DEL TORO SILVER MINE

Chalchihuites, Zacatecas, Mexico.
NI 43-101 Technical Report on Mineral Resource and Mineral Reserve Update

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EFFECTIVE DATE
December 31, 2016

CERTIFICATE OF QUALIFIED PERSON

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I, Ramon Mendoza Reyes, P.Eng., am employed as Vice President Technical Services with First Majestic Silver Corp (FMS).

This certificate applies to the technical report *Technical Report for the Del Toro Silver Mine, Chalchihuites, and Zacatecas, Mexico* that has an effective date of December 31, 2016.

I graduated from the National Autonomous University of Mexico with a Bachelor of Science Degree in Mining Engineering in 1989, and also obtained a Master of Science Degree in Mining and Earth Systems Engineering from the Colorado School of Mines in Golden, Colorado, in 2003.

I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (#158547).

I have practiced my profession continuously since 1990, and have been involved in precious and base metal sulphide mine projects and operations in Mexico, Canada, the United States, Chile, Peru, and Argentina.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have visited the Del Toro Silver Mine on several occasions from 2014-2017. My most recent personal inspection of the property took place on November 30th, 2016.

I am responsible for the preparation of Sections 1.1, 1.2, 1.3, 1.4, 1.9, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.20, 1.21, 1.22, 1.23, 1.24, 1.25, 2.1, 2.2, 2.3, 2.4, 2.5, 3, 4, 5, 6, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.1, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 25.10, 25.11, 25.12, 26.1, 26.3 and 27 of the Technical Report.

I am not independent of FMS as that term is described in Section 1.5 of NI 43–101.

I have been involved with the Del Toro Silver Mine as supervisor and coordinator of all disciplines preparing information for integration into the Technical Report, including geology, mining and metallurgy, since February 2015.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

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

“Signed and sealed”

Ramon Mendoza Reyes, P.Eng.

Dated: October 31, 2017

CERTIFICATE OF QUALIFIED PERSON

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I, Andrew P. Hamilton, P.Geo., am self-employed as a geologist consultant.

This certificate applies to the technical report entitled *Technical Report for the Del Toro Silver Mine, Chalchihuites, and Zacatecas, Mexico* that has an effective date of December 31st, 2016.

I am a Registered Professional Geoscientist (P.Geo. #24873) registered with the Association of Professional Engineers and Geoscientists of British Columbia.

I graduated from the University of British Columbia with a Bachelor of Science Degree in Geology in 1991. I have practiced my profession continuously since graduation.

Since 1991, I have held technical positions with exploration and development companies in Canada and Central America in which I was responsible for program design, data collection and management, Quality Assurance and Quality Control (QA/QC) and resource modelling. As a consultant, I have conducted data and QA/QC audits for projects in late-stage development and operating mine environments.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Del Toro project site from June 5th to June 12th, 2016, and July 31st to August 6th, 2016.

I am responsible for Sections 1.6, 1.7, 1.8, 2.2, 2.3, 10, 11, 12, 25.3 and 27 of the Technical Report.

I am independent of First Majestic Silver Corp. as independence is described by Section 1.5 of NI 43–101.

I have no previous involvement with the Del Toro Silver Mine.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

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

“Signed and sealed”

Andrew P. Hamilton, P.Geo

Dated: October 31, 2017

CERTIFICATE OF QUALIFIED PERSON

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I, Jesus M. Velador Beltran, MMSA QP, am employed as Director of Exploration with First Majestic Silver Corp. (FMS)

This certificate applies to the technical report entitled *Technical Report for the Del Toro Silver Mine, Chalchihuites, Zacatecas, Mexico that has an effective date of December 31, 2016 (the Technical* Report").

I graduated from the Autonomous University of Chihuahua with a Bachelor of Geological Engineering Degree in 1998, obtained a Master of Science Degree in Geology from the University of Texas at El Paso, El Paso Texas, in 2003, and obtained a Philosophical Doctorate degree in Geology from the New Mexico Institute of Mining and Technology, Socorro New Mexico, in 2010.

I am a member of the Mining and Metallurgical Society of America with Qualified Professional Geology status (# 01470QP). I have practiced my profession continuously since 1999, and have been involved in exploration, geological modelling, mineral resource estimation of narrow veins and carbonate replacement deposits, and evaluation of precious and base metal sulphide prospects, projects and operations in Mexico.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have visited the Del Toro Silver Mine on several occasions during 2015, 2016 and 2017. My most recent personal inspection of the property took place on March 10th, 2017.

I am responsible for preparation of Sections 1.3, 1.5, 1.6, 1.7, 1.8, 1.10, 1.11, 1.12, 1.18, 1.19, 1.28,2,3,7,8,9,10,11,12,14,15.6, 16.1,19.20, 20.2, 20.4, 23, 25.1, 25.2, 25.3, 25.5, 26.2, 26.3.1, 26.3.3 26.3.5 and 27of the Technical Report.

I am not independent of FMS as that term is described in Section 1.5 of NI 43–101.

I have been involved in the Del Toro Silver Mine as supervisor and coordinator of the exploration, geology and resource estimation disciplines preparing information for integration into the Technical Report since April 2014.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

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

"Signed"

Jesus M. Velador Beltran, MMSA QP Geology

Dated: October 31, 2017

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1 SUMMARY

1.1 Introduction

This technical report (the Report) was prepared by First Majestic Silver Corp. (FMS) to provide updated Mineral Resource, Mineral Reserve estimates and updated information on mine and process planning for the Del Toro Operations (Del Toro). The operating entity is FMS's wholly-owned subsidiary First Majestic Del Toro, S.A. de C.V.

1.2 Project Setting

Del Toro is located in the northwest portion of the state of Zacatecas, Mexico, about 150 km northwest of the capital city of Zacatecas. Access to Del Toro is by Highway 45 from Durango City, 120 km to the southeast past the Company's La Parrilla Silver Mine.

Del Toro comprises a mining complex with three underground mines, one processing plant, and one paste tailings management facility. Current production is sourced from three different underground mining areas (San Juan, Perseverancia, and Dolores). Exploration and mining operations are conducted on a year-round basis.

1.3 Mineral Tenure, Surface Rights and Royalties

Del Toro consists of 66 mining concessions, including 58 contiguous concessions in the Chalchihuites area and eight non-contiguous concessions, covering a total of 2,110 hectares. In addition to the 66 mining concessions under First Majestic Del Toro S.A. de C.V. control, there are three mining concessions, covering an area of 48 hectares, for which FMS has exploration rights and an option agreement to acquire these concessions that can be exercised in October 2017.

The Verdiosa and Nueva India mining claims are currently subject to a 1% Net Smelter Return (NSR) royalty capped at $200,000 and $500,000, respectively, in total payment. There are no other royalties payable on the Del Toro mining concessions. None of the concessions are subject to any other encumbrances.

Del Toro has acquired five parcels of surface rights covering 219.3 hectares that are sufficient to support operations (plant installation, tailings storage, and other Project requirements). There is one Ejido's parcel of surface rights that is currently under negotiation for renewal of the annual agreement.

1.4 History and Exploration

Del Toro is located near the village of Chalchihuites, which was founded in 1556 AD during the Spanish colonial period. Numerous small mining operations have been developed within the district since that date. FMS estimates that approximately seven million silver-equivalent ounces were likely extracted from the historic mines in the Chalchihuites district.

FMS commenced prospecting activities in the Chalchihuites area in late 2004 under option agreements. Work completed since that date has included geological mapping, geochemical and geophysical surveys, core drilling, metallurgical testwork, Mineral Resource and Mineral Reserve estimation, and mine construction and development. Formal mining commenced in 2013 from the San Juan and Perseverancia mines.

1.5 Geology and Mineralization

The geological model proposed by FMS for Del Toro is a combination of mesothermal deposits (chimneys, breccias and replacements) and mesothermal–epithermal veins.

Del Toro is located at the boundary between the Mesa Central physiographic province and the Sierra Madre Occidental. The district contains hydrothermal mineral deposits hosted by early Cretaceous limestones and shales that has been intruded by an Eocene-age quartz monzonite–granodiorite stock, Oligocene-age dikes, rhyolite–rhyodacite dikes and plugs, and Miocene–Quaternary-age basalt–basaltic andesite dikes. The Eocene-age stocks and dikes have metamorphosed the Cretaceous rock into marble, hornfels, skarnoid and skarn.

Del Toro consists of three operating mines, Perseverancia, San Juan and Dolores, from south to north. Mineralization in these mines occurs in chimneys (Perseverancia and San Nicolas), veins (Cuerpo 1, Cuerpo 2, Lupita, Dolores, etc.), breccia bodies (Cuerpo 3) and replacements that are hosted by the Cuesta del Cura Formation, the Indidura Formation and the quartz monzonite–granodiorite stock.

The deposits contain primary sulphides such as galena, sphalerite, pyrite, pyrrhotite, stibnite, arsenopyrite, chalcopyrite, covellite, acanthite and silver sulphosalts (tetrahedrite–freibergite solid solution). Due to deep-penetrating supergene oxidation, most of the primary sulphides have been oxidized to cerussite, anglesite, hemimorphite, hydrozincite, jarosite, goethite, hematite, cervantite, malachite, chrysocolla, chalcanthite and native silver. The non-metallic gangue minerals present in the deposits, are calcite, siderite, manganiferous calcite, quartz and fluorite.

1.6 Drilling

The Del Toro database contains 516 surface and underground drill holes totalling 118,877 m. The database used to support the estimates was closed as of August 31st, 2016, and an additional 64 holes totaling 12,206 m have been drilled since then.

The general practice has been to collar surface holes in HQ and reduce when required, while underground holes are generally collared in NQ and rarely reduced to BQ because they are mostly short holes with less than 500m length. Drill contractors are used for the drill programs.

Early logging was performed using paper logs. In 2016, a change was made to log directly onto a computer using Maxwell GeoServices' LogChief software. Information recorded includes collar, lithology, minerals, alteration, structure, sample intervals, and standard recovery and Rock Quality Designation (RQD). The average core recovery has been about 98%. The average RQD value is just over 85%.

Collar surveys have been recorded using differential GPS and Total Station instruments. Downhole surveys, when performed, have been taken using Tropari, Reflex, Flexit, and Devico PeeWee instruments. Approximately 40% of the total 516 holes in Del Toro have planned drill hole collar orientations. They correspond mainly to historical holes prior to 2008 and BQ holes. For the database used to support this Mineral Resource estimate, the percentage is reduced to 15%. Only a few drill holes without downhole surveys are longer than 400 metres, and the effect of this on the Mineral Resource estimate is believed to be minimal.

The relationship between sample length, or intersection length, and true width depends upon the angle at which mineralization is intersected. As this varies due to the location from which the drill hole can be completed, on the dip of the drill hole, and on the orientation (strike and dip) of the mineralization. Drill intersection lengths at Del Toro are typically greater than true widths.

1.7 Sampling and Analysis

Channel samples are collected across mineralized structures from the back of underground workings every 25 m where ground conditions permit. Core is sampled on variable lengths that can range from 0.25 m to 1.50 m. Prior to 2015, sample intervals were generally, but not always, coincident with geological contacts. Since 2015, all samples have been coincident with geological contacts. Chip samples are taken from the face after every round of advance by collecting chip samples from a series of horizontal and vertical lines. Muck samples are collected from the muck pile from a number of locations.

Bulk density sampling has included determinations made on full HQ or NQ core samples from recent drill programs and determinations made on half core samples from historic core. In total, 1,819 bulk density determinations are in the project database, including 320 for the Dolores mine, 411 for the Perseverancia mine and 1,261 for the San Juan mine, which includes the Lupita and Cuerpo 3 areas.

Several different independent and accredited primary analytical laboratories have been used for processing Del Toro samples, including Inspectorate Laboratories, Stewart, and SGS. Some samples were sent to the Del Toro mine laboratory or La Parrilla Central Laboratory - neither of these laboratories are independent of FMS.

Sample preparation for drill and channel samples consists of drying as required, crushing, and selecting a sub-split which is then pulverized to produce a pulp sample sufficient for analytical purposes. Sample analysis at the third-party laboratories typically consists of fire assays and Inductively Coupled Plasma (ICP) analyses for a selected 30–35 elemental suite. Silver values over 100 g/t are typically re-analysed using either fire assay with a gravimetric finish or Atomic Absorption Spectroscopy (AAS). The mine laboratories use fire assay and AAS methodologies.

For all drill programs, samples have remained in secure company facilities until shipped. For samples being analysed by Inspectorate and SGS, trucks owned by the laboratories were sent to Del Toro to collect the samples.

1.8 Data Verification

Quality Assurance and Quality Control (QA/QC) programs have been in place for all drilling and channel sampling programs at Del Toro since 2011. Starting in mid-2011, one standard and one blank was inserted every 20 samples (set position). In 2013, field duplicates were added to the program, and this protocol was in use until late 2014 when coarse (reject) and fine (pulp) duplicates were added to the insertions. Starting in early 2015, a QA/QC insertion program was developed where every 26 sample batch included one standard, one blank, one coarse duplicate, one fine duplicate and an additional QC material that can be inserted at the logging geologist's discretion (20% insertion rate).

For a majority of the standard data sets, biases are mild to moderate and within or close to a rule-of-thumb value of 5% relative to the expected value. There are some consistent biases, particularly for silver and lead, which are generally low relative to the expected values. The highest biases are observed in the La Parrilla standards, which only provide a comparison to the Inspectorate laboratory results. FMS has aggressively taken measures in order to address the assay accuracy issues that were identified at the La Parrilla Central Laboratory through compilation and assessment of the historic and recent QA/QC data and re-run analyses. Ongoing compilation of standard results indicates that these measures are improving the analytical accuracy of Central Laboratory results.

Generally, field blanks of all types indicate no significant or systematic contamination. Results for fine blanks for most of the project history show no issues with analytical contamination. Results for all primary metals in field duplicate samples show considerable scatter. This is not unusual for this type of high-grade silver–lead–zinc deposit where mineralization occurs in veins, stockwork zones or breccias. The data sets for coarse and fine duplicates are still quite small at approximately 200 pairs each. Both sets show good assay precision, as should be expected for duplicates at more advanced sample preparation stages.

Based on QA/QC failures, mainly standard failures, FMS re-ran certain batches of samples from 2015 and 2016 drilling programs at the La Parrilla Central Laboratory. In general, the re-runs returned passing standard results and the re-run results were used in the database. Del Toro has not had a consistent check assay program. However, given the issues with accuracy in results from the La Parrilla Central Laboratory, FMS sent batches of 2015 and 2016 from the most relevant resource areas for check or re-assay at SGS. The results from the samples that were re-assayed at SGS were accepted for use in the database over the La Parrilla Central Laboratory results, for both the Santa Teresa and San Juan samples.

All drill data prior to 2015 was in paper format and subject to electronic capture in Microsoft Excel spreadsheets prior to being compiled and imported into DataShed. FMS maintains a detailed spreadsheet of the data validation items for each major table, including the staff responsible for the verification procedures. In addition, the DataShed import process includes a series of built-in checks for errors at all stages, from header to individual tables. Import of assay data, including QA/QC results, in files direct from the laboratory, must match with sample intervals and sample numbers that are already established in the database. All drill holes in the database were subject to validation and a 5% selection was subject to verification from hard copy record.

Database tables were also subject to a Qualified Person (QP) peer review. This included a final check of collar location relative to topography, a review of downhole surveys for anomalies, a series of interval checks, and a comparison of database assay values to original certificates for over 10% of the assays for each zone. In the opinion of the QP, a reasonable level of verification has been completed by dedicated database management staff and external consultants and no material issues would have been left unidentified from the verification programs undertaken.

Drill data are typically verified prior to mineral resource and mineral reserve estimation through software program checks, comparison to original hard copy data, and peer review. The quality of the drill data is sufficiently reliable to support Mineral Resource and Mineral Reserve estimation.

1.9 Metallurgical Testwork

Metallurgical testwork supporting the plant design was conducted from 2009 to 2012, and included comminution, flotation, reagent, and cyanidation testwork. The initial mill design was modified during operations, and the cyanide circuit has been placed on care-and-maintenance.

Originally, the sulphide circuit was designed to produce two concentrates: lead and zinc, with the former containing most of the floatable silver values. The circuit was operated in this configuration for approximately 16 months (March 2013 to June 2014). However, as the circuit yielded rather low zinc recoveries (< 20%), a decision was made to suspend the production of zinc and use the installed capacity to process lead oxide (PbO) ore instead, thereby generating higher revenue from the sale of silver and lead.

The learning experiences and changes implemented during subsequent metallurgical optimization work were applied using observations directly from the plant. Laboratory work was limited, as it was considered to be of lesser priority. Consequently, the current forecasts exclusively rely on plant performance data, while the proposed metallurgical relationships were derived using consolidated production figures from 2016.

Mineralization that will be fed through the plant has been classified into six categories depending on the sulphide and transition material type. The sulphide material is the preferred ore type, and the proportion of transitional material included in the plant feed must be limited to control adverse effects on metallurgical recovery. However, due to mining constraints, there can be a significant contribution to the mill feed from transitional material.

Recovery considerations focus on lead and silver. The recovery circuit targets lead sulphide (PbS) recovery first, followed by sulphidisation conditioning that promotes PbO flotation. PbO increases with increasing PbS, and even ore classified as 100% sulphide contains significant PbO. Consequently, PbO plays a controlling role on recovery since PbO floats significantly slower than PbS. A ratio equation was developed, whereby the regression lines for silver reasonably match, while the agreement is nearly perfect in the case of lead. A similar approach followed to develop the metallurgical recovery equations that were applied to the model concentrate grade; however, in this case, the relationship between head and concentrate grades is linear in the case of lead, whereas for silver it is exponential. Metallurgical recovery of silver is estimated to range between 83% and 77% as a function of the degree of oxidization of the ore. Similarly, metallurgical recovery of lead is estimated to range between 77% and 60%.

Arsenic is the only known deleterious element that may reach penalty levels. Controlling the plant feed to a grade of < 0.6% As is necessary to produce a flotation concentrate with < 1% As.

1.10 Mineral Resource Estimates

Mineral Resource estimation at Del Toro was performed on four vein systems within three mining operations and three exploration veins:

- Mina Dolores: inclusive of Santa Teresa, Santa Teresa de Alto, Santa Teresa de Bajo, Purisima and Dolores;
- Mina Perseverancia: inclusive of San Nicolas and Escondida;
- Mina San Juan: inclusive of Lupitas, Lupitas Alto, San Jose and San Jose Alto, Cuerpo 1, Cuerpo 2 and Cuerpo 3;
- Zaragoza; and
- Carmen and Consuelo.

These were grouped into three estimation areas:

- Mina Dolores, Perseverancia, San Juan-Lupitas;
- Mina San Juan Cuerpo 3; and
- Minor veins (Cuerpo 1 (A, B and C), Cuerpo 2, Escondida, Zaragoza, Carmen, and Consuelo).

Depending on the mine and model, resource estimation is based on information such as the current drill hole database, channel sampling, underground level mapping, and digitized data for underground drifts and stopes. Specific gravity (SG) data were typically assigned based on major rock type groups or on domains.

Where computerized modelling techniques were employed, geological and mineralized vein solids were constructed. Assay, density and waste samples were composited, with composite lengths variable depending on domain. High-grade outlier samples were capped, or an outlier-restriction influence radius was applied. Domain boundaries were reviewed, and, typically, hard boundaries were implemented for estimation. Where sufficient data were available, semi-variogram models were developed from the composite samples for variables such as silver, arsenic, gold, lead, and zinc.

Estimation of silver, gold, lead, zinc, and arsenic within the Mina Dolores, Perseverancia and San Juan-Lupitas domains was undertaken using a two-dimensional (2D) compositing and estimation approach. A combination of estimation methodologies was used within the estimate to allow for interpolation where limited composite data and unstable variogram models were not able to capture the spatial continuity required for Ordinary Kriging (OK).

Estimation of silver, gold, lead, zinc, and arsenic for the Cuerpo 3 deposit was completed using OK. Blocks within the Cuerpo 3 model were estimated with two successive interpolation passes for all metals. The estimates were validated using a combination of methods, including visual inspection, comparison of block grade distributions with drill hole composite sample grades using scatter and cumulative probability plots, and comparison of average composite sample values with average estimated block grades using swath plots. In general, the estimates were found to be unbiased, and provide a fair representation of the supporting composite data. A range of criteria were considered when addressing the suitability of the classification boundaries for the Mineral Resource estimates, which could include some or all of the following: confidence in the interpretation of the geological continuity and volume of mineralized zones, drill spacing and sampling quality, recent mining activity, continuity of silver grades defined from variogram models, estimation technique, number of samples used to estimate a block, average composite distances, the number of octants required to estimate a block, and kriging quality parameters. No Measured Mineral Resources were estimated for Cuerpo 3.

For the estimates using polygonal methods, longitudinal sections of vein structures were constructed. Once the projections for Measured, Indicated, and Inferred polygons were addressed, the area, average width, volume, and weighted mean grade were calculated for every polygon. Outlier grades were capped. Polygons of Measured Mineral Resources are projected vertically (up and down) 20 m away from mine levels informed by chip samples. Indicated Mineral Resources are projected 20 additional metres from Measured Mineral Resources away from mine levels and 20 m around drill hole intercepts where there is continuity of mineralization as indicated by drilling information or by mine levels with sample lines reporting potentially economic grades. Inferred Mineral Resources are projected 50 m from drill hole intercepts or polygons of indicated Mineral Resources. In most cases, Inferred Mineral Resources are projected 20 m beyond Indicated Mineral Resources. Drill hole spacing varies generally from 15 to 75 m in zones of Measured and Indicated Mineral Resources, whereas chip sample lines are spaced between 1.5 and 3.0 m in those mine levels with Measured or Indicated Mineral Resources.

Mineral Resources are reported using silver-equivalent (Ag-Eq) cut-off grades, where Ag-Eq is calculated as:

- Ag-Eq = Ag Grade + [(Au Grade x Au Recovery x Au Payable x Au Price / 31.1035) + (Pb Grade x Pb Recovery x Pb Payable x Pb Price x 2204.62) + (Zn Grade x Zn Recovery x Zn Payable x Zn Price x 2204.62)] / (Ag Recovery x Ag Payable x Ag Price / 31.1035)

Assumptions used to generate the cut-off grade common to all estimates included:

- Metal prices of $19.00 /oz Ag, $1,300.00 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn;
- Actual and budgeted operating and sustaining costs;
- Metallurgical recovery for sulphides of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; and
- Metals payable of 95% for Ag, Au and Pb and 85% for Zn in concentrates produced from sulphide minerals.

A cut-off assumption of 120 g/t Ag-Eq was used for the Mina Dolores, Perseverancia, San Juan-Lupitas estimates, and a cut-off of 195 g/t Ag-Eq was used for Cuerpo 3 and the minor vein estimates.

1.11 Mineral Resource Statements

Mineral Resources are reported using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards), as summarized in Table 1-1 (Measured and Indicated Mineral Resources) and Table 1-2 (Inferred Mineral Resources).

Table 1-1: Measured and Indicated Mineral Resource Summary Table

Category	K Tonnes	Grades					Contained Metal				
		Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k oz)	Au (k oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k oz)
Measured	47	228	0.43	4.04	0.92	383	346	0.65	4,206	952	581
Indicated	1,234	219	0.14	4.55	3.51	388	8,694	5.59	123,647	95,404	15,393
Total Measured and Indicated	***1,281***	***219***	***0.15***	***4.53***	***3.41***	***388***	***9,040***	***6.25***	***127,853***	***96,357***	***15,974***

Table 1-2: Inferred Mineral Resource Summary Table

Category	K Tonnes	Grades					Contained Metal				
		Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k oz)	Au (k oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k oz)
Inferred	*1,362*	*213*	*0.13*	*5.05*	*1.95*	*385*	*9,349*	*5.61*	*151,654*	*58,531*	*16,877*

Notes:

1. Mineral Resources were prepared by FMS, SRK Consulting (Canada) Inc and Entech. The Qualified Person for the estimate is Jesus M. Velador Beltran, MMSA, QP, an employee of FMS.
2. Measured and Indicated Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources have an effective date of December 31st, 2016. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 195 g/t Ag-Eq for Cuerpo 3 and 120 g/t Ag-Eq for all other veins. Silver equivalent was calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; and metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates produced from all materials.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

The Mineral Resources may be impacted by additional infill and exploration drilling that may identify additional mineralization or cause changes to the current domain shapes and geological assumptions. The Mineral Resources may also be affected by subsequent assessments of mining, environment, processing, permitting, taxation, socio-economics, and other factors.

1.12 Mineral Reserve Estimates

Mineral Reserves were initially constrained using Ag-Eq cut-off grades developed for each mining method used. The cut-off grades considered were:

- Fully Costed Cut-Off Grade (FCOG) – a grade of material in which recoverable value pays for all associated costs, including but not limited to development, stoping, processing, treatment, and all administration costs. For high-level assessments, FMS allows for some capital in the determination (sustaining capital);
- Incremental Cut-Off Grade (ICOG) – a grade of material in which recoverable value pays for stoping, processing, treatment, and administration (if the material adds to mine life). Development and sustaining capital are excluded under the premise that these costs have already been absorbed by material deemed economic by the consideration of the FCOG; and
- Marginal Cut-Off Grade (MCOG) – a grade of material in which recoverable value pays for the incremental haulage cost between the waste dump and the processing facility, processing costs (variable component) and administration costs (if mine life is extended).

Considerations of ore loss and dilution for each mining method were then included:

- Cut-and-fill: 10% unplanned dilution, mining recovery of 95% (Dolores, San Juan, Perseverancia);
- Long-hole stoping: 15% unplanned dilution, mining recovery of 95% (Dolores);
- Development: 10% unplanned dilution, mining recovery of 95% (Dolores);
- Shrinkage stoping: 10% unplanned dilution, mining recovery of 95% (San Juan); and
- Drift-and-fill: 20% unplanned dilution, mining recovery of 90% (San Juan Cuerpo 3).

These considerations were then incorporated with the initial cut-off grade determinations to arrive at a final cut-off grade criteria set (Table 1-3). Stopes were then optimized based on selected mining methods and minimum stope widths.

Table 1-3: Final Cut-Off Grades Applied by Mining Method

Cut-Off Grade	Unit	FCOG	ICOG	MCOG
Cut-Off Grade: Cut-and-Fill	g/t Ag-Eq	195	150	80
Cut-Off Grade: Shrinkage	g/t Ag-Eq	210	170	80
Cut-Off Grade: Longhole	g/t Ag-Eq	160	120	80
Cut-Off Grade: Drift-and-Fill	g/t Ag-Eq	300	270	80

Mineral Reserve estimates were based on mining modifying factors gathered from actual operations data as well as from estimates that follow industry best practices.

Modifying factors for mining were applied to the Measured and Indicated Mineral Resources on a stope-by-stope evaluation and have been determined suitable for conversion to Mineral Reserves. To convert from Mineral Resources to Mineral Reserves, the resource blocks were interrogated by applying economic criteria as well as geometric constraints based on the mining method envisioned. Mineable blocks or stopes were defined by following this process.

1.13 Mineral Reserve Statements

Mineral Reserves are reported using the 2014 CIM Definition Standards, as summarized in Table 1-4.

Table 1-4: Mineral Reserves Summary Statement

Category	K Tonnes	Grade					Contained Metal				
		Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k oz)	Au (k oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k oz)
Proven	20	155	0.12	1.25	0.34	203	100	0.08	551	150	131
Probable	1,445	163	0.10	3.36	2.68	288	7,573	4.65	107,009	85,352	13,380
Total Proven + Probable	***1,465***	***163***	***0.10***	***3.33***	***2.65***	***287***	***7,677***	***4.71***	***107,521***	***85,565***	***13,518***

Notes:

1. The Qualified Person for the Mineral Reserve estimate is Ramon Mendoza Reyes, QP, a FMS employee. Mineral Reserves have an effective date of 31 December, 2016.
2. Mineral Reserves are defined using multiple variable cut-off grades, then stope designs are optimized based on selected mining methods and minimum stope widths. Mining methods will include cut-and-fill (resue), drift-and-fill, shrinkage stoping and longhole stoping with cemented fill methods.
3. The Ag-Eq grade formula used was Ag-Eq Grade = Ag Grade + [(Au Grade * Au Recovery * Au Payable * Au Price / 31.1035) + (Pb Grade * Pb Recovery * Pb Payable * Pb Price * 22.0462) + (Zn Grade * Zn Recovery * Zn Payable * Zn Price * 22.0462)] / (Ag Recovery * Ag Payable * Ag Price / 31.1035).

4. Key assumptions and parameters include: Metal price of US$18/oz Ag, US$1.00/lb Pb, US$1.15/lb Zn, US$1,250/oz Au; metallurgical recoveries of 82.3% for Ag, 67.5% for Pb, 15.0% for Zn, 60.0% for Au; metal payabilities of 95% for Ag, Pb and Au, and 85% for Zn; direct costs of US$49.3/t mill feed, process and treatment costs of US$38.80/t mill feed and general and administration (indirect costs) of US$18.0/t. Ore loss and dilution is variable by mine, and by mining method. Mining recoveries range from 90–95%. Unplanned dilution assumptions range from 10–20%.
5. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

Factors that could affect the Mineral Reserves include changes to the following assumptions: unplanned dilution, mining recovery, geotechnical conditions, equipment productivities, metallurgical recoveries, metal prices and exchange rates, mill throughput capacities, operating costs, and capital costs.

1.14 Mining Methods

1.14.1 Mining Considerations

In mineralisation that exhibits fair to good geotechnical conditions, Del Toro uses cut-and-fill (resue) and shrinkage stoping. Both methods have been successfully employed and recover the mineralisation with limited ore loss and dilution, albeit at a low productivity. A recent trade-off study indicated that where mineralisation was greater than 1.0 m in width, longhole stoping with fill could be more productive and cost effective than the current methods. Overhand drift-and-fill is planned for the Cuerpo 3 deposit.

Stope designs assumed:

- Dolores: a minimum mining width of 1.5 m was designed for longhole stopes and 1.0 m for cut-and-fill zones; additional waste was included to meet the minimum mining width for access, therefore waste was designed and scheduled on either side of the mineralisation. Sills mined for longhole stoping areas were proposed to be 3.0 m wide, 4.0 m high, and suitable for modern drilling equipment. Production stopes were designed with a minimum width of 1.5 m and a vertical distance of 9.5 m. Stope panels were designed at 20 m long (9.5 m high). A ramp mined with an arched profile will be excavated to a width of 3.5 m and a height of 3.5 m, and will incorporate a minimum stand-off distance of 20 m to locate the ramp away from mineralisation. Planned development includes: access drifts, sills (development on mineralisation), operating waste development (sills mining material below cut-off), sumps, escapeways and accesses to the escapeways, return airways and accesses to the return airways, stockpiles, and ore passes and access to the ore passes, where required.

- San Juan: There is limited opportunity to optimise the mining methods that can be applied to Cuerpo 1, Cuerpo 2 and the minor veins, as they are well-established and nearing completion. Shrinkage stoping, using a minimum mining width of 1.0 m, was designed for additional stoping areas. For cut-and-fill stoping, a minimum mining width of 1.0 m was used for design (resue portion), with a final width of 2.5 m for excavated width (1.5 m of waste blasting). Additional waste was included to meet the minimum mining width for access, therefore waste was designed and scheduled on either side of the mineralisation. Generally, the ramps have been moved from ore into waste to reduce the potential for sterilisation and to increase productivity. The drift-and-fill method proposed for Cuerpo 3 used 3.0 m square profiles for development. The whole drift, once inside the mineralisation, was interrogated to meet the cut-off analysis. The access ramp designs for Cuerpo 3 are 60 m from the orebody. This stand-off distance will allow sufficient space between the ramp and the orebody for the excavation of the level accesses, stockpiles and sumps. The main ramp has a profile of 3.5 m by 3.5 m. The production levels will be spaced vertically every 18 m. Planned development includes: ore drifts, sumps, escapeways and accesses to the escapeways, return airways and accesses to the return airways, stockpiles, and ore passes and the access to the ore passes, where required.

- Perseverancia: The production areas in the Perseverancia mine were designed to a minimum mining width of 1.0 m, after ore dilution and loss were considered. Additional waste was included to meet the minimum mining width for access, therefore waste was designed and scheduled on either side of the mineralisation. A ramp mined with an arched profile will be excavated to a width of 3.5 m and a height of 3.5 m; ramps will be located away from mineralization. Planned development includes: access drifts, sills (development on mineralisation), operating waste development (sills mining material below cut-off), sumps, escapeways and accesses to the escapeways, return airways and accesses to the return airways, stockpiles, and ore passes and the access to the ore passes, where required.

Ventilation at the mines is via a push-pull system, typically with fresh air coming into the mine portals and being exhausted through ventilation raises.

1.14.2 Geotechnical Considerations

Geotechnical evaluations were undertaken to provide support for the selected mining methods, including geotechnical review, structural investigations and rock mass evaluation.

Rock mass rating and mining width considerations were used to classify the rock mass within the various mining operations into three general domain types:

- Host rock domains that are not altered, behave stably in all design sections, and do not require support;
- Host rock domains that are altered, fractured, or contain oxide vein; have the potential for instability; and require support such as rock-bolts and steel-wire mesh; and
- Host rock domains that include sulphide breccias, which are classified as unstable, and require strict ground control measures that include the installation of shotcrete to help confine the weak material.

A specific study was undertaken on Cuerpo 3, because of the known poor to extremely poor ground conditions. Two clay types were identified, a sticky, swelling, saturated clay that is likely to pose a mining risk, and a less-saturated, more-freely draining clay unit that may be easier to manage during mining. Sand and clay rich conditions within the breccia will be difficult to mine. Underhand mining has been recommended to limit exposure to the degraded conditions. The geotechnical domain model will assist with predictive mining through the variable ground conditions, and the clay model will inform potential mining risks. The model should be regularly updated with new drill hole and mapping data.

1.14.3 Hydrogeological Considerations

There has been only limited hydrogeological investigation at the site to date. Del Toro monitors mine discharge daily with magnetic flowmeters and monitors hydrochemistry of discharge water on a quarterly basis. Two groundwater monitoring wells are used to monitor groundwater quality downgradient of the tailings impoundment.

