, FB +3 arrangement	4 kW
Copper 3rd Cleaner		0.5 m^3 tank cell, FB +3 arrangement	4 kW
Lead Rougher		10 m^3 tank cell, FB +1+1+1+1+1 arrangement	11 kW
Lead 1st Cleaner		0.5 m^3 tank cell, FB +3 arrangement	4 kW
Lead 2nd Cleaner		0.5 m^3 tank cell, FB +4 arrangement	4 kW
Lead 3rd Cleaner		0.5 m^3 tank cell, FB +3 arrangement	4 kW
Zinc Rougher		20 m^3 tank cell, FB +1+1+1+1+1 arrangement	34 kW
Zinc 1st Cleaner		5 m^3 tank cell, FB +3 arrangement	11 kW
Zinc 2nd Cleaner		5 m^3 tank cell, FB +3 arrangement	11 kW
Zinc 3rd Cleaner		3 m^3 tank cell, FB +2 arrangement	7 kW
Cu. Regrind	1	4' x 8', 30 kW drive	30 kW
Pb Regrind	1	4' x 8', 30 kW drive	30 kW
Zn Regrind	1	8' x 12', 250 kW drive	250 kW
Dewatering and Filtration			
Cu Concentrate Thickener	1	High-rate thickener	45 m diameter
Pb Concentrate Thickener	1	High-rate thickener	45 m diameter
Zn Concentrate Thickener	1	High-rate thickener	45 m diameter
Pyrite Thickener	1	High-rate thickener	60 m diameter
Tailing Thickener	1	High-rate thickener	80 m diameter

Item	Number	Description	Key Criteria (ea.)
Pyrite Thickener	1	High-rate thickener	60 m diameter
Copper Concentrate Filter	3	3.2 m^2 filtration area	360 kW (total)
Lead Concentrate filter	1	4.7 m^2 filtration area	360 kW (total)
Zinc Concentrate filter	1	32 m^2 filtration area	530 kW (total)
Pyrite Concentrate filter	1	12.5 m^2 filtration area	530 kW (total)
Tailing filter	2	528 m^2 filtration area	590 kW (total)

17.3 PROCESS DESCRIPTION

The following items summarize the process operations required to extract copper, lead/silver, and zinc from the plant feed:

- The primary crushing circuit will be fed directly from haul trucks.
- Size reduction of the mineralized material by a primary cone crusher to reduce the plant feed size from run of mine (ROM) to 80 percent passing 30 millimetres. Crushed material will be conveyed to a coarse material stockpile
- The crushed material will be reclaimed and conveyed to a closed-circuit secondary crushing circuit. Crushed material will be conveyed to a fine ore bin.
- Grinding the crushed product in a conventional ball mill circuit to deliver a product size of 80 percent passing 100 microns to the flotation circuit. The ball mill will operate in closed circuit with hydrocyclones.
- The flotation plant will consist of sequential selective flotation circuits to produce copper, lead, and zinc concentrates. The copper flotation circuit will consist of rougher flotation, rougher concentrate regrinding, and three stages of cleaner flotation. The lead flotation circuit will consist of rougher flotation, rougher concentrate regrinding, and three stages of cleaner flotation. The zinc flotation circuit will consist of rougher flotation, rougher concentrate regrinding, and three stages of cleaner flotation.
- Final copper, lead, and zinc concentrates will be thickened, filtered, and loaded on trucks for shipment.
- Zinc rougher tails will be floated to produce a pyrite concentrate. Pyrite flotation will consist of rougher flotation. Pyrite concentrate will be thickened to recycle water to the process, filtered, and stockpiled separately from plant tailing. Pyrite flotation circuit tailing will have a low sulphide sulfur concentration.
- Final flotation tailing will be thickened to recycle water to the process. The thickened slurry will be filtered and conveyed to the tailing storage facility (TSF) or to the tailing paste backfill plant.
- Water from tailing and concentrate dewatering will be recycled for reuse in the process. Plant water stream types include process/reclaim water, fresh/fire water, and potable water.
- Storage, preparation, and distribution of reagents to be used in the process. Reagents include lime (CaO), sodium metabisulfite ($Na_2S_2O_5$), (zinc sulfate heptahydrate ($ZnSO_4 \cdot 7H_2O$), sodium cyanide (NaCN), A-3893 (dialkyl thionocarbamate), Aero 3418A (dialkyl dithiophosphinate), copper sulfate ($CuSO_4$), sodium isopropyl xanthate (SIPX), methyl isobutyl carbinol (MIBC), flocculant, and antiscalant.
- Air compressors and receivers will supply air for process plant operations, maintenance, and laboratory services. Blowers will supply air for the flotation cells.

Not included in the PEA processing plant, but for consideration in future technical studies, is the addition of a material sorting circuit to preconcentrate the feed to the flotation circuit and reduce the plant equipment size and a CIL circuit to recover gold from the pyrite concentrate and onsite production of doré bars. A simplified overall flowsheet is shown in Figure 17-1.

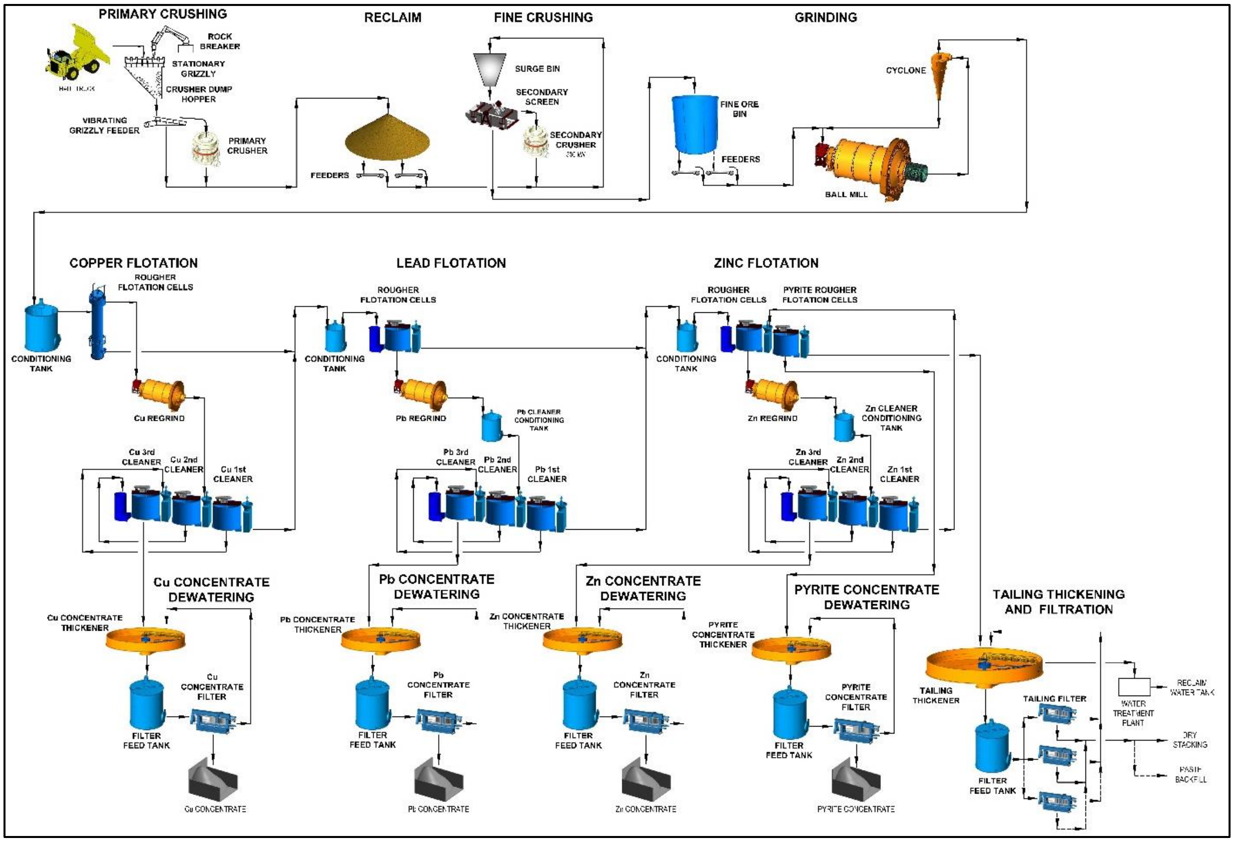


Figure 17-1: Simplified Flowsheet

17.3.1 Crushing Operations

The primary crushing circuit will be fed directly from haul trucks.

Size reduction of the mineralized material by a primary cone crusher to reduce the material size from run of mine (ROM) to 80 percent passing 30 mm. Crushed mineralized material will be conveyed to a 15,000 t coarse material stockpile located near the plant.

The coarse crushed mineralized material will be reclaimed and conveyed to a closed circuit secondary crushing circuit. Crushed plant feed will be conveyed to a fine material bin with a live capacity of 1,600 t.

17.3.2 Crushed Plant Feed Conveying, Transport and Storage

Plant feed will be hauled by trucks from the mine and will be directly dumped onto a stationary grizzly over the dump pocket. A vibrating grizzly feeder will draw the feed from the dump pocket and classify it into two streams. The oversize from the grizzly feeder will discharge into a cone crusher. The undersize from the grizzly and the discharge from the cone crusher will be conveyed to a coarse mineralized material stockpile.

A reclaim tunnel will be installed beneath the stockpile. The stockpile will contain approximately 15,000 tonnes of plant feed storage. When required, plant feed will be moved from the "dead" storage area to the "live" storage area by front-end loader or bulldozer. Plant feed will be withdrawn from the coarse material stockpile by two variable speed belt feeders. Each feeder can provide the complete feed to the fine crushing circuit. The reclaim feeders will discharge onto the primary screen feed conveyor. The plant feed reclaim rate will be monitored by a belt scale mounted on the primary screen feed conveyor. Dust control in the stockpile area will be performed by the wet type of dust suppression systems. One of the two dust collector systems will be installed to control dust at the discharge of the stockpile feed conveyor and another one will be installed to control dust in the reclaim tunnel.

17.3.3 Secondary Crushing and Screening

Mineralized material will be reclaimed from the coarse material stockpile at a rate of 4,500 t/d at 85% utilization on a 24 hour per day, 365 days per year basis. The reclaim feeders will discharge onto a transfer conveyor that discharges into a surge bin ahead of the double deck secondary screen. A magnet will be installed over the transfer conveyor to remove tramp metal ahead of the crusher. The secondary screen openings are 20 mm and 10 mm. The screen oversize material discharges directly into a secondary cone crusher. Secondary crusher product will discharge to a transfer conveyor where it is conveyed back to the surge bin ahead of the screen.

The undersize product from the secondary screen (P_{80} = 8 mm) is conveyed to a mill feed bin with a live storage capacity of 1,600 tonnes.

Secondary crusher product will be discharged at a P_{80} of approximately 13 mm.

Crusher final product (product screen undersize) will be conveyed on the fine material bin feed conveyor to a fine material bin ahead of the grinding circuit.

17.3.4 Fine Plant Feed Storage

Mineralized material will be withdrawn from the 1,600 t live bin using two mill feed reclaim belt feeders at a rate of 4,500 t/d at 92% utilization on a 24 hour per day, 365 days per year basis.

A mill feed bin dust vent will be installed to collect dust at the mill feed bin. A dust collector will be installed to collect dust around the discharge of the mill feed bin/mill feed reclaim feeders. Collected dust will be discharged onto the mill feed conveyor, ahead of the discharge from the mill feed bin reclaim feeders.

Collected dust will be returned into the mill feed material bin. The mill feed reclaim rate will be monitored by a belt scale mounted on the mill feed conveyor.

17.3.5 Grinding

The primary grinding circuit will be designed to process an average of 4,500 t/d at 92% utilization on a 24 hour per day, 365 days per year basis (4,891 t/d instantaneous rate). The grinding circuit will be designed to reduce the crushed mineralized material from 80% passing 8 mm to 80% passing 100 microns. Mineralized material will be ground to final product size in a single stage overflow ball mill.

Grinding will be performed in a rubber lined ball mill, 5.2 m inside diameter x 8.2 m effective grinding length (EGL) ball mill powered by a fixed speed 2,615 kW motor, operated in closed circuit with hydrocyclones. The ball mill will discharge over a trommel screen. The undersized material will fall through the trommel into the mill discharge sump. The trommel underflow will be pumped to the primary cyclones. The trommel product will be washed by process solution sprays and ball chips will be rejected out the end of the trommel into a tote bin.

Slurry will be pumped using variable speed horizontal centrifugal slurry pumps to two 660 mm hydrocyclones. Hydrocyclone overflow (final grinding circuit product) will flow by gravity to the copper flotation conditioning tank. Hydrocyclone underflow will flow by gravity to the ball mill.

Flotation feed will be sampled by primary samplers and analyzed by the onstream analyzer for metallurgical control prior to flotation. Cyclone overflow will also be monitored for particle size distribution by a particle size monitor.

A belt weigh scale will measure the new feed to the ball mill providing a signal for adjusting belt feeder speed and makeup solution addition. Grinding media will be fed onto the mill feed conveyor downstream from the weightometer.

A jib crane will be provided for service of the cyclone system. A bridge crane will be used to service the mill and provide other hoisting services in the process area. The area will be equipped with a sump and pump for clean-up purposes.

The grinding circuit is an enclosed plant. The floor will be concrete on grade with containment walls to contain spills within the floor area. The floor will be sloped to sumps that will pump the contained liquids and solids back to the mill feed. Steel framed maintenance platforms with steel grating will be provided.

Grinding balls will be added to the ball mill by a ball loading system. Air compressors and an instrument air dryer will provide service and instrument air for operations and maintenance.

17.3.6 Copper Flotation and Regrind

Cyclone overflow will flow by gravity to a conditioning tank. The copper conditioning tank will discharge to a splitter box that will distribute slurry to two rougher flotation cells. The copper flotation circuit will consist of two rougher column cells operated in parallel followed by three stages of cleaner flotation.

The rougher circuit will consist of two 1.2m diameter x 8m high column flotation cells. Flotation will be performed at a natural pH. The copper rougher concentrate will be pumped to the copper regrind mill. Product from the regrind mill will report to the copper cleaner circuit.

The copper cleaner row consists of four 0.5 m^3 forced air first cleaner cells, three 0.5 m^3 forced air second cleaner cells, and three 0.5 m^3 forced air third cleaner cells. Reground rougher concentrate is sent to the copper first cleaner flotation cell. Concentrate from the first cleaner flotation cells will be pumped to the second cleaner cells. Concentrate from the second cleaner cells will be pumped to the third cleaner cells. Tailing from the third cleaner circuit will flow to the second cleaner flotation circuit. Tailing from the second cleaner cells will flow to the first cleaner flotation circuit. Copper rougher tailing and copper first cleaner tailing will flow by gravity into the lead rougher conditioning tank. Concentrate from the third cleaner cells (final copper concentrate) will flow by gravity to the copper concentrate thickener. The concentrate and tail samples cut by the samplers will be analyzed for process control by an onstream analyzer.

Reagents (Zinc Sulfate, A-3894, sodium metabisulfite, and MIBC) may be added to the conditioning tank.

A concrete containment slab on grade and containment walls will contain process spills. A sump pump will transfer the contained solids and solution back to the copper flotation circuit.

17.3.7 Lead Flotation and Regrind

Copper rougher tailing and copper first cleaner tailing will flow by gravity to the lead rougher conditioning tank. Discharge from the lead rougher conditioning tank will be pumped to the lead rougher flotation cells. The lead flotation circuit will consist of one row of rougher cells followed by three stages of cleaner flotation.

The lead rougher circuit will consist of one row of five 10 m^3 forced air cells with a drop between each cell. Flotation will be performed at a natural pH. The lead rougher concentrate will be pumped to the lead regrind mill. Product from the regrind mill will report to the lead cleaner conditioning tank. Reground lead rougher concentrate will flow by gravity from the lead cleaner conditioning tank to the lead first cleaner flotation cells.

The lead cleaner row consists of three 0.5 m^3 forced air first cleaner cells, four 0.5 m^3 forced air second cleaner cells, and three 0.5 m^3 forced air third cleaner cells. Reground rougher concentrate is sent to the copper first cleaner flotation cell. Concentrate from the first cleaner flotation cells will be pumped to the second cleaner cells. Concentrate from the second cleaner cells will be pumped to the third cleaner cells. Tailing from the third cleaner circuit will flow to the second cleaner flotation circuit. Tailing from the second cleaner cells will flow to the first cleaner flotation circuit. Lead rougher tailing and Lead first cleaner tailing will flow by gravity into the zinc rougher conditioning tank. Concentrate from the third cleaner cells (final lead concentrate) will flow by gravity to the lead concentrate thickener. The concentrate and tail samples cut by the samplers will be analyzed for process control by an onstream analyzer.

Reagents (3418A and MIBC) may be added to the conditioning tank and stage added to the second and third cleaner flotation cells.

A concrete containment slab on grade and containment walls will contain process spills. A sump pump will transfer the contained solids and solution back to the lead flotation circuit.

17.3.8 Zinc Flotation and Regrind

Lead rougher tailing and lead first cleaner tailing will flow by gravity to the zinc rougher conditioning tank. Discharge from the zinc rougher conditioning tank will be pumped to the zinc rougher flotation cells. The zinc flotation circuit will consist of one row of rougher cells followed by three stages of cleaner flotation

The rougher circuit will consist of one row of five 20 m^3 forced air cells with a drop between each cell. Flotation will be performed at a pH = 10 to 11. The zinc rougher concentrate will be pumped to the zinc regrind mill. Product from the regrind mill will report to the zinc cleaner circuit.

The zinc cleaner row consists of three 0.5 m^3 forced air first cleaner cells, three 0.5 m^3 forced air second cleaner cells, and two 0.5 m^3 forced air third cleaner cells. Reground rougher concentrate is sent to the zinc first cleaner flotation cell. Concentrate from the first cleaner flotation cells will be pumped to the second cleaner cells. Concentrate from the second cleaner cells will be pumped to the third cleaner cells. Tailing from the third cleaner circuit will flow to the second cleaner flotation circuit. Tailing from the second cleaner cells will flow to the first cleaner flotation circuit. Tailing from the first cleaner circuit will be combined with the zinc rougher tailing and will flow through four 10 m^3 pyrite rougher flotation cells. Pyrite rougher tailing (final tail) will flow to the tailing thickener. Concentrate from the third cleaner cells (final zinc concentrate) will flow by gravity to the zinc concentrate thickener. The concentrate and tail samples cut by the samplers will be analyzed for process control by an onstream analyzer.

Milk of lime and copper sulfate may be added to the zinc rougher conditioning tank. Milk of lime, SIPX, and copper sulfate, and MIBC may be added to the zinc cleaner conditioning tank. SIPX may be stage added to the rougher cells and milk of lime may be stage added to the cleaner cells.

A concrete containment slab on grade and containment walls will contain rain runoff and process spills. A sump pump will transfer the contained solids and solution back to the zinc flotation circuit.

Air compressors, air receivers, and instrument air dryer will be installed for general plant operation and maintenance. A bridge crane will be installed for maintenance of the flotation and regrind equipment.

17.3.9 Copper Concentrate Dewatering

Concentrate from the copper third cleaner flotation cells will be directed to a copper concentrate thickener. The concentrate thickener overflow will be pumped back to the thickener feed for dilution and thickener spray bar to control froth, or to the process water tank. The concentrate thickener underflow will be pumped to an agitated storage tank and then to a pressure filter. Filter cake will discharge to a stockpile.

Filtrate and filter wash water will be returned to the feed box of the copper concentrate thickener.

