NI 43-101 Technical Report on the Cozamin Mine, Zacatecas, Mexico

July 19, 2018

Effective Date: March 31, 2018

Prepared by: Capstone Mining Corp.

Authors:
Gregg Bush, P.Eng., Capstone Mining Corp.
Jenna Hardy, P.Geo., Nimbus Management Ltd.
Garth Kirkham, P.Geo., FGC, Kirkham Geosystems Ltd.
Chris Martin, CEng MIMMM, Blue Coast Group Ltd
Vivienne McLennan, P.Geo., Capstone Mining Corp.
Pooya Mohseni, MBA, MASc., P.Eng., Capstone Mining Corp.
Humberto Preciado, PhD, P.E., Wood Environment & Infrastructure Solutions, Inc.

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Date and Signature Page

The effective date of the Cozamin Mine 2018 Technical Report on the Cozamin Mine, Zacatecas, Mexico, is March 31, 2018.

Signed and Sealed July 19, 2018

Gregg Bush, P.Eng., Capstone Mining Corp.

Signed and Sealed July 19, 2018

Jenna Hardy, P.Geo., Nimbus Management Ltd.

Signed and Sealed July 19, 2018

Garth Kirkham, P.Geo., FGC, Kirkham Geosystems Ltd.

Signed and Sealed July 19, 2018

Chris Martin, CEng MIMMM, Blue Coast Group Ltd.

Signed and Sealed July 19, 2018

Vivienne McLennan, P.Geo., Capstone Mining Corp.

Signed and Sealed July 19, 2018

Pooya Mohseni, MBA, MASc., P.Eng., Capstone Mining Corp.

Signed and Sealed July 19, 2018

Humberto Preciado, PhD, PE, Wood plc

1 Summary

1.1 Property Description and Location

The Cozamin Mine is located in the Morelos Municipality of the Zacatecas Mining District, near the south-eastern boundary of the Sierra Madre Occidental Physiographic Province in north-central Mexico. The mine and processing facilities are located near coordinates 22º 48’ N latitude and 102º 35’ W longitude on the 1:250,000 Zacatecas topographic map sheet F13-6.

1.2 Ownership

Cozamin Mine is 100% owned by Capstone Gold S.A, a subsidiary of Capstone Mining Corp., (“Capstone” or the “Company”) and is subject to a 3% net smelter royalty (“NSR”) payable to Minas Bacis S.A. de C.V. (“Bacis”), a Mexican mining company that was one of Mexico’s primary silver producers during the 1980s and 1990s.

1.3 Mineral Concessions, Surface Rights, and Land Ownership

The Cozamin Mine comprises 90 mining concessions covering 4,202 hectares. Capstone Gold S.A. de C.V. is the registered holder of 45 mining concessions covering approximately 3,427 hectares of land and Mining Opco, S.A. de C.V. is the registered holder of 45 mining concessions covering approximately 775 hectares of land. These mining concessions are listed in the Public Registry of Mining and are not subject to any limitations of property, claim or legal proceedings. The mining rights, with respect to each of the concessions, have been paid to date.

In 2017, Capstone entered a mineral-rights sharing agreement with Endeavour Silver Corp. on abutting mining concessions at the southern boundary of Capstone’s Cozamin mine property. The agreement provides Capstone with exploration and exploitation rights on seven Endeavour concessions below 2,000 metres above sea level (“masl”), a depth where copper-rich mineralization has been historically found and mined by Capstone, and provides Endeavour with exploration and exploitation rights on 10 Capstone concessions above 2,000 masl.

1.4 Geology and Exploration

The Zacatecas Mining District covers a belt of epithermal and mesothermal vein deposits that contain silver, gold and base metals (copper, lead and zinc). The district is in the Southern Sierra Madre Occidental Physiographic Province near the boundary with the Mesa Central Physiographic Province in north-central Mexico. The dominant structural features that localize mineralization are of Tertiary age, and are interpreted to be related to the development of a volcanic centre and to northerly trending basin-and-range structures.

In 2004, Capstone scout drilled the Mala Noche vein (“MNV”) beneath the down dip extent of the historic mine workings of the San Roberto mine. The initial three drill sections, comprising two drillholes each, all intersected economic mineralization over true widths varying from 3.2 m to 14.9 m. These three drill sections were distributed over 550 m of strike extent beneath the historic workings. At that point, Capstone decided to drill single drillholes beneath the San Roberto workings on cross-sections spaced every 100 m along strike. These holes targeted the Mala Noche vein at approximately 2,150 masl, or approximately 65 m below the historic workings. This strategy resulted in the first 20 exploration holes being distributed over a strike length of 1.4 km. Of these first 20 drillholes, 17 intersected significant mineralization that averaged 6.64 m in true width and had weighted grade averages of 2.61% Cu, 91.3 g/t Ag and 1.38% Zn.

These higher copper grades and economic silver grades are associated with significant amounts of pyrrhotite. This reinforced the company's belief that the historic workings at San Roberto are located just above the upper reaches of a large copper-silver mineralized system of mesothermal character. Subsequent exploration drilling showed that the copper-silver dominant phase of mineralization extends below 1,865 masl which is 350 m below the historic workings.

In late 2006, the mine commenced commercial production at 1,000 tonnes per day with a three-year mine life in reserve, while at the same time continuing exploration.

From 2004 until late 2009 the Company focused exploration on the MNV system, where underground drilling targeted various zones within the San Roberto mine to increase confidence for resource classification. A similar approach was taken with surface drilling that focused on the San Rafael area of the MNV system, situated to the east of the San Roberto mine. Additional surface or underground step-out and infill drilling targeting copper mineralization was conducted at the MNV in 2010-2013, and 2015-2017. In 2016 and 2017, step-out and infill drilling tested the grade and continuity of zinc mineralization at the San Roberto Zinc and San Rafael areas of the MNV.

In 2010, the Company discovered a new zone of high grade copper-silver mineralization localized in a structure in the footwall of the MNV, splaying approximately 30° to the southeast. It is referred to as the Mala Noche Footwall zone ("MNFWZ"). The zone currently measures more than 2,000 m along strike and between 200 m and 600 m down dip. Additional exploration and infill drilling at the MNFWZ was executed in 2011-2013, 2015-2017 and continues during the 2018 program. Drilling in 2017 and 2018 identified a significant extension to the zone along strike, and mineralization remains open locally up-dip, down-dip, and along strike. The MNFWZ merges to the west with the MNV and is considered closed to the north in that area. Mining commenced in the MNFWZ in November 2010.

Since 2014, additional exploration drilling has been periodically executed at Cozamin testing for mineralization in fault splays off the main zone analogous to the MNFWZ and in other parallel to sub-parallel structures.

1.5 Mineral Resources Estimates

At the Cozamin Mine, mineral resources are estimated within the MNFWZ and MNV including the San Roberto ("SROB"), San Roberto Zinc ("SROB-Zn") and San Rafael zones. Capstone commenced production from SROB in 2006, San Rafael during 2006-2009 then since March 2018, MNFWZ in 2010 and from SROB-Zn since early 2018.

Mineral resources are not mineral reserves until they demonstrate economic viability. Even though mining has been undertaken in areas of the MNV and MNFWZ with Proven and Probable class mineral reserves, there is no certainty that Inferred mineral resources will be converted to Measured and Indicated categories through further drilling, or into Mineral Reserves, once economic considerations are applied.

The MNFWZ mineral resource estimate was updated with drilling up to March 19, 2018 using commercially-available MineSight® software after mineralization domains were developed in Leapfrog®.

The MNV mineral resource estimate was updated with the same NSR formula used for MNFWZ and depleted for mining activities until March 31, 2018. The MNV mineral resource model, comprising the SROB, SROB-Zn and San Rafael zones, was previously updated internally in July 2017 to include infill drilling completed since Capstone's 2009 NI 43-101 Technical Report (SRK, 2009). Drilling included a 2017 campaign targeting zinc-rich mineralization with 49 infill drillholes at San Rafael and SROB-Zn (upper, eastern limits of the San Roberto zone). The SROB was updated with underground infill drilling from mid-2016 to July-2017 (60 drillholes). Domains separating the copper-rich SROB and zinc-rich SROB-Zn and San Rafael were generated in Leapfrog® and the mineral resource estimate was completed in Maptek™ Vulcan. Recovery on a potential blended mine feed of zinc-rich ore with copper-rich ore from the MNFWZ and SROB zones was favourably assessed.

Table 1-1: Cozamin March 2018 Mineral Resources Estimate above a US$42/t NSR cut-off

Classification	Tonnes (kt)	Grade				Contained Metal			
		Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu (kt)	Ag (Koz)	Zn (kt)	Pb (kt)
Copper Zones (SROB and MNFWZ)									
Measured	409	1.23	53	1.23	0.40	5	696	5	2
Indicated	12,583	1.69	43	0.81	0.15	212	17,374	102	18
Measured + Indicated	**12,992**	**1.67**	**43**	**0.83**	**0.16**	**217**	**18,070**	**107**	**20**
Inferred	9,888	1.15	40	1.24	0.29	114	12,762	123	28
Zinc Zones (SROB-Zn and San Rafael)									
Measured	-	-	-	-	-	-	-	-	-
Indicated	2,676	0.26	42	3.56	0.55	7	3,608	95	15
Measured + Indicated	**2,676**	**0.26**	**42**	**3.56**	**0.55**	**7**	**3,608**	**95**	**15**
Inferred	4,681	0.20	32	3.06	0.33	9	4,817	143	15
Total Mineral Resources									
Measured	409	1.23	53	1.23	0.40	5	696	5	2
Indicated	15,259	1.44	43	1.29	0.22	219	20,982	197	33
Measured + Indicated	**15,668**	**1.43**	**43**	**1.29**	**0.22**	**224**	**21,678**	**202**	**35**
Inferred	14,569	0.85	38	1.83	0.30	123	17,578	266	44

Table notes:

1. Garth Kirkham, P.Geo., FGC, is the independent Qualified Person responsible for the disclosure of Cozamin Mineral Resources. Mineral resources are reported at a cut-off of NSR US$42 using the NSR2018 formula:

Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. Metal price assumptions (in US$) used to calculate the NSR for all deposits are: Cu = $3.50/lb, Ag = $18.00/oz, Zn = $1.20/lb, and Pb = $1.00/lb. An exchange rate of MX$18.50 per US$1 is assumed. The following metal recoveries are used: 90% Cu, 74% Ag, 79% Zn, 76% Pb. Totals may not sum exactly due to rounding.

2. The cut-off date for mining activities and drillhole sample data is March 31, 2018.
3. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
4. Mineral resources are reported inclusive of the mineral reserves.

1.6 Mineral Reserves Estimate

The current mineral reserves models are based on mineral resource models for MNFWZ and MNV (effective date March 31, 2016). Capstone's 2017 AIF published mineral reserves validated and depleted for mining activities to December 31, 2017 under supervision of Pooya Mohseni, MBA, MASc., P.Eng. (Capstone, 2018). An updated mineral reserve estimation incorporating the updated MNFWZ mineral resource estimation (effective date March 31, 2018) is underway at the time of this Technical Report.

The mineral reserve estimate for MNFWZ and MNV was based on mineralization domains (e.g., VN10, an individual domain identifier) and applying a Net Smelter Return (NSR) cut-off value at $42.00 per tonne on Measured and Indicated resources, depleted for mining activities up to December 31, 2017, with internal pillars and unrecoverable remnants excluded. Mineral reserves were classified as Proven and Probable in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014) and are summarized in Table 1-2.

Table 1-2: Cozamin Mineral Reserves Estimate at December 31, 2017 above a US$42/t NSR cut-off

Classification	Tonnes (kt)	Grade				Contained Metal			
		Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu (kt)	Ag (koz)	Zn (kt)	Pb (kt)
Copper Zone – San Roberto									
Proven	122	1.42	57	0.83	0.33	2	223	1	0
Probable	1,139	0.95	45	1.44	0.40	11	1,659	16	5
Total	**1,261**	**1.00**	**46**	**1.38**	**0.40**	**13**	**1,882**	**17**	**5**
Copper Zone – Mala Noche Footwall									
Proven	125	1.81	33	0.63	0.03	2	133	1	0
Probable	1,891	2.15	45	0.28	0.02	41	2,759	5	0
Total	**2,016**	**2.13**	**45**	**0.30**	**0.02**	**43**	**2,892**	**6**	**0**
Total Mineral Reserves									
Proven	247	1.62	45	0.73	0.18	4	356	2	0
Probable	3,030	1.70	45	0.71	0.17	52	4,418	22	5
Total	**3,277**	**1.69**	**45**	**0.72**	**0.17**	**56**	**4,774**	**23**	**5**

Table Notes:
Pooya Mohseni, MBA, MASc., P.Eng., Director of Technical Services at Capstone Mining Corp., is the Qualified Person for this Cozamin Mineral Reserve update. Disclosure of the Cozamin Mine Mineral Reserves as of December 31, 2017 was completed using fully diluted mineable stope shapes generated by the Maptek Vulcan Mine Stope Optimizer software and estimated using the 2016 MNFWZ and MNV resource block models created by J. Vincent, P.Geo., of Capstone Mining Corp. The Reserves are based on a US$ 42/t NSR cut-off. The NSR formula used for the Reserves was based US$ 2.50/lb Cu, US$ 20/oz Ag, US$ 1.0/lb Zn, MEX 18.5 to USD 1.0 and metallurgical recoveries of 94.5% Cu, 72% Ag, 70% Zn. The resulting NSR formula is $42.425*%Cu + 0.364*Ag ppm + 8.123*Zn%. Note that zero value was attributed to Pb because the circuit was used minimally due to low Pb concentrations. Tonnage and grade estimates include dilution and recovery allowances. Figures may not sum due to rounding.

1.7 Life of Mine Operating Plan

The life of mine operating ("LOM") plan was completed by Cozamin Mine Engineering under the supervision of Pooya Mohseni, MBA, MASc., P.Eng. in December 2017. The LOM plan forecasts mining 3.6 Mt from 2018 until mid-2022. Only material classified as mineral reserves was included in the LOM plan; the updated MNFWZ mineral resource estimate detailed in this report is not included.

Access to underground workings is obtained from two service and haulage ramps and a hoisting shaft. Ramps are 6 m wide and 5 m high. The mining method longitudinal longhole open stoping with loose waste rock backfill will be used exclusively for the extraction of the remaining current Cozamin ore reserves. Sublevels are 4 m wide by 4.5 m high and are usually mined to the extent of the ore. The mining width can vary between 2 m and 15 m, depending on the vein thickness. The average mill production is 2,500-3,000 tonnes per day.

Ground conditions in the mine are usually favourable with wide spans observed to be generally stable with ground support at the current depth and extraction ratio. Geotechnical considerations include cross-cutting fault zones perpendicular or orthogonal to veins, sub-vertical slip planes across veins, faults parallel to MNV contacts and lower intact rocks strengths in metamorphic phyllite or shale rock types. Vertical rib pillars are typically left in place where cross-cutting faults intersect the veins. Ground support practices are modified in areas at depth where horizons of metamorphic rock increase in waste rock.

1.8 Conclusions and Recommendations

The Qualified Persons conclude that the Cozamin Mine remains a viable mining operation.

Additional recommendations include:

- Revise the LOM plan to include mineral reserves updated with mineral resource estimates for MNFWZ and MNV (effective March 31, 2018).
- Optimize extraction and mining recovery with sound mining practices:
  - Adjust overbreak dilution factors after validation and continuously monitor dilution grade.

    - Review of sequencing and back-up stope planning for mine production flexibility.
- On-going studies to evaluate possible improvements regarding:
    - Geotechnical conditions (modelling and continued rock mass characterization).
    - Data gaps in site hydrology and hydrogeology.
    - Characterization of waste, tailings and historic waste rock/tailings over the mine property.
- Continue community engagement.
- Review operational recommendations listed in this report with regulators to determine whether new or amended authorizations are required.

The authors are of the opinion that the current geological, mining, and metallurgical data from the Cozamin Mine are of sufficient quality to support the mineral resources, mineral reserves, and life-of-mine plan as presented in this Technical Report.

Opportunities identified for the Cozamin mine are as follows:

- Update mineral reserves to incorporate new MNFWZ resources.
- A 40,000 m drilling exploration program testing MNFWZ and additional near-MNV structures is 35% complete. Future exploration targets may be identified.
- Improve material handling in the mine by evaluating hoisting options to determine the appropriate path forward. Possible outcomes may include reduced haulage costs, improved ventilation and better access to deeper material.
- Develop sustainable mine plans to maximize mill throughput on a sustained basis to reduce unit costs. The mill has frequently operated in excess of 4,000 tpd, which is greater than the planned life of mine ("LOM") throughput.
- Refine the water balance to determine needs and potential long-term sources.
- Hydrogeological and hydrological studies as well as supporting geochemical modelling to understand potential aquifer vulnerability over long term into closure
- Improve the characterization of metal leaching/acid rock drainage ("ML/ARD") of tailings and waste rock with further sampling, and testing to support storage option decisions.

Risks identified to the Cozamin mine are as follows:

- Exchange rates, off-site costs and, in particular, base metal prices all have the potential to affect the economic results of the mine. Negative variances to assumptions made in the budget forecasts would reduce the profitability of the mine, thereby impacting the mine plan.
- The upstream tailings dam raise construction method is highly dependent on tailings management to keep the reclaim pond as small and as far as possible from the dam crest for proper tailings beach construction. This dependency has the potential to jeopardize the feasibility of subsequent upstream raises and limit the total waste storage capacity. These risks are currently mitigated with continuous tailings management, monitoring of the tailings storage facility performance, frequent site characterizations to monitor the progression of tailings beach strength and audits from independent consultants.
- Mexican regulatory expectations for environmental and social responsibility continue to evolve. Since the first environmental impact assessment, Capstone's property ownership has increased beyond the area of active mining and processing operations to encompass additional areas of historic mining and processing operations, particularly in the area of the Chiripa-La Gloria

arroyo. The regulatory path forward for remediating these types of environmental liabilities is not yet certain and may result in increased expectations and regulatory requirements. This has potential to increase costs for final closure and/or post closure monitoring which cannot be quantified at this time.

2 Introduction

2.1 Description of the Issuer

This technical report was prepared by Capstone Mining Corp. ("Capstone") to disclose updated mineral resources and reserves at the Cozamin Mine in Zacatecas, Mexico. It was prepared by following National Instrument 43-101, Standards of Disclosure for Mineral Projects and is written in accordance with Form 43-101F1. Estimations of mineral resources and mineral reserves follow industry best practices as defined by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM, 2003). Classification of mineral resources and mineral reserves conform to CIM Definition Standards (CIM, 2014). The effective date of this Technical Report is March 31, 2018.

This technical report was authored by several QPs. Table 2-1 summarises the sections of the Technical Report for which they are responsible.

Table 2-1: Summary of Qualified Person Responsibilities

Section	QP (Sub section)
1: Summary 2: Introduction 3: Reliance on Other Experts 4: Property Description and Location 5: Physiography, Climate, Access, Local Resources, and Infrastructure 6: History 7: Geological Setting and Mineralization 8: Deposit Types 9: Exploration 10: Drilling	Garth Kirkham
11: Sample Preparation, Analysis and Security	Vivienne McLennan
12: Data Verification	Garth Kirkham
13: Mineral Processing and Metallurgical Testwork	Chris Martin
14: Mineral Resources Estimate	Garth Kirkham
15: Mineral Reserves Estimate 16: Mining Methods	Pooya Mohseni
17: Recovery Methods	Gregg Bush
18: Project Infrastructure	Pooya Mohseni (18.1, 18.2) Humberto Preciado (18.3)
19: Markets and Contracts	Pooya Mohseni
20: Environmental Studies, Permitting and Social or Community Impact	Jenna Hardy
21: Capital and Operating Costs 22: Economic Analysis	Pooya Mohseni
23: Adjacent Properties 24: Other Relevant Data and Information 25: Interpretations and Conclusions 26: Recommendations 27: References	Garth Kirkham

2.2 Qualified Person Site Visits

Site inspections have been undertaken by each of the Technical Report authors. Dates listed do not include travel time to and from the Cozamin Mine (Table 2-2).

Table 2-2: Site Inspection Details of Qualified Persons

Qualified Person	Date (Excluding Travel)	Scope of Site Inspection
Gregg Bush	June 25-29, 2018	Review of historical mill operating data, process circuits, and equipment.
Jenna Hardy	December 2-5, 2016 October 16-20 2017	Environmental and regulatory review with site personnel, historic mines and tailings inspection as well as closure and reclamation planning.
Garth Kirkham	April 9-10, 2018	Estimation of mineral resources, review of sample collection, preparation and analysis, QAQC, bulk density measurements and mineralization in situ.
Chris Martin	January 24, 2018	Metallurgical testwork.
Vivienne McLennan	January 18-Feb 1, 2017 March 27-April 1, 2017 February 14-24, 2018 April 9-20, 2018	Review of data handling for drilling and exploration information including mineral tenures, drillcore, QAQC, and database verification.
Pooya Mohseni	June 25-29, 2018	Mineral reserve estimation. Review mining methods, mine planning and schedule, mining operations performance, mining costs (both operating and capital), dilution and ore loss, and reconciliation.
Humberto Preciado	April 30, 2018	Tailings storage facility, proposed waste dump location and associated infrastructure inspection.

2.3 Information Sources and References

Sources of data include diamond drilling, downhole surveys, geotechnical information and historic production. In addition, other reports, opinions and statements of lawyers and other experts are discussed in Section 3.

The sample information used to develop the mineral resources and mineral reserves estimates and metallurgical test work was collected over a number of years dating back to 2004. All sample information has been acquired by Capstone personnel.

2.4 Terms of Reference

All units in this report are based on the metric SI system (Système International d'Unités - International System of Units), except for some units which are deemed industry standards, such as troy ounces (oz) for precious metals and pounds (lb) for base metals. All currency values are in US dollars (“$”) unless otherwise noted.

The following defined terms have been used in this report.

Table 2-3: Acronyms

Acronym	Expanded Form
Organizations	
Acme	Acme Analytical Laboratories Ltd.
Actlabs	Activation Laboratories Ltd.
ALS	ALS Geochemisty
Assayers Canada	Mineral Environments Laboratories Ltd
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
LME	London Metal Exchange
Bacis	Minas Bacis S.A. de C.V.
Capstone	Capstone Mining Corp.
CEMEFI	Mexican Centre for Philanthropy
CML	Cozamin Mine Laboratory
Cozamin	Capstone Gold, S.A. de C.V.
Eco Tech	Eco Tech Laboratories Ltd.
INEGI	Instituto Nacional de Estadística y Geografía
Inspectorate	Bureau Veritas Inspectorate
LGGC	Lions Gate Geological Consulting Inc.
Peñoles	Industrias Peñoles S.A. de C.V.
PROFEPA	Procuraduría Federal de Protección al Ambiente en el Estado de Zacatecas
SEMARNAT	Secretaría de Medio Ambiente y Recursos Naturales
SGS	SGS Canada Inc.
Other	
AIF	Annual Information Form
CAPEX	Capital costs
CCS	Chip-channel sample
C&F	Cut and Fill
COG	Cut-off Grade
Copper Zone	San Roberto and Mala Noche Footwall zones
CRIP	Complex Resistivity Induced Polarization
CRM	Certified Reference Material
CuEq	Copper Equivalent
CUSTF	Cambio de Uso de Suelos en Terrenos Forestales
DDH	Diamond drillhole
DTU	Documento Tecnico Unificado
ETJ	Estudio Tecnico Justificativo de Cambio de Uso de Suelos
G&A	General and Administrative
HDPE	High-density polyethylene
IRR	Internal Rate of Return
IVA	Value Added Tax (Mexican)
LAU	Licencia Única Ambiental
LGEEPA	Ley General de Equilibrio Ecológico y la Protección al Ambiente
LH	Long Hole

Acronym	Expanded Form
LOM	Life of mine
LOMP	Life of mine plan
M&I	Measured and Indicated mineral resources
MIA	Manifestación de Impacto Ambiental
Minzone	Mineralized Zone
MEX or MX$	Mexican Peso
MNV	Mala Noche Vein
MNFWZ	Mala Noche Footwall Zone
ML/ARD	Metal leaching/acid rock drainage
NI 43-101	National Instrument 43-101
NSR	Net Smelter Return
OPEX	Operating costs
PAG	Potentially acid generating
PFS	Preliminary Feasibility Study
QAQC	Quality Assurance/Quality Control
RM	Reference Material
ROM	Run of Mine
SROB	San Roberto zone (Copper)
SROB-Zn	San Roberto Zinc zone
TSF	Tailings Storage Facility
US$	United States Dollar
X, Y, Z	Cartesian Coordinates, also “Easting”, “Northing”, and “Elevation”
Zinc Zone	San Rafael and San Roberto Zinc zone

Table 2-4: Abbreviations

Abbreviation	Unit or Term	Abbreviation	Unit or Term
Distance		**Mass**	
µm	micron (micrometre)	kg	kilogram
mm	millimetre	g	gram
cm	centimetre	t	metric tonne
m	metre	kt	kilotonne
km	kilometre	lb	pound
” or in	inch	Mt	Megatonne
’ or ft	foot	oz	troy ounce
		wmt	wet metric tonne
		dmt	dry metric tonne
		tpd	Tonnes per day
Area		**Pressure**	
m^2	square metre	psi	pounds per square inch
km^2	square kilometre	Pa	Pascal
Ac	acre	kPa	kilopascal
Ha	hectare	MPa	megapascal

Abbreviation	Unit or Term	Abbreviation	Unit or Term
Volume		**Elements and Compounds**	
L	litre	Au	gold
m^3	cubic metre	Ag	Silver
ft^3	cubic foot	Cu	copper
Usg	US gallon	Pb	lead
Lcm	loose cubic metre	Zn	zinc
Mlcm	Million lcm	$CaCO_3$	calcium carbonate
Bcm	bank cubic metre	ANFO	ammonium nitrate/fuel oil
Mbcm	Million bcm	**Bulk Density and Specific Gravity**	
		BD/SG	g/cm^3

Table 2-5: Conversion Factors

Conversion Factors	
1 tonne	2204.62 lb
1 oz (troy)	31.1035 g

3 Reliance on Other Experts

In preparing this Technical Report, the authors have relied upon certain work, opinions and statements of lawyers and other experts. The authors consider the reliance on other experts, as described in this section, as being reasonable based on their knowledge, experience and qualifications.

- Gordon Eng, CPA, CA, of Capstone Mining Corp. for tax calculations in Section 19.4.
- Lic. Maria del Rosario Torres Aldana of Capstone Gold S.A. for environmental and regulatory considerations detailed in Section 20.
- Rafael Cereceres Ronquillo, LL.B, for a legal opinion pertaining to the ownership of mining concessions by Capstone Gold S.A. de C.V. and Mining Opco, S.A. de C.V. in Section 4.5.

The results and opinions expressed in this report are conditional upon the information provided by the experts listed in this section as being current, accurate, and complete as of the date of this report. The authors understand that no information has been withheld that would affect the conclusions made herein and they reserve the right, but will not be obliged, to revise this report and conclusions if additional information becomes known to the authors after the date of this report.

4 Property Description and Location

The Cozamin Mine is located in the Morelos Municipality of the Zacatecas Mining District near the southeastern boundary of the Sierra Madre Occidental Physiographic Province in north-central Mexico (Figure 4-1). The mine and processing facilities are located near coordinates 22º 48’ N latitude and 102º 35’ W longitude on 1:250,000 Zacatecas topographic map sheet F13-6.

Figure 4-1: Cozamin Mine Location Map

4.1 Mining Concessions

The Cozamin Mine comprises 90 mining concessions covering approximately 4,202 ha (Figure **4-3** and Figure 4-4). Capstone Gold S.A. de C.V. is the registered holder of 45 mining concessions covering approximately 3,427 ha with an additional pending mining concession of approximately 9 ha and Mining Opco, S.A. de C.V. is the registered holder of 45 mining concessions covering approximately 775 ha. These mining concessions are listed in the Public Registry of Mining and are not subject to any limitations of property, claim, or legal proceedings. The mining rights, with respect to each of the concessions, have been paid to date. The mine is 100% owned by Capstone subject to a 3% net smelter royalty payable to Minas Bacis S.A. de C.V. ("Bacis"), a Mexican resource company.

Table 4-1: Cozamin Mining Concessions Summary – held by Capstone Gold S.A. de C.V.

Description / Name	Title Number	Claim Classification	Validity		Claim Area (ha)
			From	To	
001 Plateros	188806	Exploitation	1990-11-29	2040-11-28	9
002 Santa Lucia	195187	Exploitation	1992-08-25	2042-08-24	18.7267
003 San Nicolás	200150	Exploitation	1994-07-15	2044-07-14	5.3697
004 San Jacinto Fracc. 1	202437	Exploitation	1995-11-24	2045-11-23	78.7955
005 San Jacinto Fracc. 2	202438	Exploitation	1995-11-24	2045-11-23	17.7846
006 Santa Bárbara Fracc. 4	202628	Exploitation	1995-12-08	2045-12-07	0.4585
007 Santa Bárbara Fracc. 2	235867	Exploitation	2010-03-24	2060-03-23	16.5589
008 Gabriela II	203364	Exploitation	1996-07-19	2046-07-18	18.9438
009 Plateros Dos	208838	Exploitation	1998-12-15	2048-12-14	50
010 La Liga	217237	Exploitation	2002-07-02	2052-07-01	20.1817
011 San Bonifacio	217858	Exploitation	2002-08-27	2052-07-26	40.8518
012 Santa Bárbara Fracc. 1	218259	Exploitation	2002-10-17	2052-10-16	82.9691
013 La Secadora	219630	Exploitation	2003-03-26	2053-03-25	9
014 La Providencia	223954	Exploitation	2005-03-15	2055-03-14	60
015 Unificación Carlos	235574	Exploitation	2010-01-20	2060-01-19	542.5265
016 Orlando	225620	Exploitation	2005-09-23	2055-09-22	11.7899
017 San Luis I	223325	Exploitation	2004-12-02	2054-12-01	290.6121
018 San Luis II	224466	Exploitation	2005-05-13	2055-05-12	133.8409
019 San Luis II Fracc. I	224467	Exploitation	2005-05-13	2055-05-12	2.1713
020 San Luis II Fracc. II	224468	Exploitation	2005-05-13	2055-05-12	2.4654
021 Acueducto	224469	Exploitation	2005-05-13	2055-05-12	13.559
022 Acueducto Fracc. 1	224470	Exploitation	2005-05-13	2055-05-12	9.598
023 La Parroquia	224471	Exploitation	2005-05-13	2055-05-12	1.2601
024 La Gloria	224474	Exploitation	2005-05-13	2055-05-12	4.1372
025 La Sierpe	224503	Exploitation	2005-05-13	2055-05-12	4.2638
026 La Sierpe Fracc. 1	224504	Exploitation	2005-05-13	2055-05-12	0.0108
027 San Judas	226699	Exploitation	2006-02-17	2056-02-16	14.5989
028 El Lucero	*226834*	-	*2006-03-10*	*2056-03-09*	*145.3505*
029 Lorena	227712	Exploitation	2006-07-28	2056-07-27	318.5825
030 Sara	228086	Exploitation	2006-09-29	2056-09-28	231.9436
031 El Ranchito	228343	Exploitation	2006-11-08	2056-11-07	11.2997

Description / Name	Title	Claim	Validity		Claim
032 El Ranchito Fracc 1	228344	Exploitation	2006-11-08	2056-11-07	0.6189
033 La Veta	228345	Exploitation	2006-11-08	2056-11-07	1.4533
034 Anabel	229238	Exploitation	2007-03-27	2057-03-26	310.771
035 Cecilia	230921	Exploitation	2007-11-09	2057-11-08	425.6022
036 Ximena	234713	Exploitation	2009-08-04	2059-08-03	400.5854
037 Los Amigos	223270	Exploitation	2004-11-18	2054-11-17	30
038 San Francisco	203270	Exploitation	1996-06-28	2046-06-27	17.2735
039 Santa Rita	183882	Exploitation	1988-11-23	2038-11-22	12.3809
040 La Esperanza	214768	Exploitation	2001-11-29	2051-11-28	29.5678
041 San Benito	239550	Exploitation	2011-12-16	2061-12-15	9
042 Sandra	238171	Exploitation	2011-08-09	2061-08-08	127.3809
043 La Capilla	240517	Exploitation	2012-06-12	2062-06-11	2.198
044 La Fortuna	*Pending*	*Exploitation*	-	-	*Approx. (9.0000)*
045 Unificación El Cobre	170677	Exploitation	1982-06-11	2032-06-10	31.4914
046 Parroquia Dos	165880	Exploitation	1979-12-13	2029-12-12	1
047 Parroquia Tres	175518	Exploitation	1985-07-31	2035-07-30	6.0063
				Total (excl. 028, 044) [1,2]	3,580.9801 ha

Table Notes:

1. Capstone S.A. de C.V. is the owner of claim El Lucero (title number, 226834), registered in the Municipality of Concordia, Sinaloa.
2. La Fortuna (044) was solicited in 2010 and is pending approval.

Table 4-2: Cozamin Mining Concessions Summary – held by Mining Opco, S.A. de C.V.

Description / Name	Title Number	Claim Classification	Validity From	Validity To	Claim Area (ha)
048 Diez de Mayo	151926	Exploitation	1969-10-06	2019-10-05	26.5725
049 Aries	194829	Exploitation	1992-07-30	2042-07-29	59.6032
050 Adriana	196151	Exploitation	1993-07-16	2043-07-15	15.0000
051 11 de Mayo	211770	Exploitation	2000-07-28	2050-07-27	29.1756
052 Largo III Fracción III	219050	Exploitation	2003-02-04	2053-02-03	4.3593
053 Largo III Fracción I	219196	Exploitation	2003-02-18	2053-02-17	28.2972
054 Largo III Fracción II	219197	Exploitation	2003-02-18	2053-02-17	1.3226
055 Eureka	116153	Exploitation	1961-12-05	2061-12-04	13.9232
056 Segunda A. al Patrocinio	156645	Exploitation	1972-04-12	2022-04-11	7.6662
057 Cuarta A. al Patrocinio	156646	Exploitation	1972-04-12	2022-04-11	8.0840
058 Lucia Numero Tres	169353	Exploitation	1981-11-11	2031-11-10	31.0000
059 Lucia Numero Dos	185481	Exploitation	1989-12-14	2039-12-13	5.9975
060 Santa Lucia	210729	Exploitation	1999-11-26	2049-11-25	51.4051
061 Los Clarines	210800	Exploitation	1999-11-26	2049-11-25	74.0235
062 Santa Clara	217768	Exploitation	2002-08-13	2052-08-12	4.2124
063 Manuelito	211809	Exploitation	2000-07-28	2050-07-27	22.7023
064 Mexicapan	212562	Exploitation	2000-11-07	2050-11-06	40.9755
065 Nueva Santa Clara	213110	Exploitation	2001-03-16	2051-03-15	0.6141

Description / Name	Title	Claim	Validity		Claim
066 Chicosantos	215669	Exploitation	2002-03-05	2052-03-04	24.4870
067 Santa Fe	216458	Exploitation	2002-05-17	2052-05-16	10.5408
068 Santo Tomas	217327	Exploitation	2002-07-02	2052-07-01	4.9781
069 La Azteca II	211768	Exploitation	2000-07-28	2050-07-27	9.3218
070 La Fe 2	218080	Exploitation	2002-10-03	2052-10-02	68.0829
071 Largo V	219199	Exploitation	2003-02-18	2053-02-17	10.8878
072 Emma	220995	Exploitation	2003-11-11	2053-11-10	11.1661
073 Angustias II	222293	Exploitation	2004-06-22	2054-06-21	14.7323
074 Libra	223407	Exploitation	2004-12-10	2054-12-09	11.9969
075 El Descuido	223408	Exploitation	2004-12-10	2054-12-09	4.9761
076 Angustias I	223409	Exploitation	2004-12-10	2054-12-09	7.4914
077 Largo VI Fracción IX	224327	Exploitation	2005-04-22	2055-04-21	1.2270
078 Providencia	227729	Exploitation	2006-08-10	2056-08-09	0.7511
079 La Esperanza 3	238676	Exploitation	2011-10-11	2061-10-10	0.4848
080 La Esperanza 3 Fracc. 1	238677	Exploitation	2011-10-11	2061-10-10	0.0097
081 La Bonanza	178542	Exploitation	1986-08-11	2036-08-10	26.9273
082 La Escondida	179318	Exploitation	1986-12-08	2036-12-07	14.0000
083 San Felipe	190210	Exploitation	1990-12-06	2040-12-05	11.2822
084 San Jorge	196316	Exploitation	1993-07-16	2043-07-15	14.9090
085 El Cristo No. 2	213216	Exploitation	2001-04-06	2051-04-05	11.5746
086 Patrocinio	214120	Exploitation	2001-08-10	2051-08-09	9.0000
087 San Pedro De Hercules	214190	Exploitation	2001-08-10	2051-08-09	18.1049
088 La Chiquita	219104	Exploitation	2003-02-04	2053-02-03	1.1148
089 Largo I	219194	Exploitation	2003-02-18	2053-02-17	3.1148
090 Leo	220455	Exploitation	2003-07-29	2053-07-28	52.3500
091 Ana	220992	Exploitation	2003-11-11	2053-11-10	2.3929
092 San Lazaro 2	235676	Exploitation	2010-02-12	2060-02-11	3.7536
				Total	774.5921 ha

Three mineral claims acquired in September 2009 from Minera Largo S de RL de CV, a wholly owned subsidiary of Golden Minerals Company ("Golden Minerals"), are subject to future cash payments of a NSR of 1.5% on the first one million tonnes of production and cash payments equivalent to a 3.0% NSR on production in excess of one million tonnes from the acquired claims. The NSR on production over one million tonnes also escalates by 0.5% for each $0.50 increment in copper price above $3.00 per pound of copper.

In 2014, Capstone acquired 45 additional concessions from Golden Minerals totalling 775 ha that surround the Cozamin Mine's existing concessions. A total of 17 of the claims are subject to a finder's fee to be paid as a 1.0% NSR or Gross Proceeds Royalty to International Mineral Development and Exploration Inc. pursuant to existing agreements on the concessions dating back to October 1994 and August 2000.

In 2017, Capstone purchased three concessions on the south side of the property and also entered a mineral-rights sharing agreement with Endeavour Silver Corp. for concessions that abut on the southern boundary of the Cozamin mine property. The mineral-rights sharing agreement provides Capstone with exploration and exploitation rights on seven Endeavour concessions below 2,000 masl, a depth where copper-rich mineralization has been historically found and mined by Capstone, and provides Endeavour with exploration and exploitation rights on 10 Capstone concessions above 2,000 masl.

4.2 Surface Rights

Capstone has acquired surface rights to the lands required for mining operations and exploration activities (Figure 4-2 and Figure 4-4).

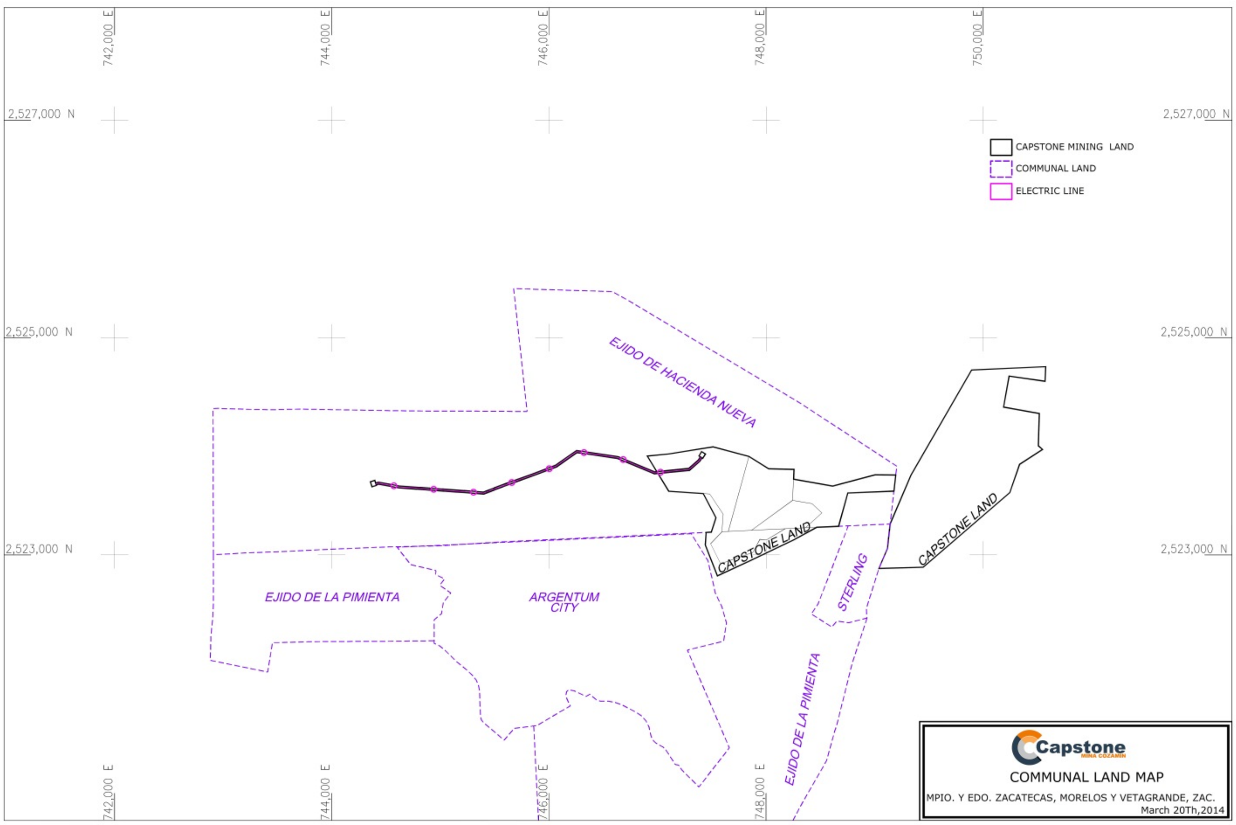


Figure 4-2: Cozamin Surface Rights and Surrounding Ejido Boundaries

4.3 Environmental liabilities

As of the effective date of this report, environmental liabilities and issues of environmental concern are limited to those that are expected to be associated with an underground base metal mining operation with mineral processing by flotation. Facilities include an underground mine and associated infrastructure, access roads, and surface infrastructure, including the process plant and waste and tailings disposal facilities situated within an area of extensive disturbance due to historic mining and processing activities. The mine environmental setting, environmental considerations and current environmental liabilities are discussed in Section 18 and Section 20.

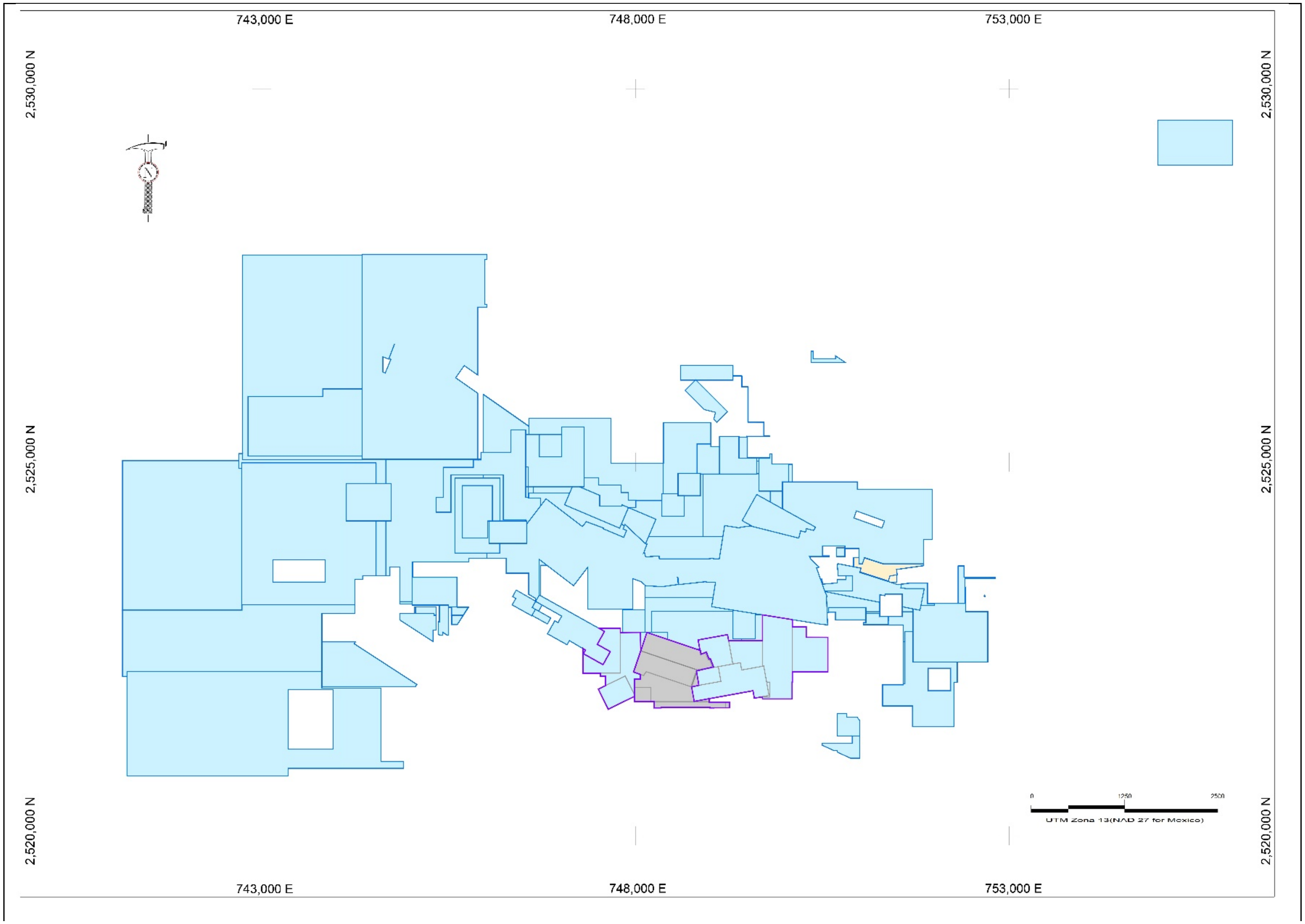


Figure 4-3: Cozamin Mining Concessions Map; Capstone Gold and Mining OpCo (blue), Endeavour agreement claims (purple outline with Endeavour concessions in grey), withdrawn concession in processing (yellow)

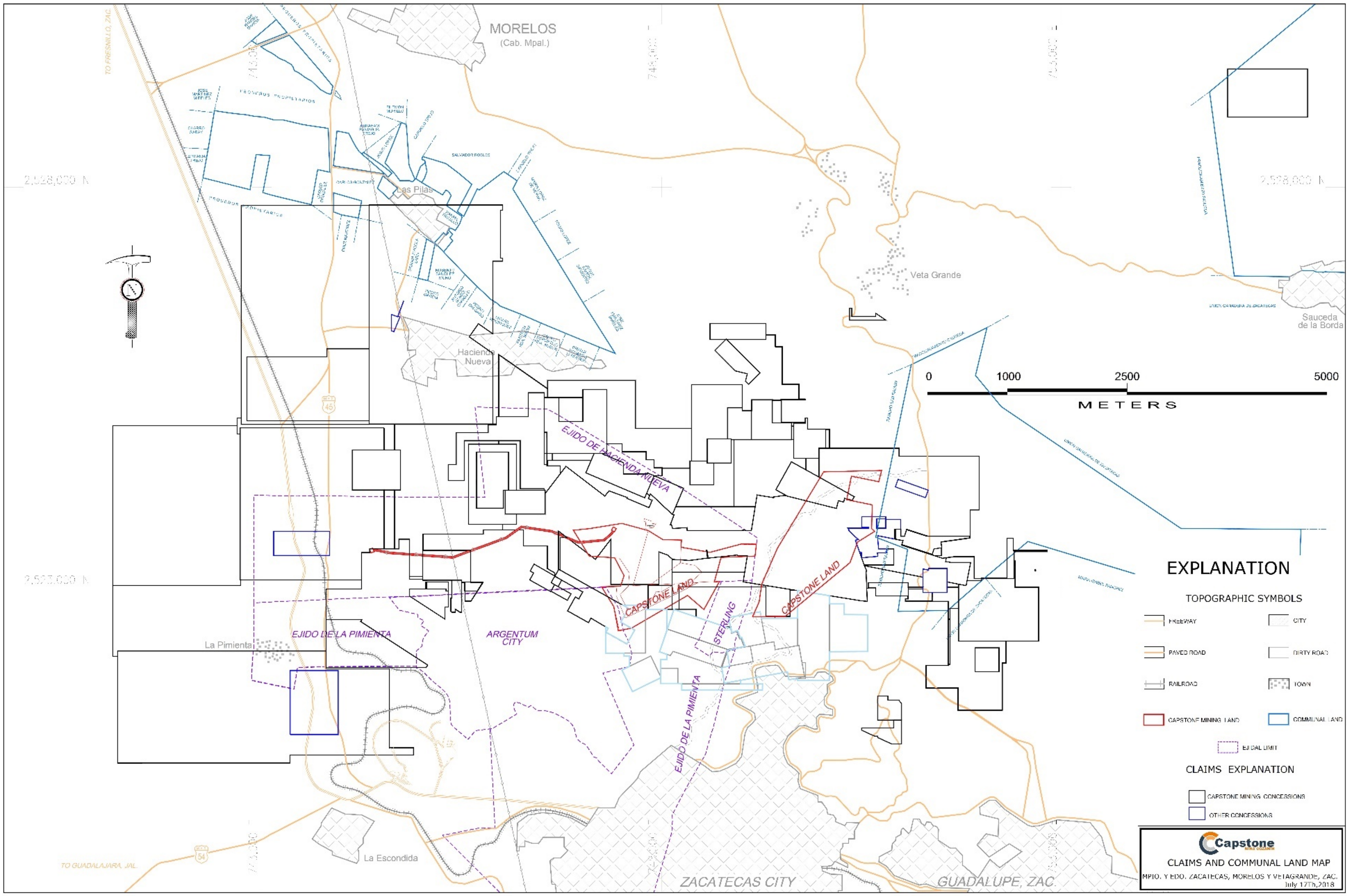


Figure 4-4: Cozamin Mining Concessions Including, Surface Rights, Ejido Land, Roads and Infrastructure, and City Limits

4.4 Obligations to Retain the Property

Several obligations must be met to maintain a mining concession in good standing, including the following:

- Carrying out the exploitation of minerals expressly subject to the applicability of the mining law;
- Performance and filing of evidence of assessment work; and
- Payment of mining duties (taxes).

The regulations establish minimum amounts that must be invested in the concessions. Minimum expenditures may be satisfied through sales of minerals from the mine for an equivalent amount. A report must be filed each year that details the work undertaken during the previous calendar year.

Mining duties must be paid in advance in January and July of each year, and are determined on the annual basis under the Mexican Federal Rights Law. Duties are based on the surface area of the concession, and the number of years that have lapsed since the mining concession was issued. In July 2017 and January 2018, the taxes respectively totaled US$33,781 and US$35,043.

All necessary permits to conduct mining work on the property have been obtained. There are no known factors or risks that affect access, title, or the ability to conduct mining. Specific exploration activities are authorized until 2019, with new authorizations pending at the time of this report.

4.5 Legal Title

Capstone obtained a legal opinion on the mining concession titles from Rafael Cereceres Ronquillo, Abogado, with a business address of C. Centro Ejecutivo 5500 5°Piso Fracc. Desarrollo el Saucito C.P., 31125, Chihuahua, Chihuahua, dated October 27, 2017, which confirmed the mining concessions are registered in the *Public Registry of Mining* naming Capstone Gold, S.A. de C.V and Mining Opco, S.A. de C.V. as titleholders, the mining concessions are valid and should remain in effect provided the titleholders continue to comply with the required obligations.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Cozamin Mine is located in the Sierra Madre Occidental physiographic province near the boundary with the Mesa Central province (Mexican Plateau). The Zacatecas area is characterized by rounded NW trending mountains with the Sierra Veta Grande to the north and the Sierra de Zacatecas to the south. Elevations on the property vary from 2,400 masl to 2,600 masl.

The Zacatecas area is located between forested and sub-tropical regions to the southwest, and desert conditions to the northeast. The climate in the region is semi-arid. Vegetation consists of natural grasses, mesquite or huizache and crasicaule bushes. Standing bodies of water are dammed as most streams are intermittent.

Maximum temperatures reach approximately 30°C during the summer season and minimum temperatures in the winter season produce freezing conditions and occasional snow. The rainy season extends from June until September, with average annual precipitation totaling approximately 500 mm.