Most of the mine inflows are associated with sub-vertical faults within the skarn unit. The contact metamorphism process has silicified the antecedent limestone and leached soluble minerals, resulting in enhanced porosity and permeability. Appreciable inflows have been observed on four separate structural trends, with the northeast–southwest fault trend the most productive. An inflow event in late September 2016 resulted in the flooding of the lower portion of Ramp 068. FMS has since upgraded its pumping system to handle the increased flows.

Review of the Cuerpo 3 orebody indicates that it should be pre-drained, to the extent possible prior to extraction, to limit the effect of elevated pore pressures and discharging groundwater could have on the wall rock stability and on dilution.

1.14.4 Production Plan

Del Toro has well-established productivities which were applied in the mine schedule, including the time taken to drill, blast, muck and support each round; vertical development considerations; longhole drilling; material movement; and backfill requirements. The following mine life assumptions are included in the schedule presented in Table 1-5:

- Dolores: four years;
- Cuerpo 3: seven years; and
- Perseverancia: two years.

Table 1-5: Mine Schedule

Type	Units	Total	2017	2018	2019	2020	2021	2022/ 2023
Development								
Total Lateral Development	m	42,650	14,467	14,791	6,615	3,549	1,936	1,277
Vertical Development	m	727	426	279	22	0	0	0
Waste Mined								
Dolores	kt	182.8	66.9	83.6	30.8	1.4	0	0
Perseverancia	kt	91.7	75.9	15.8	0	0	0	0
San Juan	kt	331.6	192.4	75.1	33.1	16.4	8.8	5.8
Total	*kt*	*606.1*	*335.2*	*174.5*	*63.9*	*17.8*	*8.8*	*5.8*
Ore Mined (Dilution and Mining Recovery Applied)								
Dolores	kt	379.2	87.3	162.9	117.8	11.3	0	0
Perseverancia	kt	152.5	78	37.5	37.1	0	0	0
San Juan	kt	932.3	190.1	160.4	193.9	217.8	113.1	56.8
Total	*kt*	*1464*	*355.3*	*360.7*	*348.7*	*229.1*	*113.1*	*56.8*
Mined Grades (Dilution Applied)								
Silver	g/t	163	166	139	161	173	205	181
Lead	%	3.33	3.81	2.98	3.28	3.21	3.48	3.17
Zinc	%	2.65	1.37	2.29	2.92	3.87	3.73	4.26
Gold	g/t	0.1	0.05	0.1	0.14	0.1	0.12	0.14
Ag Equivalent	***g/t***	***287***	***292***	***250***	***288***	***302***	***343***	***314***
Mined Metal Mass (Process Recovery Not Applied)								
Silver	m oz	7.7	1.9	1.6	1.8	1.3	0.7	0.3
Lead	kt	48.8	13.5	10.7	11.4	7.4	3.9	1.8
Zinc	kt	38.8	4.9	8.3	10.2	8.9	4.2	2.4
Gold	k oz	4.8	0.6	1.2	1.6	0.7	0.4	0.2
Ag Equivalent	***m oz***	***13.5***	***3.3***	***2.9***	***3.2***	***2.2***	***1.2***	***0.6***

1.14.5 Equipment Considerations

Equipment requirements were assessed for each mining operation. Typically, the equipment fleet includes jumbos, raisebore machines, load-haul-dump machines, and trucks. Additional haulage requirements can be met by the onsite contractor through the provision of additional haulage trucks.

1.15 Process Plant

The process plant uses a conventional grinding circuit followed by sulphide flotation, then oxide flotation. To maximize metal recovery, the circuit targets PbS first in a rougher-cleaner-scavenger cell configuration, followed by sulphidisation conditioning in a rougher-scavenger configuration that promotes PbO flotation.

Since the ore originates from three different mines, each mine hosting multiple geological domains, the plant metallurgical (grade-recovery) performance varies noticeably at times. However, by exercising plant feed blending practices the metallurgical variability is adequately controlled and the operation consistently achieves its production objectives. Concentrate grade varies between 40% and 50% lead, depending on the percentage of lead in the feed. Concentrate sales penalties due to arsenic content (the only deleterious element of concern) is not an issue, as current commercial agreements specify penalties for arsenic content at > 1%.

Because of the operation of tailings filtration, most of the water (80-85%) is recycled in the process. Power consumption is approximately 46,000 kWh per day.

The current plant capacity and infrastructure are considered adequate to continue operating for the remaining mine life. However, there are a number of initiatives to continue improving the metallurgical performance of the plant. These initiatives include the implementation of microbubble flotation and fine grinding technologies to optimize metallurgical recoveries and concentrate grades, and the evaluation of specialty flotation reagents to increase metal recoveries and to inhibit the concentration of arsenic.

1.16 Infrastructure

The existing surface mining infrastructure includes the process plant, workshops, analytical laboratory, temporary ore stockpiles, waste rock and tailings storage facilities, water management and diversion structures, offices, drill core and logging shack, water ponds, power substations and power lines. The three mining operations are accessed via surface portals.

Short-term plant feed storage stockpiles are located in proximity to the processing plant in the San Juan mine. Waste rock storage is limited to surface dumps outside each of the mines. Del Toro is currently operating Tailings Storage Facility # 1-2 (TSF 1-2), which is expected to reach maximum capacity in the first quarter of 2018. Construction of Tailings Storage Facility #3 (TSF3) is ongoing with expected completion in the fourth quarter of 2017, in sufficient time to be able to store the remaining tailings material for the life-of-mine. TSF3 was designed to hold 11.85 Mt of paste-filtered tailings in 10 benches of 10 m high, for a total height of 100 m.

With the completion of TSF3, no other major infrastructure is planned for the Life of Mine (LOM).

Fresh water for Del Toro is sourced from underground dewatering stations. The two main uses of fresh water are water for production and exploration drilling, and make-up water for processing.

The location of the Del Toro mines in the vicinity of the municipality of Chalchihuites reduces the need to provide dedicated camp facilities to employees and contractors. The majority of the mine personnel lives in the town of Chalchihuites, which is in walking distance to the mine. A minor portion of the workforce live in surrounding towns and commute each day.

1.17 Markets and Contracts

The main product obtained from the flotation process at Del Toro is a silver-rich lead concentrate, which is sold under annual contracts to arm's length concentrate traders. Based on FMS's proven success to secure sales contracts from this operation, and from two of its other properties, FMS has been able to continuously sell Del Toro's concentrates since starting commercial operations in 2014. Concentrate sales agreements are valid for one year or more and are reviewed on a regular basis. Terms within the sales contracts are considered by FMS to be within industry norms for such agreements.

Based on past performance and the characteristics of the ore, the lead-silver concentrates will carry impurities in the form arsenic sulphides that could be penalized at the smelter. In the last three years, the arsenic content has been recorded at a range between 0.6 and 0.9 %; the penalty thresholds for arsenic are set between 0.5 and 1.0 percent. Controlling the plant feed to less than 0.6% arsenic is necessary to produce a flotation concentrate with less than 1% arsenic. According to the production schedule, generally, if a blend of less than 40% of this material in the plant feed is maintained, the arsenic level is managed below the upper threshold. No other relevant impurities have been recorded.

FMS has corporately established a standard procedure to determine the medium-term and long-term metal price guidance for silver, gold, lead and zinc, using a consensus-based approach.

Metal prices used for Mineral Resource and Mineral Reserve estimates are listed in Table 1.6

Table 1-6: Metal Prices Used for Mineral Resource and Mineral Reserve Estimates

Metal Price	Units	Used in Resource Estimation	Used in Reserves Estimation and Mine Plan
Silver	$/oz Ag	19.00	18.00
Gold	$/oz Au	1,300	1,250
Lead	$ / lb Pb	1.00	1.00
Zinc	$ / lb Zn	1.20	1.15

Foreign exchange rates utilized in the cost estimates and in the LOM model were USD:CAD 1.30 and USD:MXN 18.70.

As a normal course of business, Del Toro has contracts in place for some of the services required for the mining and processing activities. All of these contracts are agreed upon one-year or multi-year terms and, in the opinion of the QP, these contracts and commercial terms are in line with industry norms for such contracts.

1.18 Environmental Considerations

Environmental and social baseline studies were performed in order to characterize pre-existing conditions and to support the preparation of Environmental Impact Assessment (EIA) studies in the areas potentially affected by Del Toro activities. Completed studies cover aspects of surface hydrology, surface water geochemistry, hydrogeology, soils, air quality, noise, flora and fauna, and history and culture. A number of environmental areas require ongoing monitoring as part of permitting, including tailings and waste material handling and disposal and the management of mine effluent, process water, and hazardous waste. FMS has developed and is implementing an Environmental Management System (EMS).

1.19 Permitting Considerations

Del Toro is an operating mine, as such it holds all major environmental permits and licenses required by the Mexican authorities to carry out mineral extracting activities in the San Juan mining complex.

1.20 Closure Plan

The current closure plan includes the following concepts: post-operation activities, closure of facilities, reclamation of certain areas, monitoring and site abandonment. The Standardized Reclamation Cost Estimator (SRCE) model, adapted to reflect current regulations in Mexico and escalated for inflation. The closure estimate as at December 2016 is US$3.28 million.

1.21 Social Considerations

Del Toro has been actively investing in public infrastructure by building a high-voltage powerline and substation and a sewage treatment facility, servicing the entire community. It also sponsors the local children´s symphony orchestra and several handcrafts workshops in the local community center.

A grievance mechanism was implemented to receive complaints related to the operations and provide timely responses to the community.

There are no currently known social or community pressures that materially affect the Mineral Resource and Mineral Reserve estimates or the proposed mine plan.

1.22 Capital and Operating Costs

All mining capital costs are assumed to be either sustaining capital or capital assigned in support of new mining areas ("expansion" capital):

- The sustaining capital expenditures are budgeted on an as-required basis, established on actual conditions of the mine and the processing plant infrastructure. Estimated sustaining capital expenditures include infill exploration drilling, on-going development, mine equipment rebuilding, major overhauls or replacements, plant maintenance and on-going refurbishing, and as needed, tailings management facilities expansion.

- Currently, FMS is developing access to new mining blocks in the Santa Teresa, Dolores and Purisima veins in the Dolores mine, is conducting ramping on the lower Escondida vein in the Perseverancia mine, and is developing the Cuerpo 3 and lower Lupitas veins in the San Juan mine.

Table 1-7: Mining Capital Cost Estimate

Type	Units	Total	2017	2018	2019	2020	2021	2022	2023
Sustaining Capital Costs	$US M	2.89	11.00	4.05	2.38	1.77	1.77	1.77	0.15
Total Development Capital Costs	$US M	5.46	1.56	0.77	0.77	0.77	0.77	0.77	0.06

Mining operating costs are based on site actuals (e.g., labour, various supplies, etc.) and contractor quotes; however, the proportion of operating mining costs between the different methods will have a significant variance between time periods, depending on how equipment, labour and other indirect costs are proportioned to each method. Operating costs summaries include a 5% contingency allocation.

1.23 Economic Analysis

FMS is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production where no major expansion is planned.

Mineral Reserve declaration is supported by a positive cashflow.

1.24 Interpretation and Conclusions

Under the assumptions in this Report, the operations have a positive cashflow, and Mineral Reserves can be reported.

1.25 Recommendations

Recommendations were made on a two-phase work program basis.

The first phase consists of exploration activities, including allocations for underground drilling, drill target generation, fluid inclusion and geochemical studies, and geophysical surveys, for a total cost of about $12.8 million.

The second phase, which is independent of, and not contingent on, the results of the first phase, can be conducted concurrently. Activities recommended include: additional geotechnical considerations to be implemented (structural logging, evaluation of fault structures, evaluation of Cuerpo 3 clay zones following dewatering), trial mining at Cuerpo 3 and the Dolores mine, ongoing monitoring activities (geotechnical, hydrological, QA/QC), metallurgical studies (characterization of the degree of sulphidisation of the ore, microbubble flotation technology implementation, geometallurgical study focused on zinc recovery, advance metallurgical testing and flowsheet optimization efforts to implement a zinc recovery circuit), auditing the Central Laboratory, collecting additional SG data to support development of an SG model, update polygonal estimates using modern estimation methods, complete additional infill drilling to support vein modelling, conduct a blending optimization and recovery study, and upgrade ventilation systems at the Dolores mine and conduct a ventilation audit. These programs are collectively estimated at $3.3 million.

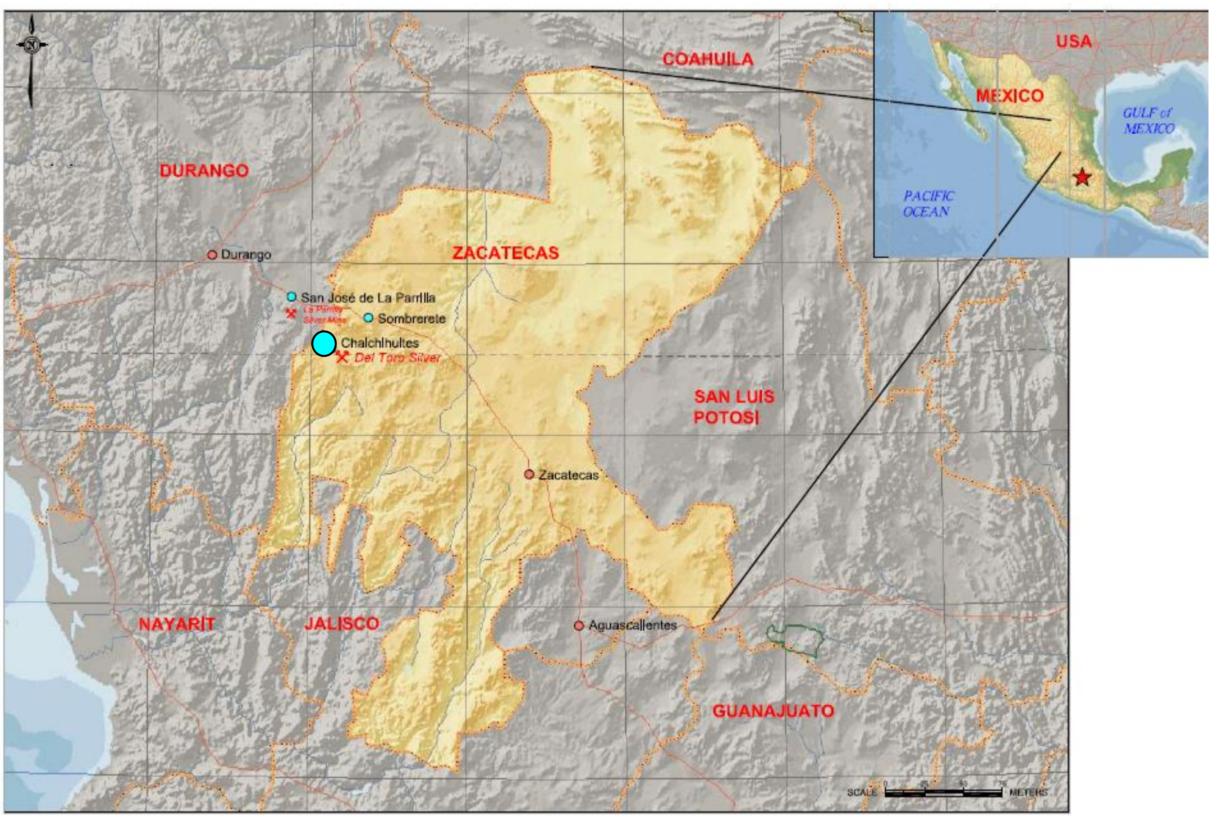
2 INTRODUCTION

This technical report (the Report) was prepared by First Majestic Silver Corp. (FMS) to provide updated Mineral Resource, Mineral Reserve estimates and updated information on mine and process planning for the Del Toro Operations (Del Toro). The operating entity is FMS's wholly-owned subsidiary First Majestic Del Toro, S.A. de C.V.

FMS is a publicly listed company incorporated in Canada with limited liability under the legislation of the Province of British Columbia. The Company is in the business of silver production, development, exploration, and acquisition of mineral properties with a focus on silver production in Mexico.

Del Toro is 100% owned and operated by FMS, and is located in the northwest portion of the state of Zacatecas, Mexico. Figure 2-1 shows the general location of Del Toro. Del Toro comprises a mining complex with three underground mines, one processing plant, and one paste tailings management facility. Current production is sourced from three different underground mining areas (San Juan, Perseverancia, San Nicolas, and Dolores).

Figure 2-1: General Location of Del Toro



Note: Figure from Pincock, Allen & Holt, 2012.

2.1 Effective Dates

The effective date of the Mineral Resource and Mineral Reserve estimates is December 31, 2016. Drill hole database used to support the estimates was closed as of August 31st, 2016. The overall effective date of the Report is December 31, 2016.

2.2 Qualified Persons

The following serve as Qualified Persons (QPs) as defined in NI 43-101:

- Mr. Ramon Mendoza Reyes, P.Eng., Vice President of Technical Services, FMS;
- Mr. Jesus M. Velador Beltran, MMSA, Director of Exploration, FMS; and
- Mr. Andrew Hamilton, P.Geo., Independent Consultant.

2.3 Site Visits and Scope of Personal Inspection

Table 2-1 below shows the dates of site visits and scope of QP’s personal inspection.

Table 2-1: Dates of Site Visits and Scope of QP's Personal Inspection

QP	Dates	Scope of Personal Inspection
Ramon Mendoza Reyes	Several occasions from 2014-2017. Most recent inspections on: - October 12th to 13th, 2016; and - November 30th, 2016.	- Coordination of the Mining Method Selection Study performed in the 3rd quarter of 2016 - Review of the modifying factors used for conversion of resources to reserves -Inspection of mining practices, ventilation, costs and safety were performed several times during 2014 and 2015 -Recurrent meetings with Del Toro personnel to review short-term mine plans, mine and mill performance, operating costs, budget and production projections.
Jesus M. Velador Beltran	Several occasions from 2014-2017. Most recent inspections on: - February 27th, 2017; - March 1st to 2nd, 2017; and - March 10th, 2017.	-Review and coordination of drilling, core logging and geological modeling interpretations. -Inspection of drill cores with emphasis on mineralization, alteration, structure and paragenesis.
Andrew Hamilton	Visits performed in 2016: - June 5th to June 12th, 2016; and - July 31st to August 6th, 2016.	- Evaluation and validation of recent and historic drill hole data. -Evaluation of recent and historic QAQC data and protocols. - Gap analysis and recommendations for improvements on data quality and confidence.

2.4 Information Sources and References

Reports and documents listed in the References section were used to support the preparation of the Report. Specialist input from other disciplines, including legal, process, geology, geotechnical, hydrological and financial, was sought to support the preparation of the Report.

For the purposes of this Report, all information, data, and figures contained or used in its compilation have been provided by FMS unless otherwise stated.

2.5 Units, Currency and Abbreviations

Units of measurement are metric. All costs are expressed in United States dollars unless otherwise noted. Only common and standard abbreviations are used wherever possible. Table 2.2 shows the list of abbreviations used:

Table 2-2: List of Abbreviations and Units

Distances:	mm – millimetre	Other:	tpd – tonnes per day
	cm – centimetre		ktpd – 1,000 tonnes per day
	m – metre		Mtpa - 1,000,000 tonnes per year
	km – kilometre		kW – kilowatt
	masl – metres above sea level		MW – megawatt
Areas:	m2 – square metre		kVA – kilovolt-ampere
	ha – hectare		MVA – Megavolt-ampere
	km2 – square kilometre		kWh – kilowatt hour
Weights:	oz – troy ounces		MWh – megawatt hour
	k oz – 1,000 troy ounces		°C – degrees Celsius
	lb - pound		Ag – silver
	g – grams		Au – gold
	kg – kilograms		Pb – lead
	t – tonne (1,000 kg)		Zn – zinc
	kt – 1,000 tonnes		Cu – copper
	Mt – 1,000,000 tonnes		Mn - manganese
Time:	min – minute		Ag-Eq – silver equivalent
	hr – hour	Assay/Grade:	g/t – grams per tonne
	op hr – operating hour		g/L – grams per litre
	d – day		ppm – parts per million
	yr – year		ppb - parts per billion
Volume/Flow:	m3– cubic metre	Currency:	$ - United States dollar
	m3/hr – cubic metres per hour		
	cu yd – cubic yards		

3 RELIANCE ON OTHER EXPERTS

This section is not relevant to this Report. Information pertaining to mineral tenure, surface rights, royalties, environment, permitting and social considerations, marketing and taxation were sourced from FMS experts in those fields as required.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

Del Toro is an underground producing silver mine and processing facility located in the municipality of Chalchihuites, in the northwestern part of the state of Zacatecas, Mexico.

The Chalchihuites mining district consists of an area of approximately 15 km by 10 km enclosing numerous silver/gold/lead/zinc underground mines, and FMS has consolidated part of the district into Del Toro for mineral exploration and mining purposes.

The mine was established as a brownfields project by FMS, and commenced commercial production in 2013. Current mining operations consist of production from three different underground areas: San Juan, Dolores and Perseverancia. The processing plant includes a flotation circuit and a cyanidation circuit which is currently on care and maintenance.

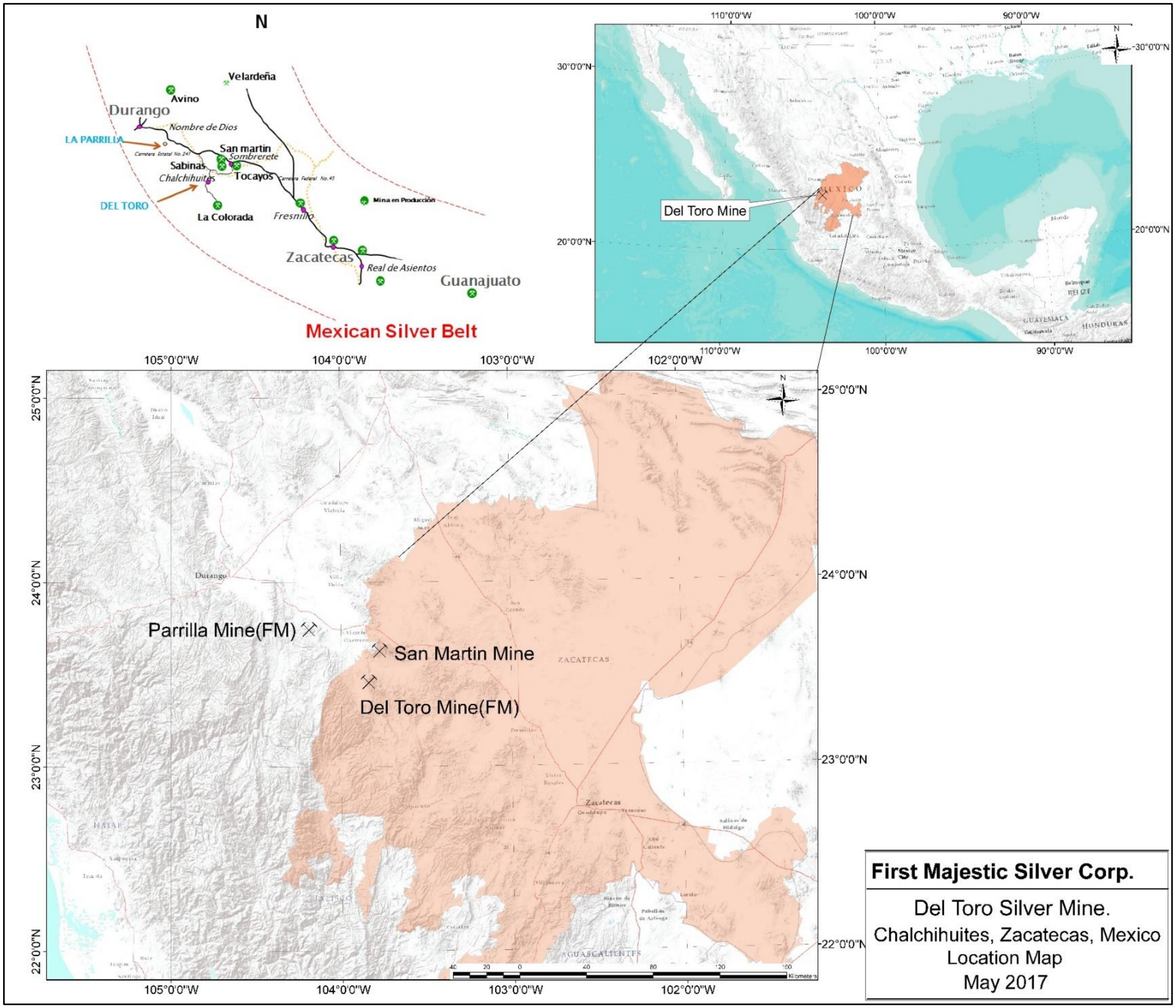
Location coordinates in Universal Transverse Mercator of the area that encloses Del Toro are as follows:

- North: 2,593,500 - 2,597,500; and
- East 614,500 - 619,000.

The approximate latitude and longitude coordinates of Del Toro are 103°51’25.008”W and 23°27'17.442”N.

Figure 4-1 is a general location map.

Figure 4-1: Location Map of FM Del Toro



Note: Figure prepared by First Majestic 2017

4.2 Ownership

The property is wholly owned and operated by First Majestic Del Toro S.A. de C.V., a wholly owned indirect subsidiary of FMS.

4.3 Mineral Concessions

In Mexico, mining concessions are granted by the Economy Ministry and are considered exploitation concessions with a 50-year term. Mining concessions have an annual minimum investment to complete and an annual mining rights fee to be paid to keep the concessions effective. Valid mining concessions can be renewed for an additional 50-year term as long as the mine is active.

Del Toro consists of 66 mining concessions, including 58 contiguous concessions in the Chalchihuites area and eight non-contiguous concessions covering a total of 2,110 hectares which are owned or controlled by First Majestic Del Toro S.A. de C.V. Table 4-1 and Figure 4-2 shows Del Toro's mining concessions.

In addition to the 66 mining concessions under First Majestic Del Toro S.A. de C.V. control, there are four mining concessions, covering an area of 48 hectares, for which FMS has exploration rights and an option agreement to acquire these concessions that can be exercised in October 2017. The concessions under option agreements are listed in Table 4-2.

The QP notes the following:

- Providencia concession (188060) is partially owned by First Majestic Del Toro S.A. de C.V. (40%). The remaining 60% is privately owned by Pedro Fernandez.
- Four concessions (Navidad 6, 7, 11 and El Toril) are undergoing the title registration process.
- The earliest renewal date of any of the mineral concessions is for the Perseverancia concession, which has a renewal date of April 23, 2021.

Table 4-1: FM Del Toro Mining Concessions

No.	Mining Concession	Title	Expiration date	Surface Hectares	Status	Ownership
1	PERSEVERANCIA	154546	23/04/21	23.7	Valid	Del Toro
2	LA NUEVA INDIA	160319	22/07/24	17	Valid	
3	PERSEVERANCIA UNO	163916	13/12/28	7.3	Valid	
4	LA ESPERANZA	164001	7/2/2029	20	Valid	
5	ZARAGOZA	164599	21/05/29	8.7	Valid	
6	CARMEN	166017	19/02/30	12.6	Valid	
7	SAN RAFAEL	166911	24/07/30	9	Valid	
8	AMPL. A LAS COTORRAS	168738	7/7/1931	14.2	Valid	
9	GABI	169659	9/12/1931	2	Valid	
10	LUPITA	170279	30/03/32	16	Valid	
11	RICARDO	171191	23/08/32	5.3	Valid	
12	LAS COTORRAS	171331	19/09/32	8.6	Valid	
13	DOLORES	172133	25/09/33	7.9	Valid	
14	DOLORES DOS	172138	25/09/33	4	Valid	
15	LOURDES	185185	13/12/39	13	Valid	
16	PERSEVERANCIA CUATRO	185186	13/12/39	23.2	Valid	
17	TAYOLTITA	186876	15/05/40	19	Valid	
18	VIOLETA	189682	4/12/1940	3.6	Valid	
19	FANNY	189876	5/12/1940	63.7	Valid	
20	VERDIOSA	191727	18/12/41	22	Valid	
21	SAN MARCELO DOS	193381	18/12/41	48.8	Valid	
22	SOCORRO	201174	27/11/44	22	Valid	
23	PERSEVERANCIA DOS	203243	13/06/46	11.8	Valid	
24	MARIA DE LA PAZ	207132	28/04/48	61.1	Valid	
25	BEATRIZ	212918	2/12/1951	43.9	Valid	
26	LA GUERA	214855	3/12/1951	4.6	Valid	
27	FATIMA	228623	14/12/56	46.4	Valid	
28	LA TRINIDAD	180630	7/12/1937	8.3	Valid	
29	ALTAMIRA	194863	29/07/42	17.3	Valid	
30	PANCHO	214817	12/3/1951	71.7	Valid	
31	NAVIDAD 2	229456	23/04/57	100	Valid	
32	NAVIDAD	229570	17/05/57	94.5	Valid	
33	NAVIDAD 1	229571	17/05/57	99.5	Valid	
34	NAVIDAD 3	229572	17/05/57	98.5	Valid	
35	NAVIDAD 4	230256	1/8/1957	108.2	Valid	
36	NAVIDAD 9	233730	7/4/1959	83.7	Valid	
37	NAVIDAD 8	233499	9/3/1959	95.1	Valid	
38	PANCHO III	235064	21/10/59	4.8	Valid	
39	NAVIDAD 10 F-2	235624	28/01/60	1.2	Valid	
40	NAVIDAD 9 F-2	237753	25/04/61	9	Valid	
41	NAVIDAD 9 F-3	237754	26/04/61	9	Valid	
42	NAVIDAD 9 F-4	237755	25/04/61	9	Valid	
43	NAVIDAD 9 F-5	237756	25/04/61	9	Valid	
44	NAVIDAD 9 F-6	237757	25/04/61	9	Valid	
45	NAVIDAD 9 F-7	237758	25/04/61	6	Valid	
46	NAVIDAD 9 F-8	237759	25/04/61	8.7	Valid	
47	NAVIDAD 9 F-1	237826	28/04/61	9	Valid	
48	NAVIDAD 6 FRACC. 1	242879	20/02/64	0.9	Valid	
49	NAVIDAD 5	243511	9/10/1964	33.5	Valid	
50	NAVIDAD 12	244681	30/11/65	17	Valid	
51	NAVIDAD 12 FRACC.1	244682	30/11/65	7.7	Valid	
52	NAVIDAD 12 FRACC.2	244683	30/11/65	0.8	Valid	
53	PROVIDENCIA	188060	21/11/93	26.6	Valid	40% Del Toro and 60% Pedro Fernández
54	NAVIDAD 6	093/28326		92.6	Title registration process	Del Toro
55	NAVIDAD 7	093 /28327		97.8		
56	NAVIDAD 11	093/32097		21.9		
57	EL TORIL	093/33833		12.5		
58	LA VERDE	093/34310		13.4		
59	SALUDOS	243567	16/10/64	90.2	Valid	
60	SALUDOS 2	241751	25/03/63	59.9	Valid	
61	SALUDOS 3	242286	27/06/63	41.6	Valid	
62	SALUDOS 4	242285	27/06/63	70.8	Valid	
63	SALUDOS 1	242293	27/06/63	79.5	Valid	
64	MILAGROS	190101	0/12/40	9	Valid	
65	CARIDAD	192795	18/12/41	24.3	Valid	
66	IVONE	196154	15/07/43	19.6	Valid	
Total				*2,110.50*		

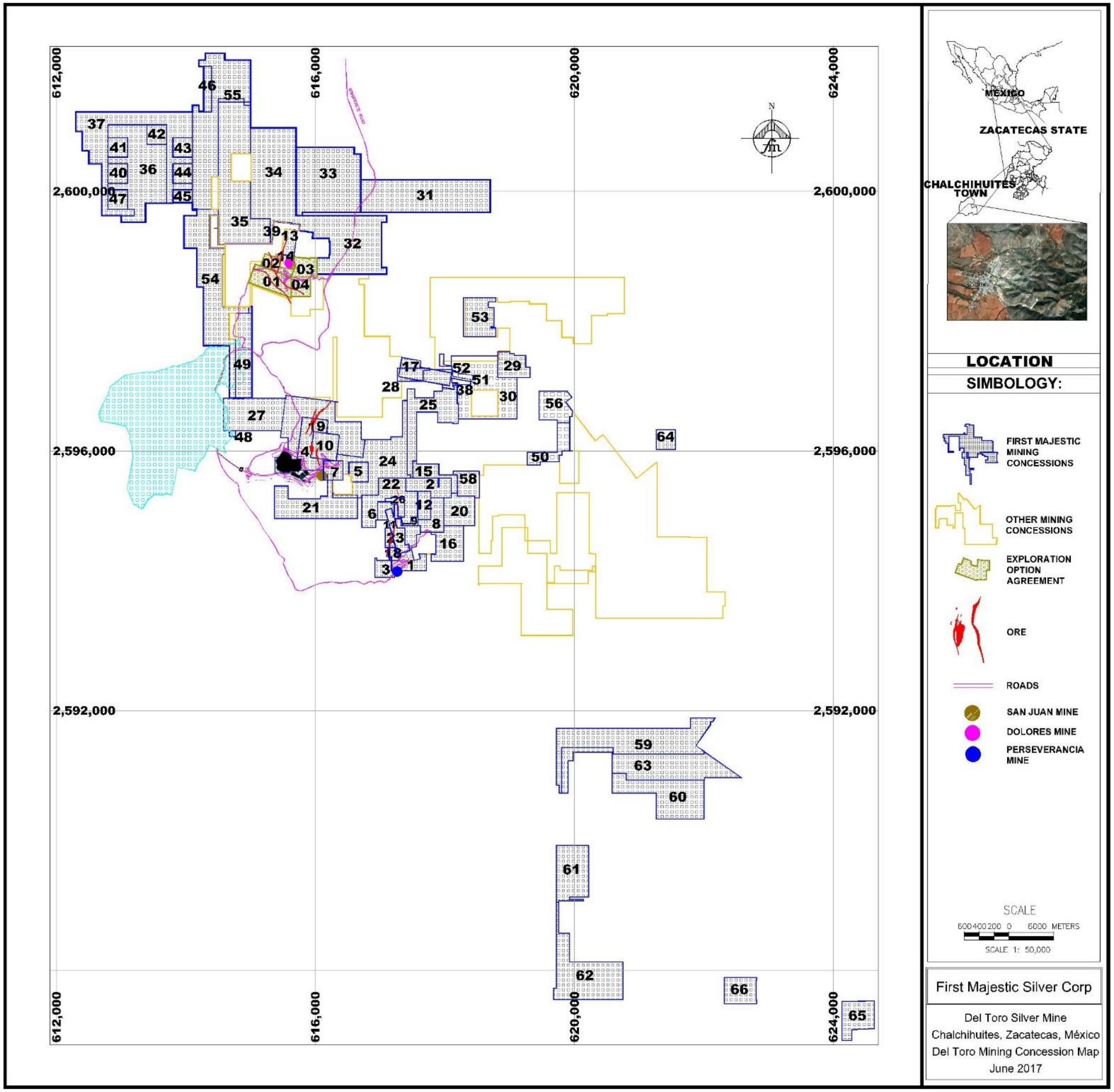
Table 4-2: Exploration Options Agreement

No.	Mining Concession	Title	Expiration date	Surface Hectares	Ownership
1	PURISIMA	*187905*	21/11/40	19.3	Minera Mantos, a wholly-owned subsidiary of Oremex Silver Inc.
2	SANTO DOMINGO	*211980*	17/08/50	7.9	
3	SANTO DOMINGO DOS	*191673*	19/12/41	12.0	
4	SANTA TERESA	*195669*	13/09/42	9.0	
Total				***48.2***	

4.4 Royalties and Encumbrances

The Verdiosa and Nueva India mining claims are currently subject to a 1% Net Smelter Return (NSR) royalty capped at $200,000 and $500,000, respectively, in total payment. There are no other royalties payable on the Del Toro mining concessions. None of the concessions are subject to any other encumbrances.