17.3.10 Lead Concentrate Dewatering

Concentrate from the lead third cleaner flotation cells will be directed to a lead concentrate thickener. The concentrate thickener overflow will be pumped back to the thickener feed for dilution and thickener spray bar to control froth, or to the lead process water tank. The concentrate thickener underflow will be pumped to an agitated storage tank and then to a pressure filter. Filter cake will discharge to a stockpile.

Filtrate and filter wash water will be returned to the feed box of the lead concentrate thickener.

17.3.11 Zinc Concentrate Dewatering

Concentrate from the zinc third cleaner flotation cells will be directed to a zinc concentrate thickener. The concentrate thickener overflow will be pumped back to the thickener feed for dilution and thickener spray bar to control froth or to the process water tank. The concentrate thickener underflow will be pumped to an agitated storage tank and then to a pressure filter. Filter cake will discharge to a stockpile.

Filtrate and filter wash water will be returned to the feed box of the zinc concentrate thickener.

17.3.12 Concentrate Loadout

Concentrates (copper, lead, and zinc) will be reclaimed by front-end loader onto highway haulage trucks. A truck scale and a concentrate truck sampler will be located near the concentrate load out area.

A wheel washing system will be installed near the load out area to clean off concentrate from the haulage trucks before they leave the concentrate building.

17.3.13 Pyrite Concentrate Dewatering

Concentrate from the pyrite rougher flotation cells will be directed to a pyrite concentrate thickener. The concentrate thickener overflow will be pumped back to the thickener feed for dilution and thickener spray bar to control froth or to the process water tank. The concentrate thickener underflow will be pumped to an agitated storage tank and then to a pressure filter. Filter cake will discharge to a stockpile and be stored separately from plant tailing.

Filtrate and filter wash water will be returned to the feed box of the pyrite concentrate thickener.

17.3.14 Tailing Dewatering

Tailing from the pyrite rougher flotation row (low sulfide sulfur) will flow to a high-rate tailing thickener. Thickener overflow will be pumped from the tailing thickener overflow tank to the process water tank. Thickener underflow from the tailing thickener will be pumped by variable speed horizontal centrifugal slurry pump to an agitated storage tank and then to two pressure filters operated in parallel. Filter cake will discharge to a conveyor and will be transported using a series of conveyors to the tailing storage facility or to the tailing paste backfill plant.

17.4 PROCESS CONSUMABLES

Reagent types and dosages were established in the metallurgical programs conducted at Blue Coast Research between 2018 and 2020 and discussed in Section 13. The grinding media consumption was calculated based on an estimated Bond abrasion index from similar process facilities and adjusted based on vendor recommendation for use of high chrome media. The same wear rate was assumed for both primary grinding and regrinding applications. This approach was taken since no Bond abrasion index data is presently available for the Cerro Las Minitas mineralization.

Reagents requiring receiving, handling, mixing, and distribution systems include Lime $Ca(OH_2)$, Zinc Sulfate, added in the heptahydrate form, ($ZnSO_4 \cdot 7H_2O$), Sodium Cyanide (NaCN), Copper Sulfate ($CuSO_4 \cdot 5H_2O$), Sodium Isopropyl Xanthate (SIPX), Aerophine 3418A, Methyl Isobutyl Carbinol (MIBC), Flocculant, and antiscalant.

Reagent types and dosages were established between 2006 and 2017 in the various metallurgical programs conducted at SGS Lakefield. The grinding media, liner, and lifter consumption were calculated based on an estimated Bond abrasion index that corresponds to the 50th percentile of abrasiveness of more than 2,000 samples that were tested at SGS. This approach was taken since no Bond abrasion index data is presently available for the Tamarack SMSU and MSU mineralization. Grinding media is assumed to be high chrome based on the use of stainless media during testing, in order to control Eh and ensure activation of chalcopyrite which was otherwise misplaced into the zinc concentrate.

The reagent and grinding media wear rates are presented in Table 17-3 and Table 17-4, respectively

Table 17-3: Project Reagents

Reagent Identification	Function	Usage Rate, kg/t mill feed
Hydrated Lime	pH control and pyrite depression. Primarily added during zinc flotation.	1.773
Sodium Metabisulfite	Galena depressant during copper flotation.	1.100
Zinc Sulfate Heptahydrate	Control metal ion activation (Sphalerite Depressant) during copper and lead flotation.	0.323
Sodium Cyanide	Depress iron sulfides, secondary zinc and pyrite depressant added during lead flotation.	0.053
A-3894	Dialkyl thionocarbamate based collector used for selective copper flotation.	0.021
Aerophine 3418A or equivalent	Promoter, a dialkyl dithiophosphinate collector used for selective galena flotation.	0.075
Copper Sulfate	Sulphide mineral activator, activate sphalerite prior to zinc flotation.	0.385
Sodium Isopropyl Xanthate	Collector, medium length xanthate-based collector, used for zinc flotation	0.125
MIBC	Low persistence alcohol based frother used to maintain a stable froth	0.306
Flocculant	Particle settling aid	0.017
Antiscalant	Inhibit scaling	0.015

Table 17-4: Consumables

	kg/t processed
Primary Crusher - Liners	
Secondary Crusher - Liners	
Ball Mill - Liners	
Cu Regrind Mill - Liners	
Pb Regrind Mill - Liners	
Zn Regrind Mill - Liners	
Ball Mill - Balls	0.488
Cu Regrind Mill – Balls	0.017
Pb Regrind Mill – Balls	0.017
Zn Regrind Mill – Balls	0.017

17.5 WATER SYSTEM

Total water requirements for the Cerro Las Minitas processing plant are estimated to be about 779.6 t/h. This water requirement includes dust suppression at the crushing circuit, water addition in the grinding circuit, dilution water, launder water, and an estimate for gland water and reagent makeup. The mineralized material is assumed to yield a moisture content of at least 3% or 6.8 t/h. All process water that is recovered in the dewatering circuits of the three concentrates and two tailing are circulated back to the process water tank. The water in the concentrate and tailing streams amounts to 749.7 t/h. Hence, the freshwater requirement to make up the water deficit is 30 t\h.

For this study, the freshwater makeup required for the process plant was assumed to be approximately 0.15 m^3/t of plant feed processed (30 m^3/h or 8 L/s). Note this does not include freshwater for other areas of the site (lab, maintenance, truck shop, etc.).

Process water will be recycled as much as possible to minimize water usage. Process water recycled in the plant is approximately 3.68 m^3/t of plant feed processed (750 m^3/hr or 208 L/s).

17.6 AIR SERVICE

Two separate air supply systems will service the process plant. Low-pressure air for the flotation cells will be supplied by air blowers. High-pressure air for the overall process plant will be supplied by plant air compressors.

Instrumentation service air will be provided from plant air compressors. Compressed air will be dried and stored in air receivers for distribution to various instruments. Filtration air will also be provided from plant air compressors.

An air compressor and receiver will be installed for operation and maintenance at the fine crushing facility, at the Tailing filter plant, at the assay laboratory, and at the plant maintenance shop.

17.7 POWER

The electrical power consumption was based on an equipment list with connected kW, discounted for operating time per day and anticipated operating load level. The Cerro Las Minitas process facility has an estimated annual 18.7 megawatt (MW) total connected load and 14.7 MW total demand load. This translates to about 23.7 kWh/t or US$2.37 per tonne of plant feed processed. The unit cost for electrical power is estimated to be $0.100 per kWh.

Annual plant power costs are estimated to average $7.8 million. See Section 21.3.1.2 for power consumption by area. Electrical power will be supplied by the electrical grid.

17.8 QUALITY CONTROL

The plant will be designed for installation of an onstream x-ray sampling and analysis system for plant control. Automatic samplers will also be provided on selected streams in order to calculate the plant material balance and for control of the process. In addition, density and particle size metres will be installed in the cyclone feed sump to control the grind. Particle size will be monitored on the primary grinding, copper, lead, and zinc regrind cyclone overflows for process control. pH control loops will meter lime to the zinc circuit. The assay data will be fed back to a central control room and will be used to optimize process conditions. Routine samples of intermediate products and final products will be collected from automatic samplers and analyzed in an assay laboratory where standard assays will be performed. The data obtained will be used for product quality control and routine process optimization. Feed and tailing samples will also be collected and subjected to routine assay.

The assay laboratory will consist of a full set of assay instruments for base metal analysis, including an atomic absorption spectrophotometer (AAS), DRX, ICP, experimental balances, and other determination instruments such as pH and redox potential metres.

17.9 AUXILIARY SYSTEMS

Auxiliary systems such as reagent mixing and storage, maintenance and office requirements, laboratory, etc. are listed but not necessarily detailed for this study. Estimates for such items were based on other similar projects. The reagent consumption was estimated from the laboratory flotation tests and data from other properties. The grinding media consumption was estimated from comminution testing and data from other properties.

17.10 PROCESS CONTROL PHILOSOPHY

The plant control system will consist of a distributed control system (DCS) with PC-based operator interface stations (OIS) located at the central control room. The DCS, in conjunction with the OIS, will perform all equipment and process interlocking, control, alarming, trending, event logging, and report generations. The plant central control room will be staffed by trained personnel 24 hours per day.

The central control room will also control and monitor the coarse material reclaim from the coarse material pile.

The process control will be enhanced with the installation of an automatic metallurgical sampling system. The system will collect samples from various streams for on-line analysis and the daily metallurgical balance. Vendors' instrumentation packages will be integrated with the central control system. In addition, density and particle size metres will be installed in the cyclone feed sump to control the grind.

A closed-circuit television (CCTV) system will monitor various facilities and conveyors discharge points. The cameras will be monitored from the central control room.

17.11 METALLURGICAL PERFORMANCE PROJECTION

According to the metallurgical performance projections developed from the metallurgical test results and the proposed mine plan, the estimated annual concentrate production is as summarized in Table 17-5.

Table 17-5: Projected LOM Concentrate Production

Concentrate	Metal	Head Grade %	Throughput, t/d	Overall % Recovery	Production tonnes	Concentrate Grade, %
Copper		0.2	4,500	60.2	108,896	27
Lead Concentrate	Lead Silver	1.07	4,500	88.2	357,242	65
Zinc		2.57	4,500	93.2	1,094,210	54

17.12 PROCESS ALTERNATIVES AND SELECTION

The selection of the process and equipment is routine, straightforward and follows modern plant design practice and no major alternatives are presented.

The proposed treatment method and key processing parametre are based on preliminary testwork completed to date and industry standards.

18 PROJECT INFRASTRUCTURE

This section summarizes the infrastructure and logistics requirements of the project. Figure 18-1 shows an aerial view of the general site vicinity.

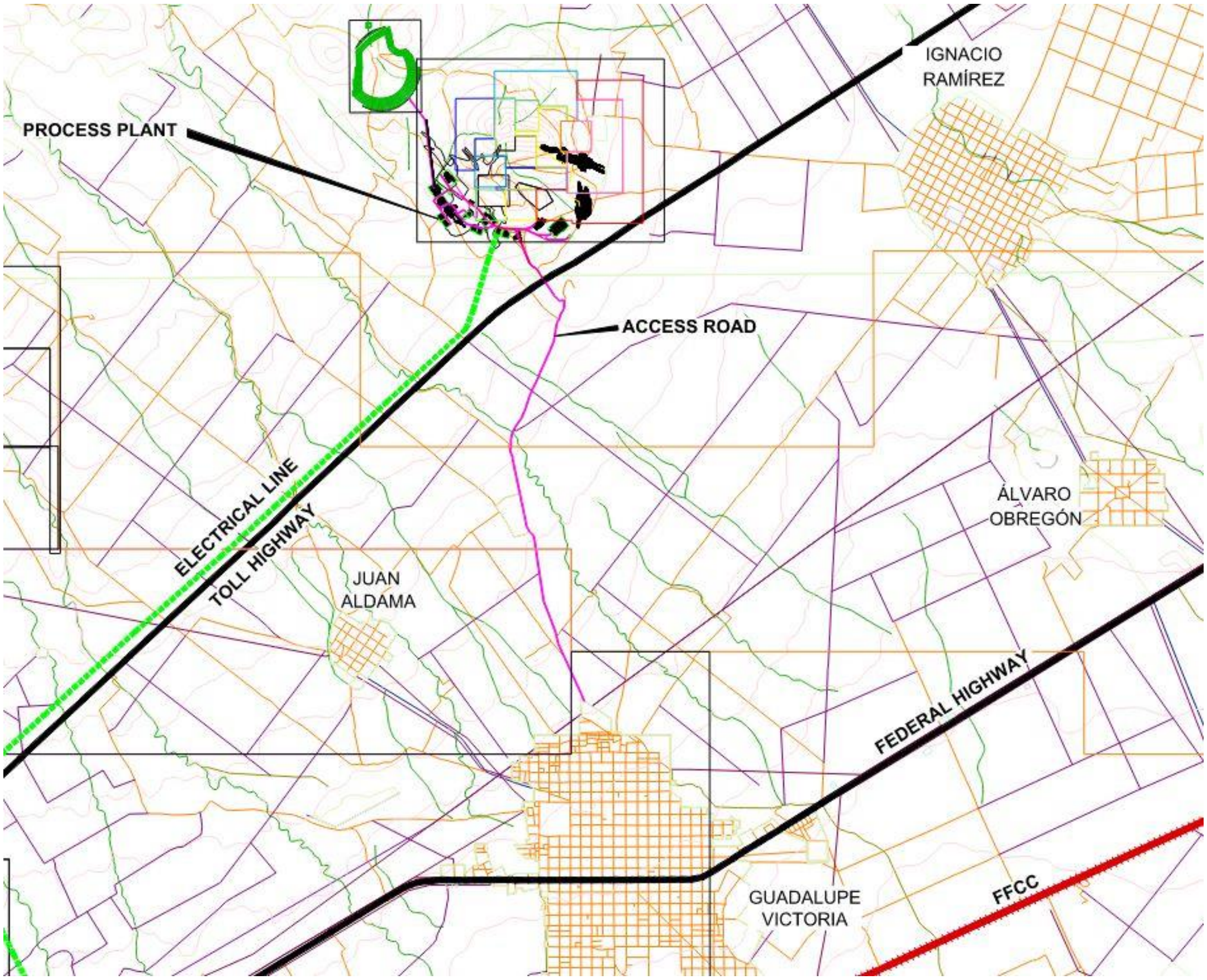


Figure 18-1: General Site Vicinity

18.1 SITE ACCESS

The Cerro Las Minitas project is located about 70 km to the northeast of the city of Durango in Durango State, Mexico, approximately 5 km from Guadalupe Victoria. The project site is 1 km alongside Federal Highway 40D, a four-lane divided paved toll highway. In the project vicinity, paved Federal Highway 40 runs through Guadalupe Victoria and parallel to Highway 40D. There is a road from Guadalupe Victoria to the site with a bridge over 40D. There is also FFCC rail service to Guadalupe Victoria operated by Linea Coahuila Durange, S.A. de C.V. which feeds into or from the Ferromex network.

18.2 ELECTRICAL POWER

The Cerro Las Minitas process plant and mine has a 20 MW demand load. A 115 kV overhead electrical power transmission line, 10.4 km in length will run on self-supported steel towers to site from CFE Substation Guadalupe Victoria, as shown in Figure 18-2.

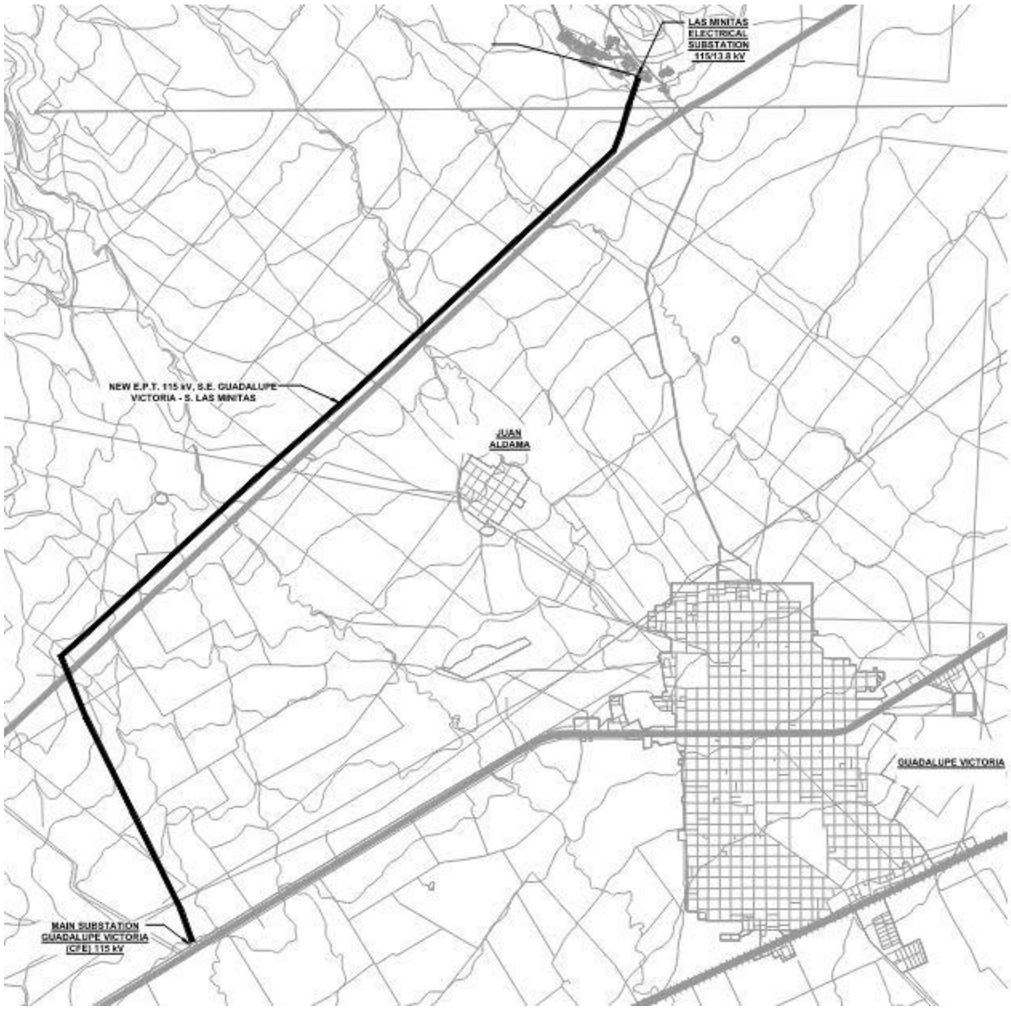


Figure 18-2: Electrical Power Transmission

18.3 WATER AVAILABILITY

Process make-up and domestic water will be supplied from sub-surface wells. The project requires a water supply of approximately 1,500 m^3/d. The amount of aquifer water available for the project is presently unknown. Preliminary studies are ongoing to identify the hydrogeological availability and characteristics of the water aquifers in the region.

18.4 PLANT SITE GENERAL ARRANGEMENT

The overall process plant general arrangement is shown in Figure 18-3.

Figure 18-3: Overall Process Plant General Arrangement

18.5 TRANSPORTATION AND LOGISTICS

Process and mining equipment will be procured both domestically in Mexico, and from international origins. Special handling requirements will be necessary for some of the equipment and considerations will need to be made to prevent theft, accidents, or unsafe conditions while shipments are in-route. There are plenty of transportation providers that serve the Mexico market that can provide the specialized resources necessary to transport over dimensional or heavy weight equipment into the project. The port infrastructure and roads leading to the project are currently in good condition to handle the volumes and types of shipments needed.

The port of Mazatlán on the Pacific is the closest commercial port to the project. However, this port does not have many inbound routings to Mexico so the project will most likely use the port of Manzanillo in the Pacific. In the Gulf of Mexico, the project will most likely use the port of Altamira mainly for cargo to and from Europe and other countries. For cargo originating in Canada and the US, the project will most likely use Nuevo Laredo in Tamaulipas or Piedras Negras in Coahuila as the border crossing points. In all these cases, access to the mine will be using major highways.