The Cozamin Mine is located 3.5 km to the north-northeast of the city of Zacatecas, the Zacatecas state capital, and operates year-round. The municipality of Zacatecas has a population of approximately 138,000 people. Other communities in the immediate vicinity of the mine include the following: Hacienda Nueva (3 km west), Morelos (5 km northwest) and Veta Grande (5 km north). The mine area falls within the Hacienda Nueva and La Pimienta Ejidos. Staff and operators are sourced from Zacatecas and other nearby communities. There is minimal presence of foreign staff at the mine.

Cozamin is accessible via paved roads to the mine area boundary. All-weather roads in good condition continue thereafter to provide access to the mine and most of the surrounding area. Excellent surrounding infrastructure includes schools, hospitals, railroads and electrical power.

The Cozamin Mine is connected to the national power grid with current approval to draw 7.5 MW. Generators, both operating and back-up, on site have a capacity of 1.0 MW. There are no plans to increase the current electrical infrastructure. Some minor improvements will be made in the future to maintain reliability. Figure **5**-1 depicts the mine site layout and building infrastructure.

The dam at the Cozamin Tailings Storage Facility ("TSF") is located on the south side of the property. The current Stage 7 lift, completed in February 2018, added approximately 900,000 cubic metres of storage volume, which will provide sufficient storage for 1.5 additional years of mining. The TSF lift Stages 8 to 18 are projected to provide storage for the remainder of the life of the mine production.

The mine sources its process mill and mine water supply from seasonal rainfall, permitted wells, groundwater inflow from abandoned mines and a local municipal water treatment plant. The existing baseline information suggests current water sources and water conservation/management strategy will provide sufficient water for the current life of mine plan.

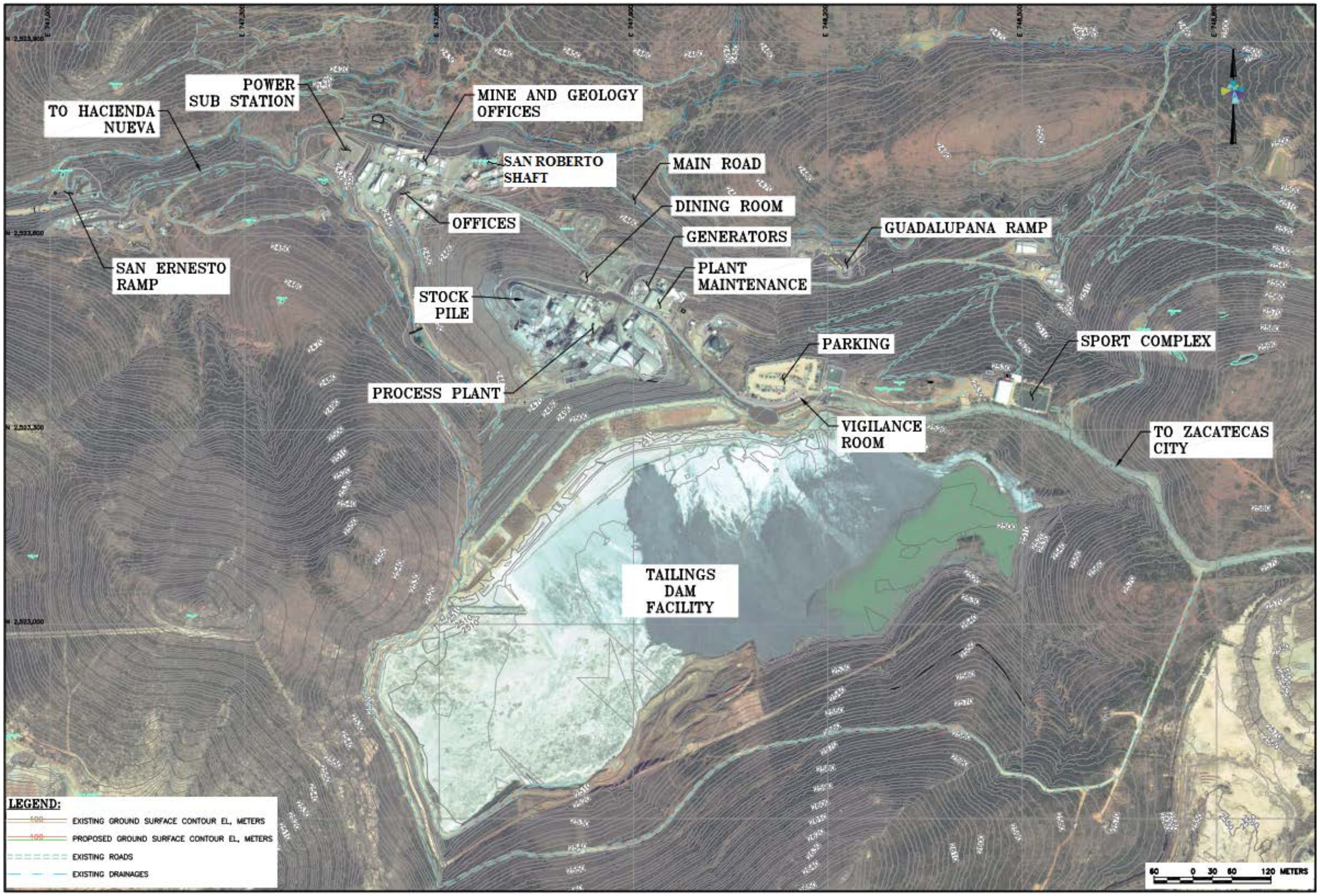


Figure 5-**1**: Surface Layout of the Cozamin Mine Facilities (Wood, 2018a).

6 History

In pre-Hispanic times, the area was inhabited by the Huichol people, who mined native silver from the oxidized zone of argentiferous vein deposits in the Zacatecas Mining District. In 1546, Juan de Tolosa, guided by a local Huichol person, arrived in Zacatecas (then Lomas de Bracho) to examine argentiferous occurrences. In 1548, production commenced at three mines: the Albarrada mine on the Veta Grande system, and the San Bernabe mine and Los Tajos del Panuco on the MNV system. The initial operations worked only the oxides for silver and some gold, and later the sulphide zones were worked for base and precious metals.

During the Mexican Revolution (1910-1917), mining was essentially halted by numerous flooding and cave-ins, limiting access for some time after that. Foreign companies worked mines in the district for base metals from 1936 to 1948, but the lack of electric power, labour problems and low metal prices resulted in closure of unprofitable mines. From 1972, Consejo de Recursos Minerales worked mines in the El Bote, La Purisima and La Valencia zones.

A number of old workings are located throughout the mine area, but accurate records of early production are not available. Historic production from the Zacatecas district is estimated by Consejo de Recursos Minerales (Cardenas et al 1992) to be 750 million ounces of silver from 20 million tonnes grading over 900 g/t silver and approximately 2.5 g/t gold. Lead, zinc and copper have also been recovered but neither metal production nor ore grades were estimated.

Minera Cozamin was established in 1982 by Jack Zaniewicki, who consolidated concession holdings over much of the MNV and operated the San Roberto Mine and plant at 250 tpd until October 1996. During this period, Industrias Peñoles S.A. de C.V. ("Peñoles") undertook exploration in the district but did not purchase any significant concessions. In all, it is estimated that 1.2 million tonnes of ore were mined and processed at Cozamin prior to October 1996.

In October 1996, Zaniewicki sold the Cozamin Mine for US$6.8 million to Minera Argenta, a subsidiary of Minas Bacis S.A. de C.V. ("Bacis"). In 1997, Bacis expanded the mill to a 750 tpd flotation plant, and processed 250,000 tonnes of ore grading approximately 1.2% copper, 90 g/t silver, 0.5 g/t gold, 1.8% zinc and 0.6% lead from 1997 to the end of 1999, mainly from shallow, oxide zone workings. Bacis developed resources principally by drifting along and then raising up on the MNV within the San Roberto (Cozamin) mine.

Diamond drilling was only used as an exploration tool to identify areas with mineralization peripheral to the developed mine workings (Table 6-1). These results influenced the location of Capstone's 2004 drillhole locations. The sample collection, preparation and analysis procedures followed for these drillholes are unknown and Capstone has not used any data from these holes in the March 2018 mineral resources estimate.

Table 6-1: Historical Drillholes completed by Bacis and Peñoles

Hole-ID	Length (m)	Vein Intersection (m)	Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)
Bacis Drillholes							
CZM-#1	229.50	4.2	-	-	-	0.26	-
CZM-#2	389.45	3.1	2.90	1.13	4.48	0.20	53
CZM-#3	331.37	5.4	2.47	0.53	2.32	0.25	123
CZM-#4	210.45	NA	0.48	0.17	9.56	0.10	21
CZM-#6	200.00	8.02	3.32	1.36	2.57	NA	NA
CZM-#8	359.65	NA	1.34	0.03	0.67	NA	27.6
Peñoles Drillholes							
SR-1	231.6	1.1	2.54	0.16	0.02	0.17	20
SR-2	330.84	14.2	1.40	NA	1.29	0.40	118
SR-3	257.12	14.75	1.49	0.22	0.39	0.40	109
SR-4	251.16	3.5	0.48	0.17	9.56	0.01	21
SR-5	420.20	NA	3.37	0.08	0.25	0.40	103

Table Notes:

1. NA = Not available

Near the end of 1998, Bacis closed the Cozamin Mine due to low metal prices and under-capitalization of the asset. Poor grade control in the mine and poor recovery in the plant were also contributing factors to the closure. Diamond drillholes completed by Peñoles and Bacis suggested that the average grade of copper in the mine might increase with depth, but these were not followed up by further exploration.

In a press release dated October 27, 2003, Capstone Gold Corp. (“Capstone Gold”) announced it had entered into a Letter of Intent with Bacis to option five advanced exploration projects in Mexico, including Cozamin (Capstone Gold, 2003). Historical mineral resources for Cozamin are summarized in Table 6-2. The assumptions, parameters, or methods used to prepare this historical estimate were not disclosed. Capstone does not use or rely on this estimate to any extent or treat this estimate as current. A Qualified Person has not done sufficient work to classify the historical estimate as current mineral resources. Capstone is not treating the historical estimate as current.

Table 6-2: Cozamin Historical Mineral Resources as Reported by Minas Bacis S.A. de C.V.

Classification	Tonnes (000s)	Ag (g/t)	Au (g/t)	Cu (%)	Zn (%)	Pb (%)
Measured + Indicated	2,795	85	0.5	0.95	3.16	0.88
Inferred	3,131	103	0.49	1.41	3.21	0.85

Table Notes:

1. The mineral resources estimate was prepared by Minas Bacis S.A. de C.V.
2. Capstone is not treating the historical estimate as current and it must not be relied upon.

7 Geological Setting and Mineralization

7.1 Geological Setting

The Zacatecas Mining District covers a belt of epithermal and mesothermal vein deposits that contain silver, gold and base metals (copper, lead and zinc). The district is in the Southern Sierra Madre Occidental Physiographic Province near the boundary with the Mesa Central Physiographic Province in north-central Mexico. The dominant structural features that localize mineralization are of Tertiary age, and are interpreted to be related to the development of a volcanic centre and to northerly trending basin-and-range structures.

The Zacatecas Mining District occurs in a structurally complex setting, associated with siliceous subvolcanic and volcanic rocks underlain by sedimentary and meta-sedimentary rocks. The geologic units of the Zacatecas area include Triassic metamorphic rocks of the Zacatecas Formation and overlying basic volcanic rocks of the Upper Jurassic or Lower Cretaceous Chilitos Formation. The Tertiary rocks consists mainly of a red conglomerate unit deposited in Paleocene and/or Eocene times and overlying rhyolitic tuff and intercalated flows that were deposited from Eocene to Oligocene times. Some Tertiary rhyolite bodies cut the Mesozoic and Tertiary units and have the appearance of flow domes.

7.1.1 Zacatecas Formation

The Zacatecas Formation represents the oldest rocks in the district and appears to be equivalent to the Pimienta Metasediments of Ponce and Clark (1988). It is an Upper Triassic marine unit, comprising pelitic sediments and carbonate rock that have been metamorphosed to sericite schists, phyllites, slates, quartzites, metasandstone, flint, metaconglomerate and recrystallized limestone. The unit hosts the El Bote and Pimienta vein systems to the west of the city of Zacatecas.

7.1.2 Chilitos Formation

The Upper Jurassic to Lower Cretaceous Chilitos Formation is composed of andesitic to basaltic volcanic rocks with pillow structures and some limestone lenses. The units are referred to as greenstone of the Zacatecas area and as the Zacatecas microdiorite by Ponce and Clark (1988).

7.1.3 Zacatecas Red Conglomerate

The red conglomerate contains fragments of Chilitos and Zacatecas Formation rocks and is probably of Early Tertiary (Paleocene-Eocene) age. The unit is deposited south of the La Cantera fault in the structural zone situated in the city of Zacatecas.

7.1.4 Tertiary Volcanic and Volcaniclastic Rocks

Tertiary volcanic rocks are generally associated with and deposited south of the Zacatecas caldera. They are described by Consejo de Recursos Minerales (Cardenas et al 1992) as rhyolitic tuffs with flow intercalations of rhyolite composition that were extruded during the Oligocene to Eocene. The rhyolitic rocks are reported to have moderate to high silica content and high potassium content.

A very small group of epiclastic deposits occur in a road cut near the Bufa flow dome and small areas of chemical sediments are present in the western flank of the Zacatecas caldera (Ponce and Clark, 1988).

7.1.5 Rhyolitic Subvolcanic Bodies

Ponce and Clark (1988) suggest that subvolcanic intrusive phases include silicic subvolcanic bodies, lava-flow domes, intrusive tuffs, ignimbrite bodies, pipes and autoclastic breccias. The rhyolitic subvolcanic bodies, generally dikes and subvolcanic bodies, are structurally controlled by radial or concentric faults and fractures of the caldera structure. The subvolcanic rhyolitic bodies are concentrated in the central part of the Zacatecas district in a northwest-southeast trending zone.

Rhyolite flows and dikes are spatially associated with the San Roberto mine. Cerro La Sierpe (500 m north-northwest of the San Roberto shaft), Cerro San Gil (1.5 km west-northwest of the San Roberto shaft) and Cerro El Grillo (750 m south-southwest of the San Roberto shaft) are all rhyolite flow domes that, together, surround the western third of the MNV. To date, economically significant copper mineralization has only been found within this sector of the MNV system. Rhyolite dikes are difficult to distinguish from massive rhyolite flows, however some of the best quartz stockworks at Cozamin occur within massive rhyolite bodies that do not display the fluidal textures and polymictic inclusions common in most of the other rhyolite bodies.

The host rocks for the MNV are intercalated carbonaceous meta-sedimentary rocks and andesitic volcanic rocks ranging in age from Triassic to Cretaceous, and Tertiary rhyolite intrusive rocks and flows (Figure 7-1). Mineralization in the MNV appears to have been episodic. A copper-silver dominant phase is interpreted as the first stage of mineralization and is considered to be the most important phase of mineralization at Cozamin. In general, this copper-silver phase was emplaced then enveloped, overprinted, or brecciated by moderate to strong zinc-lead-silver mineralization. Thus, the host lithology to the vein does not appear to have influenced the strength of the copper-silver phase of mineralization which is typically enveloped by younger vein material. Local rheology contrasts between rock units may have some control on vein emplacement, as well as metal content. For example, the MNFWZ is intimately associated with several rhyolitic dikes where mineralized veins often crosscut or follow dike contacts with the country rock.

The close association of the western third of the MNV and the entire MNFWZ with rhyolite flow domes and the strength of contained copper mineralization in this sector of the vein support the hypothesis that the copper mineralization in the San Roberto mine at Cozamin is relatively close to volcanic to sub-volcanic magmatic centre(s). Figure 7-2 shows the spatial association of the San Roberto mine with the significant complex of rhyolite flow domes mapped in the area.

Alternatively, other rheology contrasts may localize faulting along the contact of the phyllites with the more competent andesites and lutites. One kilometre to the south of the MNV, mineralization in the Parroquia mine is hosted by gneissic rocks that are mapped by the Consejo de Recursos Minerales as Upper Jurassic, Zacatecas Formation.

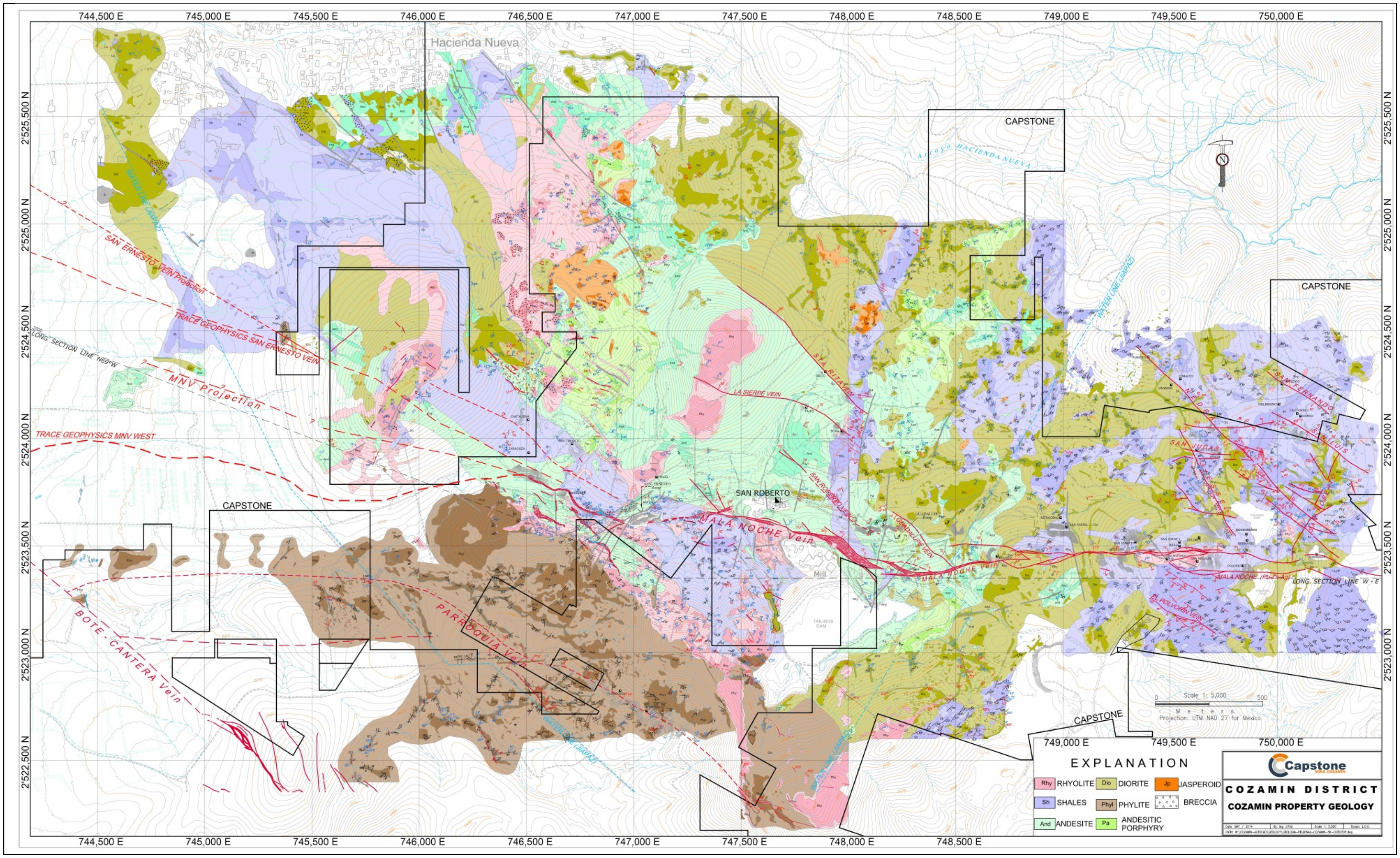


Figure 7-1: Mapped Geology of the Cozamin Property

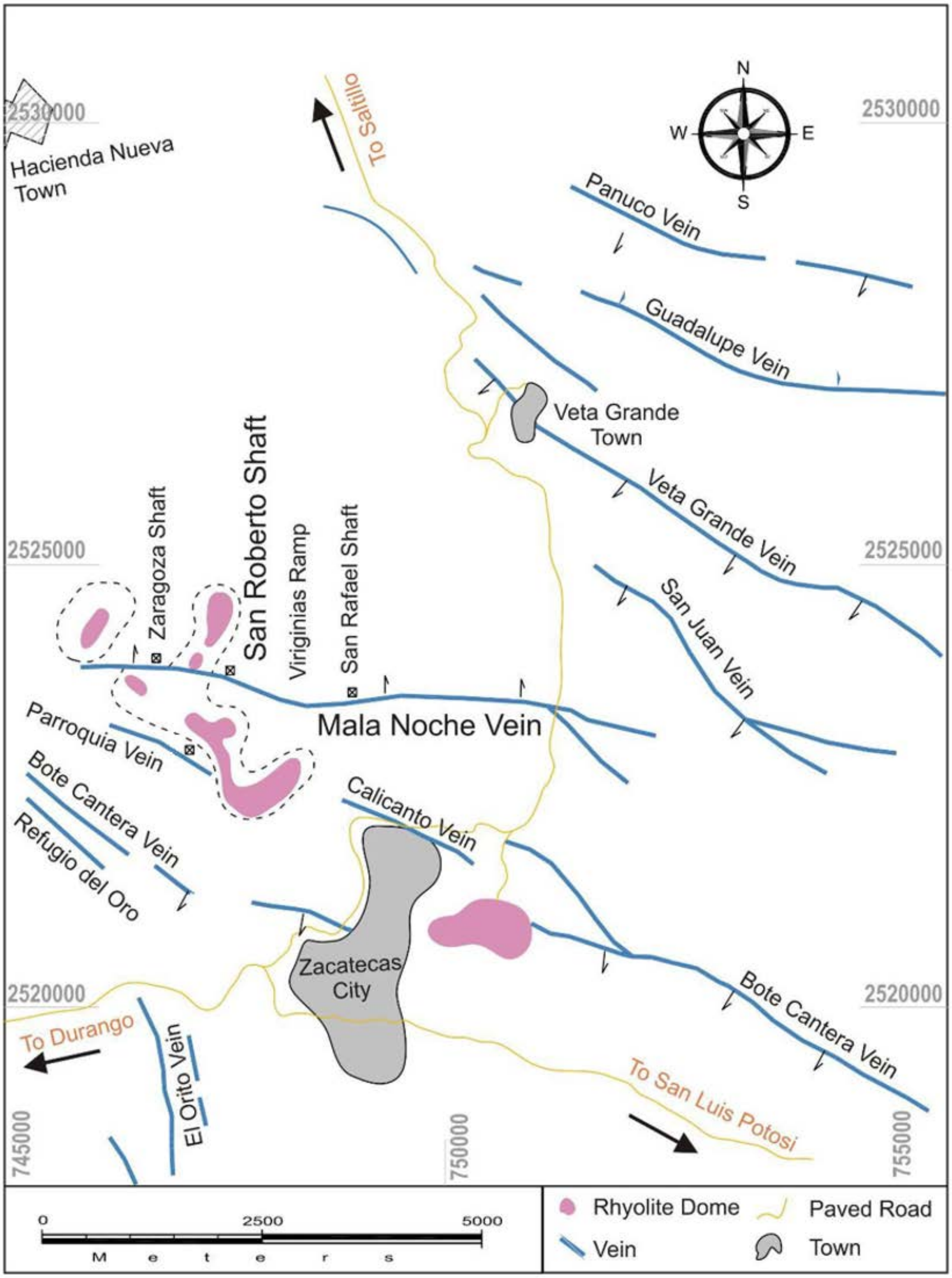


Figure 7-2: Plan Showing the Distribution of Mineralized Veins near Zacatecas

7.2 Faulting

Rock textures suggest the MNV is infilling open spaces controlled by brittle faulting along the Mala Noche Fault System. This system of faults is named for the principal fault associated with mineralization at Cozamin but other subsets of faults also host mineralization, including El Abra, Rosita, San Ernesto and the MNFWZ.

In the San Roberto Mine, the MNV strikes WNW (N70-80W) and the dip varies from 38° to 90° to the north. There is a clear association of higher copper grades with steeper dips of the Mala Noche fault. Where the MNV is weakly copper mineralized, it appears that the principal style of alteration in the fault is mostly quartz-pyrite.

The El Abra fault is closely associated with the Mala Noche fault with which it forms an anastomosing set in both strike and dip directions. Grades in the San Roberto mine are strongest where the two faults coalesce. The dominant alteration associated with the El Abra fault is silica-calcite-pyrite. On Level 8 immediately east of the shaft, the drift roof had to be stabilized where the El Abra fault meets the Mala Noche fault/vein.

The MNFWZ is located in a fault-splay off the Mala Noche Fault System, striking approximately 30° oblique to the MNV at ~145° with an average dip of 54°. Mineralized veins and rhyolite dikes both exploit and closely follow the structure.

The Rosita fault is also sub-parallel to the Mala Noche but mostly lies in the hangingwall. The principal alteration associated with the Rosita fault is coarse crystalline calcite suggesting that this fault is possibly post mineralization and quite open.

The San Ernesto fault is best known in the San Ernesto shaft which was sunk 60 m on the fault in the hangingwall to the Mala Noche at the west end of the San Roberto Mine. The fault strikes WNW and dips at about 60° to the NNE. Mineralization encountered in the fault to date has been zinc and lead dominant. This fault and associated mineralization may be related to lenses of hangingwall zinc found in the western sector of the San Roberto mine.

The Margarita Fault is located about 100 m west of the shaft on Level 8. The fault strikes NNE and dips at 70° to the WSW. Movement on the fault appears to be minimal as indicated by the mapping to date. Minor argillic alteration is associated with the fault.

The Josefina fault is found on Level 8 about 50 m west of the shaft. The fault strikes SE and dips at about 55° degrees to the NE. Movement on the fault appears to be dextral with a displacement of about 5 m. Minor argillic alteration is found in the fault zone.

The Lorena fault is located about 25 m west of the shaft on Level 8. This fault strikes NE and dips at about 70° to the SE. Post mineralization movement on the Lorena fault appears to be less than 2 m and only weak argillic alteration is found within the fault. The intersection of the Lorena and Josefina faults on Level 8 resulted in poor roof stability in the area of a prior electrical substation 35 m west of the shaft.

On Level 8, the Anabel Fault is found 155 m east of the shaft. The fault strikes NNE and dips E at about 60°. Movement on the fault appears to be dextral strike slip with possibly some normal dip slip displacement. The projection of the MNV is offset about 10 m horizontally along this fault. However, there has been significant drag on the west side of the fault resulting in minimal displacement of the vein across the fault plane. Mineralization west of this fault is strongly diminished. Alteration in the Anabel fault is principally silicification.

The Lupita fault is located 255 m E of the shaft on Level 8. The fault strikes NE and dips at about 65° to the SE. Displacement on the fault appears to be minimal and only minor silicification is associated with the fault.

The Karla fault is located 465 m east of the shaft on Level 8. This fault has been mapped only on Level 8. Its strike is NE and the fault dips 65 SE. Apparent horizontal offset on the fault is about 3 m as a result of normal dip slip or possible dextral strike slip displacement. There is no significant drag or alteration associated with this fault. The principal cross faults in the San Roberto mine area displayed on Level 8 and are presented in Figure 7-3.

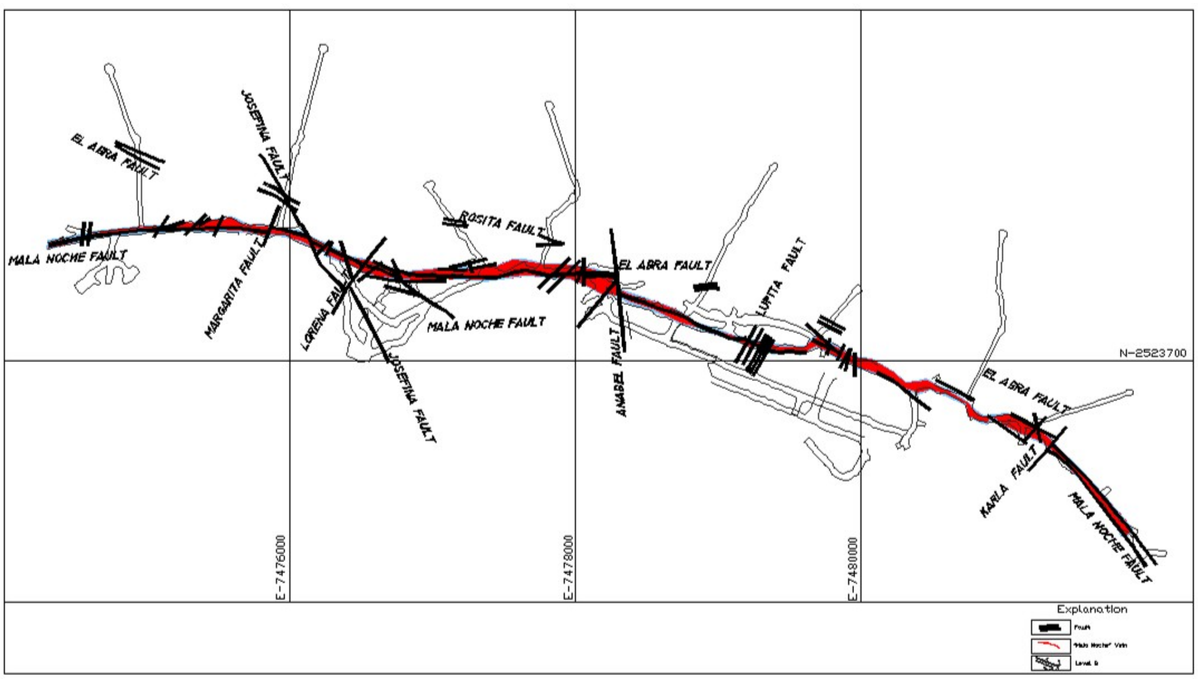


Figure 7-3: Cross Faults, Level 8 Cozamin Mine

7.3 Mineralization

The dominant mineralized vein on the Cozamin Mine is the MNV. This vein has been traced for 5.5 km on surface on the property. It strikes approximately east-west and dips on average at 60° to the North. There are several shafts that provide access to the historical workings at Cozamin. The largest mined area is the San Roberto mine which has a strike length of 1.4 km. Mineralization peripheral to these workings was the principal target of Capstone's exploration at Cozamin. The MNFWZ is not exposed at surface, however based on underground drilling it strikes ~145° over a length of more than 2.0 km and dips on average 54° to the northeast. The MNFWZ comprises multiple veins in close spatial association with rhyolite dikes and locally cross-cut the intrusions themselves. The relative age of the copper mineralization ranges from contemporaneous with to perhaps slightly post the rhyolite magmatism.

The MNV system occupies a system of anastomosing faults. The mineralized bodies within the Mala Noche Fault System appear to be strongest where the individual faults coalesce into a single fault zone. Results from the exploration and mine development to date indicate that some of the strongest mineralization in the San Roberto mine plunges to the west at approximately -50° within the vein. Post mineralization offsets of the MNV are minimal and occur along high angle, normal faults that strike northeast.

Moderate propylitic wall rock alteration is generally limited to 3 m into the hangingwall and footwall. The main gangue minerals in the MNV are quartz and calcite, and in some cases rhodochrosite, gypsum, or barite. The quartz occurs as coarse-grained druse crystalline masses, and a stockwork of quartz veinlets. Mineralization in the MNV at the Cozamin Mine appears to have been episodic. Intermediate sulphidation pyrite-pyrrhotite-chalcopyrite dominant mineralization is enveloped, overprinted, or brecciated by younger sphalerite dominant intermediate sulphidation epithermal alteration and mineralization in a telescoped, intrusive related hydrothermal system. Well-banded, quartz, or quartz-carbonate veins, best classified as low sulphidation are also observed. These veins have open space filling textures with quartz druse vug linings. The MNV in the San Roberto mine workings shows contained sulphides to occur as disseminations, bands and masses. Conclusions about mineralization styles are based on observations in drill core and the exposure of the copper-silver phase of mineralization in mine workings, however a large portion of the upper parts of the mine are not accessible.

Pyrite is the dominant vein sulphide and typically comprises approximately 15% of the MNV in the San Roberto mine. It occurs as fine disseminations and veinlets, coarse crystalline replacements, and pseudomorphs of epithermal textured carbonate minerals and possible barite. Arsenopyrite typically occurs as minor, microscopic inclusions in pyrite.

Pyrrhotite is the second most common sulphide mineral but is present only in the intermediate and deeper levels of the San Roberto mine. It occurs as replacement masses, pseudomorphs of platy masses and acicular replacements probably after amphibole. Pyrrhotite commonly occurs as an envelope to, or intermixed with, strong chalcopyrite mineralization. Pyrrhotite ranges from monoclinic to hexagonal, or a combination of these polytypes.

Chalcopyrite is the only copper sulphide recognized visually at the Cozamin Mine. Like pyrrhotite, it is more common at the intermediate and deeper levels of the mine. It occurs as disseminations, veinlets and replacement masses. These masses appear to be fractured and brecciated at intermediate levels in the mine. Mineralization at the MNFWZ is chalcopyrite dominant in contrast to the polymetallic nature of the main MNV.

Sphalerite is the dominant economic sulphide in the upper levels in the San Roberto mine. Most of the sphalerite is marmatitic. It occurs as disseminations and coarse crystalline masses and is commonly marginal to the chalcopyrite-dominant portion of the vein.

Galena is less common than sphalerite but is generally associated with it. Where it is abundant, it occurs as coarse crystalline replacement masses. Both coarse and fine crystalline masses of galena are argentiferous. Argentite is the most common silver mineral. It has been identified microscopically occurring as inclusions in chalcopyrite and pyrite. Assays indicate that silver is also probably present in sphalerite and galena. Bismuth and silver selenides occur as inclusions predominantly in chalcopyrite and pyrite.

8 Deposit Types

All mineralization at the Cozamin Mine occurs in veins, and stockworks of veinlets. Currently mined mineralization at Cozamin is best described as intermediate sulphidation. The copper-rich intermediate sulphidation mineralization is an early phase that is enveloped, overprinted, or brecciated by zinc-rich intermediate sulphidation mineralization. The copper veins are inferred to be higher temperature, have significantly fewer vugs, and can be massive pyrrhotite-pyrite-chalcopyrite with little gangue. Zinc-rich veins also tend to be sulphide rich, like the copper-rich ones, but with slightly more gangue. Well-banded, quartz, or quartz-carbonate veins are inferred to be lower temperature and best classified as low sulphidation. They often have open space filling textures with quartz druse vug linings and typically gold and silver rich with lesser base metals and are generally not being mined, but were historically important.

This transition from intermediate sulphidation copper-dominant mineralization to intermediate sulphidation zinc-dominant mineralization is thought to be the result of an evolving, telescoped hydrothermal system. Blocks or fragments of massive chalcopyrite-pyrite-pyrrhotite mineralization enveloped by zinc-dominant mineralization are observed in drill core and in mine workings. This telescoping system is closely associated with the district's largest center of rhyolite flow domes which may be the shallow expression of a hidden, inferred buried felsic stock.

9 Exploration

9.1 Geological Mapping

Cozamin exploration geologists have systematically mapped a total of 1,694 Ha throughout the Cozamin property at scales of 1:1,000 or 1:2,000 since 2004. Mapped Cozamin geology is illustrated in Section 7.1 (Figure 7-1).

9.2 Surface Channel Samples and Chip Specimens

Regular exploration along the strike of the MNV system has occurred through channel sampling. Channel samples total approximately 2 kg in mass and have approximate dimensions of 50-150 cm in length, 5 cm in width and 3 cm in depth. Capstone considers these surface channel samples to be fully representative of the vein material.

The surface chips, by definition, are specimens not samples, and thus are not representative of the material from which they have been extracted. The goal of the surface chip sampling is to quickly ascertain the presence or absence of anomalous geochemical values, which would support the decision to conduct additional exploration. Capstone has collected chip specimens from outcrops on a 25 m by 25 m grid from several areas on the property (Table 9-1). Chipped material is collected on a blanket and split into smaller pieces. The specimen is then split into four parts, with approximately 2 kg placed into the sample bag as the specimen for analysis. The remaining material is left at the sample site.

All surface channel sample and chip specimen locations were obtained using GPS and are stored in Capstone's database. All material is photographed and logged for lithology, alteration, and mineralization. Quality control samples including certified reference material, sample blanks, or duplicate samples were not inserted into the sample stream. Preparation and analysis procedures for channel samples and chip specimens follow the same procedures described in Section 11 pertaining to the analysis of drill core samples. Details of Cozamin's surface channel and chip sampling programs since 2004 are summarized in Table 9-1. Cozamin has used the assay results from these programs to assist with exploration drillhole planning, but they are not included in resource estimation.

Table 9-1: Cozamin Surface Channel and Chip Program details

Year	Surface Channel Samples	Surface Chip Specimens
2004	2,250 from 66 sample lines spaced 15 m apart along 1,000 m of the Mala Noche vein system.	None
2005	1,350 from 40 sample lines spaced 20 m apart along 800 m of the Mala Noche vein system.	None
2006	1,200 from 40 sample lines spaced 25 m apart along 1,000 m of the Mala Noche vein system.	None
2007	1,200 from 40 sample lines spaced 25 m apart along 1,000 m of the Mala Noche vein system.	None
2008	None	300 from outcrops where veinlets, quartz stockwork, and alteration were observed. Specific area was not defined.
2009	No exploration conducted.	
2010	708 from 20 sample lines spaced 50 m apart along 1,000 of the Mala Noche vein system.	1,118 from Rondaneras covering an area of 700 m by 800 m.
2011	135 from 27 sample lines spaced 10 m apart along 300 m of the El Polvorín vein.	276 from El Polvorín, covering an area of 300 m X 400 m.
2012	None	None
2013	185 from 37 sample lines spaced 10 m apart along 400 m of the Parroquia vein. 235 from 15 sample lines spaced 20 m apart along the Manto San Eduardo system.	359 from La Parroquia, covering an area of 500 m X 400 m.

9.3 Geophysical Surveys

9.3.1 Ground Magnetic Survey

In the summer of 2004, Zonge Engineering and Research Organization, conducted a ground magnetics survey over the MNV system including 24 north oriented lines, 25 m station spacing, for a total of 24.3 line-km. The field data was processed to produce only total magnetic field, however this was sufficient to map the linear east-west orientation of the MNV system as well as other intrusive features.

9.3.2 Aeromagnetic Survey

In the summer of 2009, New Sense Geophysics Limited conducted an aeromagnetic survey at Cozamin including a main survey block covering the entire property and an extension block to the northeast. The main block was flown at 50 m line separation with the magnetic sensor draped at 30 m above the terrain at an azimuth of N30°E. This orientation allowed the survey to cross the east-west vein trends as well as the northerly trending basin and range faults. Physical obstructions such as power and telephone lines and small villages required the terrain clearance to be increased locally. Control lines were flown east-west at 1 km spacing. The extension block was flown with the same parameters as the main block but with 600 m line spacing; the extension block was added to the survey to determine the extent of a broad northwest trending magnetic high identified while flying the main block. A total of 1,733 line-km were flown in the main block and 90 line-km in the extension block. New Sense delivered the final leveled magnetic data, while EGC Inc. was responsible for project quality control, development of the processed grids and images (total magnetic field only), and interpretation.

In 2013, the 2009 aeromagnetic survey data was reprocessed in-house to generate first vertical derivative (total field and reduced to pole), analytical signal, magnetic tilt products as well as a 3D inversion using UBC code. The interpretation of the reprocessed data has been useful for tracking infrastructure such as power lines and pipelines, the general structural and vein trends of the MNV system, and in some cases has been used as a secondary tool to help guide exploration drill planning in new target areas.

9.3.3 Resistivity Study and Ground Induced Polarization Surveys

Zonge Engineering and Research Organization was contracted by Capstone in 2004 to undertake a resistivity study through measurement of magnetic response using CSAMT (Controlled Source Audio Magnetotellurics) over 8 line-kilometres and NSAMT (Natural Source Audio Magnetotellurics) (Zonge, 2004) over 16 line-kilometres. The survey indicated the presence of sulphide mineralization at depth along the MNV structure below known mineralized extents. These were used to assist with exploration drillhole planning.

From October 2009 until January 2010, Zonge conducted a dipole-dipole complex resistivity induced polarization (CRIP) survey on 13 lines and 391 stations covering a total of 58.7 line-km (Zonge, 2010). In comparison to conventional IP data, CRIP penetrates deeper into the ground, is able to better discriminate between certain minerals (e.g., sulphide bearing versus barren rock), and provides a higher quality dataset with contaminated data and the effects of coupling removed. Zonge noted the quality of the data to be good despite the proximity of the study to the city of Zacatecas and radiofrequency interference sources (power lines, metal pipelines, metal fences and buildings, etc.). The results from the study however, proved inconclusive with respect to identifying further exploration targets.

In 2010, a pole-dipole time domain induced polarization (TDIP-resistivity) geophysical survey was carried out at Cozamin on 39 lines covering a total of 70.3 line-km by in-house staff. The survey was conducted using rental equipment including a TSQ-3 Scintrex transmitter and IPR-12 Scintrex receiver. Interpex and

Geosoft software were used to process and evaluate the field data which was then displayed in AutoCAD. The program focused on four specific areas including MNV West, Hacienda Nueva South, MNV North and MNV East. Identified resultant chargeability (± coincident resistivity and/or magnetics) anomalies were tested by diamond drilling spanning from 2010 to 2012 in a total of 4 surface drillholes (CG-10-153, CG-11-S156, GC-11-S162, CG-11-S183). These exploration holes returned overwhelmingly negative results intercepting predominantly pyrite-bearing, black shale units. These highly pyritic and graphitic rocks are thought to be the source of the anomalies.

10 Drilling

Exploration drill planning by Capstone on the Cozamin project commenced in 2003 along with engineering examinations by Capstone. Two rock chip samples were collected from the Virginias mine decline and 24 splits of half core from mineralized intervals in diamond drillholes previously drilled by Bacis. These samples were submitted to Acme in Vancouver for copper, lead, zinc, gold, and silver assays and multi-element analysis by ICP (inductively coupled plasma). The assay results confirmed Bacis' records and the Phase I drilling program commenced in March 2004 under the supervision of Capstone. Preliminary underground sampling was not completed because most of the mineralized underground workings were flooded.

Drilling has been carried out by Capstone almost continuously since March 2004 on the MNV system (San Roberto and San Rafael mines) and related splays such as the MNFWZ. In all, 834 surface and underground exploration drillholes have been completed. Drillholes are located by Capstone staff using total station TRIMBLE model S6 or LEICA instruments. Downhole survey readings were recorded using Eastman Single Shot, FLEXIT SensIT, or Reflex EZ-Shot instruments (Table 10-1).

The Cozamin Mine has been actively producing from the San Roberto and San Rafael zones from 2006 onward and from the MNFW zone since 2010. Additionally, as previously stated, drilling has been carried out almost continuously since March 2004 on the MNV system (San Roberto and San Rafael zones) and the MNFWZ. For the most part, drilling has been directed toward resource definition, delineation and increasing confidence for classification. It is significant but not unexpected that the success rate for the drilling campaigns is high given that the location of the veins is known and they tend to be continuous.

10.1 Drilling Programs

Capstone's surface and underground drilling programs from 2004 to March 2018 are summarised in Table 10-1. Longitudinal sections of drilling pierce points from surface and underground drilling for the MNV and MNFWZ from all exploration drilling as of March 2018 are presented in Figure 10-1, Figure 10-2, and Figure 10-3. Historical diamond drillhole recovery has generally been very good. Recovery from 2017 to March 2018 averages 98%. No obvious drilling, sampling, or recovery factors materially affect the reliability of the samples.

Table 10-1: Capstone Drilling Program Details from 2004 to March 2018

Phase	Date	Hole ID	Total (m)	Core Size	Target	Total Program Budget ($US Millions)
I	Apr 2004 to Aug 2004	Surface: CG-04-01 to CG-04-20	7,849	NQ	MNV	1.0
II	Sep 2004 to Mar 2005	Surface: CG-04-21 to CG-04-37	10,119	NQ	MNV at 1,900-2,050 masl	2.5
III	Mar 2005 to Mar 2006	Underground: CG-U01 to CG-U114	17,750	NQ	MNV	4.5
IV/V	Sep 2006 to Jul 2007	Surface: CG-06-38 to CG-06-39, CG-07-40 to CG-07-42	4,825	NQ/HQ /PQ	MNV at 600 to 700 m below surface	6.0
		Underground: CG-06-U115 to CG-06-U124, CG-07-U125 to CG-07-U177	20,061	NQ	MNV infill and extension of previous holes	
VI	Aug 2007 to Oct 2008	Surface: CG-08-43 to CG-08-150	30,391	HQ/NQ	San Rafael and east San Roberto Increase confidence in classification and add resources at depth	5.0
		Underground: CG-07-U178 to CG-08-U217	14,435	NQ		
VII	May 2010 to Dec 2010	Surface: CG-10-S151 to CG-10-S158	4,467	HQ/NQ	San Rafael deep exploration and MNV west Avoca Extension and MNFWZ	3.5
		Underground: CG-10-U218 to CG-10-U253	11,752	NQ		
VIII	Jan 2011 to Dec 2011	Surface: CG-11-S159 to CG-11-S180	20,329	HQ/NQ	MNV infill and MNFWZ	7.3

		Underground: CG-11-U254 to CG-11-U294	21,340	NQ	MNFWZ infill and extension	
IX	Jan 2012 to Nov 2012	Surface: CG-12-S181 to CG-12-S185	5,061	HQ/NQ	Exploration targets along main MNV structure	6.5
		Underground: CG-12-U295 to CG-12-U340	26,825	HQ/NQ	MNFWZ	
X	Jan 2013 to Dec 2013	Underground: CG-13-U341 to CG-13-U373	19,836	HQ/NQ	MNV and MNFWZ infill and extension	4.9
XI	Jan 2014 to Dec 2014	Surface: CG-14-S186 to CG-14-S206	10,422	HQ/NQ	Exploration targets along main MNV splays or other sub-parallel targets	3.0
XII	Jan 2015 to Dec 2015	Surface: CG-15-S207 to CG-15-S214	4,117	HQ/NQ	MNV infill and extension	5.7
		Underground: CG-15-U374 to CG-5-U415	17,733	HQ	MNFWZ infill and extension	
XIII	Jan 2016 to Dec 2016	Surface: CG-16-S215 to CG-16-S238 and 240	8,601	HQ/NQ	MNV infill and extension	2.9
		Underground: CG-16-U416 to CG-16-U432 and CG-16-UGIN146 to CG-16-UGIN185	12,659	HQ/BQ	MNV and MNFWZ infill and extension	
XIV	Jan 2017 to Dec 2017	Surface: CG-17-S239 and CG-17-S241 to CG-17-S304	29,937	HQ/NQ	MNV and MNFWZ infill and extension	5.9

		Underground: CG-17-U433 to CG-17-U459 and CG-17-UGIN186 to CG-17-UGIN204	19,072	HQ/BQ	MNFWZ infill and extension	
XV	Jan 2018 to Mar 2018	Surface: CG-18-S305 to CG-18-S313	7,544	HQ	MNV and MNFWZ infill and extension	6.7
		Underground: CG-18-U460 to CG-18-U463	2,668	HQ	MNFWZ infill and extension	

Table 10-2: Drilling History from 2004 to March 2018

Contractor/Company	Phase	Year	Holes Drilled	Metres Drilled	Downhole Survey Instrument
Surface					
Britton Brothers Diamond Drilling, Ltd.	I/II	2004-2005	37	17,967	Eastman Single Shot
Major Drilling Group International Inc.	V	2006-2007	5	4,825	FLEXIT SensIT
Major Drilling Group International Inc.	VI	2008	108	30,391	Reflex EZ-Shot
Landrill International Mexico, S.A. de C.V.	VII	2010	8	4,467	Reflex EZ-Shot
Driftwood Diamond Drilling Mexico S.A. de C.V.	VIII	2011	22	20,329	Reflex EZ Shot
Driftwood Diamond Drilling Mexico S.A. de C.V.	IX	2012	5	5,061	Reflex EZ Shot
Driftwood Diamond Drilling Mexico S.A. de C.V.	XI	2014	21	10,422	Reflex EZ Shot
Patpa Distribuciones S. de R.L. de C.V.	XII	2015	8	4,117	Reflex EZ Shot
Patpa Distribuciones S. de R.L. de C.V.	XIII	2016	24	8,601	Reflex EZ Shot
Patpa Distribuciones S. de R.L. de C.V.	XIV	2017	65	29,937	Reflex EZ Shot
Patpa Distribuciones S. de R.L. de C.V.	XV	2018	9	7,544	Reflex EZ Shot
Underground					
Canrock Drilling Services S.A. de C.V.	III	2005-2006	77	9,812	Reflex EZ-Shot
Globexplore Drilling S.A. de C.V.	III	2005	1	306	Reflex EZ-Shot

Tecmin Servicios S.A. de C.V.	III	2005-2006	36	7,632	Reflex EZ-Shot
Tecmin Servicios S.A. de C.V.	IV	2006-2007	80	25,516	Reflex EZ-Shot
Tecmin Servicios S.A. de C.V.	VI	2008	20	7,888	Reflex EZ-Shot
Britton Brothers Diamond Drilling, Ltd.	VI	2008	2	1,092	Eastman Single Shot
Tecmin Servicios S.A. de C.V.	VII	2010	25	8,272	Reflex EZ-Shot
Landrill International Mexico, S.A. de C.V.	VII	2010	11	3,481	Reflex EZ-Shot
Tecmin Servicios S.A. de C.V.	VIII	2011	5	2,569	Reflex EZ-Shot
Landrill International Mexico, S.A. de C.V.	VIII	2011	3	1,593	Reflex EZ-Shot
Driftwood Diamond Drilling Mexico S.A. de C.V.	VIII	2011	33	17,178	Reflex EZ-Shot
Driftwood Diamond Drilling Mexico S.A. de C.V.	IX	2012	46	26,825	Reflex EZ-Shot
Driftwood Diamond Drilling Mexico S.A. de C.V.	X	2013	34	19,836	Reflex EZ-Shot
Patpa Distribuciones S. de R.L. de C.V.	XII	2015	42	17,733	Reflex EZ-Shot
Patpa Distribuciones S. de R.L. de C.V.	XIII	2016	17	8,397	Reflex EZ-Shot
Capstone Gold S.A. de C.V.	XIII	2016	40	4,262	Reflex EZ-Shot
Patpa Distribuciones S. de R.L. de C.V.	XIV	2017	27	17,076	Reflex EZ-Shot
Capstone Gold S.A. de C.V.	XIV	2017	19	1,996	Reflex EZ-Shot
Patpa Distribuciones S. de R.L. de C.V.	XV	2018	4	2,668	Reflex EZ-Shot

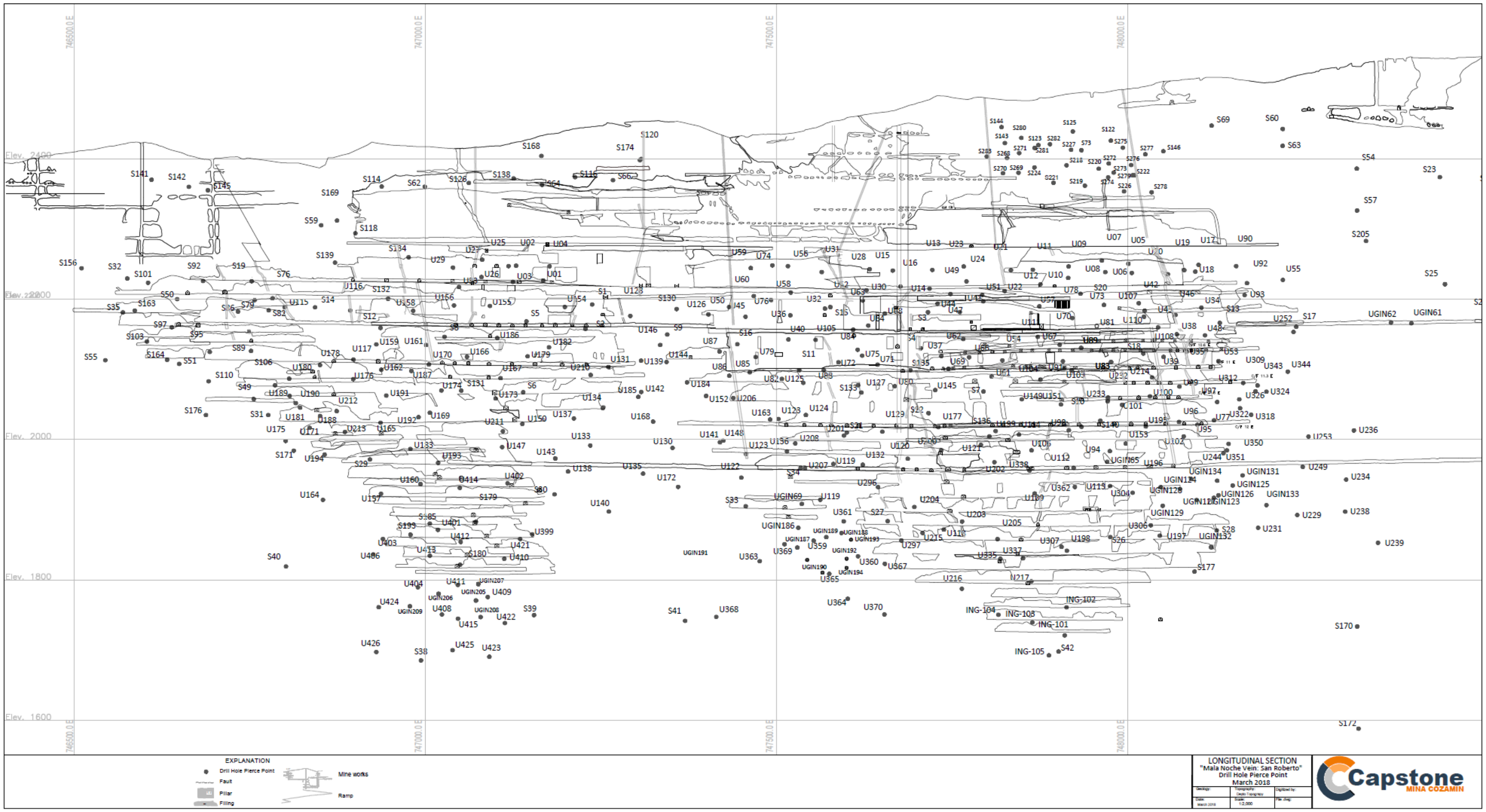


Figure 10-1: Longitudinal Section of Drilling Pierce Points in San Roberto zone of the Mala Noche Vein