Figure 4-2: FM Del Toro Mineral Concessions



Note: The concession numbers are according to Tables 4-1 and 4-2.

4.5 Surface Rights

Surface rights in Mexico are commonly owned either by communities ("Ejidos") or by private owners. Chalchihuites mining district land is mainly owned by private owners, and to a lesser degree, by community owners. In either case, the mining concessions include "right of way" rights, although in many cases it is necessary to negotiate access to the land. Federal or state roads allow permission to access federal or state lands without other requirements.

The Mexican Mining Law includes provisions to facilitate purchasing land required for mining activities, installations and development. Del Toro has acquired five parcels of surface rights covering 219.3 hectares (Table 4-3) that are sufficient to support operations, including plant installation, tailings storage, and other Project requirements (Figure 4-3).

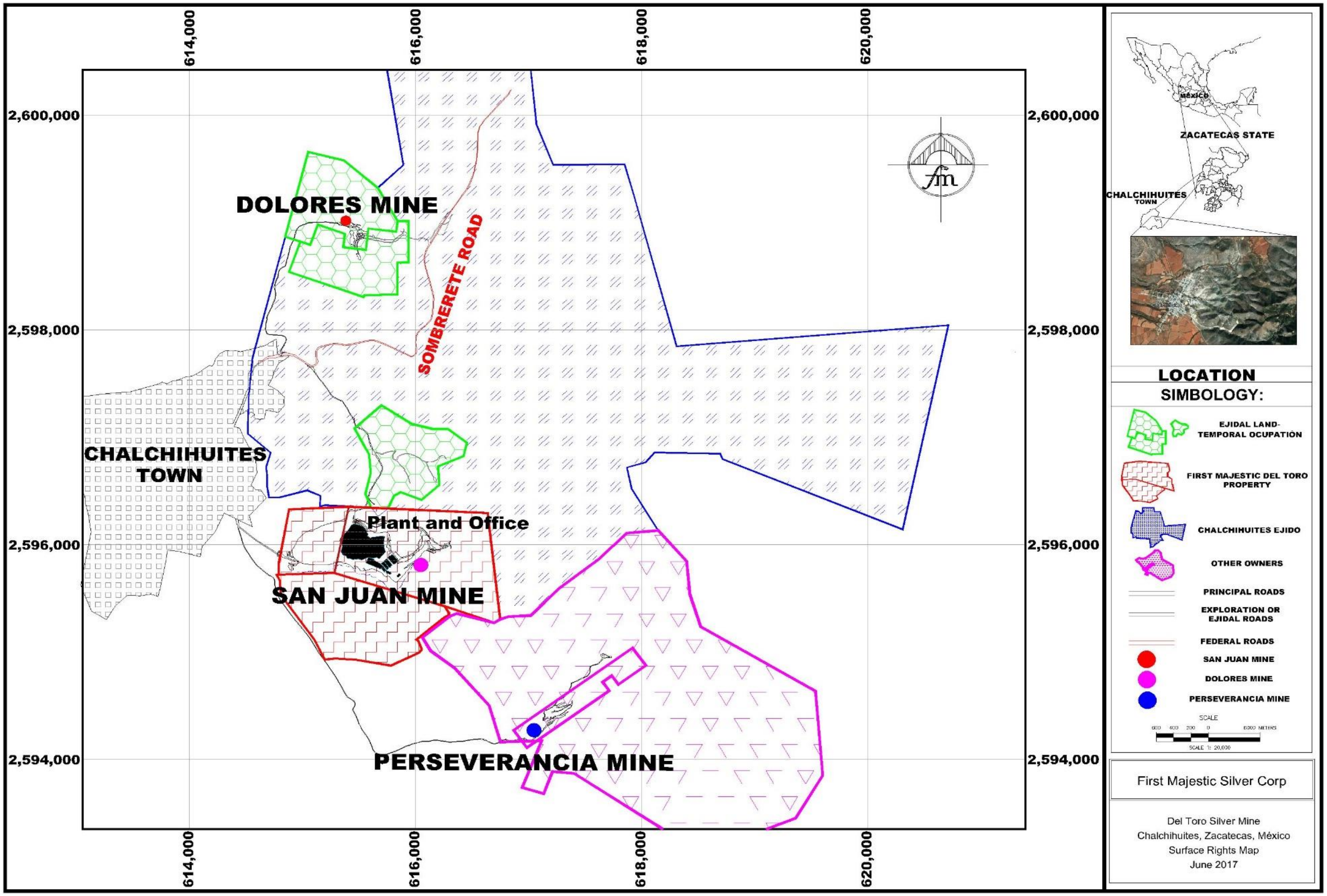
There is one Ejido's parcel of surface rights that is currently under negotiation for renewal of the annual agreement.

Table 4-3 shows Del Toro's land holdings.

Table 4-3: Del Toro Land Holdings

Acquired from	Title No.	Surface Hectares	Date of Acquisition	Type
Pedro Perez Lopez	9,831	100.001	23/11/2007	First Majestic Del Toro property
	13,376	29.594	16/05/2011	
Socorro Castillo	14,397	88.938	7/5/2012	
Othon Ricardo Andrade Garcia	13,532	0.71	13/05/2011	
Ruben Godoy Canales	11,530	0.008	11/9/2009	
Sub Total		**219.3**		
Ejido Chalchihuites		58.768	6/1/2012	Annual rental
		48.159	28/08/2012	
		1.297	26/04/2011	
		54.4		
Sub Total		**162.6**		
TOTAL		*381.9*		

Figure 4-3: FM Del Toro Surface Rights Map



4.6 Permits

First Majestic Del Toro S.A. de C.V. has all necessary permits for current mining and processing operations, including an operating license, a mine water use permit, and an Environmental Impact Assessment (EIA) for the mines, processing plant and tailings management facilities (see also the discussion in Section 20).

4.7 Environmental Considerations

Information regarding environmental permits and studies are presented in Section 20 of the Report.

4.8 Social License Considerations

Information regarding social license is presented in Section 20 of the Report.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The mining operations are about 150 km northwest of the capital city of Zacatecas in the bordering zone between the Sierra Madre Occidental and Mesa Central provinces. It is located at about 40 km southeast of FMS's La Parrilla Silver Mine and approximately 120 km southeast of the capital city of Durango.

Access to Del Toro is by Highway 45 from Durango City, 120 km to the southeast past the La Parrilla Silver Mine. Driving time from Durango to Chalchihuites is about two and a half hours. An alternate access route to Chalchihuites is from the city of Zacatecas by Highway I-45 to the northwest for 170 km, then, from the city of Sombrerete, a 50-km highway leads west to the village of Chalchihuites. Driving time from Zacatecas to Chalchihuites is about three hours.

Airports with service for international flights are available in the cities of Durango and Zacatecas.

The property boundary is located approximately 1 km to the east of the village of Chalchihuites, while the mill is located approximately 3 km away and can be accessed by all-weather dirt roads. Access within the concessions is by dirt roads. The Gualterio railroad station is located 5 km from Chalchihuites, with connections to the rest of the country.

An access map for the state of Zacatecas is shown in Figure 5-1.

Figure 5-1: Access Map of the State of Zacatecas, Mexico

Note: Figure from website explorandomexico.com, 2017.

5.2 Climate

Chalchihuites's climate is considered a semiarid, mild temperature climate according to the Köppen climate classification (BS1kw). The average temperature for the year in Chalchihuites is between 12 and 18˚C. The warmest month on average is May, with an average temperature of 22°C. The coolest month on average is January, with an average temperature of 12°C ranging from -3 and 18°C.

The average amount of precipitation for the year in Chalchihuites is between 556 and 571 mm. The rainy season occurs in the Del Toro area during the months of July to October. The month with the most precipitation on average is August (137 mm), and the month with the least precipitation on average is April.

Exploration and mining operations are conducted on a year-round basis.

5.3 Local Resources and Infrastructure

Local roads connect the mining district to various population centres within the region. The towns of Vicente Guerrero in the state of Durango (21,000 inhabitants at an elevation of 1,960 m) and Sombrerete in the state of Zacatecas (58,000 inhabitants at an elevation of 2,300 m) are located within 50 km of the Del Toro area.

All basic facilities such as hotels, restaurants, and telephone (including cellular), banking and postal services are available in Chalchihuites, Vicente Guerrero and Sombrerete. Elementary and secondary schools are available in all medium to major cities within the region. Higher education institutions and international airports are established in Durango and Zacatecas.

Electric power is provided by the national grid via a 45km extension constructed by FMS in 2011-2012. Potable water is available to all the towns from water wells.

Approximately 4,000 inhabitants live in the village of Chalchihuites. Numerous other villages and towns are located within the mining district, such as José María Morelos (about 1,000 inhabitants), San José de Buena Vista (700 inhabitants), El Mineral de La Colorada (500 inhabitants), La Candelaria (500 inhabitants), Piedras Azules (400 inhabitants) and El Hormiguero (300 inhabitants). A labor force, including miners, is readily available from these communities.

Additional information on the mining infrastructure is included in Section 18 of the Report.

5.4 Physiography

The Chalchihuites mining district is located at elevations of 2,300 m to 2,900 m.

The Sierra Madre Occidental consists of a north-to-northwest-trending range with mountains that reach elevations above 3,000 m. It comprises peaks, plateaus and elongated valleys along the range which merges into the mountains to the northwest. Deep canyons carved by drainage cross the Sierra Madre Occidental with increasing depth in the northwest portion of the range.

The Mesa Central province includes a great portion of the north-central part of Mexico. It comprises a large plateau composed of Mesozoic sedimentary rocks at elevations of 1,500 m to 2,300 m covering parts of the states of Zacatecas, Durango, San Luis Potosí, Coahuila and Chihuahua. Occasional ranges originated by folding or igneous activity break the flat extensions of the Mesa Central.

The Chalchihuites mining district is enclosed by the Huaynamota river basin in the western part of the state of Zacatecas near the border with the state of Durango. The Huaynamota River drains into the Santiago River about 40 km to the northeast of the capital city of Tepic in Nayarit State. It drains about 5,250 km^2 of the Chalchihuites region within the state of Zacatecas.

Vegetation in the area consists of xerophile plants in the lower elevations and grasslands, including cactuses (maguey, nopal and biznaga), while in the higher elevations the predominant vegetation consists of coniferous or evergreen oak forests (pine and oak trees).

The Chalchihuites region's main economic activities are agriculture, cattle and mining. Most farming (corn, beans, chilis, wheat, and some fruit trees such as apples and peaches) in the area takes place in the valleys and lower elevation zones.

6 HISTORY

6.1 Historical Mining Activity

Del Toro is located near the municipality of Chalchihuites. The village of Chalchihuites was founded in 1556 AD during the Spanish colonial period, right after the foundation of the city of Zacatecas by Mr. Nuño de Guzmán and Mr. Martín Pérez Uganda. According to historical references, during the period of 1554–1558 the Spanish captains Martín Pérez Uganda and Francisco Ibarra carried out expeditions to explore the Sombrerete, Chalchihuites and San Martín mineral zones.

Numerous small mining operations have been developed within the district from which high-grade silver-bearing oxidized minerals were extracted at times when prices were favorable. Mining districts that are still in operation within this region include Fresnillo, San Martín, Sombrerete, La Colorada, La Parrilla, and Cerro del Mercado, among others.

Mining activity in the Chalchihuites mining district generally consists of underground mines where silver-, gold-, lead-, zinc- and copper-bearing minerals are extracted. Most historical mine workings within the district were superficial developments, with exception of the San Juan mine, where a 90-m-deep shaft was developed to extract some of the high-grade silver minerals, and the Perseverancia mine, where two shafts were developed to a depth of about 200 m following two adjacent breccia pipe deposits.

No official records exist of mineral production from the Chalchihuites mines; however, according to FMS internal estimates, it can be inferred from surveying volumes of old stopes within the San Juan and Perseverancia mine-workings, that approximately four million ounces of silver were extracted from these mines at an estimated grade of about 700 g/t Ag, 10% to 35% Pb and 2% to 3% Zn. The Perseverancia mine was operated by Mr. Raúl Mazatán for a period of 23 years until 1997, shipping 150 to 300 hand-sorted ore tonnes per month to Peñoles smelter in Torreón city. The ore was reported to contain 1,500 to 3,000 g/t Ag and 20% to 40% Pb in sulphides. FMS estimates that approximately seven million silver-equivalent ounces were extracted from the historic mines in the Chalchihuites district. Table 6-1 summarizes the Chalchihuites district's estimated historical production.

Table 6-1: Estimated Historical Production in the Chalchihuites District

Mine	Estimated Tonnage (ktonnes)	Grade Range				
		Silver (g/t Ag)	Gold (g/t Au)	Lead (% Pb)	Zinc (% Zn)	Copper (% Cu)
San Juan	100	300-500				
Perseverancia	100	500-1500		10-35	2-3	
Dolores	80	300-400	1-3	4-5	4-5	
La Esmeralda	80					2-6
Magistral	50		2-8			2-6
San Nicolás	15	200-500				
Total	***425***					

Historical production of silver from major mines located in the Chalchihuites vicinity is estimated to be about 500 million ounces, including the San Martín mine operated by Grupo México, the Sabinas mine operated by Peñoles, and the La Colorada mine under operation by Pan American Silver.

6.2 Del Toro Prospecting and Exploration 2004–2010

FMS is the first modern mining company to explore the Del Toro area. FMS commenced prospecting activities in the Chalchihuites area in late 2004 under option agreements. The Company subsequently exercised options to acquire the Perseverancia and the San Juan groups of claims in 2006 and 2007.

From 2008 to 2010, more than 2,500 m of development was completed to access underground areas of old workings and to develop and prepare test mine areas in preparation of mining activities.

In 2009, FMS commenced a permitting process for the construction of a 1,000-tonnes-per-day flotation plant, and construction permits were received by the first quarter of 2010.

During 2010, an aggressive exploration program was launched at Del Toro to carry out development for underground drilling in the San Juan and Perseverancia areas. A surface diamond drilling program was also launched to explore the Cotorras and San Nicolas areas to define surface mineralization extensions to depth.

6.3 Del Toro Development 2011–2013

Construction activities for the flotation processing facility started in April 2011.

During 2011, based on the exploration and development results, plans were re-examined to evaluate the construction of a dual-processing facility, including flotation and cyanidation circuits to produce lead concentrates, zinc concentrates and doré bars. Capital expenditures to complete this expansion were divided into three phases: Phase 1 included mine development and construction of the flotation plant;

Phase 2 included the construction of the cyanidation plant; and Phase 3 included the completion of a new power line and a new tailings deposit.

During the exploration phase of the project, a principal decline access to the San Juan area was driven from the surface and extended as the principal access for orebody development as well as for use as haulage-way and service facility. Major access declines were also driven into the Perseverancia/San Nicolas ore zones and the Dolores area. These workings were also commenced during the exploration phase of the project and were continued for stope development accesses and ore haulage.

Production from San Juan mine oxide ore bodies during 2012 was stockpiled in preparation of the completion of the cyanide counter-current decant and Merrill–Crowe circuit.

Phase 1 infrastructure for a processing rate of 1,000 tpd was completed in January 2013, and pre-production commenced at the same time.

6.4 Modern Mining Production Statistics

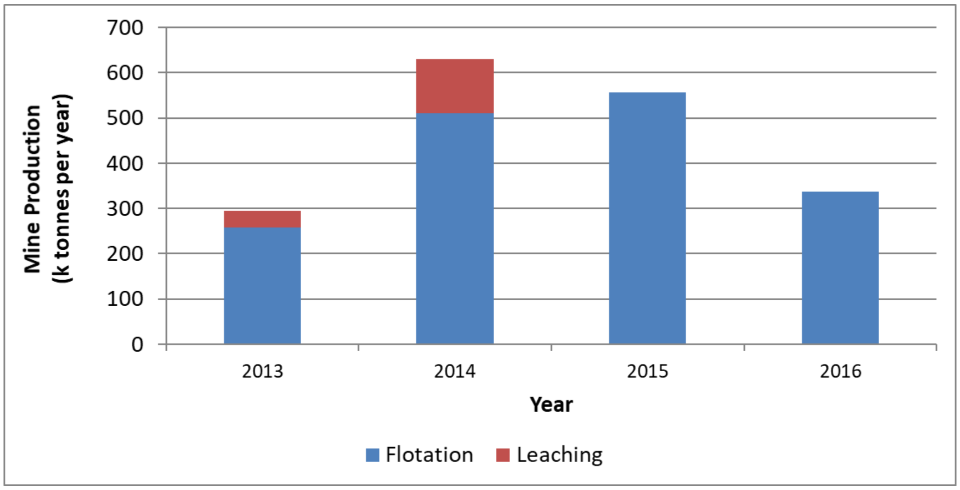
At the end of 2013, a decision was made to defer a portion of the capital investment of Phase 3: the San Juan shaft, the mine hoist, underground development, and the installation of the two autogenous mills was put on hold until economic conditions improved.

During 2014, the flotation circuits of the processing plant operated at an average rate of 1,400 tpd. In January 2014, the Phase 2 cyanidation circuit was deemed as having reached planned operating levels. However, in May 2014, due to a larger transition ore area within the San Juan mineralized deposit (which contains high lead content), the reduction in the original investment plan, and more challenging market conditions, it was determined that the most economical method of production was to process this transition ore through flotation rather than cyanidation. The flotation circuit reached an average processing rate of 1,800 tpd in December 2014. As a result of the plant reconfiguration, process optimization, and the addition of a regrinding area, silver recoveries increased during 2014, reaching 80% at the end of the year.

Challenging market conditions faced during 2014 and 2015, forced the Company to constrain development and exploration activities. Consequently, in 2016 a decision was made to reduce throughput by focusing on areas with higher grade, but narrower veins were mined. Since then, dilution control and higher metallurgical recoveries have contributed to improve the profitability of the mine.

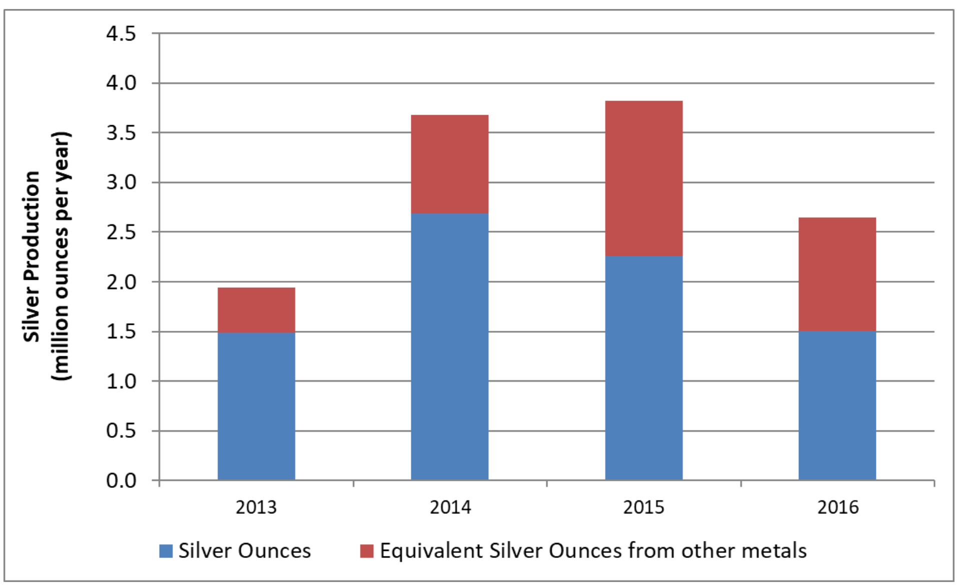
Mine production figures since 2013 are presented in Figure 6-1, and silver metal produced is shown in Figure 6-2.

Figure 6-1: Mine Production Since 2013



Note: Figure from First Majestic, 2017

Figure 6-2: Silver Production Since 2013



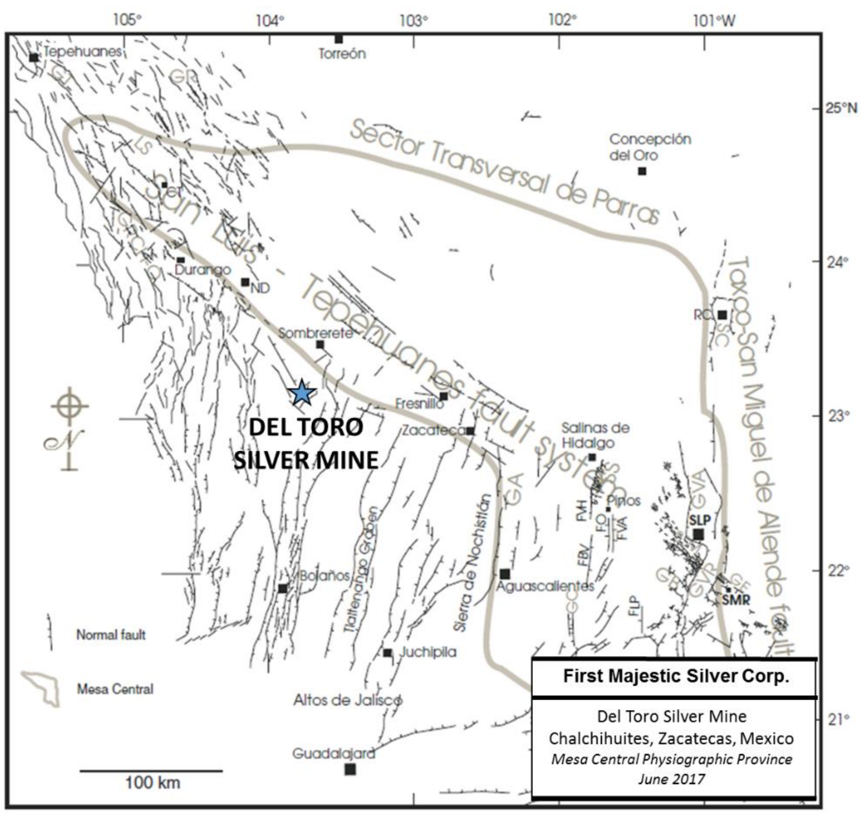
Note: Figure from First Majestic, 2017

7 GEOLOGIC SETTING AND MINERALIZATION

The Chalchihuites mining district is located within the Mesa Central (MC) physiographic province, which is an elevated plateau comprised of marine sedimentary rocks of the Mesozoic Basin of Central Mexico (MBCM) to the east and a sequence of volcano-sedimentary rocks of the Parral terrane and Guerrero super terrane to the northwest and southwest, respectively (Centeno-Garcia et al., 2008). A clear boundary between the volcano-sedimentary terranes and the calcareous rocks of the MBCM has not been defined, but Nieto-Samaniego et al. (2007) propose that the San Luis Tepehuanes Fault System could be the boundary between the volcano-sedimentary terranes and the Mesozoic Basin of Central Mexico.

Del Toro is located right at the boundary between the MC and the Sierra Madre Occidental. The district contains hydrothermal mineral deposits hosted by early Cretaceous limestone and shale that has been intruded by an Eocene-age quartz monzonite–granodiorite stock, Oligocene-age dikes, rhyolite–rhyodacite dikes and plugs and Miocene–Quaternary-age basalt–basaltic andesite dikes. The Eocene-age stocks and dikes have metamorphosed the Cretaceous rock into marble, hornfels, skarnoid and skarn. Figure 7-1 shows MC, the Del Toro area, and major mines in the region.

Figure 7-1: Mesa Central Physiographic Province.



Note: Figure from Nieto – Samaniego et al., 2007. Figure shows the location of Del Toro and Other Districts

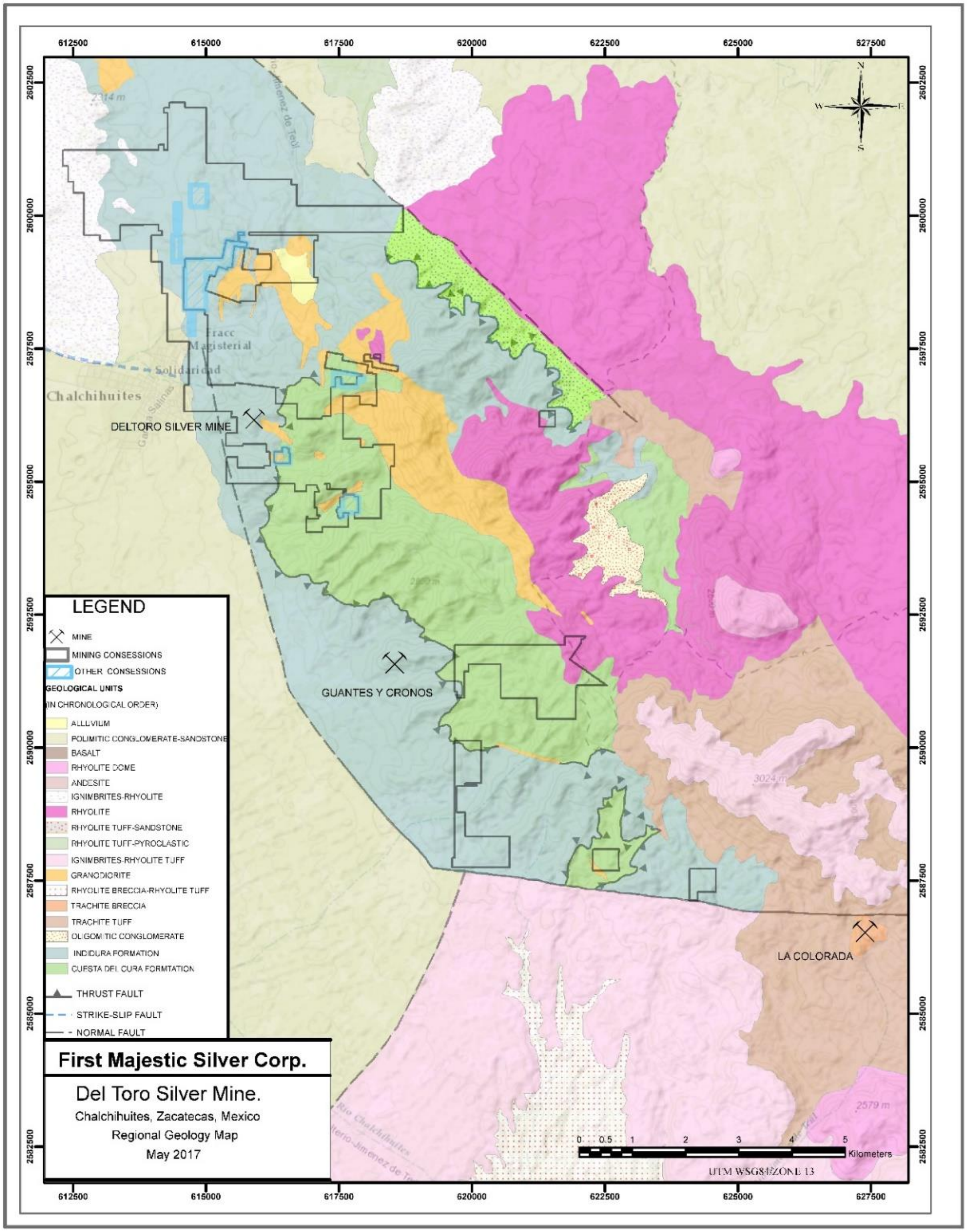
7.1 Stratigraphy

According to the Mexican Geological Service (SGM), the volcano-sedimentary sequence of the Parral terrane extends to the south into Sombrerete and Chalchihuites. Based on field observations, FMS geologists have not been able to determine the presence of intercalated volcaniclastic rocks in the mine area, and thus prefer to continue correlating the Chalchihuites carbonate formations with the Cretaceous formations described in the Sierra Madre Oriental, e.g., the La Peña, Cuesta del Cura and Indidura Formations.

The stratigraphic column in the Chalchihuites district consists of lower- to upper-Cretaceous calcareous rocks of the La Peña Formation (Aptian), Cuesta del Cura Formation (lower Albian–Cenomanian) and Indidura Formation (Cenomanian–Turonian). Overlying the Cretaceous formations is the Cenozoic Ahuichila calcareous conglomerate (Paleocene). The Mesozoic formations and the Cenozoic conglomerate are partially overlain by Eocene–Oligocene dacite–rhyodacite flows and tuffs and rhyolite tuffs, particularly to the east and southeast portions of the range. Miocene–Quaternary basalts represent the latest volcanic event and they overlie Eocene–Oligocene volcanic units and Quaternary conglomerates and gravels. The Cretaceous formations have been intruded by an Eocene-age quartz monzonite–granodiorite stock, Oligocene-age dacite-rhyodacite dikes and Miocene–Quaternary basalt–basaltic andesite dikes.

Figure 7-2 is regional geologic map of the Chalchihuites district. Figure 7-3 is a geological map of the Del Toro area, and Figure 7-4 is the stratigraphic column for the region. Del Toro consists of three operating mines, Perseverancia, San Juan and Dolores, from south to north. Mineralization in these mines occurs in chimneys (Perseverancia and San Nicolas), veins (Cuerpo 1, Cuerpo 2, Lupita, Dolores, etc.), breccia bodies (Cuerpo 3) and replacements that are hosted by the Cuesta del Cura Formation, the Indidura Formation and the quartz monzonite–granodiorite stock.

Figure 7-2: Regional Geologic Map of Chalchihuites District



Note: The map shows the location of Del Toro mining concessions. It also shows Grupo Mexico's projects (Guantes and Cronos) and the La Colorada mine owned by Pan American Silver.