Concentrates (copper, lead, and zinc) may be reclaimed by a front-end loader onto highway haulage trucks for transport to the ocean port for shipment to international smelters. Depending on the ultimate marketing needs, concentrate may also be bagged at the project site. If the marketing plan allows for ocean lots above 5,000 tonnes the port of Mazatlan will be the ideal port to use for Asia bound cargo. Otherwise, for smaller lots the port of Manzanillo will provide the project more flexibility in ocean routings.

Because of its proximity to the project, transportation by rail may also be an option for the project. For inbound cargo to the mine, rail could be used for intermodal from the US and Canada or other types of cargo. For outbound cargo with concentrates, rail could be an option for shipments out of the port of Altamira. Rail to Manzanillo or Lazaro Cardenas may not be very efficient due to the design of the rail network in Mexico.

18.6 TAILINGS

The Cerro Las Minitas tailings facility is designed and operated as a dry-stack, in which dewatered tailings are spread, compacted and graded for erosion control and stability. Dry-stacking of tailings was selected and is implemented as an effective way to create a safe facility that will, upon closure, become a long-term stable geomorphic form in the landscape.

Dewatering equipment at the tailing filter plant will utilize plate and frame filter presses, where the water content of the tailings is reduced from 40 percent to about 15 percent by weight. After filtering, the dewatered tailings are transported to the tailings storage facility by an overland conveyor, distributed across the facility by moveable grass-hopper conveyors and graded and compacted in place. Mine development rock is placed and compacted as engineered fill within the dry stack area.

Concurrent reclamation of the tailing storage facility will be ongoing during operations. As successive lifts of dewatered tailings are placed and compacted behind perimeter rock berms (buttresses), the lower front-face rock slopes are covered with stockpiled topsoil and revegetated. Thus, at all stages of operation, the outer slope of the dry stack is in essence a vegetated slope that replicates natural slopes in the immediate vicinity of the mine.

19 MARKET STUDIES AND CONTRACTS

No market studies were performed, and no sales contracts are in place. The commodities involved in this project are commonly traded on the open market.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Mining in Mexico is subject to a well-developed system of environmental regulation that applies from the exploration stage to mine development, operation, and ultimately through mine closure.

There are presently no known environmental issues that could materially impact Southern Silver's ability to extract the mineral resources and process material.

The only known environmental liabilities are associated with the exploration site activities and access roads. Remediation of surface disturbances and removal of residues is required as part of the exploration environmental permits. Exploration activities are ongoing, and closure will be incorporated into the mine closure plan.

20.1 ENVIRONMENTAL STUDIES

The Cerro Las Minitas Mining Project is in the state of Durango and is owned by Southern Silver Exploration Corp. This is the initial technical report on the environmental status the project area. No environmental studies of the flora and fauna specific to the project area have been conducted to date. However, a preliminary report has been prepared concerning the hydrology using data from published governmental sources to evaluate the groundwater status in the project area.

20.1.1 Groundwater Resources

In May 2022, the hydrogeological studies consulting firm Investigación y Desarrollo de Acuíferos y Ambiente (IDEAS) prepared a report titled, Hydrological and Hydrogeological Characterization for the Cerro Las Minitas Mining Project, Durango. (Determination of Basic Hydrological Level). The information obtained and interpreted for this report are of a semi-regional nature using official sources, the last of which were published in 2020. The results are inconclusive due to a lack of recent data from fieldwork. The report is based on the official data from the Nation Water Commission (CONAGUA) most recently updated in the 2006 or 2014.

The Project Area (PA) is situated at the boundary of two aquifers, as defined by CONAGUA – Peñón Blanco to the northeast and Madero-Victoria to the southwest. Evaluation of both aquifers combining data from the Public Registry of Water Rights (REPDA) and that of registered water concession holders indicates that both aquifers are over exploited leaving no available volume to grant new concessions. However, the project has the right to use water extracted from mine workings (dewatering) for exploration and exploitation (Aqua de Laboreo de Minas) according to National Water Law.

The aquifers in the PA are poorly defined and require additional investigation. Sources of recharge, direction of groundwater movement, and aquifer zonation and connectivity are poorly understood and could have a significant impact on the exploitation of the mineral deposits. Depth to groundwater in the PA is variously reported as 60-70 metres or 100-120 metres. Preliminary groundwater phreatic surface elevation contours suggest that the PA is in a depression in the groundwater, but the data are sparse, poorly characterized, and poorly understood.

Water sources for the project may be obtained from three possible sources. Water derived from dewatering the workings can be used for operational purposes. Water rights could be purchased from existing water rights holders. Negotiation of an extraction concession might be possible in the unlikely event that evaluation of the aquifers indicates a surplus.

20.1.2 Groundwater Quality

In February 2017, three groundwater samples were analyzed (one from the Puro Corazón mine and two from the La Bocana mine) to determine the quality of the water in relation to physicochemical and microbiological parameters for future use of the water in a possible mineralized material processing plant and provide groundwater quality information to the authorities of the Ejidos Guadalupe Victoria and Ignacio Ramírez.

The results of the 14 parameters analyzed from the three groundwater samples are presented in Table 20-1.

Table 20-1 Results of water quality in the Project area

PARAMETER	UNIT	MINE PURO CORAZON 017CLMPC-1	MINE LA BOCONA 017CLMLB-2	MINE LA BOCONA 017CLMLB-1	MAXIMUM PERMISSIBLE LIMIT
pH	SU	7.7	8.4	7.6	6.5 –8.5
Color	CU	<2.0	<2.0	<2.0	20
Turbidity	NTU	<0.5	<0.5	<0.5	5
Total hardness	mg/L	481.12	378.3	407.4	500
Calcium hardness	mg/L	358.9	310.4	323.98	Not Specified
Arsenic	mg/L	<0.005	<0.005	<0.005	0.025
Cyanide	mg/L	<0.02	<0.02	<0.02	0.07
Copper	mg/L	1.23	<0.1	<0.1	2
Mercury	mg/L	<0.0005	<0.0005	<0.0005	0.006
Zinc	mg/L	6.12	0.67	0.74	Not Specified
Total Coliform	NMP/100mL	<2	<2	<2	<1.1 or Not detectable
Fecal Coliform	NMP/100mL	<2	<2	<2	<1.1 or Not detectable
Escherichia coli	NMP/100mL	<2	<2	<2	<1.1 or Not detectable
Lead	mg/L	0.0015	0.002	0.001	0.01

The last column of the Table 20-1 shows the reference parameters of the Official Mexican Standard NOM-127-SSA1-2021, which establishes the permissible limits of water quality for human use and consumption, which was published in the Official Gazette of the Federation on May 2, 2022.

Regarding the presence of metals in the groundwater analyzed, the concentrations of various elements could be the result of proximity to the alteration halo of the mineralized area and migration of leached metals from the mineralized zones. The presence of metallic elements can result from industrial activity. The lack of industrial activity in the area suggests that these metals are the result of natural processes rather than from anthropogenic activity. However, in some regions, the source of elevated metal concentrations has been attributed to fertilizer products and agricultural or livestock activities. Subsequent studies are required to investigate the origin of metal concentration within the impact area of the project using a rigorous geochemical methodology.

20.2 PERMITTING

There are several environmental permits required for operation of the project. Most of the mining regulations are at a federal level, but there are also a number regulated and approved at state and local level, as delineated in Table 20-2. Three major federal permits required by the Secretary of Environmental Media and Natural Resources (SEMARNAT) prior to construction include the Environmental Impact Statement (MIA), Land Use Change (CUS), and Risk Analysis (RA). A construction permit is required from the local municipality and an archaeological release letter from the National Institute of Anthropology and History (INAH). An explosives permit is required from the Ministry of Defense before construction. It is required to submit a Social Impact Assessment study to SENER prior to the construction of the electrical transmission line.

Table 20-2: Permitting Requirements

Permit	Agency	When Required	Description / Comments	Agency Process Time
Environmental Impact Assessment and Risk Analysis (Mining & Access Road) **An EIA and Risk Analysis needs to be integrated into the MIA when the project has risk factors listed in the first and second list of high-risk activities.**	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Environmental and Risk Department SEMARNAT Central Office	Prior to construction	The submittal should include a detailed process description along with engineering details from the Civil, Mechanical, Electrical and Fire Protection System disciplines. This should also include a description and discussion about natural resources and socioeconomic aspects, including the effects of the project in the Regional Environmental System (SAR area). The submittal should also identify the activities that will create an ecological imbalance, along with corresponding prevention and mitigation measures for the identified environmental impacts.	Approximately 120 working days (Mon-Fri)
Land Use Change (Mining, & Access Road)	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Forestry Resources SEMARNAT State Office	Prior to construction	The submittal should include: • Basic information of the natural resources and socioeconomic aspects of the project. • Description of the Regional Environmental System (SAR) and socioeconomics of the affected area. • Identify endangered species with flora removal. • Provide location of areas with protected species and provide habitat conservation measures. • Describe impacts and effects caused by clearing and grubbing of flora. • Define forest land. • Identify the activities that will create an ecological imbalance. • Define the prevention and mitigation measures for the environmental impacts.	Approximately 160 working days
Archaeological Release Letter (Mining & Access Road)	INAH (State Office)	Prior to construction	INAH must authorize, in advance, any project work required near archeological, historic, or artistic monuments with an Archaeological Release Letter.	Approximately 120 days
Permit for Access, Crossings and Marginal Facilities within the right of way to access the Durango-Torreon Highway (Access Road)	Secretaría de Comunicaciones y Transporte (SCT) State Office	Prior to construction	Must present the engineering project that will be carried out to connect the access road to the mine using the Durango-Torreon Highway. Must present the land acquisition where the project will be executed.	Approximately 90 days
Environmental Impact Assessment (Power line)	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Environmental and Risk Department SEMARNAT Central Office	Prior to construction	The submittal should include a detailed process description along with engineering details from the Civil, Mechanical, Electrical and Fire Protection System disciplines. This should also include a description and discussion about natural resources and socioeconomic aspects, including the effects of the project in the Regional Environmental System (SAR area). • The submittal should also identify the activities that will create an ecological imbalance, along with corresponding prevention and mitigation measures for the identified environmental impacts.	Approximately 120 working days (Mon-Fri)

Permit	Agency	When Required	Description / Comments	Agency Process Time
Land Use Change (Power line)	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Forestry Resources SEMARNAT State Office	Prior to construction	The submittal should include: • Basic information of the natural resources and socioeconomic aspects of the project. • Description of the Regional Environmental System (SAR) and socioeconomics of the affected area. • Identify endangered species with flora removal. • Provide location of areas with protected species and provide habitat conservation measures. • Describe impacts and effects caused by clearing and grubbing of flora. • Define forest land. • Identify the activities that will create an ecological imbalance. • Define the prevention and mitigation measures for the environmental impacts.	Approximately 160 working days
Archaeological Release Letter (Power line)	INAH (State office)	Prior to construction	• INAH must authorize, in advance, any project work required near archeological, historic, or artistic monuments with an Archaeological Release Letter.	Approximately 120 days
Social Impact Studies (Power line)	Secretaría de Energía (SENER) Central Office	Prior to construction	• Description of the project and its area of influence • Identification and characterization of communities and towns that are in the area of influence of the project • The identification, characterization, prediction and assessment of the positive and negative social impacts that could derive from the project • Provide prevention and mitigation measures, and social management plans	Approximately 90 working days
New Concession or Useful Allotment of Groundwater	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Comisión Nacional del Agua (CNA)	Prior Construction	This is required to extract or use groundwater from zones regulated by the Federal government for public interest.	Approximately 90 working days
Authorization for the Transfer of Titles and Registration.	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Comisión Nacional del Agua (CNA)	As required	This is required when the interested party has a valid concession title or assignment of rights and is registered in the real state water rights record office and wants to transfer their rights for either surface water within the same basin or groundwater within an aquifer.	Approximately 90 working days
Concession for the Material Extraction in Rivers Deposits	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Comisión Nacional del Agua (CNA) **A MIA approved by SEMARNAT is needed to grant the Concession.**	As required	According to Article 113 of the National Water Law, this submittal is applicable for the exploitation and use of construction materials when: • The area is regulated by the National Water Commission. • The area is on land occupied by lakes, lagoons, estuaries, or natural deposits whose water is national property; and • The area has riverbeds with national water currents.	Approximately 90 working days

Permit	Agency	When Required	Description / Comments	Agency Process Time
Permission to carry out Hydraulics Construction (Tailing Dam)	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Comisión Nacional del Agua (CNA) State Office & Federal office **A MIA approved by SEMARNAT is needed to grant the Concession**	Prior Construction	The submittal is needed when working within National Property regulated by National Water Commission for: • River-Crossing Structures • Flow channels • Channel Dams • Tailing Dams • Storage Dams • Bypass Constructions	Approximately 240 working days
Concession for Occupation of Federal Land under the Jurisdiction of National Water Commission	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Comisión Nacional del Agua (CNA)	As required	This submittal is required when there will be land use or exploitation of federal channels, riverbeds, lakes, or lagoons, as well as creeks, zones and other national assets regulated by the National Water Law.	Approximately 90 working days
Use of Explosives ***(Presented for evaluation)***	Secretaria de la Defensa Nacional (SEDENA)	To buy, transport, store, or use explosives	Transactions are made in Mexico City and must comply with the following format: • Letter of notification from the State Governor. • Safety Certificate. • Location map of powder magazines and accessories, with reference to the places where the explosives are used and stored in relation to human occupation. • Relation of the type of explosives and amount to be used monthly. • Legal documentation of the company.	Approximately 90 working days after a Technician of SEDENA inspects visit
Compliance with Environmental Risk and Impact Regulations	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Procuraduría Federal de Protección al Ambiente (PROFEPA) State Office	Always	The authorization of the Environmental Impact and Risk Analysis defines rules for the construction and start-up of operations to protect the environment.	
Residual Water Discharge Register and Permission	Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) Comisión Nacional del Agua (CNA) State Office	Prior to water usage	The submittal is needed when permanently, intermittently, or incidentally discharging or infiltrating sewage into national water bodies (ocean/sea, riverbeds) or lands that are national assets, with a risk of contaminating the subsoil or aquifer.	90 working days
Construction License	Municipality	Prior to construction	It is required to comply with the construction regulations.	Check with country
Land Use License	Municipality	Prior to construction	The project must be registered and approved by the County.	Check with country

SEMARNAT (Federal Office of Environmental Protection)
INAH (Archeological and Historic Federal Institute)
SENER (National Secretary of Energy)
CNA (National Water Commission) [Role of state office unclear currently]
SEDENA (National Secretary of Defense)

20.3 SOCIAL AND COMMUNITY IMPACT

The Cerro Las Minitas project is located within the town of Guadalupe Victoria (Guadalupe Victoria Ejido & Ignacio Ramirez Ejido), in the municipality of Guadalupe Victoria, in the State of Durango.

20.3.1 Municipality of Guadalupe Victoria, Durango

The surface area of the municipality of Guadalupe Victoria is estimated as 1,292.75 km^2, which corresponds to approximately 1.05% of the land area of the state of Durango. The municipality of Guadalupe Victoria borders the municipality of Peñon Blanco to the north; Peñon Blanco and Cuencame to the east; Cuencame, Poanas, and Durango to the south; and Durango, Panuco de Coronado, and White Rock to the west.

20.3.2 General Demographics

The population currently registered for the municipality of Guadalupe Victoria, Durango is estimated at a total of 36,695 people, of which 18,635 are female and 18,060 are male.

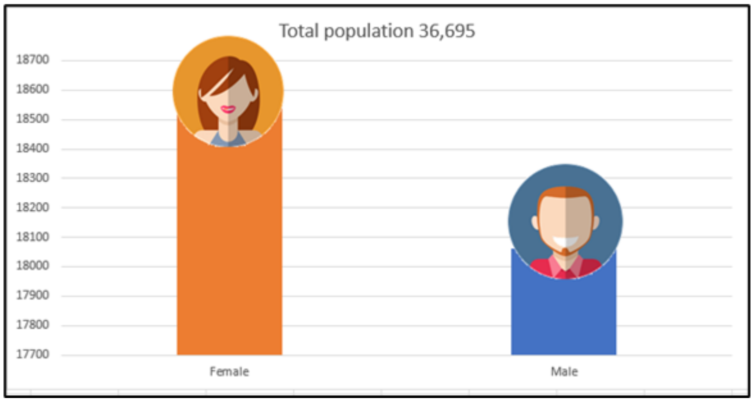


Figure 20-1: Population Gender Demographics

The illiteracy rate for the municipality of Guadalupe Victoria for 2020 was 2.78%. Of the illiterate population, 56.6% were men and 43.4% were women. Illiteracy is defined as being 15 years of age or older and having the inability to read or write. Economic activity for the population 12 years of age or older increased from 38.7% in 2015 to 54.8% in 2022.

Currently, 31% of the workforce is employed in commerce, 29.4% in manufacturing industries, and the remainder distributed in the other economic pursuits shown the following graph.

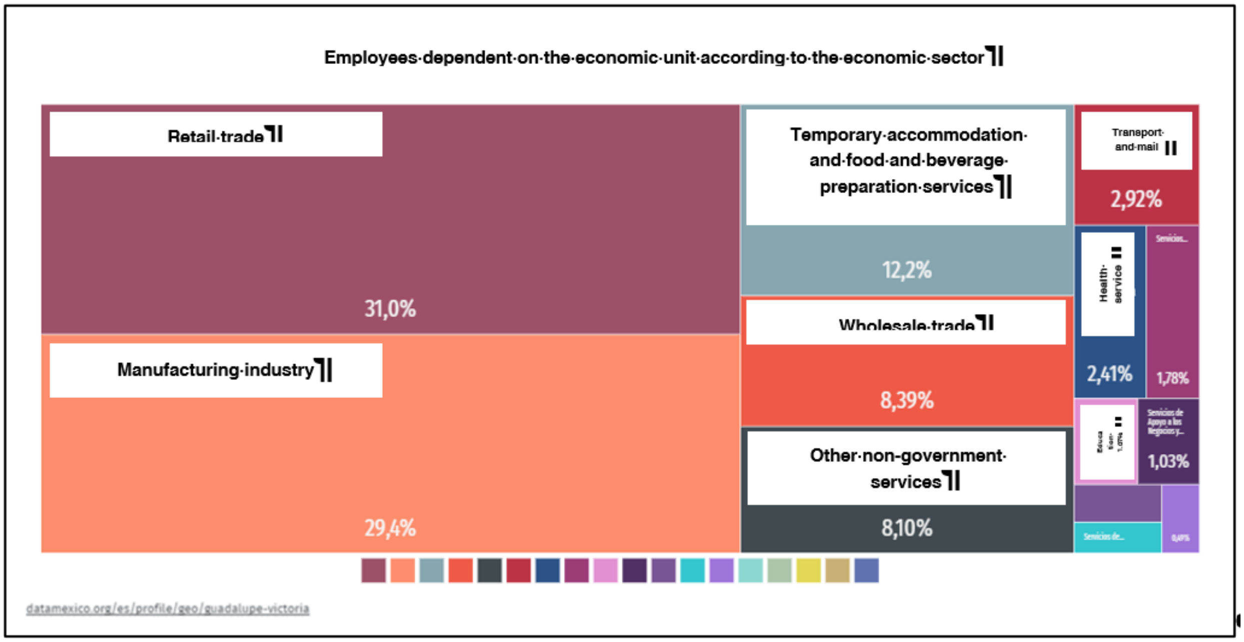


Figure 20-2: Employment Demographics

The health service coverage options most utilized in the last year for the municipality of Guadalupe Victoria are the SSA Health Center or Hospital, Popular Insurance, and Pharmacy Office according to the Mexican Institute of Social Security (IMSS).