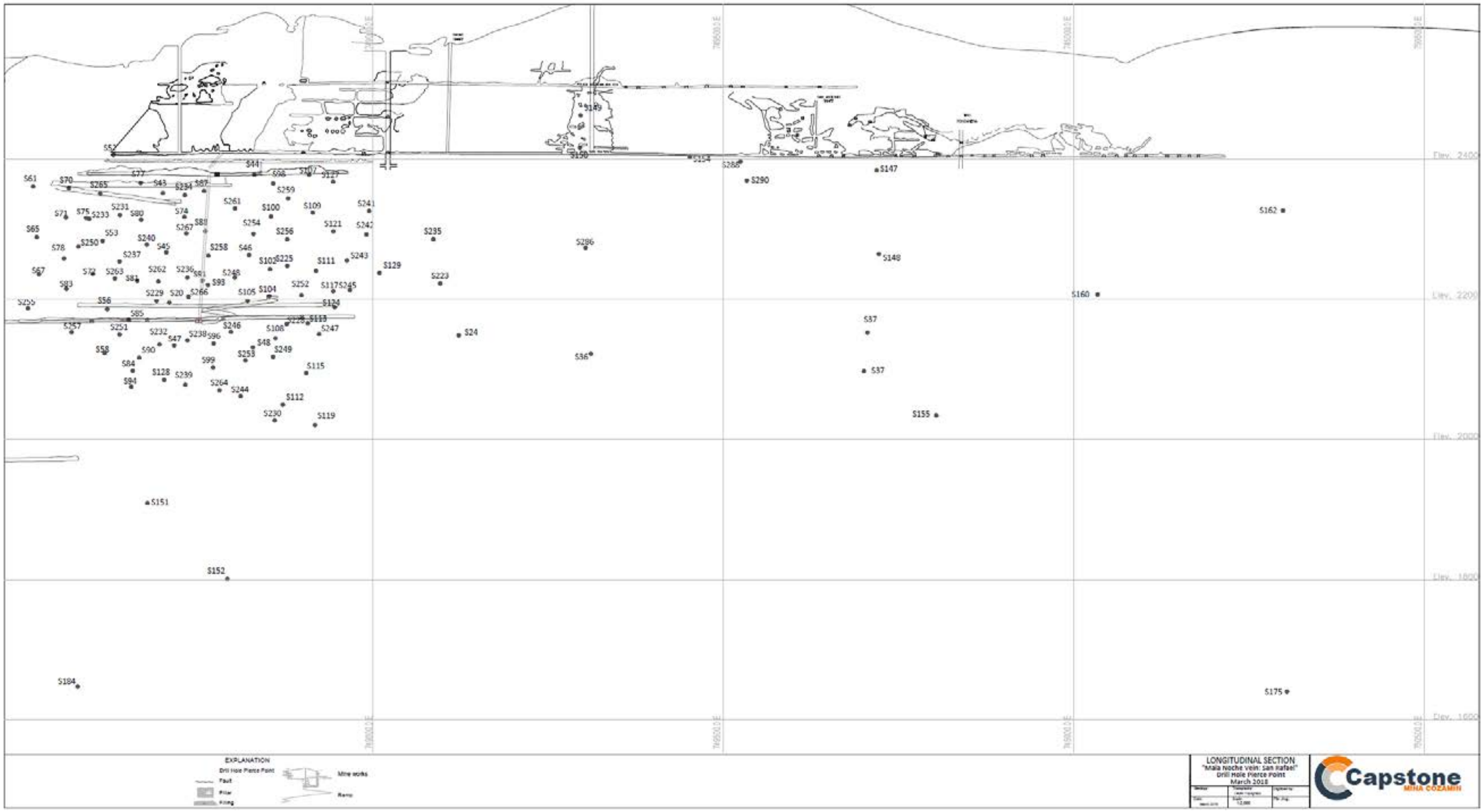


Figure 10-2: Longitudinal Section of Drilling Pierce Points in San Rafael zone of the Mala Noche Vein

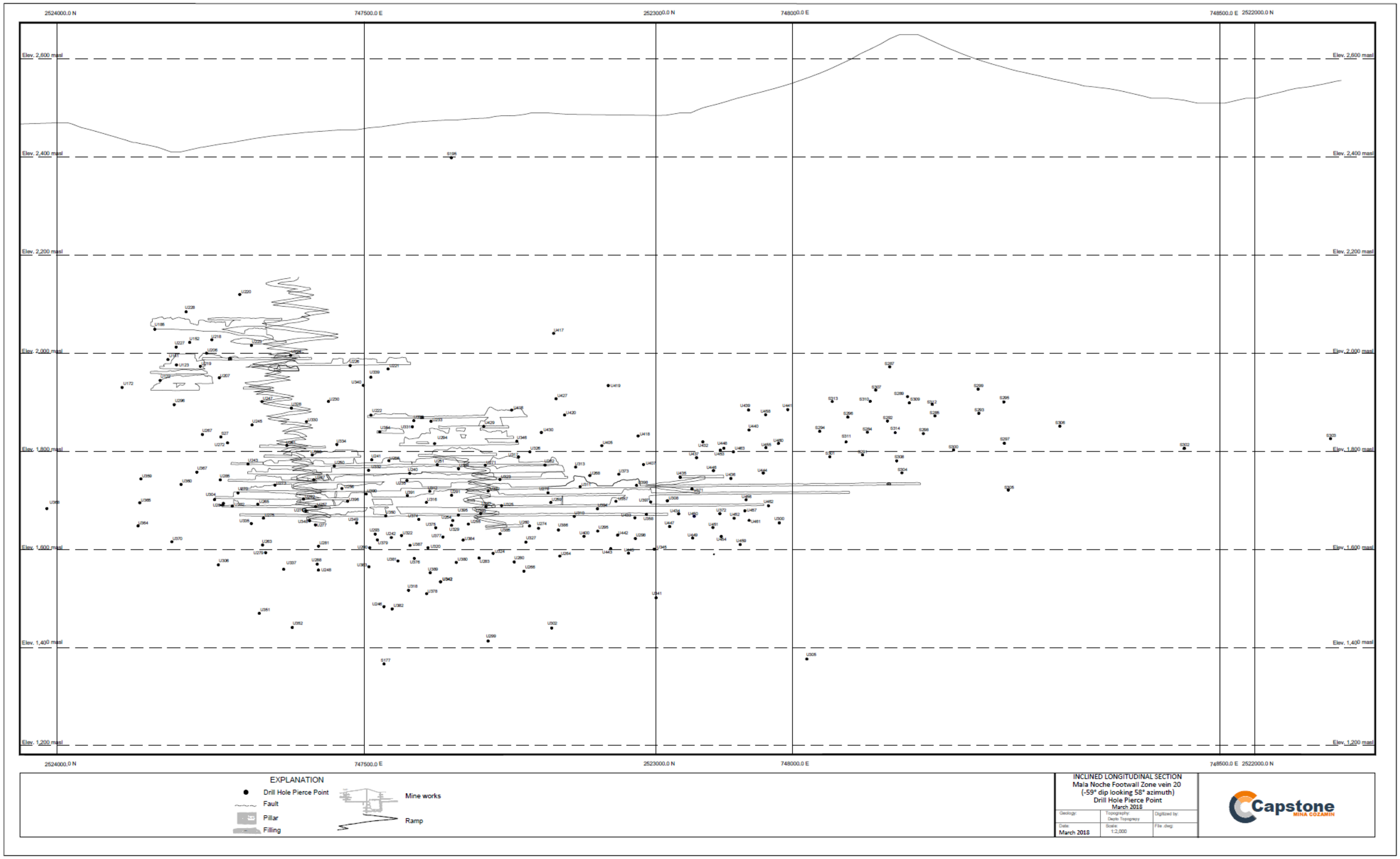


Figure 10-3: Longitudinal Section of Drilling Pierce Points in Mala Noche Footwall Zone

11 Sample Preparation, Analyses and Security

11.1 Drill Core Samples

11.1.1 Drill Site Control

Clean core boxes are delivered to the drill site by the drilling contractor. The driller clearly marks the drillhole number on each box. The driller then places a wood block or a plastic ticket in the core box at the end of each core interval. Intervals are marked in feet and inches which the driller converts from metres. The box is covered by the lid and secured using either rubber straps or nylon cord prior to transportation from the drill site. Either Capstone employees or the drillers transport the core from the drill site to the core shack.

11.1.2 Survey Control

In 2009, Capstone contracted PhotoSat Information Ltd. to reference INEGI control points around the Cozamin mine (UTM 13N, NAD 27) and to create other survey reference points, such as the San Roberto headframe. The locations and orientations of the drillholes are checked by a Capstone surveyor after the completion of each drillhole. The driller identifies each drillhole with a wood plug showing the drillhole number labelled with permanent black marker. Drillhole locations are surveyed using either total station TRIMBLE or LEICA instruments.

Downhole surveys are undertaken after completion of each drillhole. Survey points are taken approximately every 50-75 m using a downhole survey instrument (Table 10-2). Survey readings are generally taken every 50-150 m for surface holes and every 50-100 m for underground holes. Survey results were corrected for magnetic declination. The magnetic mineral pyrrhotite is present in deeper levels in the mine and occasionally causes downhole survey anomalies. These are identified by the geologist during the survey measurement process and corrected by taking another survey measurement above or below the point giving the faulty reading. Dip variations in surface drillholes are not more than 5.3°, with an average value of 1.1°. The maximum downhole dip variation in the underground holes is 15.4° with an average variation of 1.3°.

11.1.3 Drill Core Logging, Photography, Sampling and Security

When the drill core arrives at the core shack, the geologist checks the order of the core. If required, the core assistant cleans the core of any contaminants. Boxes are checked for labelled start and end depths. Next, the core is placed three boxes at a time on the ground in natural light for photography along with a scale bar using a digital camera. The core is then logged for recovery, rock quality, lithology, structure, alteration, and mineralization prior to marking out sample intervals by the geologist. Cozamin records geological information using an acQuire database data entry object since late 2014; prior to acQuire implementation, geological information was collected in Microsoft Excel spreadsheets.

Only Capstone employees are permitted in the core shack when unsampled core is ready to be cut. The geologist marks the saw line along the centre of the core, with each side containing roughly equivalent apparent grade. After the core is cut, one half is placed in a sample bag. The sampler returns the remaining core to the box in its original orientation, which is checked by the geologist. The same side of the core is always taken for sampling.

The drillhole number and sample interval are entered into the sample book. One ticket stub is stapled in the corresponding interval in the core box by the geologist and the other two ticket stubs are placed in the sample bag by the sampler. The sample books are archived in the core shack. A minimum of 10 samples are placed in a large sack and secured by a tamper proof seal. The sample number series within the sack are marked on the outside. A transmittal form is then completed, which identifies the batch number, the serial numbers of the seals and the corresponding sample number series, and delivered to the preparation laboratory by a Cozamin representative (Table 11-1).

Drill core containing intercepts of the MNV and MNFWZ structure is stored in a secured warehouse near the core shack and other core is stored in a second storage building and laydown on the mine property. Some pre-2014 waste hangingwall and footwall drill core is stored within the mine on Level 8. Access to the warehouse and storage building is controlled by the Geology department.

11.1.4 Drill Core Sample Preparation and Analysis

Since 2005, Cozamin has sent diamond drillhole samples to multiple accredited laboratories for sample preparation and analysis, as well as for participation in round-robin analysis of samples for use as reference material standards (Table 11-1). These laboratories include Bureau Veritas Inspectorate (“Inspectorate”, known previously as BSI Inspectorate), ALS Geochemistry (“ALS”), SGS Canada Inc. (“SGS”), Mineral Environments Laboratories Ltd (commonly known as “Assayers Canada”, which was acquired by SGS in 2010), Activation Laboratories Ltd. (“Actlabs”), and Acme Analytical Laboratories Ltd. (acquired by Bureau Veritas in 2012). In 2010, Cozamin sent samples from one drillhole (CG-10-S151) to Eco Tech Laboratory Ltd. (“Eco Tech”, which was acquired by ALS in 2012).

Until December 2013, Capstone analyzed field and pulp duplicate samples at a second laboratory. Capstone now analyzes the duplicate samples at the same laboratory as the original sample to better represent sampling precision, without additional inter-laboratory variability between the samples.

Table 11-1: Primary and Secondary Laboratories Used for Cozamin Diamond Drillhole Samples

Principal Laboratory	Secondary Laboratory	Drilling Phase	No. Samples
Inspectorate	ALS	I	1,515
ALS	Inspectorate	II	903
SGS	ALS	III	5,854
ALS	SGS	IV and V	2,581
ALS	SGS	VI	6,774
ALS	SGS	VII	6,842
ALS / Eco Tech[1]	SGS	VIII	14,843
ALS	ALS	IX	6,100

Principal Laboratory	Secondary Laboratory	Drilling Phase	No. Samples
ALS	Actlabs	X	1,301
ALS	Actlabs	XI	898
ALS	-	XII	3,462
ALS	-	XIII	2,422
Cozamin Mine Laboratory	-	XIII	1,007
ALS	-	XIV	4,403
Cozamin Mine Laboratory	-	XIV	438
ALS	-	XV	991

Table Notes:

1. Eco Tech used only for drillhole GC-10-S151

ALS sample preparation facilities in Hermosillo, Mexico were used until 2009, when ALS opened a new preparation facility in Zacatecas, Mexico in time for the Phase VII 2010 drilling campaign. After preparation, all ALS samples were sent to the Vancouver, Canada laboratory for analysis. The SGS sample preparation facility is located in Durango, Mexico. Samples were then analysed in the SGS Lakefield laboratory located in Toronto, Canada. The Inspectorate facility in Durango, Mexico conducted the sample preparation before analysis at the Inspectorate laboratory in Sparks, Nevada, USA. The Actlabs sample preparation and analysis facility is located in Zacatecas, Mexico. The Eco Tech laboratory facility is located in Kamloops, Canada. Samples remained in the custody of the respective laboratories from arrival at the preparation facility through analysis. Sample preparation and analysis procedures at each of the laboratories utilized by Cozamin are detailed in Table 11-2 and

Table 11-3.

Table 11-2: Sample Preparation Details at Laboratories Utilized by Cozamin

<table>
<tr><th>Laboratory</th><th>Accreditation</th><th>Crushing</th><th>Pulverizing</th></tr>
<tr><td>Inspectorate</td><td>ISO 9002, certificate 37925</td><td rowspan="3">Dried, weighed, then crushed to 75% passing 2 mm</td><td rowspan="3">250 g subsample split pulverized to 90% passing 75 microns</td></tr>
<tr><td>ALS</td><td>ISO 9001:2001 and ISO 17025</td></tr>
<tr><td>SGS</td><td>ISO 9002 and ISO 17025 accredited for Specific Tests SCC No. 456.</td></tr>
<tr><td>Actlabs</td><td>ISO 9001:2008, No. MX-11-182, No. Mx11-183</td><td>Dried, weighed, then crushed to 90% passing 2 mm</td><td>250 g subsample split pulverized to 95% passing 105 microns</td></tr>
<tr><td>Eco Tech</td><td>ISO 9001:2008 by KIWA International (TGA-ZM-13-96-00)</td><td>Dried, weighed, then crushed to 70% passing 1.8 mm</td><td>250 g subsample split pulverized to 95% passing 104 microns</td></tr>
<tr><td>Cozamin Laboratory</td><td>ISO 17025 accredited for specific tests, certificate Q-0383-064/12</td><td>Dried, weighed, then crushed to 95% passing 6.4 mm</td><td>200 g subsample split pulverized to 100% passing 75 microns</td></tr>
</table>

Table 11-3: Sample Digestion and Analysis at Laboratories Utilized by Cozamin

Laboratory	Cu	Zn	Pb	Ag
Inspectorate	Aqua regia digest with AAS finish. Overlimit samples follow the same procedure with the instrument calibrated for ore grades.			
ALS	Four acid digest with ICP-AES finish. Overlimit Pb samples use a four acid digestion followed by titration (CON02 method).			Four acid digest with ICP-AES finish, and fire assay (50 g charge) with a gravimetric finish.
SGS	Four acid digest with ICP-OES finish. Overlimit samples follow the same procedure but with sodium peroxide fusion.			Multi acid digest (2 g charge), with AAS finish. Overlimit samples analyzed using fire assay (50 g charge) with an AA finish.
Actlabs	Four acid digest with ICP-OES finish. Overlimit samples use an aqua regia digest with ICP-AAS finish.			Four acid digest with ICP-OES finish. Overlimit samples are analyzed using fire assay (30 g charge) with a gravimetric finish.
Eco Tech	Aqua regia digest with ICP-AES finish. Overlimit samples undergo an oxidizing digestion in 200 ml phosphoric flasks with final solution in aqua regia solution and an AA finish.			
Cozamin Laboratory	Three acid digest, with ICP-OES finish Overlimit samples follow the same sample digestion procedure, but with an AAS finish.			

11.1.5 Drill Core Quality Assurance and Quality Control (QAQC)

11.1.5.1 Phase I and II Drilling Programs, 2004

In 2004, splits of 24 previously assayed intervals from five drillholes were sent for independent analysis at the Acme laboratory in Vancouver. The analyses from these check samples agreed well with the previously analysed results. No other QAQC samples were submitted during this drilling program.

11.1.5.2 Phase III Drilling Program, 2005

Capstone implemented a formal QAQC program for the 2005 Phase III drilling campaign. Cozamin staff obtained large samples from the dewatered underground workings and made three in-house reference material ("RM") standards (not certified) that had undergone round robin testing at SGS, ALS, Acme, Assayers Canada, and Inspectorate laboratories to determine mean and performance thresholds at two and three standard deviations (Table 11-4).

Table 11-4: Cozamin Reference Materials used in the Phase II and III Drilling Campaigns, 2005-2006

RM	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (ppb)
4759	3.45 ± 0.07	2.78 ± 0.065	0.17 ± 0.01	212.46 ± 47.17	109.4 ± 8.3
4757	1.31 ± 0.03	0.86 ± 0.030	0.03 ± 0.01	60.04 ± 3.73	70.2 ± 4.6
4787	0.55 ± 0.03	0.68 ± 0.015	0.01 ± 0.007	24.42 ± 1.37	200.3 ± 5.4

Most RM values plotted within two standard deviations of the mean value. There were seven failed samples that were attributed to sample switching. Overall assay accuracy was acceptable, with no signs of bias.

Duplicate samples comprised a second split of the pulp reject being sent to the SGS laboratory for reanalysis at a rate of approximately 1 in 10 samples. A total of 432 samples for copper, zinc, lead, 388 samples for gold, and 422 samples for silver were analysed over the Phase III campaign. No evidence of bias was detected for silver or lead, but there was a weak positive bias observed in copper at higher grades and a weak negative bias for zinc and gold at higher grades. The magnitudes of the biases were not considered to be significant.

Samples of cement were submitted on a regular basis within the sample stream to identify evidence of cross contamination in the laboratory. A total of 144 blanks were submitted. A few samples had anomalous values of zinc, gold, and silver. In these instances SGS was instructed to reanalyze the samples.

ALS was used as a check laboratory for analysis of 262 pulp samples. No bias between the results of the two laboratories was observed, but significantly lower levels of precision were noted with the ALS results. This was attributed to different analytical procedures followed at the two laboratories.

11.1.5.3 Phase IV and V Drilling Programs, 2006-2007

The QAQC program initiated in 2005 for the Phase III drilling program continued through the Phase IV and V drilling programs (Table 11-5).

Table 11-5: QAQC Program Summary Phase IV and V Drilling Programs, 2006-2007

Control	No. Samples	Insertion Rate (%)	Comments
RM	103	4.0	Acceptable performance for Cu, Ag, Pb and Zn; most sample values plot within 2 standard deviations from the certified mean. Medium grade RM 4757 shows low bias.
Blank	112	4.3	Acceptable performance for Ag, Au, Cu, Pb and Zn. 4 failures for Ag, 1 failure for Cu, 1 failure Au.
Core Duplicate	106	4.1	Good correlation between original sample and core duplicate for Cu, Ag Pb and Zn. Low correlation between original sample and core duplicate for Au.
Pulp Duplicate	106	4.1	Pulp duplicates show very good correlation for Cu, Ag, Pb, Zn and Au.

11.1.5.4 Phase VI Drilling Program, 2008

QAQC continued through 2008 using the same protocols developed in 2005 for Phase III program. Commercially available certified reference materials (CRM) and Cozamin sourced RMs were used during the program. Supplies of the Cozamin sourced material created in 2005 were depleted by the end of 2008 (Table 11-6). In 2006 and 2007, Cozamin created new RM using the remainder of the large samples collected from underground in 2005. The certification process was poorly documented and only partial details of the certification process are available. The performance summary of the Phase VI drilling program QC samples is in Table 11-6.

Table 11-6: Reference Materials used in the Phase VI Drilling Program, 2008

Control	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (ppb)	# In UG DDH	# In Surface DDH	Insertion Rate (%)
06-4787	0.68 ± 0.003	0.65 ± 0.062	0.176 ± 0.003	35.38 ± 0.310	-	4	23	0.4
4757	1.31 ± 0.03	0.86 ± 0.030	0.03 ± 0.01	60.04 ± 3.73	70.2 ± 4.6	-	30	0.4
06-4759	1.94 ± 0.003	0.74 ± 0.004	0.144 ± 0.002	115.14 ± 0.32	200.3 ± 5.4	3	9	0.2
4787-a	9.49 ± 0.13	1.05 ± 0.07	0.172 ± 0.002	427.6 ± 3.06	-	-	48	0.7
4757-a	1.18 ± 0.03	3.58 ±0.086	10.6 ±0.086	138.8 ± 3.75	-	-	34	0.5
4759-a	1.27 ±0.05	0.14 ± 0.002	0.04 ±0.006	42.95 ± 2.90	-	-	13	0.2

Control	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (ppb)	# In UG DDH	# In Surface DDH	Insertion Rate (%)
HLLC[1]	1.49 ± 0.06	3.01 ± 0.17	0.29 ± 0.03	65.1 ± 6.7	830 ± 120	5	113	1.7
HLHC[1]	5.07 ± 0.27	2.35 ± 0.11	0.17 ± 0.01	111.0 ± 8.6	1970 ± 220	18	-	0.3
FCM-2[1]	0.756 ± 0.046	1.739 ± 0.104	0.479 ± 0.038	73.9 ± 7.3	1370 ± 120	8	-	0.1
BLANK	0.01% warning limit	0.011% warning limit	0.01% warning limit	5 g/t warning limit	50 ppb warning limit	66	211	4.1

Table Notes:

1. CRM purchased from CDN Resource Laboratories Ltd., Delta, Canada. HLLC and HLHC are High Lake volcanogenic massive sulphide deposit material. FCM is Campo Morado volcanogenic massive sulphide deposit material.

The results of the Phase VI drilling program QAQC results were summarized by Bruce Davis in a memorandum to Capstone (Davis, 2009). He concluded that copper results from certified and in-house RM standards were under proper analytical control. Results from the CRMs for silver, zinc, and lead were under analytical control, but were limited in number. The in-house RMs had not been subjected to homogeneity testing through a proper round robin procedure and were deemed insufficient to serve as controls for gold or silver. In addition, comparisons to ALS results showed there could be significant differences in mean grades determined for silver, zinc, and lead, and therefore may not adequately serve as controls for these elements either. Davis (2009) concluded that the in-house RMs were sufficient for laboratory control of copper grades.

Blank results suggested no contamination in the sample preparation process. No coarse reject duplicates were available to validate the sample preparation process. No pulp duplicates were available to further validate the accuracy of the assays.

From the certified standard control information, Davis (2009) concluded the copper, lead, zinc, and silver assay processes were producing results that could be used for public reporting, resource estimation, and grade control purposes.

11.1.5.5 Phase VII-X Drilling Programs, 2010-2013

Three new RM standards were created in 2010 using MNV material sourced during active mining operations, CGLG2010, CGMG2010, and CGHG2010. Round robin testing at SGS, ALS, Acme and Assayers Canada was used to determine performance thresholds. In 2012, a new low grade RM, CGLG2012, was created using material from MNV. Performance thresholds were determined after round robin analysis at three laboratories (Cozamin, ALS and SGS). Typically, RM and blank samples were placed at the start and finish of the mineralized interval within a hole. Approximately two sample intervals per hole were selected to have pulp duplicates prepared and another two intervals per hole were selected for preparation of core duplicates. Additional quality control samples were inserted into the sequence as deemed necessary, e.g. a blank inserted in the sample sequence after a sample expected to have very high grade to monitor the quality of the sample preparation.

Analytical performance for copper was generally good (Table 11-8). Silver, zinc and lead results were more inconsistent, with periods of high failure rates. Results are summarized respectively in Table 11-9, Table 11-10, and Table 11-11. Graphical results for copper, silver, zinc and lead are in Figure 11-1, Figure 11-2, Figure 11-3 and Figure 11-4 respectively. Less consistent results for silver, zinc and lead suggest the RM standards were not sufficiently homogenized. Sample failures were defined as values greater than three standard deviations from the mean or two (or more) consecutive samples greater than two standard deviations from the mean. Blank performance was mixed, but failed samples were not sufficient in grade to suggest significant cross contamination within samples.

Standards covering low, medium, and high grade ranges were not consistently inserted into the sample stream. The use of LG2012 as the only RM standard between June 2012 and December 2013 did not provide accuracy control in the middle to upper grade ranges for the drillholes completed within this timeframe. Following LGGC's recommendation to provide additional accuracy control on the 2010-2013 DDH data, Capstone initiated a resampling program of pulps and drillcore samples from mineralized intercepts of the San Roberto zone and MNFWZ. These were submitted to ALS with purchased CRM standards and blank material.

Table 11-7 summarizes the DDH duplicate results for copper, silver and zinc; no bias was observed. Bias in lead values could not be determined; most values were very low grade. Values for copper exceeded the target of 80% or more of the pairs with duplicate values within 20% of the original value. Silver values were very close to the target. Zinc and lead values are below the target threshold, with 67% and 68% of the paired values within 20% of each other, respectively.

Pulp duplicate values for copper, silver and zinc did not show bias. Lead was biased high for values under 0.4% (5-10%) and low for values over 0.4% (5-17%). Values for copper met the target of 90% or more of the pairs with duplicate values within 20% of the original value. Silver, zinc and lead values are below the target threshold, with approximately 80% of the paired values within 20% of each other.

The use of a secondary laboratory to analyze the duplicate samples introduced an additional source of uncertainty due to inter-laboratory variability. This practice was changed in December 2013 and now duplicate samples are submitted to the same laboratory. Cozamin found better precision between original and duplicate samples when duplicate samples are submitted to the original laboratory.

Table 11-7: 2010-2013 Diamond Drillhole Sample Duplicate Performance

Duplicate Type (Years)	Element	Correlation Coefficient	Ranked HARD	Comments
Field (2012-2013)	Copper	0.973	87% within 20%	No bias observed.
	Silver	0.991	78% within 20%	No bias observed.
	Zinc	0.906	67% within 20%	No bias observed.
	Lead	0.922	68% within 20%	Predominately very low grade; cannot determine bias.
Pulp (2012-2013)	Copper	0.987	92% within 20%	No bias observed.
	Silver	0.974	80% within 20%	No bias observed.
	Zinc	0.981	82% within 20%	No bias observed.
	Lead	0.986	81% within 20%	Weak high bias (5-10%) under 0.4% Pb, low bias of values over 0.4% (5-17%).

Table Notes:

1. Ranked HARD = Ranked Half-Absolute Relative Difference. Target values for field duplicates are 80% or more of duplicate values within 20% of original value. Target value for pulp duplicates is 90% or more of duplicate values within 20% of original value.

Table 11-8: 2010 – 2013 DDH Reference Material Standards and Blanks Data - Copper

Laboratory	SRM	Reference Value (%)	Mean (%)	No Samples	Total Failures	Failure Rate (%)
ALS	CGHG2010	6.16	6.22	84	7	7
CML			5.92	9	1	11
Eco Tech			5.81	3	3	100
ALS	CGMG2010	2.36	2.33	304	5	2
CML			2.31	154	12	16
Eco Tech			2.20	4	4	100
ALS	CGLG2010	0.12	0.12	268	1	0
CML			-	0	-	-
Eco Tech			3	0	0	0
ALS	CGLG2012	0.079	0.077	258	1	0
CML			0.079	279	60	22
ALS	Blank	0.001	0.007	942	138	15
CML			0.012	316	129	41
Eco Tech			0.006	10	0	

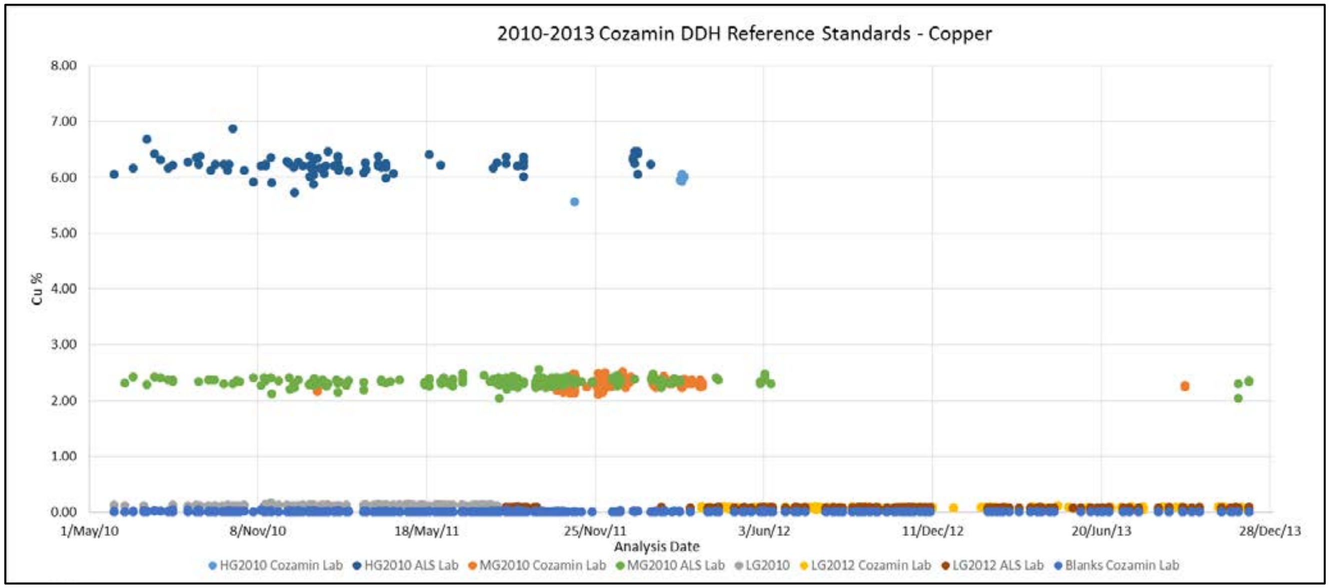


Figure 11-1: 2010 - 2013 DDH Reference Material Standards and Blanks Chart – Copper

Table 11-9: 2010 - 2013 DDH Reference Material Standards and Blanks Data – Silver

Laboratory	SRM	Reference Value (g/t)	Mean (g/t)	No Samples	Total Failures	Failure Rate (%)
ALS	CGHG2010	109	107	85	15	18
CML			108	7	0	0
Eco Tech			114	3	0	0
ALS	CGMG2010	92	88	296	78	26
CML			95	162	34	21
Eco Tech			95	4	0	0
ALS	CGLG2010	4	3	324	11	3
CML			-	-	-	-
Eco Tech			3	3	0	0
ALS	CGLG2012	2	3	201	18	9
CML			2	282	58	21
ALS	Blank	1	2	974	17	2
CML			2	320	13	4
Eco Tech			2	10	1	0

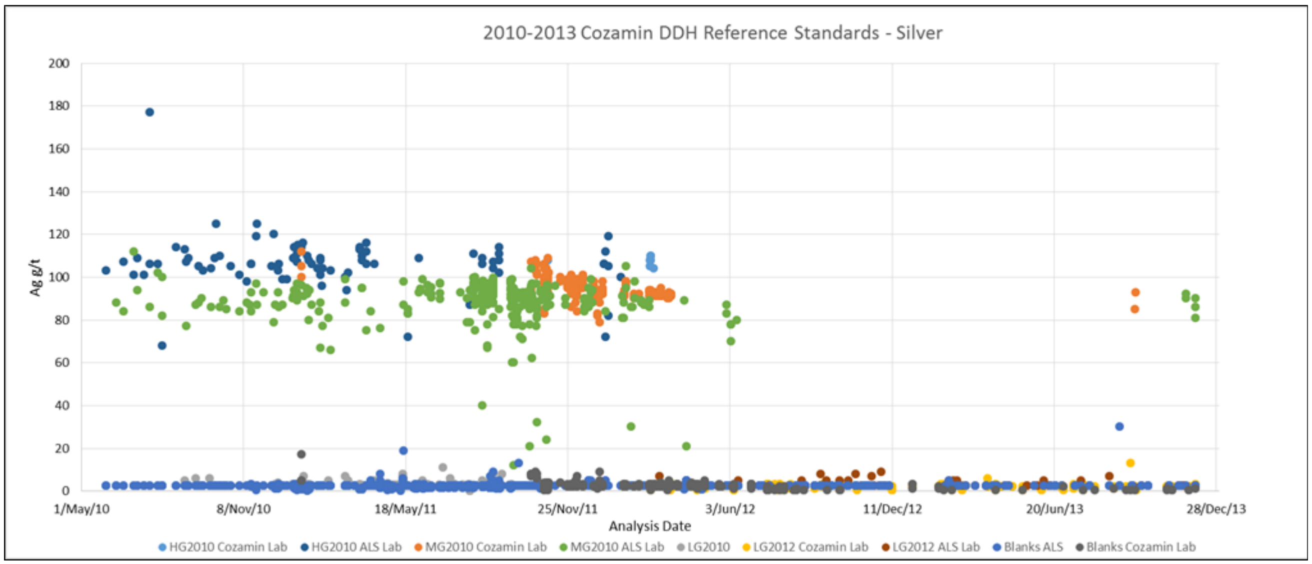


Figure 11-2: 2010 – 2013 DDH Reference Material Standards and Blanks Chart – Silver

Table 11-10: 2010 – 2013 DDH Reference Material Standards and Blanks Data – Zinc

Laboratory	SRM	Reference Value (%)	Mean (%)	No Samples	Total Failures	Failure Rate (%)
ALS	CGHG2010	0.17	0.17	37	9	24
CML			0.15	9	5	36
Eco Tech			0.17	3	0	0
ALS	CGMG2010	1.54	1.59	256	0	0
CML			1.55	162	0	0
Eco Tech			1.85	3	0	0
ALS	CGLG2010	0.13	0.11	258	76	29
CML			-	-	-	-
Eco Tech			0.48	3	1	33
ALS	CGLG2012	0.07	0.07	193	0	0
CML			0.07	278	0	0
ALS	Blank	0.05	0.05	976	584	60
CML			0.05	320	145	45
Eco Tech			0.04	10	2	20

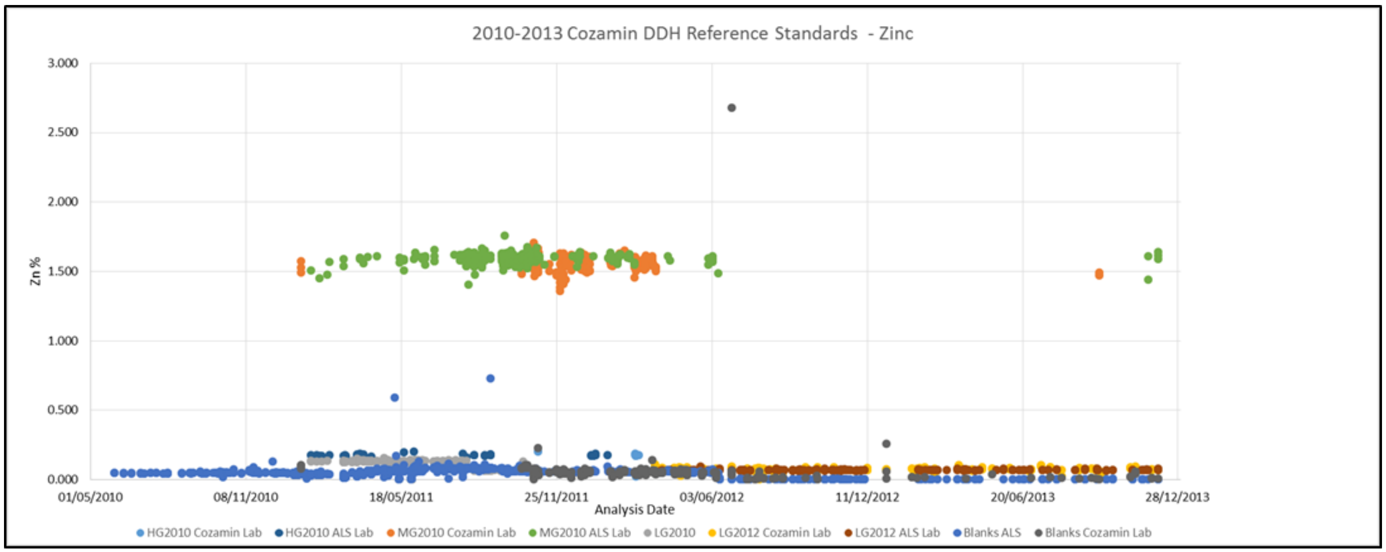


Figure 11-3: 2010 – 2013 DDH Reference Material Standards and Blanks Chart – Zinc

Table 11-11: 2010 – 2013 DDH Reference Material Standards and Blanks Data – Lead

Laboratory	SRM	Reference Value (%)	Mean (%)	No Samples	Total Failures	Failure Rate (%)
ALS	CGHG2010	0.010	0.009	83	0	0
CML			0.017	9	5	56
Eco Tech			0.008	3	0	0
ALS	CGMG2010	0.41	0.41	304	41	13
CML			0.41	162	44	27
Eco Tech			0.43	4	2	50
ALS	CGLG2010	0.002	0.011	324	80	25
CML			-	-	-	-
Eco Tech			0.003	3	0	0
ALS	CGLG2012	0.014	0.010	193	0	0
CML			0.016	280	50	18
ALS	Blank	0.050	0.006	976	26	3
CML			0.009	320	6	2
Eco Tech			0.007	10	0	0

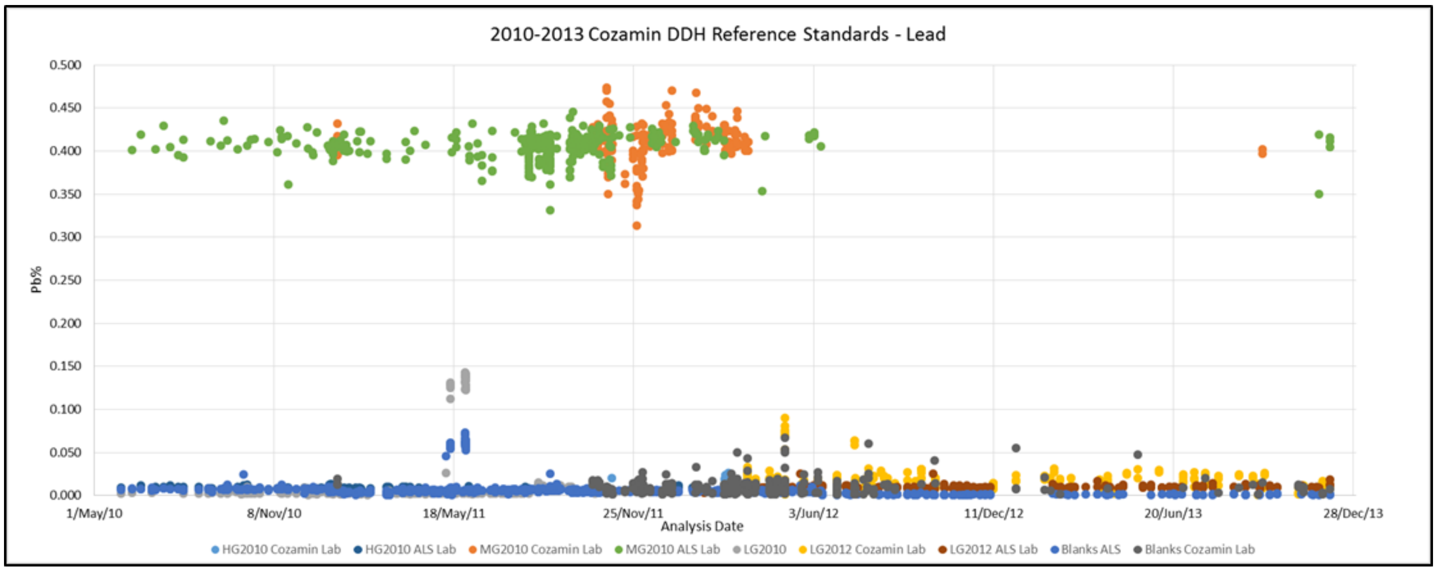


Figure 11-4: 2010 – 2013 DDH Reference Material Standards and Blanks Chart – Lead

11.1.5.6 Reanalysis of DDH Pulp Samples, 2010-2013

Capstone reassayed all available DDH pulp samples within the 2014 mineralization domains for MNV and MNFWZ (1,491 samples) with QAQC control samples to establish stronger controls on sample accuracy and precision. Results of the pulp reanalysis adequately corroborate the original analysis, thus original analytical values for the samples analyzed during the drilling campaigns were retained in the assay database (Capstone, 2015). Copper values reproduced well, with 90% of the samples within 5.2% of original result (Table 11-12), zinc and lead results performed well, while silver analyses showed more variability. Figure 11-5 illustrates the locations of the drillholes containing reanalyzed pulp samples. Figure 11-5 illustrates the locations of the drillholes containing reanalyzed pulp samples.

Table 11-12: Comparison of Drillcore Pulp Reanalyses to Original Sample Values, 2010-2013

Element	Correlation Coefficient	Ranked HARD	Comments
Copper	0.995	96% within 10%	Not biased below 14% Cu (low bias 5-20% above 14% Cu, based on very few data points).
Silver	0.976	70% within 10%	Bias not shown.
Zinc	0.963	89% within 10%	Lower grade values below 2.75% Zn are well distributed. Low bias for values between 2.75-8% (3-7%). Overall high bias over 8% Zn, typically 4-8%.
Lead	1.00	70% within 10%	Bias not shown.

Note: Ranked HARD = Ranked Half-Absolute Relative Difference; target values are 90% or more of duplicate values within 10% of the original value (for pulp duplicates submitted to the same laboratory)

QAQC control samples included with the pulp reanalysis submittals included CRM, blanks and coarse and pulp rejects. All QAQC controls performed well for copper and zinc. Silver demonstrated a higher failure in two of four CRM. Silver and lead preparation duplicates were less precise than copper and zinc. All batches with CRM failures were reanalyzed.

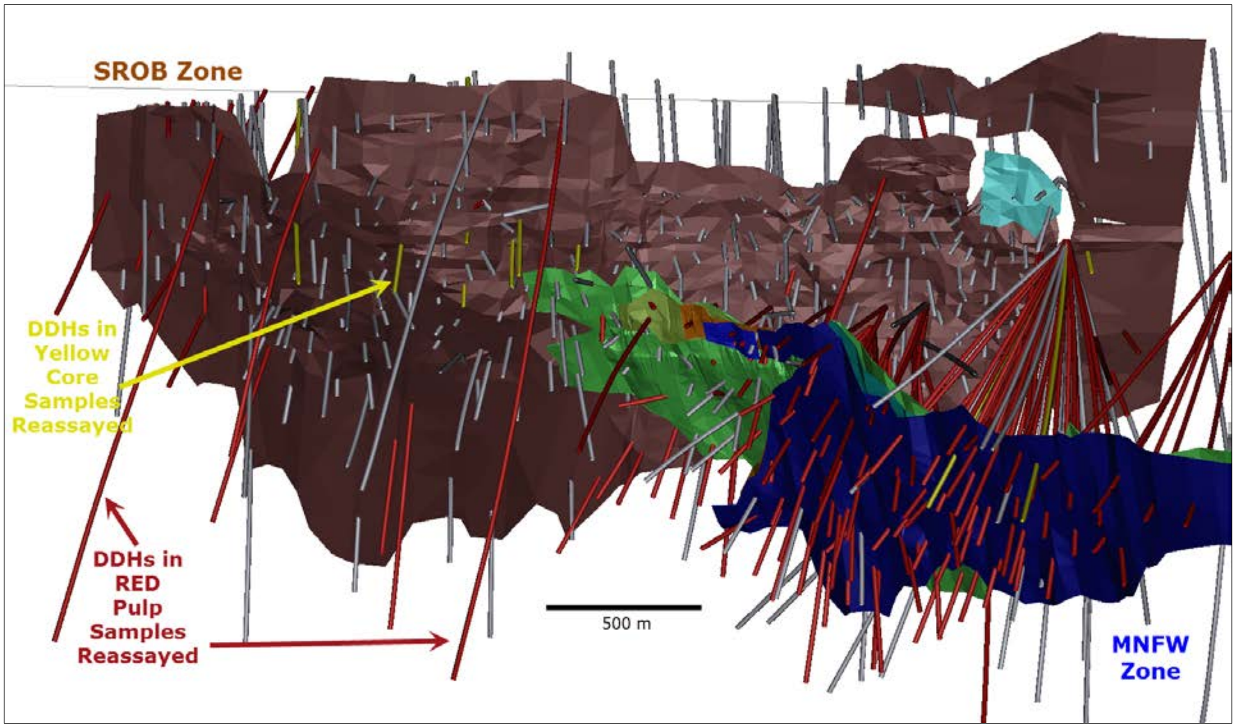


Figure 11-5: Isometric View of Drillholes Containing Reanalyzed Pulp Samples (red)

11.1.5.7 Phase XI Drilling Program, 2014

The QAQC program initiated in 2014 included CRM, blanks and duplicates (field and preparation). One of each type of control sample was included in every batch of 20 core samples; control sample performance was evaluated upon receipt of the certificate of analysis before results were accepted into the acQuire database. Performance of the QAQC control samples is summarized in Table 11-13, with examples of the control charts for copper in blanks (Figure 11-6) and medium-grade CRM “ME-1201” (Figure 11-7). CRM inserted included 4 commercially available CRM and 2 CRM created from ore material covered low-grade and medium-grade values. The custom CRM were certified by CDN Resources of Langley, Canada using 15 laboratories. All batches containing failed CRM were reanalyzed and the values replaced in the acQuire database. Blank performance demonstrated contamination typically did not occur between samples during preparation in ore grade samples. Preparation duplicates show increasing homogeneity from field duplicates (quarter core) through coarse crush duplicates and finally pulp duplicates, with strong correlation between duplicates for copper and zinc with moderate correlations for silver and lead (Capstone Gold, 2015a).

Table 11-13: 2014 DDH Certified Reference Material Standards and Blank QAQC Performance

Control	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Insertion Rate (%)	Total # Failures	Failure Rate (%)
2014							
ME-1403[1]	0.448 ± 0.045	1.34 ± 0.09	0.414 ± 0.027	53.9 ± 8.1	2.3	2	3
ME-1204[1]	0.519 ± 0.033	2.36 ± 0.18	0.443 ± 0.036	58.0 ± 9.0	1.4	-	-
CG-LG-14[2]	0.877 ± 0.057	0.451 ± 0.030	0.052 ± 0.006	27.5 ± 3.6	0.5	-	-
ME-1201[3]	1.572 ± 0.129	4.99 ± 0.435	0.465 ± 0.048	37.6 ± 5.1	0.7	2	9
CG-MG-14[2]	1.738 ± 0.099	0.492 ± 0.033	0.112 ± 0.012	53.0 ± 4.05	0.1	-	-
ME-1402[4]	2.9 ± 0.24	15.23 ± 1.005	2.48 ± 0.165	131.0 ± 10.5	0.4	-	-
BLANK	0.01% warning limit	0.01% warning limit	0.01% warning limit	10 g/t warning limit	6.5	2	1

Table Notes:

CRM acceptable ranges are ±3 standard deviations. CRM were purchased from or certified through CDN Resource Laboratories Ltd., Langley, Canada. Blank material was quartz cobbles.

1. Mexico Campo Morado volcanogenic massive sulphide deposit material.
2. Mexico Cozamin Mine ore. “CG-Grade-14” certified using 15 laboratories.
3. Canada Slave structural province volcanogenic massive sulphide deposit material.
4. Mixed ore material with approximate whole rock composition of 36% SiO_2 and 15% Fe_2O_3.