Figure 7-3: Geological Map of Del Toro's Deposits at San Juan, Perseverancia and Dolores

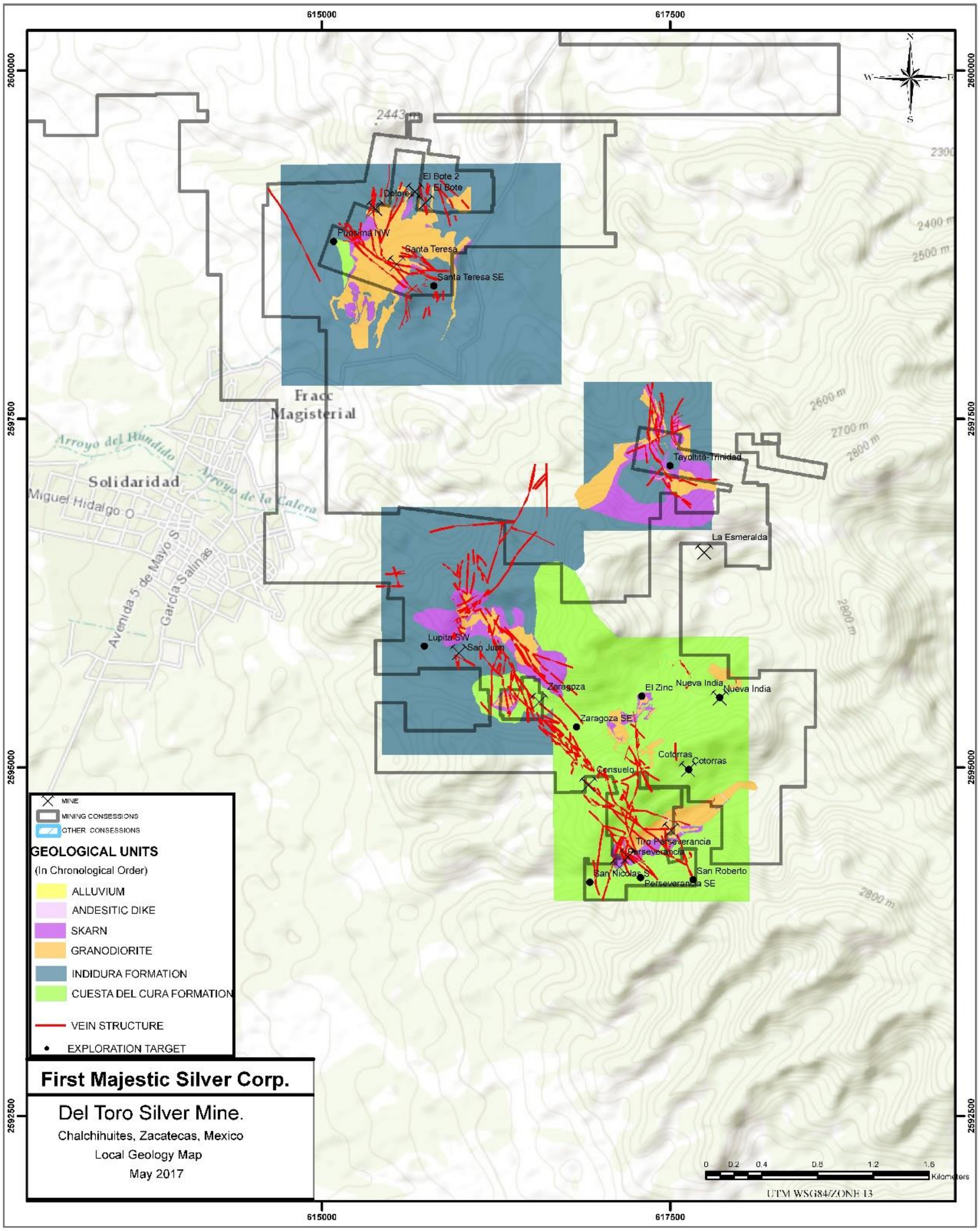
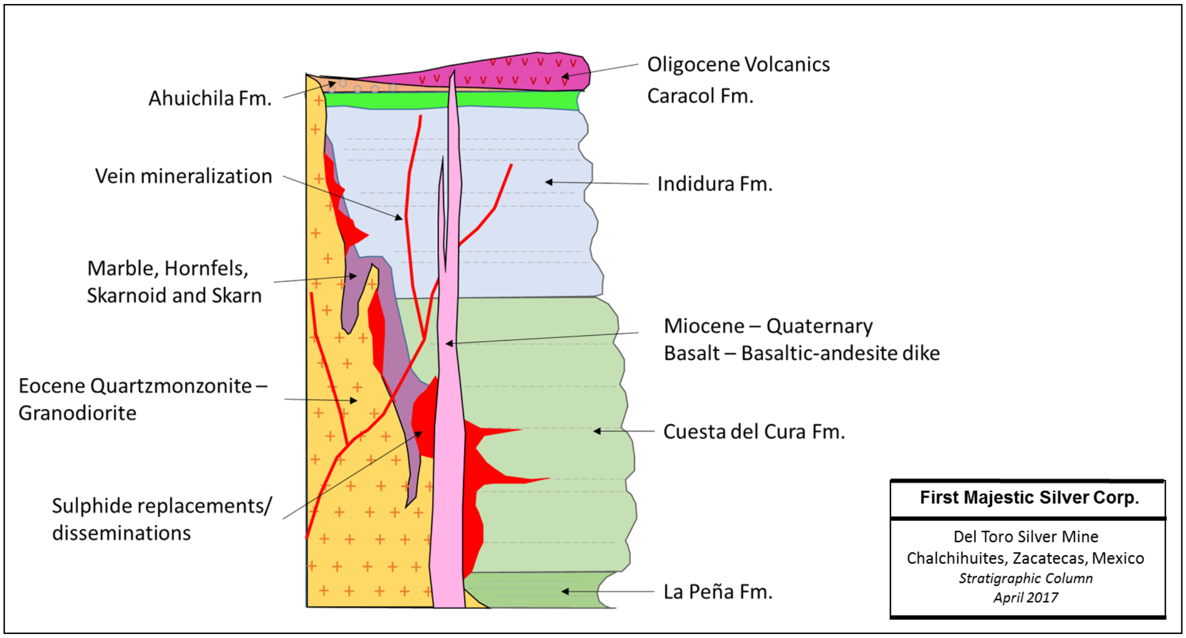


Figure 7-4: Chalchihuites Stratigraphic Column



7.1.1 Sedimentary Rocks

La Peña Formation

This formation was first described in Parras Coahuila by Imlay (1936). The formation consists of thin- to medium-thickness (10–30 cm) interbedded limestones and shales with a dark gray to black colour. It is characterized by having occasional chert nodules and syngenetic pyrite. Pyrite oxidation gives a yellow staining to the La Peña rocks when the formation is exposed to weathering. The unit has been recognized in small tectonic windows created by normal faults in the northern part of the Chalchihuites range (Velador, 1999). Locally, the formation has been metamorphosed to hornfels and skarnoid with selective calc-silicate alteration forming thin layers. The calc-silicate layers are generally white in colour due to the presence of abundant wollastonite. The thickness of the formation has not been determined in the area due to scant outcrops and strong deformation. In the Sierra de Ramirez area (near Torreon), the formation has been determined to have up to 100 m in thickness (Reyes, 1976). In the La Colorada mine located approximately 20 km southwest of Del Toro, a sequence of thin- to medium-bedded gray calcareous argillaceous mudstones and fine-grained limestones of the Aptian age has been described as the Fresnillo Formation (Moller et al., 2001). The Fresnillo Formation is correlative in age with the La Peña Formation described in the northern part of the Chalchihuites range.

Cuesta del Cura Formation

The Cuesta del Cura Formation was first described in Parras Coahuila where it overlays the Aurora Formation and is overlain by the Indidura Formation (Imlay, 1936). At its type locality, the formation consists of black to gray beds of limestone (20–120 cm thick) with boudinage bedding and abundant lenses of black chert. In the Chalchihuites area, the formation consists of 10-to-50-cm-thick layers of dark gray limestone beds bearing chemical weathering and interbedded with thin layers (10–20 cm in thickness) of black shale. The abundance of black shale layers is estimated to be about 10% (Velador, 1999). The thickness of the formation has not been determined in the area, but in the San Martin mining district in Sombrerete, a maximum thickness of 770 m has been measured (Olivares, 1991).

Indidura Formation

The Indidura Formation was first described in the Las Delicias Coahuila (Kelly, 1939). In its type locality, it consists of three members where intercalated shales and thin layers of limestones overlay the Aurora Formation. The middle member contains layers of sandstone and gypsum, indicating a shallow depositional environment proximal to the shoreline (Reyes, 1976). The Indidura Formation in the Chalchihuites district consists of silty limestone in thin layers (10–20 cm in thickness) intercalated with shales. Some outcrops in the southern part of the range have been observed to present marl and sandstone layers (Velador, 1999). The thickness of the formation has not been determined in the area, but a maximum thickness of 575 m has been measured in the San Martin mining district in Sombrerete (Olivares, 1991).

Ahuichila Formation

The Ahuichila Formation has been considered a “molasse” deposit, accumulated after the folding and thrusting of the La Sierra Madre Oriental (Zoltan de Cserna, 1956). It was first described in the Fronton de Ahuichila between the states of Durango, Coahuila and Zacatecas (Reyes, 1976). In the Chalchihuites area, it consists of sub-rounded clasts of limestone, shale and black chert ranging in size from 2 to 10 cm in diameter. The rock fragments are cemented by limy-sandy carbonate material. The formation was observed in the northwest portion of the range overlying the Cuesta del Cura Formation and in the south in road cuttings on the access road to the La Colorada mine, where it overlays the Indidura Formation (Velador, 1999).

7.1.2 Igneous Rocks

Intrusions

The main intrusions are deep-seated quartz monzonite–granodiorite stocks and dikes, and hypabyssal-dacite–rhyodacite domes and plugs. The main outcrops of the intrusions are located in El Pinillo, El Picacho Pelón, Picacho Montoso and La Borrega (Velador, 1999). The quartz monzonite–granodiorite is coarse-grained and holocrystalline, with textural variations to porphyry. It consists mainly of oligoclase–orthoclase, andesine, quartz, hornblende and biotite (Velador, 1999). The intrusion has not been dated in the area but it seems to be of Eocene age, similar to the quartz monzonite stock at the Cerro de la Gloria in San Martin. The Cerro de la Gloria stock has been dated by potassium-argon (K–Ar) dating at 46.2 +/- 1 m.y. by Damon et al. (1983). These Eocene-age intrusions are responsible for some of the porphyry-type mineralization in Mexico. At depth in the San Juan mine, the quartz monzonite shows potassic alteration, i.e., potassium feldspar replacing the groundmass and altered biotite rims. The dacite–rhyodacite rocks are fine-grained to porphyritic, and consist of plagioclase feldspar, minor alkali feldspar (sanidine–orthoclase) and quartz. These rocks have not been dated in the Chalchihuites district, but in Fresnillo and other portions of the Central Mexican Plateau, age dating suggests that they are Oligocene in age (Velador, 2010 and Tuta et al., 1988). Additionally, basalt–basaltic andesite dikes of probable Miocene to Quaternary age intrude the sedimentary formations and older intrusions. These younger dikes have also been observed to destroy or cross-cut mineralization in the Chalchihuites district and elsewhere, e.g., Fresnillo, La Parrilla and La Preciosa.

Volcanic rocks

Volcanic rocks in the Chalchihuites area consist of tuff and flow deposits of dacite–rhyodacite, rhyolite and basalt compositions. Dacite and rhyodacite tuff deposits occur to the northeast of the range overlying the Ahuichila conglomerate and the Cretaceous formations. They are characterized by an aphanitic texture with occasional plagioclase and quartz phenocrysts (Velador, 1999). The dacites and rhyodacites post-date the age of the main quartz monzonite–granodiorite intrusion and they may be correlative with other Oligocene volcanic rocks in the region. Rhyolites occur mostly south of the Chalchihuites range in La Sierra Prieta. Basalt flows occur to the northwest of the range near the Piedras Azules village where they display vesicular textures with olivine phenocrysts in a vitreous groundmass. The age of the basalts has not been determined, but it is possible that they are late Miocene to Quaternary in age.

7.1.3 Metamorphic Rocks

The predominant metamorphic rocks in the Chalchihuites district are marble, hornfels, skarnoid and skarn. Hornfels contains layers of white skarnoid-bearing wollastonite and occasionally idocrase. Genetically, skarnoid is an intermediate rock between a purely metamorphic hornfels and a purely metasomatic skarn; and skarnoid development results from metamorphism of impure lithologies with some mass transfer by small-scale fluid movement (Meinert, 1992). Skarn is observed underground in pods and lenses, particularly proximal to the quartz monzonite–granodiorite intrusion and on the surface north of the Chalchihuites range. There, it occurs on top of the Picacho Pelon, as a roof pendant on top of the intrusion. The skarn in the Picacho Pelon hill shows granoblastic texture; and proximal to the contact with the intrusion, the skarn is made up of brownish garnet (possibly andradite) and calcic clinopyroxene (possibly diopside). Distal with respect to the intrusion contact, it starts to transition into idocrase-bearing marble (Velador, 1999). Skarn has also been identified underground in the San Juan mine and in core samples. Skarn seen in core is predominantly a light green pyroxene skarn bearing diopside and minor garnet, wollastonite and idocrase.

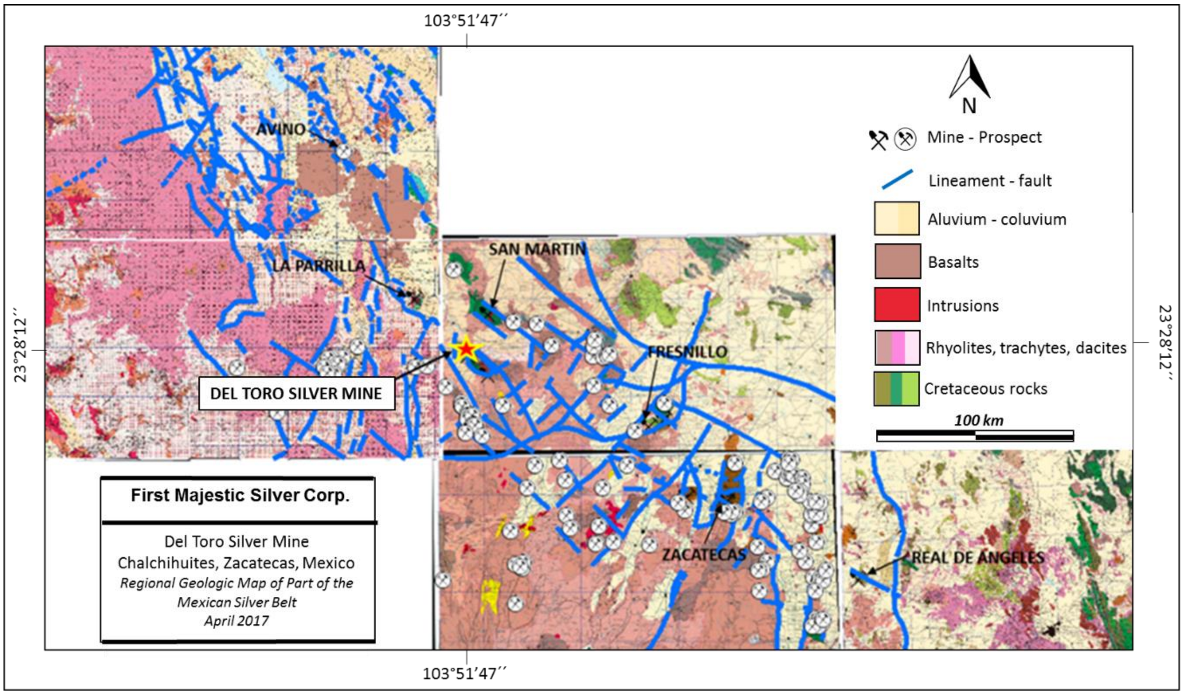
7.2 Structural Geology

7.2.1 Regional Structure

Three deformation events have been recognized in the region: the Laramide northeast–southwest to east–west compression, a north–south to north-northeast–south-southwest extension and an east–west extension. The Laramide thin-skinned deformation created low-angle northwest-trending folds and thrust faults and operated in MC between ~90 Ma and ~37 Ma (Campa and Coney, 1982, Starling, 2006, and Nieto-Samaniego et al., 2007). North–south extension operated in the region during the late Eocene–Oligocene. The north–south extension was accompanied by sinistral trans-tensional reactivation of the low-angle northwest-trending thrust-faults, which produced east–west to northwest–southeast normal faults and tension fractures between the sets of reactivated northwest thrust-faults (Starling, 2006 and Nieto-Samaniego et al., 2007). The east–west extension event started in the Miocene and produced north-northeast- and northwest-oriented normal faulting and tilting of the Eocene and Oligocene volcanic units. The north-northeast and northwest normal faults are interpreted to be post-mineralization and are more representative of the Basin and Range type of extension (Starling, 2006 and Nieto-Samaniego et al., 2007).

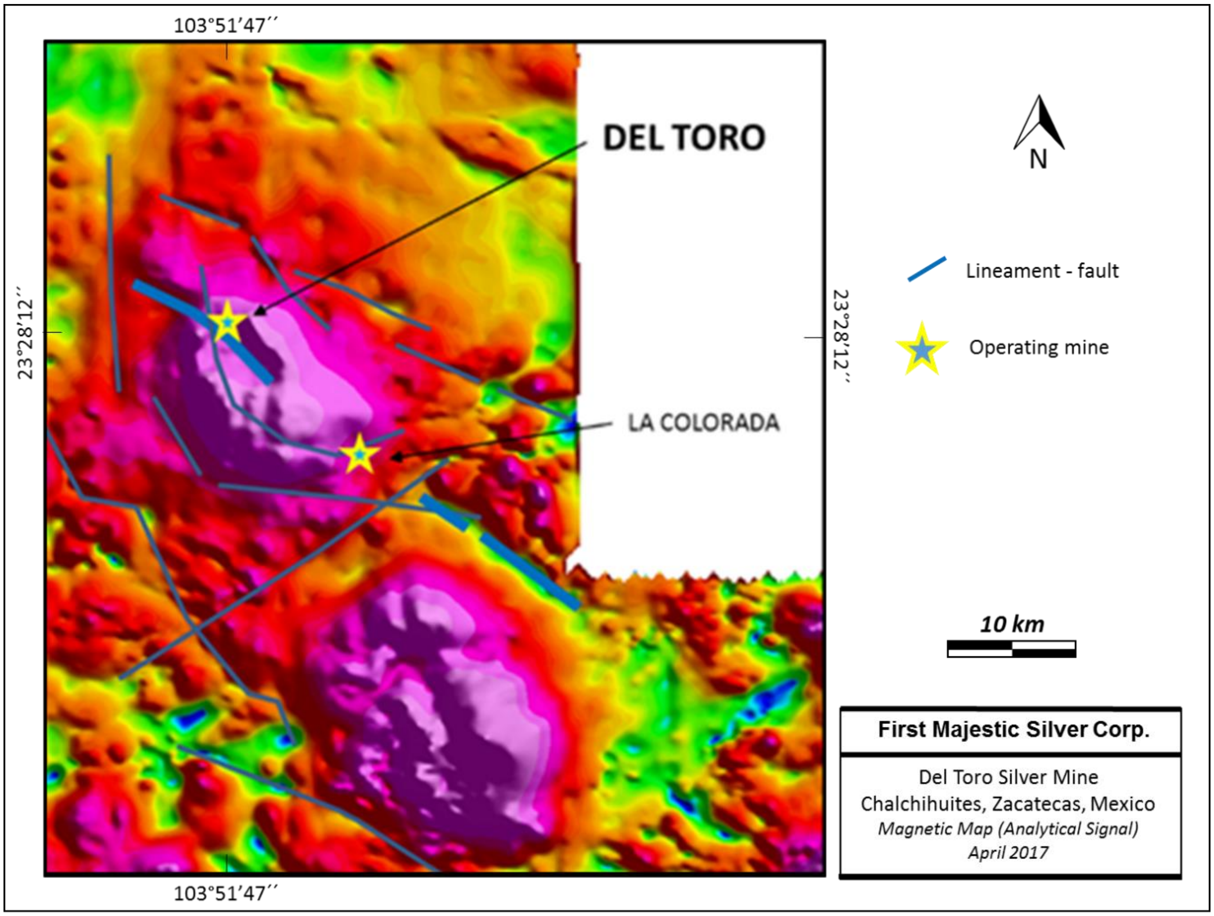
One important feature in MC is the San Luis–Tepehuanes Fault System (SLTFS) which is a northwest–southeast lineament observed on satellite images and digital elevation models that extends from San Luis de la Paz in Guanajuato to Tepehuanes Durango (Nieto-Samaniego et al., 2007). The SLTFS is proposed to be a major structure controlling the localization of mineral deposits in the Mexican Silver Belt (MSB) where mineral deposits such as Real de Angeles, Zacatecas, San Martin–Sombrerete, Chalchihuites, La Colorada, Avino and Pitarrilla are located. Figure 7-5 is a regional map showing the location of Del Toro, other mines and the regional northwest, northeast and east–west structural lineaments interpreted along the MSB and SLTFS between Zacatecas and Durango (Velador, 2012).

Figure 7-5: Structural Lineaments in the San Luis–Tepehuanes Fault System



The San Juan mine is situated within a 15-km-long northwest-trending anticline, at the western contact of a 7-km-long, 1-km-wide quartz monzonite–granodiorite intrusion and the Cuesta del Cura and Indidura Formations. The analytical signal airborne magnetic map processed from the SGM regional data, provided in Figure 7-6, shows a strong magnetic anomaly caused by the presence of intrusion emplaced along an anticline structure. The analytical signal map also shows a magnetic lineament trending northwest and cutting through the magnetic anomaly caused by the stocks. It is interpreted that the northwest-trending lineament may represent a fault cutting through the intrusion; and Del Toro is located right on this lineament. Therefore, it is possible that the presence of a major northwest-trending fault may be controlling the localization of mineralization in the district.

Figure 7-6: Regional Airborne Magnetic Map (Analytical Signal) for the Chalchihuites Region



Note: Hot colours represent magnetic anomalies.

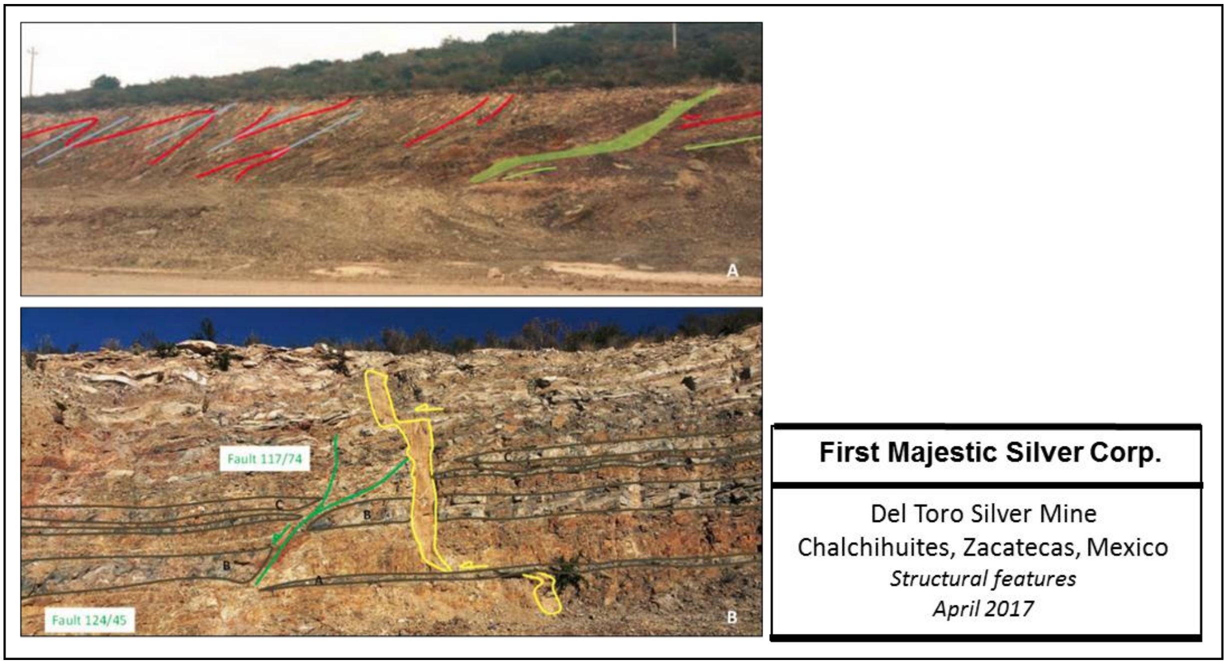
7.2.2 Local Structures

Most of the interpretations of the local structural geology for the San Juan mine have been obtained from an internal report prepared for FMS by SRK Consulting Canada Inc. (SRK; March 2017), unless otherwise stated. Interpretations of the structural geology for other deposits are based on FMS´s mapping and interpretations.

The work carried out by SRK consisted of underground mapping, core logging and three-dimensional (3D) modelling of the main mineralized breccia body, Cuerpo 3, and the fault veins, Cuerpo 1 and Cuerpo 2, in the San Juan mine. Structural data collected included fault and joint surface orientations, geometries, surface properties, fault kinematics, cross-cutting relationships, fault persistence and damage zone thicknesses. The common structures in the mine are north–north-northeast-trending dip-slip vein-faults, northwest- and northeast-trending strike-slip faults and steeply dipping northeast–east-southeast-trending dip-slip faults. The fault systems are interpreted to result from a combination of compression and magmatic intrusions during the Paleogene.

Structural mapping on some road cuts near the San Juan mine show the presence of tight isoclinal folds dipping 28° to 34° and striking east-northeast, which suggest compression in a west-northwest direction (Figure 7-7, A). Additionally, east-southeast- to southeast-trending, moderately to steeply dipping normal faults were observed displacing the stratigraphy; and dikes were observed to cross-cut normal faults and were subsequently offset by later-stage faults (Figure 7-7, B).

Figure 7-7: Structural Features in the Del Toro Property Near the San Juan Mine



Note: A) picture showing tight isoclinal folds and bedding (red), axial surfaces (blue), faults (green) and an east-northeast-trending strike-slip fault (thicker green line); B) picture showing normal fault (green) with offsets along bedding horizons (A, B and C, labelled black); note the segmented felsic dyke (yellow) which is not offset by the normal fault. From SRK internal report 2017.

Surface and underground mapping of veins at Del Toro identified two significant structural corridors; a northwest-southeast trending corridor and a northeast-southwest trending corridor.

Other faults measured during the SRK field work were strike-slip faults trending northwest and northeast with dips greater than 75°. Kinematic indicators were difficult to discern, but both trends usually displayed a sinistral sense of displacement. The sinistral sense of displacement defined in these faults is consistent with the regional sense of lateral displacement proposed for the SLTFS by Nieto-Samaniego (2007). Northeast–east-southeast faults typically cross-cut mineralization and the stock, and they probably represent one of the latest faulting events.

Revision of kinematics and timing relationships on the field and geological maps generated by FMS and SRK has resulted in the following interpreted deformation events at Del Toro:

- D1: Surface and mine mapping show a west-northwest–east-southeast-directed compression formed tight to isoclinal folds, thrusts and most likely northwest–southeast-trending strike-slip faults.
- D2: This deformation event resulted from north-northeast–south-southwest to northeast–southwest compression that favoured the formation of northeast–southwest-trending strike-slip faults with a sinistral sense of movement and the regional Chalchihuites anticline that has an axial surface trending at 330°. Surface mapping by FMS suggests a fault relay / bend zone is taking place through the centre of the deposit and trending towards the breccia body in Cuerpo 3.
- Late-D2: Formation of the Cuerpo 3 breccia body occurs where Cuerpo 1 and Cuerpo 2 intersect and along the northeast–southwest vein and fault corridor. Neither the vein faults associated with Cuerpo 1 and Cuerpo 2 trends nor the northeast–southwest vein and fault orientations are observed within the Cuerpo 3 breccia. This suggests the breccia body is late or post Cuerpo 1, Cuerpo 2 and northeast–southwest vein and fault emplacement. Preliminary observations of the northeast–east-southeast faults cross-cutting the vein-faults and breccia body suggest the breccia body is younger than D3 described below.
- D3: The northeast–east-southeast-trending faults which offset mineralisation, also cross-cut the intrusive and have higher moisture content than the earlier generation faults. Formation of these structures are possibly similar to those observed by Patterson and Rowins (2001) at the Sacraficio mine, whereby late-stage east-northeast-striking, steeply-dipping structures are proposed to be mode 1 extensional fractures due to the continued exsolution of magmatic fluids raising local pore fluid pressures.

7.2.3 Vein-fault Timing

Vein-faults were observed to have opening directions towards the west and northwest, and displacements varying between dip-slip or with oblique dextral/sinistral displacement. Continuation of the vein-faults was not observed beyond intersection with significant northwest–southeast-trending strike-slip faults, rather they were observed to change orientation and/or terminate on these faults.

The fault-veins are interpreted as northeast–southwest-trending sinistral strike-slip faults from D2 north–south and north-northeast–south-southwest-directed compression that have undergone possibly late, or syntectonic, reversal of sigma 2 and 3, to create mineralized extensional veins. The overall plunge of the Cuerpo 1 vein-fault system and breccia bodies are sub-vertical, also suggesting a sigma 2 orientation in the vertical plane and contemporaneous strike-slip movement. Northwest–southeast-trending strike-slip faults, however, show a cross-cutting or truncation of the vein-faults which complicates this theory. Possibly, these northwest–southeast-trending faults were reactivated at this time.

7.3 Mineralization

Mineral deposits at Del Toro occur in veins, chimneys, breccias and mantos. It is interpreted that some of the mineralization is skarn-related mesothermal in style, similar to that of San Martin Sombrerete. Some epithermal features, such as quartz–calcite veins containing fluorite, occur at Dolores and the Navidad claims north of Dolores. Veins at Del Toro can be of two types, open space filling or fault vein.

The open space filling type can be massive sulphide veins containing galena, sphalerite and pyrite, quartz–carbonate veins containing pyrite, sphalerite and galena, and massive carbonate veins consisting of calcite, siderite and manganiferous calcite.

The second type of vein, fault-vein, consists of breccia or gouge with disseminated sulphides and oxides. Open space filling veins can transition into fault veins, and vice versa, along a structure. Most veins were likely open or partially open faults that were flooded with hydrothermal fluids carrying metals, and some of these were reactivated by later faulting events. Good examples of massive open space filling veins that transition into fault veins are Lupita, Santa Teresa and San Nicolas. Cuerpo 1 and Cuerpo 2 in the San Juan mine are good examples of vein-faults. Veins typically range in width from a few centimetres to up to five metres.

Breccia pipes and chimneys also occur in the district. Sulphide-rich (galena and sphalerite) chimneys were mined in the Perseverancia mine (Perseverancia and San Nicolas chimneys) where they occur at the intersection of northwest-trending structures and north-trending structures. Cuerpo 3 is a sub-vertical pipe-like structure located on the eastern footwall of the Cuerpo 1 vein-fault system. It extends from 2,200 masl to at least 1,955 masl, varies in width from 40 to 80 m and forms where the Cuerpo 1 and Cuerpo 2 bodies intersect with one another. It contains sulphide and oxide mineralization in cross-cutting structures and disseminations.

Manto-type structures are more common in the Cotorras and Magistral areas, although some manto development has also been observed in the San Juan mine associated with the Lupita vein. The mantos may vary in thickness from 20 cm at Las Cotorras to 1.5 m at Magistral.

7.3.1 Mineralogy

The mineralogy and paragenesis of the Del Toro deposits is complex, likely due to multiple hydrothermal pulses (mesothermal and epithermal) and deep-penetrating supergene alteration. The mineral deposits contain primary sulphides such as galena, sphalerite, pyrite, pyrrhotite, stibnite, arsenopyrite, chalcopyrite, covellite, acanthite and silver sulphosalts (tetrahedrite–freibergite solid solution).

Due to deep-penetrating supergene oxidation, most of the primary sulphides have been oxidized to cerussite, anglesite, hemimorphite, hydrozincite, jarosite, goethite, hematite, cervantite, malachite, chrysocolla, chalcanthite and native silver. Additionally, a green-coloured zinc-rich smectite has been formed below Cuerpo 3 in fractures, probably due to sorption of zinc ions being transported by deep-penetrating meteoric water. The non-metallic gangue minerals present in the deposits, are calcite, siderite, manganiferous calcite, quartz and fluorite.

The main clay minerals detected with the TerraSpec Analytical Spectral Device (ASD) in the deposits and alteration are smectite, illite–smectite, nontronite and kaolinite, but most of these minerals are interpreted to be late with respect to the main mineralizing pulses.

7.4 Mine Geology

The geology of the mineral deposits at Del Toro is discussed separately by mine. The deposits are described from south to north starting with the chimneys and vein deposits of Perseverancia, then the breccia and vein deposits of San Juan and finally the vein deposits of Dolores.

7.4.1 Perseverancia Mine

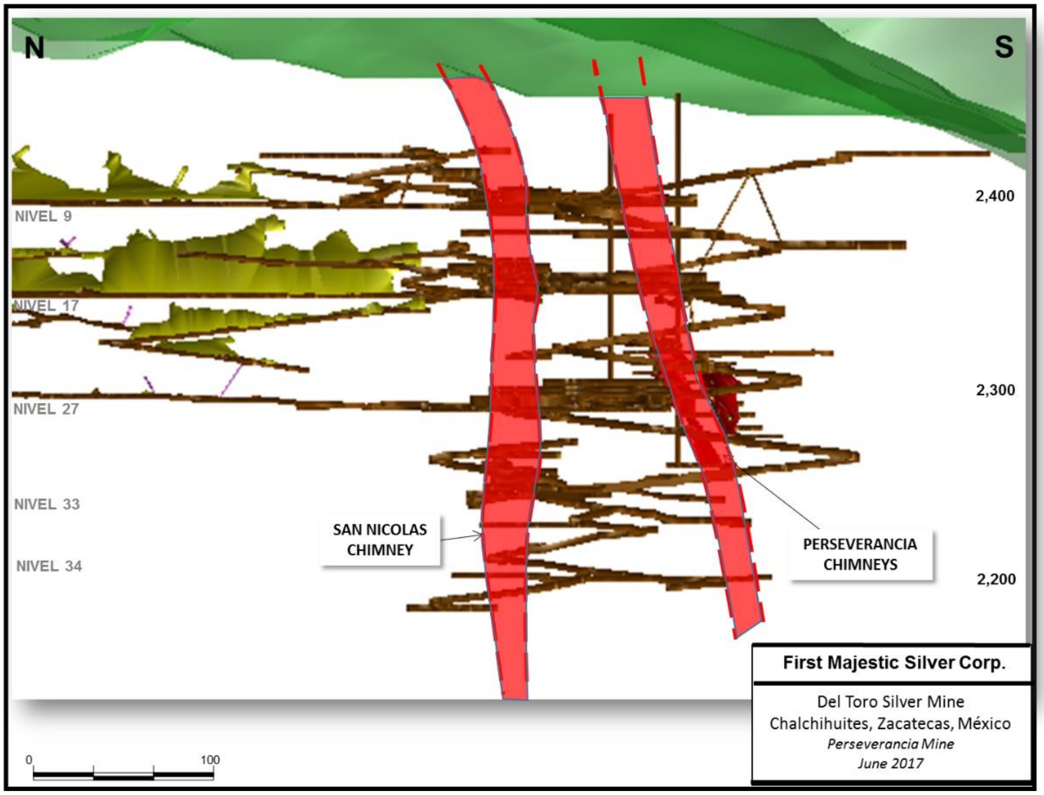
The Perseverancia mine contains chimneys and veins. The chimneys are hosted by limestone and shale, hornfels and skarnoid. They are pipe-like bodies with ellipsoidal shape and occur along the intersection of northeast-trending structures with a northwest-trending structure. Mineralogically, they consist of massive coarse-grained galena and sphalerite with traces of acanthite and cross-cut by stringers of calcite.

Figure 7-8 is a picture of the ore from Perseverancia showing intergrow galena and sphalerite.

Figure 7-8: Ore from Perseverancia Showing Intergrown Galena and Sphalerite

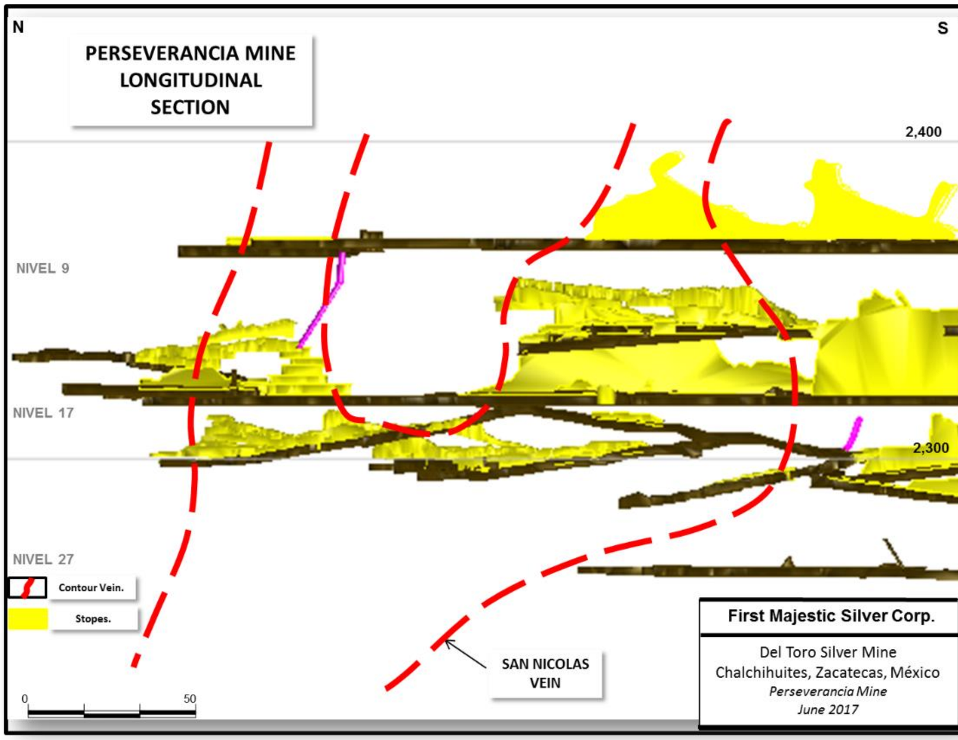
Close to surface, the sulphides are oxidized to cerussite, anglesite, smithsonite and hematite. The bodies vary in size between 15 and 30 m along the northeast–southwest direction and between 6 and 10 m along the northwest–southeast direction. The Perseverancia chimney extends from the surface at 2,450 masl to 2,150 masl, whereas the San Nicolas chimney extends from 2,430 masl to 2100 masl. San Nicolas is already depleted and the Perseverancia chimney still remains open below 2,150 masl, although it narrows to about 0.4 m. Figure 7-9 is a longitudinal section showing the chimneys.