20.3.3 Community Relationship

The Cerro Las Minitas Project will offer over 220 potential temporary and permanent jobs to the region. Special effort will be taken during the Project to provide support to the local communities, including assisting with introducing and improving basic services and educational institutions.

It is of vital importance for Southern Silver to have a relationship with the population and society in the area. Southern Silver reached out to the community through it's subsidiary, Minera Plata del Sur (MPS), to express the intention of developing a mining project within private and ejido property land, that would provide a socio-economic well-being for the local and foreign population that boosts local economy. A lease scenario was proposed for the land that comprises the project's mineral reserve and surface for supplementary and support works. A land occupation agreement was achieved by the company. Consequently, a mutual benefit was generated as the surface owners would economically benefit from the lease of their lands, and in turn MPS benefits from having the property to exploring the mining project. In the future, a land occupation agreement for exploitation activities will be negotiated.

Over the years, the company has fulfilled its social commitment with the community of the Guadalupe Victoria Ejido and Ignacio Ramirez Ejido, developing a series of activities and programs that allow maintaining a healthy and pleasant relationship with the residents of the ejido. The company maintains constant contact with the needs of the population and community, which in turn has the connection with those responsible for the project to request economic and other support for community needs.

The main activities developed by MPS are focused on improvements in the supply of drinking water, modification and maintenance of educational centers and maintenance of streets and main roads.

In addition, social activities and recreation for the Ejidos population is a main part of the contributions that MPS has been maintaining over the years, by mainly providing necessary financial resources per request of the people, and needed for the festivities and recreational activities that as a society are performed locally, such as Mother's Day, Children's Day, Christmas festivities and sport activities.

MPS's collaboration and contributions to improvements for the general well-being of the community has allowed growth in relationships and social ties in the area, generating a state of trust and reciprocity that is maintained to date. It is expected that these relationships will continue to strengthen with the development of all phases of the Cerro Las Minitas Project, which will be reflected with the employment of a portion of the population that resides at the Guadalupe Victoria Ejido and Ignacio Ramirez Ejido, as well as at the surrounding towns and communities.

20.4 CLOSURE AND RECLAMATION

20.4.1 Overview

In accordance with the general work schedule of the Cerro Las Minitas Project, the abandonment phase will commence after Year 15 from the start of operations. As part of the permitting requirements, MPS will prepare a detailed Closure and Reclamation Plan, which will be concurrently executed from the operation phase of the project and will be completed in the abandonment phase.

Conditions of the final closure and reclamation plan will depend on land use after the mining operations. It is anticipated that designated uses will be one or a combination of the following:

- Natural habitat for wild flora and fauna.
- Land with potential for livestock activities.
- Land with potential for seasonal agriculture

The general guidelines and criteria for closure and recovery are described below, prioritizing the reduction of risks to health and the environment.

20.4.2 Tunnel

The main risks associated with underground mining tunnels (adits) are related to the access of people or fauna that could be injured or trapped when entering the tunnel. The tunnels will be partially or totally filled with the material from the dumps, or terreros, (extraction and filling of tunnels from the paste plant), closure of air inlets or outlets that reach the surface and closure of access to the tunnels.

In the areas around the tunnel portal, cleaning and dismantling and removal of pipes, tanks, and pumping equipment will be carried out, and signs restricting access to the area will be posted.

There will also be a cleaning and reforestation campaign with native plants.

20.4.3 Waste Rock Dumps

Waste rock dumps will remain onsite, and piles and banks will be contoured to prevent ponding. Earthworks will be constructed, if necessary, to control and divert drainage routes towards natural creeks.

The waste dumps will be revegetated using growth media recovered during the initial construction phase. Where needed and when operationally possible, land will be scarified, and native species will be planted.

20.4.4 Tailings Dam

Characteristics of the tailings will be evaluated to establish restoration requirements. For baseline purposes, several acid-base accountability and toxicity tests will be carried out with leached material subject to metallurgic tests. An annual composite will be extracted from the tailings during the operation to monitor geochemical behavior.

The following is the preliminary plan for tailings dam reclamation. Once the operation of the project is completed, recovery works will be carried out at the base and margins of the system, which include surface runoff control works to reduce wind and water erosion, smoothing of slopes on the periphery of the dam, removal of pipes and installations.

Remaining process pond solution will be removed and unloaded in compliance with NOM-001-SEMARNAT-2021. Remnant sludge will be left at the bottom of ponds and then covered and buried with a plastic geomembrane. The pond will be filled with waste from different mining phases. The land will then be scarified and prepared for seeding or planting with native species. Surface water drainage will be consistent with pre-mining conditions.

20.4.5 Process Plant and Service Facilities

Recovery plant cleaning, dismantling, and closure will be carried out, as well as the recovery of equipment and material useful for the company or third parties.

All facilities will be dismantled or demolished. Major production equipment will be dismantled and sold at closure. Foundations will be removed, and holes filled to restore natural topography where possible. The land will be scarified, and native species planted and cultivated.

20.4.6 Roads

Some roads will be left to access main areas of the site to facilitate closure and monitoring. Internal roads will be leveled and scarified to promote local plant growth via the addition of topsoil and native species planting or cultivation with seeds.

20.4.7 Environmental Monitoring

Groundwater monitoring will be conducted for three years post closure using operation wells and surface water monitoring will be conducted on the main creeks.

21 CAPITAL AND OPERATING COSTS

21.1 CAPITAL COST

21.1.1 Initial Capital Cost

Table 21-1 summarizes the initial capital costs. Total initial capital investment in the project is estimated to be $341 million and includes $55 million contingency, which represents the total direct and indirect cost for the development of the project, including associated infrastructure.

Table 21-1: Initial Capital Cost Summary

Item	Total ($M)
Process Plant and Infrastructure	
Project Directs including freight	$185
Project Indirects	$35
Contingency	$55
Sub-Total	**$275**
Process Pre-production	**$3**
Mining	
Pre-Production Capital Costs	$63
Total Initial Capital Costs	**$341**
Sustaining Capital	$168
Total Capital Costs	**$509**

21.1.2 Basis of Process Plant and Infrastructure Capital Cost Estimate

In general, M3 based this capital cost estimate on its knowledge and experience of similar types of facilities and work in similar locations. One of cost benchmarks includes M3's Los Gatos Project, a 2,500 t/d Lead Zinc concentrator in Chihuahua, Mexico, completed in Q3 2019.

As an EPCM, M3 had previously designed and constructed a 4,500 t/d concentrator with filtered tailings, similar to the Cerro Las Minitas Project.

"Initial Capital" is defined as all capital costs through the end of construction or the end of Year 1 of the mine life. Capital costs predicted for later years are carried as sustaining capital in the financial model.

All costs are in 2nd quarter 2022 United States dollars except as noted otherwise. The Mexico to US exchange rate used is 20 Mexican pesos = US$1.00.

21.1.2.1 EPCM Execution

The capital costs are based on this project being executed by experienced EPCM contractor(s) in the hard rock mining industry with a recent record of bringing projects on budget or under budget. It is assumed that at least two sufficiently sized self-performing local contractors are in place for all trades, such as civil, concrete, steel, architectural, mechanical, electrical, instrumentation and controls, and process piping. Certain contractors will have multiple trade capabilities.

21.1.2.2 Exclusions and Qualifications

This capital cost estimate excludes the following items:

1. Future escalation,
2. The cost of all prior and future studies,
3. Start-up and initial operating expenses subsequent to Owner's acceptance of the plant ready to accept feed,
4. Future foreign currency exchange variation,
5. The cost to provide insurance coverage for the duration of the project, and
6. Environmental, permitting, and ecological considerations.

This capital cost estimate depends on the following qualifications:

1. Environmental permits and licenses required to operate the facilities are obtained in a timely manner, and
2. Unfettered access to the project site is assured for the duration of the project development and operation.

21.1.2.3 Contingency

Contingency is a cost that statistically will occur based on historical data. The term is not used to cover changes in scope, errors, or lack of sufficient information to meet a desired accuracy range. Contingency is used to cover items of cost which fall within the scope of work but are not known or sufficiently detailed at the time that the estimate is developed. A 25% contingency was applied to the process plant and infrastructure direct and indirect costs.

21.1.2.4 Documents

Documents developed for this PEA Study include:

- General Flowsheet and Process Design Criteria
- Overall Site General Arrangement drawing
- Overall Electrical Single Line diagrams
- 115 kV Power Transmission route drawing
- Equipment Register, major equipment data sheets, and Electrical Load List

21.1.2.5 Construction Labor

Burdened construction labor rates used in the process plant and infrastructure capital cost estimate are shown in Table 21-2. The rates were provided in Q2 2022 by a Mexican industrial contractor experienced in the scope and scale of the Project. The contractors' work schedule considers a 65-hour work week, 10 hours per day, 6 days per week. (Monday through Saturday – 10 hrs/day, Sunday – 5 hours). The contractors' cycle will be 21 working days followed by 7 days off. Adjustment for the 65-hour work week, small tools, PPE, indirect costs (field supervision and safety), overhead and profit are included. The crew build ups cover the majority of activities for each commodity.

Table 21-2: Burdened Labor Rates

Trade	Labor Rate (US$/hour)
Civil Work	$9.00
Concrete	$9.00
Architectural	$9.00
Structural Steel	$12.00
Equipment Installation	$12.00
Piping	$15.00
Electrical	$15.00
Instrumentation	$15.00

21.1.3 Process Plant and Infrastructure Direct Costs

Direct capital costs by are broken down by commodity in Figure 21-1.

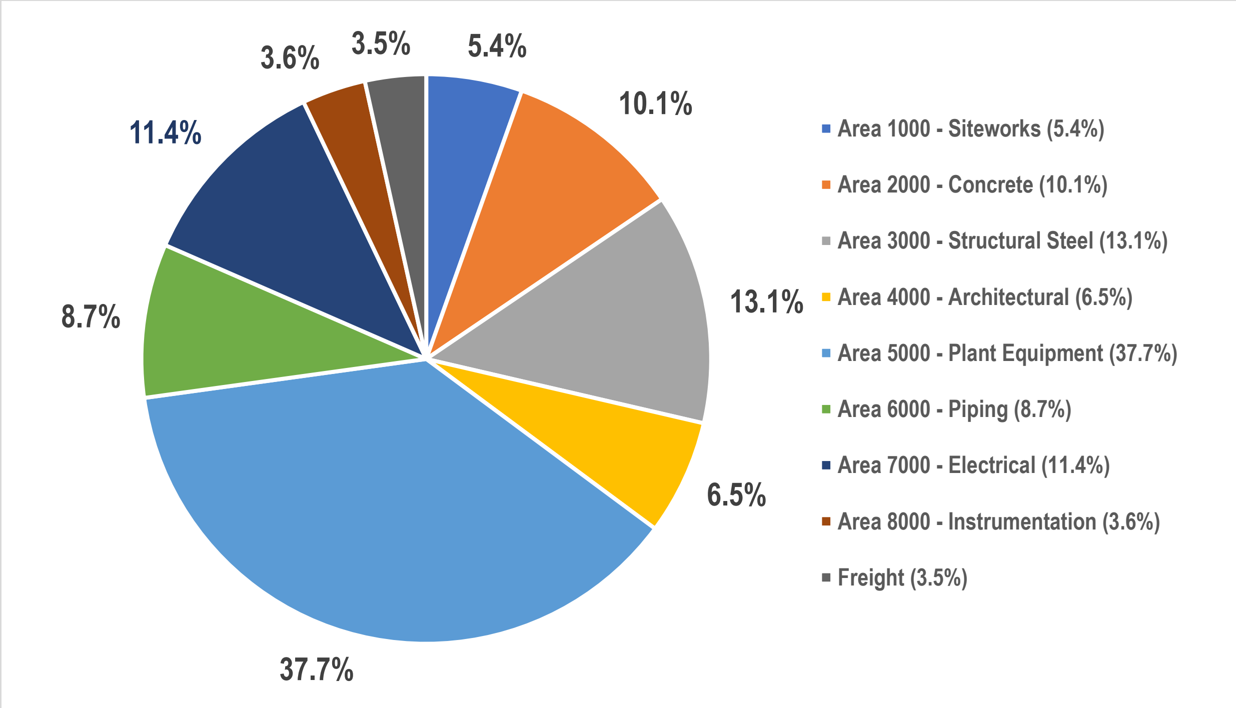


Figure 21-1: Direct Cost Percentages by Commodity Type

21.1.3.1 Civil

Civil earthwork costs were included as an allowance based on similar recently built projects.

21.1.3.2 Concrete

Concrete quantities were developed from general arrangement drawings and similar recently built projects.

Recent unit rates were provided by an industrial contractor in Mexico experienced in the scope and scale of the Project.

21.1.3.3 Structural Steel

Structural steel quantities were developed from the general arrangement drawings and similar recently built projects.

Fabricated steel costs were provided by recent quotes from Mexico.

Steel erection rates were provided by an industrial contractor in Mexico experienced in the scope and scale of the Project.

21.1.3.4 Mechanical Steel

Takeoffs have been made for mechanical steel including platework, abrasion resistant liners, etc. based on the general arrangement drawings, equipment list, and experience with similar installations.

21.1.3.5 Mechanical Equipment (including major electrical equipment)

M3 solicited prices for the major equipment depicted on the Flow Sheet and the Equipment Register from qualified suppliers. Budgetary quotes were received in Q2 2022 for the following major equipment:

- Cone Crusher
- Vibrating Grizzly Feeder
- Variable Frequency Drives
- Motor Control Centers
- Secondary Screens
- Secondary Crusher
- Distribution Panel
- Lighting Panel
- Transformers
- Ball Mill
- Switchgear
- Cu Cleaner Flotation Cells
- Pb Cleaner Flotation Cells
- Pb Rougher Flotation Cells
- Zn Rougher Flotation Cells
- Zn Ceaner Flotation Cells
- Cu Concentrate Filter
- Pb Concentrate Filter
- Pb Concentrate Thickener
- Zn Concentrate Filter
- Zn Concentrate Thickener
- Pyrite Concentrate Filter
- Pyrite Concentrate Thickener
- Tailings Filter
- Tailings Thickener

An allowance for Mechanical installation costs is included based on actual install hours from a similar recently built project in Mexico.

21.1.3.6 Architectural

An allowance of $12,000,000 was carried for all ancillary facilities, based on recently built projects in Mexico.

21.1.3.7 Piping

An allowance for Piping material and installation costs is included based on actual built costs from a similar recently built project in Mexico.

21.1.3.8 Electrical

The majority of major electrical equipment was quoted. See the list above under mechanical equipment. The list incudes the electrical equipment that was quoted.

An allowance for bulk Electrical material and installation costs is included based on actual built costs from a similar recently built project in Mexico.

21.1.3.9 Instrumentation

An allowance for Instrumentation material and installation costs is included based on actual built costs from a similar recently built project in Mexico.

21.1.3.10 Capital and Commissioning Spares

Capital Spare parts are included at 2% of Plant Equipment Costs. Commissioning spares are also included at 0.5% of Plant Equipment Costs.

21.1.3.11 Freight

Freight is 10% of equipment and material costs.

21.1.4 Process Plant and Infrastructure Indirect Costs

Indirect costs include:

- Contractor Mobilization (included in contractor unit rates),
- Busing Costs (included in contractor unit rates),
- Camp construction and operating costs,
- Temporary Construction Facilities and Power,
- Engineering, Management & Accounting, Project Services, Project Controls and Construction Management,
- Vendor Supervision, Pre-commissioning, and Commissioning, and
- Contingency.

21.1.5 Mine Capital Costs

Mining development costs were developed by Entech considering a mining contractor model based on Entech's database of mining costs. Total capital costs including sustaining capital allocated to mining are approximately US$228 million consisting of the following:

- Initial development costs are approximately US$35 million;
- Sustaining development are approximately US$104 million;
- Reallocated operating expense of US$23 million;
- Contractor mobilization, equipment purchases, and half-life rebuilds (pumps, primary and auxiliary fans, compressors, and substations) are approximately US$29 million;
- Initial project capital expenses (portals, primary fans, initial pump stations, refuge chambers, etc. plus a 25% contingency) are approximately US$37 million; and,
- Total lateral capital development cost of US$5,705/m and includes a reallocation of operating expense to capital of US$701/m;
    - Direct costs of US$3,749/m and indirect costs of US$1,255/m.

A summary of the underground capital costs is provided in Table 21-3.

Table 21-3: Mining Capital Breakdown

Capital Expense	Total ($US M)
Capital – Mining Development	34.7
Sustaining Development	104.3
Capitalised Operating Expenses	22.6
Equipment Purchases, including rebuilds	28.9
Mine Infrastructure and UG Capital Projects	37.3
Total Mining Capital Costs	227.8

21.1.6 Owner's Costs

Owner's costs include the owner's onsite & start-up teams and other G&A costs during the pre-production period. Pre-production G&A costs include items such as: outside consultants, office equipment, legal fees, insurance, information technology services and general supplies. Labor costs include administration, office, safety, security, and warehouse personnel. The pre-production costs are estimated at $2.25 million and expended in year prior to the start of production. Owner's costs prior to the start of project engineering and construction are deemed as sunk cost and are not included in this analysis.

21.2 SUSTAINING CAPITAL COSTS

Sustaining capital is planned over the operating life of the mine for equipment replacement in the mining and process plant areas. The total project-life sustaining capital is estimated to be $168.0 million over the 15-year project. The mine area sustaining capital is $164.76 million which includes $104 million for development, $25.3 million for equipment purchases and rebuilds, and $35 million for infrastructure and other underground capital projects. Process plant equipment sustaining capital is $3.25 million ($250,000 yearly allowance for years 3 through 15) to cover equipment replacements.

21.3 OPERATING COSTS

The operating costs for the Cerro Las Minitas project are comprised of the following components: mining, process plant, and general & administration. An operating cost summary is shown in Table 21-4.

Table 21-4: Operating Cost Summary

Area	US$/mt ore processed
Mine Operating Cost	$38.74
Process Plant Operating Cost	$15.12
G & A	$3.59
Treatment & Refining Charges	$22.66
Operating Cost	**$80.10**
Royalties - Revenue	$0.32
PTU-Profit Sharing	$4.15
Closure & Salvage Value	$0.17
Other Production Cost	**$4.63**
Total	**$84.74**

21.3.1 Process Operating Costs

The process plant for the base-case PEA-level study is a conventional sulphide flotation system consisting of both primary and secondary crushing, a closed-circuit ball mill grinding and sequential Cu-Pb-Zn flotation circuit producing three filtered concentrates for sale. Table 21-5 summarizes the process operating costs.

Table 21-5: Process Operating Cost Summary

Operating & Maintenance	Average Annual Cost ($000)	US$/t processed	LoM Operating Cost ($000)	%
Labor	$2,208	$1.35	$33,127	9.0%
Electrical Power	$7,246	$4.45	$108,686	29.4%
Reagents	$8,283	$5.08	$124,249	33.6%
Liners/Grinding Media	$2,129	$1.31	$31,929	8.6%
Maintenance Parts	$2,605	$1.60	$39,069	10.6%
Supplies and Services	$2,172	$1.33	$32,585	8.8%
Total (US$)	**$24,643**	**$15.12**	**$369,645**	**100.0%**

21.3.1.1 Process Labor and Fringes

Process labor costs were derived based on an estimated staff of 113 employees and prevailing annual labor rates. Labor rates and fringe benefits for employees include all applicable benefits as well as applicable payroll taxes but excludes profit sharing (PTU). Table 21-6 below summarizes the labor costs.

Table 21-6: Labor Cost Summary

	Staff	Average Annual Salary	LoM Cost ($000)
Administration	5	$61,985	$4,649
Operations	75	$15,256	$17,072
Maintenance	33	$23,044	$11,407
Total	**113**	**$19,614**	**$33,127**

21.3.1.2 Power

Power consumption was estimated using the equipment list connected kW rating, discounted for operating time per day and anticipated operating load levels. A cost per kWh of $0.10 was assumed. A summary of the consumption and power costs are shown in Table 21-7 below.