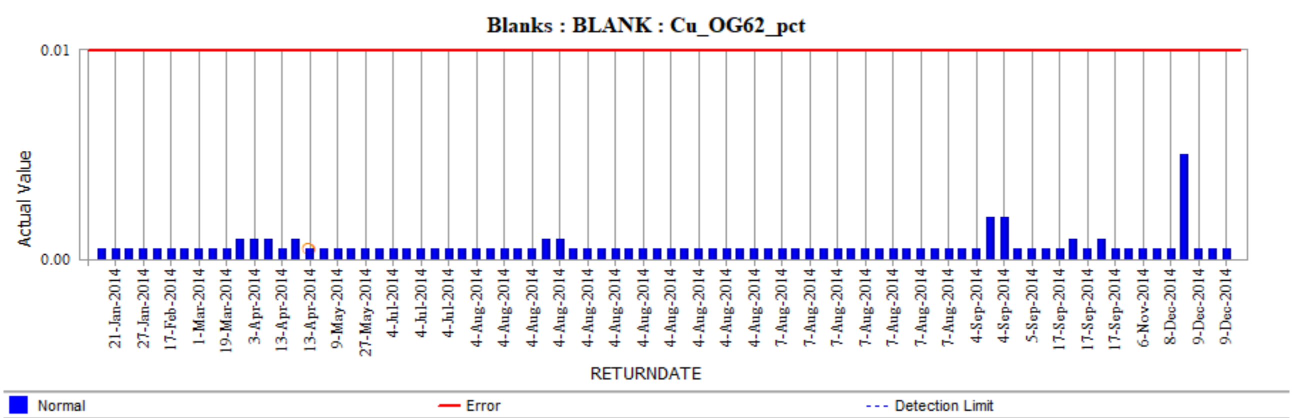


Figure 11-6: 2014 DDH Blanks performance - copper

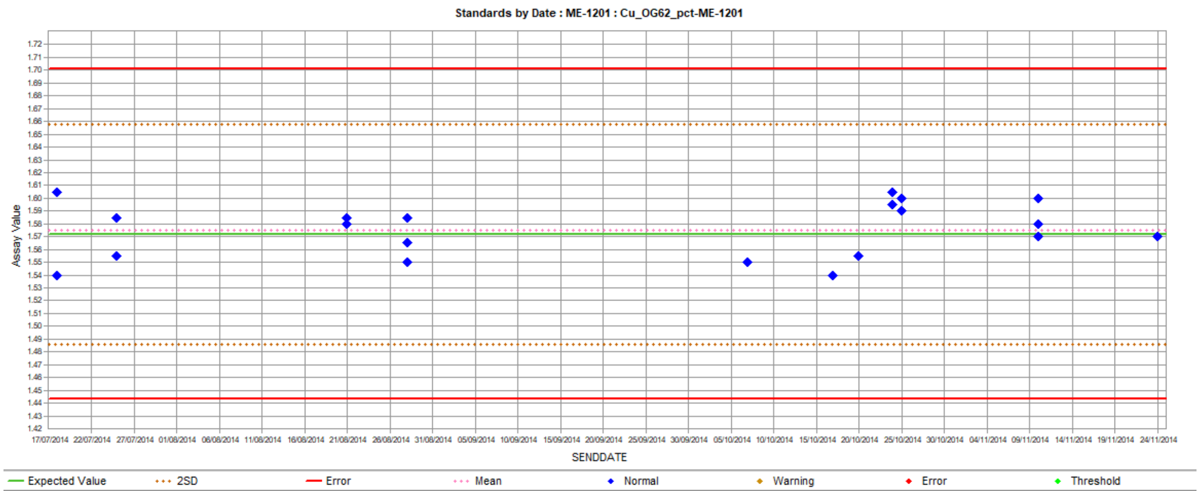


Figure 11-7: 2014 DDH CRM “CG-MG-14” performance – copper

11.1.5.8 Phase XII-XV Drilling Programs, 2015-March 2018

The QAQC program initiated in 2014 continued to demonstrate the assay process was in control in 2015 through March 2018. Reporting on QAQC performance includes monthly and annual reports. Blank performance demonstrated contamination typically did not occur between samples during preparation in 2015 – 2016 (Cozamin, 2016a, 2017a), although increased between-sample contamination was observed in 2017, particularly in zinc. Blank performance shows that cross contamination between 0.01% to 0.04% Zn occurred in 2017, typically at the coarse crushing stage. The impact of these blank failures on ore-waste classification is considered low but investigation into the root cause and mitigation is on-going (Cozamin, 2018a). CRM inserted included six commercially available CRM and five CRM created from ore material covered low-grade to high-grade values. The custom CRM were certified by CDN Resources of Langley, Canada using 15 laboratories for three CRM created in 2014 and using 10 laboratories for two CRM created in 2016. All batches containing failed CRM were reanalyzed and the values replaced in the acQuire database. Performance of the QAQC control samples is summarized in Table 11-13, with examples of the control charts for copper in blanks at ALS and CML (Figure 11-8) and medium-grade CRM “CG-MG-14” (Figure 11-9). Field duplicates show high variability consistent with the vein mineralization at Cozamin, with 50% of the duplicate value within ±20% of the original value for copper (42% within ±20 % for zinc, 57% within ±20% for silver, 45% within ±20% for gold and for lead). Field duplicates were not taken in SROB-Zn drilling in 2017 to preserve material for metallurgical testing. Preparation duplicates show increasing homogeneity from field duplicates (quarter core until October 2015, the other half of core to present) through coarse crush duplicates and finally pulp duplicates. Correlation between preparation duplicates was strong for copper and zinc and moderate for silver and lead.

Table 11-14: 2015-2018 DDH Certified Reference Material Standards and Blank QAQC Performance

Control	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Insertion Rate (%)	Total # Failures	Failure Rate (%)
2015							
ME-1204[1]	0.519 ± 0.033	2.36 ± 0.18	0.443 ± 0.036	58.0 ± 9.0	0.1	-	-
CG-LG-14[2]	0.877 ± 0.057	0.451 ± 0.030	0.052 ± 0.006	27.5 ± 3.6	2.5	-	-
CG-MG-14[2]	1.738 ± 0.099	0.492 ± 0.033	0.112 ± 0.012	53.0 ± 4.05	1.8	-	-
ME-1402[3]	2.9 ± 0.24	15.23 ± 1.005	2.48 ± 0.165	131.0 ± 10.5	0.4	-	-
CG-HG-14[2]	3.553 ± 0.203	0.604 ± 0.036	0.094 ± 0.012	94.1 ± 7.1	0.1	-	-
BLANK	0.01% warning limit	0.01% warning limit	0.01% warning limit	10 g/t warning limit	5.6	14	7
2016							
ME-1306[4]	0.398 ± 0.027	3.17 ± 0.225	1.6 ± 0.105	104 ± 10.5	0.3	-	-
ME-1403[1]	0.448 ± 0.045	1.34 ± 0.09	0.414 ± 0.027	53.9 ± 8.1	0.3	-	-
CG-LG-14[2]	0.877 ± 0.057	0.451 ± 0.030	0.052 ± 0.006	27.5 ± 3.6	2.7	-	-
ME-17[5]	1.36 ± 0.15	7.34 ± 0.555	0.676 ± 0.081	38.2 ± 4.95	0.3	-	-
CG-MG-14[2]	1.738 ± 0.099	0.492 ± 0.033	0.112 ± 0.012	53.0 ± 4.05	1.3	-	-
CG-HG-14[2]	3.553 ± 0.203	0.604 ± 0.036	0.094 ± 0.012	94.1 ± 7.1	0.9	-	-
BLANK	0.01% warning limit	0.01% warning limit	0.01% warning limit	10 g/t warning limit	5.9	14	11
2017							
ME-1306[4]	0.398 ± 0.027	3.17 ± 0.225	1.6 ± 0.105	104 ± 10.5	0.9	-	-
ME-1403[1]	0.448 ± 0.045	1.34 ± 0.09	0.414 ± 0.027	53.9 ± 8.1	0.9	-	-
CG-LG-16[2]	0.751 ± 0.036	0.259 ± 0.015	0.008 ± 0.003	14.0 ± 2.55	2.3	3	4
CG-LG-14[2]	0.877 ± 0.057	0.451 ± 0.030	0.052 ± 0.006	27.5 ± 3.6	0.6	-	-
ME-17[5]	1.36 ± 0.15	7.34 ± 0.555	0.676 ± 0.081	38.2 ± 4.95	1.1	-	-
ME-1201[5]	1.572 ± 0.129	4.99 ± 0.435	0.465 ± 0.048	37.6 ± 5.1	0.4	1	7
CG-MG-14[2]	1.738 ± 0.099	0.492 ± 0.033	0.112 ± 0.012	53.0 ± 4.05	0.4	-	-
CG-HG-14[2]	3.553 ± 0.203	0.604 ± 0.036	0.094 ± 0.012	94.1 ± 7.1	0.8	-	-
BLANK	0.01% warning limit	0.01% warning limit	0.01% warning limit	10 g/t warning limit	6.9	OG62 51 blanks Cu= 4 Zn= 2 ICP61 43 blanks Cu= 2 Zn= 29 Pb= 10 MEMS61 260blanks Cu= 13 Zn= 88	OG62 Cu 8% Zn 4% ICP61 Cu 5% Zn 70% MEMS61 Cu 5% Zn 34% Pb 4%

						Pb= 10	
2018 to March 31							
ME-1306[4]	0.398 ± 0.027	3.17 ± 0.225	1.6 ± 0.105	104 ± 10.5	0.4	-	-
ME-1403[1]	0.448 ± 0.045	1.34 ± 0.09	0.414 ± 0.027	53.9 ± 8.1	0.1	-	-
CG-LG-16[2]	0.751 ± 0.036	0.259 ± 0.015	0.008 ± 0.003	14.0 ± 2.55	5.2	6	12
CG-MG-16[2]	1.228 ± 0.063	0.608 ± 0.036	0.032 ± 0.003	30.7 ± 2.4	0.3	1	33
ME-17[5]	1.36 ± 0.15	7.34 ± 0.555	0.676 ± 0.081	38.2 ± 4.95	0.4	1	25
CG-HG-14[2]	3.553 ± 0.203	0.604 ± 0.036	0.094 ± 0.012	94.1 ± 7.1	0.9	1	11
BLANK	0.01% warning limit	0.01% warning limit	0.01% warning limit	10 g/t warning limit	7.1	OG62 16 blanks Cu= 1 MEMS61 89 blanks Cu= 1 Zn= 4	OG62 6% MEMS61 4%

Table Notes:

CRM Acceptable ranges are ±3 standard deviations. CRM purchased from or certified through CDN Resource Laboratories Ltd., Langley, Canada.
Blank material was quartz cobbles.

1. Mexico Campo Morado volcanogenic massive sulphide deposit material.
2. Mexico Cozamin Mine ore. “CG-Grade-14” certified using 15 laboratories; “CG-Grade-16” certified using 10 laboratories.
3. Mixed ore material with approximate whole rock composition of 36% SiO_2 and 15% Fe_2O_3.
4. Mixed ore material with approximate whole rock composition of 58% SiO_2 and 13% Fe_2O_3.
5. Canada Slave structural province volcanogenic massive sulphide deposit material.

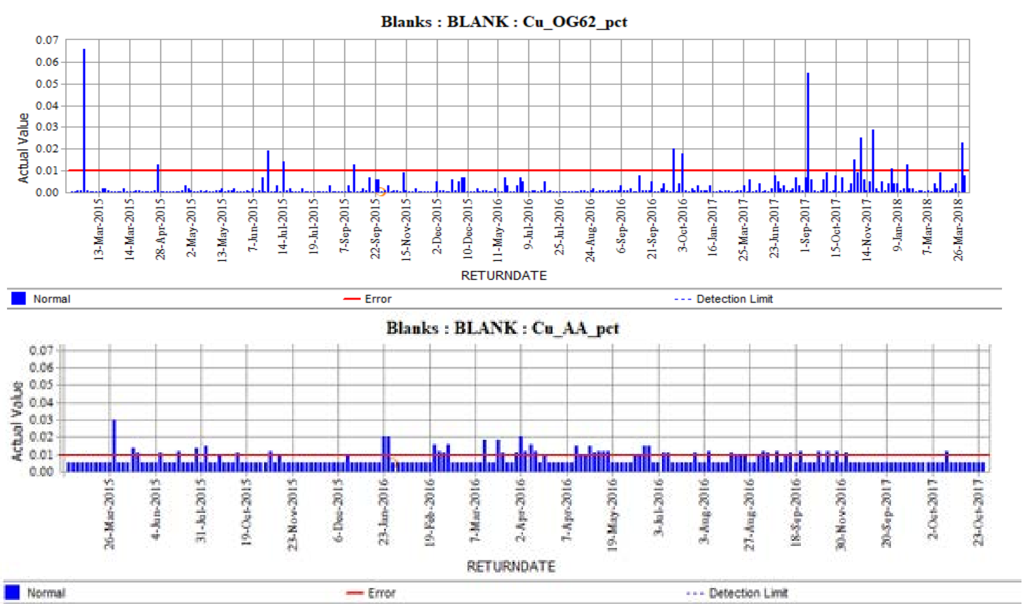


Figure 11-8: 2015 to March 2018 DDH Blanks performance – copper, ALS (upper) and CML (lower)

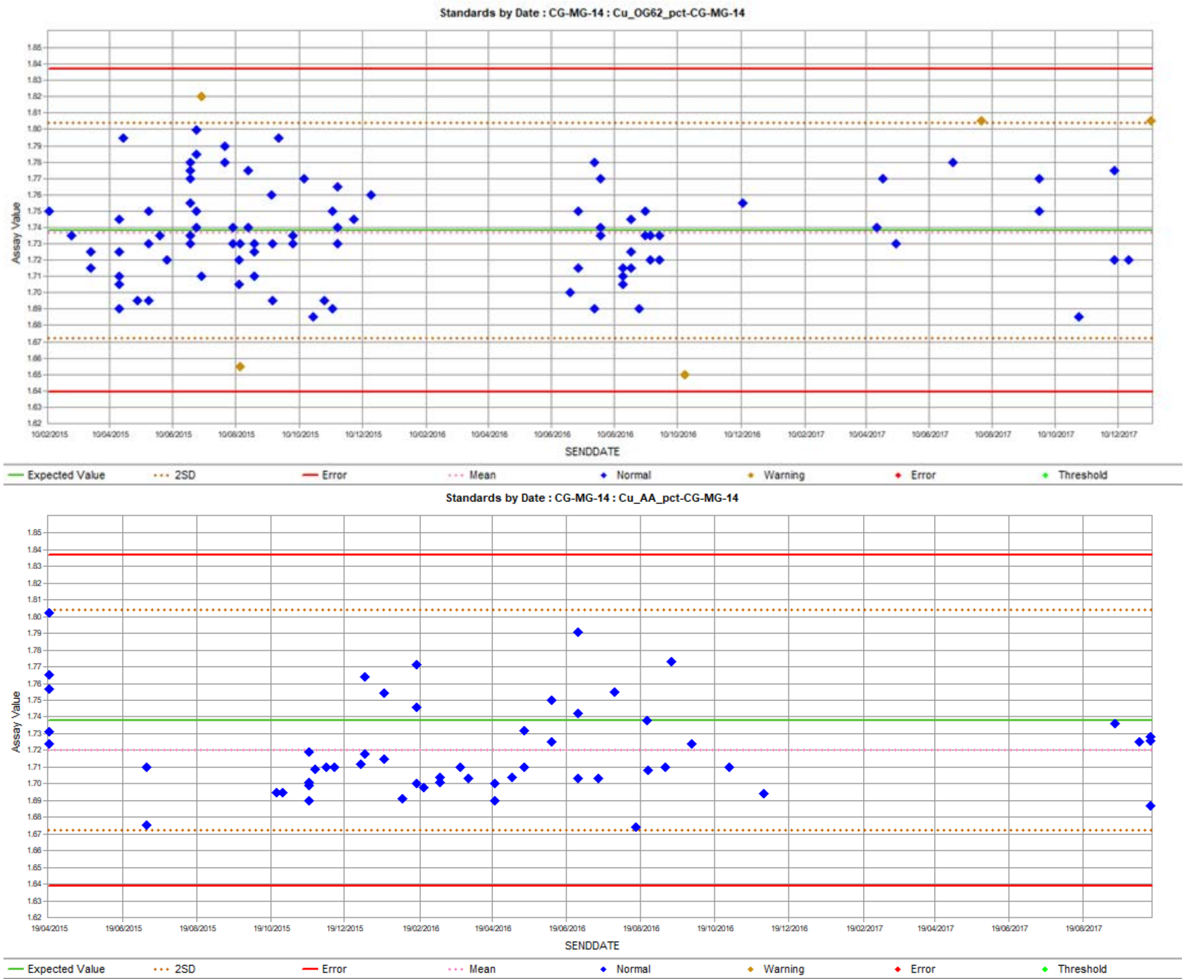


Figure 11-9: 2015 to March 2018 DDH CRM "CG-MG-14" performance – copper, ALS (upper) and CML (lower)

11.2 DDH QAQC Conclusions

Cozamin's QAQC program for diamond drillhole samples effectively controlled sample accuracy, precision and contamination since its reinstatement, 2014 through 2018. Reanalysis of available pulps from samples collected 2010 to 2013 within resource domains, including QAQC controls, confirmed original values.

Vivienne McLennan, P.Geo., Capstone's Senior Geologist – Technical Services, confirms the diamond drilling samples are acceptable to support the mineral resource estimation in this technical report.

11.3 Bulk Density

Capstone collects bulk density measurements from each drillhole, including samples from mineralized and non-mineralized intercepts. As of March 31, 2018, there are 32,479 bulk density measurements from most drillholes on the property.

11.3.1 Bulk Density Sampling Method and Procedure, 2009-2014

All drillcore pieces greater than 10 cm in length within an assay sample interval were selected from the core box and labelled to retain their order. Bulk density measurements were taken of consecutive assay intervals through mineralized zones. In waste zones measurements are less frequent, comprising a 2 m sample approximately every 20-50 metres down the hole. Core pieces were placed on a top loading balance and weighed. Capstone used the weight-in-air weight-in-water technique to determine the bulk density of the drillcore (Equation 11-1).

Equation 11-1:

$$\boldsymbol{Bulk\ Density} = \frac{\boldsymbol{weight\ in\ air}}{\boldsymbol{volume\ of\ water\ displacement}}$$

A 2,000 mL plastic graduated cylinder is filled with water to the 2,000 mL graduation line and weighed. The cylinder is then emptied and filled with the drillcore pieces from the sample interval. Water is poured into the cylinder containing the core to the 2,000 mL mark and then weighed. The volume of the displaced water is then divided by the weight in air to determine the bulk density (g/cm^3). Data are recorded into a Microsoft Excel® spreadsheet, along with the drillhole name, from, to, and rock type information.

In 2009, Cozamin's bulk density dataset comprised 4,045 measurements, plus an additional 857 repeat samples to test the method precision. Three anomalous values were removed from the database due to suspected typographic entry errors of the sample weights. The bulk density ranges in the database were between 1.51 g/cm^3 to 6.37 g/cm^3, with a mean of 2.83 g/cm^3. Density values were measured in 135 of the 365 drillholes in the database at the time, and their spatial distribution was considered reasonably extensive throughout areas of potential economic interest.

In 2013, a total of 2,354 bulk density values were reanalysed to correct widely varying values obtained between 2009 and 2012, from 0.31 g/cm^3 to 9.02 g/cm^3, for quality control and to check extreme values. The extreme high and low values were replaced with results that fell within expected bulk density ranges database.

As of December 31, 2014, there were 18,468 bulk density measurements from most drillholes on the property. The bulk density values range between 2.05 g/cm^3 to 6.05 g/cm^3, with a mean of 2.71 g/cm^3.

11.3.2 Bulk Density QAQC 2013-2014

In November 2013 Cozamin implemented a QAQC program for its bulk density determinations. This included the use of an aluminum cylinder, approximately 20 cm in length with a known bulk density of 2.7 g/cm^3, to act as a reference standard for the measurement method. Measurements of the aluminum cylinder are taken at a rate of 1 in 25 measurements of drillcore. Values of 215 aluminum cylinder measurements ranged from 2.63-2.74 g/cm^3, with an average of 2.69 g/cm^3. This represents an average underestimation bias of less than 0.4%.

Repeat measurements are taken to provide an understanding of the precision of the method. Capstone selected vein intercepts from drillholes in the San Roberto, MNFWZ, and San Rafael zones for reanalysis. Repeat measurements from the drillholes showed good levels of precision, with 90% of the 142 sample pairs measuring within 1% of each other (from the Ranked HARD plot). The duplicate samples did not show obvious bias.

The results of the QAQC samples indicate the 2013-2014 bulk density dataset is of sufficient quality for use in mineral resources and mineral reserves estimation.

11.3.3 Bulk Density Sampling Method and Procedure, 2015-2018

Capstone uses the weight-in-air over weight-in-water technique to determine the bulk density of the drillcore (Equation 11-2). All drillcore pieces greater than 10 cm in length within an assay sample interval are selected from the core box and labelled to retain their order. Bulk density measurements are taken from consecutive assay intervals through mineralized zones. Core pieces are placed on a top loading balance and weighed, then weighed again in a vat of water using a basket suspended from the hook on the scale.

Equation 11-2:

$$\boldsymbol{Bulk\ Density} = \frac{\boldsymbol{weight\ in\ air}}{(\boldsymbol{weight\ in\ air} - \boldsymbol{weight\ in\ water})}$$

Data are recorded into an acQuire data entry object, along with the drillhole name, and from-to.

In March 2018, Cozamin's bulk density dataset comprised 13,125 measurements collected 2015-2018. The bulk density ranges in the database were between 2.01 g/cm^3 to 6.46 g/cm^3, with a mean of 2.72 g/cm^3.

11.3.4 Bulk Density QAQC 2015-2018

The QAQC program for bulk density determinations continued since 2013. Measurements of the aluminum cylinder reference material are taken at a rate of 1 in 20 measurements of drillcore. Values of 886 aluminum cylinder measurements ranged from 2.69-2.72 g/cm^3, with an average of 2.70 g/cm^3. The average estimation matches the density of the aluminum bar reference material.

Repeat measurements are taken to provide an understanding of the precision of the method. Capstone selected vein intercepts from drillholes in the San Roberto, MNFWZ, and San Rafael zones for reanalysis. Repeat measurements from the drillholes showed good levels of precision, with 90% of the 725 sample pairs measure within 0.4% of each other (from the Ranked HARD plot). The duplicate values do not exhibit bias.

The results of the QAQC samples indicate the 2015-2018 bulk density dataset is of sufficient quality for use in mineral resources and mineral reserves estimation.

12 Data Verification

12.1 Current Drillhole Database

Cozamin implemented a "Geological Information Management System" acQuire database in October 2014. Error rates remained within the typically accepted industry standard of less than 1% since that time, including the data collected 2004-2014.

Table 12-1: Drillhole Database Validation - Error Rates

Time Period	Error Rate	Comments on Source of Error	Corrective Actions
July 2017 to March 2018	0.6%	downhole surveys (Cozamin, 2018b)	Reminded team of requirement to save all downhole survey backups.
January to July 2017	0.6%	collar surveys (Cozamin, 2017c)	Implemented 100% check on collar data.
April to December 2016	0.3%	downhole survey (Cozamin, 2017b)	None taken.
March 2015 to March 2016	2.6%	4% error rate in downhole survey; 1 error in assay (Cozamin, 2016b)	Switched to downloadable Reflex tool.
Re-Built Database 2004-2014	0.3%	1.2% error rate for lithology; 1.5% error rate in downhole survey (Cozamin, 2015b-d)	Added lithological core logging data entry object to acQuire; new workflow required saving of all downhole survey backups.

As noted in Table 12-1, the error rate for the data imported into the newly built acQuire database was 0.3% overall, with all errors limited to downhole survey at 1.5% and a new lithology check at 1.5%. To resolve the source of these errors, use of a downloadable Reflex downhole survey tool and a data entry object for lithological core logging were established.

Internal verification of drillhole data imported into the acQuire database is completed annually since 2015 and documented in memoranda accessible to all Capstone's intranet users. A minimum of 10% of surveyed collar co-ordinates, downhole survey data and analytical values are checked against original source records. As no other source records exist, data entered directly into acQuire's user interfaces, such as lithology, RQD and bulk density are not verified using this method. Functions such as pick-lists and acceptable value ranges set in the acQuire data entry object control error for these parameters.

All errors found were corrected immediately and the dataset used for resource estimation included the corrected values.

12.2 Past Drillhole Database

In 2014, audits of the former dataset collected in spreadsheets revealed an unacceptable error rate greater than the typical industry standard of less than 1%. The April internal audit demonstrated an error rate of 7.8% for assays checked against the ALS laboratory issued certificates across a random selection of 8% of the assay dataset. A further check by LGGC in May on 10% of the assays focussed on drillholes within areas of Indicated and Inferred mineral resources (LGGC, 2014a). Collar location data, downhole survey measurements, and assay values were all checked. No errors were found during the audit of the collar data, the assay error rate was 6.4% error rate for downhole survey data (most errors were decimal values or resulted missing source files) and 2% for assays (typically Zn and Pb switches). In June, an internal audit on 92% of the drillhole database collars, downhole surveys, and assays further demonstrated error rates of 2.4%, 1.4% and 3.4% respectively. The data was considered adequate to support Indicated and Inferred classification of mineral resources only until further review after completion of corrective actions.

12.3 Site Visit and Author Verification

A site visit to the Cozamin property was completed by Garth Kirkham on April 9-10, 2018. The purpose of these visits was to fulfill the requirements specified under NI 43-101 and to familiarize with the property. The site visit consisted of an underground tour of development headings as well as an inspection of the surface core logging, sampling and storage areas. The site visit also included an inspection of the property, offices, underground vein exposures, core storage facilities, mill, and tour of major centre affected by the mining operation.

The tour of the office showed a clean, well-organized, professional environment. On-site staff led the Author through the chain of custody and methods used at each stage of the logging and sampling process. All methods and processes are to industry standards and reflect best practices, and no issues were identified. The core is accessible and stored in covered racks.

The Author selected 10 drill holes 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 Author toured the complete core storage facilities, selecting and reviewing core throughout. No issues were identified.

The Author 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 Author 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 the site visit to verify assay results as the project is an operating mine and ongoing QAQC is performed constantly and consistently however there were no limitations on the Author with respect to verification. In addition, there were no limitations with respect to validating the physical data or computer-based data. The Author is of the opinion that the work was being performed by a well-respected, large, 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 Cozamin sample/assay data. The Author is satisfied that the assay data is of suitable quality to be used as the basis for this resource estimate.

12.4 Summary and Opinion of QP

Vivienne McLennan, P.Geo., Capstone's Senior Geologist – Technical Services, considers the Cozamin diamond drillhole dataset appropriately validated and verified, and adequate for the mineral resource estimation in this technical report.

13 Mineral Processing and Metallurgical Testing

13.1 Introduction

Mr. Chris Martin of Blue Coast Metallurgy Ltd visited and toured the mill in January 2018. The mill remains largely as described by Ken Major, P.Eng., of KWM Consulting Inc., in the 2014 Technical Report, such that its description requires no significant update in this report.

The purpose of the most recent metallurgical development has been to ease the transition of milling operations from the treatment of ores entirely from MNFWZ to a blend of ores from San Rafael and MNFWZ. The section of the report summarises the testwork done in this area and early metallurgical performance achieved by the mill in processing the blended feed.

The Cozamin metallurgical laboratory has been responsible for the continuous metallurgical testing of the Cozamin ore feeding the mill since 2010. The current processing facilities and equipment, for the most part, are in good repair, maintained and functioning at design capacities.

13.2 Metallurgical Testing

13.2.1 Samples

Blending the zinc-rich ores from the San Rafael resource with existing copper-rich mill feed materials through the same mill was investigated through a program of laboratory tests in late 2017 and early 2018, and has been practiced by the mill since February 2018.

The following samples were tested:

- Pre-existing mill feed: This was sampled from the mill feed during different periods in 2017, and, in its entirety, was represented by the copper-rich MNFWZ.
- San Rafael variability samples. Seven samples of drill core were provided by minesite geologists for this work. These samples represented different parts of the San Rafael resource and contained varying grades of copper, zinc, silver and lead.

13.3 Mineralogy

The bulk modal mineralogy of the tested samples is compared with the current feed as shown in Figure 13-1. While the mix of sulphides is quite different, the same sulphides are present in San Rafael as in the MNFWZ feed.

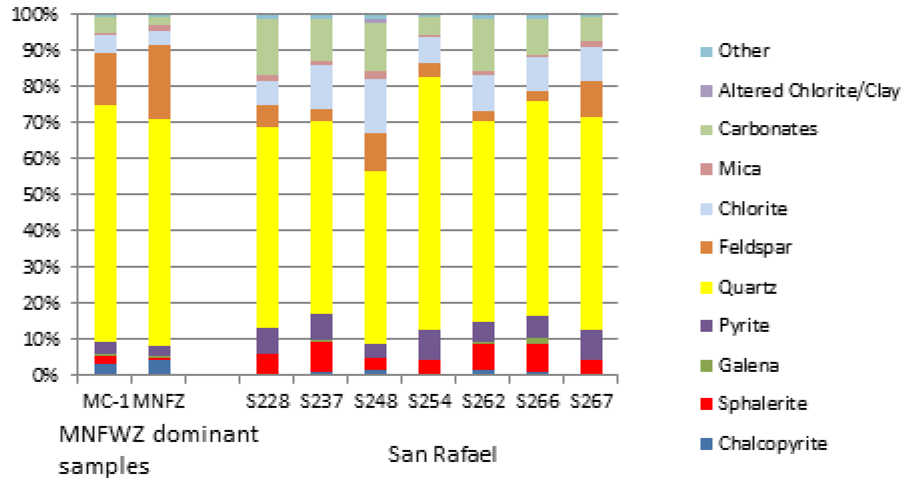


Figure 13-1: Bulk Modal Mineralogy of MNFWZ Dominated Samples and Samples from San Rafael

The sulphide mineral textures were found to be similar to but slightly finer than the material from the MNFWZ suggesting that, assuming the same grind size, copper metallurgy should be similar to if slightly poorer than had previously been experienced, zinc metallurgy should be good, while lead metallurgy was expected to be only moderately good. Liberation was found to be inversely proportional to grade, suggesting that there will be a distinct head grade-metal recovery relationship for copper, zinc and lead.

As with the MNFWZ, sphalerite in San Rafael is iron-rich, and this is expected to limit the concentrate grade potential in zinc flotation to below 50% zinc.

13.3.1 Grindability Testing

Three Bond Ball Mill work index tests were conducted, yielding an average 15.3 kWh/tonne, which is slightly softer than the 16.9 kWh/tonne measured on a 2017 mill feed sample. San Rafael material is not expected to lead to grinding circuit capacity constraints.

13.3.2 Flotation testing

Flotation testing was conducted both at Blue Coast Research Ltd ("BCR") in Parksville, British Columbia, Canada and on the minesite at Cozamin (allowing fresh local process water to be used). In both cases a joint BCR/Cozamin team executed the testwork and all work was conducted under the guidance of the Author. A total of 60 batch flotation tests and five locked cycle tests were conducted in three phases, the first phase being completed in Canada and the subsequent two phases on the minesite.

As the primary objective of the work was to demonstrate that the ores from the two deposits could be co-processed, the majority of the testing was conducted on blended samples. This testwork included flowsheet development work on master composites, and on blended composites comprising MNFWZ and the variability samples.

The reagent scheme employed was a variant of what was being used in the mill at the time, and the preferred flowsheet was designed to minimize the need for re-training of current operators, by adhering to an approach that had been used in the recent past for short periods when more lead-rich material had been processed. Reagents were kept to those conventionally used in the mill.

Accordingly, the flowsheet as tested in the final locked cycle test was as shown in Figure 13-2.

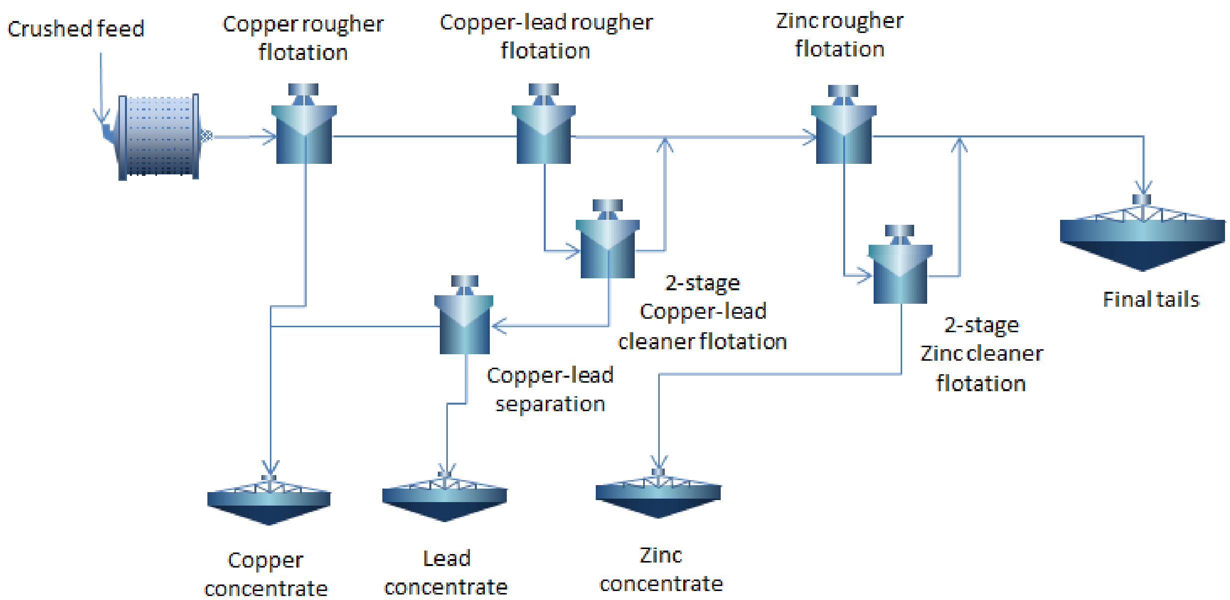


Figure 13-2: Flowsheet Employed in Locked Cycle Test LCT-5

Typical locked cycle concentrates grades and recoveries to the copper, lead and zinc concentrates are shown in Table 13-1.

Table 13-1: Results from Locked Cycle Test (LCT-5) using Flowsheet to be Adopted by the Mill

Product	Mass pull %	Assays %, g/t					% Distribution				
		Pb	Zn	Ag	Cu	Fe	Pb	Zn	Ag	Cu	Fe
Final Copper Concentrate	4.7	2.3	2.8	497	25.9	25.9	23	8	55	85	19
Final Lead Concentrate	0.7	46.6	5.1	921	11.7	13.1	68	2	14	5	1
Final Zinc Concentrate	3.1	0.5	44.6	108	1.7	15.9	3	80	8	4	8
Feed	100.0	0.5	1.7	43	1.4	6.6	100	100	100	100	100

The Cozamin mill makes extensive use of column flotation for the production of high quality saleable concentrates, while the provision of large cleaner conventional cell capacities capturing and recycling the often high losses from columns ensures good overall cleaner recoveries. For the most part, the efficiency of such circuits cannot be replicated in the laboratory and so it was expected that the mill would produce higher grade concentrates than was typically produced in laboratory testing. Concentrate grade projections were based on previous BCR experience of scaling up laboratory testwork to plant column cleaner circuit.

A brief variability program, testing blends of different San Rafael samples with MNFWZ material was used to develop some simple algorithms, which were used to develop metallurgical forecasts for treating the blended San Rafael/MNFWZ feeds. These algorithms, generally linking metal recovery to head grade are shown in the next section, together with actual mill performance on the blended feed materials.

13.3.3 Mill performance in 2018 on the blended feed

Since February 2018, the mill has been treating blended ores from San Rafael and MNFWZ. Mill daily operating data from the period April to June 2018 has been used to assess the performance of the mill against that predicted from the testwork. Recovery predictions had been provided through the use of algorithms for each metal driven by the respective feed grade (except for silver, the recovery of which appeared to be more closely linked to lead head grade).

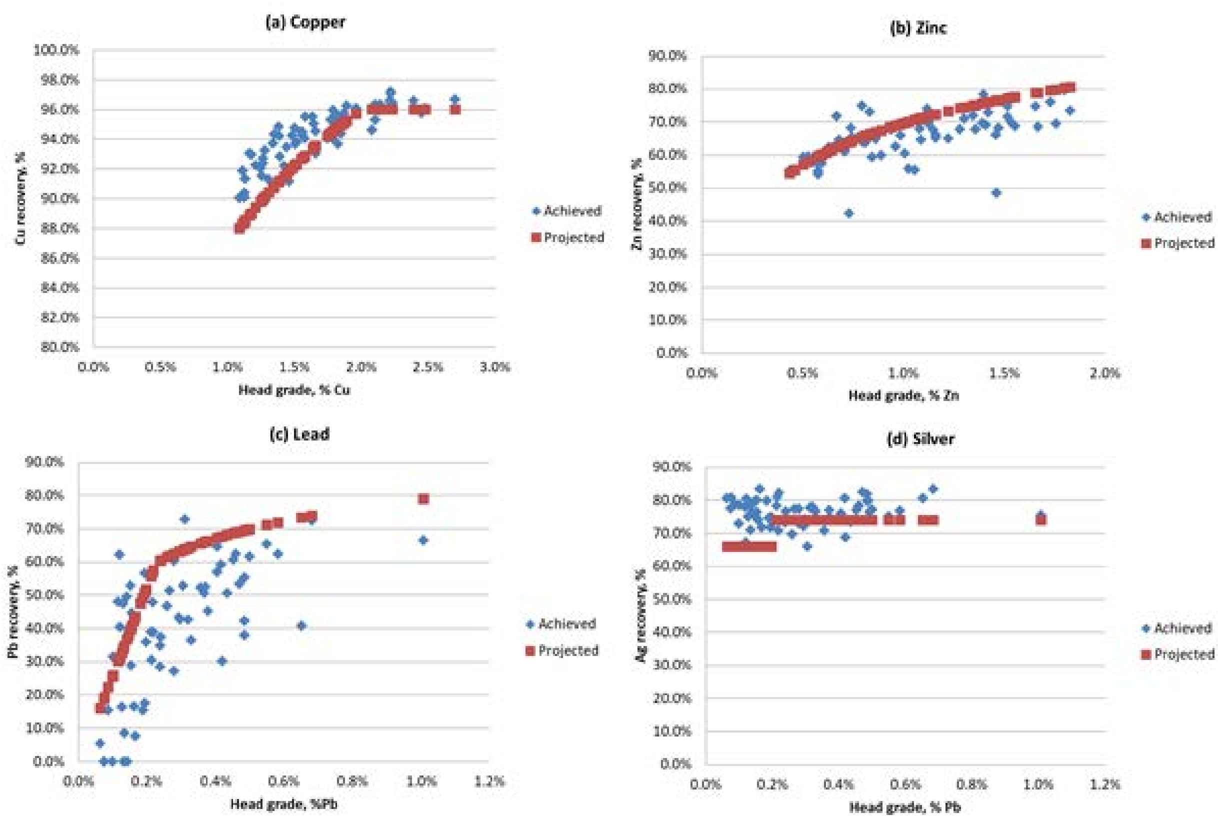


Figure 13-3: Head Grade vs Recovery: Performance Achieved by the Mill vs. Predicted from Testing

The mill has proven capable of achieving and in some cases beating the targets set out in the laboratory testing. Average copper concentrate grades are 26% versus the predicted 27%, while lead concentrate grades (56% lead) are much higher than predicted (49% lead). This arises from the need to run the copper/lead separation circuit much more sparingly than expected, due to current operating issues with the use of cyanide in this circuit. Zinc concentrate grades (averaging 47%) are exactly as predicted.

Daily mill recoveries through the quarter are plotted in Figure 13-3 against expected metallurgy from the algorithms developed from the testing. Copper recovery has tracked expected performance well, but has typically been 1% higher than predicted. The higher recovery is arising from more sparing use of the copper-lead separation circuit, due to the above-noted issues in this circuit. This also accounts for most of the shortfall in lead recovery. Zinc recovery tracks the predictive algorithm quite well though overall recovery is slightly poorer than had been predicted. This is believed to be largely a consequence of a higher (unrecoverable) oxide zinc content in the current mill feed than expected through the San Rafael mine life. This is, in turn, a consequence of the specific location being mined through the quarter. Silver recovery is a little better than predicted.

Overall, however, the mill data has confirmed the early laboratory work, that the two ore types can be effectively co-processed, at least to blends up to 25-30% San Rafael ore, producing good quality concentrates at recoveries that are mostly close to those predicted from the testing.

14 Mineral Resources Estimates

At the Cozamin Mine, mineral resources are estimated within the MNFWZ and MNV including the San Roberto ("SROB"), San Roberto Zinc ("SROB-Zn") and San Rafael zones. Capstone commenced production from SROB in 2006, San Rafael during 2006-2009 then since February 2018, MNFWZ in 2010 and from SROB-Zn since early 2018.

In March 2009, Capstone completed a mineral resource estimate for the San Roberto and San Rafael zones under the supervision of Robert Sim, P.Geo., of Sim Geological Inc. (SGI). Findings from the mineral resource estimate was summarized in a NI 43-101 Technical Report (SRK, 2009). In December 2009, the San Rafael zone was again updated by SGI to reflect additional exploration and infill drilling.

The MNV San Roberto and Mala Noche Footwall zones were updated, respectively in November 2012 and February 2013, as two separate mineral resource models by Ali Shahkar, P.Eng., of Lions Gate Geological Consulting Inc. (Shahkar, 2013). After completion of the 2013 drilling campaign, which focused on infilling and delineation of additional resources in the San Roberto zone and MNFWZ, Capstone commissioned LGGC in January 2014 to combine and update the mineral resource models of these two zones.

MNV was the subject of two subsequent internal resource estimation updates. The June 2016 update (Capstone, 2016) included 18 infill drillholes at San Roberto. An interim update in February 2017 targeted zinc-rich zones with 8 infill holes at SROB-Zn and 14 infill drillholes at San Rafael. The San Roberto zone was separated into the SROB and SROB-Zn mineralization domains (Capstone, 2017a).

The MNV mineral resource estimate, currently comprising the SROB, SROB-Zn and San Rafael zones, was updated effective July 2017 incorporating 27 HQ infill drillholes completed February to July 2017 and 60 underground BQ drillholes from mid-March 2016 to July 2017 featuring whole core sampling. Further, 28 drillholes were omitted where the vein intercepts did not reasonably fit and there was a concern over spatial data (12), azimuths were sub-parallel to mineralization domains (4), absent logging or sampling information (5) or twinned drillholes (6); 9 of the omitted drillholes were rejected in previous mineral resource estimations (Capstone, 2017a).

The July 2017 mineral resource was reported above a NSR cut-off using Capstone's current NSR formulae. Capstone believes the parameters and methodology are sufficient to consider the mineral resources in the San Rafael zone as current for reporting purposes.

In January 2018, Capstone commissioned Kirkham Geosystems Ltd. to complete an updated resource estimate on the MNFWZ to incorporate current data, models and understanding. There have been interim estimates and models performed by the company internally which is to be expected considering that Cozamin is an operating mine, however none of these estimates were published in the public domain. In addition, Kirkham Geosystems was tasked with updating the Mala Noche zone resources reporting to align with current pricing and updated NSR formula.

The cut-off date for data and models for this report is March 31, 2018.

14.1 Mala Noche and Mala Noche Footwall Zones

Mineral Resource Estimates for the San Roberto and the Mala Noche Footwall zones, using data from surface and underground diamond drillholes are the subject of these sections. The March 2014 mineral resource estimates were built using the commercially available three-dimensional block modelling software, Leapfrog®, Maptek™ Vulcan and MineSight®.

14.1.1 Geological Modelling

The drillhole desurveying method was set to the *balanced tangent algorithm* to be compatible with the *tangent* drillhole desurveying method used by Maptek™ Vulcan and MineSight®. This option is accessed in the survey table in Leapfrog®.

The internal validation tools provided in Leapfrog® were used to complete a more thorough validation of the data. No errors were identified in the collar, survey, lithology, or assay tables. In the density, mineralization, structure and geotech tables, zero-length intervals (point values) and overlapping intervals were identified. These were flagged for correction and were addressed subsequent to this mineral resource estimate.

Following July 2017, strip logs of the drillholes were created to assist with the geological interpretation. These included geochemical, geological, mineralogical, structural and economic data to help reduce ambiguity in the vein/mineralization boundary definition.

These led to stronger definition of the lithological boundaries of the Mala Noche fault-vein hangingwall and footwall contacts, as well as confirmed the interpretation of the limits of the mineralized zones within the MNV fault-vein structure.

A revised lithological model was created due to redefinition and regrouping of lithological logging codes. A simplified lithological model was generated using Leapfrog® software to assist with exploration targeting and to provide lithological information for mine planning purposes. Four lithological units were modeled based on diamond drillhole logs and surface mapping including lutite, andesite, diorite, and rhyolite (Figure 14-1). Surface mapping was tied into the sub-surface models using polylines. It should be noted that post-mineral faulting and the absence of a marker horizon complicated the creation of a robust stratigraphic model however the models are adequate for the purpose created.

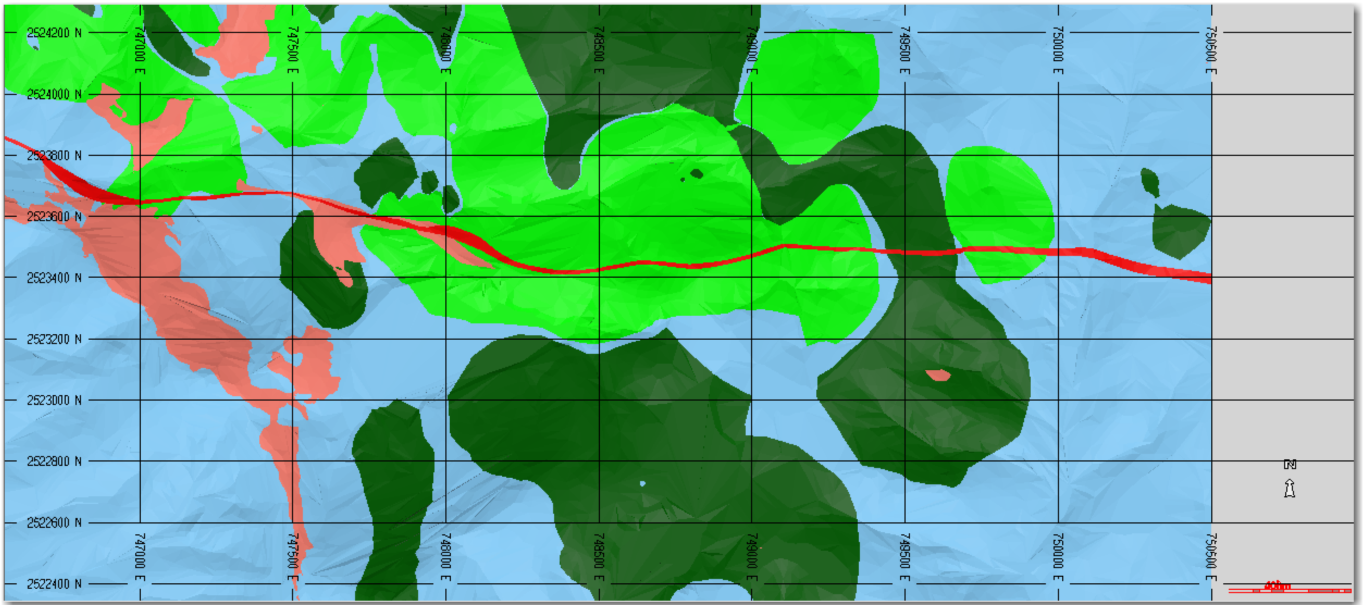


Figure 14-1: Modelled lutite (grey-blue) displayed with the rhyolite (pink), andesite (light green), diorite (dark green), MNV (red).

14.1.1.1 Mineralization Models

Mineralization domains for MNV and MNFWZ were constructed using Leapfrog® software. The vein system function was used allowing individual veins to be identified and assigned a priority to manage the relationship of multiple intersecting veins. This was done on a section by section basis using the interval selection tool by manually selecting categorical data from either lithology, structure or vein type. Alternatively, assay data was converted into NSR value ranges to define each individual vein domain. Core photos and diamond drillhole strip logs were also used to assist in the process of defining the limits of the mineralization domains and polylines were used to help guide the location of the vein position locally. All vein boundary surfaces were manually edited to restrict their extents along strike, up dip, and down dip. Finalized mineralized domains were then exported from Leapfrog® and imported into Maptek™ Vulcan and MineSight®.

14.1.1.1.1 Mala Noche Zone

A total of five discrete veins were modelled in the MNV: MNV_Main, MNV_HW1, MNV_HW2, MNV_HW3, and MNV_East_HW1.

Table 14-1 shows the domains and corresponding volumes for each. The MNV_Main was further subdivided into three sub-domains to spatially segregate high-grade mineralization from surrounding low-grade/unmineralized material. Also, all mineralization wireframes were trimmed against the lithological interpretation of the MNV to ensure mineralization was constrained within the MNV structure.

Table 14-1: Mineralized Domains within Mala Noche Zone

Domain Name	Volume (m³)
Main	29,249,252
HW1	318,849
HW2	143,060
HW3	68,396
East_HW1	365,364
Total	**30,114,921**

The MNV is shown in Figure 14-2 and Figure 14-3.

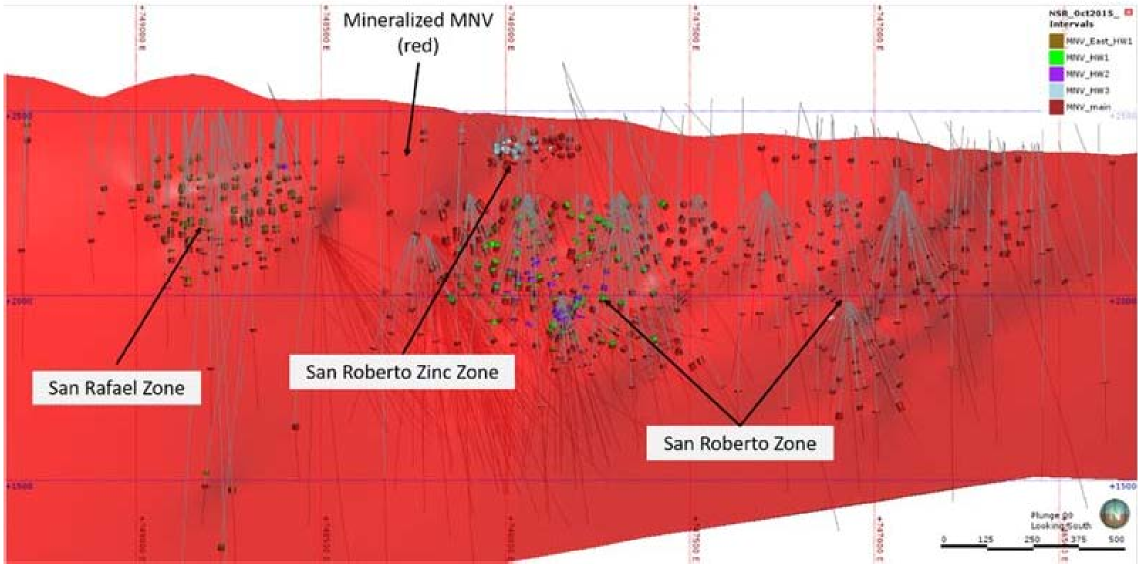


Figure 14-2: Long section, looking south, of the mineralized MNV (red).

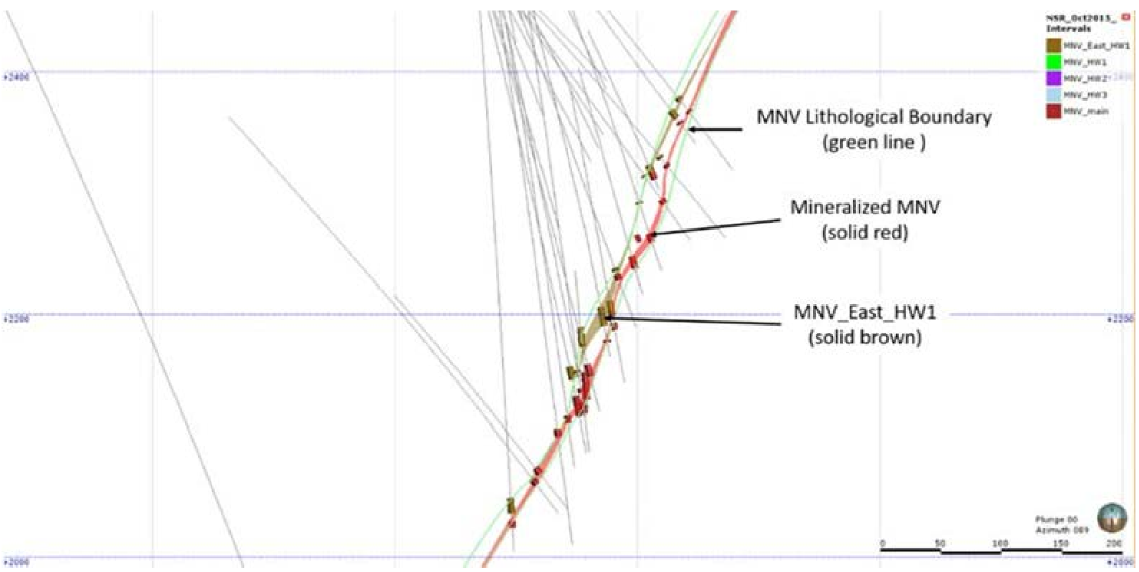


Figure 14-3: Cross section (San Rafael Zone) illustrating MNV Main (dark red intercepts and red solid vein) and MNV_East_HW1 (brown intercepts and brown solid vein) within the lithological boundary (green line).

The MNV_HW1 is a hangingwall structure in the heart of the San Roberto zone. It terminates against the hangingwall of MNV_Main (Figure 14-4).