Figure 7-9: Longitudinal Section Showing the Perseverancia and San Nicolas Chimneys



The vein deposits are the San Nicolás and Escondida veins, which strike north–south and dip to the west at angles varying from 75° to 85°. The veins are hosted by the limestone and shale of the Indidura Formation, hornfels and skarnoid. Mineralogically, they consist of intergrown pyrite, galena and sphalerite, partially cemented by late-stage calcite or cross-cut by late calcite veining. Silver-bearing minerals were not observed, but it is suspected that silver may be present in a solid solution with galena and or as small inclusions of acanthite and complex silver sulphosalts. The upper parts of the deposit, particularly at the old San Nicolas mine located north of Perseverancia, are oxidized, bearing hematite, cerussite, and minor smithsonite. The San Nicolas vein has an approximate length of 750 m, vertical extension of 200 m and a width that varies from 0.5 to 2.7 m (1.3 m avg.). The Escondida vein runs for approximately 400 m, has a vertical extension of about 350 m and width that varies between 0.6 and 3.1 m (1.8 m avg.). The San Nicolas vein seems to open to the north and the Escondida vein remains open south of the San Nicolas chimney. Figure 7-10 is a longitudinal section of the San Nicolas vein.

Figure 7-10: Longitudinal Section of the San Nicholas Vein



7.4.2 San Juan Mine

The San Juan mine contains the main San Juan bodies, Cuerpo 1, Cuerpo 2, Cuerpo 3 and Cuerpo de Zinc. Additionally, the mine contains the more recently discovered Lupita vein and its splays, Lupita del alto, San Jose and Fanny. The San Juan deposits consist of two fault-vein deposits (Cuerpo 1 and Cuerpo 2), one breccia-pipe deposit (Cuerpo 3) and a disseminated-replacement deposit (Cuerpo de Zinc).

Cuerpo 1 is an oxidized stockwork containing silver, lead and zinc mineralization. Mineralogically, it consists primarily of galena, sphalerite, pyrite and native silver. Sulphides are completely or partially altered to anglesite, cerussite, hemimorphite, hydrozincite, hematite, goethite and minor jarosite. The major gangue-non-metallic minerals are calcite, siderite and quartz. The stockwork is mainly hosted by hornfels, skarnoid, skarn and the quartz monzonite stock. The deposit runs for about 150 m, striking N45°E and dipping to the northwest at 75°. The vertical extent is approximately 230 m, and it has an average width of 2.2 m.

Cuerpo 2 is an oxidized fault vein containing silver, lead and zinc mineralization. Mineralogically, the vein contains galena, sphalerite, pyrite, acanthite, native silver, calcite, siderite and some quartz. Particularly in the upper parts, the vein has been extensively oxidized and the sulphides have been altered to cerussite, anglesite, hemimorphite, hydrozincite, hematite, goethite and jarosite. The main gangue-non-metallic minerals are calcite, siderite and quartz. The vein is primarily hosted by skarnoid, skarn and the quartz monzonite stock. The vein runs for about 320 m in the north-northwest direction and dips between 45° and 55° to the west. Its vertical extent is approximately 330 m, and it has an average width of 2.2 m.

Cuerpo 3 is a pipe-like breccia body containing silver, lead and zinc mineralization. The mineralogy consists of galena, sphalerite, pyrite, pyrrhotite, arsenopyrite, stibnite, chalcopyrite, acanthite, tetrahedrite–freibergite and native silver. Sulphides are partially altered to anglesite, cerussite, hemimorphite, hydrozincite, hematite, goethite, jarosite and cervantite. The main gangue-non-metallic minerals are calcite, siderite and quartz. Cuerpo 3 is hosted by hornfels, skarnoid, skarn (garnet skarn and pyroxene skarn), and quartz monzonite. Sulphide mineralization occurs as cement in breccias, as sulphide clasts, disseminated in host rock and quartz veining, and as replacements along pseudo-bedding planes and the groundmass of the intrusion. Figure 7-11 shows pictures of the skarn, skarnoid and hornfels hosting the deposit. The mineralogy of the skarn and skarnoid consists of wollastonite, diopside, andradite, grossularite, idocrase and occasional epidote. Epidote can also occur in the quartz monzonite. Argillic alteration affects the intrusion and the skarn. In the intrusion, it has mainly developed as smectite, illite and some kaolinite, whereas in the skarn it forms smectite-illite and nontronite. The breccia body has a vertical extent of approximately 250 m and varies in width from 40 to 80 m. Figure 7-12 is a 3D view of the breccia body (Cuerpo 3). The body forms at the intersection of Cuerpo 1 and Cuerpo 2 at an approximate elevation of 2,200 masl; and below 1,955 masl., it transitions into the Cuerpo de Zinc.

The Cuerpo de Zinc consists of disseminated sphalerite and minor galena that replaces the groundmass of the argillically altered quartz monzonite. The Cuerpo de Zinc seems to be open at depth, but deeper drilling is required to determine its vertical extent.

Figure 7-11: Hornfels, Skarnoid and Skarn Associated with the Mineral Deposits in the San Juan Mine

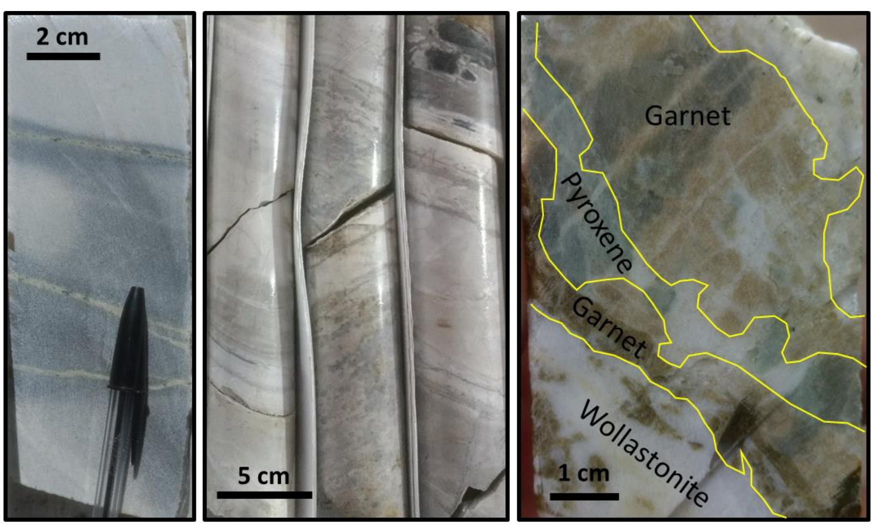
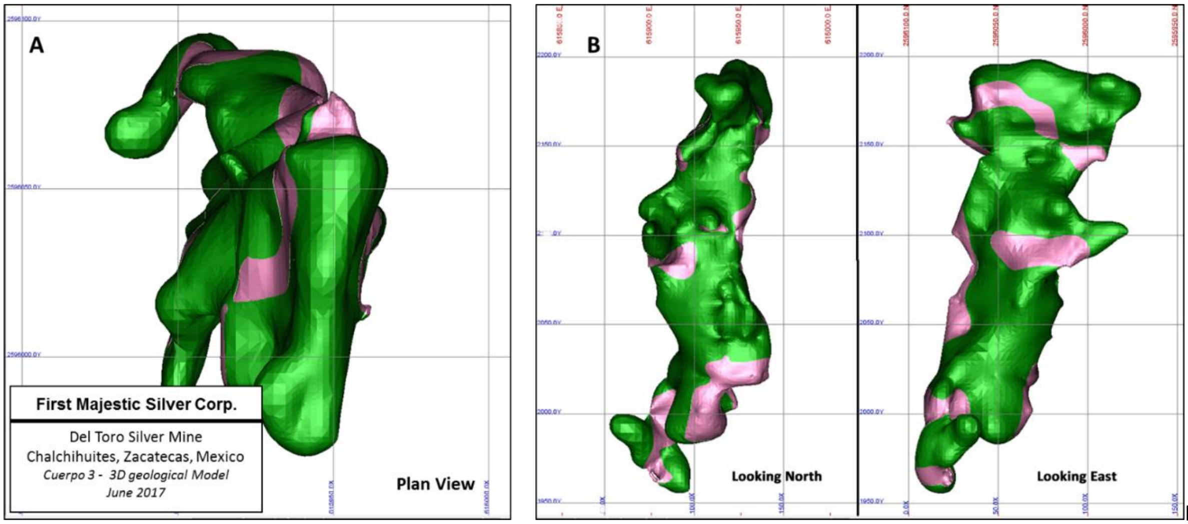


Figure 7-12: Three-Dimensional View of Cuerpo 3 in the San Juan Mine



Note:

Note: A) Plan view showing skarn breccia (green) and granodiorite breccia (pink). Full projection of all levels, north is up. Grid is in metres; B) Side-by-side vertical sections showing skarn breccia (green) and granodiorite breccia (pink). Full projection looking north and east. Grid is in metres.

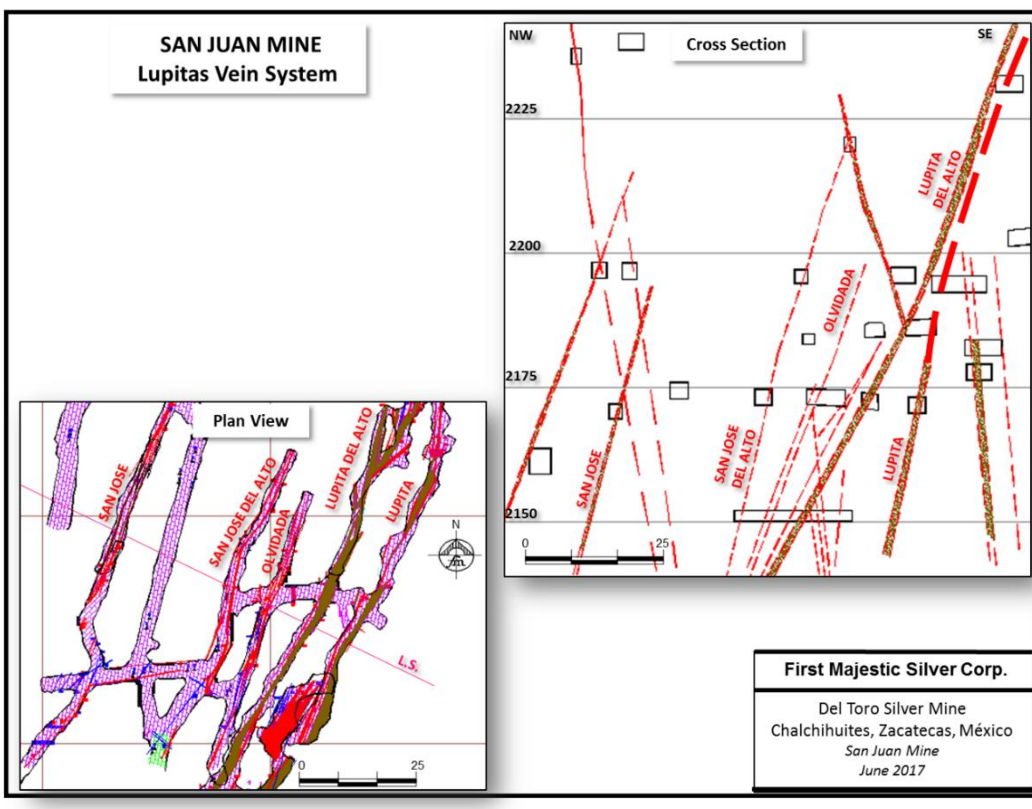
The Lupita vein system consists of the main Lupita vein, the Lupita hanging wall vein, the San Jose vein and the San Jose hanging wall vein. The veins have similar mineralogy, which consists mainly of galena, sphalerite, pyrite, pyrrhotite, acanthite and silver sulphosalts (tetrahedrite–freibergite solid solution). Secondary oxidation has been more intense, i.e., deeply penetrated, in the Lupita and Lupita hanging wall veins, whereas it has been less intense in the San Jose veins. Oxidation of sulphides has developed secondary minerals such as cerussite, anglesite, hydrozincite, hemimorphite, hematite, goethite and some jarosite. Figure 7-13 is picture of galena being altered to secondary anglesite and minor cerussite.

Figure 7-13: Sample from Lupita Showing Galena Being Replaced by Anglesite and Minor Cerussite

The veins are hosted by limestone and shales of the Indidura Formation, hornfels, skarnoid and quartz monzonite. Additionally, an andesite-to-basalt-andesite post-mineralization dike is associated with the Lupita vein. The dike cuts the vein and switches back and forth from the hanging wall to the footwall of the vein.

The Lupita and Lupita hanging wall veins have an average strike and dip of N58°W and 60° - 75° to the southwest. Lupita has a strike length and vertical extent of 590 m and 470 m, respectively, whereas the Lupita hanging wall vein has a strike length and vertical extent of 590 m and 125 m, respectively. The San Jose and San Jose hanging wall veins have an average strike of N20°E and a dip of 72° to the southeast and 77° to the northwest, respectively. The San Jose vein has strike length and vertical extent of 230 m and 110 m respectively, whereas the San Jose hanging wall vein has a strike length and vertical extent of 190 m and 260 m, respectively. The average width for the Lupita and Lupita hanging wall veins are 1.6 m and 1.7 m, respectively. Average widths for the San Jose and San Jose hanging wall veins are 1.1 and 1.3 m, respectively. The Lupita system of veins terminates in the proximity of the west-northwest-trending fault and is open to the north; however, the northern extension trends into property owned by a third party. Figure 7-14 is a plan view and cross section of the Lupita vein system.

Figure 7-14: Plan View and Cross-Section of the Lupita Vein System in the San Juan Mine



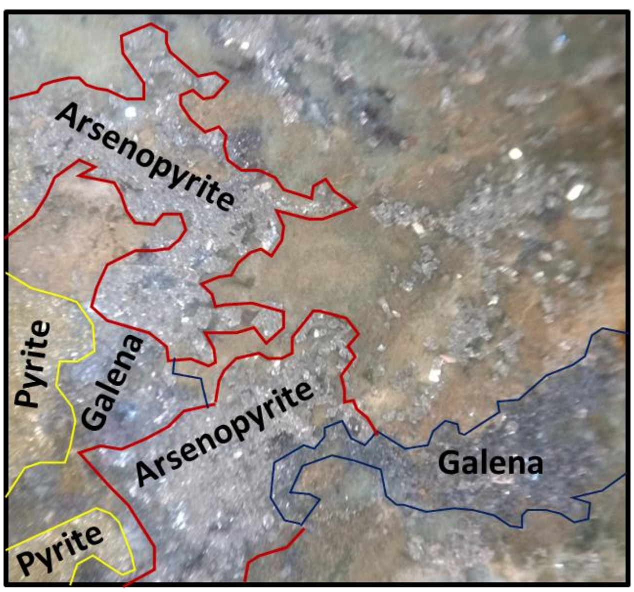
7.4.3 Dolores Mine

The mineral deposits of the Dolores mine include the Dolores, Santa Teresa and Purisima veins. Figure 7-15 is a plan view and cross section of the Dolores mine showing the veins.

The Dolores vein contains abundant galena, sphalerite, pyrite and stibnite in a gangue of quartz, fluorite and calcite. The fluorite and stibnite appear to be late-stage phases. The vein is hosted mainly by a quartz monzonite–granodiorite stock and has an average strike and dip of N15°E and 75° to the northwest. Its strike length, vertical extent and average width are 400 m, 300 m and 1.5 m, respectively. The alteration associated with the vein and host intrusion is predominantly argillic-bearing montmorillonite and illite. The Dolores vein pinches to the north and south as it approaches the Santa Teresa vein. The Dolores vein has not been detected with exploration at the hanging wall of the Santa Teresa vein.

The Santa Teresa and Purisima veins were discovered in 2015. The Purisima vein occurs in the hanging wall of the Santa Teresa vein, and the veins have similar mineralogy, which mostly consists of sphalerite, galena, pyrite, acanthite, undifferentiated silver sulphosalts, arsenopyrite and stibnite. Arsenopyrite is concentrated only in scant patches whereas stibnite is a late-stage phase filling some vugs. Non-metallic gangue minerals include mainly quartz and calcite. Figure 7-15 shows arsenopyrite developed next to pyrite and galena.

Figure 7-15: Picture Showing Arsenopyrite Next to Pyrite and Galena

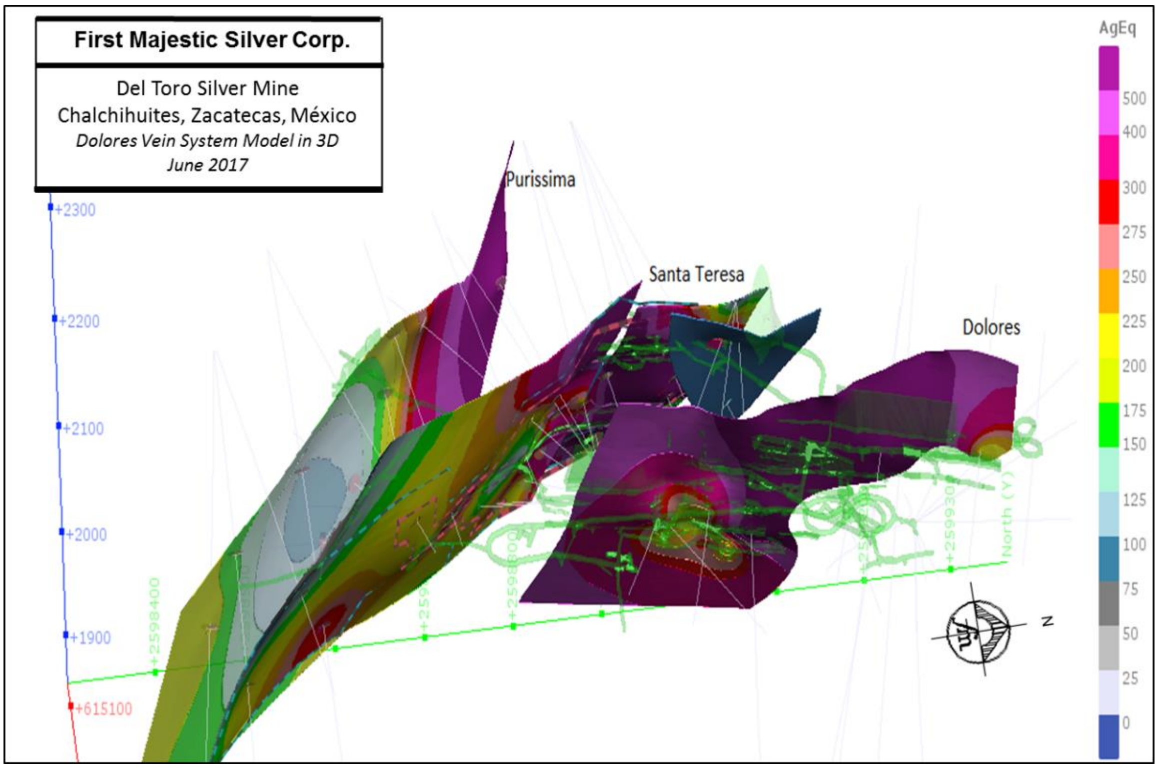


The veins are hosted by silicified limestones and shales of the Indidura Formation, hornfels, skarnoid and quartz monzonite intrusion. The quartz monzonite occasionally shows some endoskarn development, and weak retrograde alteration consisting mainly of epidote and calcite was observed overlapping the skarnoid–skarn alteration in both Indidura Formation and quartz monzonite protoliths. The veins bear

N50°W to N60°W and dip 60° to 70° to the southwest. They have an approximate strike length of 350 m, a vertical extent of 300 to 320 m and an average width of 1.6 m.

One particular feature of the Santa Teresa vein is the changing in direction to the west as it goes through the intrusion–Indidura Formation interface. A more detailed structural interpretation is needed, but it is possible that the vein turns to the north due to a change in rheology or, alternatively, that the vein branches out in a horsetail fashion. Geological potential appears to be open to the north–northwest and southeast, but the structure trends into ground that is owned by a third party.

Figure 7-16: Dolores Vein System in 3D Showing the Purisima, Santa Teresa and Dolores Veins

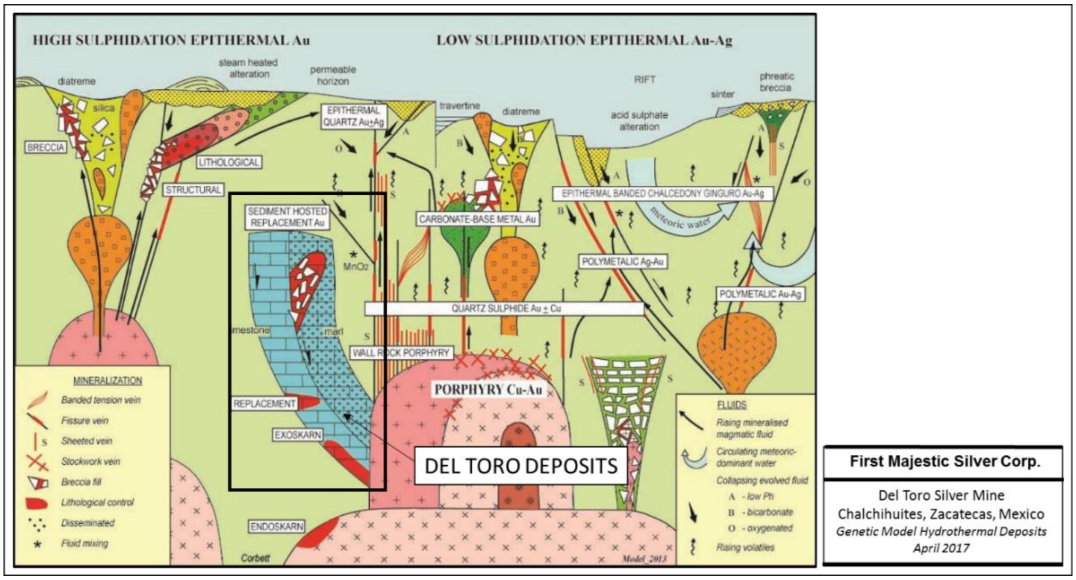


8 DEPOSIT TYPES

Mineral deposits at Del Toro occur in veins, chimneys, breccias and mantos. The deposits are associated with a quartz monzonite–granodiorite intrusion and are hosted by Cretaceous limestone and shale that has been altered to marble, hornfels, skarnoid and skarn.

Because of their spatial relation with intrusions and metamorphic/motasomatic rocks, the deposits are proposed to be of the intrusion-related hydrothermal type. Potassic alteration observed at depth in the San Juan mine suggests high-temperature alteration at depth. Although fluid inclusion–microthermometry studies have not been carried out for the Del Toro deposits, the association intrusions and skarn suggests they could be of the mesothermal to epithermal type. The occurrence of distal quartz–calcite veins containing fluorite in the Dolores mine is suggestive of an epithermal environment. Figure 8-1 is a general genetic model proposed by Corbett (2013) showing the various styles of hydrothermal deposits, and the black square includes the proposed environment for Del Toro deposits. The proposed setting for Del Toro is similar to that of other nearby mining districts such as San Martin and La Colorada.

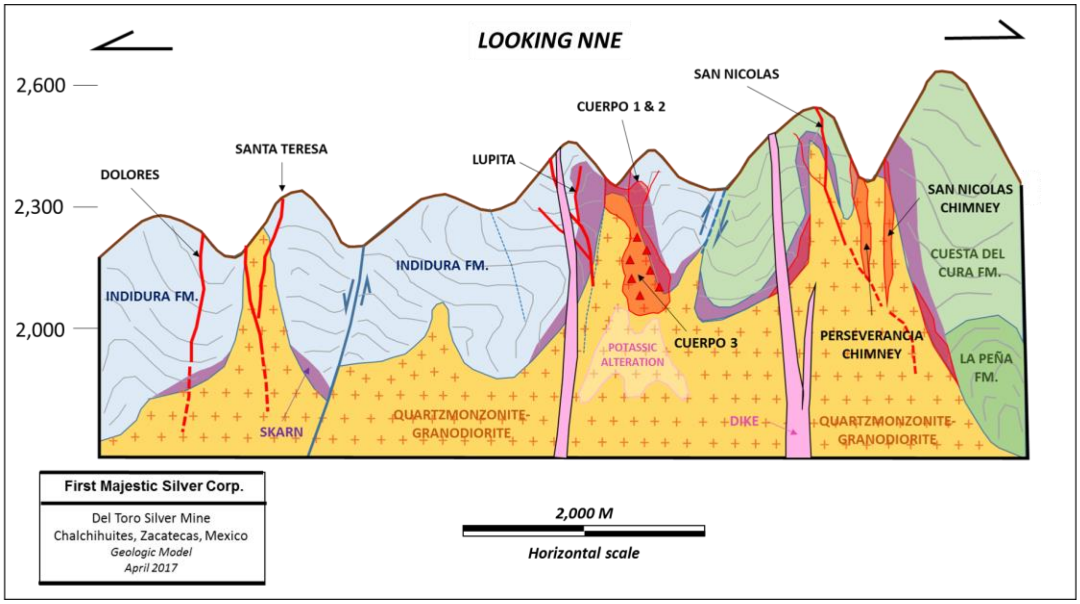
Figure 8-1: Schematic Model Proposed by Corbett (2013) for a Variety of Hydrothermal Deposits



Note: The black square shows the most likely setting for the Del Toro deposits.

The geological model proposed by FMS for Del Toro is a combination between mesothermal deposits (chimneys, breccias and replacements) and mesothermal - epithermal veins. Figure 8-2 is schematic model oriented northwest-southeast and showing the different deposits that have been identified and are being explored at Del Toro. Mineralization to the south at San Nicolas and San Juan seems to be more mesothermal whereas the mineralization to the north in Dolores seems to be epithermal. No attempt was made to fit Del Toro deposits to the settings of the well-studied porphyries or epithermal deposits described by Sillitoe or Hedenquist elsewhere, since the geologic features observed suggest that Del Toro sits in between these end-member environments.

Figure 8-2: Geologic Model Proposed for Del Toro Deposits



The QP is of the opinion that using this hybrid model is appropriate for exploration vectoring. Consideration should be given when designing exploration programs to ensure that, in addition to the hybrid model, potential mineralization controls for mesothermal and epithermal deposits are incorporated in the exploration concepts.

9 EXPLORATION

9.1 Introduction

FMS has conducted prospecting, geological mapping, alteration mapping, structural interpretations, and geochemical and geophysical studies at Del Toro. Surface and underground mapping and sampling are referenced to the WGS84 Datum. Topographic base maps and high resolution orthophotos were used as based maps for mapping. The INEGI 1:50,000 scale topographic maps with contour lines at 20 m interval for Chalchihuites (F13B34) and Gualterio (F13B24) were used for regional and semi-detailed mapping. A topographic restitution with drone was completed in 2016. Topographic maps with precision of 0.5 m in elevation and high resolution orthophotos were obtained with the drone survey.

9.2 Geological Mapping

Semi-detailed geological mapping was carried out on 154 ha over the Perseverancia mine by Geomaps S.A. de C.V., a contractor from Torreón, Coahuila, in 2013.

Five targets were identified that required detailed mapping and interpretations. Two targets located more proximal to Perseverancia mine had already been mapped and sampled in more detail by FMS.

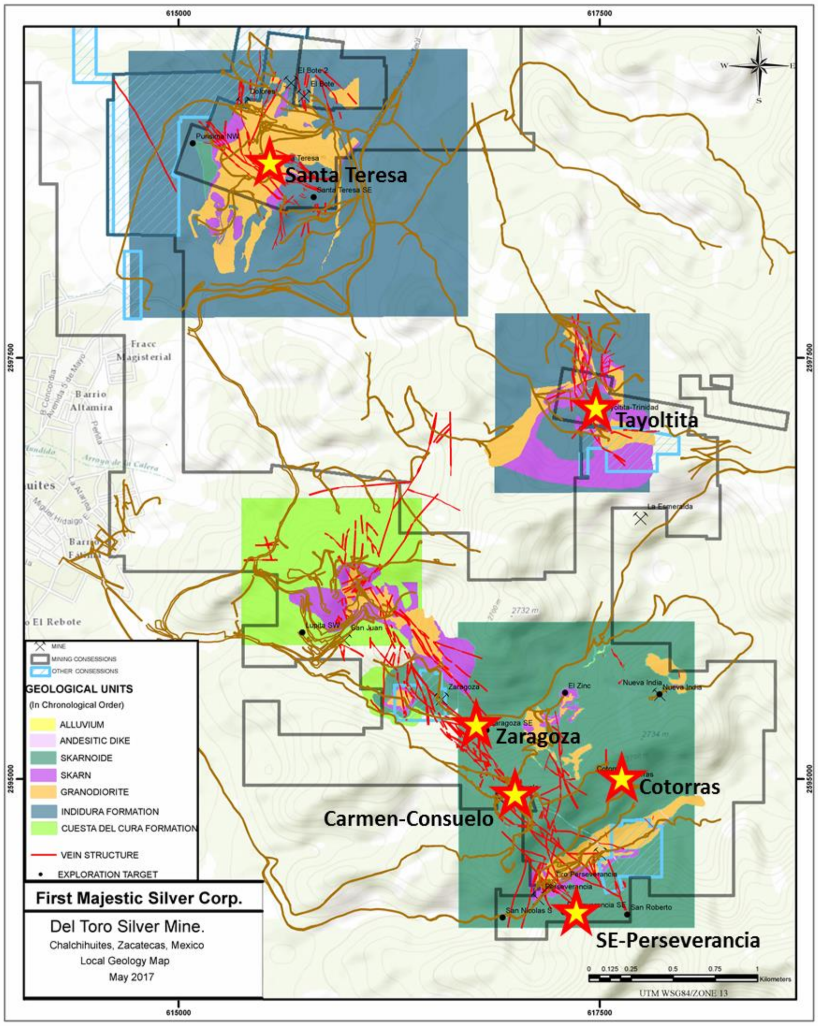
Detailed mapping by FMS has been carried out over approximately 750 ha.

Geological mapping is performed using a Brunton compass, 30-m measuring tape, and GPS.

Photogrammetric restitution was conducted over 544 ha using a senseFly eBee drone with a 16-megapixel camera. The high-resolution orthophotos were used for structural interpretations to complement the detailed geological mapping. The collected geological data (mapping and sampling) were digitized in ArcGIS Ver. 10.4.1 and Geosoft Target 9.2.

The geological mapping and structural interpretation programs led to identification of a generation of drilling targets in Santa Teresa, Zaragoza, Carmen-Consuelo, Cotorras, southeast Perseverancia and Tayoltita (Figure 9-1).

Figure 9-1: Geological Map of Del Toro with Main Exploration Targets (Stars)



9.3 Geochemistry

Geochemistry work consisted of a systematic soil and rock geochemical survey over the San Juan and Perseverancia mines, trenching and sampling over the Santa Teresa area, and numerous chip samples collected on outcropping structures. The systematic soil and rock geochemical survey was done on a grid with line spacing of 100 m and samples collected every 50 m along the lines.

A total of 1,768 samples were collected and analysed at FMS's Central Laboratory in La Parrilla between 2013 and 2016. FMS's Central Laboratory obtained ISO 9001:2008 certification in July 2015. Chip samples were collected on outcrops, and when soil cover was present, 20-50-cm depth pits were excavated to sample the bedrock. If bedrock was not encountered after digging a pit, the soil was sampled from soil horizon B.

The -80-mesh fraction was separated from the soil samples at the assay laboratory, and 250 g were pulverized to 80%, passing the -200 mesh. Rock samples were crushed to 80%, passing the -10 mesh, and a 250-g fraction was pulverized to 80%, passing the -200 mesh. The samples were analysed for Au, Ag, As, Be, Bi, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, V, Zn using the methods ASAG-13 (Au and Ag), AWAA-100 (Pb, Zn, Cu and Fe) and ICPAW-20 (As, Sb, Be, Cd, Co, Cr, Li, Mg, Mn, Mo, Ni, Se, Sr, Ti and V).