Table 21-7: Power Consumption and Cost Summary

Area	Average Annual kWh	Average Annual Cost ($000)	LoM Cost ($000)
Primary Crushing	2,444,524	$244	$3,667
Coarse Mineralized Material Storage and Reclaim	769,696	$77	$1,155
Reclaim and Fine Crushing	4,112,452	$411	$6,169
Grinding	22,725,114	$2,273	$34,088

Area	Average Annual kWh	Average Annual Cost ($000)	LoM Cost ($000)
Copper Flotation	4,527,150	$453	$6,791
Lead Flotation	3,607,118	$361	$5,411
Zinc Flotation	5,153,377	$515	$7,730
Pyrite Flotation	629,440	$63	$944
Cu Concentrate Handling	1,371,087	$137	$2,057
Pb Concentrate Handling	1,006,953	$101	$1,510
Zn Concentrate Handling	1,646,298	$165	$2,469
Pyrite Concentrate Handling	1,535,877	$154	$2,304
Water and Tailing	8,353,059	$835	$12,530
Water Treatment	346,607	$35	$520
Fresh Water System	2,169,565	$217	$3,254
Paste Plant	3,310,445	$331	$4,304
Main Substation Las Minitas	1,257,235	$126	$1,886
Reagent	584,142	$58	$876
Ancillary and Buildings	7,348,676	$735	$11,023
Total	**72,898,815**	**$7,290**	**$108,686**

21.3.1.3 Reagents

Consumption rates were estimated based on industry practice and M3's internal database of recent and similar projects. The annual consumptions and project-life costs are presented below in Table 21-8.

Table 21-8: Reagent Annual Consumptions and Life of Mine Costs

Reagent	Average Annual Quantity (kg)	Average Annual Cost ($000)	LoM Cost ($000)	US$/t processed
Hydrated Lime	43,349,570	$722	$10,837	$0.44
Sodium Metabisulfite	26,895,718	$1,703	$25,551	$1.05
Zinc Sulfate, heptahydrate	7,897,561	$696	$10,446	$0.43
Sodium Cyanide	1,295,885	$213	$3,201	$0.13
A-3894	513,464	$304	$4,565	$0.19
Aerophine 3418A	195,605	$190	$2,850	$0.12
Copper Sulfate	9,413,501	$1,569	$23,534	$0.96
Sodium Isopropyl Xanthate	3,056,332	$639	$9,582	$0.39
Methyl Isobutyl Carbinol	7,481,900	$2,045	$30,676	$1.25
Flocculant	415,661	$125	$1,870	$0.08
Antiscalant	366,760	$76	$1,137	$0.05
Total		**$8,283**	**$124,249**	**$5.08**

21.3.1.4 Maintenance Parts and Consumables

The grinding media consumption and unit cost estimates are based on industry practice and M3's internal database for the crusher and grinding operations. The project-life cost for the grinding media and liners is $31.9 million. An allowance was made to estimate the cost of equipment maintenance. The allowance is 3.5% - 4.5% of the direct capital cost of plant equipment, which equates to an average annual cost of $2.6 million and a project-life cost of $39.1 million.

21.3.1.5 Supplies and Services

Annual allowances were used for items such as lubricants, tools, safety items, outside services and miscellaneous supplies are based on industry practice and M3's internal database. The project-life cost for supplies and services is $32.6 million.

21.3.2 General Administration

General and administration costs reflect a well-located project in an area of established infrastructure and adjacent to the town of Guadalupe Victoria (population approximately 35,000). G&A costs include labor and fringe benefits for the administrative, human resources, safety & environmental, and accounting personnel. The labor costs for G&A are based on a staff of 34 employees. All other G&A costs were estimated as allowances based on M3's internal database. Table 21-9 summarizes the G&A costs.

Table 21-9: General & Administrative Costs Summary

Item	Average Annual Cost ($000)	US$/t plant feed processed	LoM Cost ($000)	%
Labor	$1,550	$0.95	$23,244	26%
IT/Communications	$815	$0.50	$12,225	14%
HR/Safety/Social	$1,108	$0.68	$16,626	19%
Property/Security	$1,565	$0.96	$23,473	27%
Legal/Finance/Accounting	$815	$0.50	$12,225	14%
Total	**$5,853**	**$3.59**	**$87,794**	**100%**

21.3.3 Mine Operating Costs

The operating costs reflect a contractor mining option which defers capital but uses the experience of a contractor for initial construction and development of the mine. Mining considers a modern and large operation using large 21-t loaders and 63-t capable trucks targeting an average daily plant feed of approximately 4,500 t/d (peak of 5,200 t/d averaged for Year 5) and 5,200 t/d when including waste development (peak of 6,100 t/d in Years 2-4). Mining costs are developed by Entech and are from Entech's cost database which includes pricing from mining contractors. Unit operating costs are summarised in Table 21-10.

Table 21-10: Mining Operating Cost Summary

Item	Total (US$)	Total (US$/t)
Development	$140	$5.71
Production	$808	$33.03
Total Production and Development Costs	**$947**	**$38.74**

Operating costs are summarized as follows and are appropriate for a Preliminary Economic Assessment:

- Total underground mining operating costs are approximately $947 million at an average of US$38.74/t;
- Operating development (including non-capital waste development) of $2,852/m (direct costs of US$2,505/m) and averages on a per tonne basis of $5.71/t; and,
- Production costs of $33.03/t of which $24.71 are direct costs and $8.32/t are indirect costs which includes labour (mine management/technical services), maintenance, power, and other costs.

Table 21-11: Stoping Costs (Y1-Y15)

Stoping Cost Centre	LoM Cost ($000)	US $/t processed
Drill	124,017	5.07
Blasting	16,911	0.69
Muck	144,932	5.93
Load & Haul	181,165	7.41
Stope Support	4,193	0.17
Backfill Cost	35,565	1.45
Geology	132,844	5.43
Allocated Diesel	48,786	2.00
Allocated Labour	46,898	1.92
Allocated Power	52,375	2.14
Allocated Maintenance	14,005	0.57
Allocated Other Overheads	5,816	0.24
Total	**$807,507**	**$33.03**

22 ECONOMIC ANALYSIS

22.1 INTRODUCTION

The economic analysis for the Cerro Las Minitas project uses a discounted cash flow (DCF) methodology to determine the Net Present Value (NPV), Internal Rate of Return (IRR) and payback period (time, in years, to recapture the initial capital investment). The Annual Cash Flow projections were estimated over the project-life based on the estimates of capital expenditures, production costs and sales revenue. The sales revenue is based on the production of copper concentrate, zinc concentrate and lead concentrate. The analysis assumes 100% equity financing of the initial capital.

22.2 CAPITAL EXPENDITURES

22.2.1 Initial Capital

The total initial capital investment in the project is estimated to be $341 million and includes a $55 million contingency, which represents the total direct and indirect cost for the development of the project, including associated infrastructure. Any acquisition cost or expenditures prior to the full project production decision have been treated as “sunk” cost and have not been included in the analysis.

22.2.2 Sustaining Capital

Sustaining capital is planned over the operating life of the mine for equipment replacement in the mining and process plant areas. The total project-life sustaining capital is estimated to be $168.0 million over the 15-year project.

22.2.3 Working Capital

An estimation of working capital has been included in the DCF analysis assuming 20 days for receipt of sales revenue (accounts receivable) and 30 days for payment to vendors (accounts payable). An allowance for initial replacement parts inventory for the plant is also included. All the working capital is recaptured at the end of the project-life and the final value of the account is $0.

22.2.4 Salvage Value

An allowance of $6.4 million is included in the DCF analysis as a return of capital from the salvage and resale of equipment at the end of the project-life.

22.3 REVENUE

Annual revenue is determined by applying selected metal prices to the annual payable metal contained in the concentrates for each operating year. Sales prices have been applied to all project-life production without escalation or hedging. The DCF analysis uses weighted average long-term prices (60% prior 3 years, 40% future 2 years) based on London Metals Exchange (LME) information. Prices used in the analysis are:

- US$3.78 per pound of copper
- US$21.95 per oz of silver
- US$1.33 per pound of zinc
- US$0.94 per pound of lead.

22.4 OPERATING COSTS

The operating cost estimate are comprised of the following areas: mining, process plant, G&A, and treatment and refining charges. The average operating cost is $80.10 per tonne of processed plant feed. Additional details regarding the operating costs are discussed in Section 21.

22.5 TOTAL PRODUCTION COST

Total Production cost is the total Operating cost plus royalties, profit sharing (PTU), reclamation & closure cost, and salvage value income. The average total production cost is $84.74 per tonne of processed plant feed.

22.6 TREATMENT & REFINING CHARGES AND TRANSPORTATION

Treatment and refining charges were based on consultation with industry professionals and generated the terms indicated in Table 22-1.

Table 22-1: Treatment & Refining Charges

	Ag	Cu	Pb	Zn
Cu Concentrate				
Average Concentrate Grade LOM	-	27%	-	-
Payable Metal	-	95%	-	-
Minimum Deduction		1 unit		
Pb Concentrate				
Average Concentrate Grade LOM	6,350g/t	-	64.90%	-
Payable Metal	95%	-	95%	-
Minimum Deduction	50g/t	-	3 Units	-
Zn Concentrate				
Average Concentrate Grade LOM	179g/t	-	-	53.50%
Payable Metal	70%	-	-	85%
Minimum Deduction	3oz/t	-	-	8 units

The high Ag grade in the Pb concentrate makes it attractive to smelters and could result in more favorable treatment terms, but these have not been considered at the PEA level. Penalty elements are low, with Cd (in solution with Zn) ($49/t concentrate) being the major contributor to Zn penalties, and Sb (in solution with Pb) being the major source of Pb penalties ($27/t concentrate). Arsenic present in 2020 concentrates was removed in 2022 testwork, but an allocation of $14.60/t Pb concentrate is still provided for in the PEA.

22.6.1 Concentrate Transportation

Transportation costs assume trucking of the concentrate via containers to the international port at Manzanillo, Colima, and then shipping via ocean freight to Asia. Estimated transportation costs (trucking, port handling and ocean freight) are US$96/wmt (wet metric tonnes) for Pb concentrate and US$106/wmt for Zn concentrate. Moisture contents are assumed to be 8.5% based on the grind size of the final concentrates.

22.7 ROYALTIES AND PROFIT SHARING (PTU)

Production costs include two mining-related royalties and one statutory tax.

- A 0.5% royalty is applied on revenue from precious metals (silver), which is paid to the federal government.

- A 7.5 royalty is applied on earnings before interest, income taxes, depreciation, and amortization (EBITDA), which is paid to the federal government.
- Employee Participation in Company Profits (PTU) is a statutory requirement to share a portion of profits with employees. PTU payments cannot be considered part of an employee's salary per the statute. A 10.0% rate is applied to taxable income (i.e., after depreciation and royalties).

The royalties and PTU are deductible against income before the calculation of income taxes.

22.8 RECLAMATION & CLOSURE

An allowance for reclamation and closure costs is estimated to be $10.5 million and assumed to be incurred the year after the end of plant operations.

22.9 DEPRECIATION

The economic analysis uses a straight-line depreciation method, over a period of 7 years, for both initial and sustaining capital. The straight-line term is adjusted to fully depreciate sustaining capital incurred in later years of the project by the end of year 16.

22.10 INCOME TAX

Income taxes are estimated to be $304.2 million for the project-life based on a 30% governmental income tax rate.

22.11 NPV AND IRR

The CLM project demonstrates project-life revenues over 15 years of production and after-tax Net Present Value at an 8% discount rate (NPV8%) of $220.4 million. Projected maximum cash outlay for the project is estimated to be US$341.0 million and project payback is approximately 60 months. Table 22-2 below summarizes the economic results.

Table 22-2: Summary of Economic Results

Item	Units	Base Case
Revenue	$M US	$3,705
Total Cost (excluding income tax & EBITDA Royalty)	$M US	$2,581
LOM pre-tax cash flow	$M US	$1,124
LOM after-tax cash flow	$M US	$696
NPV pre-tax (5% Discount)	$M US	$619
NPV pre-tax (8% Discount)	$M US	$431
NPV pre-tax (10% Discount)	$M US	$336
IRR pre-tax (%)	%	25.4%
NPV after-tax (5% Discount)	$M US	$349
NPV after-tax (8% Discount)	$M US	$220
NPV after-tax (10% Discount)	$M US	$156
IRR after-tax (%)	%	17.9%
Max Cash Outlay	$M US	$341
Payback (discounted, after-tax)	months	60

Figure 22-1 illustrates the estimated annual and cumulative after-tax cash flow over the project-life. Mine scheduling targets higher margin mineralization in the first eight years of production leading to a more aggressive paydown of capital and improved economics.

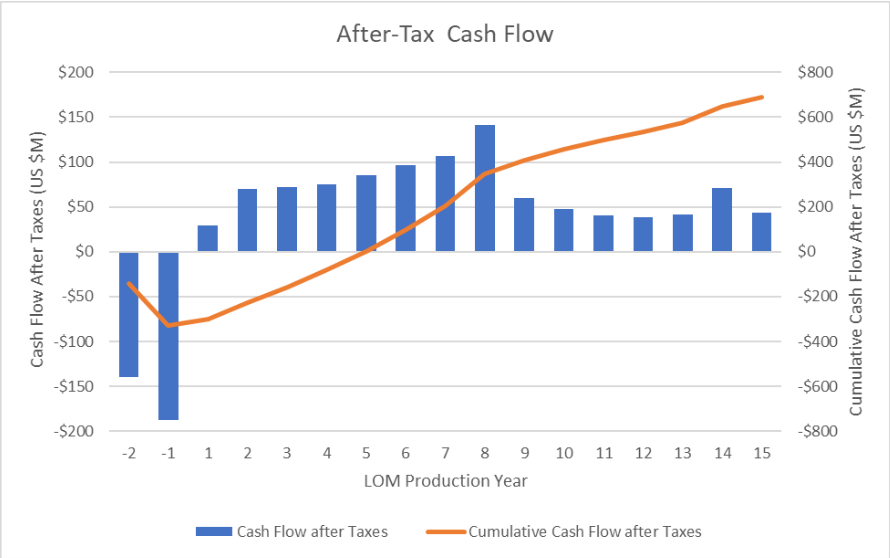


Figure 22-1: Life of Mine Cash Flow

Table 22-3 shows the financial model.