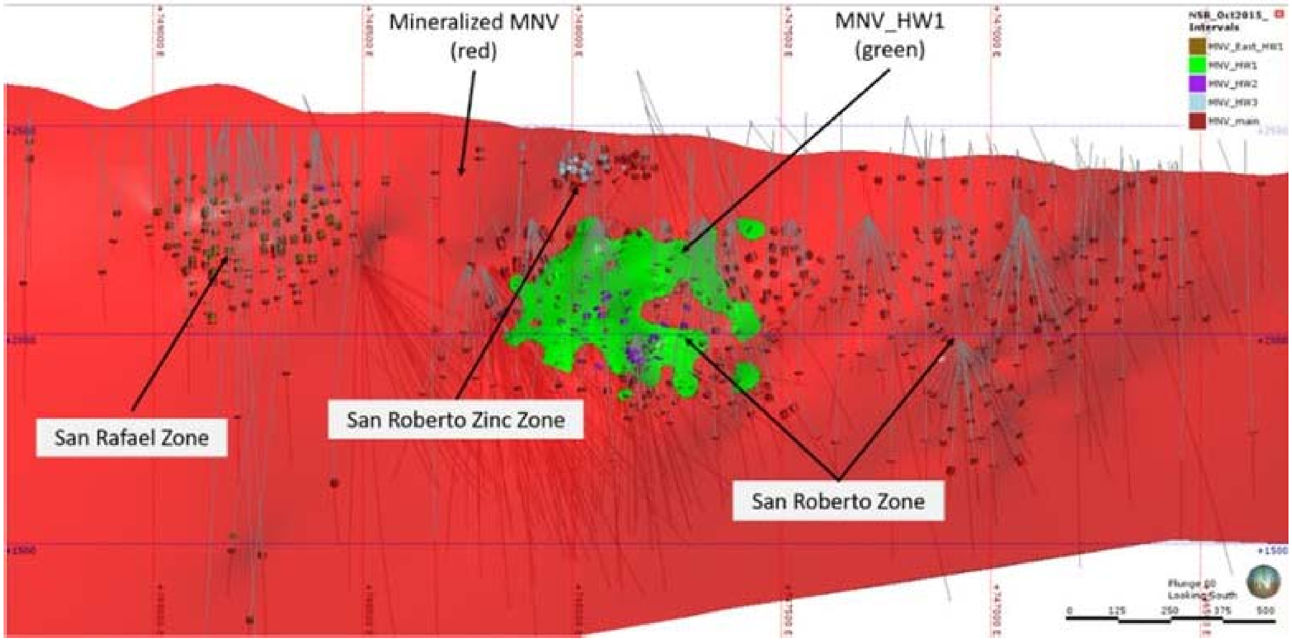


Figure 14-4: Long section, looking south, of MNV_HW1 (green) in relation to MNV (red).

The MNV_HW2 is another hangingwall structure (in the hangingwall of MNV_HW1) in the San Roberto zone. It terminates against the hangingwall of MNV_HW1 and MNV_Main (Figure 14-5).

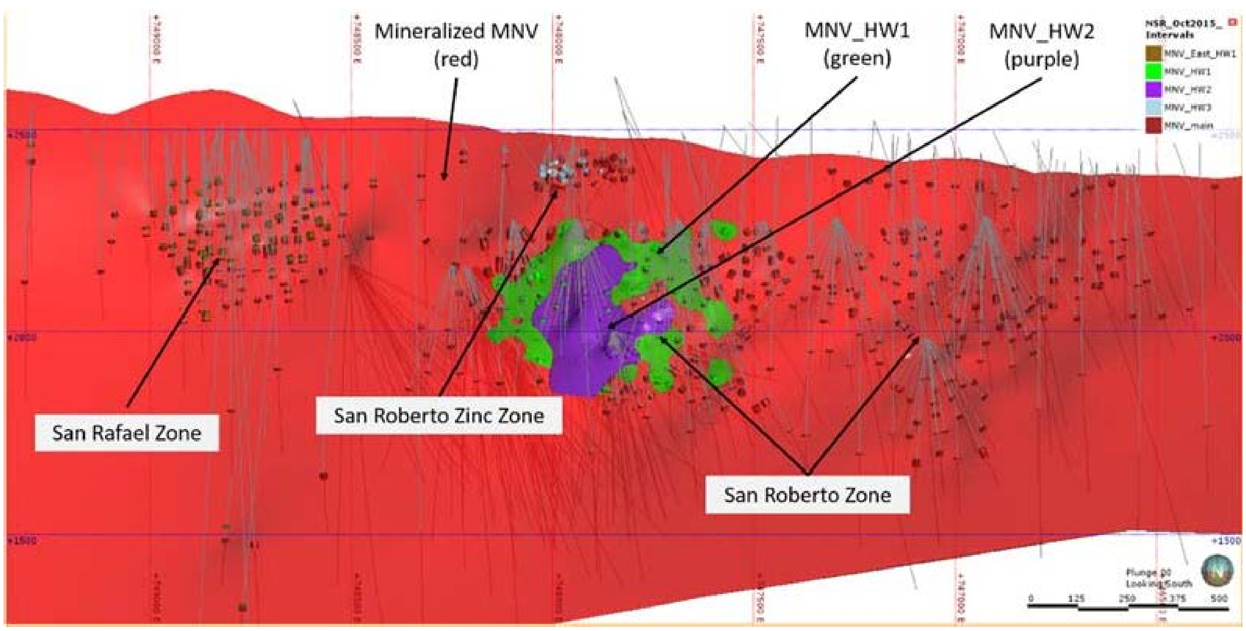


Figure 14-5: Long section, looking south, of MNV_HW2 (purple) in relation to MNV_HW1 (green) and MNV (red).

The MNV_HW3 is a hangingwall structure located in the San Roberto Zinc zone. It likely represents the up-dip portion of the MNV_HW1 vein, but there is insufficient drilling information to confirm this. It terminates against the hangingwall of MNV_Main (Figure 14-6).

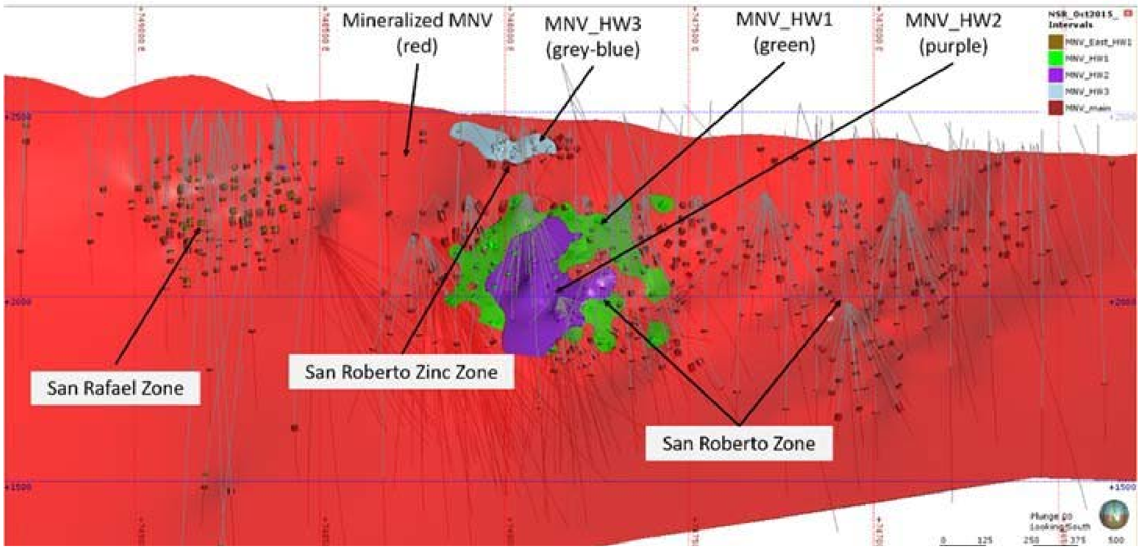


Figure 14-6: Long section, looking south, of MNV_HW3 (grey-blue) in relation to MNV_HW2 (purple), MNV_HW1 (green) and MNV (red).

The MNV_East_HW1 is a hangingwall structure located in the San Rafael zone. It terminates against the hangingwall of MNV_Main (Figure 14-7).

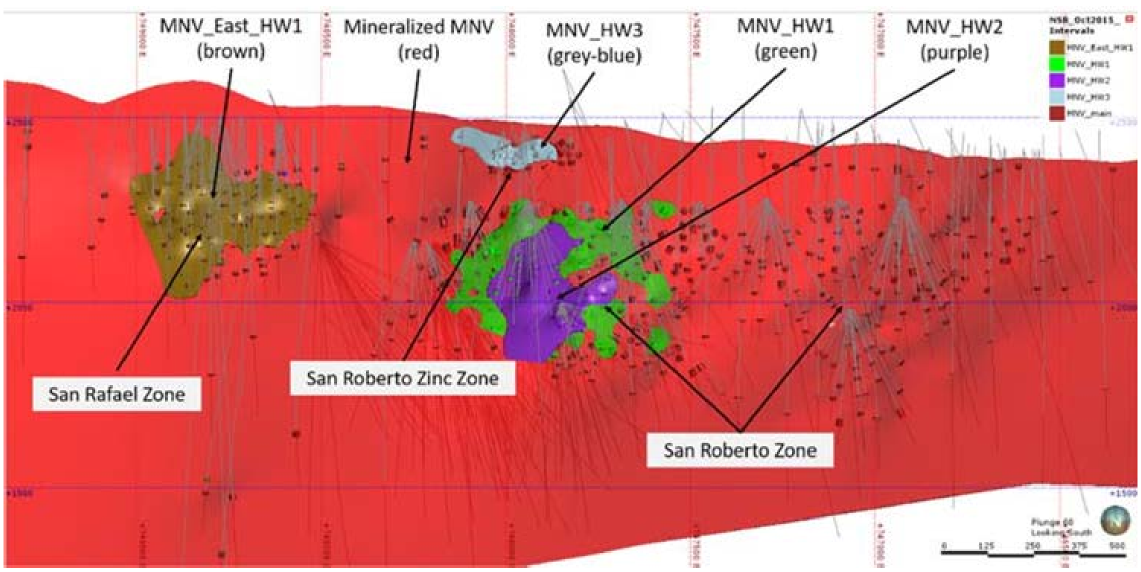


Figure 14-7: Long section, looking south, of MNV_East_HW1 (purple) in relation to MNV_HW1 (green) and MNV (red).

The San Roberto and San Rafael zones represent spatially-isolated, high-grade mineralized zones within the mineralized MNV (MNV_Main). To segregate these zones from lower-grade areas, two sub-domains were defined. In the San Roberto zone, two polygons were created to isolate the high-grade copper and zinc mineralization. In the San Rafael and San Roberto Zinc zones, a single polygon was created to isolate the high-grade zinc (low-grade copper) mineralization. (Figure 14-8).

The remaining areas of the MNV_Main represent low-grade/unmineralized material, which were classified as vein domain VN08. The sub-domains VN01, VN02, and VN08 (pink solid) are treated as mutually exclusive subsets comprising the entire modelled MNV_Main vein (Figure 14-8).

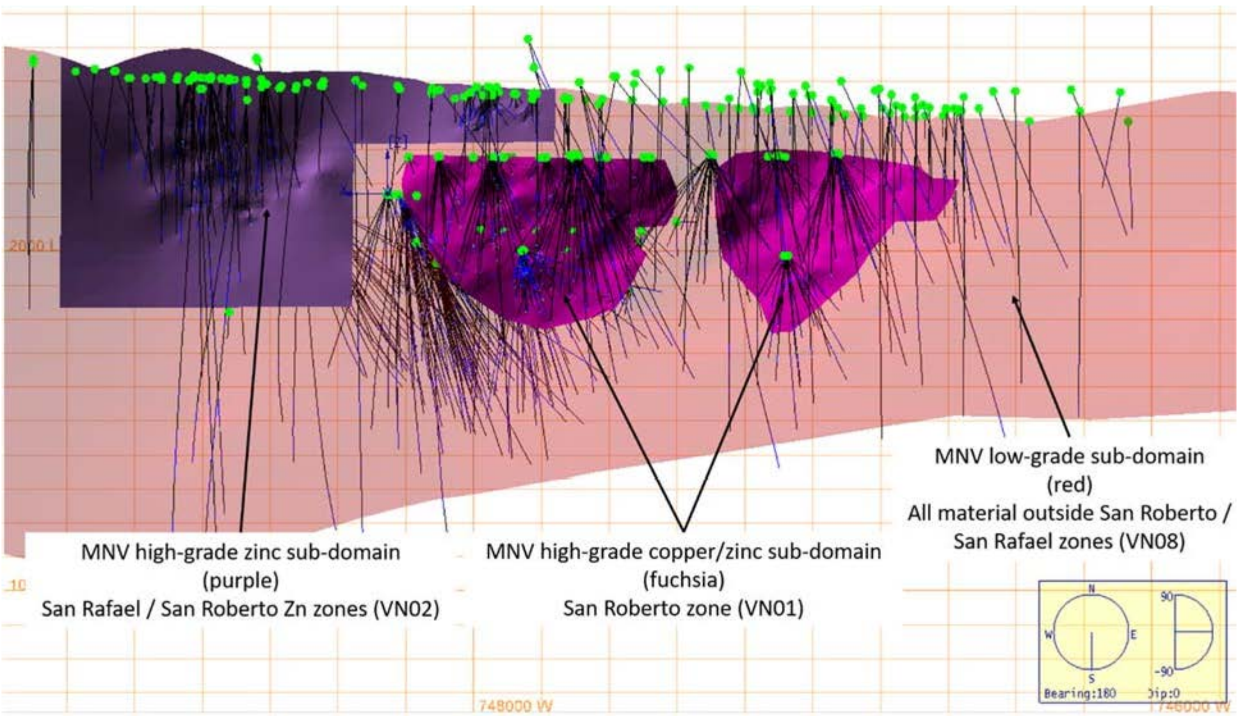


Figure 14-8: Long section, looking south, of sub-domains comprising the MNV_Main vein: San Roberto (VN01), San Rafael/San Roberto Zinc (VN02) and low-grade/unmineralized (VN08).

14.1.1.2 Mala Noche Footwall Model

Table 14-2 includes a list of the seven domains that were modelled at MNFWZ and the volumes reported for each domain solid. The total volume of all vein solids at MNFWZ is 7,114,765 m^3.

Table 14-2: Mineralized Domains within Mala Noche Footwall Zone

Domain Name	Volume (m^3)
Calicanto	770,424
VN08	32,560
VN09	350,805
VN10	1,270,752
VN18	414,154
VN20	3,970,585
VN22	305,485
Total	**7,114,765**

The MNFWZ strikes approximately southeast, 145° over its length, but strikes 92° in the western section of the zone. The Calicanto vein strikes at approximately 136° over the total strike length measured over 2,630 m (Figure 14-9 and Figure 14-10). The veins range in thickness from sub-metre to approximately 10 metres.

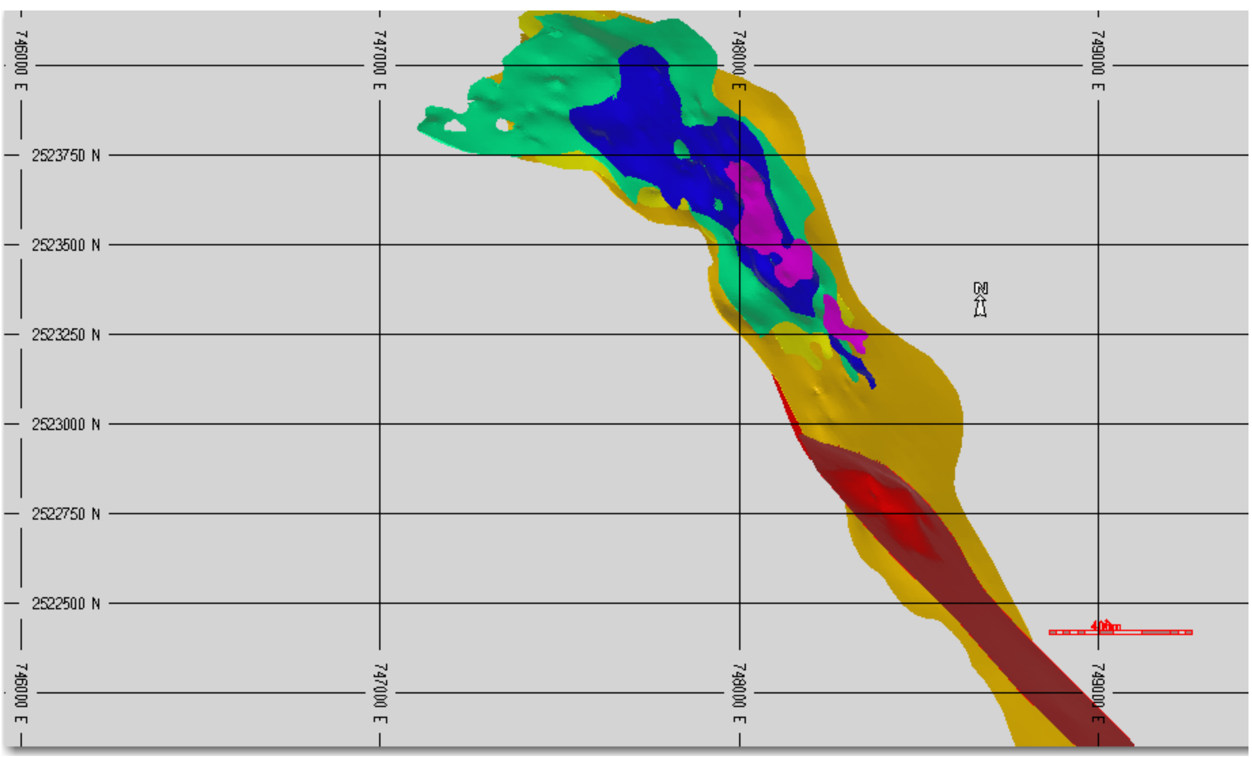


Figure 14-9: MNFWZ Structural Sub-Domains, Calicanto (red), VN22 (orange), VN20 (yellow), VN18 (green), VN10 (light blue), VN09 (dark blue), VN08 (purple)

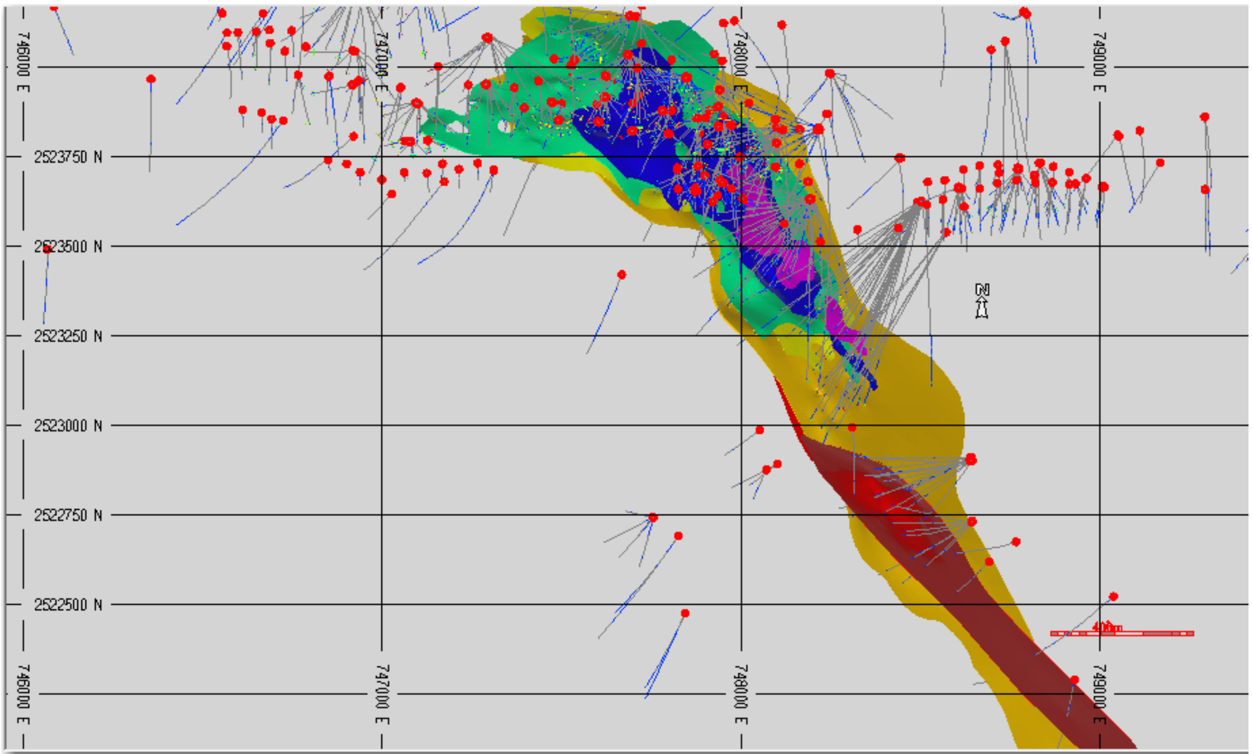


Figure 14-10: MNFWZ Structural Sub-Domains with DDH's, Calicanto (red), VN22 (orange), VN20 (yellow), VN18 (green), VN10 (light blue), VN09 (dark blue), VN08 (purple)

14.1.2 Mala Noche Zone Mineral Resource Modelling

The Mala Noche resource modelling comprises the San Roberto copper zone along with the San Roberto and San Rafael zinc zones. The following section details the method and procedures employed to estimate the mineral resources within these zones and the classification of those resources.

14.1.2.1 Raw Data

The raw drillhole data were imported into Maptek™ Vulcan software version 10.1.1. This included data from the *collar.csv*, *survey.csv*, *lithology.csv*, *assay.csv*, *density.csv* and *geotech.csv* tables.

14.1.2.1.1 Geochemical Sample Analysis

The raw drillhole sample data were desurveyed and stored. The domain wireframes were used to code the drillhole data within the respective vein domains in the compositing process using the priority sequence defined during geological modelling. Missing and non-sampled data were ignored, while a value of 0.001 was assigned to data not logged. The drillhole selection file was used to exclude the drillholes identified as unsuitable for mineral resource estimation.

The database was exported and viewed within Snowden Technologies Pty Ltd *Supervisor* software version 8.7.0.7 ("Supervisor"). Univariate statistics, by vein domain, are summarized in Table 14-3 through Table 14-8 for the MNV model.

Table 14-3: Cu raw statistics of MNV

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
0	40,952	0.0001	22.00	0.16	0.89	5.61
VN01	5,818	0.0005	16.40	1.92	2.49	1.29
VN02	1,560	0.001	5.50	0.29	0.48	1.69
VN03	535	0.0005	3.48	0.24	0.43	1.78
VN05	579	0.0005	12.35	1.56	2.33	1.49
VN06	314	0.0005	12.40	1.21	1.96	1.62
VN07	87	0.0009	0.53	0.07	0.11	1.46
VN08	1,171	0.0005	7.39	0.41	0.73	1.77
Lith10	6,327	0.0002	14.2	0.15	0.67	4.34

Table 14-4: Ag raw statistics of MNV

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
0	40,952	0.001	4,070	5.82	37.5	6.44
VN01	5,818	0.001	1135	67.1	87.4	1.30
VN02	1,560	0.001	650	43.6	54.6	1.25
VN03	535	0.001	1,500	41.7	82.6	1.98
VN05	579	0.001	1,520	59.1	112.6	1.90
VN06	314	0.001	610	44.8	74.8	1.67
VN07	87	0.210	62.0	15.9	14.5	0.91
VN08	1,171	0.001	737	31.6	53.7	1.70
Lith10	6,327	0.001	3,020	9.15	47.8	5.22

Table 14-5: Zn raw statistics of MNV

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
0	40,952	0.0001	39.35	0.25	1.15	4.63
VN01	5,818	0.0005	28.30	1.43	2.62	1.84
VN02	1,560	0.0010	36.03	3.91	4.25	1.09
VN03	535	0.0010	19.95	3.67	3.42	0.93
VN05	579	0.0010	30.00	2.14	3.29	1.53
VN06	314	0.0010	11.05	1.46	2.27	1.56
VN07	87	0.1100	21.00	2.97	3.21	1.08
VN08	1,171	0.0010	28.90	1.83	3.11	1.71
Lith10	6,327	0.0005	43.07	0.61	1.44	2.35

Table 14-6: Pb raw statistics of MNV

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
0	40,952	0.0010	28.90	0.04	0.30	7.66
VN01	5,818	0.0005	36.85	0.33	1.57	4.69
VN02	1,560	0.0009	29.45	0.60	1.76	2.94
VN03	535	0.0010	20.00	0.56	1.46	2.61
VN05	579	0.0004	32.54	0.82	2.99	3.63
VN06	314	0.0010	13.05	0.84	2.17	2.59
VN07	87	0.0022	1.60	0.22	0.34	1.53
VN08	1,171	0.0001	20.00	0.26	1.14	4.32
Lith10	6,327	0.0001	13.65	0.11	0.60	5.70

Table 14-7: Zn oxide composited statistics of MNV

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
0	236	0.005	1.78	0.12	0.20	1.68
VN02	248	0.020	5.52	0.72	0.88	1.22
VN07	56	0.030	2.11	0.59	0.53	0.91
Lith10	165	0.005	1.74	0.22	0.24	1.09

Table 14-8: Pb oxide composited statistics of MNV

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
0	4	0.010	0.32	0.10	0.15	1.48
VN02	115	0.005	3.09	0.24	0.43	1.83
Lith10	4	0.010	0.13	0.05	0.06	1.26

14.1.2.1.2 Bulk Density Sampling

Bulk density sampling has been undertaken systematically throughout the MNV and MNFWZ veins. Since 2013 samples were taken at the same volume support as the geochemical assay data (i.e., the average bulk density value was generated over the interval length as the assay sample).

The vein domains and lithology wireframes were used to code the drillhole data in the compositing process (populating the domain and litho fields in the database).

Univariate statistics of the raw, domain-coded bulk-density drillhole sample data within the modelled veins and lithology units are summarized in Table 14-9. A filter was placed on the data during importation in to Supervisor, where values less than 1.50 g/cm3 were excluded (totaling 711). Those greater than 6 g/cm3 were included and then top cut.

Table 14-9: Bulk density raw statistics (MNV domains and all lithology units)

Vein/Litho	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	4,574	2.10	6.05	2.89	0.33	0.11
VN02	973	2.26	4.56	2.76	0.24	0.09
VN03	327	2.28	4.92	2.73	0.22	0.08
VN05	382	2.34	4.81	2.95	0.37	0.12
VN06	208	2.40	4.45	2.83	0.36	0.13
VN07	10	2.64	3.01	2.79	0.11	0.04
VN08	817	2.15	3.80	2.73	0.19	0.07
Lith 10	2,838	1.60	4.95	2.67	0.22	0.08
Lith 30	4,468	1.50	4.09	2.60	0.15	0.06
Lith 50	3,844	1.75	6.91	2.72	0.16	0.06
Lith 60	2,107	1.50	4.93	2.69	0.16	0.06
Lith 80	5,868	1.50	4.03	2.67	0.14	0.05

14.1.2.1.3 Core Recovery and Rock Quality Data (RQD) Samples

Core recovery data are recorded from measurements taken by the geologist of the total core length in the box between the blocks demarking the run interval. Rock Quality Data ("RQD") information involved summing the total length of individual pieces greater than 10 cm in length, divided by the run length. The resulting value is expressed as a percentage. Note that the core recovery and RQD data within the lithological domains should be considered as indicative and not definitive due to grouping of lithologies during the geological modelling process. Individual sub-units within a lithological domain (e.g., andesite tuff) could have significantly different values.

The vein domains and lithology wireframes were used to code the drillhole data in the compositing process (populating the domain and litho fields in the database). The domain-coded, raw statistics for the core recovery and RQD data are summarized in Table 14-10 and Table 14-11.

Table 14-10: Core recovery raw statistics (MNV domains and all lithology units)

Vein/Litho	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	351	18.03	100.0	96.88	8.20	0.08
VN02	371	0.00	100.0	95.88	12.41	0.13
VN03	115	68.40	100.0	98.71	4.19	0.04
VN05	50	31.50	100.0	93.40	14.18	0.15
VN06	66	86.56	100.0	99.09	2.53	0.03
VN07	53	62.15	100.0	96.13	8.25	0.09
VN08	274	0.00	100.0	98.05	8.03	0.08
Lith 10	2,231	0.00	100.0	95.96	14.17	0.15
Lith 30	5,886	0.00	100.0	93.45	22.69	0.24
Lith 50	22,805	0.00	100.0	98.51	8.77	0.09
Lith 60	14,089	0.00	100.0	86.26	32.70	0.38
Lith 80	28,687	0.00	100.0	97.41	12.17	0.12

Table 14-11: RQD raw statistics (MNV domains and all lithology units)

Vein/Litho	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	351	1.0	100.0	62.54	26.34	0.42
VN02	371	0.0	100.0	56.22	33.54	0.60
VN03	115	0.0	100.0	61.06	33.83	0.55
VN05	50	5.0	94.0	64.58	22.72	0.35
VN06	66	25.0	87.0	59.21	16.39	0.28
VN07	53	0.0	100.0	51.92	32.38	0.62
VN08	274	0.0	100.0	60.53	27.98	0.46
Lith 10	2,231	0.0	100.0	58.31	29.59	0.51
Lith 30	5,886	0.0	100.0	57.20	28.97	0.51
Lith 50	22,805	0.0	100.0	72.07	24.02	0.33
Lith 60	14,089	0.0	100.0	38.24	38.41	1.00
Lith 80	28,687	0.0	100.0	60.97	27.75	0.46

14.1.2.2 Compositing

The raw drillhole samples were composited within the modelled wireframes following the same prioritization rules used as previously stated. A 2.0 m composite length was chosen to match the minimum mining thickness. The run-length composite method with the merge option was used with a tolerance of 0.5, as it yielded the most sample intervals with a 2 m width and a smaller sample-length variance than the other methods. Domain codes into the domain field of the database and to assign a default of zero (0) for samples in the waste domain.

The undeclustered statistics of the composited data are presented in Table 14-12 through Table 14-18.

Table 14-12: Cu composited statistics of MNV (undeclustered)

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	1,473	0.0005	10.13	1.74	1.89	1.08
VN02	536	0.0020	2.13	0.26	0.35	1.33
VN03	171	0.0010	2.32	0.22	0.34	1.51
VN05	162	0.0043	9.46	1.42	1.76	1.24
VN06	120	0.0090	6.07	1.02	1.39	1.37
VN07	59	0.0010	0.35	0.07	0.09	1.35
VN08	398	0.0006	4.58	0.37	0.57	1.52
Lith10	2,746	0.0005	8.60	0.11	0.42	3.71

Table 14-13: Ag composited statistics of MNV (undeclustered)

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	1,473	0.150	634.6	60.1	63.1	1.05
VN02	536	0.611	261.8	39.4	38.7	0.98
VN03	171	2.000	359.9	35.5	40.7	1.14
VN05	162	0.500	543.2	53.5	74.8	1.40
VN06	120	1.250	391.0	37.9	52.5	1.39
VN07	59	0.260	58.7	14.8	13.4	0.90
VN08	398	0.001	316.6	23.9	35.2	1.48
Lith10	2,746	0.059	758.3	7.3	22.9	3.14

Table 14-14: Zn composited statistics of MNV (undeclustered)

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	1,473	0.004	23.14	1.44	2.04	1.41
VN02	536	0.006	22.02	3.68	3.29	0.89
VN03	171	0.001	14.35	3.61	2.51	0.70
VN05	162	0.020	16.00	2.01	2.58	1.29
VN06	120	0.008	10.00	1.39	1.89	1.36
VN07	59	0.190	10.77	2.83	2.27	0.80
VN08	398	0.001	22.40	1.56	2.32	1.48
Lith10	2,746	0.001	16.84	0.55	0.91	1.65

Table 14-15: Pb composited statistics of MNV (undeclustered)

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN01	1,473	0.001	11.30	0.30	0.78	2.96
VN02	536	0.001	17.31	0.62	1.39	2.26
VN03	171	0.001	11.37	0.61	1.19	1.96
VN05	162	0.003	17.63	0.80	2.41	3.00
VN06	120	0.003	10.00	0.65	1.55	2.39
VN07	59	0.003	1.30	0.20	0.28	1.39
VN08	398	0.001	6.04	0.21	0.55	2.62
Lith10	2,746	0.001	8.15	0.08	0.36	4.32

Table 14-16: Zn oxide composited statistics of MNV (undeclustered)

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN02	123	0.022	5.33	0.58	0.74	1.27
VN07	40	0.036	1.79	0.56	0.44	0.80
Lith10	118	0.010	1.52	0.22	0.22	0.97

Table 14-17: Pb oxide composited statistics of MNV (undeclustered)

Domain	No. Samples	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
VN02	41	0.005	1.42	0.22	0.34	1.55
Lith10	2	0.020	0.02	0.02	-	-

Table 14-18: Bulk density composited statistics of (MNV domains and all lithology units)

Vein Domain	No. Samples	Min (g/cm^3)	Max (g/cm^3)	Mean (g/cm^3)	Std. Dev. (g/cm^3)	COV
VN01	1,469	2.42	5.21	2.87	0.27	0.10
VN02	452	2.26	4.03	2.76	0.19	0.07
VN03	164	2.42	3.38	2.72	0.15	0.06
VN05	124	2.52	3.96	2.92	0.30	0.10
VN06	88	2.46	3.94	2.82	0.34	0.12
VN07	8	2.65	3.01	2.80	0.11	0.04
VN08	334	2.41	3.45	2.71	0.14	0.05
Lith 10	1,391	1.79	4.22	2.66	0.17	0.06
Lith 30	2,656	1.54	3.95	2.59	0.13	0.05
Lith 50	3,150	1.53	6.91	2.73	0.15	0.05
Lith 60	1,673	1.50	4.93	2.70	0.15	0.06
Lith 80	4,119	1.55	3.67	2.67	0.11	0.04

Since core recovery and RQD are calculated on a "per core run" basis of 3.05 m, compositing is not necessary.

14.1.2.3 Exploratory Data Analysis (EDA)

An exploratory data analysis ("EDA") was undertaken in Supervisor on the composited drillhole data. The objectives of this study are as follows:

- Identify spatial trends in grade data and verify domaining strategy (data orientation, data population distributions).
- Characterize geochemical associations through a regression analysis of the high-grade domains, VN02, VN03 and VN07 (Table 14-19).
- Understand sample distributions within the domains and select the appropriate grade estimation method and estimation strategy.
- Assess top-cutting and search-restriction requirements for outlier samples.

Table 14-19: Regression analysis of composited sample data in domains VN02, VN03, VN07

Element	Ag	Cu	Zn	Pb	ZnOx	PbOx
San Roberto Zinc / San Rafael (VN02/03/07)						
Ag	1	**0.69**	0.33	0.36	-0.10	0.17
Cu	-	1	0.14	0.04	-0.13	0.00
Zn	-	-	1	0.31	0.32	0.20
Pb	-	-	-	1	0.03	0.60
ZnOx						0.26
PbOx						

The following observations were made based on geochemical correlations:

- Cu and Ag are well correlated. The same estimation search parameters will be used for both elements to attempt to maintain their relationship in the block model.
- Cu is uncorrelated with Zn and Pb and their oxide species. It will be estimated independently of these elements.
- Ag is weakly correlated with Zn and Pb and uncorrelated with their oxide species. It will be estimated independently of these elements.
- Zn and Pb are weakly correlated, so they will be estimated independently. They are uncorrelated with Cu and Ag.
- Pb is moderately correlated with it's oxide species, so estimation of PbOx will use the same estimation parameters.
- Zn is weakly correlated with it's oxide species, so estimation of ZnOx is independent of Zn.

The data in the high-grade mineralization domains (VN02, VN03, VN07) were reviewed graphically and spatially and the following observations were made with respect to grade distribution and continuity:

- The boundary between the high-grade sub-domains and low-grade sub-domain (VN08) will be treated as "soft" for grade estimation.
- The boundary between the high-grade sub domains within the modelled lithological vein structure (Lith10) will be treated as "hard" for grade estimation.
- Domains VN02 and VN03 show similar grade distributions for each element, so these will be combined and estimated together.
- Domain VN07 is lower in grade than VN02 and VN03 for each element, so it will need to be estimated separately. There are too few samples (57) to estimate using Ordinary Kriging, so this vein domain will be estimated using inverse distance weighting.
- The modelled veins are sinuous along strike. Grade estimation will utilize a search ellipse that changes orientation to match the locally varying strike and dip of the vein to ensure the correct samples are selected (Section 6.6).
- The coefficient of variation ("CoV") is between 0.7-1.6 for elements in the mineralization domains (VN02, VN03, VN07) except lead, which is generally higher than 2. Ordinary Kriging "OK" will be used for grade estimation, with top-cuts used to manage outlier values.

Copper:

- San Rafael contains significantly lower copper grades (~10x) than San Roberto zone, with only minor top cutting required.
- There is a central "core" area of higher-grade copper values in the central part of the San Rafael zone reaching as high as 2% Cu.

Silver:

- San Rafael is lower in grade (~30%) than the San Roberto zone, but minor top cutting will be required to control outlier grades that are dispersed throughout the zone.
- Higher-grade silver values are located in the eastern part of the San Roberto Zinc zone, with lower grades situated in the western part.

Zinc:

- San Rafael contains the highest average grade of zinc of all zones (3.7%), almost double the grade encountered in San Roberto and almost six times higher than the grade of the MNFWZ.
- The highest-grade samples are generally spatially associated with other high-grade samples, so top cutting would unfairly discount contained metal value. Instead, a search restriction will be employed to limit the influence of these samples on neighbouring blocks.

Lead:

- The lead distribution in the MNV deposit is strongly positively skewed, meaning that most of the lead metal value is contained within a few percent of the total distribution. This is supported through underground observations, where lead tends to occur in small, localized patches of higher grade material that is not continuously distributed. Due to this, Ordinary Kriging is not the optimal estimation technique because it tends to oversmooth these types of distributions and leads to overestimation of tonnage and contained metal. A non-linear estimation technique (e.g., multiple indicator kriging, conditional simulation, etc.) would be more appropriate, but given the very small percentage of total economic value (<5%) lead represents in the unmined portions of Cozamin, the additional time required to estimate using one of the suggested techniques is not justified.
- Top cutting and search restrictions will be used to mitigate over-estimation of lead using Ordinary Kriging. To be effective, they will be harsher than for the other elements. The consequence will be a reduced amount of available metal in the drillhole file during estimation and lower confidence in the estimated lead grades (they will likely still be oversmoothed), but this trade-off is considered reasonable given lead's economic contribution to the total value of the ore.
- Historical mine reconciliation has shown lead to be overestimated with respect to mine production. This will be considered during validation of the grade estimation, with the aim of having grades that slightly underestimate the input sample data.

Zinc Oxide:

- All samples are located in the San Roberto Zinc zone, with the highest grades reaching 5% ZnOx in the central part area. The grades decrease outward to the western and eastern limits.
- Grades in the hangingwall vein (VN07) are approximately double those in the main MNV structure (VN02), however, it is noted that the VN07 domain are only located in the eastern edge of the zone.
- Top cuts and search restrictions will be needed to limit the influence of the high-grade samples in the VN02 domain.

Lead Oxide:

- All samples are located in the San Roberto Zinc zone.
- The available data are sparse (49 in total) and will only provide a high-level indication of lead-oxide mineral concentrations. Inverse-distance weighting will be used to estimate the grades.
- The estimation parameters from lead (search orientation, sample numbers, etc.) will be borrowed to estimate lead oxide.

14.1.2.3.1 Bulk Density Data

The San Roberto vein domains have higher average bulk density (2.82-2.91 g/cm3) than the San Rafael (2.72-2.76 g/cm3). This implies there is a higher concentration of sulphide mineralization in the San Roberto zone and could be due to a higher amount of brecciation observed in the San Rafael mineralization.

14.1.2.3.2 Core Recovery and RQD Data

- Core recovery in the mineralization domains is greater than 95%, except for VN05, which is 93%. These are very good results and demonstrate the sample quality to be acceptable for use in mineral resource estimation.
- Lower recovery (< 90%) values do not appear to be spatially isolated or grouped, and they will not be factored into mineral resource confidence classification.
- RQD data are highly variable across the deposit. Rocks appear to have better RQD values at deeper depths (below 2,150 m).
- Rocks in VN02 (San Rafael) have a slightly lower average RQD (56%) than those in VN01 (62%). This could be due to the observed brecciated nature of the rocks in the San Rafael zone versus the San Roberto zone.

14.1.2.4 Outlier Analysis and Top Cutting

Grade distributions in each vein were assessed graphically and spatially for the presence of outlier samples, which can have a disproportionate impact during grade estimation and can lead to overestimated grades. Top-cut selection and search distance restrictions considered the locations of the outlier samples relative to other data. If high grade samples were isolated from other samples, top cuts and/or search restrictions were stricter to mitigate against grade overestimation, and conversely, they were relaxed if spatially associated with other high-grade samples. Determination of appropriate top-cut values was undertaken through identification of population breaks in histograms, and inflection points in log-probability plots and in mean-and-variance plots. The impact of the selected top cut was assessed by reviewing the change in the mean grade and CoV of the composited samples before and after the top cut (Table 14-20 through Table 14-25).

The samples from domains VN02 and VN03 were combined for grade estimation. For proper comparison to the block model estimates, the tables below present the combined domain statistics. For domain Lith10, top-cut selection for silver and copper considered the samples around the San Rafael and San Roberto Zinc zones only, and not the San Roberto zone. Estimate quality is focused in the San Rafael and San Roberto Zinc zones because the San Roberto zone is nearly mined out. It is noted that these zones have far fewer high-grade outlier values than the San Roberto zone, so the top cut is appropriate.

Table 14-20: Cu top-cut, composited statistics of MNV

Vein Domain	Mean (%)	CoV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV	No. Samples Cut	Rest. Search Threshold (%) and distance (m)
VN01	1.74	1.08	8.75	1.74	1.08	9	≥ 6.0 25×25×10
VN02/03	0.25	1.37	1.57	0.25	1.31	10	-
VN05	1.42	1.24	No TC	-	-	-	-
VN06	1.02	1.37	5.20	1.00	1.33	3	≥ 4.0 25×25×10
VN07	0.07	1.35	No TC	-	-	-	-
VN08	0.37	1.52	1.70	0.34	1.26	14	-
Lith10	0.11	3.71	3.80	0.11	3.20	8	≥ 1.24 24×18×6

Table 14-21: Ag top-cut, composited statistics of MNV

Vein Domain	Mean (ppm)	CoV	Top Cut (ppm)	Top Cut Mean (ppm)	Top Cut COV	No. Samples Cut	Rest. Search Threshold (%) and distance (m)
VN01	60	1.05	350	60	1.00	8	≥ 200 15×15×10
VN02/03	38	1.02	158	38	0.94	10	-
VN05	54	1.40	350	51	1.22	2	≥ 118 25×25×10
VN06	38	1.39	250	37	1.25	1	≥ 140 25×25×10
VN07	15	0.90	No TC	-	-	-	-
VN08	24	1.48	150	24	1.17	5	-
Lith10	7	3.14	30	6	1.13	76	-

Table 14-22: Zn top-cut, composited statistics of MNV

Vein Domain	Mean (%)	CoV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV	No. Samples Cut	Rest. Search Threshold (%) and distance (m)
VN01	1.44	1.41	12.0	1.43	1.35	6	≥ 10.0; 25×25×10
VN02/03	3.67	0.85	14.0	3.60	0.79	11	≥9.0 24×18×6
VN05	2.01	1.29	10.0	1.95	1.20	2	≥ 7.8; 10×10×10
VN06	1.39	1.36	No TC	-	-	-	-
VN07	2.83	0.80	6.7	2.69	0.70	2	-
VN08	1.56	1.48	11.0	1.52	1.36	5	-
Lith10	0.55	1.65	2.5	0.50	1.25	79	-

Table 14-23: Pb top-cut, composited statistics of MNV

Vein Domain	Mean (%)	CoV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV	No. Samples Cut	Rest. Search Threshold (%) and distance (m)
VN01	0.30	2.96	5.6	0.29	2.72	7	-
VN02/03	0.61	2.19	7.8	0.58	1.86	5	≥ 5.8; 24×18×6
VN05	0.80	3.00	9.5	0.70	2.58	2	≥ 8.0; 10×10×10
VN06	0.65	2.39	5.95	0.60	2.17	2	
VN07	0.20	1.39	0.80	0.18	1.22	3	-
VN08	0.21	2.62	2.4	0.19	2.26	6	
Lith10	0.08	4.32	2.6	0.08	3.04	8	≥ 1.4 24×18×6

Table 14-24: Zn oxide top-cut, composited statistics of MNV

Vein Domain	Mean (%)	CoV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV	No. Samples Cut	Rest. Search Threshold (%) and distance (m)
VN02/07	0.58	1.27	No TC	-	-	-	≥ 2.5; 24×18×6
Lith10	0.22	0.97	0.85	0.22	0.87	2	-

Table 14-25: Pb oxide top-cut, composited statistics of MNV

Vein Domain	Mean (%)	CoV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV	No. Samples Cut	Rest. Search Threshold (%) and distance (m)
VN02	0.22	1.55	No TC	-	-	-	-
Lith10	0.02	-	-	-	-	-	-

The composited bulk-density data were assessed graphically and spatially for outlier values in each vein domain. In general, top cuts were not harsh and only capped a minor number of samples in the mineralization vein domains. Top cuts were harsher in the waste lithology domains in order to mitigate the impact of isolated mineralized samples outside of the vein mineralization (Table 14-26). Search restrictions for higher bulk density values were not used.

Table 14-26: Bulk density top-cut, composited statistics (MNV)

Vein Domain	Mean (g/cm^3)	CoV	Top Cut (g/cm^3)	Top Cut Mean (g/cm^3)	Top Cut COV	No. Samps Cut
VN01	2.87	0.10	3.80	2.87	0.07	9
VN02	2.76	0.07	3.37	2.76	0.07	4
VN03	2.72	0.06	2.73	2.72	0.05	6
VN05	2.92	0.10	3.60	2.91	010	3
VN06	2.82	0.12	3.60	2.82	0.11	4
VN07	2.80	0.04	No TC	-	-	-
VN08	2.71	0.05	3.02	2.71	0.05	11
Lith 10	2.66	0.06	3.53	2.66	0.06	10
Lith 30	2.59	0.05	3.10	2.59	0.04	18
Lith 50	2.73	0.05	3.07	2.73	0.05	8
Lith 60	2.70	0.06	3.05	2.70	0.05	17
Lith 80	2.67	0.04	3.18	2.67	0.04	8

There were no outlier values identified in the RQD data. No top cuts or bottom cuts were applied.

14.1.2.5 Variography

Spatial relationships of the top-cut, composited sample data were analyzed in Supervisor to define continuity directions of the mineralization. For copper and silver, a weak, shallow plunge to the east-southeast was modelled (-36→285). For lead, a weak plunge was modelled steeply dipping down the vein (-65→355), while for zinc, a weak, shallow plunge was observed in an orthogonal direction to copper and silver (-31→069). This was visually confirmed by reviewing the grade distribution spatially above a variety of cut-offs. These observations “fit” geologically, as copper and silver show a strong correlation, while lead and zinc are not correlated with copper/silver or with each other.

After establishing the orientation of the continuity ellipse, experimental semi-variograms were generated in the downhole direction (to establish the nugget effect) and in each of the three axis directions of the continuity ellipse (Figure 14-11). Spherical models were used to model the directional experimental semi-variograms with variance contributions normalized to a total 1.0.

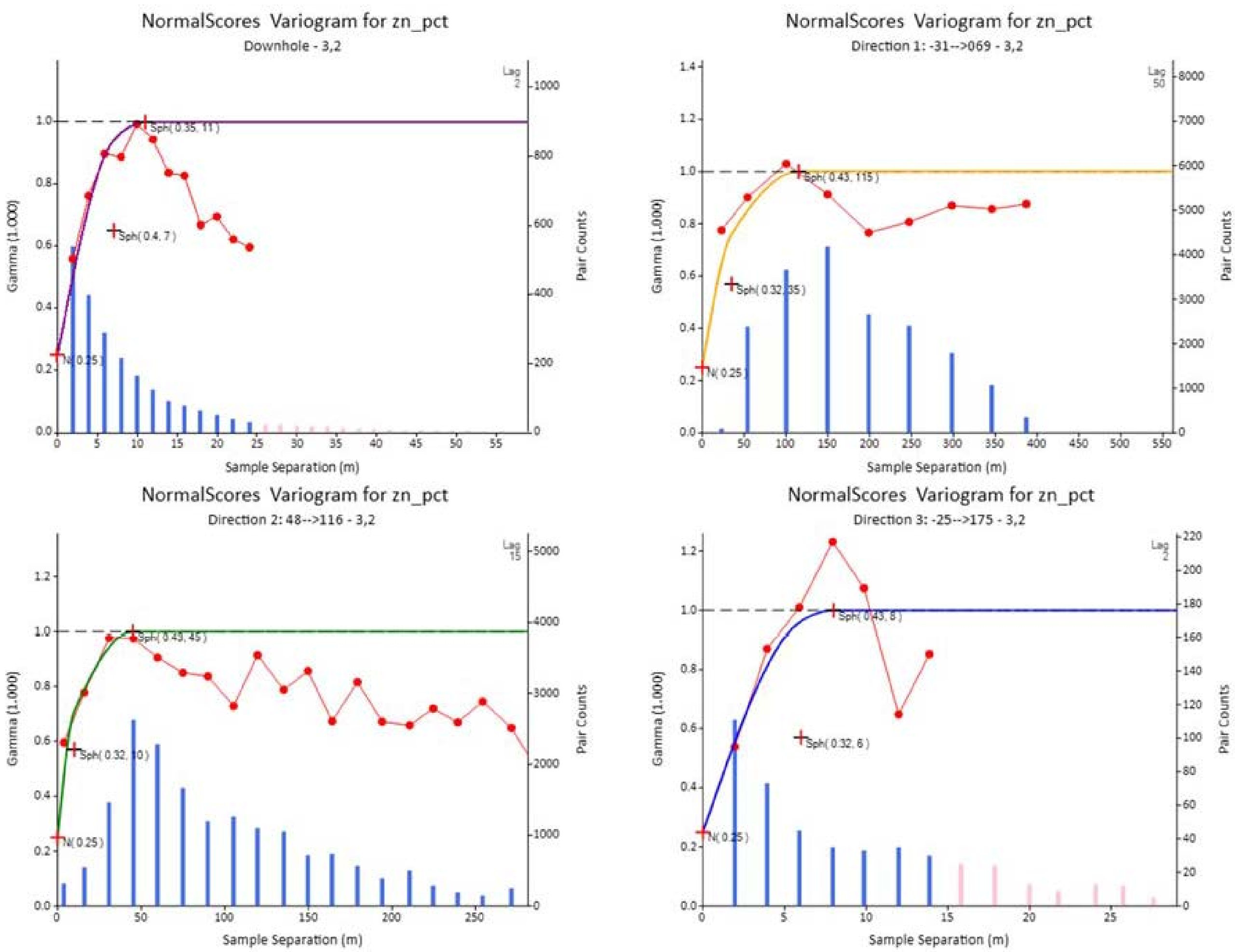


Figure 14-11: Zinc semi-variogram models (top left: downhole; top right: major axis – direction 1; bottom left: semi-major axis – direction 2; bottom right: minor axis – direction 3.

After modelling, the semi-variogram models were back-transformed in to regular space for use in grade estimation. Projecting the data onto a flat plane through data “unfolding” would improve the quality of the experimental semi-variogram and should be explored in the future. Tables 14-27 through 14-30 show the correlogram models for Cu, Ag, Zn and Pb, respectively.

Table 14-27: Cu back-transformed, semi-variogram parameters – Domains VN02 and VN03

Continuity Direction	Axis Direction	Variance	Range (m)		
		Nugget/Sill	R_1	R_2	R_3
HC: 00→265	D_1: 36→285	C_0: 0.05	-	-	-
AS: -65→355	D_2: -44→058	C_1: 0.54	35	35	10
DP: 36→105	D_3: -25→175	C_2: 0.41	130	130	10
Axis Rotation Angles (Vulcan ZXY): {284.525, -35.631, 121.330}					
*Note: HC = Horizontal Continuity; AS = Across Strike Continuity; DP = Dip Plane Continuity; C_0 = Nugget; C_x = Structure X					

Table 14-28: Ag back-transformed, semi-variogram parameters – Domains VN02 and VN03

Continuity Direction	Axis Direction	Variance	Range (m)		
		Nugget/Sill	R_1	R_2	R_3
HC: 00→265	D_1: 36→285	C_0: 0.07	-	-	-
AS: -65→355	D_2: -44→058	C_1: 0.41	25	15	6
DP: 36→105	D_3: -25→175	C_2: 0.25	85	70	14
		C_3: 0.27	375	150	14
Axis Rotation Angles (Vulcan ZXY): {284.525, -35.631, 121.330}					
*Note: HC = Horizontal Continuity; AS = Across Strike Continuity; DP = Dip Plane Continuity; C_0 = Nugget; C_x = Structure X					

Table 14-29: Zn back-transformed, semi-variogram parameters for MNV – Domains VN02 and VN03

Continuity Direction	Axis Direction	Variance	Range (m)		
		Nugget/Sill	R_1	R_2	R_3
HC: 00→265	D_1: -31→069	C_0: 0.28	-	-	-
AS: -65→355	D_2: 48→116	C_1: 0.34	35	10	6
DP: -27→071	D_3: -25→175	C_2: 0.38	115	45	8
Axis Rotation Angles (Vulcan ZXY): {68.515, -31.321, -119.651}					
*Note: HC = Horizontal Continuity; AS = Across Strike Continuity; DP = Dip Plane Continuity; C_0 = Nugget; C_x = Structure X					

Table 14-30: Pb back-transformed, semi-variogram parameters for MNV – Domains VN02 and VN03

Continuity Direction	Axis Direction	Variance	Range (m)		
		Nugget/Sill	R_1	R_2	R_3
HC: 00→265	D_1: -65→355	C_0: 0.32	-	-	-
AS: -65→355	D_2: 00→085	C_1: 0.50	35	20	7
DP: 65→175	D_3: -25→175	C_2: 0.18	175	100	8
Axis Rotation Angles (Vulcan ZXY): {355.000, -65.000, 180.000}					
*Note: HC = Horizontal Continuity; AS = Across Strike Continuity; DP = Dip Plane Continuity; C_0 = Nugget; C_x = Structure X					

14.1.2.6 Block Model

The selective mining unit ("SMU"), has been revised to 12 m East × 2 m North × 10 m Elevation. It was previously 4 m East × 2 m North × 5 m Elevation. The updated size matches the model parent-block size and much more closely approximates the volume of a single longhole-stope blast that represents the volume of material that must be physically selected (mined).