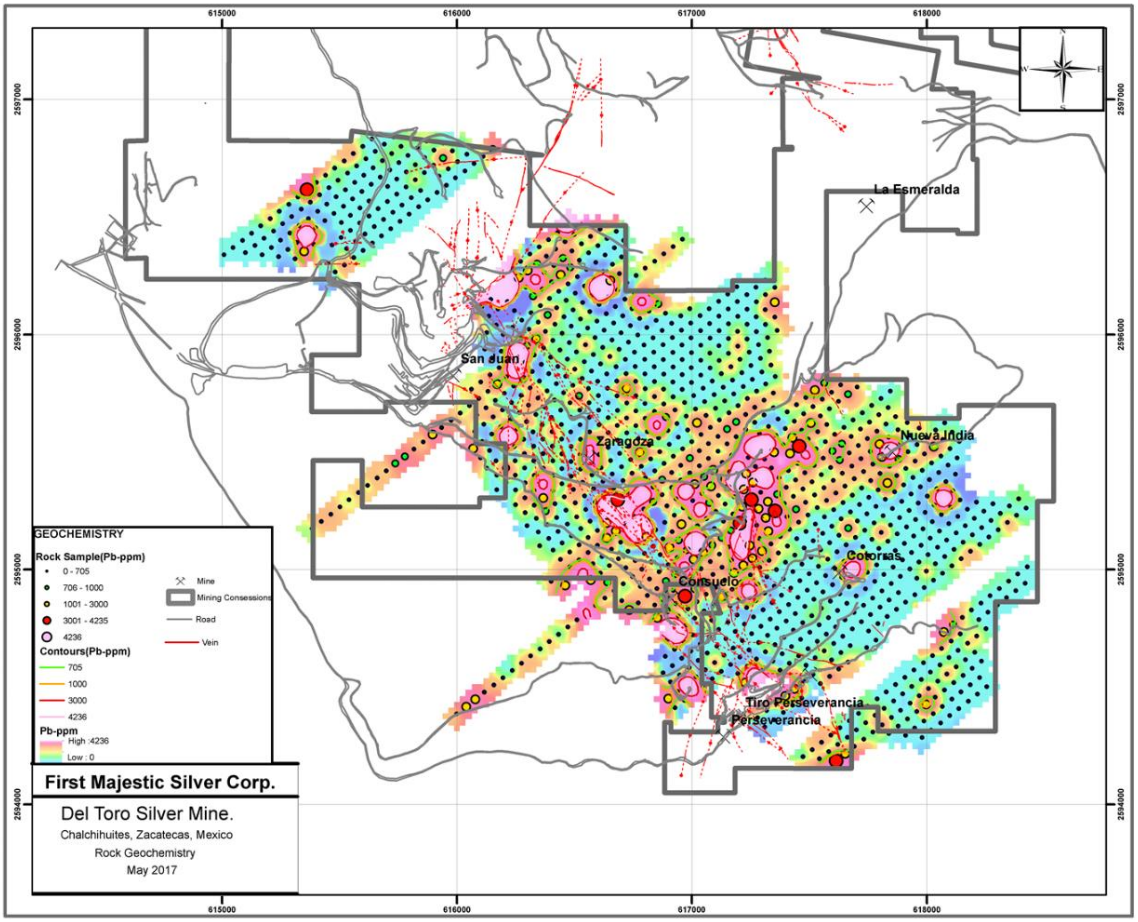
Two standards, field duplicates and coarse blanks were inserted in the sample batches for Quality Assurance/Quality Control (QA/QC) analysis. The analysis of the quality controls shows that the values reported for Au, Ag, As, Be, Bi, Cd, Co, Cr, Cu, Pb, Li, Mg, Mo, Sb, Se, Sr, Ti, V and Zn in the standards are acceptable and generally fall within μ +/- 2 standard deviations (σ). Field duplicate results indicate that most elements have an Absolute Relative Difference (ARD) of > 30% for 90% of the duplicate pairs. This is not of great concern since a lot of the variability could be intrinsic to the samples. The use of pulp and coarse duplicates would have been a better approach to assess precision, but it was not implemented at the time of the study.

Coarse blanks were also inserted, and the results show that, for the elements of interest (Au, Ag, Pb and Zn), the blanks generally report concentrations below four times the detection limit, which is considered acceptable for a coarse blank.

Basic statistics and a correlation matrix were calculated for all the elements in order to select background levels and identify correlations between pairs of elements. Geochemical maps were created with the information, but only elements such as Pb and Zn reflected meaningful anomalies. Figures 9-2 and 9-3 are geochemical maps for Pb and Zn, respectively. Significant Pb–Zn anomalies were resolved along the northwest Carmen–Consuelo trend and north-northeast of Carmen–Consuelo around prospects containing Zn mantos.

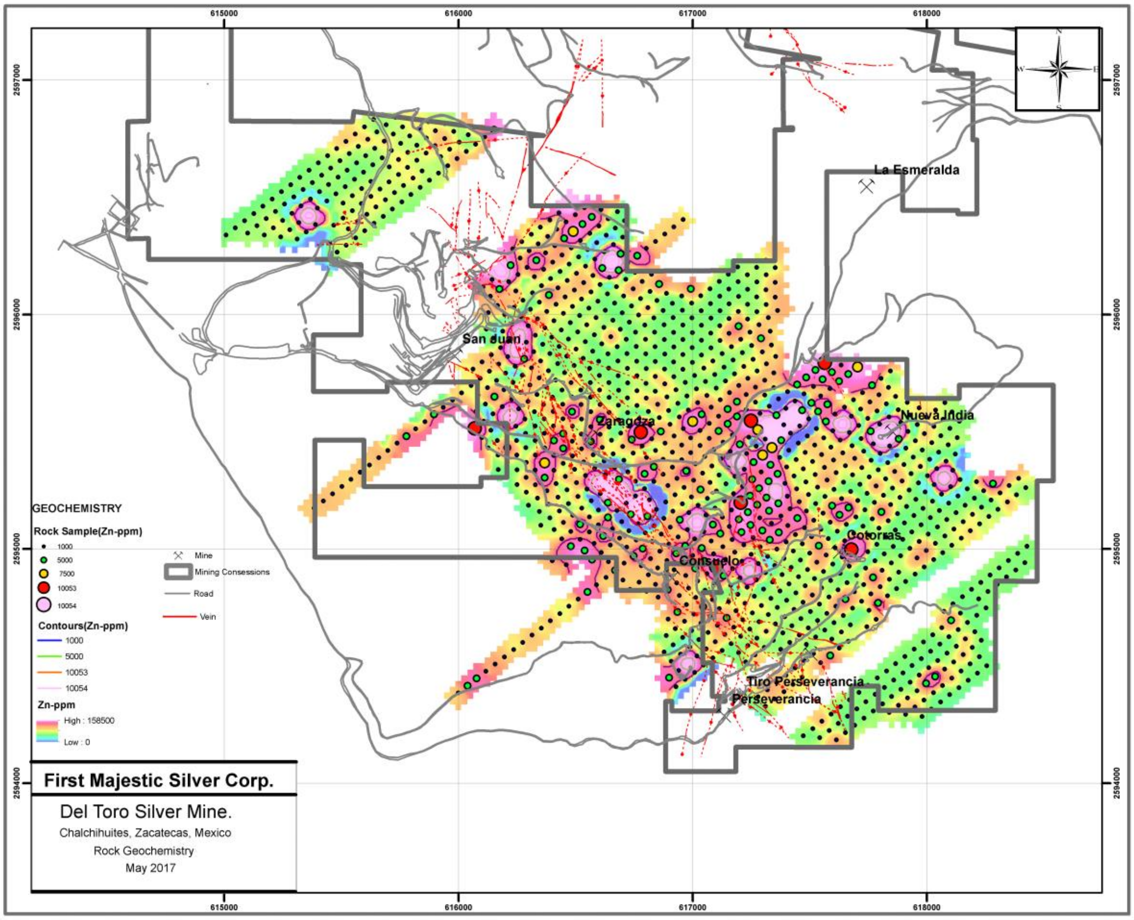
Additionally, all samples collected on the geochemical survey were analysed with a TerraSpec Analytical Spectral Device (ASD) to generate an alteration map. Minerals indicative of a high-temperature environment, such as muscovite, hornblende and prehnite, were plotted and are shown in Figure 9-4. A rough coincidence was noted between the Pb-Zn geochemical anomalies located north-northeast of Carmen-Consuelo and a northeast trend of high-temperature minerals.

Figure 9-2: Map Showing Isovalues for Lead



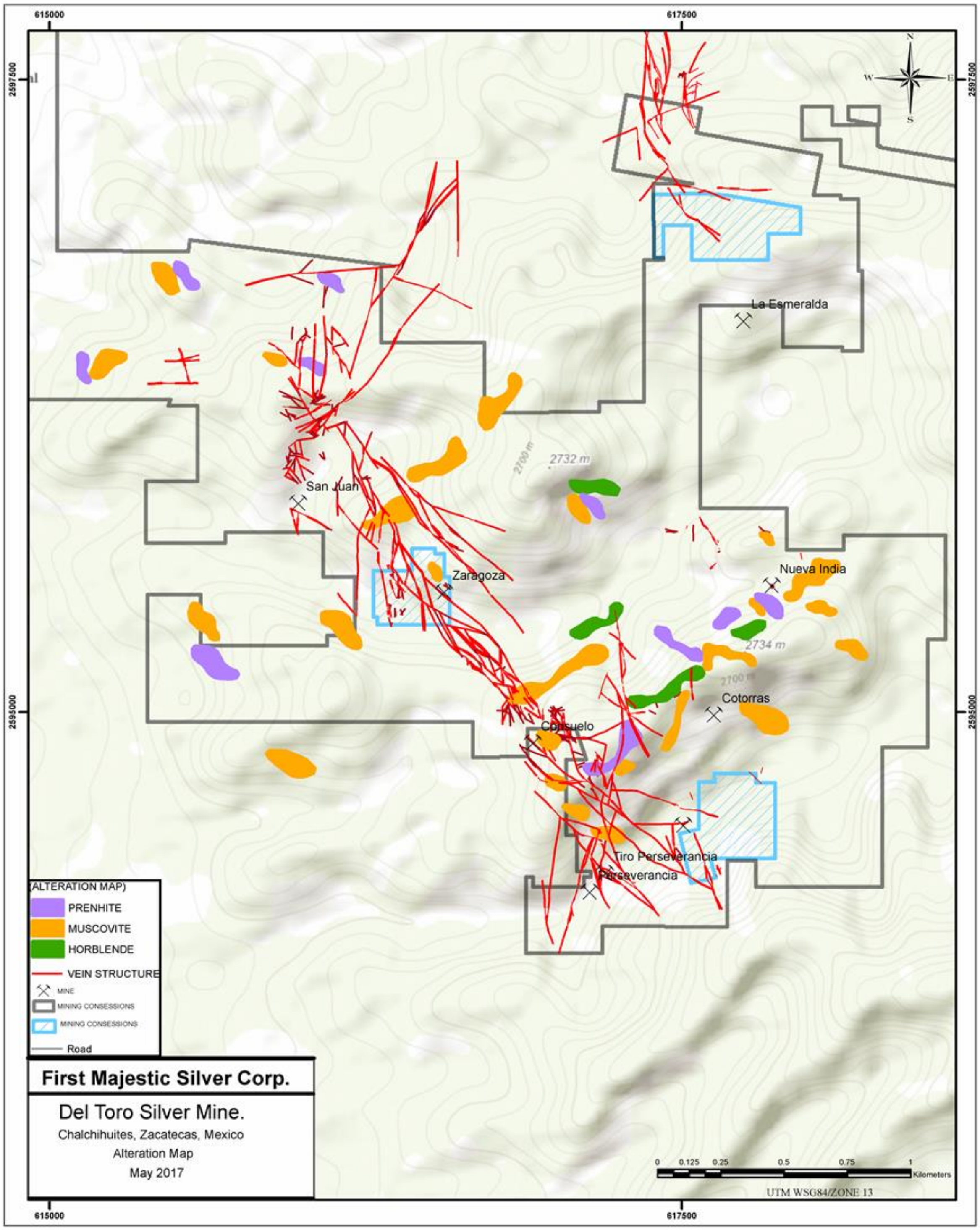
Note: Concentrations greater than 4,200 ppm Pb are considered anomalous.

Figure 9-3: Map Showing Isovalues for Zinc



Note: Concentrations greater than 9,200 ppm Zn are considered anomalous.

Figure 9-4: Alteration Map



9.4 Geophysics

A direct current/induced polarization (DC/IP; TITAN 24) geophysical survey was carried out by Quantec Geoscience Ltd. (Quantec) on 14 N52°E-trending lines for a cumulative 34.8 line-km. Data were acquired on those lines at 100 m dipole length and 200 m line spacing. According to Quantec, DC and IP components of the survey should provide an excellent means of delivering targets within the top 500 to 750 m of the topographic surface.

Depth of investigation is mainly controlled by the array geometry (TITAN 24), but may also be limited by the received signal, which is dependent on transmitted current and ground resistivity (Quantec, 2012). The TITAN 24 Distributed Acquisition System (Sheard, 1998) employs a combination of multiplicity of sensors, 24-bit digital sampling, and advanced signal processing (Quantec, 2012). The geophysical interpretation was completed on two-dimensional (2D) inversion models of TITAN 24 data; and sections and plan maps for different elevations were prepared with this data.

The DC resistivity method is used to resolve the structure and lithology of the subsurface by measuring the electric potential of DC. Resistivity can be an indicator of metallic mineralization, but is more often controlled by rock porosity and is therefore an indirect indicator of alteration and mineral grain fabric. Figure 9-5 is a plan map for resistivity at 300 m depth showing a northwest-trending high resistivity (above 1600 ohm-m) zone that most likely correlates with the presence of the quartz monzonite stock. Chargeability is a near-direct indicator of the presence of sulphide mineralization, graphite and some types of clays, which makes it a useful tool for base-metals exploration.

Based on the TITAN 24 data, Quantec proposed 11 anomalous zones which were classified as follows (Figure 9-6):

- CC# - Both conductive and chargeable responses;
- CN# - Non-chargeable responses (shallow oxidized zones) associated with conductive zones;
- RC# - Chargeable responses associated with resistive rock units; and
- RN# - Resistive and non-chargeable responses.

A combination of mapping (structural and alteration), geochemistry and geophysics were used to define drilling targets throughout Del Toro. Potential mineralization was discovered at Fanny-Lupita (north of San Juan mine) and Santa Teresa (Dolores mine). Other targets such as Zaragoza, Cotorras and Carmen Consuelo have been partially tested and are promising. Other targets in the vicinity of the San Juan and Perseverancia mines also retain exploration prospectivity.

Figure 9-5: Resistivity Map at 300-Metres Depth

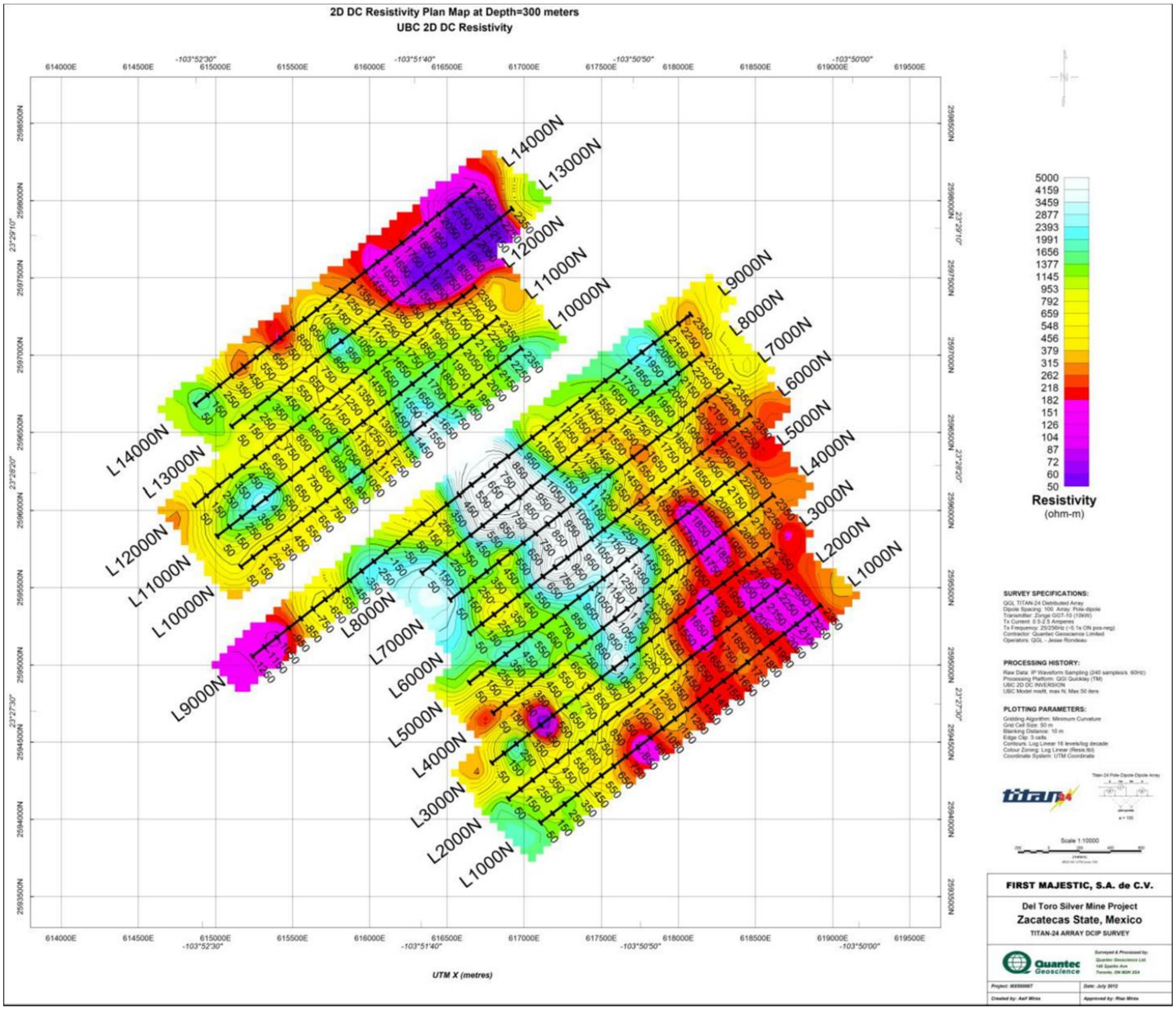
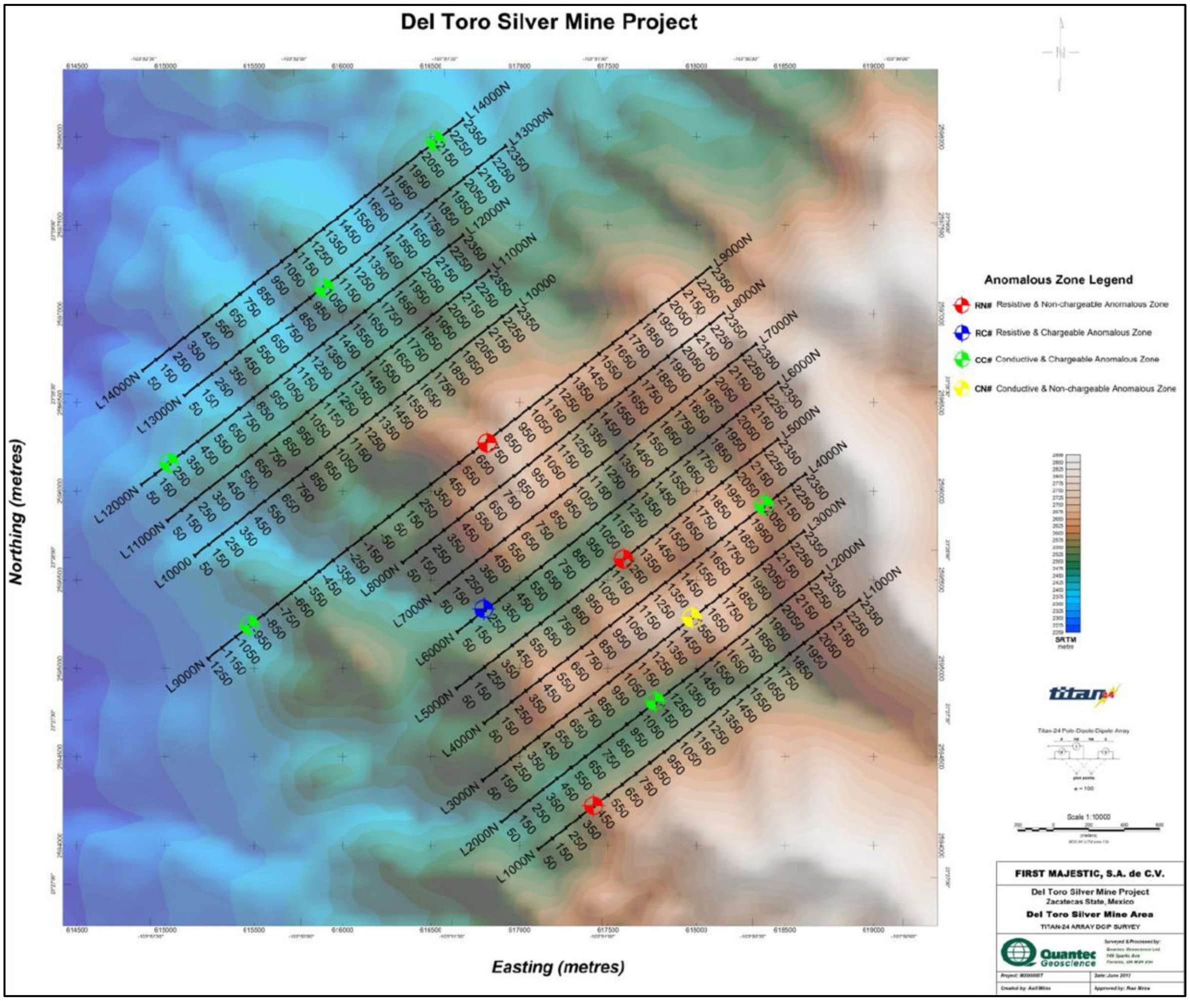


Figure 9-6: Targets Defined by Quantec Based on TITAN 24 Data



Note: The green targets are the conductive and chargeable anomalies and are therefore more indicative of the potential presence of sulfide mineralization.

10 DRILLING

10.1 Introduction

The Del Toro database contains 516 surface and underground drill holes totalling 118,877 m. Drilling by year is summarized in Table 10-1 to the end of June 2017, and a plan of drill hole locations for the Dolores, Perseverancia and San Juan mines are shown in Figures 10-1, 10-2 and 10-3, respectively.

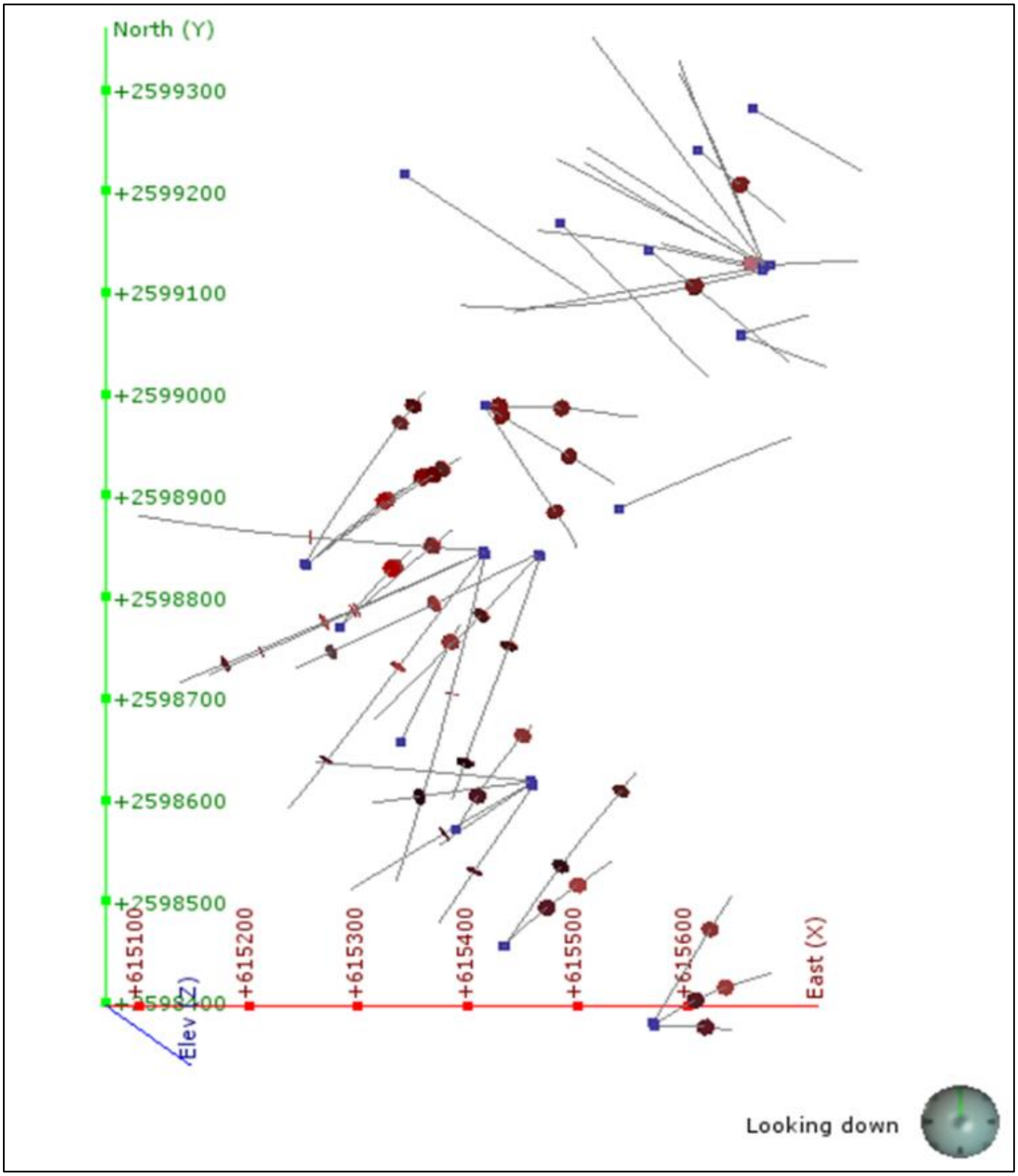
Of the total metres drilled for the property, 343 holes totalling 68,261 m have been drilled since the end of June 2012, the cut off used for the previous resource estimation by Pincock, Allan & Holt (2012).

The database used to support the estimates was closed as of August 31st, 2016, and an additional 64 holes totaling 12,206 m have been drilled since that date.

Table 10-1: Drill Hole Summary

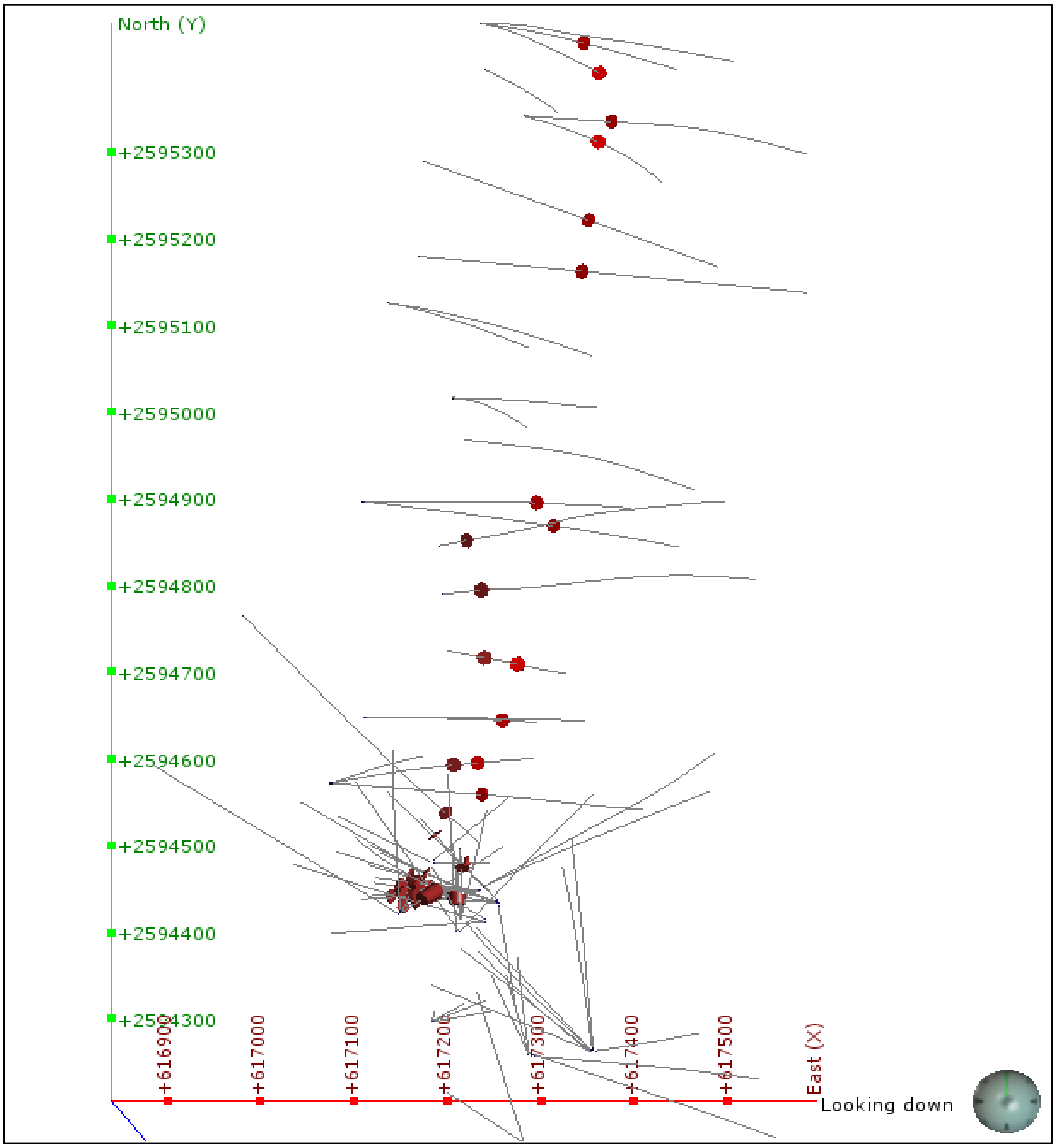
Year	Number of Holes	Metres
2005	2	491
2006	23	5,194
2007	17	3,296
2008	28	9,003
2009	3	1,293
2011	32	11,803
2012	113	37,112
2013	65	11,581
2014	53	7,145
2015	43	9,179
2016	89	14,938
2017	48	7,842
Total	*516*	*118,877*

Figure 10-1: Dolores Mine Area Drill Hole Plan



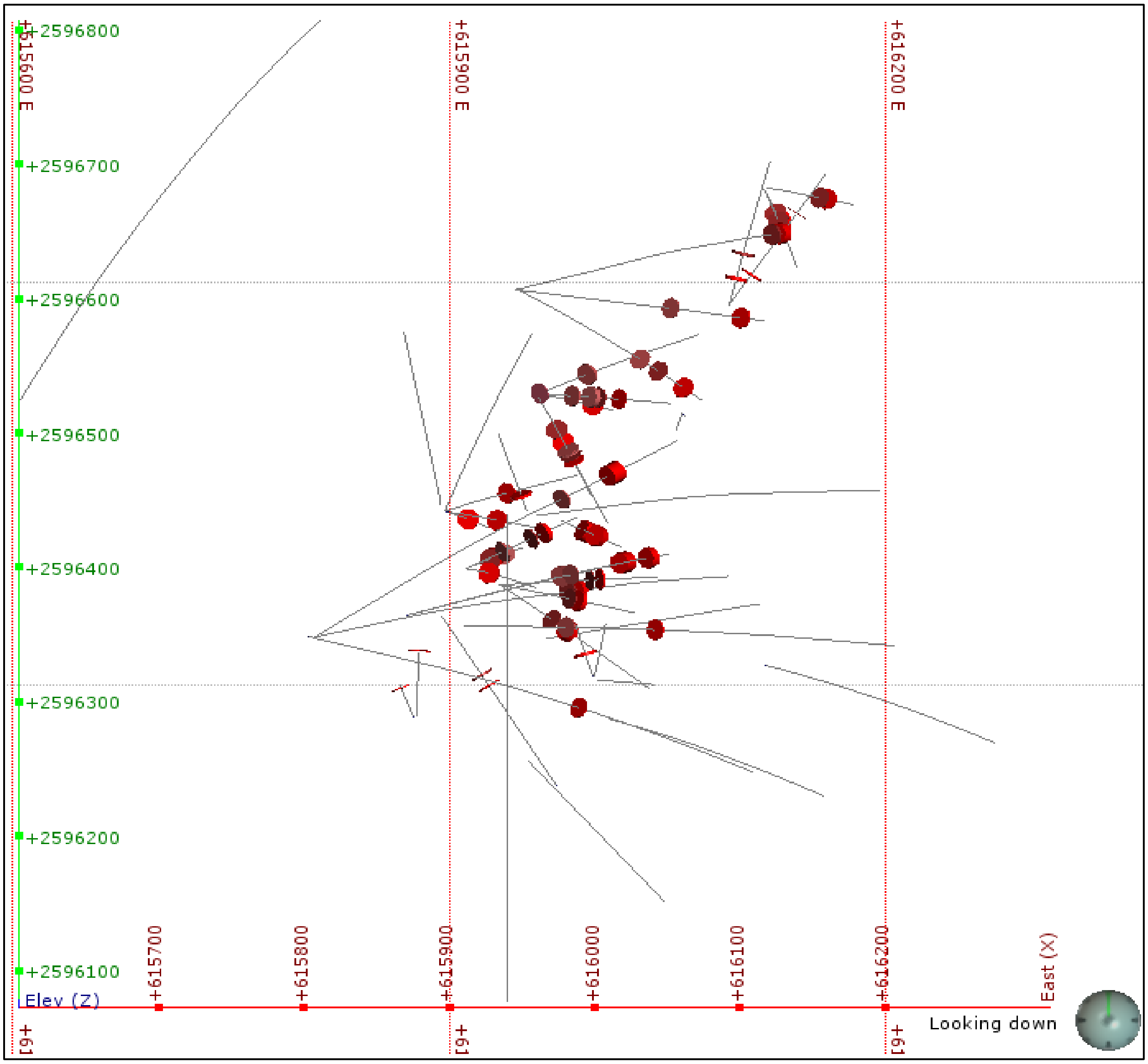
Note: Figure prepared by FMS 2017 in Leapfrog Geo 4.0, project DT Dolores. Red circles are drill hole vein intersections and blue squares are drill hole intersections

Figure 10-2: Perseverancia Mine Area Drill Hole Plan



Note: Figure prepared by FMS 2017 in Leapfrog Geo 4.0, project DT Perseverancia. Red circles are drill hole vein intersections.

Figure 10-3: San Juan Mine, Lupitas Vein System Drill Hole Plan



Note: Figure prepared by FMS 2017 in Leapfrog Geo 4.0, project DT Vetas Lupitas. Red circles are drill hole vein intersections.

10.2 Drilling Contractors

A number of drilling contractors have been used at Del Toro since 2005. The time period when drilling, the contractors used, and whether the drill holes were surface or underground, are summarized in Table 10-2.