Table 22-3: Financial Model

Operating Year>>				PP	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Calendar Year>>		Total - LoM		-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mining Summary																							
TOTAL DIRECT FEED from MINE	kt	24,451		0	0	88	207	1,534	1,759	1,869	1,798	1,902	1,833	1,711	1,623	1,657	1,618	1,420	1,441	1,421	1,646	922	0
TOTAL FROM STOCKPILE	kt	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL MINERALIZED MATERIAL TO PROCESS PLANT	kt	**24,451**			**0**	**88**	**207**	**1,534**	**1,759**	**1,869**	**1,798**	**1,902**	**1,833**	**1,711**	**1,623**	**1,657**	**1,618**	**1,420**	**1,441**	**1,421**	**1,646**	**922**	**0**
Mineral Material Grade - Direct Feed																							
Silver	g/t	109.9			0.0	68.7	100.0	108.3	122.5	114.4	105.6	113.1	111.6	132.9	158.8	86.9	85.5	92.3	90.4	80.7	118.3	127.5	0.0
Copper	%	0.20%			0.00%	0.07%	0.08%	0.08%	0.12%	0.12%	0.12%	0.18%	0.22%	0.12%	0.12%	0.15%	0.24%	0.28%	0.28%	0.25%	0.39%	0.54%	0.00%
Lead	%	1.07%			0.00%	1.50%	1.85%	1.93%	1.94%	1.84%	1.39%	1.12%	0.87%	0.99%	1.20%	0.69%	0.59%	0.67%	0.67%	0.54%	0.57%	0.41%	0.00%
Zinc	%	2.57%			0.00%	1.51%	1.96%	1.61%	2.14%	2.17%	2.48%	2.31%	2.79%	3.57%	5.44%	3.17%	2.25%	2.24%	2.10%	2.48%	2.13%	0.95%	0.00%
*Contained Metal - **Direct Feed***																							
Silver	koz	86,422			0	194	667	5,340	6,929	6,874	6,106	6,918	6,575	7,313	8,287	4,633	4,448	4,215	4,191	3,688	6,264	3,779	0
Copper	klbs	107,674			0	137	384	2,631	4,713	4,962	4,886	7,538	8,957	4,590	4,418	5,435	8,419	8,635	9,011	7,780	14,116	11,062	0
Lead	klbs	579,025			0	2,912	8,479	65,161	75,245	75,641	55,212	46,945	35,274	37,246	42,980	25,313	20,984	20,827	21,144	16,764	20,619	8,279	0
Zinc	klbs	1,383,938			0	2,929	8,960	54,303	83,188	89,477	98,270	96,989	112,724	134,849	194,518	115,870	80,382	70,220	66,830	77,558	77,467	19,404	0
Waste	kt	3,901			0	0	0	373	357	476	480	368	430	275	214	304	117	90	105	161	150	0	0
Total Material Mined	kt	**28,352**			0	88	207	1,907	2,117	2,345	2,279	2,270	2,263	1,986	1,837	1,961	1,735	1,510	1,546	1,582	1,797	922	0
Process Plant Summary																							
Total Mineralized Material Processed	**kt**	**24,451**			0	0	0	1,830	1,759	1,869	1,798	1,902	1,833	1,711	1,623	1,657	1,618	1,420	1,441	1,421	1,646	922	0
Contained Metal Processed																							
Silver	koz	86,422			0	0	0	6,202	6,929	6,874	6,106	6,918	6,575	7,313	8,287	4,633	4,448	4,215	4,191	3,688	6,264	3,779	0
Copper	klbs	107,674			0	0	0	3,152	4,713	4,962	4,886	7,538	8,957	4,590	4,418	5,435	8,419	8,635	9,011	7,780	14,116	11,062	0
Lead	klbs	579,025			0	0	0	76,551	75,245	75,641	55,212	46,945	35,274	37,246	42,980	25,313	20,984	20,827	21,144	16,764	20,619	8,279	0
Zinc	klbs	1,383,938			0	0	0	66,192	83,188	89,477	98,270	96,989	112,724	134,849	194,518	115,870	80,382	70,220	66,830	77,558	77,467	19,404	0
Recovery																							
Silver (Pb conc)	%	84.3%			0.0%	0.0%	0.0%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%	84.3%
Silver (Zn conc)	%	7.3%			0.0%	0.0%	0.0%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
Copper	%	60.2%			0.0%	0.0%	0.0%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%
Lead	%	88.2%			0.0%	0.0%	0.0%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%
Zinc	%	93.2%			0.0%	0.0%	0.0%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%
Recovered Metal																							
Copper Concentrate	kt	109			0	0	0	3	5	5	5	8	9	5	4	5	9	9	9	8	14	11	0
Copper Concentrate Grade	%	27.0%			0.0%	0.0%	0.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%
Copper Recovered	klbs	64,820			0	0	0	1,898	2,837	2,987	2,941	4,538	5,392	2,763	2,660	3,272	5,068	5,198	5,425	4,684	8,498	6,659	0
Lead Concentrate	kt	357			0	0	0	47	46	47	34	29	22	23	27	16	13	13	13	10	13	5	0
Lead Concentrate Grade	%	64.9%			0.0%	0.0%	0.0%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%	64.9%
Lead Recovered	klbs	510,874			0	0	0	67,541	66,389	66,738	48,714	41,419	31,122	32,862	37,921	22,334	18,514	18,376	18,655	14,790	18,192	7,305	0
Silver Recovered	koz	72,892			0	0	0	5,231	5,844	5,798	5,150	5,835	5,545	6,168	6,990	3,907	3,752	3,555	3,535	3,110	5,283	3,188	0
Zinc Concentrate	kt	1,094			0	0	0	52	66	71	78	77	89	107	154	92	64	56	53	61	61	15	0
Zinc Concentrate Grade	%	53.5%			0.0%	0.0%	0.0%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%	53.5%
Zinc Recovered	klbs	1,290,107			0	0	0	61,704	77,548	83,410	91,607	90,413	105,081	125,706	181,329	108,014	74,932	65,459	62,299	72,299	72,215	18,088	0
Silver Recovered	koz	6,292			0	0	0	451	504	500	445	504	479	532	603	337	324	307	305	268	456	275	0
Revenues																							
Payable Metals																							
Silver	koz	70,816			0	0	0	5,104	5,697	5,639	4,989	5,691	5,383	5,974	6,700	3,732	3,638	3,456	3,441	2,999	5,191	3,181	0
Copper	klbs	62,419			0	0	0	1,827	2,732	2,876	2,833	4,370	5,193	2,661	2,561	3,150	4,881	5,006	5,224	4,510	8,183	6,413	0
Lead	klbs	485,330			0	0	0	64,164	63,069	63,402	46,278	39,348	29,566	31,219	36,025	21,217	17,588	17,457	17,723	14,051	17,283	6,939	0
Zinc	klbs	1,096,591			0	0	0	52,449	65,916	70,899	77,866	76,851	89,319	106,850	154,130	91,812	63,692	55,641	52,954	61,454	61,383	15,375	0
Metal Prices																							
Silver	$/oz	$21.95			$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95	$21.95
Copper	$/lb	$3.78			$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78	$3.78
Lead	$/lb	$0.94			$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94	$0.94
Zinc	$/lb	$1.33			$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33	$1.33
Revenues																							
Silver	US $000	$1,554,402			$0	$0	$0	$112,026	$125,040	$123,782	$109,509	$124,926	$118,167	$131,126	$147,068	$81,928	$79,861	$75,866	$75,530	$65,817	$113,933	$69,824	$0
Copper	US $000	$235,945			$0	$0	$0	$6,907	$10,327	$10,872	$10,707	$16,517	$19,628	$10,058	$9,681	$11,909	$18,449	$18,922	$19,747	$17,049	$30,932	$24,240	$0
Lead	US $000	$456,210			$0	$0	$0	$60,314	$59,285	$59,597	$43,501	$36,987	$27,792	$29,346	$33,864	$19,944	$16,533	$16,410	$16,659	$13,208	$16,246	$6,523	$0
Zinc	US $000	$1,458,466			$0	$0	$0	$69,757	$87,668	$94,295	$103,562	$102,212	$118,795	$142,111	$204,993	$122,110	$84,711	$74,002	$70,429	$81,734	$81,639	$20,449	$0
Total Revenues (Gross)	**US $000**	**$3,705,023**		**$0**	**$0**	**$0**	**$0**	**$249,005**	**$282,320**	**$288,547**	**$267,279**	**$280,642**	**$284,383**	**$312,640**	**$395,606**	**$235,891**	**$199,554**	**$185,200**	**$182,364**	**$177,808**	**$242,749**	**$121,035**	**$0**
Operating Cost (US$ 000)			$/t Plant Feed processed																				
Mining (Contract Mining)	US $000	$947,124	$38.74		$0	$0	$0	$65,600	$73,272	$79,500	$75,042	$80,182	$72,085	$64,837	$61,314	$62,353	$60,529	$52,831	$53,754	$52,310	$57,927	$35,586	$0
Process Plant	US $000	$369,645	$15.12		$0	$0	$0	$26,891	$26,342	$27,510	$26,758	$27,865	$27,127	$25,828	$24,889	$25,253	$24,833	$22,725	$22,950	$22,737	$24,374	$13,565	$0
General Administration	US $000	$87,794	$3.59		$0	$0	$0	$6,424	$6,238	$6,528	$6,341	$6,616	$6,433	$6,111	$5,879	$5,969	$5,865	$5,343	$5,398	$5,346	$5,940	$3,363	$0
Treatment & Refining Charges																							
Treatment Charges	US $000	$307,046	$12.56		$0	$0	$0	$17,538	$20,809	$22,047	$22,449	$21,910	$24,291	$28,258	$39,920	$23,989	$17,229	$15,308	$14,715	$16,381	$17,114	$5,088	$0
Refining Charges	US $000	$47,900	$1.96		$0	$0	$0	$3,134	$3,581	$3,570	$3,207	$3,767	$3,697	$3,779	$4,234	$2,550	$2,649	$2,550	$2,562	$2,246	$3,875	$2,498	$0
Penalties	US $000	$24,616	$1.01		$0	$0	$0	$2,431	$2,518	$2,572	$2,110	$1,889	$1,700	$1,906	$2,474	$1,466	$1,105	$1,030	$1,014	$977	$1,075	$349	$0
Transportation	US $000	$174,398	$7.13		$0	$0	$0	$11,271	$12,896	$13,520	$12,999	$12,630	$13,461	$15,139	$20,915	$12,736	$9,545	$8,633	$8,385	$8,949	$9,856	$3,462	$0
Total Operating Cost	US $000	**$1,958,524**	**$80.10**	**$0**	**$0**	**$0**	**$0**	**$133,289**	**$145,656**	**$155,247**	**$148,906**	**$154,859**	**$148,793**	**$145,859**	**$159,625**	**$134,316**	**$121,754**	**$108,420**	**$108,778**	**$108,947**	**$120,163**	**$63,911**	**$0**
Royalties - Ag Revenue (0.5%)	US $000	$7,772	$0.32		$0	$0	$0	$560	$625	$619	$548	$625	$591	$656	$735	$410	$399	$379	$378	$329	$570	$349	$0
Incremental PTUs	US $000	$101,405	$4.15	$0	$0	$0	$0	$0	$5,252	$6,571	$5,759	$4,195	$4,858	$5,602	$8,184	$19,383	$6,252	$5,580	$5,651	$5,345	$4,992	$10,148	$3,633
Salvage Value	US $000	-$6,365	-$0.26		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	-$6,365

	Operating Year>>			**PP**	**-3**	**-2**	**-1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
	Calendar Year>>	**Total - LoM**		**-4**	**-3**	**-2**	**-1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Reclamation & Closure	US $000	$10,514	$0.43		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,514
Total Production Cost	US $000	**$2,071,850**	$84.74	**$0**	**$0**	**$0**	**$0**	**$133,849**	**$151,534**	**$162,437**	**$155,213**	**$159,679**	**$154,242**	**$152,117**	**$168,545**	**$154,109**	**$128,405**	**$114,380**	**$114,807**	**$114,620**	**$125,724**	**$74,408**	**$7,782**
Operating Income	US $000	**$1,633,173**		**$0**	**$0**	**$0**	**$0**	**$115,155**	**$130,786**	**$126,110**	**$112,067**	**$120,963**	**$130,141**	**$160,524**	**$227,061**	**$81,782**	**$71,149**	**$70,820**	**$67,557**	**$63,188**	**$117,025**	**$46,627**	**-$7,782**
Initial Capital Depreciation	US $000	$340,928			$0	$0	$0	$51,146	$48,297	$48,297	$48,297	$48,297	$48,297	$48,297	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sustaining Capital Depreciation	US $000	$168,010			$0	$0	$0	$2,808	$6,926	$10,718	$13,370	$14,969	$16,019	$18,295	$16,142	$13,102	$9,979	$8,969	$9,016	$8,505	$6,729	$6,771	$5,692
Total Depreciation	US $000	$508,938		$0	$0	$0	$0	$53,954	$55,223	$59,015	$61,667	$63,266	$64,316	$66,592	$16,142	$13,102	$9,979	$8,969	$9,016	$8,505	$6,729	$6,771	$5,692
Royalties - EBITDA (7.5%)	US $000	$123,655	$5.06		$0	$0	$0	$8,679	$9,856	$9,505	$8,446	$9,119	$9,805	$12,088	$17,085	$6,164	$5,366	$5,340	$5,095	$4,764	$8,820	$3,523	$0
Net Income after Depreciation & Royalty	US $000	**$1,000,581**		**$0**	**$0**	**$0**	**$0**	**$52,523**	**$65,706**	**$57,591**	**$41,953**	**$48,578**	**$56,020**	**$81,844**	**$193,834**	**$62,515**	**$55,804**	**$56,510**	**$53,446**	**$49,919**	**$101,476**	**$36,333**	**-$13,474**
Net Income before NOL	**US $000**	**$1,000,581**		**$0**	**$0**	**$0**	**$0**	**$52,523**	**$65,706**	**$57,591**	**$41,953**	**$48,578**	**$56,020**	**$81,844**	**$193,834**	**$62,515**	**$55,804**	**$56,510**	**$53,446**	**$49,919**	**$101,476**	**$36,333**	**-$13,474**
Net-Operating Loss applied	US $000	$0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Income after NOL	**US $000**	**$1,000,581**		**$0**	**$0**	**$0**	**$0**	**$52,523**	**$65,706**	**$57,591**	**$41,953**	**$48,578**	**$56,020**	**$81,844**	**$193,834**	**$62,515**	**$55,804**	**$56,510**	**$53,446**	**$49,919**	**$101,476**	**$36,333**	**-$13,474**
Net Income before Taxes	**US $000**	**$1,000,581**		**$0**	**$0**	**$0**	**$0**	**$52,523**	**$65,706**	**$57,591**	**$41,953**	**$48,578**	**$56,020**	**$81,844**	**$193,834**	**$62,515**	**$55,804**	**$56,510**	**$53,446**	**$49,919**	**$101,476**	**$36,333**	**-$13,474**
Income Taxes	US $000	$304,216	$12.44	$0	$0	$0	$0	$15,757	$19,712	$17,277	$12,586	$14,573	$16,806	$24,553	$58,150	$18,755	$16,741	$16,953	$16,034	$14,976	$30,443	$10,900	$0
Net Income after Taxes	US $000	**$696,364**		**$0**	**$0**	**$0**	**$0**	**$36,766**	**$45,994**	**$40,314**	**$29,367**	**$34,005**	**$39,214**	**$57,291**	**$135,684**	**$43,761**	**$39,063**	**$39,557**	**$37,412**	**$34,944**	**$71,034**	**$25,433**	**-$13,474**
Cash Flow (US$ 000)																							
Operating Income before Depreciation & NOL	**US $000**	**$1,633,173**		**$0**	**$0**	**$0**	**$0**	**$115,155**	**$130,786**	**$126,110**	**$112,067**	**$120,963**	**$130,141**	**$160,524**	**$227,061**	**$81,782**	**$71,149**	**$70,820**	**$67,557**	**$63,188**	**$117,025**	**$46,627**	**-$7,782**
Working Capital																							
Accounts Receivable	US $000	$0		$0	$0	$0	$0	-$13,644	-$1,825	-$341	$1,165	-$732	-$205	-$1,548	-$4,546	$8,752	$1,991	$787	$155	$250	-$3,558	$6,669	$6,632
Accounts Payable	US $000	$0		$0	$0	$0	$0	-$10,955	-$1,016	-$788	$521	-$489	$499	$241	-$1,131	$2,080	$1,032	$1,096	-$29	-$14	-$922	$4,623	$5,253
Supplies Inventory	US $000	$0		$0	$0	$0	$0	-$4,470	-$356	-$366	$258	-$308	$442	$423	$219	-$68	$111	$481	-$57	$82	-$372	$1,627	$2,353
Total Working Capital	**US $000**	**$0**		$0	$0	$0	$0	-$29,069	-$3,198	-$1,496	$1,945	-$1,530	$736	-$884	-$5,458	$10,763	$3,134	$2,364	$69	$318	-$4,852	$12,920	$14,239
Capital Expenditures																							
Mine	US $000	$63,079			$0	$29,916	$33,163	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plant	US $000	$275,000			$0	$110,000	$151,250	$13,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capitalize Plant Pre-Production	US $000	$2,849			$0	$0	$2,849	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Owner's Cost	US $000	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sustaining Capital																							
Mine	US $000	$164,760			$0	$0	$0	$19,005	$28,180	$25,889	$17,918	$10,544	$7,348	$15,930	$4,585	$7,551	$4,677	$9,858	$8,228	$2,154	$1,501	$1,393	$0
Plant	US $000	$3,250			$0	$0	$0	$0	$0	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$250	$0
Total Capital Expenditures	**US $000**	**$508,938**		$0	$0	$139,916	$187,262	$32,755	$28,180	$26,139	$18,168	$10,794	$7,598	$16,180	$4,835	$7,801	$4,927	$10,108	$8,478	$2,404	$1,751	$1,643	$0
Cash Flow before Taxes	US $000	**$1,124,235**		**$0**	**$0**	**-$139,916**	**-$187,262**	**$53,331**	**$99,408**	**$98,476**	**$95,844**	**$108,639**	**$123,279**	**$143,460**	**$216,767**	**$84,744**	**$69,357**	**$63,076**	**$59,149**	**$61,102**	**$110,422**	**$57,904**	**$6,457**
Cumulative Cash Flow before Taxes	US $000			$0	$0	-$139,916	-$327,178	-$273,847	-$174,440	-$75,964	$19,880	$128,519	$251,798	$395,258	$612,025	$696,769	$766,126	$829,201	$888,350	$949,453	$1,059,875	$1,117,779	$1,124,235
Taxes / EBITDA Royalty	US $000	$427,871		$0	$0	$0	$0	$24,436	$29,568	$26,782	$21,032	$23,692	$26,611	$36,642	$75,235	$24,919	$22,107	$22,293	$21,129	$19,740	$39,263	$14,423	$0
Cash Flow after Taxes	US $000	**$696,364**		$0	$0	-$139,916	-$187,262	$28,895	$69,840	$71,694	$74,812	$84,947	$96,668	$106,818	$141,532	$59,825	$47,249	$40,783	$38,020	$41,362	$71,160	$43,481	$6,457
Cumulative Cash Flow after Taxes	US $000			$0	$0	-$139,916	-$327,178	-$298,283	-$228,443	-$156,749	-$81,937	$3,010	$99,678	$206,496	$348,028	$407,853	$455,102	$495,885	$533,905	$575,267	$646,427	$689,908	$696,364

NPV - Year-End Cash Flow	
Economic Indicators before Taxes - End of Year	
NPV @ 0%	$1,124,235
NPV @ 5%	$430,865
NPV @ 10%	$335,851
IRR	25.4%
Payback	3.8 Years
Economic Indicators after Taxes - End of Year	
NPV @ 0%	$696,364
NPV @ 5%	$220,435
NPV @ 10%	$155,754
IRR	17.9%
Payback	5.0 Years

NPV - Mid-Year Cash Flow	
Economic Indicators before Taxes - Mid-Year	
NPV @ 0%	$1,124,236
NPV @ 5%	$369,398
NPV @ 10%	$277,564
Economic Indicators after Taxes - Mid-Year	
NPV @ 0%	$696,365
NPV @ 5%	$188,988
NPV @ 10%	$128,724

22.12 ECONOMIC SENSITIVITIES

The Project's gross revenues, NPV at 8% and IRR shows greatest sensitivity to metal prices as illustrated in Table 22-4.

Table 22-4: All Metal Price Sensitivity (Ag, Cu, Pb, Zn)

Metal Price	Revenue (US$000)	Undiscounted Cash flow, after tax (US$000)	NPV, after tax @ 8% (US$000)	IRR, after Tax
Base Case	$3,705	$696	$220	17.9%
15%	$4,261	$1,024	$388	24.4%
-15%	$3,149	$368	$52	10.6%

Note: Base Case price assumes Ag = $21.95/oz, Cu = $3.78/lb, Pb = $0.94/lb, Zn = $1.33/lb

Other factors that may impact the NPV sensitivity include changes in silver and zinc metal recoveries, operating expense and Initial Capital. These relative impacts together with changes in silver and zinc prices are shown in Table 22-5 and Figure 22-2.

Table 22-5: Sensitivity NPV @ 8%, after Tax (US$M)

Sensitivity	Silver Price	Zinc Price	Silver in Pb Recovery	Zinc Recovery	Initial Capital	OPEX
20%	$314	$307	-	-	$160	$134
15%	$291	$285	-	$265	$175	$156
10%	$267	$264	$265	$250	$190	$177
5%	$244	$242	$243	$235	$205	$199
0%	$220	$220	$220	$220	$220	$220
-5%	$197	$199	$198	$206	$235	$242
-10%	$173	$177	$176	$191	$251	$264
-15%	$150	$155	$153	$176	$266	$285
-20%	$127	$134	$131	$161	$281	$307

Note: +15% and +20% Silver and Zn recoveries are not applicable.

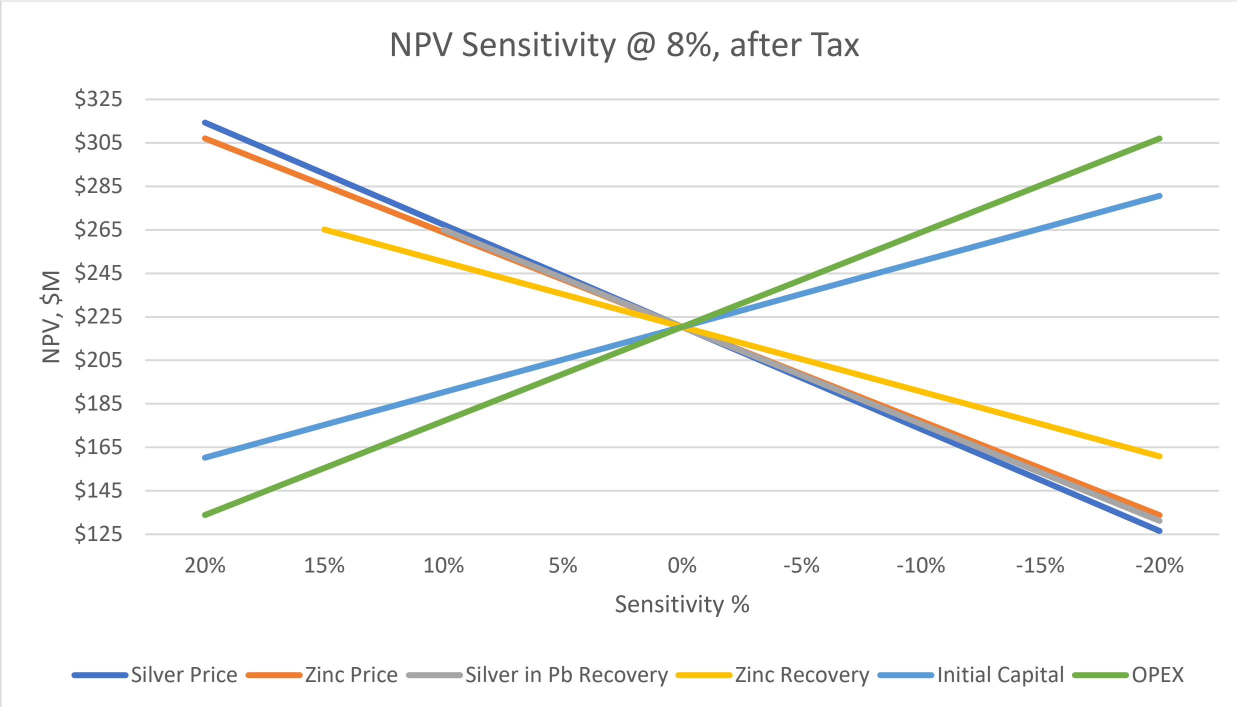


Figure 22-2: NPV Sensitivity @8%, After Tax

23 ADJACENT PROPERTIES

The Cerro Las Minitas property is located 70 km northeast of the City of Durango, capital of the state of Durango, and 6 km northwest of the town of Guadalupe Victoria, in the municipality of Guadalupe Victoria, Durango. All mineral ground surrounding the Cerro Las Minitas concessions is held under concessions of Industrias Peñoles. The closest projects adjacent to Cerro Las Minitas are the San Sebastian (Au-Ag) Project and the La Preciosa (Ag-Au) Deposit (Figure 23-1) and the Avino (Ag-Au-Cu) Project (not shown on the map).