The dimensions of the SMU are roughly one-third to one-quarter the average drillhole spacing supporting Measured and Indicated mineral resources (about 40 m × 40 m).

The existing MNV block model parameters remain unchanged with respect to its origin and block sizes. It is sub-blocked and non-rotated and was updated to represent the modelled geology and vein domain wireframes generated in Leapfrog®. The model origin is defined as the lower, southwest edge of the model and the origin coordinates are in the Cozamin local mine grid (Table 14-31). A total of 45 model variables were created, comprising domain codes, grade/density/RQD fields, classification, density, estimation parameters and search angles used by the dynamic anisotropy. Waste grades and waste density values were also estimated into the block model to provide additional information regarding local dilution grades and tonnages.

As a part of the July 2017 update, new variables were added to capture the zinc oxide and lead oxide data, as well as their ratios to total zinc and total lead. These data are limited to the San Roberto Zinc zone.

Table 14-31: MNV Block model origin and parameters

	X	Y	Z
Origin* (local grid)	746,400	2,523,350	1,500
Parent Block Size (m)	12.0	2.0	10.0
Sub-Block Size (m)	4.0	0.5	2.0
Extents (m)	2,604	1,050	1,120

*Note: Model origin is defined as lower, southwest edge of the model.

14.1.2.7 Grade, Density and RQD Estimation

Grades were estimated using Ordinary Kriging, with inverse-distance-squared weighting ("ID2") and nearest neighbour ("NN") techniques used as checks of the OK estimate for global mean-grade unbiasedness (inverse-distance-weighting was set to the power of nine to generate the NN estimate). The OK grade estimation strategy was defined through an assessment of variogram shapes and ranges, and a review of the estimation parameters used in the previous estimates. A multi-pass search strategy was used.

For all domains, silver estimates used the same parameters as the copper estimates to maintain their spatial correlation. Lead and zinc were estimated independently of each other and of copper and silver.

Due to local changes in strike and dip of the veins, a search strategy employing a dynamic search ellipse was employed to match the strike and dip of the veins during estimation (dynamic anisotropy) to allow for better sample selection.

Vein limits were treated as hard boundaries. In the case of the high-grade sub-domains comprising the San Roberto zone (VN01) and San Rafael (VN02), within the principal MNV structure, these limits were treated as soft boundaries to permit the correct interaction of low-grade samples from the lower-grade sub-domain comprising the rest of the structure (VN08). The lithological unit representing the entire MNV fault/vein system (Lith10) was estimated separately from the mineralization vein domains and used hard boundaries.

Top cuts and grade restrictions were applied within the individual estimation profiles. Block discretization was set to 3 × 3 × 3 to take into account the change of support (volume increase/reduction in sample variance) moving from a point sample volume (i.e., drillhole) to the block volume.

Final estimation and search parameters for the MNV model are in Table 14-32.

Table 14-32: MNV estimation and search parameters

Element (Est. Method)	Vein Domain	SVOL	Min Samp	Max Samp	Max Samp/DH	Search Distance D1, D2, D3 (m)	Soft Boundary Dist (m)
Cu (OK)	01/05/06/08	1	8	12	3	120, 60, 30	VN01/08: 50×50×25
Cu (OK)	02/03/08	1	8	16	3	90, 90, 30	VN02/08: 24×18×6
Cu (OK)	01/02/05/06/08	2	6	16	4	240, 120, 30	VN01/02/08: 50×50×25
		3	6	16	3	360, 180, 30	
Cu (ID^2)		1	6	16	4	240, 120, 30	No
Cu (NN)		1	1	1	1	240, 120, 30	No
Cu (ID^2)	07	1	8	16	3	130, 100, 15	No
Cu (ID^2)	Lith10	1	2	16	3	300, 300, 30	No
Ag (OK)	01/05/06/08	1	8	12	3	120, 60, 30	VN01/08: 20×20×25
Ag (OK)	02/03/08	1	8	16	3	90, 90, 30	VN02/08 24×18×6
Ag (OK)	01/02/05/06/08	2	6	12	4	240, 120, 30	VN01/02/08: 20×20×25
		3	6	12	3	360, 180, 30	
Ag (ID^2)		1	6	12	4	240, 120, 30	No
Ag (NN)		1	1	1	1	240, 120, 30	No
Cu (ID^2)	07	1	8	16	3	130, 100, 15	No
Ag (ID^2)	Lith10	1	2	16	3	300, 300, 30	No
Zn (OK)	01/05/06/08	1	8	VN01: 16 VN05: 20 VN06: 12	3	120, 60, 30	VN01/08: 40×40×25

Zn (OK)	02/03/08	1	8	16	3	60,30, 15	VN02/08: 24×18×6
ZN (OK)	01/02/05/ 06/08	2	8	VN01: 16 VN05: 20 VN06: 12	4	240, 120, 30	VN01/02/08: 40×40×25
		3	6		3		
Zn (ID^2)		1	6		4	240, 240, 30	No
Zn (NN)		1	1	1	1	240, 240, 30	No
Zn (ID^2)	07	1	12	24	3	120, 60, 15	No
Zn (ID^2)	Lith10	1	2	16	3	300, 300, 30	No
Zn (ID^2)	02/10	1	8	16	3	85, 45, 25	No
Pb (OK)	01/05/06/08	1	8	20	3	120, 60, 30	VN01/08: 50×50×30
Pb (OK)	02/03/08	1	12	20	3	50, 35, 15	VN02/08: 24×18×6
Pb (OK)	01/02/05 /06/08	2	6	20	4	240, 120, 30	VN01/02/08: 50×50×30
		3	6	20	3	240, 120, 30	No
Pb (ID^2)		1	6	20	4	240, 120, 30	No
Pb (NN)		1	6	20	4	240, 120, 30	No
Pb (ID^2)	07	1	12	24	3	175, 100, 15	No
Px (ID^2)	02	1	8	16	3	50, 35, 15	No
Bulk Density (ID^2)	01/02/03/05/ 06/07/08	2	12	24	4	330, 300, 30	No
Bulk Density (ID^2)	Lith10	2	12	24	4	300, 300, 30	No
RQD (ID^2)	01/02/03/05/ 06/07/ 08/Lith10	2	6	20	4	300, 300, 30	No

14.1.2.8 Model Validation

Block model validation after grade estimation involved the following steps:

- Visual inspection of block grades against the input drillhole data.
- Declustering of the top-cut, input drillhole data for:
  - Assessment for global unbiasedness.
  - Evaluation of block grades against declustered, top-cut, input drillhole data in swathe plots.
  - Global change of support ("GCOS") to assess smoothing above a specified cut-off.
- Review of element correlations in the blocks compared to input drillhole correlations.

14.1.2.9 Mineral Resources Classification

Mineral resources classification conforms to the definitions provided in the CIM Definition Standards for Mineral Resources and Reserves (CIM, 2014). Previously, nearly all material contained within the modelled veins was given a default classification of Inferred, as the extents of the vein boundaries were limited during geological modelling (except the MNV). This methodology was changed during this update to eliminate the upper reaches of the MNV where historic mining has occurred. There is no available drilling information in these areas, meaning the grades estimated in these blocks are extrapolations of the grades directly below. Given the grade variability of copper, silver, zinc and lead in the MNV, confidence in these estimates is low.

Classification of Indicated mineral resources in the San Rafael and San Roberto Zinc zones considered the following factors:

- QAQC data: There is accurate and repeatable performance of external certified reference material and duplicate samples. There is also an established bulk density QAQC data set. The QAQC data are of sufficient quality to support classification of Measured mineral resources.
- Drillhole spacing: The high-level drillhole spacing study completed by Davis (2014) recommended a 40 m × 40 m drillhole spacing grid to have sufficient confidence in grade continuity for Indicated resources. This was the primary constraint used during classification, but areas with wider spacing were reviewed on a case-by-case basis. Measured resources require a drillhole spacing of about 25 m × 25 m, or they must be located proximally to underground development.
- Confidence classification boundaries: The existing boundaries were used as a guide for classification of Indicated resources, which were then adjusted to account for new drilling.
- Underground development and mined stopes: There is a development drive into the San Rafael zone along Level 10 that extends eastward from the San Roberto zone. Blocks around this development were left as Indicated resources and not classified as Measured.

14.1.2.10 Grade Tonnage Reporting

Mineral resources were reported above a US$ 42/t NSR cut-off and consider depletion from mining until March 31, 2018. Mineral resources within the MNV are evaluated using the NSR2018 formula. Preliminary metallurgical test work completed by Blue Coast (2017) following the three-to-one blending ratio of copper-rich ore from the MNFWZ and zinc-rich ore from San Rafael suggests reasonable metallurgical recoveries. Additional test work is ongoing, but the NSR formula is acceptable for reporting mineral resources. Metal prices used are as follows: US$ 3.50/lb Cu, US$18.00/oz Ag, US$ 1.20/lb Zn, US$ 1.00/lb Pb. Assumed metal recoveries are as follows: 90% Cu, 74% Ag, 79% Zn, and 76%Pb. The NSR2018 formula is as follows:

$$NSR_{2018} = Cu * 61.676 + Ag * 0.354 + Zn * 14.521 + Pb * 11.208$$

Mineral resources for all three zones within the MNV summarized below (Table 14-33 through Table 14-36). They are reported above a US$ 42/t NSR cut-off value using the NSR_{2018} formula and account for mining activities until March 31, 2018.

Table 14-33: MNV – SROB-Zn mineral resources above US$ 42/t NSR cut-off as at March 31, 2018

Classification	Tonnes (kt)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu Metal (kt)	Ag Metal (koz)	Zn Metal (kt)	Pb Metal (kt)
Zinc Zone: MNV – San Roberto Zinc									
Measured	-	-	-	**-**	**-**	**-**	-	-	-
Indicated	423	0.16	26	3.57	0.64	0.68	358	15	3
Total M + I	**423**	**0.16**	**26**	**3.57**	**0.64**	**0.68**	**358**	**15**	**3**
Inferred	890	0.10	23	3.20	0.37	0.87	653	28	3

Table Notes:

1. NSR_{2018} formula = Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. The metal prices for Cu, Ag, Zn, and Pb respectively are as follows: Cu = US$ 3.50/lb, Ag = US$ 18.00/oz, Zn = US$ 1.20/lb, Pb = US$1.00/lb. The following recoveries were used: Cu = 90%, Ag = 74%, Zn = 79%, Pb = 76%.
2. Figures may not sum exactly due to rounding.

Table 14-34: MNV – San Rafael Zinc Zone mineral resources above US$ 42/t NSR cut-off as at March 31, 2018

Classification	Tonnes (kt)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu Metal (kt)	Ag Metal (koz)	Zn Metal (kt)	Pb Metal (kt)
Zinc Zone: MNV – San Rafael									
Measured	-	-	-	-	-	-	-	-	-
Indicated	2,253	0.28	45	3.56	0.53	6	3,249	80	12
Total M + I	**2,253**	**0.28**	**45**	**3.56**	**0.53**	**6**	**3,249**	**80**	**12**
Inferred	3,791	0.22	34	3.02	0.32	8	4,164	115	12

Table Notes:

1. NSR_{2018} formula = Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. The metal prices for Cu, Ag, Zn, and Pb respectively are as follows: Cu = US$ 3.50/lb, Ag = US$ 18.00/oz, Zn = US$ 1.20/lb, Pb = US$1.00/lb. The following recoveries were used: Cu = 90%, Ag = 74%, Zn = 79%, Pb = 76%.
2. Figures may not sum exactly due to rounding.

Table 14-35: MNV – Total Zinc Zone mineral resources above US$ 42/t NSR cut-off as at March 31, 2018

Classification	Tonnes (kt)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu Metal (kt)	Ag Metal (koz)	Zn Metal (kt)	Pb Metal (kt)
Total Zinc Zones									
Measured	-	-	-	-	-	-	-	-	-
Indicated	2,676	0.26	42	3.56	0.55	7	3,608	95	15
Total M + I	**2,676**	**0.26**	**42**	**3.56**	**0.55**	**7**	**3,608**	**95**	**15**
Inferred	4,681	0.20	32	3.06	0.33	9	4,817	143	15

Table Notes:

1. NSR_{2018} formula = Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. The metal prices for Cu, Ag, Zn, and Pb respectively are as follows: Cu = US$ 3.50/lb, Ag = US$ 18.00/oz, Zn = US$ 1.20/lb, Pb = US$1.00/lb. The following recoveries were used: Cu = 90%, Ag = 74%, Zn = 79%, Pb = 76%.
2. Figures may not sum exactly due to rounding.

Table 14-36: MNV – San Roberto Copper Zone mineral resources above US$ 42/t NSR cut-off as at March 31, 2018

Classification	Tonnes (kt)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu Metal (kt)	Ag Metal (koz)	Zn Metal (kt)	Pb Metal (kt)
Copper Zone: MNV – San Roberto									
Measured	409	1.23	53	1.23	0.40	5	696	5	2
Indicated	3,233	0.99	43	1.60	0.38	32	4,478	52	12
Total M + I	**3,642**	**1.02**	**44**	**1.56**	**0.38**	**37**	**5,174**	**57**	**14**
Inferred	4,534	0.63	36	1.49	0.14	29	5,178	68	6

Table Notes:

1. NSR_{2018} formula = Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. The metal prices for Cu, Ag, Zn, and Pb respectively are as follows: Cu = US$ 3.50/lb, Ag = US$ 18.00/oz, Zn = US$ 1.20/lb, Pb = US$1.00/lb. The following recoveries were used: Cu = 90%, Ag = 74%, Zn = 79%, Pb = 76%.
2. Figures may not sum exactly due to rounding.
3. Mineral resources are depleted due to mining activities as at March 31, 2018.

14.2 MNFWZ Modelling and Estimation

14.2.1 Raw Data

The raw drillhole data were imported into Hexagon MineSight® software version 13.0. This included data from the *collar.csv*, *survey.csv*, *lithology.csv*, *assay.csv*, *density.csv* and *geotech.csv* tables.

14.2.1.1 Assay Data

The raw drillhole sample data were desurveyed and stored. The domain wireframes were used to code the drillhole data within the respective vein domains in the compositing process using the priority coding defined during geological modelling.

Univariate statistics, by vein domain, are summarized in Table 14-37 through Table 14-40 for the MNFWZ model.

Table 14-37: Cu raw statistics of MNFWZ

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	84	71.3	0.002	5.65	0.468	0.987	2.1
VN08	43	33.6	0.001	5.17	0.194	0.448	2.3
VN09	280	229.1	0.001	12.35	1.171	1.735	1.5
VN10	684	524.8	0.001	14.34	1.771	2.214	1.3
VN18	285	225.1	0.002	14.30	1.444	2.324	1.6
VN20	1,267	1045.8	0.0005	22.00	2.543	3.245	1.3
VN22	182	149.2	0.002	16.45	0.950	1.829	1.9
All Vein	2,825	2279.0	0.0005	22.00	1.915	2.736	1.4
All	59,773	58095.3	0.0001	22.00	0.220	0.987	4.5

Table 14-38: Ag raw statistics of MNFWZ

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	84	71.3	0.3	314	33.1	53.6	1.6
VN08	43	33.6	0.5	100	12.0	19.7	1.7
VN09	280	229.1	0.5	553	33.7	54.9	1.6
VN10	684	524.8	0.5	4,070.00	45.2	174.4	3.9
VN18	285	225.1	0.5	3,410.00	32.6	163.1	5.0
VN20	1,267	1045.8	0.1	1,480.00	54.8	95.5	1.7
VN22	182	149.2	0.5	259	16.6	28.0	1.7
All Vein	2,825	2279.0	0.1	4,070.00	44.5	120.0	2.7
All	59,696	58053.8	0	4,070.00	9.3	40.7	4.4

Table 14-39: Zn raw statistics of MNFWZ

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	84	71.3	0.0014	28	2.66	4.12	1.5
VN08	43	33.6	0.003	11.56	1.86	2.35	1.3
VN09	280	229.1	0.002	19.7	0.82	1.80	2.2
VN10	684	524.8	0.001	24.2	0.64	1.58	2.5
VN18	285	225.1	0.0005	4.655	0.28	0.74	2.6
VN20	1,267	1045.8	0.0005	15.15	0.44	1.08	2.5
VN22	182	149.2	0.0005	4.66	0.13	0.43	3.2
All Vein	2,825	2279.0	0.0005	28	0.58	1.52	2.6
All	59,772	58093.3	0.0001	43.07	0.40	1.44	3.6

Table 14-40: Pb raw statistics of MNFWZ

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	84	71.3	0.0002	20	1.50	3.71	2.5
VN08	43	33.6	0.0005	4.552	0.26	0.79	3.0
VN09	280	229.1	0.0005	0.621	0.04	0.07	1.7
VN10	684	524.8	0.0005	1.165	0.04	0.10	2.8
VN18	285	225.1	0.0005	3.68	0.02	0.15	6.7
VN20	1,267	1045.8	0.0005	3.62	0.04	0.20	4.7
VN22	182	149.2	0.0005	0.194	0.01	0.02	2.2
All Vein	2,825	2279.0	0.0002	20	0.09	0.73	8.5
All	59,772	58094.3	0.0001	36.85	0.07	0.58	7.7

14.2.1.1.1 Bulk Density, Core Recovery and RQD Data

As previously stated, bulk density sampling has been undertaken systematically throughout the MNV and MNFWZ veins. Since 2013 samples were taken at the same volume support as the geochemical assay data (i.e., the average bulk density value was generated over the interval length as the assay sample).

The vein domains and lithology wireframes were used to code the drillhole data in the compositing process (populating the domain and litho fields in the database).

As previously stated, core recovery data are recorded from measurements of the total core length in the box between the blocks demarking the run interval. Rock Quality Data ("RQD") information involved summing the total length of individual pieces greater than 10 cm in length, divided by the run length. The resulting value is expressed as a percentage. The vein domains and lithology wireframes were used to code the drillhole data in the compositing process (populating the domain and litho fields in the database).

14.2.1.2 Compositing

The 1.0 m composite length offered a balance between supplying common support for samples and minimizing the smoothing of the grades. This was taking into consideration that the vertical block dimension was 2 metres which is the predominant direction of drilling. In addition, the 1.0 m sample length was consistent with the distribution of sample lengths within the mineralized domains as 80% of the assay lengths are less than or equal to 1.0 m and 90% of the assay lengths are less than or equal to 1.5 m as shown in Figure 14-12. It should be noted that although 1.0 m is the composite length, any residual composites of length greater than 0.5 m and less than 1.0 m remained to represent a composite whilst any composites residuals less than 0.5m were combined to the composite above.

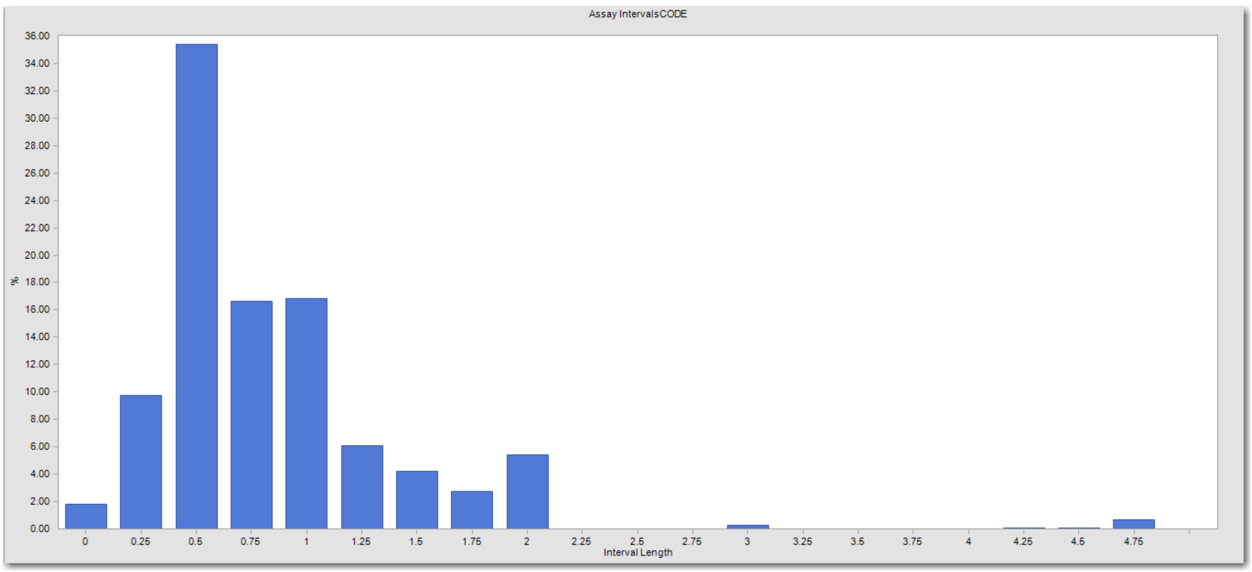


Figure 14-12: Histogram of Assay Interval Lengths within the Vein Models

The statistics of the composited data are presented in Table 14-41 through Table 14-45.

Table 14-41: Cu composited statistics of MNFWZ (undeclustered)

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	72	71.3	0.002	4.39	0.47	0.84	1.8
VN08	43	33.6	0.001	2.00	0.19	0.31	1.6
VN09	246	229.1	0.003	12.30	1.17	1.58	1.3
VN10	547	524.8	0.001	9.87	1.77	1.91	1.1
VN18	246	225.1	0.002	10.67	1.44	1.97	1.4
VN20	1,066	1045.8	0.0005	16.17	2.54	2.85	1.1
VN22	162	149.2	0.004	9.41	0.95	1.41	1.5
All Vein	2,382	2279.0	0.0005	16.17	1.92	2.40	1.3
All	60,167	58095.3	0.0001	16.17	0.22	0.90	4.1

Table 14-42: Ag composited statistics of MNFWZ (undeclustered)

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	72	71.3	0.3	268.7	33.1	48.3	1.5
VN08	43	33.6	0.5	100.0	12.0	19.0	1.6
VN09	246	229.1	0.5	442.7	33.7	48.7	1.4
VN10	547	524.8	0.5	3468.5	45.2	160.5	3.6
VN18	246	225.1	0.5	1401.4	32.6	106.7	3.3
VN20	1,066	1045.8	0.1	1095.6	54.8	80.4	1.5
VN22	162	149.2	0.5	149.8	16.7	23.0	1.4
All Vein	2,382	2279.0	0.1	3468.5	44.5	102.5	2.3
All	60,125	58053.8	0	3468.5	9.3	35.6	3.8

Table 14-43: Zn composited statistics of MNFWZ (undeclustered)

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	72	71.3	0.0041	24.97	2.66	3.86	1.4
VN08	43	33.6	0.003	11.56	1.86	2.33	1.3
VN09	246	229.1	0.002	11.05	0.82	1.55	1.9
VN10	547	524.8	0.001	24.20	0.64	1.43	2.2
VN18	246	225.1	0.001	4.24	0.28	0.68	2.4
VN20	1,066	1045.8	0.0005	13.00	0.44	0.90	2.1
VN22	162	149.2	0.001	2.43	0.13	0.35	2.6
All Vein	2,382	2279.0	0.0005	24.97	0.58	1.37	2.4
All	60,165	58093.9	0.0001	33.15	0.40	1.27	3.2

Table 14-44: Pb composited statistics of MNFWZ (undeclustered)

Domain	No. Samples	Length	Min (%)	Max (%)	Mean (%)	Std. Dev. (%)	COV
Calicanto	72	71.3	0.0004	20.00	1.50	3.58	2.4
VN08	43	33.6	0.0005	4.55	0.26	0.79	3.0
VN09	246	229.1	0.0005	0.62	0.04	0.06	1.5
VN10	547	524.8	0.0005	0.86	0.04	0.09	2.5
VN18	246	225.1	0.0005	3.68	0.02	0.15	6.7
VN20	1,066	1045.8	0.0005	2.85	0.04	0.17	3.9
VN22	162	149.2	0.0005	0.19	0.01	0.02	2.1
All Vein	2,382	2279.0	0.0004	20.00	0.09	0.70	8.2
All	60,166	58094.3	0.0001	20.00	0.07	0.48	6.4

Table 14-45: Bulk density composited statistics (MNFWZ domains and all lithology units)

Domain	No. Samples	Min	Max	Mean	Std. Dev.	COV
Calicanto	66	2.57	4.67	2.87	0.38	0.13
VN08	19	2.49	3.05	2.72	0.12	0.05
VN09	206	2.50	3.23	2.71	0.12	0.04
VN10	490	2.40	3.61	2.71	0.17	0.06
VN18	232	2.31	3.35	2.65	0.14	0.05
VN20	889	2.13	3.93	2.74	0.19	0.07
VN22	119	2.36	3.27	2.64	0.13	0.05
All Vein	2,021	2.13	4.67	2.72	0.19	0.07
All	39,424	2.01	6.46	2.69	0.15	0.06

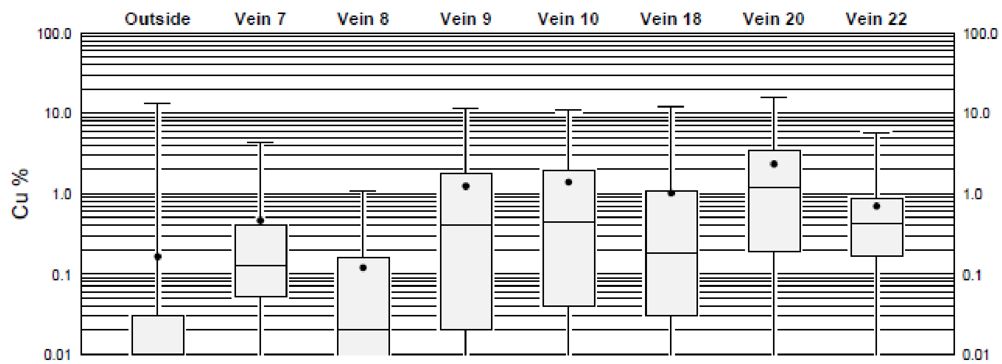
Since core recovery and RQD are calculated on a "*per core run*" basis of 3.05 m, compositing is not necessary.

14.2.2 Exploratory Data Analysis

An exploratory data analysis ("EDA") was undertaken on the composited drillhole data. The objectives are of this study are as follows:

- Identify spatial trends in grade data and verify domaining strategy (data orientation, data population distributions).
- Understand sample distributions within the domains and select the appropriate grade estimation method and estimation strategy.
- Assess top-cutting and search-restriction requirements for outlier samples.
- Histograms, probability plots, contact plots were used for exploratory data analysis ("EDA") on the composited drillhole data. Histograms showed all veins and metals demonstrated log-normal distributions which is to be expected. Contact plots illustrated that there a sharp contact at the boundary of the veins which supports the use of hard boundaries between vein and waste.

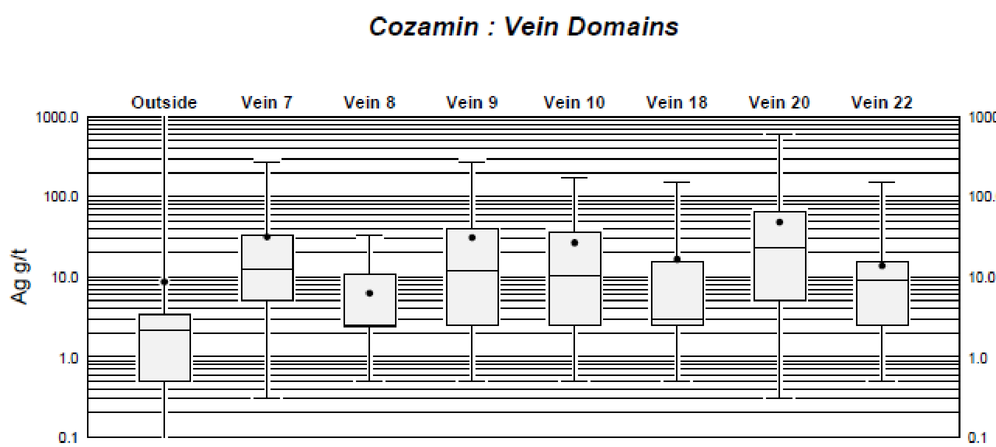
Box plots with statistics by individual vein for copper, silver, zinc and lead are shown in Figures 14-13 through 14-16, respectively.



	Outside	Vein 7	Vein 8	Vein 9	Vein 10	Vein 18	Vein 20	Vein 22	
Number of data	51264	74	43	196	422	226	949	153	Number of data
Mean	0.165	0.466	0.12	1.241	1.395	1.019	2.338	0.703	Mean
Variance	0.526	0.699	0.044	3.578	4.164	3.972	8.266	0.831	Variance
Skewness	7.914	2.98	2.878	2.464	1.963	3.134	1.7	3.02	Skewness
Coef of Variation	4.402	1.794	1.738	1.525	1.463	1.956	1.23	1.298	Coef of Variation
Maximum	13.28	4.39	1.11	11.81	10.97	12.35	16.19	5.79	Maximum
Upper quartile	0.03	0.401	0.16	1.752	1.98	1.082	3.49	0.855	Upper quartile
Median	0.01	0.128	0.02	0.4	0.45	0.184	1.204	0.435	Median
Lower quartile	0.0	0.053	0.0	0.02	0.04	0.03	0.19	0.165	Lower quartile
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Minimum

Variable: Cu %

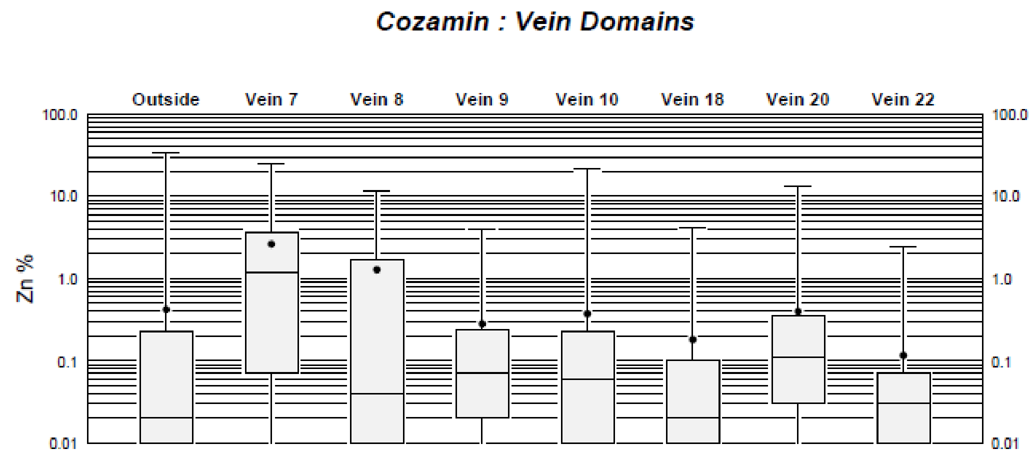
Figure 14-13: Cu Composite Box Plot and Statistics



	Outside	Vein 7	Vein 8	Vein 9	Vein 10	Vein 18	Vein 20	Vein 22	
Number of data	51264	74	43	196	422	226	949	153	Number of data
Mean	8.669	31.677	6.274	30.982	26.677	16.584	48.425	13.792	Mean
Variance	1195.19	2316.69	49.153	2253.29	1318.83	772.124	4626.82	421.283	Variance
Skewness	25.012	2.861	1.64	2.727	1.994	2.626	3.223	4.679	Skewness
Coef of Variation	3.988	1.519	1.117	1.532	1.361	1.676	1.405	1.488	Coef of Variation
Maximum	3067.5	268.7	33.0	273.2	173.0	153.8	618.1	153.5	Maximum
Upper quartile	3.4	33.075	11.0	40.0	37.14	15.45	65.598	15.756	Upper quartile
Median	2.2	12.179	2.5	11.98	10.3	3.0	23.415	9.0	Median
Lower quartile	0.5	5.138	2.363	2.5	2.5	2.5	5.0	2.513	Lower quartile
Minimum	0.0	0.3	0.5	0.5	0.5	0.5	0.3	0.5	Minimum

Variable: Ag g/t

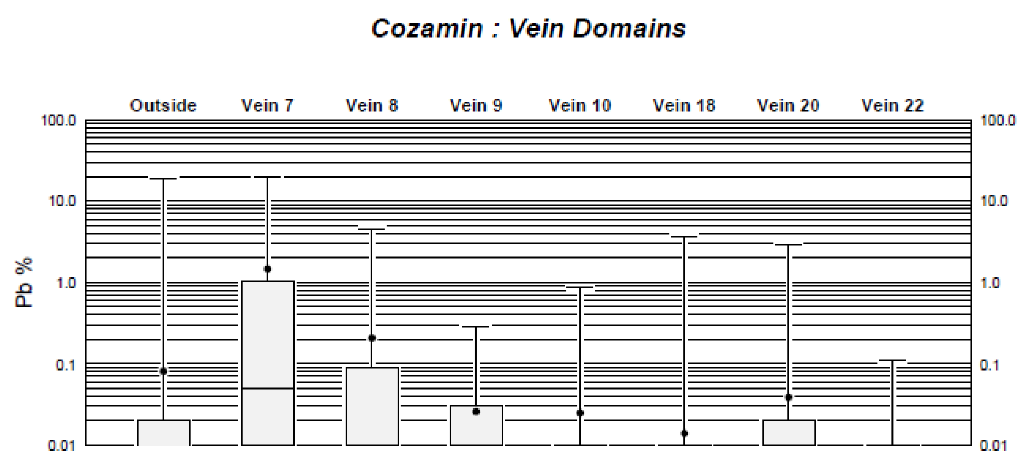
Figure 14-14: Ag Composite Box Plot and Statistics



	Outside	Vein 7	Vein 8	Vein 9	Vein 10	Vein 18	Vein 20	Vein 22	
Number of data	51264	74	43	196	422	226	949	153	**Number of data**
Mean	0.421	2.623	1.287	0.282	0.375	0.182	0.4	0.117	**Mean**
Variance	1.684	14.976	5.314	0.279	1.76	0.25	0.799	0.118	**Variance**
Skewness	7.757	2.913	2.508	3.393	11.215	5.073	5.822	5.0	**Skewness**
Coef of Variation	3.085	1.476	1.791	1.873	3.536	2.751	2.237	2.937	**Coef of Variation**
Maximum	33.15	24.97	11.56	3.93	21.83	4.24	13.0	2.43	**Maximum**
Upper quartile	0.23	3.625	1.698	0.24	0.23	0.1	0.36	0.07	**Upper quartile**
Median	0.02	1.169	0.04	0.071	0.06	0.02	0.11	0.03	**Median**
Lower quartile	0.01	0.07	0.01	0.02	0.01	0.01	0.03	0.01	**Lower quartile**
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**Minimum**

Variable: Zn %

Figure 14-15: Zn Composite Box Plot and Statistics



	Outside	Vein 7	Vein 8	Vein 9	Vein 10	Vein 18	Vein 20	Vein 22	
Number of data	51263	74	43	196	422	226	949	153	**Number of data**
Mean	0.081	1.465	0.208	0.026	0.025	0.014	0.039	0.008	**Mean**
Variance	0.247	12.901	0.557	0.002	0.007	0.019	0.029	0.0	**Variance**
Skewness	18.019	3.745	5.109	3.181	7.172	25.91	11.726	3.996	**Skewness**
Coef of Variation	6.133	2.452	3.593	1.65	3.44	9.853	4.41	1.935	**Coef of Variation**
Maximum	18.9	20.0	4.55	0.29	0.86	3.68	2.85	0.11	**Maximum**
Upper quartile	0.02	1.06	0.09	0.03	0.01	0.01	0.02	0.01	**Upper quartile**
Median	0.0	0.05	0.01	0.01	0.01	0.0	0.01	0.0	**Median**
Lower quartile	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	**Lower quartile**
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**Minimum**

Variable: Pb %

Figure 14-16: Pb Composite Box Plot and Statistics

The data in the vein domains were reviewed and the following observations were made with respect to grade distribution and continuity:

- The boundary between the vein domains will be treated as “hard” for grade estimation.
- Veins 09, 10, 18 and 20 show similar grade distributions for each element.
- Domain Vein 07 and 08 illustrate elevated zinc and lead grades in comparison to the other veins.
- The coefficient of variation (“CoV”) is between 1.2-1.9 for copper and silver however CoV’s for zinc and lead range between 1.4-3.5 which are generally high and indicate variability. This is flagged for review during outlier analysis. However, the CoV for lead in VN18 is extremely high at 9.85 which indicates a high degree of variability but as the mean lead grades are very low and a result of outliers which will be addressed by cutting.
- In general, the veins will be estimated using the same variogram models however hard boundaries will be applied but mixing of vein populations will not be permitted.

The Calicanto vein domain has higher average bulk density (2.87 g/cm^3) than the other vein domains (2.7 g/cm^3). This implies there is a higher concentration of sulphide mineralization in the Calicanto zone.

14.2.2.1 Outlier Analysis

Grade distributions in each vein were assessed graphically and spatially for the presence of outlier samples, which can have a disproportionate impact during grade estimation and can lead to overestimated grades. Determination of appropriate top-cut values was undertaken through identification of population breaks in histograms and inflection points in log-probability plots. The impact of the selected top cut was assessed by reviewing the change in the mean grade and CoV of the composited samples before and after the top cut (Table 14-46 through Table 14-49). After application of cutting the CoV for copper and silver are fairly consistently around 1.1 which illustrates that the outliers are being sufficiently treated. The CoV’s for zinc and more specifically lead are higher however and the application of cutting did not have any real effect on reducing the CoV. The mean grades are low so the issue lies in the fact that there is variability in the zinc and lead data but this is not due to outliers.

Table 14-46: Cu top-cut, composited statistics of MNFWZ

Domain	Mean (%)	COV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV
Calicanto	0.47	1.8	1.5	0.35	1.3
VN08	0.19	1.6	0.7	0.17	1.3
VN09	1.17	1.3	5	1.09	1.1
VN10	1.77	1.1	8	1.77	1.1
VN18	1.44	1.4	9.5	1.44	1.4
VN20	2.54	1.1	13	2.53	1.1
VN22	0.95	1.5	2	0.73	0.8
All Vein	1.92	1.3		1.88	1.2
All	0.22	4.1		0.25	3.8

Table 14-47: Ag top-cut, composited statistics of MNFWZ

Domain	Mean (%)	COV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV
Calicanto	33.1	1.5	150	30.51	1.3
VN08	12.0	1.6	18	8.02	0.8
VN09	33.7	1.4	170	31.80	1.2
VN10	45.2	3.6	180	36.56	1.0
VN18	32.6	3.3	150	25.49	1.2
VN20	54.8	1.5	500	53.79	1.3
VN22	16.7	1.4	500	16.65	1.4
All Vein	44.5	2.3		40.98	1.4
All	9.3	3.8		9.71	2.9

Table 14-48: Zn top-cut, composited statistics of MNFWZ

Domain	Mean (%)	COV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV
Calicanto	2.66	1.4	10	2.41	1.2
VN08	1.86	1.3	9	1.83	1.2
VN09	0.82	1.9	10	0.82	1.9
VN10	0.64	2.2	5	0.60	1.8
VN18	0.28	2.4	9	0.28	2.4
VN20	0.44	2.1	3.5	0.41	1.7
VN22	0.13	2.6	6	0.13	2.6
All Vein	0.58	2.4		0.55	2.1
All	0.40	3.2		0.43	3.0

Table 14-49: Pb top-cut, composited statistics of MNFWZ

Domain	Mean (%)	COV	Top Cut (%)	Top Cut Mean (%)	Top Cut COV
Calicanto	1.50	2.4	19	1.48	2.4
VN08	0.26	3.0	2	0.19	2.3
VN09	0.04	1.5	0.23	0.04	1.3
VN10	0.04	2.5	0.6	0.04	2.3
VN18	0.02	6.7	0.2	0.02	1.8
VN20	0.04	3.9	1.5	0.04	3.2
VN22	0.01	2.1	0.095	0.01	1.6
All Vein	0.09	8.2		0.08	8.3
All	0.07	6.4		0.07	5.1

14.2.2.2 Variography

Spatial relationships of the top-cut, composited sample data were analyzed to define continuity directions of the mineralization. Experimental variograms and variogram models in the form of correlograms were generated for Cu, Ag, Zn and Pb grades. The individual zones did not have sufficient data to generate meaningful variogram results however when combined, which is valid in the opinion of the Author, the results are meaningful and there is justification for utilizing ordinary kriging for the estimation process. The definition of the nugget effect for each of the metals was taken from the downhole variograms. The correlogram models for each of copper, silver, zinc and lead are shown in Figures 14-17 through Figure 14-20, respectively.

Cozamin FW Veins Cu Correlograms

Medsystem and Vulcan Rotation Conventions

Nugget ==> 0.300
C1 ==> 0.459
C2 ==> 0.241

First Structure -- Spherical

LH Rotation about the Z axis ==> 12
RH Rotation about the X' axis ==> -54
LH Rotation about the Y' axis ==> -25
Range along the Z' axis ==> 3.3 Azimuth ==> 42 Dip ==> 32
Range along the Y' axis ==> 19.4 Azimuth ==> 12 Dip ==> -54
Range along the X' axis ==> 11.3 Azimuth ==> 122 Dip ==> -14

Second Structure -- Spherical

LH Rotation about the Z axis ==> -8
RH Rotation about the X' axis ==> -57
LH Rotation about the Y' axis ==> 33
Range along the Z axis ==> 72.4 Azimuth ==> 314 Dip ==> 27
Range along the X' axis ==> 18.9 Azimuth ==> 53 Dip ==> 18
Range along the Y' axis ==> 182.3 Azimuth ==> 352 Dip ==> -57

Modeling Criteria

Minimum number pairs req'd ==> 75
Sample variogram points weighted by # pairs

Figure 14-17: Cu Correlogram model parameters – MNFWZ

Cozamin FW Veins Ag Correlograms

Medsystem and Vulcan Rotation Conventions

Nugget ==> 0.350
C1 ==> 0.571
C2 ==> 0.079

First Structure -- Spherical

LH Rotation about the Z axis ==> -58
RH Rotation about the X' axis ==> 1
LH Rotation about the Y' axis ==> -10
Range along the Z' axis ==> 8.9   Azimuth ==> 36 Dip ==> 80
Range along the Y' axis ==> 12.2   Azimuth ==> 302 Dip ==> 1
Range along the X' axis ==> 2.9   Azimuth ==> 32 Dip ==> -10

Second Structure -- Spherical

LH Rotation about the Z axis ==> -51
RH Rotation about the X' axis ==> 3
LH Rotation about the Y' axis ==> 33
Range along the Z axis ==> 635.2   Azimuth ==> 215 Dip ==> 57
Range along the X' axis ==> 37.7   Azimuth ==> 41 Dip ==> 33
Range along the Y' axis ==> 250.3   Azimuth ==> 309 Dip ==> 3

Modeling Criteria

Minimum number pairs req'd ==> 75
Sample variogram points weighted by # pairs

Figure 14-18: Ag Correlogram model parameters – MNFWZ

Cozamin FW Veins Zn Correlograms

Medsystem and Vulcan Rotation Conventions

Nugget ==> 0.350
C1 ==> 0.561
C2 ==> 0.089

First Structure -- Spherical

LH Rotation about the Z axis ==> 7
RH Rotation about the X' axis ==> -104
LH Rotation about the Y' axis ==> -9
Range along the Z' axis ==> 2.9   Azimuth ==> 17 Dip ==> -14
Range along the Y' axis ==> 20.3   Azimuth ==> 187 Dip ==> -76
Range along the X' axis ==> 6.6   Azimuth ==> 106 Dip ==> 2

Second Structure -- Spherical

LH Rotation about the Z axis ==> -34
RH Rotation about the X' axis ==> 34
LH Rotation about the Y' axis ==> 23
Range along the Z axis ==> 432.4   Azimuth ==> 184 Dip ==> 50
Range along the X' axis ==> 38.1   Azimuth ==> 70 Dip ==> 19
Range along the Y' axis ==> 141.4   Azimuth ==> 326 Dip ==> 34

Modeling Criteria

Minimum number pairs req'd ==> 75
Sample variogram points weighted by # pairs

Figure 14-19: Zn Correlogram model parameters – MNFWZ

Cozamin FW Veins Pb Correlograms

Medsystem and Vulcan Rotation Conventions

Nugget ==> 0.050
C1 ==> 0.594
C2 ==> 0.356

First Structure -- Spherical

LH Rotation about the Z axis ==> 71
RH Rotation about the X' axis ==> -88
LH Rotation about the Y' axis ==> 116
Range along the Z' axis ==> 2.1 Azimuth ==> 315 Dip ==> -1
Range along the Y' axis ==> 39.9 Azimuth ==> 71 Dip ==> -88
Range along the X' axis ==> 16.4 Azimuth ==> 45 Dip ==> 2

Second Structure -- Spherical

LH Rotation about the Z axis ==> -43
RH Rotation about the X' axis ==> 2
LH Rotation about the Y' axis ==> -6
Range along the Z axis ==> 27.7 Azimuth ==> 63 Dip ==> 84
Range along the X' axis ==> 19.6 Azimuth ==> 47 Dip ==> -6
Range along the Y' axis ==> 526.5 Azimuth ==> 317 Dip ==> 2

Modeling Criteria

Minimum number pairs req'd ==> 75
Sample variogram points weighted by # pairs

Figure 14-20: Pb Correlogram model parameters – MNFWZ

14.2.2.3 Block Model

The selective mining unit ("SMU"), has been revised to 12 m East × 2 m North × 10 m Elevation. The dimensions of the SMU are roughly one-third to one-quarter the average drillhole spacing supporting Measured and Indicated mineral resources (about 40 m × 40 m).

The MNFWZ block model is sub-blocked and rotated to the southeast at 145° and was updated to represent the modelled geology and vein domain wireframes generated in Leapfrog®. The model origin is defined as the lower, southwest edge of the model and the origin coordinates are in the Cozamin local mine grid (Table 14-50). A total of 36 model variables were created, comprising domain codes, grade/density/RQD fields, classification, density, estimation parameters, and search angles used by the dynamic anisotropy. Waste grades and waste density values were also estimated into the block model to provide additional information regarding local dilution grades and tonnages.

Table 14-50: MNFWZ Block model origin and parameters

	X	Y	Z
Origin* (local grid)	746,884.125	2,523,943.25	1,200
Parent Block Size (m)	12.0	2.0	10.0
Sub-Block Size (m)	4.0	0.5	2.0
Extents (m)	2,964	1,050	1,420

*Note: Model origin is defined as lower, southwest edge of the model.

14.2.2.4 Grade, Density and RQD Estimation

The estimation plan includes the following items:

- Mineralized zone code of modelled mineralization in each block;
- Estimated bulk specific gravity based on an inverse distance squared method;
- Estimated block Cu, Ag, Zn and Pb grades by ordinary kriging, using a one estimation pass.

The search ellipsoids were omni directional as oriented which will effectively use 100 metres search distance along strike and down dip for each of the veins. However, the search will only be limited to the width of the vein or perpendicular to strike as the search strategy is using hard boundaries. In all cases, a minimum of two composites is used and a maximum of 16. In addition, a maximum of five composites are permitted per drillhole.

Grades were estimated using Ordinary Kriging, with inverse-distance-squared weighting (“ID2”) and nearest neighbour (“NN”) techniques used as checks of the OK estimate for global mean-grade. The OK grade estimation strategy was defined through an assessment of variogram shapes and ranges, and a review of the estimation parameters used in the previous estimates. A multi-pass search strategy was used.

For all domains, silver estimates used the same parameters as the copper estimates to maintain their spatial correlation. Lead and zinc were estimated independently of each other and of copper and silver.

Vein limits were treated as hard boundaries.

Top cuts were applied within the individual estimation profiles. Block discretization was set to 4 × 4 × 2 to take into account the change of support (volume increase/reduction in sample variance) moving from a point sample volume (i.e., drillhole) to the block volume.

14.2.2.5 Model Validation

Block model validation after grade estimation involved the following steps:

- Visual inspection of block grades against the input drillhole data.
- Histogram and Grade-Tonnage curve evaluation.
- Declustering of the top-cut, input drillhole data for:
  - Assessment for global unbiasedness.
  - Evaluation of block grades estimates (Ordinary kriged vs. inverse distance vs. nearest neighbor) against the declustered, top-cut, input drillhole data in swathe plots.
  - Global change of support to assess smoothing above a specified cut-off.

14.2.2.6 Mineral Resource Classification

Mineral resources classification conforms to the definitions provided in the CIM Definition Standards for Mineral Resources and Reserves (CIM, 2014). Classification of mineral resources in the Mala Noche Footwall zone considered the following factors:

- QAQC data: There is accurate and repeatable performance of external certified reference material and duplicate samples. There is also an established bulk density QAQC data set. The QAQC data are of sufficient quality to support classification of Measured mineral resources.
- Drillhole spacing: The high-level drillhole spacing study completed by Davis (2018) recommended a 50 m × 50 m drillhole spacing grid to have sufficient confidence in grade continuity for Indicated resources. This was the primary constraint used during classification, but areas with wider spacing were reviewed on a case-by-case basis. Measured resources require a drillhole spacing of about 25 m × 25 m, or they must be located proximally to underground development.
- Confidence classification boundaries digitized taking into account number of composites informed, distance to nearest composite, average distance of composites used, number of drillholes informed and relative error.
- Underground development and mined stopes.

14.2.2.7 Grade Tonnage Reporting

Mineral resources were reported above a US$ 42/t NSR cut-off and consider depletion from mining until March 31, 2018. Mineral resources within the MNV are evaluated using the NSR_{2018} formula. Metal prices used are as follows: US$ 3.50/lb Cu, US$18.00/oz Ag, US$ 1.20/lb Zn, US$ 1.00/lb Pb. Assumed metal recoveries are as follows: 90% Cu, 74% Ag, 79% Zn, and 76% Pb. The NSR_{2018} formula is as follow:

$$NSR_{2018} = Cu * 61.676 + Ag * 0.354 + Zn * 14.521 + Pb * 11.208$$

The mineral resources are not particularly sensitive to the selection of cut-off grade. Table 14-51 shows global quantities and grade in the MNFWZ at different NSR cut-offs. The reader is cautioned that these values should not be misconstrued as a mineral reserve. The reported quantities and grades are only presented to show the sensitivity of the resource model to the selection of cut-off.

Table 14-51: MNFWZ mineral resources at various NSR cut-offs as at March 31, 2018

NSR COG	Tonnes (kt)	NSR (US$)	Copper (%)	Silver (g/t)	Zinc (%)	Lead (%)	Contained Copper (kt)	Contained Silver (Troy koz)	Contained Zinc (kt)	Contained Lead (kt)
Indicated										
56	8,741	148.05	2.02	45	0.54	0.06	177	12,561	47	6
49	9,112	144.14	1.97	44	0.53	0.07	179	12,769	49	6
42	**9,350**	**141.62**	**1.93**	**43**	**0.54**	**0.07**	**180**	**12,896**	**50**	**6**
35	9,485	140.15	1.91	43	0.54	0.07	181	12,963	51	6
28	9,594	138.91	1.89	42	0.53	0.07	181	13,008	51	7
Inferred										
56	4,883	135.52	1.7	46	1.02	0.43	83	7,156	50	21
49	5,127	131.54	1.64	45	1.03	0.42	84	7,357	53	22
42	**5,354**	**127.88**	**1.59**	**44**	**1.03**	**0.41**	**85**	**7,584**	**55**	**22**
35	5,506	125.4	1.56	44	1.03	0.4	86	7,742	57	22
28	5,621	123.47	1.53	44	1.04	0.39	86	7,861	58	22

Table Notes:

1. NSR_{2018} formula = Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. The metal prices for Cu, Ag, Zn, and Pb respectively are as follows: Cu = US$ 3.50/lb, Ag = US$18.00/oz, Zn = US$1.20/lb, Pb = US$1.00/lb. The following recoveries were used: Cu = 90%, Ag = 74%, Zn = 79%, Pb = 76%.
2. Figures may not sum exactly due to rounding.
3. Mineral resources are depleted due to mining activities as at March 31, 2018.