Table 10-2: Drilling Contractors 2005–Present

Dates	Contractor	Surf.	UG	Core Size
2005–2009	CAUSA Perforaciones Mineras, Torreon, Coahuila	X	X	BQ, NQ, HQ
2006–2007	XPLOR Exploraciones Mineras, Saltillo, Coahuila	X		BQ, NQ, HQ
2006–2013	Tecmin Drilling & Exploration Services, Fresnillo, Zacatecas	X	X	BQ, NQ, HQ
2011	R & R Drilling, Hermosillo, Sonora	X		HQ, NQ
2012–2015	Servicios Perforacion Mexico, Durango, Durango	X	X	BQ, NQ, HQ
2013	Prase S.A de C.V., Durango, Durango	X		HQ, NQ
2013	Procesadora de Minerales de Durango, Torreon, Coahuila	X		BQ, NQ, HQ
2014	SILM, San Luis Potosi, San Luis Potosi		X	NQ
2014	Rock Drill Mining S.A. de C.V., Aguascalientes, Aguascalientes	X		HQ
2016	Versa Perforaciones S.A. de C.V., Mazatlán, Sinaloa	X	X	NQ, HQ

In recent years, the general practice has been to collar surface holes in HQ and reduce when required, while underground holes are generally collared in NQ and rarely reduced to BQ because they are mostly short holes that are less than 500 m in length.

10.3 Field Procedures

Drill core from both surface and underground holes is placed in plastic core boxes at the drill site. The boxes are labelled with the hole number and box number, and the lids are secured with string for transport. The core is delivered to FMS's logging facility by the drilling contractor.

10.4 Core Logging

For most of the history of the Project, logging has been done by geologists directly onto paper logging forms. These included a description of primary geological intervals, a graphic log and a recording of sample intervals.

In mid-2016, a change was made to log directly onto a computer using Maxwell GeoServices' LogChief software. All drill data are entered on a series of screens (collar, lithology, minerals, alteration, structure, samples, geotechnical information) with options for field entries from pick-lists.

Historical geotechnical logging has consisted of standard recovery and Rock Quality Designation (RQD) data collected from drill run intervals for all holes. Starting in 2015, detailed geotechnical information has been collected over the mineralized zones and for distances of 20 m into the hanging wall and 10 m into the footwall. These data are collected over intervals that coincide either with lithology and structure or over a maximum length of 1 m.

10.5 Recovery

Rock units encountered in drilling, including the mineralized zones, are generally solid, yielding an average recovery of just over 98%. The average RQD value is just over 85%.

10.6 Drill Collars and Downhole Surveys

Collar Surveys

The type of collar survey data for drill holes is shown in Table 10-3. The holes labelled as “transformed” were originally surveyed by total station in NAD27 coordinates which were then converted to WGS84 coordinates.

Table 10-3: Del Toro Drill Hole Collar Survey Data

Survey Type	Surface Hole	Underground Hole
Differential GPS	87	0
Total Station	0	169
Transformed	27	30
From Old Plan and Sections	42	161
Total	*516*	

Downhole Surveys

Several different downhole survey instruments have been used at Del Toro over the project history as shown in Table 10-4.

Table 10-4: Del Toro Downhole Surveys

<table>
<tr><th>Year</th><th>Survey Type</th><th>Frequency</th></tr>
<tr><td>2005 -2007</td><td>Planned</td><td></td></tr>
<tr><td>2008</td><td>Planned, Tropari</td><td>Two measurements for drill</td></tr>
<tr><td>2009-2011</td><td>Tropari, Reflex, Flexi</td><td>2-4 measurements for drill, every 100 to 150 m.</td></tr>
<tr><td>2011 and 2012</td><td>Tropari</td><td>Every 60 to 100 m</td></tr>
<tr><td rowspan="2">2012–2016</td><td rowspan="2">Reflex</td><td>2012: Every 10 to 50 m, then every 50 to 100 m</td></tr>
<tr><td>2013–2016: Every 50 m</td></tr>
<tr><td>2015</td><td>Devico PeeWee</td><td>Every 50 m</td></tr>
</table>

Approximately 40% of the total 516 holes in Del Toro have planned drill hole collar orientations. They correspond mainly to historical holes prior to 2008 and BQ holes. For the database used to support this resource estimate, the percentage is reduced to 15%. The impact of the lack of downhole survey measurements was assessed during the database validation process by comparing holes without surveys against the deviation of nearby holes. Downhole deviation is variable, mainly in azimuth, and is stronger in longer drill holes. Only a few drill holes without downhole surveys are longer than 400 m, and the effect of this on resources is believed to be minimal.

10.7 Sample Length/True Width

The relationship between sample length, or intersection length, and true width depends upon the angle at which mineralization is intersected. As this varies due to the location from which the drill hole can be completed, on the dip of the drill hole, and on the orientation (strike and dip) of the mineralization. Drill intersection lengths at Del Toro are typically greater than true widths.

10.8 Drill Spacing

Average drill spacing for the Del Toro mine areas is shown in Table 10-5. Drilling has been carried out from surface and available underground stations.

Table 10-5: Average Drill Spacing

Mine	Vein	Drill Spacing Average (m)
Dolores	Dolores	57
	Purisima	
	Santa Teresa	
	Santa Teresa Alto	
	Santa Teresa Bajo	
	La Reyna	
Perseverancia	San Nicolas	60
	Escondida	
San Juan - Lupita	Lupita	50
	Lupita del Alto	
	San Jose	
	San Jose de Alto	
	Olvidada	
San Juan - Cuerpo 3	Cuerpo 3	25

10.9 Drill Intercepts

Table 10-6 shows a selection of intersections from each of the major vein structures at Del Toro to illustrate the typical grades and widths of the deposits.

Table 10-6: Typical Del Toro Mineralized Drill Hole Intersections

Zone	Hole ID	Collar X	Collar Y	Collar Z	Total Depth	Azimuth	Dip	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	Pb %	Zn %
Dolores	STD11-01	615458.5	2599116.7	2370.5	343.1	110	-54	104.6	108.6	4.1	0.48	986	3.11	0.16
	STD11-04	615492.1	2599204.6	2401.2	249.4	106	-59	121.2	122.1	1.3	0.08	64	0.70	0.01
	STD11-05	615332.8	2598979.3	2312.3	248.1	110	-50	161.5	162.4	0.9	0.30	53	0.63	0.02
Purisima	ITST16-07	615398.7	2598844.8	2197.2	261.0	248	18	221.0	221.9	0.9	0.14	851	16.50	1.48
	STST15-05	615456.3	2598428.0	2402.8	312.6	101	-65	199.0	200.6	1.7	0.35	138	6.64	0.48
	STST15-02	615297.5	2598600.4	2379.7	250.6	47	-60	77.0	77.4	0.4	1.65	322	2.63	0.15
Santa Teresa	ITST16-01	615357.7	2598846.0	2166.1	261.0	243	-10	119.7	121.2	1.5	0.50	463	2.74	2.39
	ITST16-04	615357.9	2598844.2	2166.1	300.0	212	-18	130.1	132.0	1.9	0.09	294	0.01	0.20
	STST15-08	615199.4	2598781.5	2389.9	241.2	55	-50	193.9	197.6	3.8	0.36	149	4.57	2.34
Santa Teresa Alto	STST15-11	615172.1	2598836.1	2386.1	250.6	56	-50	224.0	226.5	2.5	0.27	360	9.20	1.14
	ITST16-01	615357.7	2598846.0	2166.1	261.0	243	-10	123.5	124.1	0.6	0.16	186	0.99	0.05
	STST15-13	615172.3	2598836.2	2386.1	250.3	56	-45	208.7	208.9	0.3	0.23	436	15.50	0.51
Santa Teresa Bajo	STD11-05	615332.8	2598979.3	2312.3	248.1	110	-50	31.5	32.0	0.5	0.06	828	29.01	6.40
	STST15-14	615171.7	2598836.6	2386.1	296.3	36	-47	269.0	270.2	1.2	0.37	314	11.87	2.30
	STD12-07	615332.8	2598979.3	2312.3	345.7	86	-60	30.7	32.7	2.0	0.15	335	11.05	5.19
Escondida	ITSN12-05	617083.6	2594456.2	2414.1	151.3	58	-33	29.3	52.6	23.3	0.11	860	10.77	3.72
	ITSN13-14	617171.4	2594473.8	2306.4	138.5	255	-37	72.9	80.5	2.0	0.36	1513	18.83	9.23
	ITSN12-05	617083.6	2594456.2	2414.1	151.3	58	-33	76.1	85.3	9.2	0.28	1022	10.87	3.17
San Nicolas	STSN12-01	616995.7	2594598.1	2592.5	471.9	96	-44	227.5	228.9	1.5	0.13	729	49.25	0.67
	STSN12-06	617079.9	2595139.1	2589.6	663.5	92	-47	267.6	268.1	0.6	0.28	200	10.18	0.79
	STSN12-20	617151.5	2595387.7	2484.2	384.6	93	-49	189.3	189.6	0.3	0.02	265	9.15	5.70
Lupita	ITSJ15-104	616092.6	2596592.1	2206.9	117.4	34	0	26.2	27.7	1.6	0.05	153	5.78	0.16
	ITSJ15-105	616092.6	2596592.1	2206.9	110.7	14	-1	18.6	21.2	2.6	0.13	516	19.90	0.16
	STFF13-04	615807.5	2596342.3	2504.5	468.6	76	-55	311.5	315.6	4.1	0.02	95	4.17	0.56
San Jose Alto	STFF14-07	615871.1	2596358.2	2530.9	268.9	75	-47	168.1	168.6	0.5	0.02	112	4.99	0.05
	STFF15-10	615946.2	2596601.9	2441.6	262.0	120	-54	170.1	170.6	0.5	0.05	527	0.63	0.00
	ITSJ15-103	615962.2	2596522.5	2198.9	120.2	154	-31	49.5	49.9	0.4	0.11	2748	21.80	0.47
Cuerpo 3	SJI-26	615825.6	2596030.3	2389.2	455.5	60	-73	376.1	385.3	9.2	0.41	127	3.27	0.03
	SJI-31	615930.5	2596088.5	2311.6	448.6	248	-81	319.2	328.2	9.0	0.02	1	0.02	15.71
	ITSJ13-83	615765.1	2596074.9	2178.5	271.3	70	-36	210.6	215.1	4.6	0.04	6	0.14	6.60

10.10 Comments on Section 10

In the opinion of the responsible Qualified Person, the quantity and quality of the geological, geotechnical, collar and downhole survey data collected on the Del Toro silver–lead–zinc project are of sufficient quality to support Mineral Resource estimation as follows:

- Drilling procedures and core logging meets industry standards.
- Recovery data from drill core data are acceptable.
- Collar surveys have been performed using industry-standard instrumentation.
- Downhole surveys were collected at the time of the programs using industry-standard instrumentation.
- Drill orientations are generally appropriate for the mineralization style, and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the resource areas.
- Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths.
- Drill spacing has been adequate to first outline and then define mineralized zones. Drill hole spacing does vary with the stage of exploration and development.
- Drill hole intercepts as summarized in Table 10-2 appropriately reflect the nature of the mineralization, and include areas of higher-grade intervals in low-grade drill intercepts.
- No factors were identified with the data collection from the drill programs that could materially affect resource estimation accuracy or reliability.

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Sampling Methods

11.1.1 Channel Sampling

Channel samples are collected across mineralized structures from the back of underground workings every 25 m, where ground conditions permit. The purpose of this sampling is to support resource estimation around production areas.

In many cases the drifts are covered in shotcrete, so this is first removed by using a pneumatic chisel. Two cuts are then made using an electrically powered rock saw, after which the sample is removed with the pneumatic chisel and caught on a plastic tarpaulin before being placed in a sample bag.

The cuts are 6 to 7 cm apart and 4 to 5 cm deep, so the size of the channel is approximately the same size as half of an HQ core. The maximum sample length is 1.0 m and the minimum is usually 0.3 m. Samples cover the mineralized structure and wall rock on either side, where possible. Duplicate samples are also taken, and are from a second channel immediately adjacent to the first. Duplicates are mainly collected from mineralized structures rather than the wall rocks. Channel samples are sent to the La Parrilla laboratory.

After sampling, the sample locations are surveyed by taking the coordinates of the endpoints of the samples using a total station survey instrument.

11.1.2 Drill Sampling

Core from all years examined has been sawn. It is not known where core was sampled from early programs (2005-2009). From 2011 to September 2015, core was sawn at the Perseverancia mine. From then onwards, core has been cut at the central logging and core storage facility in the town of Chalchihuites. As far as can be determined, one side of the core has consistently been sampled in all holes.

Prior to 2015, sample intervals were generally, but not always, coincident with geological contacts. Since 2015, all samples have been coincident with geological contacts. Details of sample size and lengths are given in Table 11-1.

Table 11-1: Sample Size and Lengths

Date	Sample	Min–Max Lengths
2007–2008	½ BQ core	0.25–0.60 m
2011–Mar. 2012	¼ NQ or HQ core	0.30–1.20 m, rarely 1.50 m
Mar. 2012–present	½ NQ or HQ core	0.30–1.20 m, rarely 1.50 m

Sample intervals are marked on the boxes along with the “From” and “To” depths and the sample numbers, including Quality Assurance and Quality Control (QA/QC) insertions where applicable. Samples are placed into plastic sample bags that are marked with the sample numbers along with a sample tag. Sample bags are tied with string and placed in rice bags (costales) for shipping to the primary laboratory. Typically there are 13 HQ samples to a bag or 26 NQ samples to a bag.

11.1.3 Production Sampling

Production samples include chip samples and muck samples. Chip samples are taken from the face after every round of advance by collecting chip samples from a series of horizontal and vertical lines. Muck samples are collected from the muck pile from a number of locations. Production samples are sent to the Del Toro mine laboratory.

11.1.4 Bulk Density Sampling

Bulk density sampling has included determinations made on full HQ or NQ core samples from recent drill programs and determinations made on half core samples from historic core. Samples were collected from the mineralized structures and from the wall rocks on both sides. The procedure used is a water displacement method carried out at site and consisting of the following steps:

- Taking a damp weight;
- Drying the sample for 14 hours at 120°C;
- Taking a dry weight;
- Wax coating the sample;
- Taking a wax coated weight;
- Displacing water with the sample and weighing the displaced water; and
- Calculating the bulk density, taking into account the weight of the wax.

In total, 1,819 bulk density determinations are in the project database, including 320 for the Dolores mine area, 411 for the Perseverancia mine and 1,261 for the San Juan mine, which includes the Lupita and Cuerpo 3 areas.

In the opinion of the QP, the number and quality of density data is sufficient to support Mineral Resource estimation.

11.2 Analytical Laboratories

Several different primary analytical laboratories have been used for processing Del Toro samples.

Table 11-2: Del Toro Analytical Laboratories by Year

Year	Primary Laboratory	Type	Comments
2005–2009	Inspectorate Laboratories	Independent	Mainly Durango laboratory, but also Hermosillo
2011–2013	Inspectorate Laboratories	Independent	Sample preparation in Durango, analysis in Reno NV
2012	Stewart	Independent	A few Cuerpo 2 holes analysed in Kamloops BC
2013–2014	SGS	Independent	Durango, Mexico
2014	Del Toro	Not independent	Del Toro mine site laboratory
2014–2016	La Parrilla Central Laboratory	Not independent	FMS Central Laboratory at La Parrilla mine
2016	SGS	Independent	Durango: regular assays, re-assays and check assays

From at least as early as 2008 until mid-2011, Inspectorate held ISO 9001:2000 accreditation, after which it has held ISO 9001:2008 accreditation. Since 2007, Inspectorate also has ISO 17025 accreditation for selected analytical methods.

Similarly, SGS Durango held ISO 9001 certification from at least early 2008 until approximately mid-2012, by which time it was ISO 9001:2008 accredited.

In 2012, the Stewart Group laboratory in Kamloops, British Columbia, Canada held ISO 9001:2008 accreditation.

The Del Toro laboratory is not independent of FMS and is not ISO accredited.

The La Parrilla Central Laboratory is not independent of FMS. This laboratory gained ISO 9001 accreditation in mid-2015 and ISO 9001:2008 in 2017. The laboratory currently only handles samples from FMS's operations.

11.3 Sample Preparation and Analysis

Sample Preparation

Sample preparation for drill and channel samples consists of drying as required, crushing, and selecting a sub-split which is then pulverized to produce a pulp sample sufficient for analytical purposes. Table 11-3 summarizes the sample preparation procedures used by the primary laboratories.

Table 11-3: Sample Preparation Procedures

Laboratory	Procedure
Inspectorate	Dry, crush to 70% -10 mesh, 250g split pulverized to 85% passing -200 mesh
Stewart	Dry, crush to 70% -10 mesh, 250g split pulverized to 85% passing -200 mesh
SGS	Dry, crush to 75% -10 mesh, 250g split pulverized to 85% passing -200 mesh
Del Toro	Dry, crush to 80% -10 mesh, 200-250g split pulverized to 80% passing -200 mesh
Central LAB	Dry, crush to 80% -10 mesh, 200-250g split pulverized to 80% passing -200 mesh

Sample Analysis

Analytical methods used on drill samples, channel samples and check assays are shown in Table 11-4.

Table 11-4: Analytical Methods

Laboratory	Procedure
Inspectorate	Fire assay for gold on a 30g sample with an AA finish. 30 element ICP, if Ag >100 g/t by 30g fire assay with gravimetric finish, over limits for Cu, Pb, Pb by AR digestion with AAS finish, Hg by AR digestion with cold vapour AA
Stewart	Fire assay for gold on a 30g sample, 35 element ICP-AES, if Ag >100 or Pb or Zn >1% over limits by 2 acid digestion with AAS finish. Hg by AR digestion with cold vapour AA finish
SGS	Fire assay for gold on a 30g sample with an AA finish. 34 element ICP-AES package, if Ag >100 g/t by 2g sample AR digestion with AAS finish, if Ag > 300 g/t by 30g fire assay with gravimetric finish, over limits for As, Cu, Fe, S, Sb, Zn, Pb by sodium peroxide fusion ICP_AES package
Del Toro	Gold and silver by fire assay, silver with a gravimetric finish, Au with an AA finish. Pb, Zn, Cu, Mn and As by 2 acid digestion with AA finish
La Parrilla	Gold by AAS, Ag by 3 acid digestion with AAS finish, 20 element ICP-SCAN, if Ag >300 g/t by 20g fire assay with gravimetric finish, over limits for Cu, Fe, Pb, Zn and other elements by 2 acid digestion with AA finish

Note: The definition of the abbreviations used in this table can be found in Section 2, Table 2-2.

The La Parrilla laboratory uses a 20-g assay charge for fire assays rather than the standard 30-g charge. The use of this charge size was started after a study carried out on 100 samples showed no significant statistical differences between results from assays on both charge sizes.

11.4 Quality Assurance and Quality Control

Quality Assurance and Quality Control (QA/QC) programs have been in place for all drilling and channel sampling programs at Del Toro since 2011.

11.4.1 Insertion Rates

Starting in mid-2011, one standard and one blank was inserted every 20 samples (set position). In 2013, field duplicates were added to the program and this protocol was in use until late 2014 when coarse (reject) and fine (pulp) duplicates were added to the insertions.

Starting in early 2015, a QA/QC insertion program was developed where each 26-sample batch included one standard, one blank, one coarse duplicate, one fine duplicate and an additional QC material that can be inserted at the logging geologist's discretion (20% insertion rate). The position of the QC insertions is also at the discretion of the geologist (floating position) who keeps track of locations using an excel spreadsheet with sample numbers divided into 26-sample batches.

11.4.2 Standards

Several different standards have been used for Del Toro samples:

- 2011–2013**:** Two CDN-Labs-certified multi-element standards.
- 2011–early 2016: Two site-specific standards made from material taken from Level 8 in the San Juan mine. These were prepared by SGS in Durango. The preparation procedures used are not known, but the material was refereed by five laboratories who analysed five cuts each. The expected values and control limits are based on simple statistics only, no Grubbs tests for single outliers or t-tests to compare means were applied.
- 2015–2016: Six site-specific standards made from material from the La Parrilla mine, high-, medium- and low-grade oxide and high-, medium- and low-grade sulphide. Each standard was prepared at Inspectorate Laboratories from ~50 kg of material, crushed and pulverized to pass 200 mesh, and homogenized for 96 hours. The standards are not certified and only have referee results from 10 cuts analysed at Inspectorate. Not all of these standards were used at Del Toro.
- 2016: Five multi-element standards at a variety of grade levels were purchased from CDN Laboratories for use on a regular basis.

Compiled results of the standards that have been used in samples from Del Toro drilling programs are given in Table 11-5. Only the CDN Laboratories standards have certified values.

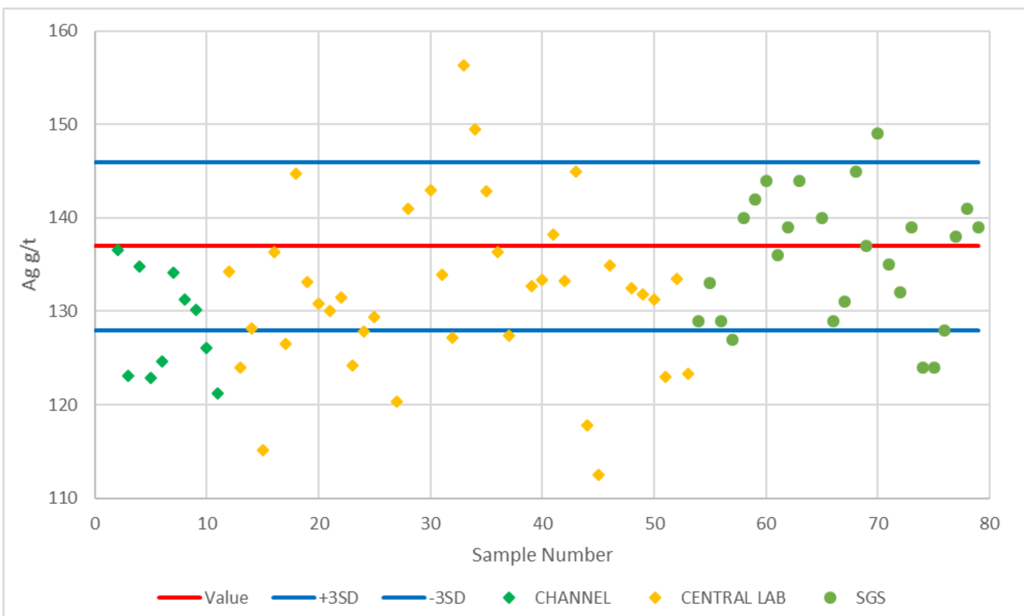
Table 11-5: Del Toro Standard Results

Standard	Count	Grade	Expected Value	Mean of Results	Bias(%)	High Failures count	Low Failures count
CDN-ME-13	192	Au g/t	0.15	0.14	-4.70	4	23
		Ag g/t	77	72	-7	0	35
		Pb %	1.70	1.64	-3.50	3	28
		Zn %	18.48	17.86	-3.30	0	12
CDN-ME-8	164	Au g/t	0.09	0.10	10.70	14	6
		Ag g/t	62	60	-3	2	4
		Pb %	1.94	1.93	-0.50	15	14
		Zn %	1.92	1.98	3.10	30	16
ALTA_NIVEL_8_SUR	271	Au g/t	-	-	-	-	-
		Ag g/t	88	83	-6	7	64
		Pb %	1.62	1.60	-1.20	12	15
		Zn %	0.82	0.74	-7.60	5	19
BAJO_NIVEL_8	288	Au g/t	-	-	-	-	-
		Ag g/t	35	32	-7	0	7
		Pb %	0.81	0.76	-6.20	12	54
		Zn %	2.98	2.84	-4.70	14	22
LP_SU_ALTO	29	Au g/t	-	-	-	-	-
		Ag g/t	491	466	-5	0	1
		Pb %	8.50	7.97	-6.20	2	15
		Zn %	4.77	5.32	11.50	13	0
LP_SU_MEDIO	38	Au g/t	-	-	-	-	-
		Ag g/t	184	172	-7	1	6
		Pb %	2.35	2.56	8.90	8	4
		Zn %	2.64	2.97	12.50	19	3
LP_SU_BAJO	46	Au g/t	-	-	-	-	-
		Ag g/t	112	97	-13	0	7
		Pb %	1.28	1.27	-0.80	5	11
		Zn %	1.69	1.88	11.20	17	5
LP_OX_MEDIO	30	Au g/t	-	-	-	-	-
		Ag g/t	129	125	-3	4	7
		Pb %	2.03	1.87	-7.90	7	6
		Zn %	1.89	1.80	-4.80	11	7
CDN-ME-1306	78	Au g/t	0.92	0.92		11	4
		Ag g/t	104	101	-3	0	1
		Pb %	1.60	1.52	-5.00	10	22
		Zn %	3.17	3.06	-3.50	13	25
CDN=ME-1407	72	Au g/t	2.12	2.02	-4.70	6	14
		Ag g/t	245	247	1	7	2
		Pb %	3.97	4.04	1.70	16	18
		Zn %	0.54	0.58	7.40	25	10
CDN-ME -1408	75	Au g/t	2.94	2.70	-8.10	1	22
		Ag g/t	396	385	-3	0	8
		Pb %	6.53	6.40	-2.00	11	14
		Zn %	0.85	0.87	2.30	20	14
CDN-ME-1413	88	Au g/t	1.01	0.94	-6.90	4	17
		Ag g/t	52	55	4	6	19
		Pb %	0.70	0.68	-2.90	18	16
		Zn %	0.60	0.63	5.00	33	7
CDN-ME-1602	79	Au g/t	1.31	1.27	-3.00	12	6
		Ag g/t	137	127	-7	3	19
		Pb %	1.13	1.08	-4.40	10	13
		Zn %	0.78	0.83	6.40	17	25

For a majority of the standard data sets, biases are mild to moderate and within or close to a rule-of-thumb value of 5% relative to the expected value. There are some consistent biases, particularly for silver and lead, which are generally low relative to the expected values. The highest biases are observed in the La Parrilla standards, which only provide a comparison to the Inspectorate laboratory results.

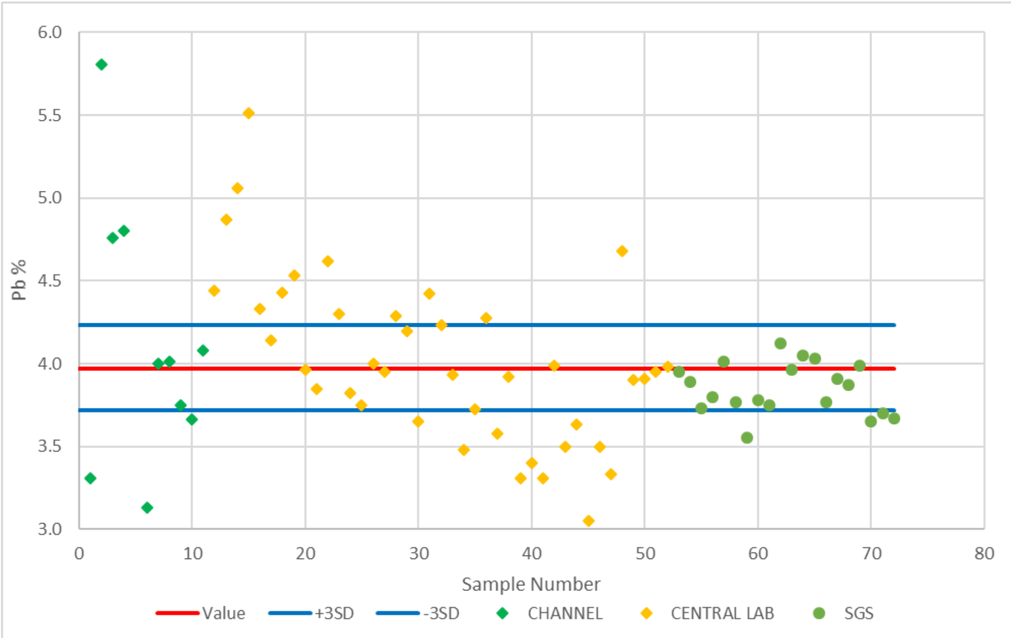
There are high percentage standard failure levels from all eras of standards, particularly for lead and zinc. The worst-case failure levels range from 10% to 25% for the early CDN Laboratories and site-specific standards, to 25% to 50% for the recent CDN Laboratories standards. A selection of timeline plots for the early CDN Laboratories standards analysed by Inspectorate and SGS, the two site-specific standards from 2011 analysed by Inspectorate, SGS and the Central Laboratories, and the recent CDN Laboratories standards analysed by the Central Laboratory and SGS, are given in Figures 11-1 to 11-3. Points labeled as "CHANNEL" were assayed at the Central Laboratory.

Figure 11-1: CDN-ME-1602 Silver Values



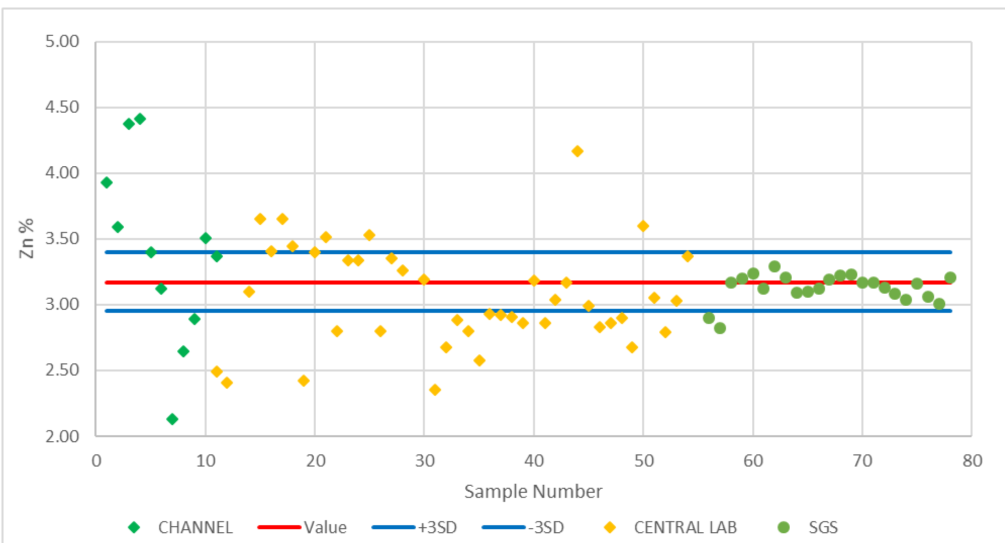
Note: Figure prepared by Andrew Hamilton from QA/QC compilation data, 2017.

Figure 11-2: CDN-ME-1407 Lead Values



Note: Figure prepared by Andrew Hamilton from QA/QC compilation data, 2017.

Figure 11-3: CDN-ME-1306 Zinc Values



Note: Figure prepared by Andrew Hamilton from QA/QC compilation data, 2017.

It is clear that, relative to the commercial laboratories, the Central Laboratory has problems with analytical accuracy. While this has been, and continues to be the case, the data do suggest that accuracy is improving.

FMS has aggressively taken measures to address the assay accuracy issues that were identified at the Central Laboratory through compilation and assessment of the historic and recent QA/QC data and re-run analyses. Since an initial meeting with Central Laboratory staff to address accuracy on August 16th, 2016, several changes have been made:

- October 12th, 2016: An Inductively Coupled Plasma (ICP) specialist was hired to work in the Central Laboratory.
- December 9th, 2016: A second Atomic Absorption (AA) unit was put into operation exclusively for gold and silver analyses.
- December 21st, 2016: A second ICP unit was put into operation exclusively for exploration samples, leaving the original unit for mine production and concentrate samples.

As mentioned above, ongoing compilation of standard results indicates that these measures are improving the analytical accuracy of Central Laboratory results.

11.4.3 Blanks

Both coarse and fine blanks have been used at Del Toro. As far as can be determined, none of the materials used have been subject to referee analysis.

Coarse Field Blanks

Several different coarse field blanks have been used:

- 2011: Pieces of brick.
- 2012–mid 2015: Pieces of construction blocks that were made from local river sand and gravel.
- Mid 2015–June 2016: Tertiary basalt from a location about 15 km from the La Parrilla mine were used. The material collected was sent to Inspectorate who crushed the material to about a 0.5-cm size. Approximately 300 g was used per insertion.
- June 2016 onwards: The same Tertiary basalt was used, but in pieces approximating the size of the drill core.

Generally, field blanks of all types indicate no significant or systematic contamination. The data from 2012 to 2015 do have occasional clusters of anomalously high values, which is attributed to batches of construction blocks that may have included minor amounts of mineralized material. Locally, the data sets indicate occasional mild contamination from extremely high-grade preceding samples; however, these instances are not frequent enough nor severe enough to be of concern. Results for lead and zinc from the Central Laboratory from late July 2016 onwards do show more scatter and more elevated values (up to 400 ppm) than results from SGS (up to 100 ppm).

Fine Blanks

Fine blanks have been inserted since early 2015. Until July 2015, the material used was the same basalt as used for the coarse blank. The fine blank was prepared by Inspectorate who pulverized it and homogenized the pulp for approximately 80 hours. A fine blank prepared from granodiorite from locations within the San Juan mine and prepared at the Del Toro site was used from July 2015 to May 2016. In June 2016, a change was made back to the fine basalt blank.