Source: Kirkham Geosystems, 2016

Figure 23-1: Location Map of Adjacent Properties

The San Sebastian (Au-Ag) Project operated by Hecla Mining Company is located approximately 10 km to the east of the property and mining began in December 2015. Gold and silver mineralization is hosted in multiple structurally controlled low and intermediate sulfidation epithermal veins hosted in shales and fine-grained sandstones of the Cretaceous Caracol formation. At the end of 2015, the proven and probable reserves on the San Sebastian Mine were 289,100 tons at a grade of 27.7 oz/ton silver and 0.22 oz/ton gold for total contained metal of 8,014,800 oz silver and 64,000 oz gold. (Source: Annual Report 2015, Hecla Mining Company).

La Preciosa (Au-Pb-Zn) Project, situated approximately 50 km to the west of the property, is an advanced gold and silver project owned by Coeur Mining. Precious metal mineralization is hosted in a series of Tertiary age low and intermediate sulfidation epithermal quartz veins hosted in Tertiary age polylithic conglomerates, arkosic sandstones as well as intermediate tuffs and agglomerates. Table 23-1 shows the resources for La Preciosa.

Table 23-1: La Preciosa Resources

		GRADE (Oz/Ton)		CONTAINED OUNCES	
	SHORT TONS	SILVER	GOLD	SILVER	GOLD
MEASURED					
	18,156,000	3.21	0.006	58,225,000	108,000
INDICATED					
	20,818,000	2.75	0.004	57,198,000	88,000
INFERRED					
	1,359,000	2.33	0.004	3,168,000	5,000

1. Effective December 31, 2015 except Endeavor, effective June 30, 2015.

2. Assumed metal prices for estimated reserves were $17.50 per ounce silver and $1,250 per ounce gold, except for San Bartolomé, Rosario and lower 76 underground deposits at Palmarejo at $15.50 per ounce of silver and $1,150 per ounce of gold, Endeavor at $2,400 per tonne zinc, $2,200 per tonne lead and $17.00 per ounce of silver, and Wharf at $1,275 per ounce of gold. Proven and probable reserves (other than Endeavor) were also evaluated using $15.50 per ounce of silver and $1,150 per ounce of gold. It was determined that substantially all proven and probable reserves could be economically and legally extracted or produced at these lower price assumptions.

3. Mineral resources are in addition to mineral reserves and do not have demonstrated economic viability. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be considered for estimation of mineral reserves, and there is no certainty that the inferred mineral resources will be realized.

4. Rounding of tons and ounces, as required by reporting guidelines, may result in apparent differences between tons, grade, and contained metal content.

Source: Coeur Mining website, 2015

Avino Silver and Gold Mines Ltd. operates the Avino Project located in the Durango region of North Central Mexico in the heart of the Sierra Madre Silver Belt. Table 23-2 shows a summary of current mineral resources at the San Gonzalo and Avino Mines as well as the oxide tailings resource (as reported in the July 2013 Technical Report on the Avino Property) grouped into the Measured, Indicated and Inferred categories. The effective dates of the resource estimates are June 10, 2013, for San Gonzalo and Avino Mines, and July 24, 2012 for the Oxide Tailings, but it is still considered current.

Table 23-2: Avino Project Resources

Resource Category	Deposit	Cut-off Ag Eq*	Tonnes	Contained Metal				Grade			
				Ag_Eq (oz)	Ag (oz)	Au (oz)	Cu (t)	Ag_Eq (g/t)	Ag (g/t)	Au (g/t)	Cu (%)
Measured	San Gonzalo System	150	71,416	914,791	759,801	3,288	N/A	398	331	1.432	N/A
Total Measured - All Deposits			71,416	914,791	759,801	3,288	N/A				
Indicated	Avino System	100	4,253,968	23,838,629	10,835,338	72,207	30,914	174.3	79.2	0.528	0.727
Indicated	San Gonzalo System	150	222,407	2,763,069	2,043,514	15,263	N/A	386	286	2.134	N/A
Total Indicated - All Deposits			4,476,375	26,601,698	12,878,852	87,470	30,914				
Total Measured & Indicated - All Deposits			**4,547,791**	**27,516,489**	**13,638,653**	**90,758**	**30,914**				
Inferred	Avino System	100	3,220,896	16,262,944	7,068,831	75,858	17,719	157	68.3	0.733	0.55
Inferred	San Gonzalo System	150	1,085,276	10,494,843	8,158,834	49,549	N/A	300.8	233.8	1.42	N/A
Inferred	Oxide Tailings	50*	2,340,000	N/A	6,660,000	39,530	N/A	N/A	91.3	0.54	N/A
Total Inferred - All Deposits			**6,646,172**	**26,757,787**	**21,887,665**	**164,937**	**17,719**				

*Ag Eq not calculated for the oxide tailings resource; cut-off in g/t Ag.
Source: Avino website, 2021

The reader is cautioned that this information is supplied for information purposes only and in the interest of providing a complete report. However, there has been no work in the creation of this report to link these deposits or to draw definitive comparisons or associations. In addition, the QP has not confirmed this publicly available disclosure and has not talked to companies to confirm the data.

24 OTHER RELEVANT DATA AND INFORMATION

There is no additional relevant data or information.

25 INTERPRETATION AND CONCLUSIONS

25.1 OVERALL RESULTS

The results of the preliminary economic analysis conclude:

- The PEA for the Project indicates the potential economic viability of the deposit. The metals prices used were as follows:
  - US$3.78 per pound of copper
  - US$21.95 per oz of silver
  - US$1.33 per pound of zinc
  - US$0.94 per pound of lead.
- The CLM project demonstrates project-life revenues over 15 years of production and after-tax Net Present Value at an 8% discount rate (NPV8%) of $220.4 million. Projected maximum cash outlay for the project is estimated to be US$341.0 million and project payback is approximately 60 months. IRR after-tax is 17.9%.
- The proposed mine plan is appropriate for a Preliminary Economic Assessment, considering the prudent recovery and dilution factors used and the approach of using a mining contractor for the entire project that may result in overall higher costs.

While the QPs have confidence in the level of study completed and the results of the PEA, it is with the understanding that the PEA is preliminary in nature and 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.

25.2 GENERAL

The Cerro Las Minitas property is located 70 km northeast of the City of Durango, the capital of the state of Durango, and 6 km northwest of the town of Guadalupe Victoria, in the municipality of Guadalupe Victoria, Durango, Mexico. The property consists of 26 mining concessions encompassing 34,427.45 ha.

Mineral resources on the Cerro Las Minitas project are hosted within a prominent domal uplift of Cretaceous marine sediments cored by an intrusive porphyry complex. Contact metasomatic (skarnoid) deposits of Ag, Zn, Pb, Cu and Au are known to occur at various locations in the contact zone around the central intrusive complex, as well as at the margins of some dykes that emanate from the main intrusive complex.

To date, mineralization seen at Cerro Las Minitas has been classified into four types based on surface and underground field observations and the examination of drill core: skarnoid, chimney, manto, and dyke margin.

Since acquisition of the property in 2010, diamond drilling; geological mapping; geochemical rock, soil and acacia sampling; shallow and deep-seated IP surveys; a ground gravity survey; and an airborne magnetic survey have been completed. Geological mapping, sampling and some trenching has been conducted periodically to define and delineate targets for continued exploration drilling.

A total of 186 holes totaling 80,650 metres and seven have been drilled at Cerro Las Minitas resulting in the delineation of six mineral deposits: the Blind; El Sol, Las Victorias, Skarn Front, South Skarn and Mina La Bocona deposits and several additional target areas of high exploration potential.

The Blind and El Sol deposits comprise multiple sub-vertical northwest-southeast trending zones of semi-massive to massive sulphide mineralization. Mineralization is hosted in the skarnoid- and hornfels-altered margins of monzonite and felsite dykes may be localized along through-going structures or occur as replacements within stratigraphic units. The mineralized zones can be traced for up to 1000 metres along strike and up to 800 metres down dip.

Sulphide mineralization in the Skarn Front and parts of the South Skarn and La Bocona deposits is localized at the outer boundary of the skarnoid alteration zone surrounding the Central Monzonite Intrusion at or near the transition to the recrystallized/marbleized carbonate sediments (marmorized zone). Mineralization on the western side of the Central Monsonite Intrusion can be trace for up to 1300 metres along strike and up to 1000 metres depth. Similarly, mineralization on the eastern side of the Intrusion is localized within the Skarnoid zone and is traced laterally by drilling for up to 850 metres strike and up to 500 metres down dip.

Initial drilling in 2011 targeted skarnoid and replacement deposits in the margin of the central Intrusion in the Santo Nino, Mina La Bocona and the North Skarn zones and also tested several Induced Polarization geophysical targets both within the Central Intrusion and outboard of the known zones of mineralization in gravel covered areas. This initial 11 hole drill program successfully identified extensions to the Santo Nino zone mineralization approximately 100m vertically underneath the lowest historic workings, confirmed previous drill results at the North Skarn and Mina La Bocona targets and resulted in the discovery of the Blind zone, a new high-grade target outboard of the El Sol shaft in a gravel covered field.

Drilling in 2015 continued to expand the overall size of the Blind and El Sol deposits and identify new zones of high-grade mineralization. This and subsequent drilling delineated these mineralized zones for up to 1000 metres strike and up to 650 metres depth.

Drilling in 2017 by Southern Silver successfully outlined the Skarn Front as a zone of mineralization, located at depth beneath the Blind and El Sol Zones. Mineralization occurs on the outer edge of the skarnoid alteration zone surrounding the Central Monzonite Intrusion at or near the transition into marble and forms the primary geological control on the distribution of sulphide mineralization.

Subsequent geological modelling suggests that intersections between the sub-vertical, northwest-trending mineralized zones of the Blind and El Sol deposits and the generally more shallowly dipping Skarn Front may localize higher-grade shoots of mineralization which may be in part responsible for higher grade intervals identified in some of the 2017 drilling.

Exploration in 2018 targeted two new step-out targets with further drill testing. Mineralization in the Skarn Front is open for approximately 300 metres along strike to the southeast of drill holes 18CLM-117 in what is now termed the Las Victorias zone and up to 250 metres along strike to the northeast, where the zone wraps around the northern margin of the Central Intrusion, in the North Skarn zone.

In 2017/18, seven additional claims were staked totalling 20,746.60 ha to the south and west of the existing claims to cover prospective, gravel-covered ground. These claims are collectively known as the CLM West claim group. Over 6400 rock chip and float samples have been collected in the CLM West claims to date and identify a >12 kilometre long northwest-southeast-trending corridor of anomalous precious-metal and pathfinder values that display a distinct zoning pattern consistent with modelled vertical and lateral zonation within a large epithermal vein system. Multiple distinct clusters and trends are seen in the metal distribution in the samples which provide potential future targets for further exploration on the property. Drill testing in 2018 successfully discovered silver mineralization as well as wide intercepts of anomalous pathfinder elements such as As and Sb which provide compelling follow-up targets.

Drilling in 2020-21 confirmed laterally extensive skarnoid-style mineralization in both the South Skarn and La Bocona deposits which are located on the eastern side of the Central Monzonite Intrusion. In both deposits, mineralization occurs adjacent to the central intrusion, features similar replacement styles and variability in metal assemblage, but tends to be more galena biased and is generally associated with elevated silver values when compared to the Skarn Front mineralization.

Drilling also identified manto-styled mineralization within the La Bocona deposit which occurs as replacements in the hanging wall of the skarnoid mineralized zone within variably altered marble-skarn-hornfels. The mineralization is strongly silver-enriched with elevated lead, arsenic and gold values. The upper portion of the mineralized zone is strongly oxidized and makes up in part the small oxide resource identified in the current mineral resource update including:

Several phases of metallurgical test work have been conducted on mineralization from the Cerro Las Minitas project. Metallurgical test work has identified three distinct sulphide concentrates (Copper, Lead and Zinc) and each is processed at a different smelting and refining combination, in different locations, using different processes, with differing metal recoveries and operating costs. An NSR valuation technique is used to account for these differences in applicable recovery and off-site factors that influence the NSR valuation for sulphide and oxide rock types for typical Skarn Front or Blind-El Sol type sulphides and oxides types and provides an NSR value to mineralization in the Resource Update.

The purpose of this Technical Report was to present an update of the 2019 resource estimate for the Cerro Las Minitas Project. In addition, it served as an update on the exploration activities.

Based on a US$60 NSR cut-off, Indicated resources are 12,325,000 tonnes at a grade of US$130 NSR, 347 g/t AgEq,, 106 g/t Ag, 0.07 g/t Au, 0.16% Cu, 1.3% Pb and 3.3% Zn while Inferred resources are 19,605,000 tonnes at a grade of US$117 NSR, 334 g/t AgEq, 111 g/t Ag, 0.12 g/t Au, 0.23% Cu, 1.2% Pb and 2.3% Zn.

25.3 RECOVERY METHODS

The conceptual flowsheet has been developed based on results of metallurgical testwork to date on samples of mineralized material types expected to be processed during the life of the mine. The preliminary testwork established that sequential flotation to produce copper, lead/silver, and zinc concentrates is possible.

The flowsheet was designed for a nameplate capacity throughput of 4,500 t/d (1,642,500 t/a). Conventional mineral processing technologies were selected to produce copper, lead/silver, and zinc concentrates as well as one LS and one HS tailing stream. The LOM concentrate recoveries for Cu, Pb, and Zn are estimated at 60%, 88%, and 93% respectively. The concentrate grades are projected to be 27% Cu, 65% Pb, and 54% Zn. The feed rate to the plant facilitates a simple crushing and grinding circuit with two stages of crushing and a single stage of ball milling but an alternate circuit should be evaluated once additional comminution data is available. A portion of the tailings will be used as mine backfill material, while the remaining portion will be disposed in a filtered TSF.

Additional metallurgical testwork will better define the metallurgical response and assess the effect of mineralized material variability and optimize reagent schemes.

25.4 POTENTIAL RISKS

Risks and opportunities for this project are shown in Table 25-1.

Table 25-1: Risk Assessment

Risk	Explanation	Potential Outcome	Possible Risk Mitigation
Operating Costs	Energy, water, and reagent requirements have been estimated and should be verified at the next level of study.	The estimated process operating costs for the project are US$15.12/t processed material. These costs are based on metallurgical testwork along with budgetary quotations for reagents and consumables.	It is recommended reagent and consumable consumption rates are further updated upon completion of additional testwork.
Metal Price	Metal prices have a significant impact on the economic viability of the project.	Variation in commodity prices and/or concentrate quality could lead to increased or decreased sale price.	As the project progresses to different study levels market study for concentrate sales can be completed to confirm sale price.
Concentrate Recovery & Grade	The final metallurgical performance may be reduced or improved by further investigations. The factors that present the highest risks to metallurgical performance include sample representivity, water recirculation, grinding chemistry and flotation hydrodynamic efficiency.	Different metallurgical recoveries than assumed for the payable elements could have either a negative or positive impact on concentrate production and project cash flow forecasts.	
Dewatering Equipment	Dewatering assumptions were used in process plant design	Variations from design assumptions could lead to variations in capital and operating cost estimates for the concentrate and tailing dewatering circuits.	Dewatering testwork will be required on representative samples.
Water treatment	A water treatment plant has been included in the capital cost estimate.	Higher than planned water treatment requirements could potentially increase capital and operating costs.	Review parameters used to size water treatment plant.
Plant throughput	The flowsheet was designed for a nameplate capacity throughput of 4,500 t/d (1,642,500 t/a). A factor was used for maximum throughput.	Equipment sizing may change based on finalized mine plan which could increase capital and operating cost estimates.	Review equipment sizing based on mine plan as study levels progress.
Process selection	Testwork to date is appropriate for this level of study.	Individual best scale tests completed to date may not be representative of continuous plant flow.	Test of flowsheet selected to validate process parameters selected.

Risk	Explanation	Potential Outcome	Possible Risk Mitigation
Higher Mining Costs	Higher mining costs can arise from various changes and are not limited to the following: • Dilution and recovery factors are worse than proposed; • Contractor repricing; • Ground conditions are worse than assumed; • Ground water is higher than assumed; • Hotter environmental conditions requiring air cooling (refrigeration); • Geology is less continuous than model; and, Availability of skilled labour is poor.	Factors can contribute to higher costs, higher dilution, and higher loss of mineralisation reducing the overall margin of the project.	A contractor model was selected and internal prices to Entech were inflated, and fuel costs were added (typically included) at a price of ~$2.50 /t mineralised. A higher COG was used for the stope shapes ($64/t) versus the estimated COG of ~$58/t. A conservative mining recovery of 93% was used. Further studies have been recommended, especially for rock mechanics and mine hydrology.

25.4.1 Mineral Resources

Mineral resource estimates are inherently forward-looking and may be subject to change. Although due diligence is exercised in reviewing the supplied information, uncontrollable factors or unforeseen events can have significant positive or negative impacts on mineral resource statements. These uncontrollable factors and/or unforeseen events may consist of risks such as:

- Cyclical nature of the mineral industry,
- Global economic, political and regulatory changes,
- Commodity price fluctuations based on varying levels of demand,
- Changes in the social acceptance of the project by local communities,
- Risks related to health epidemics, including the ongoing global pandemic,
- Mineral exploration efforts are highly speculative in nature and may be unsuccessful,
- Risks related to delays or changes to exploration and/or development program plans and schedules,
- Uncertainty related to the potential changes to the constitution and the taxation regime.

Any one or combination of factors could significantly influence mineral resource statements. As detailed in this technical report the resource estimates are based on geological theories, interpretations and domaining. There is a level of subjectivity where other geoscientists may have differing opinions and with new information and subsequent data, interpretation may be updated or revised. Although, these differences should not be materially significant, there will invariably be changes going forward and risks due to uncertainty.

Exploration has continued to result in discovery and expansion of potential mineral resource. However, there is no guarantee that exploration and discovery will result in an economically viable operation.

The geology of the area is well known and documented, supported by extensive data, analysis, and study. However, further work may disprove previous models and therefore result in condemnation of targets and potential negative economic outcomes.

All projects benefit from increasing amounts of data and information in order to improve understanding and mitigate risks. However, there is a risk that unknown issues may arise with additional data. It is prudent to continue to improve the quantity and quality of information to decrease risk as mcu8h as possible. Risk may be mitigated with definition drilling in order to further refine and delineate structures and identify any potential problem areas.

25.5 POTENTIAL OPPORTUNITIES

25.5.1 Mineral Resources

Opportunities related to the project are reflected in the fact that Cerro Las Minitas has potential as a district play with a variety of deposits types which poses excellent exploration and expansion potential.

25.5.2 Mining

The following opportunities have been identified during the study specific to mining:

- Lower Mining Costs
    - An owner-operator model could demonstrate lower mining costs, albeit at higher upfront capital;
    - Battery equipment is increasing in availability and will be considered in future studies as equipment manufacturers increase production. Power prices at site supports a transition to battery equipment, which will improve working conditions and may reduce ventilation and mining costs;
- Additional Resources selected for mining
    - Updated mining costs could reduce the COG and lead to more material being selected for mining and improving potential economics;
    - Additional resources found through expansionary drilling that is closer to the surface will defer capital required to access material lower in the mine.