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

“[A] concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized minerals in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.”

The “reasonable prospects for eventual economic extraction” requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account the likely extraction scenarios and process metal recoveries. It is the opinion of the Qualified Person that the Mala Noche Footwall zone, as classified, has a reasonable expectation of economic extraction.

Table 14-52 presents the mineral resource statement for the Mala Noche Footwall Zone at a US$42/t NSR cut-off.

Table 14-52: MNFWZ mineral resources above US$ 42/t NSR cut-off as at March 31, 2018

Classification	Tonnes (kt)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)	Cu Metal (kt)	Ag Metal (koz)	Zn Metal (kt)	Pb Metal (kt)
Copper Zone: MNFWZ									
Measured	-	-	-	-	-	-	-	-	-
Indicated	9,350	1.93	43	0.54	0.07	180	12,896	50	6
Total M + I	**9,350**	**1.93**	**43**	**0.54**	**0.07**	**180**	**12,896**	**50**	**6**
Inferred	5,354	1.59	44	1.03	0.41	85	7,584	55	22

Table Notes:

1. NSR_{2018} formula = Cu*61.676+Ag*0.354+Zn*14.521+Pb*11.208. The metal prices for Cu, Ag, Zn, and Pb respectively are as follows: Cu = US$3.50/lb, Ag = US$18.00/oz, Zn = US$1.20/lb, Pb = US$1.00/lb. The following recoveries were used: Cu = 90%, Ag = 74%, Zn = 79%, Pb = 76%.
2. Figures may not sum exactly due to rounding.
3. Mineral resources are depleted due to mining activities as at March 31, 2018.

15 Mineral Reserves Estimates

Pooya Mohseni, MBA, MASc., P.Eng., Director of Technical Services at Capstone Mining Corp., is the Qualified Person for the Cozamin Mineral Reserve Estimate. The estimate is based on the mineral resource block models developed by Jeremy Vincent, P.Geo., formerly of Capstone Mining Corp for the San Roberto/San Rafael zone and the MNFWZ (effective December 31, 2016). Only the Measured and Indicated mineral resources in these mineral resource block models have been used as the basis for the mineral reserves estimates. The mineral reserves estimate in this section is not based on the mineral resource update described in this Technical Report. An updated mineral reserve estimation incorporating the updated MNFWZ mineral resource estimation (effective date March 31, 2018) is underway at the time of this Technical Report.

Cozamin extracts several metals and produces multiple metal concentrates from mining operations. Due to the polymetallic nature of the mine, the cutoff is applied to a calculated Net Smelter Return (NSR). The NSR is the dollar value of the metals recovered from a tonne of ore, less the cost for concentrate transport to the smelter, smelting and refining charges and other deductions at the smelter. For mining of an area to be considered economical, the mineral reserve cut-off NSR value of that volume must cover the cost for mining, milling and G&A. The mineral reserve NSR calculation formula and metal prices were developed and based on historical transportation and smelting charges for Cozamin concentrates and Capstone metal price assumptions.

The metal prices used in the NSR calculations are summarized in Table 15-1.

Table 15-1: Metal Prices Used in the 2017 Mineral Reserves NSR Calculations

Metal	Unit	Selling Price (US$)
Copper	lb	$2.50
Silver	oz	$20.00
Lead	lb	$0.90
Zinc	lb	$1.00

The final NSR formula used for the December 31, 2017 reserve estimate was:

$42.426*Cu% + $0.364*Agppm + $8.123*Zn%

15.1 Cut-off Grade

The mineral reserve estimates for the San Roberto zone and MNFWZ were based on vein domain names (e.g., VN10, an individual vein identifier) using a combination of minimum vein width and a mineral reserve NSR cut-off value of $42.00/t.

The mineral reserve NSR cut-off value was calculated for the San Roberto zone and MNFWZ using actual mine, milling, and G&A costs. The economic mineral reserve NSR cut-off grade calculations from San Roberto zone and MNFWZ are summarized in Table 15-2. These historical operating costs have been reviewed and were considered to be reasonable, which therefore supported a NSR cut-off value of $42.00.

Table 15-2: 2017 Mineral Reserve NSR Cut-off Value Calculation

Cost Center	Unit Cost (US$/tonne)
	Cozamin Mine
Mining	20.23
Processing (Milling)	9.75
General and Administration	11.76
Total Cost	41.74

15.2 Mining Shapes and Stope Designs

Cozamin has historically used three separate mining methods - cut and fill mining, longhole stope mining, and Avoca retreat mining. In recent years the method has been entirely longhole Stope Mining. Identification of the mineable portions of the San Roberto zone and MNFWZ resources was accomplished using Maptek Vulcan Mine Stope Optimizer.

Using the respective resource block models, the vein domain triangulations (e.g., VN10, an individual mineralization domain identifier) were cropped to the Measured and Indicated resource boundary to limit the optimization to only include M&I blocks. The vein domain triangulations were then depleted by mine production up to the effective date. Further depletion removed internal pillars left for geotechnical support and unrecoverable remnants. The resulting triangulations were then used to constrain the optimization process in MSO. Mineable shapes exclude the following: ore intentionally left in crown pillars; ore left in parallel veins with insufficient intervening pillar to allow the stoping of both zones; and ore material deemed un-mineable due to geological complications (structures).

Stopes at Cozamin are mined in ~60 m levels separated by 8 m sill pillars. Since mining progresses down ramp, the sill pillars are not mined to provide some geotechnical support and to separate areas of loose backfill in upper areas from the active mining areas below. The 60 m panels are further split into sublevels to provide access for the longhole drill. In the San Roberto zone, the sublevels allow for a stope height of 15 m. In the MNFWZ, the stope height is 12 m to account for the variability of the vein. Additional constraints included minimum stope widths, maximum hanging wall and footwall angles, and dilution.

Each vein domain triangulation (San Roberto – Mala Noche, HW1, HW2; MNFWZ – V10, V20) was optimized independently. The results of the optimization were reviewed and shapes were removed according to the following vetting steps:

- Stopes generated in mined-out areas (or in areas largely mined out areas)
- Sill pillars
- Stope blocks too small and isolated

- Checked against the short-term model (if areas showed no viable stopes in the short-term model, stopes generated were removed from the reserve estimation)
- Geotechnical viability
- Economics viability after adding access and capital development requirements

15.3 Dilution and Recovery

Mining dilution is the low-grade wall rock that is introduced as part of the normal ore extraction cycle. At Cozamin, the longitudinal longhole stopes are defined by development drifts driven on the vein above and below the approximately 20 m sublevel heights. Therefore, mineral reserves have two dilution factors, one for the ore development drifts and one for the extraction of the stope.

Ore development drifts are driven wider than the actual ore width to allow equipment access for stope drilling and mucking, and to ensure the entire ore width is delineated for stoping. Approximately 25% of ore production is from development drifts; therefore, it is important to determine a separate ore development drift dilution factor. A minimum drift width of 4 m is required to accommodate the Cozamin mining equipment. Development shapes were constructed in MSO at 4 m widths, and dilution was added to account for slash and overbreak. Development shapes were given additional adjustment (dilution) of 10% for San Roberto and 7% for MNFWZ veins.

Ore drifting is controlled by mine geology mapping and the assays from the face chip-channel samples taken after each round. This information along with the as-built drift surveys are turned over to mine planning to delineate the stope tonnes and grade, and for the development of the longhole drilling and extraction plan. Due to typical longhole stope heights of 20 m or less, the regularity of the veins, and the top and bottom detailed drift delineation, a stope dilution skin of 0.5 m on each of the hangingwall and footwall has been applied in MSO to all longhole stopes regardless of width. From the ground conditions observed in the San Roberto and MNFWZ, and from the supporting geotechnical reports, the assumed dilution factors are reasonable for this mineral reserve estimate. The grade assigned to the diluting stope wall rock skin in this mineral reserve estimate comes from the resource block models and is included in the interrogation of the stope shapes.

An additional but minor source of dilution is backfill mucked during stope cleanout. Backfill dilution will only be encountered in those longhole benches that are mucked out on a floor of backfill waste rock. The grade assigned to these waste tonnes is one-half the detection limit of the analytical methods used for drillcore assays. Since this dilution is considered insignificant, it has not been included in the mineral reserve estimate, but will be monitored and reported by the Cozamin staff in reconciliation reports.

A mining recovery factor of 95% (5% ore loss) has been applied to the mineral reserve estimate to account for ore that cannot be recovered from the stopes, is lost in transit to the processing facilities, or remains in situ as part of a geotechnical support pillar. This recovery factor is consistent with those realized in mining similar deposits using longitudinal longhole stoping.

15.4 Mineral Reserves

Cozamin Mine has been operated by Capstone since production resumed in 2006. The mine infrastructure (including access ramps, ore production shaft, cross cuts, ventilation raises, etc.) has been designed for ore extraction. A detailed life-of-reserve development and production schedule and budget have been completed, which demonstrate the economic viability for the extraction of the mineral reserves at an annual production rate of approximately 1.0 Mt/yr.

Capstone is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

The mineral reserves, as presented in Table 15-3, are the expected total diluted and recovered mineral reserves within the designed stopes, production depleted to December 31, 2017. This estimate does not include San Rafael and MNFWZ East extension mineral reserves (the next update to this technical report will cover these areas).

Table 15-3: December 31, 2017 Mineral Reserves Estimates for the San Roberto zone and MNFWZ

Cozamin Deposit	Tonnage (000s)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)
Copper Zone - San Roberto					
Proven	122	1.42	57	0.83	0.33
Probable	1,139	0.95	45	1.44	0.40
Proven + Probable	1,261	1.00	46	1.38	0.40
Copper Zone – Mala Noche Footwall					
Proven	125	1.81	33	0.63	0.03
Probable	1,891	2.15	45	0.28	0.02
Proven + Probable	2,016	2.13	45	0.30	0.02
Total – Copper Zones					
Proven	247	1.62	45	0.73	0.18
Probable	3,030	1.70	45	0.71	0.17
Proven + Probable	3,277	1.69	45	0.72	0.17

NOTE: Pooya Mohseni, MBA, MASc., P.Eng., Director of Technical Services at Capstone Mining Corp., is the Qualified Person for this Cozamin Mineral Reserve update. Disclosure of the Cozamin Mine Mineral Reserves as of December 31, 2017 was completed using fully diluted mineable stope shapes generated by the Maptek Vulcan Mine Stope Optimizer software and estimated using the 2016 MNFWZ and MNV resource block models created by J. Vincent, P.Geo., formerly of Capstone Mining Corp. The Reserves are based on a US$ 42/t NSR cut-off. The NSR formula used for the Reserves was based US$2.50/lb Cu, US$20/oz Ag, US$1.0/lb Zn, MEX18.5 to US$1, and metallurgical recoveries of 94.5% Cu, 72% Ag, 70% Zn. The resulting NSR formula is $42.425*%Cu + 0.364*Ag ppm + 8.123*Zn%. Note that zero value was attributed to Pb because the circuit was used minimally due to low Pb concentrations. Tonnage and grade estimates include dilution and recovery allowances. Figures may not sum exactly due to rounding.

16 Mining Methods

From January 2012 to the end of December 2017, approximately 6.7 Mt have been mined and processed from the MNV and MNFWZ. An additional 3.6 Mt are forecasted to be mined from 2018 to 2022 in the Five Year mine plan, with the life of mine plan extending to mid 2022.

16.1 Geotechnical Considerations

The Cozamin underground mine comprises a series of sub-parallel copper and lead-zinc rich veins dipping north at 45-70° and striking approximately east-west at MNV and northwest-southeast at MNFWZ. The mining width can vary between 2 m and 15 m, depending on the vein thickness. The hangingwall horizon generally is composed of rhyolite with some local shale and phyllite. The vein material is competent, being a mix of quartz and massive sulphides. The shale is locally metamorphosed to phyllite. The footwall material is generally volcanic, including rhyolite and andesite with some local diorite. The mine maintains a three-dimensional model of lithological contacts and these are used for planning of the location of development openings and stope design purposes.

The mine continues to advance the understanding of the mechanical properties for each of the main rock units, sub-divided by geomechanical domains. Extensive core logging and underground mapping have been conducted to derive rock mass rating (RMR) and Q values for these domains. In terms of geological structures, Cozamin geologists map all significant occurrences encountered underground and include them in the three-dimensional model.

Exposed igneous rocks are typically competent and exhibit similar geotechnical characteristics and therefore can be lumped into the same broad geotechnical domain. The sedimentary and metamorphic rocks can be sub-divided into two geotechnical domains, as shale and phyllite exhibit differing behaviour. The veins exhibit similar geotechnical behaviour to the igneous rocks but are maintained as a separate geotechnical domain.

The igneous rocks exhibit high intact rock strengths of up to 150 MPa but the presence of micro-defects in rocks near the veins reduce the unconfined compressive strength (“UCS”) values to ranges between 50 and 100 MPa. The veins themselves exhibit similar intact rock strengths to the igneous rocks. The metamorphosed sedimentary rocks are typically foliated and exhibit lower intact rock strengths than the igneous rocks with unconfined compressive strength typically 75 MPa for the shale and 50 MPa for the phyllite. Rock mass quality in the igneous rocks and the veins are higher than in the shale and phyllite.

All these materials are quite competent, except for shale, which is more jointed.

Ground conditions and intact rock strengths typically deteriorate in proximity to cross-cutting fault zones (typically striking perpendicular or orthogonal to the veins) due to increased fracturing and alteration. Vein parallel faults are present in both the footwall and hangingwall of the MNV which can increase local stope dilution but these do not appear to be as prevalent in the MNFWZ. Rib pillars are typically left in place where cross-cutting faults intersect the veins. There is a fault that runs sub-parallel to the Mala Noche Vein that is generally present on the hangingwall. There are also numerous sub-vertical slip planes, which cut across the lenses. Ground conditions in the waste rock at depth are expected to deteriorate to a certain extent as metamorphic horizons are encountered and as induced mining stresses are experienced. Ground support practices have been modified to address these situations.

Observed ground conditions and in-situ stress information available for the mine location suggest that horizontal stresses are less than the vertical stress due to the overburden load.

Geomechanical instrumentation is routinely used at Cozamin, mainly in the form of instrumented cable bolts in wider stopes and intersections, particularly where contact zone alteration is encountered in cross-cutting fault zones.

16.1.1 Anticipated geotechnical conditions in the lower MNFWZ

For the bulk of the future reserves of the mine present in the lower MNFWZ and the east extension of that area, the bulk of the vein 20 stopes will be wholly excavated in the rhyolite rock mass but shale and phyllite zones are present locally in the footwall of the stopes. The proposed vein 10 mining in the lower MNFWZ is in a more complex geotechnical situation than the vein 20 mining with more shale and phyllite anticipated, particularly in the hangingwall.

The depth of mining in the reserve update ranges from 440m deep to 1000m deep.

Much of the vein 20 mining is in rhyolite and mining conditions there are expected to be like what has been encountered in recent mining in the last five years in the upper MNV and MNFWZ mining except for increased depth. Therefore, planned level spacing, sub-level spacing, open stope strike lengths, and sill pillar sizes are achievable and dilution estimates are suitable for most stopes. Localised portions of vein 20 and much of vein 10 are expected to encounter more challenging ground conditions than have been encountered in the past due to an increasing prevalence of shale and phyllite in the permanent development openings, the stope development, and in the stope walls themselves. These issues are likely to cause a reduction in extraction due to an increase in the requirement for rib pillars to control wall dilution relative to what has been required in much of the mines previous production.

Recommendations for required local alterations to the typical Cozamin stope geometry designs in the lower MNFWZ and the east extension are described below. These recommendations are based on anticipated geotechnical conditions derived from Cozamin lithological and fault modelling and will be refined in the future using empirical open stope span stability assessment approaches that are influenced by actual stope performance at Cozamin and numerical stress analyses. Such local alterations to the generic Cozamin mine design guidelines that will be used to update the reserve that includes the MNFWZ east extension may include:

- Stopes in the MNFWZ east extension are anticipated to be in good ground conditions and previous mine designs applied to historical main MNV stoping may be achievable.
- Shallow dipping (e.g. < 50° dip) stopes may require reduced strike lengths to control dilution.

- Stopes with shale in either hangingwall or footwall will require reduced stope strike lengths to control dilution.
- Stopes deeper than 750m may require wider rib pillars.
- When shale or phyllite is close to a stope wall, in either the hangingwall or footwall, reduced strike lengths may be required to maintain the waste in place and not increase dilution.
- Mining of adjacent veins may not be feasible if they are too close together, but unless cemented fill is adopted the footwall stopes should be mined before stopes on the hangingwall side.
- Cross-cutting fault zones should be left as rib pillars, but they may need to be larger than those required to be left in un-faulted areas.

The mining recovery published in this report does not yet reflect these local mine design refinements. These refinements may lead to both increases and decreases in the mining extraction locally.

Ground support requirements will increase with depth in the lower MNFWZ and the MNFW east extension as pattern rebar is now being used in the stopes in the lower MNFWZ stope development. Increasing thicknesses of shotcrete and reduced round lengths are required in development in shale and phyllite. Development openings wider than 10 m in igneous rocks and 7.5 m in shale and phyllite rocks should have a provision that 50% will require long tendon (e.g. cable bolts) support.

16.2 Underground Mining Method

The San Roberto zone and MNFWZ are able to support underground mining operations. The ore is extracted using the longhole open stoping method. Ground conditions in the mine are usually favourable with wide spans observed to be generally stable with ground support at the current depth and extraction ratio. In areas where significant faults intersect the ore body, the ground conditions can be poor and vertical rib pillars are established, along with appropriate ground support systems.

No significant constraints relating to rock temperature or groundwater have been encountered, nor are they anticipated. The mine dewatering system is centrally located in the San Roberto mine. The system uses a series of sump levels to assist with the decantation process. The western regions of the mine use four submersible pump stations on different levels and transfer water along Level 10 to the central pump station. The San Roberto zone and MNFWZ use a combination of submersible and horizontal pumps to transfer water to Level 10. Level 10 uses a 150 HP submersible pump to transfer water to Level 8. Vertical pumps are located on Level 8 to transfer water to surface for process water. A small portion of water is recirculated back into the mine.

Detailed mine development layouts are prepared by Cozamin Engineering for the Life of Mine Plan (LOMP). The general dimensions of the various development headings are as follows:

Table 16-1: LOMP development dimensions

Development	Dimensions
Ramps	6.0 m wide x 5.0 m high
Sublevels (usually mined to the extent of the ore)	4.0 m wide x 4.5 m high
Access cross-cuts, drawpoints	4.0 m wide x 4.5 m high
Raises	3.1m/3.6m bore diameters

Thirty five percent of primary mine development is carried out by Capstone and the remaining 65% is by a Mexican mining contractor. Capstone personnel complete 100% of the mine production.

16.2.1 Description of Longhole Stope Mining

Longhole stoping is a bulk mining method in which the long axis of the stope and access drifts are either perpendicular (transverse) or parallel (longitudinal) along the strike of the vein. Cozamin currently exclusively uses the longitudinal longhole stoping methodology.

Longitudinal longhole stoping operates along or parallel to the strike of the vein. The orientation of the methods means that the hangingwall and footwall of the vein will form the sidewalls of the stope and is used where rock mass quality of the hangingwall is competent enough to allow the development of a substantial opening in the hangingwall or footwall. Longitudinal longhole methods are well suited to retreat mining and can be planned such that much of the development necessary can be considered production as the cuts can be kept within the vein.

The general mining sequence is described in section 16.6. Cozamin backfills each stoping sublevel prior to mining the sublevel above. The backfill used is unconsolidated waste development rock from other areas of the mine.

16.3 Mine Access and Material Handling

There are three main access routes to the mine; the San Ernesto ramp on the west end of the mine, the San Roberto shaft in the central part of the mine and the Guadalupana ramp at the east end of the mine. The mine has a crushing and loading pocket station at the 11.8 Level. The San Roberto shaft is used for ore hoisting and ventilation. The Guadalupana ramp is primarily used for underground heavy equipment access and ore haulage, while the San Ernesto ramp is used for light vehicle traffic.

Mineralized material is mucked from stopes and in-ore development using load-haul-dump (LHD) vehicles. The LHDs transfer the material into trucks. Mineralized material is either hauled to surface via the Guadalupana ramp or taken to the San Roberto shaft and dumped on the grizzly-crusher system. Oversized material left on the grizzly is broken up using a hydraulic rock breaker. Hoisted material from the San Roberto shaft is loaded into surface trucks and is transported to the truck scales.

Trucks are weighed on a truck scale located near the mill, after which the material is dumped into the Run of Mine (ROM) stockpile. Ore is then re-handled from the ROM stockpile to the primary jaw crusher by a loader. Oversized material is broken by a mobile hydraulic rock breaker.

Development waste is used exclusively in the mine as backfill. The waste is transported directly using LHDs or loaded into trucks with ejector boxes depending on the haul distance.

16.4 Mine Ventilation

The underground workings are ventilated using a push pull system with intake and exhaust fans located on surface, and booster fans underground delivering 800,000 cfm (378 m^3/s) of fresh air. Fresh air enters the mine through the San Roberto shaft, Guadalupana ramp, San Ernesto ramp and other smaller raises. Underground booster fans, internal raises and ventilation doors transport the fresh air to the specified locations.

There are currently three dedicated exhaust fans. Exhaust routes are configured to serve the different areas of production. A 650 HP Zitron exhaust fan at the Los Angles shaft is in use in the western regions of the mine, another 650 HP Zitron exhaust fan at the Robbins 10 raise is in use in the central zones, and a final 650 HP Zitron exhaust fan located in San Rafael is in use for the eastern zones. Additional fans and development of new raises are budgeted to increase ventilation capacity and air flow control.

16.5 Mobile Equipment and Fleet Optimization

The mine has a fleet of modern mobile equipment that is sufficient for current production. The mine fleet is composed of Capstone-owned and contractor-owned equipment. Capstone personnel concentrate on production and internal mine haulage. Contractors are used on site for haulage and capital development that exceed the current Capstone fleet capabilities. Table 16-2 highlights the Capstone fleet.

Table 16-2: Major Underground Mobile Equipment (Capstone Fleet Only)

Equipment Type	Mode	No. of units
Load-haul-dump ("LHD")	Toro 006 (2.67 m^3)	1
	LH 410 Sandvik (4.6 m^3)	8
Drills	Axera 5 Sandvik 16 ft	1
	DD-311-40 Sandvik 16 ft	2
	Stope Mate – Boart Longyear	1
	Cubex Aries	1
	DL310 Solo Sandvik	1
	DL311 Solo Sandvik	2
Haul Trucks	TH430 Sandvik – 18m^3	2
Rock Bolter	DS 310 Sandvik	1
	DS 311 Sandvik	3

16.6 Production Schedule

The mill capacity matches mine's ability to deliver ore to surface. The Life of Mine (LOM) plan does not include any significant stockpiling of low grade material. The LOM plan includes all mineral reserves reported in this technical report.

The production schedule is based on a general rule set of mining dependencies. When downward ramp development reaches stoping levels, in-vein production development begins, expanding from the access along strike in both directions. Each of the ~60 m levels consists of three of these sublevel production development drifts. When the top and bottom sublevel development drifts for the lowest stoping sublevel, stoping proceeds from the outside (furthest from the access) back to center. Stoping is performed for ~72 m along strike (this distance varies due to local geotechnical conditions), then a 6 m vertical rib pillar is left in-situ. The stoping resumes after the 6 m rib pillar and this pattern continues until mining reaches the central access point.

After a sublevel is mined, loose backfill is place from the center outwards to the extremities from the top drift of the sublevel. This loose fill creates the floor of the stoping activities on the next level above. After three sublevels are mined in this bottom-up, outside-in sequence, an 8 m horizontal pillar is left separating the completely mined and filled level from the level above and below. The mining activities continue in the level below and the pattern is repeated until the bottommost level of the mine is depleted and backfilled. The sequence is constrained to vertical columns with a length of ~200 m along strike. The division of columns in this manner allow for parallel mining activities to occur at several locations along strike simultaneously.

The production schedule for Cozamin was developed by Cozamin Engineering and incorporated San Roberto and MNFWZ mineral reserves. Table 16-3 shows the mine schedule for the 2018 LOM plan.

Table 16-3: Cozamin LOM Production Schedule

Year	Tonnes (Kt)	Cu (%)	Ag (g/t)	Zn (%)	Pb (%)
2018	912	1.72%	33	0.57%	0.03%
2019	880	1.63%	44	0.79%	0.09%
2020	836	1.59%	52	0.54%	0.26%
2021	720	1.58%	47	0.63%	0.25%
2022	217	1.31%	38	0.79%	0.34%

17 Recovery Methods

17.1 Process Plant

There is an existing process plant at Cozamin mine. KWM used the standard lab test procedures to review the flotation equipment installed and operated in the plant in order to evaluate process risk. Similarly, the primary ball mill grinding units were evaluated to determine the process limitations of the mill. With the modifications in the crushing circuit and the replacement of the Omnicone with the HP4, the crushing circuit appears to have sufficient flexibility to manage ore variability.

The main primary ball mills are 3.65 m diameter x 4.27 m long with 1,500 hp motors. The installed mill speed is 16.59 rpm, calculated to be 75% of critical. As an overflow mill the power draw was estimated at 1,150 hp. In the plant the mills were determined to operate between 115 amps and 125 amps, full load motor amps 180. Based on the amp draw the estimated operating power was 960 hp to 1040 hp. The indications are that, based on the mill power draw, there is flexibility in the grinding circuit for further optimization.

KWM developed a preliminary mass balance based on a mill feed rate of 3,500 tpd (monthly budget about 3,200 tpd). Flows from the mass balance were used to determine the residence times and scale up factors for comparison to the lab flotation test conditions. The plant residence times are believed to be more than sufficient to manage any ore variability when treating similar ores.

17.2 Crushing Plant

The crushing process flow sheet is illustrated in Figure 17-1. Ore is presently trucked from the headframe bin and underground ramps to a surface stockpile for blending to produce a consistent copper feed grade. The surface stockpile of approximately 10,000 tonnes is reclaimed by a front-end loader that feeds the material to a 100-tonne bin. Ore reports to the 0.5 m x 0.9 m primary jaw crusher via belt feeder. Crusher product is conveyed to the secondary 1.52 m x 3.66 m vibrating screen ahead of the 1.22 m secondary standard head cone crusher. Screen oversize is fed to the secondary crusher with screen undersize combined with secondary crusher product. This material is conveyed to a 1.83 m x 4.88 m vibrating screen with oversize material conveyed to the tertiary crusher (Metso HP4) and undersize material being conveyed to the fine ore bins, for the two main ball mill circuits and original ball mill circuit. Tertiary crusher product is returned to the 1.83 m x 4.88 m screen. Two 1,100-tonne capacity fine ore bins are available each feeding one of the two primary grinding lines in the milling circuit. Each bin provides approximately 20 hours storage for the respective grinding line.

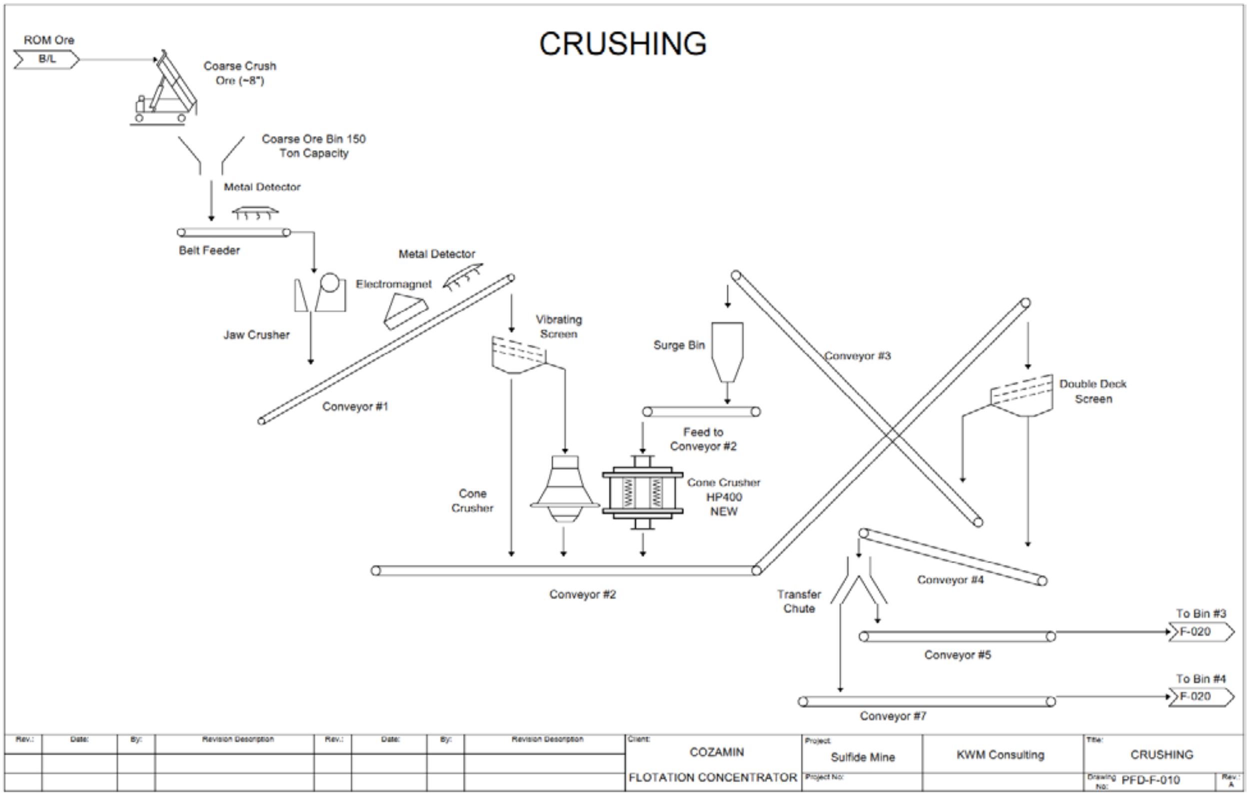


Figure 17-1: Crushing Flow Sheet

17.3 Grinding

The current milling process flow sheet is presented in Figure 17-2. The milling section is composed of two primary ball mills operating in parallel. Each mill is 3.65 m in diameter by 4.27 m long. The original ball mill (2.8 m in diameter by 1.6 m long) grinding circuit has been recommissioned to provide a budget combined mill feed rate of 3,200 to 3,300 tonnes per day.

Grinding product size is an 80% passing (P80) 100 mesh. Each ball mill is operated in closed circuit with a cyclone pack composed of 0.66 m diameter cyclones. Cyclone under flow reports back to the respective grinding mill with the cyclone overflow from both circuits reporting to a common flotation conditioning tank.

Lime is added to the grinding circuit for pH control throughout the circuit. Flotation reagents including zinc sulfate and the collector, S-7583, are also added to the grinding circuit.

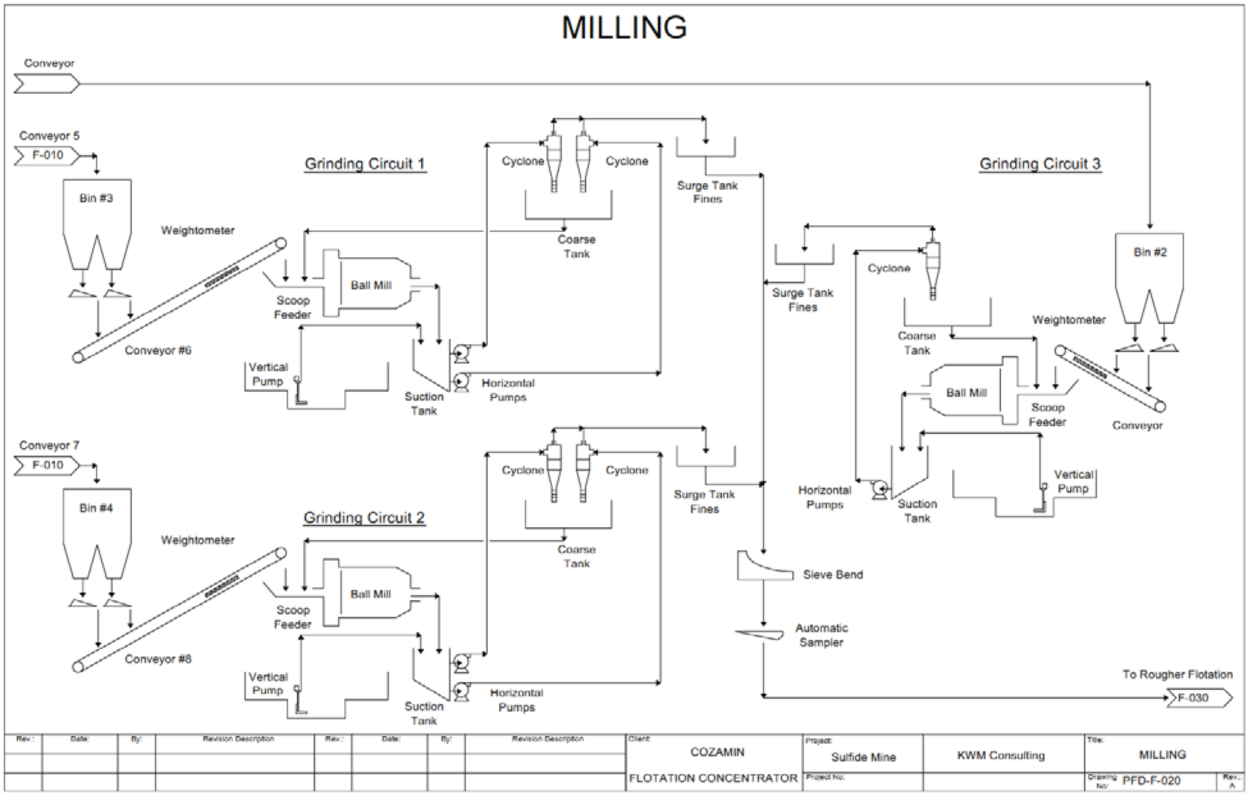


Figure 17-2: Milling Flow Sheet

17.4 Flotation

The original process flow sheet has been expanded to include a flash flotation cell for the recovery of copper and lead. Figure 17-3 illustrates the current flotation flow sheet at Cozamin. Slurry from the grinding circuit is transported to the flash flotation cell for initial copper and lead flash flotation. Concentrate from flash flotation report directly to the copper and lead separation flotation.

Tailings from flash flotation report by gravity to banks of rougher and scavenger flotation cells (6-OK 16 cells) for additional recovery of copper and lead. The copper-lead rougher concentrates report to a two-stage cleaning system. The original second stage cleaner cells have been replaced with a column cleaner which has improved the overall concentrate grade.

Copper-lead rougher flotation tailings report to the zinc conditioner tank prior to zinc rougher flotation, where reagents are added to depress deleterious minerals and activate the zinc mineralization. The zinc rougher concentrate reports to a closed circuit regrind for additional liberation of zinc mineralization. Products from the regrind circuit reports to two stages of zinc concentrate cleaning. A column cell has been added to the circuit to improve zinc concentrate grade. Tailings from the first cleaner stage report to final tails.

Individual copper and lead concentrates are produced from the copper-lead cleaner concentrate via selective flotation. Reagents are added to promote lead mineral flotation and suppress the flotation of copper mineralization. The copper-lead flotation rougher tails (copper concentrate) reports directly to the copper concentrate thickener. The lead concentrate undergoes two stages of cleaning before being transferred to the lead concentrate thickener.

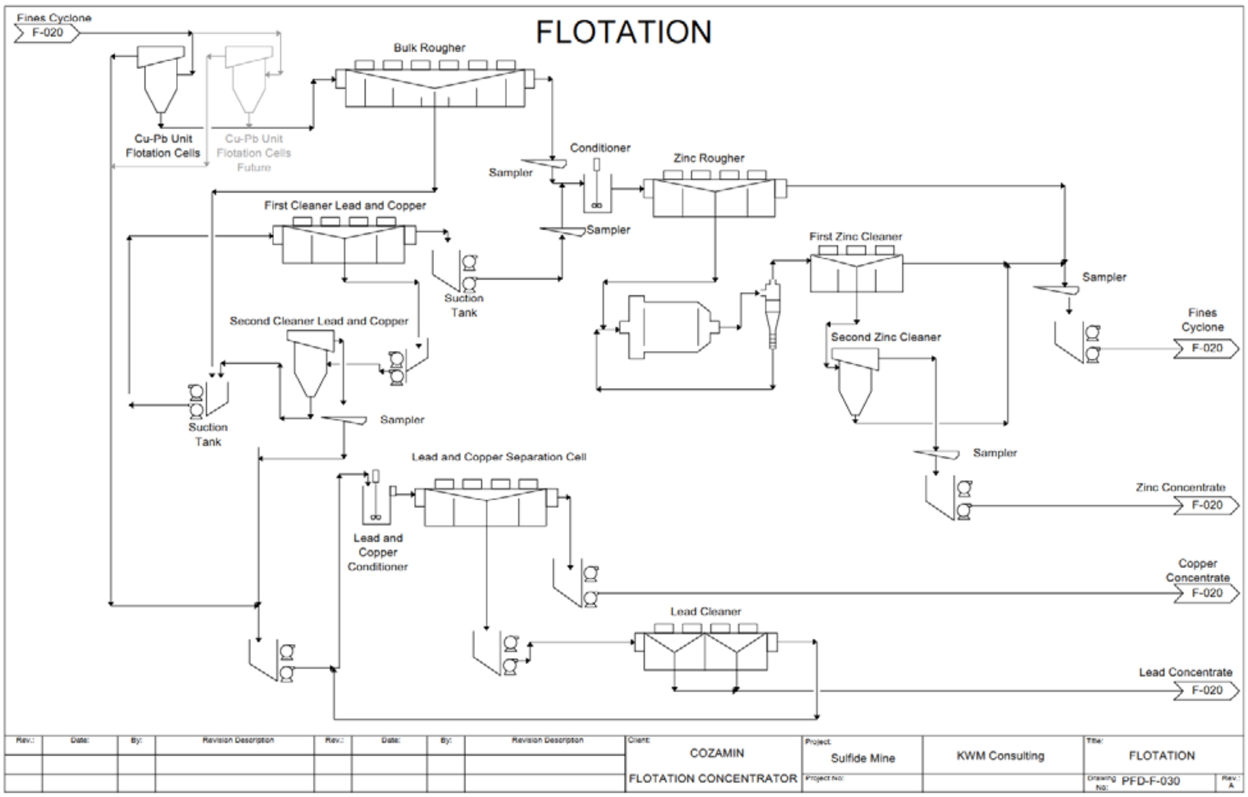


Figure 17-3: Flotation Flow Sheet

17.5 Concentrate Dewatering and Filtration

Copper concentrate is pumped to the 16 m diameter concentrate thickener. Underflow from the thickener is pumped to a holding tank and then filtered in a Larox pressure filter (Figure 17-4). Product moisture is approximately 10%. Copper concentrate can be stored in the inside bins (capacity 1,500 tonnes) or outside on a concrete pad (capacity 4,000 tonnes). Concentrate is trucked to port daily (approximately 600 kilometres) and sampled as the material is transferred to the port warehouse and becomes the property of the buyer.

Zinc concentrate is pumped from the 8 m diameter thickener to the 1.3 m diameter x 4 m disc filter. Product moisture is approximately 10% and is stored in the inside bins with a capacity of 1,000 tonnes. The material is then transported to the port and sampled the same as the copper concentrate.

Lead concentrate is pumped from a 4 m diameter thickener to a 1.3 m diameter x 2 m long drum filter. The final moisture is approximately 8% and this material is stored inside (capacity 400 tonnes) prior to shipment by truck to the port. All concentrate trucking is done by third party. All trucks are weighed both empty and full at the mine site and the port.

The concentrate trucks are all equipped with GPS to monitor progress between the mine site and the port. The concentrate trucks are scheduled to operate in a convoy to maximize security.

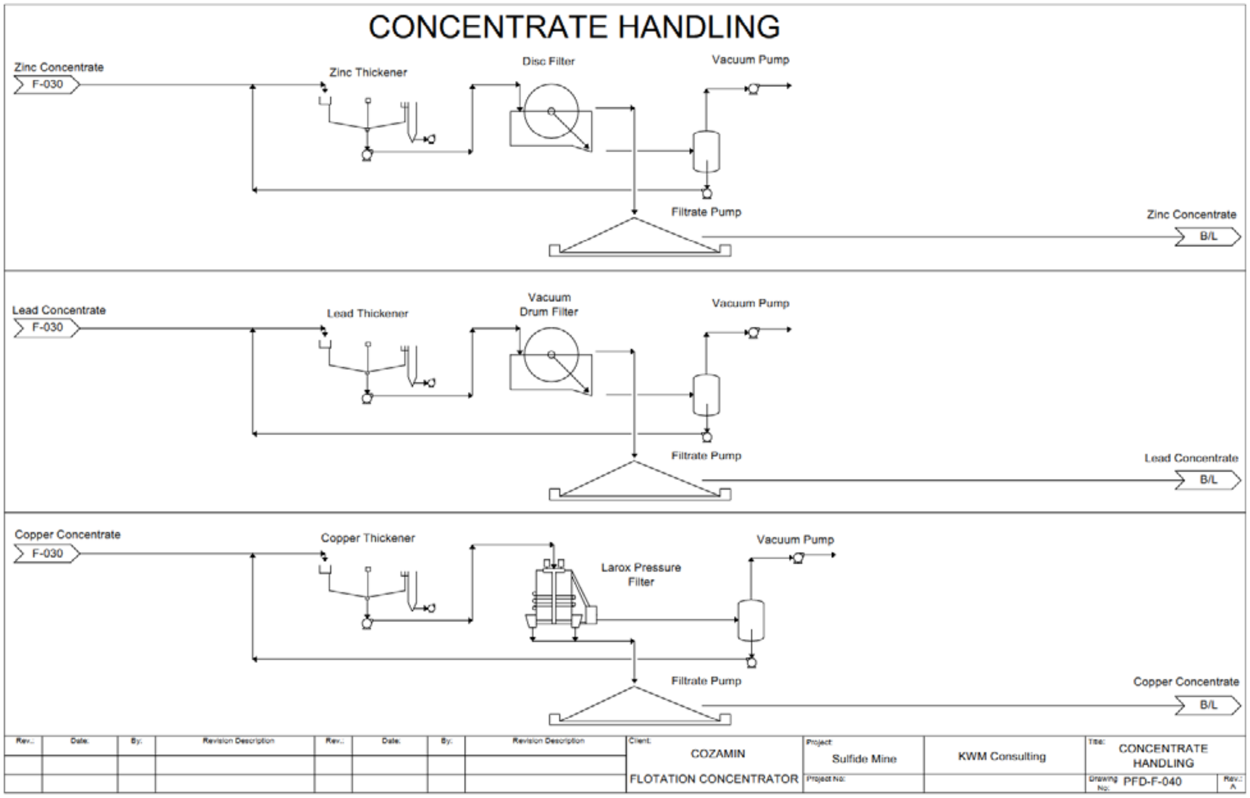


Figure 17-4: Concentrate Handling Flow Sheet

17.6 Tailings Handling

Tailings are pumped from the plant at approximately 32% solids to the thickener, where tailings achieve about 40-42% solids and are subsequently pumped up to the TSF for disposal (Figure 17-5). Cozamin TSF maintenance personnel deposit tailings in the TSF via D-20 and D-10 Krebbs cyclones in paddocks of about 50 m long (normal to the dam crest) and 25 m wide (parallel to the dam axis). The paddocks allow operations personnel to limit the embankment length over which the beach is constructed, mitigating the risk for slimes and water accumulating along the embankment crest. The deposition method allows for better water management and higher overall tailings densities.

When tailings segregation using cyclones is not possible, the tailings by-pass the thickener and direct tailings discharge takes place in the southwestern portion of the TSF. Following discharge into the impoundment, the coarse tailings particles settle out of the slurry in the beach area while the water with slimes continues to flow towards the reclaim pond area at the lowest point in the southeastern portion of the impoundment. Water pooled within the tailings pond is either evaporated on surface or reclaimed and sent back to the mill facility for re-use via a barge pumping system and water return pipeline. At present, there is sufficient capacity within the TSF to store all of the mineral reserves assuming proper tailings management continues and allows for construction of competent coarse tailings beaches for subsequent upstream raises.

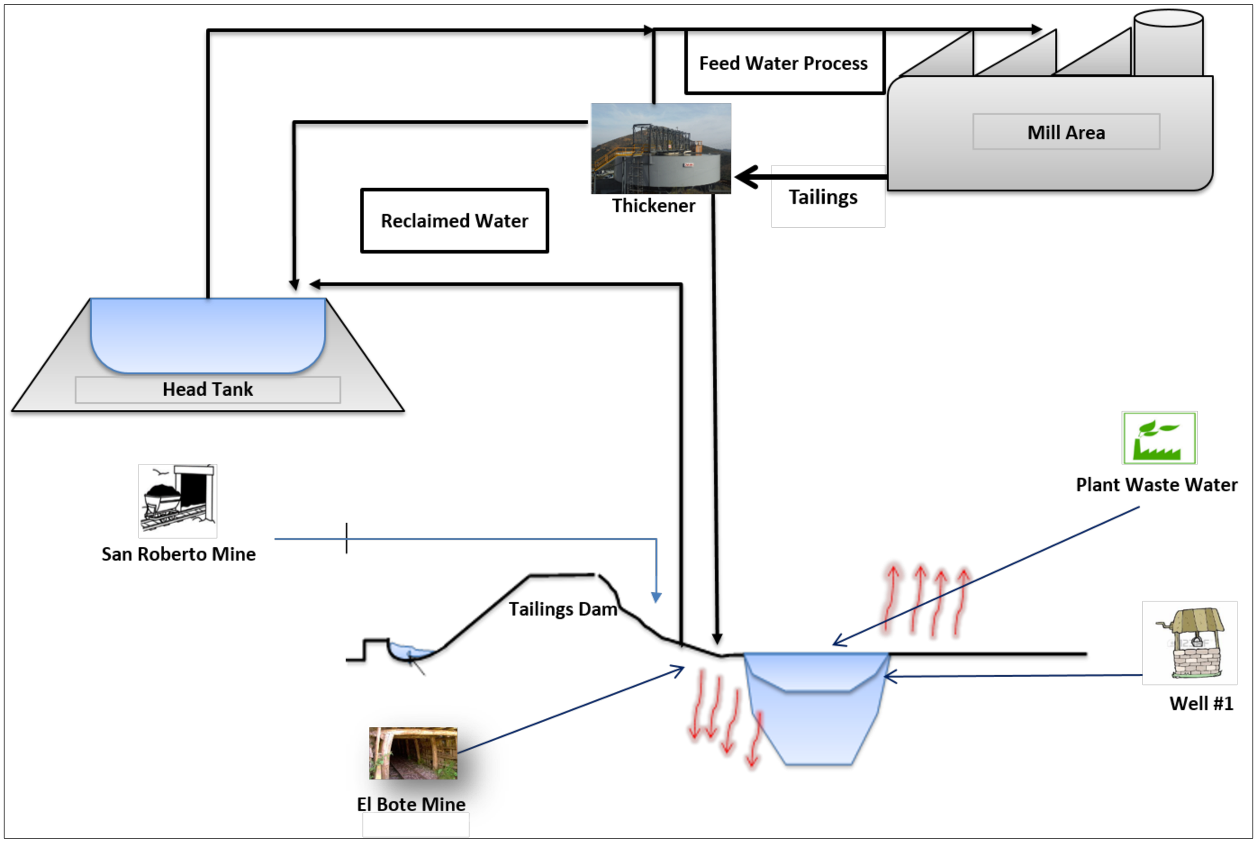


Figure 17-5: Tailings Handling Flow Sheet

18 Project Infrastructure

As an operating mine, all project infrastructure is presently in place at Cozamin including power, pipelines, crushing and conveying facilities, all milling and processing infrastructure, tailings impoundment dam with related infrastructure, maintenance facilities, and roads.

The buildings and infrastructure facilities at Cozamin include all buildings, pipelines, pump stations, electrical systems, laydowns, ore storage pads and roads shown in Figure 5-1. The principal facilities at Cozamin include:

- Process Plant;
- Site Laboratory;
- Power Sub Station;
- Plant Maintenance Building;
- Mine Entrance Building;
- On Site Back-up Generators;
- Stockpiles;
- Guadalupana and San Ernesto Ramps;
- San Roberto Shaft and Hoist Room;
- Mine and Geology Offices;
- Waste dump;
- Tailings Storage Facility;
- Administrative Offices;
- Dining Areas; and
- Recreational Complex / Auditorium.

18.1 Power and Electrical

Power is currently being supplied to the mine site from the national power grid with a current approval to draw 7.5 MW. Generators (both operating and back-up) on site have a capacity of 1.0 MW to back up critical mill and mine plant components.

18.2 Water Supply

There are three primary sources of water at Cozamin: permitted wells, permitted groundwater from nearby underground mines, and discharge water from a local municipal water treatment facility. The existing baseline information and site water balance suggests that the current sources and operational water management will be sufficient for the current LOM plan.

Although the existing baseline information indicates water sources are sufficient, Cozamin improved its existing water management systems. Cozamin installed a tailings thickener in 2014 to increase water recovery in tailings. This increased water recycle back to the mill and reduced water loss due to evaporation in the tailings storage facility.

Table 18-1 provides the current and pending annual water rights at Cozamin. The water sources described are accessible year-round and do not include seasonal rainfall or mine dewatering requirements which do not require permitting. In 2017, water consumption at Cozamin was approximately 2,499 km^3. Taking into consideration 2017 rainfall and underground dewatering, Cozamin used approximately 636,001 m^3 of water from its permitted water sources (25% fresh water).

Table 18-1: Primary Water Sources at Cozamin Mine

Source	Annual Water Rights Allocation (M^3)	Notes
Water Wells	128,000	Well 1, 4 - Permitted
Permitted Underground mine sources	404,800	San Bartolo Shaft - Permitted
Municipal Water Treatment Plant	566,784	Under agreement with municipal government - Permitted
Current Water Rights Subtotal	1,099,584	Permitted Subtotal
Other Water Rights Pending	134,000	Los Carrera well - pending
Permitted and Pending Water Rights	1,233,584	

18.3 Tailings Storage Facility

The design of the Cozamin TSF up to Stage 5 consisted of a modified center-line raise. Given the restrictions downstream to continue expanding the embankment with a center-line concept, it was decided to shift to an upstream dam raise concept. Currently, two upstream raises have been constructed (Stages 6 & 7) up to elevation 2,512 masl. Additionally, a conceptual design of 13, three-meter high lifts has been developed up to the elevation 2,545 masl. Each raise would be constructed over compacted cyclone sand from the tailings beach, with a starter berm constructed using compacted locally available materials or compacted tailings for future lifts if their material properties indicate that they can be compacted to achieve a suitable shear strength.

Each 3-metre-high starter berm has a downstream slope of 2 to 1 (horizontal to vertical) and upstream slopes of 1.5 to 1. Most of the starter berms would have a crest width of 6.5 metres with a 2-metre overlap creating 4.5-metre-wide benches. At various elevations the design calls for wider benches. The benching creates an overall downstream slope of approximately 3.9 to 1 up to elevation 2,545 metres from the 30 m offset starting at Stage 6. The plan view and section through the deepest portion of the dam are shown in Figure 18-1 and Figure 18-2, respectively. The maximum elevation of the water pool is maintained at least two metres below the dam's crests – allowing for a minimum of two metres of operational freeboard per the original design of the dam and requirements by the Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT).

Tailings are pumped from the plant at approximately 32% solids to the thickener, where tailings achieve about 40-42% solids and are subsequently pumped up to the TSF for disposal. Cozamin TSF maintenance personnel deposit tailings in the TSF via D-20 and D-10 Krebbs cyclones in paddocks of about 50 m long (normal to the dam crest) and 25 m wide (parallel to the dam axis). The paddocks allow operations personnel to limit the embankment length over which the beach is constructed, mitigating the risk for slimes and water accumulating along the embankment crest. The deposition method allows for better water management and higher overall tailings densities.

When tailings segregation using cyclones is not possible, the tailings by-pass the thickener and direct tailings discharge takes place in the southwestern portion of the TSF. Following discharge into the impoundment, the coarse tailings particles settle out of the slurry in the beach area while the water with slimes continues to flow towards the reclaim pond area at the lowest point in the southeastern portion of the impoundment. Water pooled within the tailings pond is either evaporated on surface or reclaimed and sent back to the mill facility for re-use via a barge pumping system and water return pipeline. At present, there is sufficient capacity within the TSF to store all of the mineral reserves assuming proper tailings management continues and allows for construction of competent coarse tailings beaches for subsequent upstream raises.

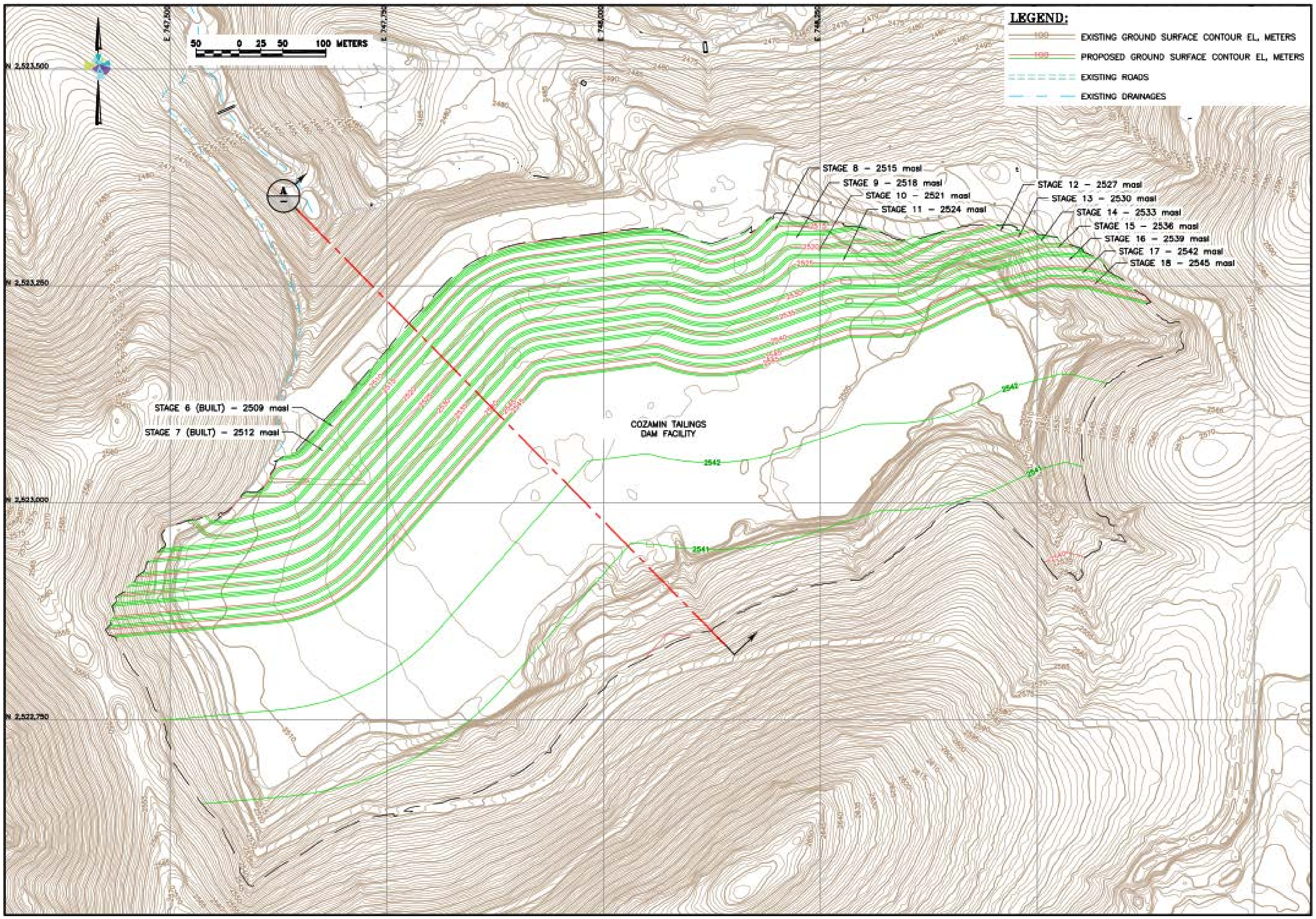


Figure 18-1: Stages 6 through 18 Expansion Evaluation Plan View (Wood, 2018b)

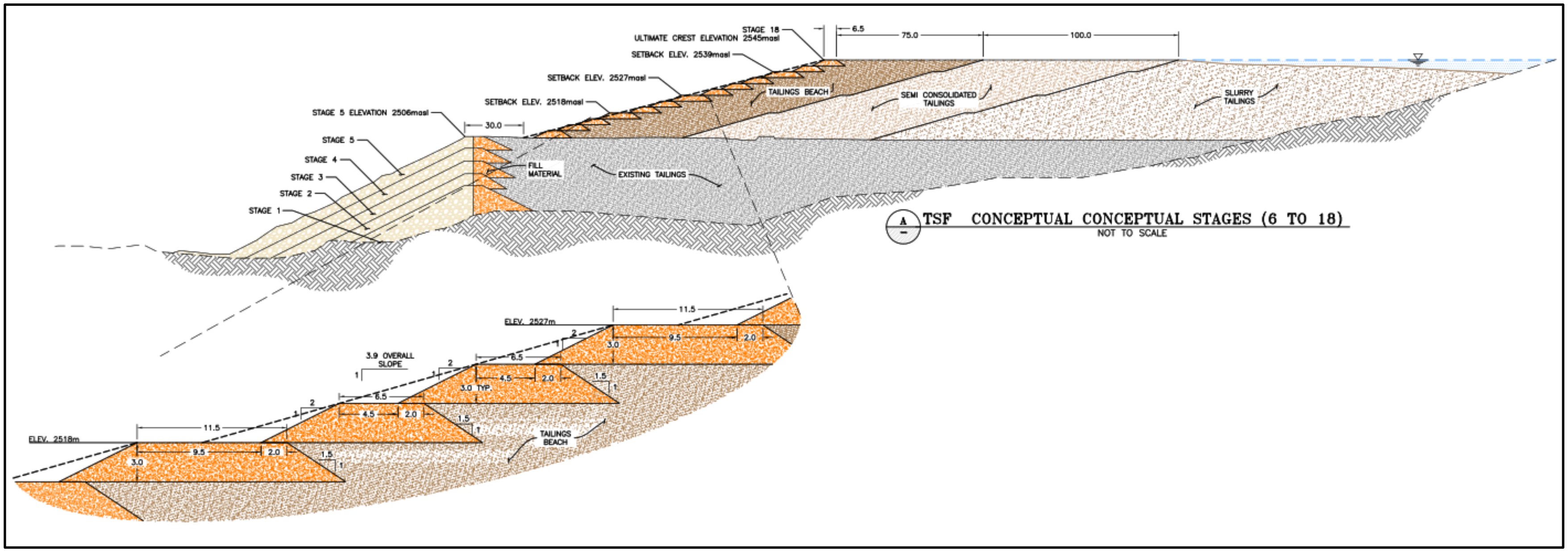


Figure 18-2: Stages 6 through 18 Expansion Evaluation Section View (Wood, 2018b).

19 Market Studies and Contracts

19.1 Markets

Copper, lead and zinc concentrates produced by Cozamin are currently sold to international commodity purchasing companies who market the concentrates to various smelters or use the concentrate as a prime blending quality to enhance the quality of other sourced concentrates. The marketability of the Cozamin concentrates is dependent upon metal grade and the quantity of deleterious elements in the concentrate.

19.2 Concentrate Contracts

The concentrate contracts are considered within accepted industry practice by the Qualified Person of this section. All three concentrates are sold domestically, delivered on a DAP (delivered at place) basis, negating the need to secure storage facilities or arrange ocean shipping for export. The zinc concentrate can be delivered domestically, by truck, to either domestic smelters or to storage/blending facilities near the port of Manzanillo (as directed by the buyer for the monthly quotas). Lead and copper concentrate are typically delivered to facilities located in Manzanillo for blending or direct export. Transportation agreements are negotiated for a fixed price per wet metric tonne for a prescribed period (usually annually) and transported by truck to the port under contract. Cozamin's current concentrate sales agreements are summarized in Table 19-1.

Table 19-1: Metal and Concentrate Purchase Contracts

Metal (Concentrate)	Purchaser	Contract Period	% of Production	Metal Price
Copper Concentrate	MRI Andina Trade S.A. DE C.V.	2018	100%	Cu: LME Cash Settlement Ag: London Silver Spot
Zinc Concentrate	Trafigura Mexico S.A. DE C.V.	2018	100%	Zn: LME Cash Settlement Ag: London Silver Spot
Lead Concentrate	Louis Dreyfus Commodities Metal Suisse S.A.*	2018[1]	100%	Pb: LME Cash Settlement Ag: London Silver Spot

1. The lead concentrate sales agreement is an extension of the 2014 contract for which the quantity requirement has not been met but is expected to be completed within 2018.

19.3 Taxes

Detailed tax calculations are typically very complex and take into account many factors of a corporation's entire financial performance and not just the results of an individual operation.

Mexican corporate tax comprises the following:

- 30% corporate income tax on net profit.
- 7.5% mining royalty tax effective January 1, 2014 on operating earnings (without a deduction for interest, depreciation and amortization).
- 10% dividend withholding tax on distribution of dividends out of Mexico, reduced to 5% by the applicable Mexico-Canada tax treaty.

A valued added tax ("IVA") is paid to the government by Cozamin, but can be refundable. Property taxes for the mine site are approximately $20,000 per annum. Cozamin pays a 3% NSR royalty to Bacis.

In 2017, the State of Zacatecas introduced the following environmental taxes:

- Environmental Remediation Tax on the extraction of materials. Extraction of material from federally granted mining concessions is exempt, so this tax does not apply to Cozamin.
- Tax on greenhouse gas emissions, based on $12.5 (MXN$250) per ton of CO_2 or equivalent released to the atmosphere.
- Tax on discharge of pollutants to soil, subsoil and water, at $1.25 (MXN$25) per m^2 of land or $5 (MXN$100) per m^3 of water affected by pollutant emission.
- Tax on the disposal of waste at $5 (MXN$100) per ton of waste disposed by the taxpayer in public or private waste facilities. Waste includes any material deriving from extraction and processing of minerals.
- Cozamin won a challenge opposing these environmental taxes on constitutional grounds in 2017, however, the state filed an amendment and final resolution remains pending.

20 Environment Studies, Permitting and Social or Community Impacts

Requirements and plans for waste and tailings disposal are described in Section 18 of this Technical Report. The present section discusses information on environmental assessment, permitting, site monitoring both during operations and mine closure, and social or community factors related to the project.

20.1 Environmental Assessment and Permitting

This summary of the environmental assessment and permitting requirements is based on work undertaken for Capstone under the supervision of Nimbus Management Ltd., Jenna Hardy, P.Geo., Principal.

The Cozamin Mine lies within a regionally mineralized area that has seen extensive historic mining over more than 475 years. Host rocks surrounding the mineralized vein systems are anomalous in base and precious metals, providing a halo of elevated metals values that extends a considerable distance beyond known workings.

Numerous old mine workings, excavations and dumps, as well as some historic tailings are present, both on, and adjacent to, the Cozamin Mine site; some lie on mining lands held by Capstone and others are held by third parties.

Environmental impacts within the mine site resulting from historic activities are evident. As well, there are obvious impacts from the present day (though sometimes intermittent) operations of surrounding mines and processing operations by third parties. The impacts have been discussed, though not necessarily completely documented, in historic reports.

Though local and state permits are also required, mine permitting in Mexico is regulated and administered under an integrated regime by the government body, Secretaría de Medio Ambiente y Recursos Naturales ("SEMARNAT"), the federal regulatory agency that establishes the minimum standards for environmental compliance. The federal level environmental protection system is described in the General Law of Ecological Equilibrium and the Protection of the Environment (Ley General de Equilibrio Ecológico y la Protección al Ambiente or "LGEEPA"). Under LGEEPA, numerous regulations and standards for environmental impact assessment, air and water pollution, solid and hazardous waste management and noise have been issued. Article 28 of the LGEEPA specifies that SEMARNAT must issue prior approval to parties intending to develop a mine and mineral processing plant.

SEMARNAT also regulates the use of "forest" resources and promotes sustainable development of "forest" ecosystems under the General Law of Forest Development (Ley General de Desarrollo Forestal or "LGDFS") which establishes the regulation for the Change of Use of Soils in Forested Lands (Cambio de Uso de Suelos en Terrenos Forestales or "CUSTF) authorization. This applies to removal of all types of vegetation in areas which have potential to be used for forest activities. An Economic-Technical Study (Estudio Economico-Tecnico or "ETE") is required to demonstrate that proposed activities will not compromise biodiversity, cause soil erosion, deterioration of water/air quality or reduction of water catchment, and that in the long term the proposed alternative use will be more productive.

Environmental regulations are promulgated through various "Official Mexican Standards ("Normas Oficiales Mexicanas"), knows as "NOM's" or "normas", which establish specifications, procedures, technical standards, ecological criteria, emission limits and general guidelines that apply to particular processes or activities; and carry the force of law.

Prior to Capstone's involvement in the Cozamin Mine, several environmental studies had been carried out by previous owners. The San Roberto mine had been fully permitted to operate at 750 tpd. Capstone completed the following to support permitting and regulatory approvals with a view to re-open the mine and expand tonnage throughput to 1,000 tpd in 2006:

- an environmental impact assessment, known in Mexico as a Manifestación de Impacto Ambiental ("MIA"), which describes potential impacts to the environment that may occur in all stages of the operation as well as the measures to prevent, control, mitigate or compensate for these impacts;
- a detailed study of new lands needed for use as part of an expanded mining operation, known as the Estudio Justificativo de Cambio de Uso de Suelos ("ETJ" or "ETJ"), which applies to all affected lands associated with the mining and processing operation; and
- a risk assessment to include all aspects of the operation, known as an Estudio de Riesgo ("ER"), that evaluates and ranks risks associated with activities that impact human health and environment, and describes risk control and mitigation measures.

The original MIA was approved by SEMARNAT on August 29th, 2005. It remained valid for a period of ten years, and can be renewed for additional periods of ten years on application. Capstone received approval for an additional ten years of operation on June 1st, 2015.

Following significant exploration and operational success in succeeding years, Capstone made a series of applications for eight modifications to the original operational MIA, followed by two additional MIA specifically to cover work, installations and activities complementary to those already approved, as well as the expansion of the tailings storage facility and associated infrastructure for the stage 6/7 dam. In addition there were various ETJ, to accommodate an expanded operation, changed operational conditions and optimized site usage. Five additional environmental impact assessments for exploration were also completed and approved.

The approved MIA include authorizations for: enlargement of operations for the underground mine, plant and surface support facilities; installation and relocation of new surface and underground facilities; a self-serve diesel supply station; construction and relocation of surface access roads; a new design and expanded footprint for the tailings facility and its infrastructure; installation of sub-stations and power lines as well as water lines and pumping capacity for water sources; installation of playing fields and lunch rooms; and an expansion of the San Roberto shaft, mine deepening, underground pump installation, with improved underground ventilation and mine maintenance facilities.

In 2016 SEMARNAT streamlined the regulatory process by introducing a new submission and approval process known as a Technical Documento Tecnico Unificado ("DTU"). This combines an environmental impact assessment and a study detailing changes to use of soils in "forested" lands (Cambio de Uso de Suelos en Terrenos Forestales or "CUSTF") in project sites where additional lands are needed as part of an expanded operation and these had not been previously permitted.

With time four DTU were submitted and approved to cover ancillary and complementary mining and new exploration activities on forested lands. Permitted work included: increased waste rock storage; short term hazardous waste storage; infrastructure associated with the tailings storage facility; a second recreational facility as well as platforms and lay down areas for surface exploration drilling; an alternate access route into the mine property and storage facilities for drill core; internal access for surface drilling, temporary work areas for contractors; construction of three new Robbins raises for underground ventilation; and development of new accessways and additional drill core storage areas. Terms for the DTU authorizations vary from 2-10 years and depend on the estimated time frame for the proposed activities.

SEMARNAT approved the most recent of the MIA applications for the Stage 6/7 tailings dam on February 2, 2016 and the most recent DTU on May 10, 2018.

A new DTU application was submitted on February 15, 2018 and is currently under evaluation by SEMARNAT. The first phase activities would include diamond drilling from surface to evaluate the potential of previously identified veins within the broader mineralized zone at the Cozamin Mine property. The second phase would involve development of a new waste dump immediately downstream from the present tailings embankment. This would reinforce the present upstream dam and include a seepage recovery system.

The Cozamin Mine is presently authorized to operate at 4,500 tpd of underground production and process plant operation, using two surface ramps and the principal San Roberto shaft, and to dispose tailings into the completed stage 7 dam. Additional ETJ authorizations have also been received for work which falls outside the standard threshold for disturbances of direct mineral exploration activities (NOM-120-SEMARNAT-2011). Surface exploration activities were authorized for a 2-year period beginning June 10, 2015, then extended until 2019.

The expanded operation required more workers and more sanitary facilities. To improve downstream waste management, Capstone submitted documentation to support a new MIA (with accompanying ETJ) for the construction and operation of a plant to treat residual water. A new and separate MIA was granted on February 14, 2011 for installation of the plant. This authorization is good for ten years or until the site is abandoned.

SEMARNAT's statements of approval for these documents (known as a "Dictamenes") include detailed terms and conditions for compliance in protection of the environment, as well as an obligation to file operational reports every six months describing the Company's progress in fulfilling the terms and conditions. The Dictamenes provide authorization for Capstone to complete the proposed activities within the approved mine footprint subject to the terms and conditions outlined. These represent normal environmental and regulatory requirements as described in the MIA's DTU's, CUSTF's and ETJ's, and all costs are included in the operating costs summary. Development of the required monitoring and mitigation plans, closure strategy and operational procedures is dynamic, with periodic review and updating to make sure they meet permit requirements. Detailed reporting includes filing of mitigation and closure plans with SEMARNAT, as well as the results of ongoing dust and water quality monitoring.

Following a final inspection of verification by PROFEPA (Procuraduría Federal de Protección al Ambiente en el Estado de Zacatecas), the federal attorney general with respect to environmental protection (i.e. enforcement branch), of SEMARNAT, Capstone formally received its first integrated operating permit on October 20, 2006 (LAU-32/007-2006). This is known in Mexico as a Licencia Única Ambiental (LAU). The LAU is the main operational permit which provides Mexican federal environmental regulators with information on project environmental risk and impact, atmospheric emissions and hazardous waste, as well as details regarding wastewater effluent. It covers all procedures for environmental impact and risk assessment, emissions to the atmosphere and the generation, handling and reporting of hazardous wastes. It also sets out the acceptable limits for air emissions, hazardous waste and water impacts, as well as the environmental impact and risk of the proposed operation based on the approved MIA or DTU, the environmental risk study, and the ETJ.

LAU's were received for the tonnage expansions to 2,600 tpd (March 25, 2008), 3,000 tpd (May 19, 2009), 4,000 tpd (January 13, 2012) and 4,500 tpd (June 15, 2015). Under the administrative reporting procedure of the LAU, all environmental data relating to air and water emissions are consolidated and reported on a single Annual Operations document known as a COA (Cedula de Operación Anual) to be submitted to SEMARNAT annually on April 30. This information is recorded in a publicly available Emissions and Transfer of Contaminants Register (RETC), fulfilling the Mexican government's commitment to transparency in the area of environmental regulation.

Wastes generated by the mining operations include waste rock and tailings as well as regulated and hazardous wastes. Capstone received authorization as a generator of hazardous wastes under the General Law for the Prevention and Comprehensive Management of Waste (Ley General para la Prevención y Gestión Integral de los Residuos or "LGPGIR"- articles 68, 69, 70, and applicable regulations), first registering its plan for management of wastes in 2009 (No. 32-PMM-I-0015-2009). In 2017, following a site visit and review by the regulator*,* Dirección General de Gestión Integral de Materiales y Actividades Riesgosasa (or "DGGIMAR"), Capstone submitted a revised plan with more focus on mining and metallurgical wastes which was authorized on December 3, 2017 for a 15 year term. Capstone submits regular updates with respect to the types of wastes generated and how they are managed; its integrated waste management plan is revised on an annual basis.

Capstone is certified under PROFEPA's National Environmental Auditing Program (Programa Nacional de Auditoría Ambiental) or Clean Industry (Industria Limpia) Program. This voluntary environmental audit program serves to promote self-regulation and continuous environmental improvement. Companies are certified after they meet a list of requirements including the implementation of international best practices, applicable engineering and preventative corrective measures; it is perhaps one of the most advanced programs of voluntary compliance in Latin America.

Companies entering the program contract third-party, PROFEPA-accredited, private sector auditors, considered experts in fields such as risk management and water quality, to conduct an "Industrial Verification" audit. PROFEPA determines the terms of reference of the audit, defines audit protocols, supervises the work through certification of the independent third party auditors, and supervises compliance with the agreed-upon actions. The audit determines whether facilities are in compliance with applicable environmental laws and regulations. It results in an Action Plan which defines a time frame and specific actions a site needs to take in order to be in compliance and solve existing or potential problems.

According to PROFEPA this program fosters a better relationship between regulators and industry, providing a green label for businesses to promote themselves and reducing insurance premiums for certified facilities. The Plan is included in an Environmental Compliance Agreement signed by PROFEPA and the company. The Clean Industry Certificate recognizes operations that have demonstrated a high level of environmental performance, based on their own environmental management system, as well as total compliance with regulations. Apart from public acknowledgement of its clean status, benefits to Capstone include the assurance of legal compliance through the use of the Action Plan, agreement with its regulators on a defined program of remediation and mitigation, and the ability to participate in no-cost training programs established by PROFEPA. The audit Certificate is valid for two years and can be re-authenticated after renewal by an additional audit.

The Cozamin Mine first registered for admission to the Clean Industry Program in late 2007. It successfully underwent the rigorous audit to assess compliance with a broad spectrum of local, state and federal environmental, mine and operational safety, health and occupational safety laws, norms and regulations.

Capstone identified areas for improvement, and implemented a detailed Action Plan (with estimated costing) to achieve compliance within an approximate two-year period through the cooperative process described above. Work completed in support of the Plan was verified by the independent auditor. Capstone's renewal of its Clean Industry Certification in 2017 was delayed pending approval of its revised mining-metallurgical waste management plan by DGGIMAR. With receipt of this approval, on

June 8, 2018, Capstone has received its third successful renewal of its Clean Industry Certificate; it is valid for two years from 2017-2019.

Overall, under Capstone's management, the Cozamin mine has a good environmental record and a generally good relationship with the environmental regulatory authorities. The company has an active and continuous corporate responsibility program focused on health and safety, positive community relations and protection of the environment. In 2017, for the seventh time, Capstone was awarded the Empresa Socialmente Responsable (ESR) designation by CEMEFI, the Mexican Centre for Philanthropy in recognition of its commitment to sustainable, social and environmental operations. Capstone also participates in periodic environmental leadership (Liderazgo Ambiental) programs organized by regulators in Mexico. At a corporate level Capstone is implementing internal standards based on industry best practice to ensure continual improvement in key areas including health and safety, tailings management, energy management and stakeholder engagement,

At the present time, all environmental permits required by the various Mexican federal, state and municipal agencies are in place for the current Cozamin Mine operations. The health, safety and environmental management system and integrated health, safety, environmental and social management plans have been developed in accordance with the appropriate Mexican regulations. Annual land usage/disturbance and half yearly environmental compliance reports are filed as required.

With respect to the implementation of any of the operational recommendations resulting from this Technical Report, Capstone will need to review these with SEMARNAT as soon as sufficient engineering and other necessary design information is available. This review would identify and flag for discussion any new proposed activities and/or modifications to current activities already authorized as described above, as well as any new activities which could be considered as new work on lands not included in the existing MIA, DTU, CUSTF and ETJ, or which would involve new disturbances, which once fully designed might require new authorizations.

Baseline studies required to support the original MIA, DTU, ETJ, CUSTF and their modifications have included detailed analysis of: soil, water quality, vegetation, wildlife, hydrology, cultural resources and socio-economic impacts. These investigations identified locally elevated heavy metals concentrations in soils, acid rock drainage and metal leaching as possible concerns potentially manageable with appropriate mitigation measures.

Static acid-base accounting showed that flotation tailings and some types of waste rock have the potential to generate acidic drainage. However, the country rocks surrounding the deposit have significant neutralizing capacity and show relatively low permeability. In addition, construction activities programmed as part of the expansions reduced the identified sources of acidic drainage associated with the historic tailings impoundment, as well as downstream contamination due to tailings spills by previous operators. Further, during ongoing operation both newly generated waste rock and waste rock from historic operations have to date been used as underground back fill.

Capstone's renewed operation of the Cozamin Mine had until recently assumed that over the life of the mine there would be no requirement for new waste dumps, and further that ongoing operational needs for underground fill and sterile waste material for surface construction would reduce the existing volumes of historic waste rocks on surface. A mine wide materials handling (current tailings and waste rock as well as current and historic waste rock) study is presently underway in conjunction with site planning and engineering departments. While the overall objective is as much as possible to either place material back into the underground mine or (assuming appropriate geochemistry) put it to beneficial use for progressive reclamation/rehabilitation, the new DTU which is currently under evaluation would include a significant new surface waste dump downstream from the existing tailings impoundment in the dam arroyo. While this DTU is still being evaluated, additional mitigation measures are likely to include both engineering design and operational approaches.

An environmental management and monitoring program has been underway from the start of the renewed operation and will continue. Data collected are used to inform an ongoing operational environmental management and monitoring program, which includes appropriate environmental management and mitigation plans based on the principle of continuous improvement. These are reviewed and revised annually as necessary, with results reported as required to Mexican regulators.

Guidance documents for addressing historical environmental liabilities have recently been issued by the Mexican government based on the "polluter pays" principle embedded in LGEEPA and LGPGIR. The Mexican federal state coordinates with both state and municipal authorities to manage the environmental liabilities identified. In general terms, Mexican law lacks grandfathering provisions and it remains uncertain how much flexibility there will be in managing responsibility for restoration of areas with historic mining activities which are near or adjacent to operating mines.

Though some assessment and management planning remain to be completed (and planning to address environmental liabilities needs to be incorporated), work to date indicates that environmental impacts are manageable. It is expected that appropriate management and mitigation solutions to anticipated problems can be developed within the project schedule and time frames.

Apart from the issues identified above with respect to the locally elevated heavy metals concentrations, and the potential for acid rock drainage/metal leaching from tailings and waste rock and management of historic environmental liabilities, other issues of environmental concern relate to potential impacts as seen in comparable underground mines of similar size with flotation tailings impoundments. These include: dust, tailings handling/management, storm water diversion, combustibles and reagent management/handling, potential for aquifer contamination, waste management and disposal and noise.

In October 2015, as part of a state-wide regional scale review of identified historic disturbances (known in Latin America as "pasivos"), PROFEPA conducted a site inspection at Capstone in an area of historic workings which is known as Chiripa-La Gloria. This is located in an entirely separate catchment located north and east of Capstone's active mine and plant installations. Chiripa-La Gloria, which also lies outside of any of Capstone's permitted MIA or DTU authorizations, includes numerous and extensive old workings and waste dumps as well as the remnants of an historic process plant and several tailings dams/deposits. Significant tailings are dispersed into the arroyo downstream. On a voluntary basis following extended discussions with SEMARNAT, Capstone had previously undertaken agreed upon rehabilitation and reclamation activities to reduce further degradation of the ambient environmental.

PROFEPA initiated an administrative procedure (known as an "emplazamiento) in December 2015. In these situations, companies who own such the land over such areas of historical liability enter into a mine to government agreement with PROFEPA/SEMARNAT to define and fund agreed upon sampling programs to first evaluate and characterize the site and its elements of concern and then define suitable programs of remediation and rehabilitation to restore the environmental quality of the disturbance. Preference is generally given to quick start programs of physical stabilization and phased action plans which build upon the success of the earlier phases.

At Chiripa-La Gloria, after an initial characterization study which showed significant levels of arsenic and vanadium in soils and waste rock piles across a relatively wide area of the zone (with point highs for lead and cadmium) and historic tailings characterized as potentially acid generating, Capstone successfully completed the first phases of rehabilitation which included physical stabilization of the upper portion of the area in 2016 and 2017. Activities included: closure and capping of open workings, construction of diversion channels around the old tailings dam, recovery of spilled tailings to the historic dams, berming/resloping of waste dumps and placement of gabions in the arroyo below. A second, more detailed site characterization study was submitted in August 2017 as well as a proposal for phased follow up remediation and rehabilitation. Discussions continue regarding the necessary scale and scope of planned remediation as well as whether additional characterization and risk assessment studies will be required. Importantly, because these administrative procedures are relatively new in Mexico (very few agreements have been finalized), the level of effort which will ultimately be required of Capstone, as well as likely time frames for completion of an agreement are difficult to establish. As the regulatory procedure stands, the physical limit for proposed activities is the edge of the property border though identified effects may extend beyond this point. Neither the eventual outcome of these discussions nor the results of additional studies can be predicted.

With the acquisition of additional water supplies for the Cozamin Mine and installation of the tailings thickener (2015), as well as adoption of other operational water conservation practices at the present time it appears that the available water supply is adequate for future operations. Existing baseline data suggests current water sources from seasonal rainfall and catchment, the nearby municipal water treatment plant, the onsite treatment plant, and underground water (both at the mine and from permitted wells) and operational water management are sufficient to maintain operations as projected. However, studies to evaluate the potential for supply issues over the longer term have not been completed and it is recommended that these be appropriately scoped and carried out as soon as necessary supporting information is available (Section 26).

The successful implementation of measures which have already been undertaken provides reasonable expectation that longer-term water supply needs can continue to be met. However, for the purposes of contingency planning and risk analysis, additional investigation is recommended. The supply situation should continue to be actively monitored and as a matter of routine best management operational practice, site water retention, and conservation measures should be adopted where practical.

Within the local water supply area, water demand remains high and the regional aquifer shows a deficit for resupply. Further, the pressure for housing and other municipal development in the areas directly surrounding Cozamin is evident and is increasing. There is also renewed activity at several of the historic operations adjacent to Cozamin (e.g. past producers San Acacio and Veta Grande Mines, as well as at Endeavour Silver's leased El Compas mill and expansions at the Juan Reyes Cooperative Plant (toll processing predominantly by vat leach) which may impact both water supply availability within the basin, as well as potentially adding downstream effects to ground water.

20.2 Closure Plan

The Mexican government addresses reclamation and closure using broad standards set out under Article 27 of the Constitution from which the legal framework for environmental protection is derived under LGEEPA. Environmental regulations with respect to closure are promulgated through the various NOM's which establish specifications, technical standards, ecological criteria and general guidelines. At the present time there are no formal reclamation and closure standards for mining, however, the company's general obligation is to take mitigation measures which will protect natural and human resources and restore the ecological balance. Regulations do require that a preliminary closure program be included in the MIA and DTU and that a definite program be developed and provided to the authorities during mine operations as a supplemental submission to the project reporting. Plans typically use risk-based approaches which involve characterizing the existing concentrations of metals in the soils, waters and groundwater, and designing a plan to ensure that post closure risks to human health and the environment are acceptable and that the concentrations are no higher than the pre-mining baseline conditions.

Though the preparation of the closure plan and a commitment on the part of the mining company to implement the plan are needed, financial surety (i.e. bonding) has thus far been not generally been required. This may gradually be changing as some Canadian mining companies have recently been asked to prepare bonding estimates for SEMARNAT's review. Further, with implementation of the Law of Environmental Responsibility (Ley de Responsabilidad) in 2013, and new guidelines with respect to environmental liabilities, companies can anticipate that standards will evolve higher. The legislation as it stands firmly incorporates the principle that "those who contaminate will pay" ("el que contamina paga"), and it is clear that environmental damages, if not remediated by the owner/operator, can give rise to civil, administrative and criminal liability, depending on the action or omission involved. PROFEPA is responsible for the enforcement and recovery for those damages, but recent legal reforms have introduced the concept of class actions as a means to demand environmental responsibility for damage to natural resources.

Following from the terms and conditions of the various authorizations, as well as various obligations outlined for example in the various NOM's regulating tailings facilities and associated infrastructure (NOM-141-SEMARNAT-2003), management of hazardous wastes (NOM-052-SEMARNAT-2005, NOM-157-SEMARNAT-2009), and exploration activities (NOM-120-SEMARNAT-1997), Capstone re-started the Cozamin Mine in 2006 with a proactive approach to closure. This included a conceptual closure plan which described current and projected conditions of facilities, operating areas and storage sites. Closure activities were described including the estimated cost for each activity based on the proposed mine plan. Using site-specific experience gained during progressive reclamation activities, Capstone submitted its first revised reclamation and closure plan to SEMARNAT as part of the six month reporting requirement in March 2009. The Plan has been revised and updated on an annual basis since 2016, with the support of independent consultants, Clifton Associates Ltd. Natural Environment SC ("Clifton").

The key objectives of Capstone's reclamation and closure plan include:

- demonstrating compliance with relevant Mexican laws and regulations, as well as Capstone corporate standards;
- protecting public and employee health, safety and welfare;
- limiting or mitigating any residual adverse environmental effects of the project;
- minimizing erosional damage and protecting surface and ground water resources through control of natural runoff;
- establishing physical and chemical stability of the site and its facilities;
- ensuring that all process chemicals and hydrocarbon products are safely removed from the site at closure and equipment is properly decontaminated and decommissioned;
- properly cleaning and detoxifying all facilities and equipment used in the storage, conveyance, use and handling of process chemicals;
- establishing surface soil conditions conducive to the regeneration of a stable vegetation community through stripping, stockpiling and reapplication of soil material and/or application of waste rock suitable as growth medium;
- repopulating disturbed areas with a diverse self-perpetuating mix of plant species to establish long-term productive communities compatible with existing land uses;
- mitigating socio-economic impacts of the project following decommissioning and subsequent closure as far as reasonably possible; and
- maintaining public safety by stabilizing or limiting access to landforms that could constitute a public hazard.

Capstone's most recent update to the closure plan in 2017 assumed progressive reclamation during operations, operational closure in 2020, and 10 years of post-closure monitoring, inspection and maintenance. It included consideration of certain new initiatives by the Mexican government which will develop a national program for site rehabilitation in areas of historic mining, as well as the potential for increased requirements for operating mines to consider more options for sustainable restoration of the visual landscape after final closure. In fact, since 2011, Capstone has been including an allowance which considers certain of these aspects in its closure cost estimate. As the Mexican government moves forward to advance these regulatory aspects, there may be increased requirements for reclamation and rehabilitation of the Cozamin site and bonding may be required. The closure plan will be reviewed and updated accordingly.

In May 2011 the Mexican government completed the public portion of a regional scale land use planning exercise (known in Spanish as the Programa de Ordenamiento Ecologico General del Territorio or POEGT's process) to promote more effective coordination and management of resources between agencies with responsibilities for environmental affairs. This involved identifying and classifying land unit areas across the country based on 1:2,000,000 scale biophysical inventories.

Three land units (Unidad Ambiental Biofisica) were identified in the neighbourhood of the Cozamin Mine at this regional scale. The larger part of the Capstone property was identified as high priority for mining. This was based not only on the past and existing mines, but also due to areas considered to have regional geologic and metallogenic potential. As described to Capstone, the ongoing "in-government" work largely considers identifying appropriate buffer zones ("zonas de amortiguamiento") around areas in need of protection or where high benefit economic activities have been identified and need isolation from activities of lesser benefit. This identification may provide some protection for mining needs/rights, however, shortages of water and protection against aquifer degradation will remain key points for political pressure with implications for ultimate closure requirements.

At present, the state of Zacatecas itself does not have specific mapping or plans which relate to Planes de Ordenamiento Ecologico del Territorio (POET's) and has not implemented management units (Unidades de Gestion Ambiental – UGA's) or determined ecological criteria. A state development plan (Plan Estatal de Desarrollo) 2011-2016 is in place which has an objective of increasing mining activity in ways which guarantee more benefits for the state along with preserving the environment and health of the neighbouring communities and reducing mining impacts. The state action plan also includes an objective of working to prevent spreading urban fringes from impinging on mining lands, a consideration which is important for the Cozamin Mine.

To date, a number of ongoing closure activities have been completed as part of the site program of progressive reclamation. These include: closure of historic workings; reclamation and re-vegetation of exploration drill pads and access ways disturbed historically and by Capstone; reclamation and re-vegetation of areas of historic waste rock dumps and mining activities; clean-up of historic tailings spilled downstream from the tailings impoundment; removal of historic waste rock for use as underground fill and current construction activities; and definition of diversion channels around the historic Chiripa impoundment, re-sloping, armouring and stabilizing historic dam faces and installation new gabions as well as replacement of damaged gabions downstream.

Much of the site area has been previously disturbed from historic operations. Surface soils removed for site construction have been stockpiled for reuse in closure. Though detailed studies of the suitability of stockpiled soils for reclamation have not been completed, the undisturbed parts of the mine area which are not actively grazed support patchy plant cover and areas reclaimed during progressive closure already show good evidence of successful re-vegetation with local species.

Continued implementation of “best practices” operational management and a site wide initiative focused on continuous improvement, along with sequential progressive reclamation and closure planning, will over time significantly reduce new sources of contamination. Reclamation, post-closure monitoring and follow-up will require more detailed planning, but have the overall objective of leaving the land in a useful, stable and safe condition capable of supporting native plant life, providing appropriate wildlife habitat, maintaining watershed function and supporting limited livestock grazing. General objectives include the removal of any environmental liabilities, minimization of potential acid rock drainage/metals leaching and the return of the site to a condition that resembles pre-mining conditions or restores productivity. Final land use after closure will need to be determined in consultation with neighbouring communities and Mexican authorities.

Once mining stops, surface equipment as well as surface and underground infrastructure will be removed and the mine will be allowed to flood. Mine entryways will be closed to restrict entrance. Surface accesses to the mine such as access ramps will be closed and filled; apertures such as shafts and raises will be plugged. Access to mine areas, stopes, and raises will be stabilized and eliminated. Though additional ground water studies are needed, based on observations of historic mining, following cessation of operations ground waters are expected to return to their original phreatic levels in a short time, with no direct point source discharges to surface anticipated. All salvageable items will be removed from the site. Remaining quantities of chemicals, reagents, lubricants, combustibles, etc., will be returned to suppliers, vendors or sold to third parties. Any remaining non-hazardous waste will be removed to the municipal landfill. Hazardous waste will be removed and disposed of at an appropriately licensed waste management facility. Buildings, other structures and surface infrastructure will be dismantled, removed and sold (or donated) where practical.

Remaining disturbed areas will be re-sloped to re-establish natural landscape contours and (where applicable) pre-existing drainage patterns. In selected areas as necessary erosion prevention measures will be implemented. The disturbed areas will be re-vegetated with natural species approved by SEMARNAT. Roads that will not be required after mine closure will be re-graded and re-vegetated to approximate pre-mining conditions.

The flotation tailings and certain waste rock piles located on surface are potentially acid generating and require careful management during operations and into closure and post closure to minimize potential impacts to the environment. Management during operations and into closure will require combinations of mine waste handling, placement planning and evaluation of the need for treatment of existing acid generating surfaces to reduce infiltration by precipitation and therefore the volume of any contaminated water emanating from the site. Capstone is currently undertaking a materials handling study which will evaluate options and alternatives for the future management of tailings and waste rock as mine operations proceed; these results will be incorporated into ongoing closure planning.

The closure plan identifies a number of final closure activities to maintain physical and geochemical stability including: diversion channels above the impoundment to limit fresh water flowing into the tailings from the upper watershed; re-contouring the surface of the tailings impoundment to prevent ponding and improve flow; and a final cover with downstream passive treatment system for seepage and infiltration yet to be designed. Before these can be fully evaluated and costed, Capstone will need to complete the ongoing materials management study as well as geochemical characterization and modelling for tailings and available waste rock before alternatives for longer term tailings and waste rock disposal can be fully defined. Depending on the results of ongoing water quality monitoring as well as the results of these studies planning for closure design may include installation of an engineered low permeability cover to limit oxygen entry into the tailings, restrict infiltration and minimize seepage with or without materials blending. Alternatively closure planning may involve use of an engineered store and release cover. With careful engineering design, modelling of water, waste and tailings geochemistry, as well as good quality control on construction these would appear to be reasonable concepts.

Reclamation obligations will be funded during mining operations, and are not anticipated to involve measures significantly different than would be expected for an underground base metal mining operation of this size and type processing by flotation, and located near centres of population.

An original preliminary closure cost estimate developed internally by the Cozamin projects and environmental groups was revised and updated most recently to December 31, 2017 year end with support from Clifton. In developing the figures supporting the cost estimate Clifton used the Open Pit / Underground Mine - Cost Estimator Tool updated to the most recent version CAL.V.Nov/2017. This Estimator was originally developed for arid climates in Australia by the New South Wales Government Industry & Investment (www.industry.nsw.gov.au). It is used in many mining regions internationally and has been well validated for underground metal mines.

The overall cost figure considers and incorporates the environmental conditions and those disturbances present at the Cozamin Mine to December 31, 2017 year end. Assumptions included continued operation at the current average operating rate of 3,300 tpd to March 2022, following by an estimated ten year period of post-closure monitoring to define an initial undiscounted estimate of US$11.6M. This amount is refined by the application of appropriate risk adjusted discount and exchange rates to present value of the final figure used in the corporate Asset Retiring Obligation ("ARO") for the Cozamin Mine.

The updated ARO to December 31, 2017 reflects necessary expenditures to achieve successful closure based on the existing disturbances and operational conditions. It does not contemplate or project those additional activities, facilities or disturbances which are, might be, or are likely to be required for the remainder of the life of the operating mine but are not yet authorized or constructed at the time of calculation of the ARO. This figure includes progressive reclamation during operations, clean up, rehabilitation and reclamation on closure as well as the projected 10 years of post closure inspection and monitoring, and uses actual site unit costs to third quarter 2017.

Funding of the progressive reclamation costs comes from operational cash flow. Post-closure monitoring and maintenance costs are accounted in the final year of operation. Reclamation and closure costs are capitalized and amortized over the Life of Mine.

As Capstone continues with its exploration and development, mine life and resource potential are anticipated to change. For this reason, the closure plan for the Cozamin Mine remains a dynamic document._The costing is revised and updated on an annual basis to reflect the disturbances present to the current year end, the evolving knowledge of specific site conditions and their reclamation requirements, revisions to design requirements as engineering and materials handling studies are completed, changes in Mexican regulatory requirements and social obligations, and an understanding of the success of ongoing progressive rehabilitation, reclamation and closure activities, as well as prevailing costs for physical and other work related to closure.

20.3 Community Relations

Capstone has implemented a systematic approach to community relations. This includes a site-specific Social Responsibility Policy, which covers procedures for identifying and mapping stakeholders, planning formal engagement activities and collecting and responding to stakeholder feedback.

Regular, proactive engagement with stakeholders is a component of daily activities at the mine. Project information is communicated on a regular basis through a magazine publication called “Boletin Cozamin” which is distributed to local stakeholders and made available online.

Capstone conducts an annual program of activities to engage stakeholders and support the local community. The program is comprised of hosting and participating in community events, for example, sports tournaments and recognition of important local holidays and traditions, and contributions to community initiatives focused on education, health care, social support and infrastructure development.

21 Cost Estimation

21.1 Operating Cost Estimate

Cozamin staff developed the mine operating costs from first principles. Annual mine equipment utilization hours were derived from the forecast. Total operating costs were calculated using current unit operating costs. Contractor costs were derived from forecasted requirements and contract unit costs. Mine support functions were estimated based on historical unit costs against budget activities to produce the mine operating costs. The processing operating costs were derived using forecasted production and current unit operating costs. General Management and Administration costs were assumed to be fixed based on budget.

Table 21-1 summarizes the mine operating costs for the duration of the forecast. Site operating costs were derived using budgeted operating costs based on historical actual costs.

Table 21-1: 2017 Unit Operating Cost Estimates

Area	Unit	Cost Estimate (US$)
Underground Mining	$/t milled	20.23
Processing	$/t milled	9.75
General and Administration	$/t milled	11.76
Total	$/t milled	41.74

21.2 Capital Cost Estimation

Capital expenditures were developed in support of the life-of-mine plan by Cozamin staff and include the following:

- Purchase of new equipment;
- Overhauls of existing equipment;
- Capital underground development;
- Tailings dam expansion,
- Capital infrastructure,
- Ongoing reclamation; and
- Sustaining capital requirements.

Table 21-2 summarizes expected capital costs over the life-of-mine at Cozamin. The first five years are outlined in the Cozamin capital budget plan. Capital expenditures include mine equipment, plant upgrades, underground capital development, tailings management, and surface infrastructure. The remaining years are based on ongoing capital infrastructure projects, progressive reclamation and a sustaining capital allowance for the mine and mill. The sustaining capital allowance is estimated to be 2% of operating budget that is carried forward to the life of mine plan.

Table 21-2: Summary of Capital Costs

Year	Cost Estimate (US$ x 1 Million)
2018	25.5
2019	18.3
2020	14.9
2021	7.3
Total	66.0

22 Economic Analysis

As Cozamin is a producing mine, an economic analysis is not required for this Technical Report.

23 Adjacent Properties

The Mala Noche vein is one of several main veins that have been exploited since pre-colonial times in the Zacatecas area. The Bote vein has recently been in production, but production on the Veta Grande, Panuco, Mala Noche, Cantera and San Rafael veins has varied with silver and base metal prices. The average ore grades for the Zacatecas district are reported to be 1.5 g/t Au, 120 g/t Ag, 3% Pb, 5.1% Zn and 0.16% Cu with total silver production to the end of 1987 estimated to be about 750,000,000 ounces (Ponce and Clark, 1988). The Qualified Person has been unable to verify this information and that the reported grades are not necessarily indicative of the mineralization on Cozamin mine that is the subject of the Technical Report.

24 Other Relevant Data and Information

There is no other additional data or information required to make this Technical Report understandable or not misleading.

25 Interpretations and Conclusions

The Cozamin Mine has been successfully developed into a viable mining operation with 12 years of continuous operation by Capstone. Based on the findings of this technical report, the QPs believe the Cozamin Mine and milling operation is capable of sustaining current production levels through the depletion of the mineral reserve. Relevant geological, geotechnical, mining, metallurgical and environmental data from the Cozamin Mine has been reviewed by the QPs to obtain an acceptable level of understanding in assessing the current state of the operation. The mineral resource and reserve estimates have been performed to industry best practices (CIM, 2003) and conform to the requirements of CIM Definition Standards (CIM, 2014).

25.1 Conclusions

Capstone holds all required mining concessions, surface rights, and rights of way to support mining operations for the life-of-mine plan developed using the December 31, 2013 mineral reserves estimates. Permits held by Capstone are sufficient to ensure that mining activities within Cozamin Mine are carried out within the regulatory framework required by the Mexican Government. No risk associated with permit extensions is anticipated. Annual and periodic land use and compliance reports have been filed as required.

The understanding of the regional geology, lithological, structural, and alternation controls of the mineralization at Cozamin are sufficient to support estimation of mineral resources and mineral reserves. The mineral resources and mineral reserve estimates, NSR cut-off strategy, and operating and capital cost estimates have been generated using industry-accepted methodologies and actual Cozamin performance standards and operating costs. Metallurgical expectations are reasonable, based on stable metallurgical results generated from actual production data. Reviews of the environmental, permitting, legal, title, taxation, socio-economic, marketing and political factors for the Cozamin Mine support the declaration of mineral reserves.

Cozamin water sources include purchase of additional water rights from the municipal authority in 2014, authorization to use treated water, water from underground mines held by various other parties, and new water supply wells constructed downstream from the mine and processing facilities in 2011 and 2012. Cozamin Mine is projected to have access to sufficient water resources to support a 4,000 tpd operation.

At present, there is sufficient capacity within the TSF to store all of the mineral reserves assuming proper tailings management continues and allows for construction of competent coarse tailings beaches for subsequent upstream raises. The site-wide water balance will be updated this year and should provide answers as to the need of a separate water reservoir and timing for its construction. This will help keep the supernatant pond as small as possible allowing for continued formation of competent tailings beaches and reducing the risk of compromising future upstream raises.

Based on current regulations and laws, Capstone has addressed the environmental impact of the operation, in addition to certain impacts from historical mining. Closure provisions are appropriately considered in the mine plan. There are no known significant environmental, social or permitting issues that are expected to prevent the continued mining of the deposits at Cozamin Mine.

25.2 Risks and Opportunities

The QPs, as authors of this Technical Report, have noted the following risks:

- Exchange rates, off-site costs and, in particular, base metal prices all have the potential to affect the economic results of the mine. Negative variances to assumptions made in the budget forecasts would reduce the profitability of the mine, thereby impacting the mine plan.
- The upstream tailings dam raise construction method is highly dependent on tailings management to keep the reclaim pond as small and as far as possible from the dam crest for proper tailings beach construction. This dependency has the potential to jeopardize the feasibility of subsequent upstream raises and limit the total waste storage capacity. These risks are currently mitigated with continuous tailings management, monitoring of the tailings storage facility performance, frequent site characterizations to monitor the progression of tailings beach strength, and audits from independent consultants.
- Mexican regulatory expectations for environmental and social responsibility continue to evolve. Since the first environmental impact assessment, Capstone's property ownership has increased beyond the area of active mining and processing operations to encompass additional areas of historic mining and processing operations; particularly in the area of Chiripa-La Gloria arroyo. The path forward for remediating the environmental liabilities is not yet certain and may result in increased expectations and regulatory requirements. This has potential to increase costs for final closure and/or post closure monitoring but these cannot be quantified at this time.

The authors of this Technical Report have noted the following opportunities:

- Update mineral reserves to incorporate new MNFWZ resources.
- A 40,000 m drilling exploration program approved for 2018 and in progress to test for further extensions to the MNFWZ and additional structures splaying from the main Mala Noche fault system or sub-parallel structures for economic potential is 35% completed as of March 31st and drillin. Additional exploration drilling can also contribute to the geological understanding of the mine and assist in identifying future exploration targets.
- Future drill programs are justified to upgrade the classification of a substantial portion of the current Inferred Resource.
- Capstone maintains a dialogue with regulators regarding potential changes to operations, as well as the immediately adjacent property owners and from time to time discusses potential exploration partnerships on their lands.
- The Mala Noche Vein is incompletely tested at depth outside of the historical mining areas.
- Additional drilling can increase geological understanding of the entire area and assist in identifying future exploration targets.

- Develop sustainable mine plans to maximize mill throughput on a sustained basis to maximize profitability. The mill has unutilized capacity that could be used.
- Investigate opportunities to reclassify more of the San Rafael zinc deposit from mineral resource to mineral reserve. This may include flow sheet synergies to transition San Rafael ore to the existing mill.
- Improve material handling in the mine by evaluating hoisting options to determine the appropriate path forward. Possible outcomes may include reduced haulage costs, improved ventilation, and better access to deeper material. A materials handling study is currently underway.
- Proper tailings deposition and management options currently implemented can increase the storage capacity of the existing TSF postponing or potentially eliminating the need for additional storage facilities.

26 Recommendations

The following recommendations have been identified by the authors of the Technical Report:

- Revise the LOM plan to include mineral reserves updated with mineral resource estimates for MNFWZ and MNV (effective March 31, 2018).
- For longhole stopes, an overbreak dilution factor of 0.5 m has been applied to the benches and 1.0 m has been applied to the development drifts. These factors need to be validated through annual reconciliations and adjusted as required.
- Mining dilution grades need to be continually monitored and tested to validate the factors applied to the mineral reserves estimates.
- Review the potential to change the long hole mine sequencing to allow backfilling with waste from the top in order to fill the stopes more fully, thereby increasing stope stability and reducing waste haulage.
- Sound mining practices must be maintained to minimize dilution and optimize extraction. Adequate back-up stopes must be available to give the mine production flexibility.
- Continue to track rock mass conditions underground and measure ground movements. Continue training of personnel to identify poor rock conditions and execute remediation work. Continue to conduct systematic bolting in new headings and adjust ground support in areas of weaker rock mass conditions or in higher ground stress zones. Upgrade ground support to current standards in permanent active areas such as ramps, main drifts and shops. This recommendation is being implemented on site.
- Define local regional stress field characteristics to develop a reliable geotechnical numerical model and provide supporting data to define/cost at high level the technical requirements for underground stability to ensure safe support and closure approaches for Capstone's accesses and underground workings.
- Conduct in the near term a high level evaluation of available information and data gaps that would support a detailed scoping (and budget) for a more a comprehensive investigation of the hydrology and hydrogeology of the site, its wells and its immediate surroundings.
- Design an effective sampling and monitoring plan to further characterize current conditions of waste and tailings. This will support design of waste and tailings management plans and assist in the evaluation of alternatives for tailings and waste rock disposal.
- Continue tailings management and update site water balance to determine if/when construction of a water reservoir should be completed to keep the size of the tailings pond within the TSF as small and far away from the cyclone tailings beach as possible.
- Increase pumping capacity from the TSF to be able to remove water to prevent a large storm event from undermining the specified minimum beach width.
- Continue to actively engage in community assistance and development programs with surrounding communities to ensure Capstone retains its social licence.

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