26 RECOMMENDATIONS

26.1 RESOURCE DEFINITION

Potential risks related to the project include metallurgy, continuity of the structures and continued ability to expand resources. Further metallurgical testing is required in order to clearly understand recoveries. In addition, although the mineralized zones appear to be relatively continuous and predictable, faults and other structures may be encountered that would pose interpretation challenges. The Skarn zone appears to be amenable to more bulk underground mining methods. However, thickness can vary particularly in the Blind and El Sol zones which may require more selective mining methods which will increase costs and require higher cut-off grades to justify.

Opportunities related to the project are reflected in the fact that Cerro Las Minitas has potential as a district play with a variety of deposits types which poses excellent exploration and expansion potential.

The exploration completed by Southern Silver between 2010 and 2022 on the Cerro Las Minitas property indicates that the presence of Indicated and Inferred resources justifies the cost of ongoing exploration and development.

The QP recommends continued focus on the Area of the Cerro, to build additional mineral resources and to advance the project. To further advance the project the Southern Silver should conduct:

- In-fill drilling to upgrade classification and de-risk the project specifically to test the on-strike potential of the Skarn Front and Blind zone extensions.
- Infill drilling in order to better define the specific mineralized zones particularly in the areas of high value tonnes, within the payback years of potential operations and with significant grade and thickness;
- Further drilling on the eastern margin of the central Intrusion to delineate potential additional resources in the South Skarn and La Bocona target areas;
- Further drill in order to de-risk areas of high variability within the Skarn Front deposit

This work is expected to cost approximately $7 to 10 million.

26.2 MINE PLANNING

Although a conservative approach has been taken, there are inherent risks with Preliminary Economic Assessments, and further analyses and data collection is recommended to advance the project:

- Create a detailed understanding of the geotechnical regime reflecting collect data (oriented core-logging, hydrogeology, mapping, rock strength testing, in-situ stress, paste strength testing, etc.) to more accurately estimate ground support requirements, mining costs, and further support the mining approach;
    - Additional geotechnical data may revise dilution assumptions, stope height and spans, ground support assumptions, paste fill assumptions, advance rates, support costs, of which may increase mining costs, dilution or loss of mineralisation;
- Additional mining studies / analyses to complete are as follows:
    - Updated contractor pricing for selected mine plan;
    - Complete an owner-operator model to assess that a transition to owner-operator would be beneficial;
    - Update base case plan with additional information provided by geotechnical and hydrological studies; and,

  - Assess electric/battery equipment in lieu of relatively low power costs of approximately $0.10/kWh.

The cost of this work is expected to be approximately $2 million.

26.3 METALLURGY AND MINERAL PROCESSING

The four flotation campaigns performed to date have consistently shown excellent pay metal recoveries and grades. No issues were encountered in producing high value saleable concentrates.

Variability tests have confirmed the robustness of the flowsheet with respect to grade variability.

It is recommended that no further flotation testwork is required prior to final feasibility unless new resources with different geo-metallurgical characteristics are discovered.

Energy, water, and reagent requirements were estimated on the basis of the consumption rates used in testwork. The estimated process operating costs for the project of US$15.12/t plant feed are based on metallurgical testwork along with budgetary quotations for reagents and consumables. It is recommended reagent pricing be more accurately determined at the next level of study.

Dewatering assumptions based on concentrate and tailing grind sizes and simple settling test results were used in guiding process plant design. Filtration testwork will be required on representative samples, particularly of tailings, to determine optimum paste characteristics. The current design assumptions are considered conservative, and future dewatering test programs could lead to reductions in capital and operating cost estimates for the concentrate and tailing dewatering circuits.

The ball mill work index testwork was carried out on a limited number of samples. Although the grinding characteristics of the predominantly Skarn type host rock are dominant, no rock breakage testing has been performed, as to date only quarter core samples have been available for testing. Should development mineralized material become available prior to production, breakage tests could provide value in optimization of the crushing circuit, particularly if material-sorting is incorporated.

Trade-off studies are recommended to refine the preferred overall mining and processing strategy. Material sorting and leaching of refractory pyrite concentrates to recover precious metals are trade-off studies recommended to commence shortly. The budgets for these studies are approximately $70,000.

26.4 PERMITTING

Establishing the environmental baseline conditions is recommended for the prefeasibility phase of the study process to provide the data necessary for the permitting process. Investigation of water supply and dewatering requirements are critical to the success of the project.

26.4.1 Environmental Baseline

Considering the type of project and its dimension, establishing environmental baseline conditions is critical to the permitting process. The project influence area (PIA) should be defined, and seasonal sampling should be implemented to include flora, fauna, noise, soil, sediments, air quality, surface water, and ground water. These surveys and monitoring programs should be maintained on a regular basis in accordance with the various permitting requirements.

Establishing the environmental baseline requires an extensive field work that is guided by published literature and includes the sampling that must be carried out by companies accredited by the Mexican government. This guarantees that the sampling protocols are consistent with environmental regulations and that the results are acceptable for permitting purposes.

26.4.2 Hydrology

A detailed hydrogeological study is recommended to establish the location, depth, and characteristics of the aquifer(s) for the project area. It is critical to evaluate whether there is enough water to meet the water needs for the project and the dewatering necessary to enable underground mining. Evaluating the aquifer characteristics is critical to the estimation of mining impacts to the groundwater basins that are present in the project area and assess impacts to nearby groundwater users.

- It is necessary to identify the regional lithology and geological structures through which groundwater flows and whose infiltration may provide more water to the project area groundwater system at deeper levels, important to be ready at the excavation time and probably as well to deeper stratus at the valley itself.
- The piezometric data suggest that the project area may be a recharge zone that could be supplying groundwater to the Peñon Blanco basin. A significant hydrogeological investigation is necessary to evaluate the amount and potential impact of pumping for dewatering. A conceptual model of hydrogeological characteristics is required for the project area (PA) and its project influence area (PIA).
- Subsequent studies will be necessary to evaluate the groundwater impacts of the project and meet the permitting requirements of the authorities.
  1) Initial objective of conceptual hydrogeological modeling is to compile and integrate the existing geology, hydrology, and hydrogeophysics, which can be conducted as a part of the Environmental Impact Statement (MIA) process.
  2) Installation of wells for pumping tests to evaluate aquifer characteristics for hydrogeologic control wells.
  3) Identification of Depth to groundwater encountered in all lithologic zones in each borehole and monitoring of piezometric head for each aquifer zone.
  4) Interpretation of results and hydraulic graphs and data consolidation
  5) Sensitivity analysis (water-rock interrelationships, 3D hydrogeological control of construction and testing of pumping wells, hydrostratigraphy).

26.4.3 Tailings Storage Facility

Conduct an investigation to evaluate the hydrogeologic and geotechnical conditions beneath the prospective tailings storage facility footprint. Evaluate the foundation characteristics and establish the design parameters as in accordance with NOM-141-SEMARNAT-2003, which establishes the procedure to characterize the tailings, as well as the specifications and criteria for the characterization and preparation of the site, project, construction, operation, and post-operation of tailings facilities.

26.4.4 Land Tenure

Negotiations with the surface owners of the land within the project area is recommended for the prefeasibility phase. These negotiations should focus on the transition from exploration contracts to exploitation contracts with the Guadalupe Victoria Ejido and Ignacio Ramirez Ejido.

26.4.5 Budget

The budget for the recommended environmental investigations is approximately $2.5 million.

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APPENDIX A – PEA CONTRIBUTORS AND PROFESSIONAL QUALIFICATIONS

CERTIFICATE OF QUALIFIED PERSON

I, Daniel Roth, P.E., P. Eng. do hereby certify that:

1. I am currently employed as a project manager and civil engineer at M3 Engineering & Technology Corp. located at 2051 West Sunset Rd, Suite 101, Tucson, AZ 85704.
2. This certificate applies to the technical report titled, "NI 43-101 Technical Report, Preliminary Economic Assessment of the Cerro Las Minitas Project, Durango State, Mexico" prepared for Southern Silver Exploration Corp. ("Southern Silver") with an effective date of August 29, 2022.
3. I graduated with a Bachelor of Science degree in Civil Engineering from The University of Manitoba in 1990.
4. I am a registered professional engineer in good standing in the following jurisdictions:
    - Yukon, Canada (No. 1998)
    - British Columbia, Canada (No. 38037)
    - Alberta, Canada (No. 62310)
    - Ontario, Canada (No. 100156213)
    - New Mexico, USA (No. 17342)
    - Arizona, USA (No. 37319)
    - Alaska, USA (No. 102317)
    - Minnesota, USA (No. 54138)
    - Nevada, USA (No. 029423)
5. I have worked continuously as a design engineer, engineering, and project manager since 1990, a period of 30 years. I have worked in the minerals industry as a project manager for M3 Engineering & Technology Corporation since 2003, with extensive experience in hard rock mine process plant and infrastructure design and construction, environmental permitting review, as well as development of capital cost estimates, operating cost estimates, financial analyses, preliminary economic assessments, pre-feasibility, and feasibility studies.
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 am responsible for Sections 2, 3, 18, 19, 21 (except 21.1.5 and 21.3), 22, 24, and corresponding sections of 1, 25, 26 and 27 of the Technical Report.
8. I have not had prior involvement with the property that is the subject of the Technical Report. I have not visited the property that is the subject of the Technical Report.
9. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10. I am independent of Southern Silver and its subsidiaries as defined by Section 1.5 of NI 43-101.
11. I have read NI 43-101 and Form 43-101F1. The sections of the Technical Report that I am responsible for have been prepared in compliance with that instrument and form.

Dated this 13th day of October, 2022.

"Signed"
Signature of Qualified Person

Daniel Roth
Print Name of Qualified Person

CERTIFICATE OF QUALIFIED PERSON

1. This certificate applies to the technical report titled, "NI 43-101 Technical Report, Preliminary Economic Assessment of the Cerro Las Minitas Project, Durango State, Mexico" (the "Technical Report") prepared for Southern Silver Exploration Corp. ("Southern Silver") (the "Technical Report") with an effective date of August 29, 2022.

I, Laurie Tahija, MMSA-QP, Consultant (Processing), do hereby certify that:

2. I am currently employed as Senior Vice President by M3 Engineering & Technology Corporation, 2051 W. Sunset Road, Ste. 101, Tucson, Arizona 85704, USA.
3. I am a graduate of Montana College of Mineral Science and Technology, in Butte, Montana and received a Bachelor of Science degree in Mineral Processing Engineering in 1981.
4. I am recognized as a Qualified Professional (QP) member (#01399QP) with special expertise in Metallurgy/Processing by the Mining and Metallurgical Society of America (MMSA).
5. I have practiced mineral processing for 40 years. I have over twenty (20) years of plant operations and project management experience at a variety of mines including both precious metals and base metals. I have worked both in the United States and overseas at existing operations and at new operations during construction and startup. My operating experience in base metal processing includes copper heap leaching with SX/EW and zinc recovery using ion exchange, SX/EW, and casting. My operating experience in precious metals processing includes heap leaching, agitation leaching, gravity, flotation, Merrill-Crowe, and ADR (CIC & CIL). I have been responsible for process design for new plants and the retrofitting of existing operations. I have been involved in projects from construction to startup and continuing into operation. I have worked on scoping, pre-feasibility and feasibility studies for mining projects in the United States and Latin America, as well as worked on the design and construction phases of some of these projects.
6. I have not visited the property that is the subject of the Technical Report.
7. I have read the definition of "qualified person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
8. I am independent of the issuer as defined by Section 1.5 of NI 43-101.
9. I accept professional responsibility for Sections 17, 21.3.1, 21.3.2 as well as relevant information in Sections 1, 25, 26, and 27 of the Technical Report.
10. I have not had prior involvement with the property that is the subject of the Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. I have read NI 43-101 and Form 43-101F1. The sections of the Technical Report that I am responsible for have been prepared in compliance with that instrument and form.

Dated this 13th day of October 2022.

"signed"
Signature of Qualified Person

Laurie Tahija
Print Name of Qualified Person

CERTIFICATE OF QUALIFIED PERSON

Richard K Zimmerman, M.Sc., R.G., SME-RM

I, Richard K Zimmerman, M.Sc., R.G., SME-RM, do hereby certify that:

1. I am currently employed as Environmental Geologist by:

   M3 Engineering & Technology Corporation
   2051 Sunset Road, Ste. 101
   Tucson, AZ 85704

2. This certificate applies to the technical report titled, "NI 43-101 Technical Report, Preliminary Economic Assessment of the Cerro Las Minitas Project, Durango State, Mexico" prepared for Southern Silver Exploration Corp. ("Southern Silver") with an effective date of August 29, 2022.
3. I am a graduate of Carleton College and received a Bachelor of Arts degree in Geology in 1976. I am also a graduate of the University of Michigan and received a Master of Science degree in Geology in 1980.
4. I am a:
   - Registered Professional Geologist in the State of Arizona (No. 24064)
   - Registered Member in good standing of the Society for Mining, Metallurgy and Exploration, Inc. (No. 3612900RM)
5. I have practiced geology, mineral exploration, environmental remediation, and project management for 41 years. I have worked for mining and exploration companies for 9 years, engineering consulting firms for 22 years. The past 11 years have been spent with M3 Engineering & Technology Corporation managing, planning, and constructing processing plants for base and precious metals including over 20 technical reports.
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 experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
7. I am responsible for Section 20, and corresponding portions of 1, 25, 26, and 27 of the Technical Report.
8. I have had no prior involvement with the property that is the subject of the Technical Report. I have not visited the Cerro Las Minitas project site.
9. As of the date of this certificate, to the best of my knowledge, information and belief, the parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10. I am independent of the issuer applying all tests in Section 1.5 of National Instrument 43-101.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them of the Technical Report for regulatory purposes including electronic publication in the public company files on their websites accessible by the public.

Dated this 13th day of October, 2022.

"Signed"
Richard K. Zimmerman, M.Sc., R.G., SME-RM

Certificate of Qualified Person

I, Garth David Kirkham, P.Geo., do hereby certify that:

1) I am a consulting geoscientist with an office at 6331 Palace Place, Burnaby, British Columbia.
2) This certificate applies to the technical report titled, "NI 43-101 Technical Report, Preliminary Economic Assessment of the Cerro Las Minitas Project, Durango State, Mexico" prepared for Southern Silver Exploration Corp. ("Southern Silver") with an effective date of August 29, 2022 (the "Technical Report").
3) I am a graduate of the University of Alberta in 1983 with a BSc. I have continuously practiced my profession since 1988. I have worked on and been involved with NI43-101 studies on the Kutcho Creek and Debarwa poly-metallic deposits along with multiple technical reports and resource estimates on the Cerro Las Minitas Project.
4) I am a member in good standing of Engineers and Geoscientists BC (EGBC).
5) I have visited the property on March 31 through April 2, 2015, January 14 through 18, 2019 and most recently on August 16, 2021.
6) In the independent report titled entitled "Cerro Las Minitas Project, Form 43-101F1 Technical Report, Preliminary Economic Assessment, Durango, Mexico" prepared for Southern Silver Exploration Corp. ("Southern Silver") with an effective date of August 29, 2022, I am responsible for Sections 4 through 12 and Section 14 and 15, 23, and corresponding sections of 1, 25, 26 and 27.
7) I had prior involvement with the property and was the author of the independent technical reports with effective dates of 21st of March 2016, 22nd of February 2018, 9th of May, 2019 and October 27th, 2021.
8) I am independent of Southern Silver Exploration Corporation as defined in Section 1.5 of National Instrument 43-101.
9) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
10) I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the Technical Report and that, at the effective date of the Technical Report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
11) I have read National Instrument 43-101, Standards for Disclosure of Mineral Projects and Form 43-101F1. This technical report has been prepared in compliance with that instrument and form.

Dated this 13th day of October, 2022 in Burnaby, British Columbia.

"Garth Kirkham" {signed and sealed}

Garth Kirkham, P.Geo.
Kirkham Geosystems Ltd.

CERTIFICATE OF QUALIFIED PERSON

ARTHUR ROBERT BARNES

I, Arthur Robert Barnes, P.Eng ; FSAIMM; M.Sc.(Eng.) do hereby certify that:

1. I am President and Principal Consultant of:
   MPC Metallurgical Process Consultants Limited situated at
   Unit 90-2400 Oakdale Way, Kamloops, British Columbia, Canada

2. This certificate applies to the technical report entitled, "NI 43-101 Technical Report, Preliminary Economic Assessment of the Cerro Las Minitas Project, Durango State, Mexico" prepared for Southern Silver Exploration Corp. ("Southern Silver") (the "Technical Report") with an effective date of August 29, 2022.

3. I graduated with a B.Sc (Metallurgy)(Honours) from the University of Pretoria in 1974 and an M.Sc. (Metallurgical Engineering) degree from the University of the Witwatersrand in 1981

4. I am a Professional Engineer in good standing in Ontario (license #100501305) and British Columbia (license # 209871) in the areas of Process Metallurgy. I am a Fellow of the Southern African Institute of Mining and Metallurgy (license # 18967)

5. I have worked as a professional process metallurgist in the extractive industry for a total of 39 years.

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 am responsible for Sections 13, 25, 26, 27 and portions of section1 of the Technical Report.

8. I have prior involvement with the property that is the subject of the Technical Report. I contributed to the "Updated Mineral Resource Estimate for the Cerro Las Minitas Project, Durango State, Mexico", with effective date of 9th May, 2019. ("Technical Report"). I have not visited the project site.

9. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

10. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

11. I have read NI 43-101 and Form 43-101F1. The sections of the Technical Report that I am responsible for have been prepared in compliance with that instrument and form.

Signed and dated this 13th day of October, 2022.

"Signed"
Signature of Qualified Person

ARTHUR ROBERT BARNES
Print Name of Qualified Person

CERTIFICATE OF QUALIFIED PERSON

Jason Allen P. Eng.

I, Jason Allen, P.Eng., do hereby certify that:

1. I am Director of:
   Entech Mining Ltd.
   Suite 1125, 510 Burrard St, Vancouver, BC, Canada, V6C 3A8

2. This certificate applies to the technical report entitled, "NI 43-101 Technical Report, Preliminary Economic Assessment of the Cerro Las Minitas Project, Durango State, Mexico" prepared for Southern Silver Exploration Corp. ("Southern Silver") (the "Technical Report") with an effective date of August 29, 2022.

3. I graduated with a Bachelor of Engineering Degree in Mining Engineering in 2001 from Western Australian School of Mines, and also obtained a Master of Engineering Science (Mining Geomechanics) in 2013 from the Western Australian School of Mines.

4. I am a registered professional engineer in good standing in British Columbia, Canada (No. 39170) and also registered in Yukon, Canada, (No 2439). I am also registered as a chartered professional in Western Australia, Australia (MAusIMM (CP) 225796).

5. I have worked continuously as a miner, mining engineer, senior mining engineer, technical services manager, alternate underground manager, senior mining consultant, and as a director of a consultancy since 2000, a period of 21 years. Various roles include drill and blast, mine design, short-term and long-term planning, ventilation, capital projects, and project evaluations (preliminary economic assessments, prefeasibility and feasibility studies).

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 am responsible for Sections 16 of the Technical Report. I am also a co-author for Sections 1, 21.1.5 and 21.3.3, 25, 26, and 27 if the Technical Report.

8. I have had prior involvement with the property that is the subject of the Technical Report completing conceptual mining assessment and project evaluations. I have visited the project site on July 6th 2022, and visited the core facility located in Guadalupe Victoria located adjacent to the property. I also visited the project site reviewing potential portal locations, general layout, and the historic La Bacona workings.

9. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

10. I am independent of Southern Silver and its subsidiaries, as defined by Section 1.5 of NI 43-101.

11. I have read NI 43-101 and Form 43-101F1. The sections of the Technical Report that I am responsible for have been prepared in compliance with that instrument and form.

Signed and dated this 13th day of October, 2022.

"signed"
Signature of Qualified Person

Jason Allen
Print Name of Qualified Person