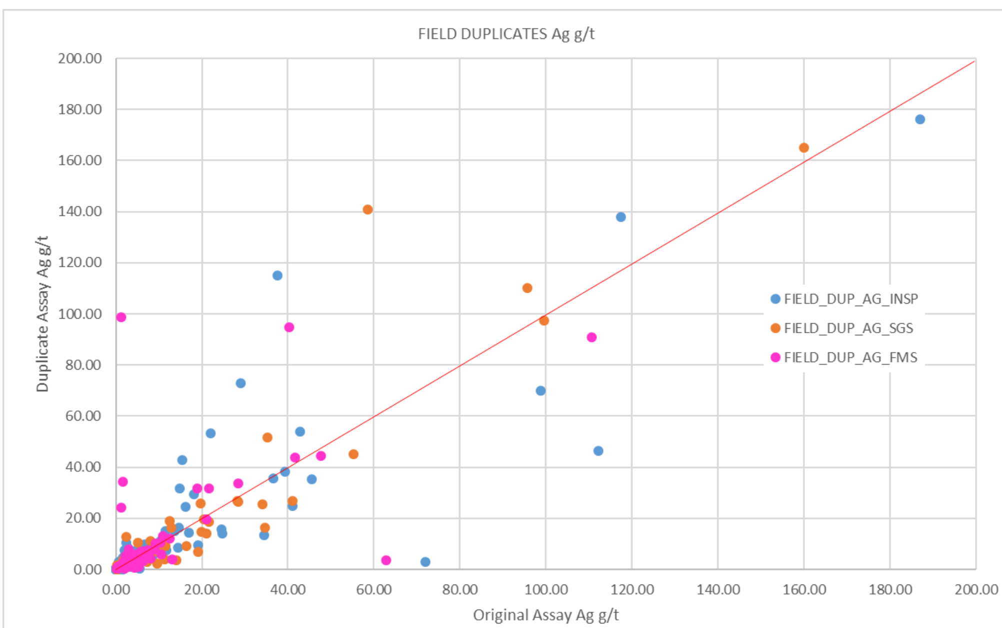
Results for fine blanks for most of the project history show no issues with analytical contamination. As with the coarse blanks, the Central laboratory results for lead, and to a lesser extent zinc, show elevated values relative to SGS from late July 2016 onwards. This is unusual and suggests that there may be an issue with the ICP calibration that should be investigated.

11.4.4 Duplicates

Field Duplicates

Since mid-2012, quarter NQ or HQ core field duplicates have been used. Results for all primary metals show considerable scatter. This is not unusual for this type of high-grade silver–lead–zinc deposit where mineralization occurs in veins, stockwork zones or breccias. A plot for silver is shown in Figure 11-4 for field duplicates from 2012 to 2015.

Figure 11-4: Field Duplicates of 2012–2015 Silver Values



Note: Figure prepared by Andrew Hamilton from QA/QC compilation data, 2017.

Coarse and Fine Duplicates

The data sets for coarse and fine duplicates are still quite small at approximately 200 pairs each. Both sets show good assay precision, as should be expected for duplicates at more advanced sample preparation stages.

11.4.5 Re-run

Based on QA/QC failures, mainly standard failures, Del Toro re-ran certain batches of samples from 2015 and 2016 drilling programs at the Central Laboratory. These included batches initially run at the Central Laboratory and a few batches that were initially run at the Del Toro mine laboratory. In general, the re-runs returned passing standard results and the re-run results were used in the database.

11.4.6 Check Assays

Del Toro has not had a consistent check assay program. However, given the issues with accuracy in results from the Central Laboratory, Del Toro sent batches of 2015 and 2016 from the most relevant resource areas for check or re-assay at SGS Durango. These batches included 86 samples from twelve drill holes within the Santa Teresa resource model, and 427 samples from six Lupita and Cuerpo 3 drill holes within the San Juan mine. Many of the San Juan samples contained very high-grade silver–lead–zinc values. Summary data are provided in Table 11-6.

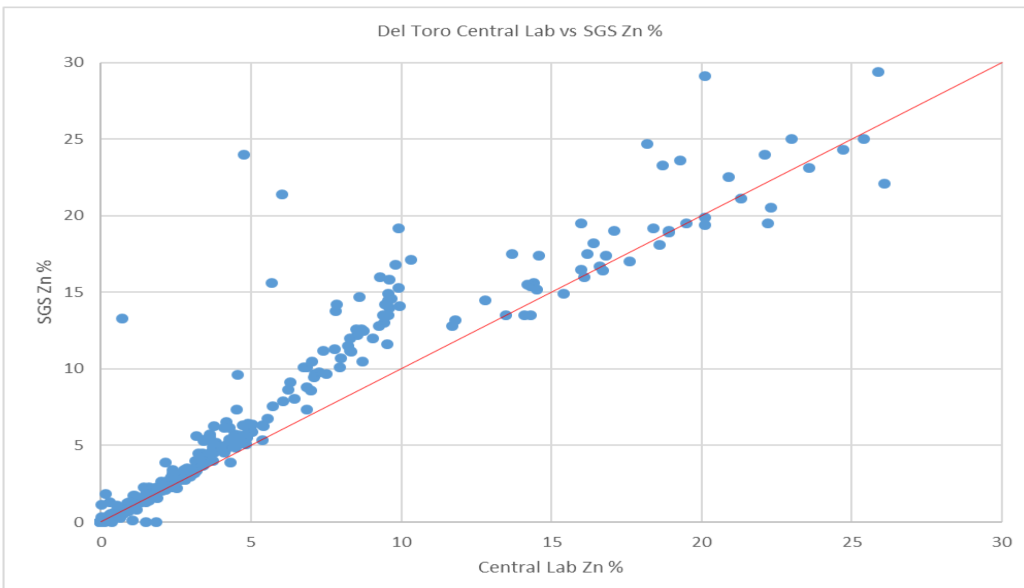
Table 11-6: SGS Durango Re-assay Summary Results

Element	Mean SGS Durango	Mean FMS Central Lab	Bias (%)
Santa Teresa N=86			
Au g/t	0.183	0.186	-1.6
Ag g/t	137	128	7
Pb %	2.32	2.39	-2.9
Zn %	1.15	1.18	-2.5
Cuerpo 3 and Lupita N=427			
Au g/t	0.15	0.143	4.9
Ag g/t	102	96	6
Pb %	3.05	2.78	9.7
Zn %	4.94	4.12	19.9

Note: Extreme outliers are removed, biases are relative to Central Laboratory results.

The results do not indicate any significant biases for the Santa Teresa re-assays, with the possible exception of a modest high SGS Durango bias for silver. For the San Juan data set, there are consistent high SGS Durango biases, particularly for lead and zinc. Analysis of this data suggests that the problem is grade related, as the data set contains a much higher proportion of lead and zinc grades of >3.0% percent than the Santa Teresa data set, and a significant number of results at grades of over 10% lead or zinc. Further, the biases appear related to Central Laboratory procedures in ICP analyses and, specifically, the upper detection limit. The Central Laboratory has been using an upper detection limit of 10% for initial ICP analyses before going to over-limit analyses, whereas most commercial laboratories use an upper detection limit of 1.0% before going to over-limit analyses. This high upper limit will have made it difficult to properly calibrate the ICP unit. A plot of the zinc results is shown in Figure 11-5, where a strong high bias for SGS starts at about 3.0% and increases until close to the 10% upper limit. The plot indicates that higher zinc grades have been significantly under-reported in Central Laboratory analyses, and the same may be said for lead analyses. The break noted in this chart does not occur with lead; however, a stronger bias to SGS Durango does start at about the same 3.0% level.

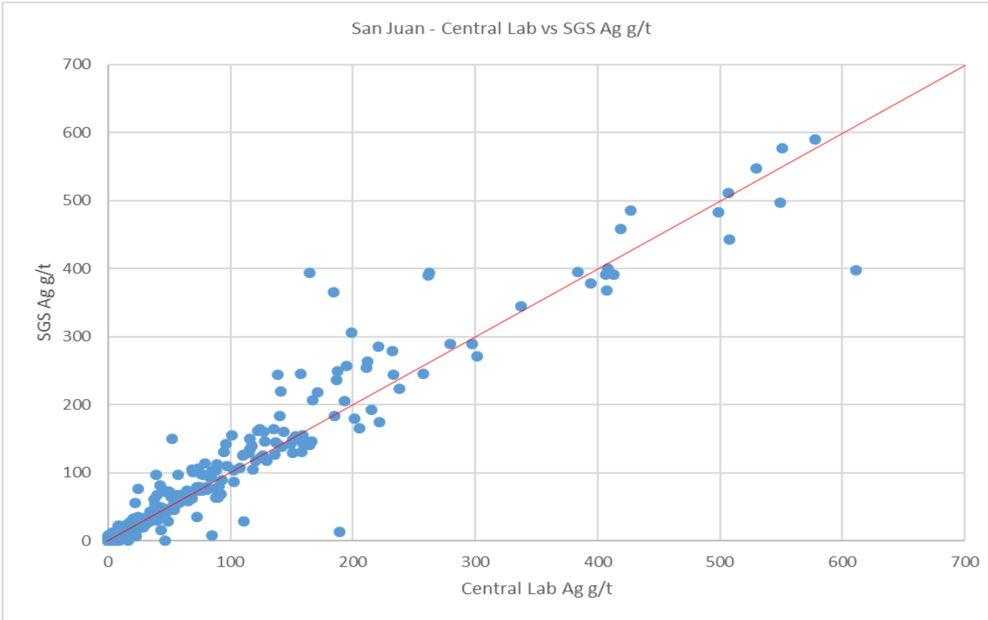
Figure 11-5: SGS vs Central Lab for Zinc, San Juan Data Set



Note: Figure prepared by Andrew Hamilton from QA/QC compilation data, 2017.

The plot for silver results suggests that the same issue may exist to some extent in the AA data for the San Juan mine re-runs, as shown in Figure 11-6. Although a high bias to SGS Durango is present up to about 150g/t of silver, a stronger and more erratic bias is present in results from 150 g/t to about 250 g/t silver. Central Laboratory results may be underestimating silver values.

Figure 11-6: SGS vs Central Lab for Silver, San Juan Data Set



Note: Figure prepared by Andrew Hamilton from QA/QC compilation data, 2017.

The results from the samples that were re-assayed at SGS were accepted for use in the database over the Central Laboratory results, for both the Santa Teresa and San Juan samples. There are additional drill holes in the San Juan mine for which there are samples with high silver, lead and zinc grades that have not been re-assayed at an external laboratory, and only have Central Laboratory results. As has been noted above, these results may underestimate the silver, lead or zinc grades and will therefore will locally have a conservative influence on the resource estimate grades.

11.5 Databases

Until mid-2016, all data capture was onto paper forms. As a part of the 2016 resource estimation process, all data were transcribed to digital format (Microsoft Excel spreadsheets). The data were then transferred to the commercially-available software package DataShed, a system for capturing, validating and managing drill hole data provided by Maxwell GeoServices of Fremantle, Australia. Transfer to DataShed will become easier and cleaner now that the logging software package, LogChief, also supplied by Maxwell GeoServices, is being used for direct electronic data capture.

11.6 Security

11.6.1 Sample Security

For all drill programs, samples have remained in secure company facilities until shipped. For samples being analysed by Inspectorate and SGS Durango, trucks owned by the laboratories were sent to Del Toro to collect the samples.

Samples being analysed at the Del Toro Laboratory or the Central Laboratory at the La Parrilla mine site are transported in rice bags in a company truck and by company employees to the respective facilities.

All samples are shipped in rice bags that are tied at the top with string. In order to reduce potential tampering, the rice bags are required to be tied shut with a zap strap or a numbered security tag.

11.6.2 Storage

All available Del Toro core, rejects and pulps are currently stored at the core shack in the town of Chalchihuites where the exploration facilities are located. Drill core dating back to 2007 is available for reference. The core is generally in good condition and well organized, as are the pulps covering approximately the same period. Rejects are available as far back as 2011, although some of the earliest are in deteriorating conditions, due to being stored in an outdoor location.

11.7 Comments on Section 11

In the opinion of the QP, the quality of the analytical data is sufficiently reliable to support Mineral Resource estimation. Sample collection, preparation, analysis, and security were generally performed in accordance with exploration best practices and industry standards as follows:

- Sample collection and preparation for samples that support Mineral Resource estimation has been in line with industry-standard methods.
- Drill core samples were analysed by independent certified laboratories and the non-independent but certified Central Laboratory using industry-standard methods for gold and silver analyses.
- Drill programs have included the insertion of an adequate number of QA/QC materials.
- The QA/QC program results do not indicate any problems with the contamination or assay precision in either historic or current data.
- Historic standard results from commercial laboratories do not show any problems and demonstrate that the results are accurate, however the results from Central Laboratory analyses, starting in early 2015, do show problems in Central Laboratory results with respect to analytical accuracy. FMS has taken steps to correct this issue and recent results show improved accuracy; however, the Central Laboratory should be monitored on an ongoing basis to ensure that results are of good quality.

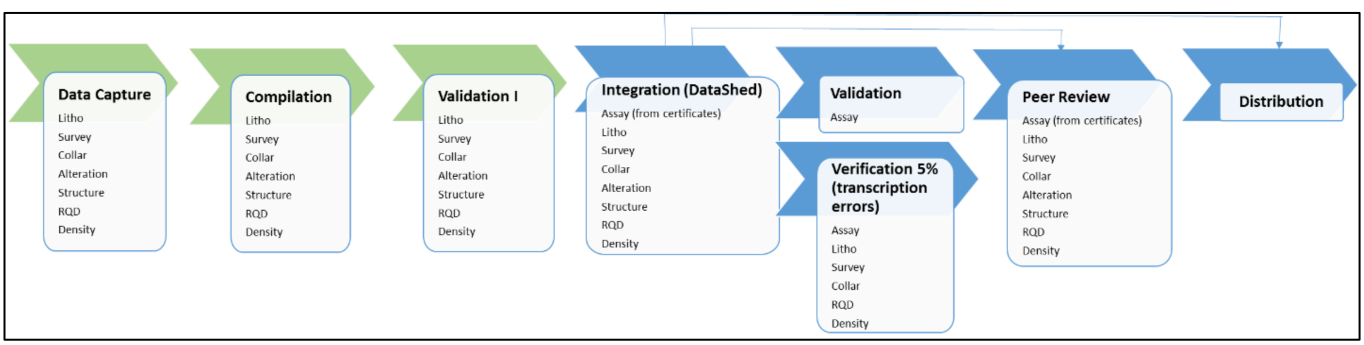
- Re-assays carried out by SGS Durango indicate that the Central Laboratory may be underestimating zinc, lead and silver values. Re-assay results were accepted over Central lab results where available. High-grade drill hole or channel samples do remain in the data base with Central lab results, and these may have a local conservative effect on resource estimation grades.
- Sample security has relied upon the fact that the samples were always attended to by drill crews or company staff while at the project site or logging facilities, and delivered to the laboratory either directly by project staff or commercial trucking companies. Current sample security procedures can be improved through the use of zap straps and/or numbered security straps to tie shut the rice bags used for sample shipments.
- Data is currently captured electronically, entered in databases and validated through a series of built-in validation routines.
- Current sample security procedures are consistent with industry standards.
- Current sample storage procedures and storage areas are consistent with industry standards.

12 DATA VERIFICATION

12.1 Internal Data Verification

All drill data prior to 2015 was in paper format and subject to electronic capture in Microsoft Excel spreadsheets prior to being compiled and imported into DataShed. The flow of historical and new data from capture to use in resource estimates is shown in Figure 12-1. In conjunction with this flowsheet, FMS maintains a detailed spreadsheet of the data validation items for each major table, including the staff responsible for the verification procedures. In addition, the DataShed import process includes a series of built-in checks for errors at all stages, from header to individual tables. Import of assay data, including Quality Assurance and Quality Control (QA/QC) results, in files direct from the laboratory, must match with sample intervals and sample numbers that are already established in the database.

Figure 12-1: Del Toro Data Capture and Validation Flowsheet



Note: Figure from FMS internal documentation, 2017.

All drill holes in the database were subject to validation, and a 5% selection was subject to verification from hard copy records.

12.2 External Peer Review

Once data were added to the database and 5% of records from all tables were checked through a comparison to original hard copy or original digital records, database tables were subject to a QP peer review. This included a final check of collar location relative to topography, a review of downhole surveys for anomalies, a series of interval checks, and a comparison of database assay values to original certificates for over 10% of the assays for each zone. Any discrepancies were bought to the attention of FMS staff for correction.

12.3 Comments on Section 12

In the opinion of the QP, a reasonable level of verification has been completed by dedicated database management staff and external consultants, and no material issues would have been left unidentified from the verification programs undertaken. Drill data are typically verified prior to Mineral Resource and Mineral Reserve estimation through software program checks, comparison to original hard copy data, and peer review. The quality of the drill data is sufficiently reliable to support Mineral Resource and Mineral Reserve estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Background

Table 13-1 shows a summary of testwork completed to support the plant design at Del Toro.

Table 13-1: Metallurgical Testwork Summary

Date	Test Facility	Testwork Performed
03-SEP-09	SGS Mineral Services/Durango	"The separation of Pb/Zn through flotation with an ore sample from the Chalchihuites Project. Final Report SGS-1109": The head of the composite was 0.61 g/t Au, 335 g/t Ag, 6.4% Pb, 7.5% Zn, 5.7% As and 14.3% Fe. The objective was to obtain the best parameters to generate sequential Pb and Zn flotation concentrates from a composite containing high As. The best locked cycle test results were obtained from Test # 24: 48.8% Pb recovery and 34.8% Pb grade (in Pb concentrate); 58% Zn recovery and 53.5% Zn grade (in Zn concentrate). The pH was 9.5 in the Pb circuit, and 10 in the Zn circuit. In addition, gravimetric concentration tests with a Wilfley table were done at K_{80} of 600 µm, 212 µm and 106 µm to attempt eliminate arsenic before flotation. However, the attempts were unsuccessful. Acid leaching tests were performed with H_2SO_4 and alkaline with NaOH to remove arsenic. For acid leaching, the maximum dissolution of As was 2.7%, while it was 14.7% for alkaline leaching. The Bond Ball Work Index (Wi) for the composite was 12.4 kWh/t, being classified as medium hardness.
14-AUG-11	Metallurgical Research Laboratory/Durango	"Sodium Cyanide Leaching Tests of a Composite formed with Samples of San Juan Ore Bodies": The recommended grind size and NaCN concentration were 70% -200 mesh and of 3000 ppm, respectively. The maximum Ag recovery obtained under these conditions was 84.6% after 72 hours of leaching.
25-OCT-11	Industrial Cyanidation Testwork at Unidad La Parrilla	"Industrial Cyanidation Testwork Report for a San Juan Mine Sample": The industrial test was run from October 8 to 16, 2011, with a tonnage of 379 tpd and a head grade of 157 g/t Ag, 1.3% Pb and1.2% Zn. Ag recovery was 68%. Grind size was 64% -200 mesh, the retention time was 50 hours, and cyanide consumption was 3.5 kg/t.
25-JUN-12	Metallurgical Research Laboratory/Durango	"Del Toro Metallurgical Testing Results": Two composites were tested for sequential Pb-Zn flotation: one from San Juan Ore Body 3 and another one from San Nicolas, Perseverancia and Dolores. The metallurgical recoveries from the San Juan composite were 73.6% Ag, 53.3% Pb and 57% Zn, whereas the concentrate grades were 2.9 kg/t Ag, 43.3% Pb (in Pb concentrate) and 52% Zn (in Zn concentrate). Flotation recoveries for the San Nicolas-Perseverancia-Dolores composite were 91.5% Ag, 64.5% Pb and 70% Zn, whereas the concentrate grades were 8.4 kg/t Ag, 36.7% Pb (in Pb concentrate) and 47% Zn (in Zn concentrate).

The metallurgical process flowsheet at Del Toro has experienced some modifications from its original design. Initially, the flowsheet was designed to process two ore types: oxides in a cyanide leaching circuit designed to produce doré, and sulphides via flotation to produce silver-rich lead and zinc concentrates.

During commissioning of the leaching circuit in 2014, however, a series of tests showed that processing lead-oxide ore in the flotation circuit produced higher revenue from silver and lead contents when compared to processing the oxide ore in the cyanidation circuit (which mainly produced silver). As a result, the decision was made to put the cyanidation circuit into care-and-maintenance.

The sulphide flotation circuit has also undergone considerable changes. Originally, the sulphide circuit was designed to produce two concentrates: lead and zinc, with the former containing most of the floatable silver values. The circuit was operated in this configuration for approximately 16 months – from March 2013 to June 2014. However, as the circuit yielded rather low zinc recoveries (< 20%), a decision was made to suspend the production of zinc, and use the installed capacity to process lead oxide ore instead, thereby generating higher revenue from the sale of silver and lead.

The zinc flotation problem was traced to inadequate sample selection and laboratory data interpretation: the majority of zinc minerals mined at that time were not sulphides, but zinc minerals molecularly associated with carbonates, silicates, and oxides and, therefore, not amenable to be processed via flotation.

After halting zinc production in the second half of 2014, efforts were aimed to optimize the lead flotation performance. During that optimization period, plant equipment and operating conditions were adjusted to maximize the recovery of lead sulphide (PbS) and lead oxide (PbO), while controlling the concentration of deleterious elements, particularly arsenic.

The outcome from that optimization approach was quite successful: in 2014, the recovery of silver (in lead concentrate) was 69%; and increased to 74% and 81% in 2015 and 2016, respectively. Del Toro currently operates a viable flotation circuit which regularly posts silver recoveries at or above 80%, at a grinding throughput of approximately 920 t/d.

The learning experiences and changes implemented during the metallurgical optimization work were applied using observations directly from the plant. Laboratory work was limited, as it was considered to be of lesser priority. Consequently, the analysis discussed here exclusively relies on plant performance data while the proposed metallurgical relationships were derived using consolidated production figures from 2016, the last year of stable and successful operation.

13.2 Definition of Ore Types and Plant Feed Classification

Ore types are classified as oxides, sulphides, and transitional material. In the original design, transitional ore was intended to feed either the oxide or sulphide circuit depending on actual plant performance. However, as the cyanide leach tanks were decommissioned, transitional ore now has to be processed in the flotation circuit, provided the proportion of this ore type in the plant feed is limited to control adverse effects on metallurgical recovery.

In Table 13-2 the ore that fed the plant in 2016 has been classified into six categories depending on the composition of sulphide and transition material. Feed class "A" has the lowest fraction of sulphide ore (50%), and feed class "F" has the highest (100%). It can be seen that the plant feed contained > 30% transition ore during only 5% of the operating days in 2016.

Table 13-2: Plant Feed Composition and Grinding Performance in 2016

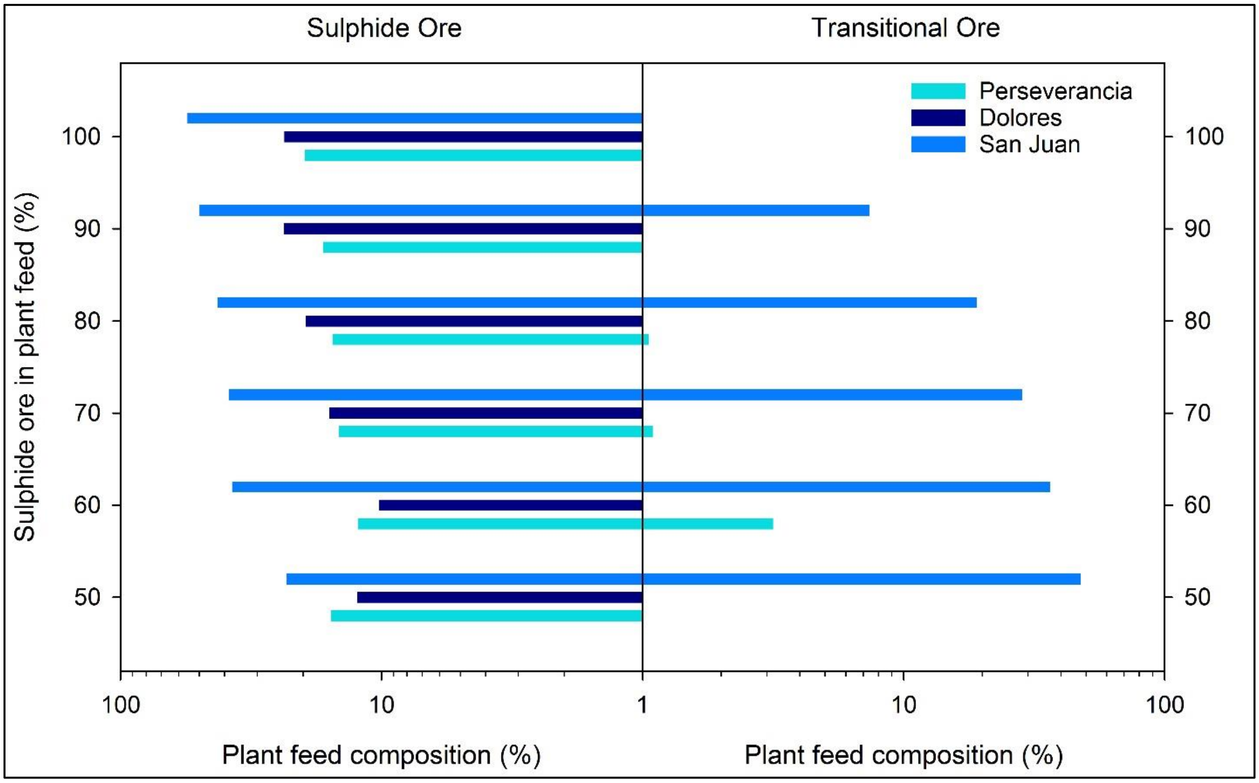
Feed Class	Plant Feed Composition			Grinding Performance	
	Sulphide	Transition	Frequency	Tonnes/Day	P_{80}(μm)
A	50%	50%	1%	895	82
B	60%	40%	4%	945	89
C	70%	30%	10%	934	83
D	80%	20%	17%	929	84
E	90%	10%	38%	938	84
F	100%	0%	30%	891	84

Table 13-2 also includes average grinding performance indicators (throughput and grind size) for each feed class. Plant throughput averaged approximately 920 t/d and was independent of the feed composition. Grind size (P_{80}) shows a minor variation (82-84 μm), with the exception of feed class "B," in which P_{80} appears to be slightly higher (7%). This suggests that, besides sulphide/transition content, other factors might be at play.

Figure 13-1 further dissects the analysis of feed composition. Overall, three general trends can be observed:

- Total sulphide content in the plant feed increases linearly with increasing the fraction of San Juan sulphide ore. (Note that the scale on the horizontal axis is logarithmic and that feed class "B" has been excluded, as it falls away from the linear relationship. This exclusion is reasonable, as feed class "B" comprises a higher-than-typical amount of Perseverancia ore, both sulphide and transitional).
- Total transitional content in the plant feed increases linearly with increasing the fraction of San Juan transitional ore.
- Dolores is the second source of sulphide ore, except for feed class "A" and "B," in which Perseverancia provides more sulphide material.

Figure 13-1: Plant Feed Composition Per Mine Domain in 2016

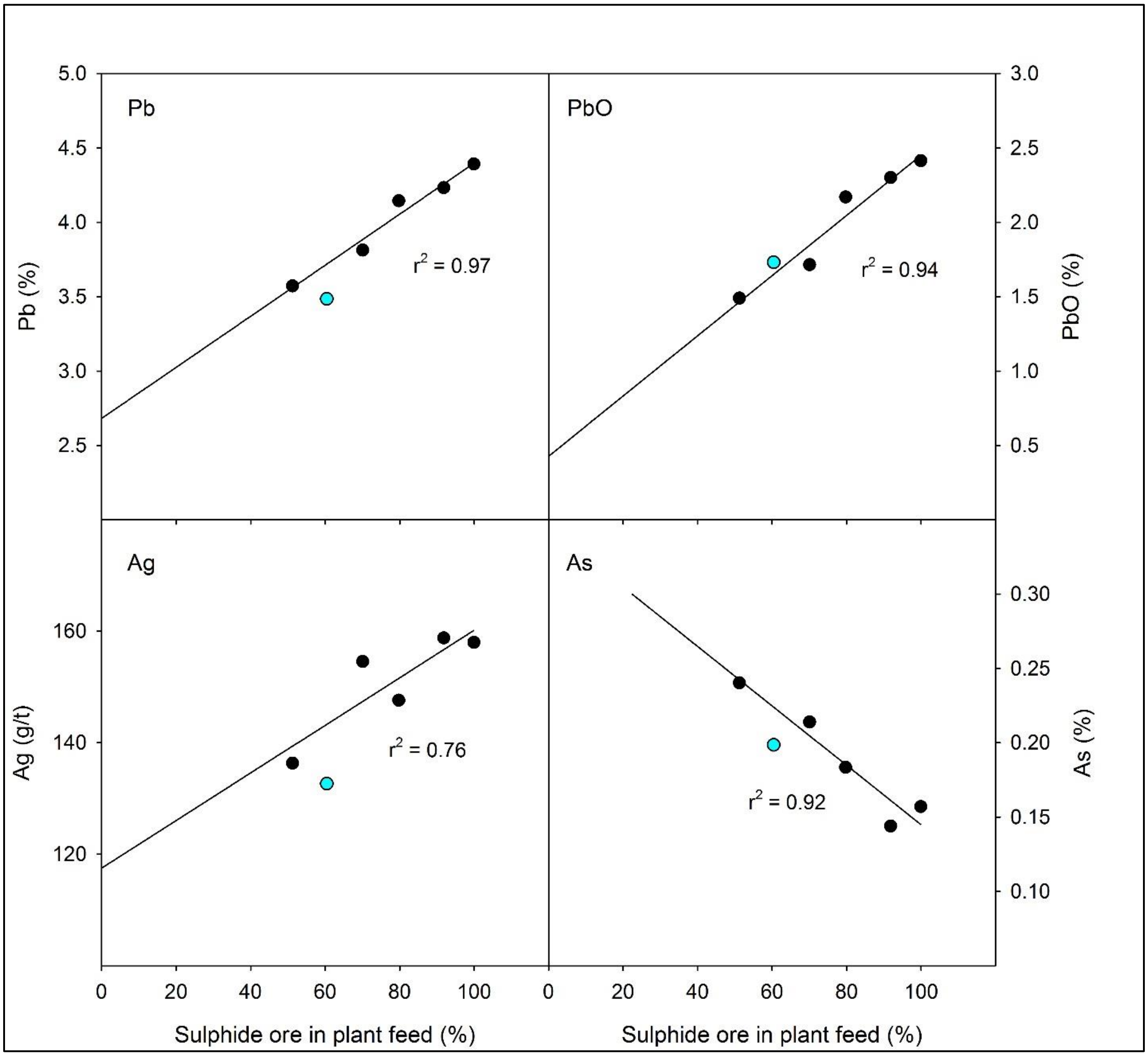


Note: Figure prepared by FMS, 2017.

Head grades of key chemical species also exhibit consistent trends, as shown in Figure 13-2: lead, PbO and silver increase with increasing sulphide ore content, though the relationship is more scattered in the case of silver, possibly due to lower analytical precision. Arsenic grade decreases with increasing sulphide content.

The figure highlights (in light blue) the data point corresponding to feed class "B" (60% sulphide), as including this point in the analysis needs caution due to the apparent differences with this feed class (refer to the discussion around Figure 13-1). Since this analysis relies on production data from the plant—where precise control of ore type is impractical—characterizing variations and trends of feed composition is key to formulating reliable metallurgical grade-recovery relationships.

Figure 13-2: Variation of Head Grades with Sulphide Content in Plant Feed

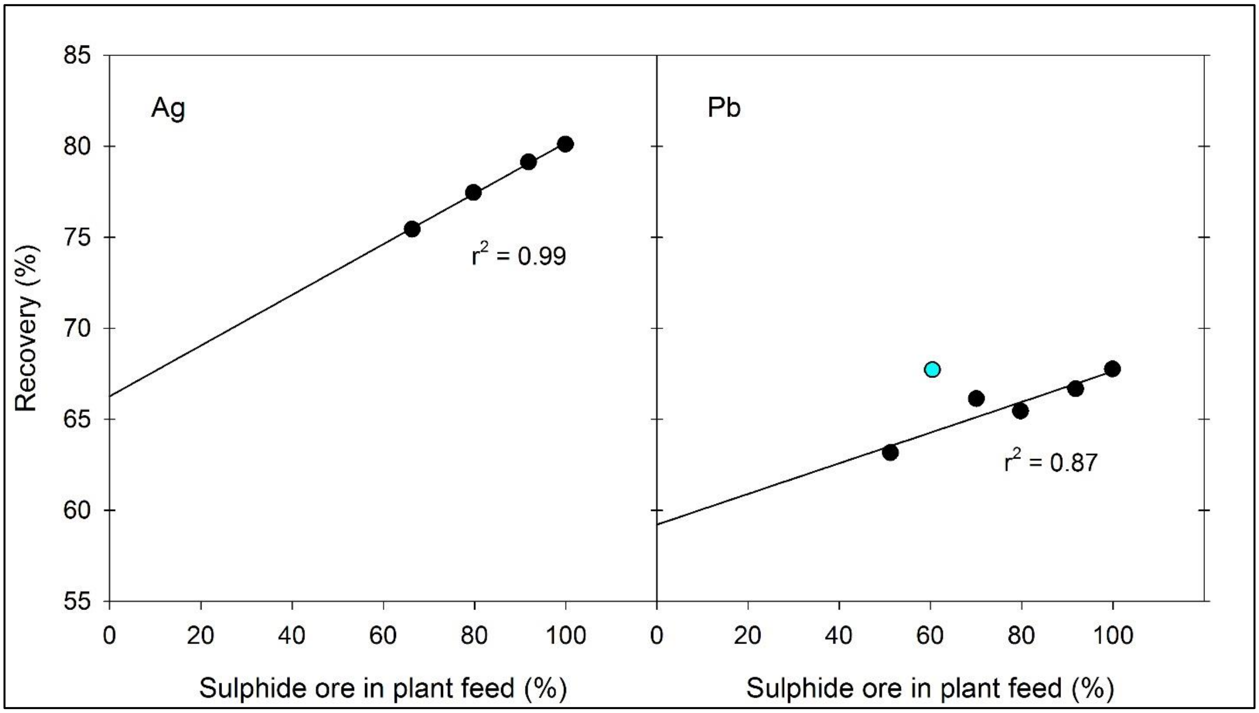


Note: Figure prepared by FMS, 2017.

Figure 13-3 shows the effect on silver and lead recovery of sulphide content. Despite the fact that the sulphide/transition determination of a given ore is essentially a subjective (non-quantitative) process which relies on visual evidence, consistent trends can be observed: recovery decreases with decreasing sulphide ore content. The data indicate that controlling transitional ore content to approximately < 10% is an effective operating strategy to maintain silver recovery at or above 80%.

In the case of lead, it is evident that the point corresponding to feed class "B" (60% sulphide) overestimates the recovery relative to the indicated relationship. This can occur because the ore from Perseverancia is cleaner than San Juan ore.

Figure 13-3: Effect of Sulphide Content on Silver and Lead Recovery



Note: Figure prepared by FMS, 2017. The blue point highlights the variation in composition of that particular ore type (60% sulphide) compared to the typical mill feed (see Figure 13-1).

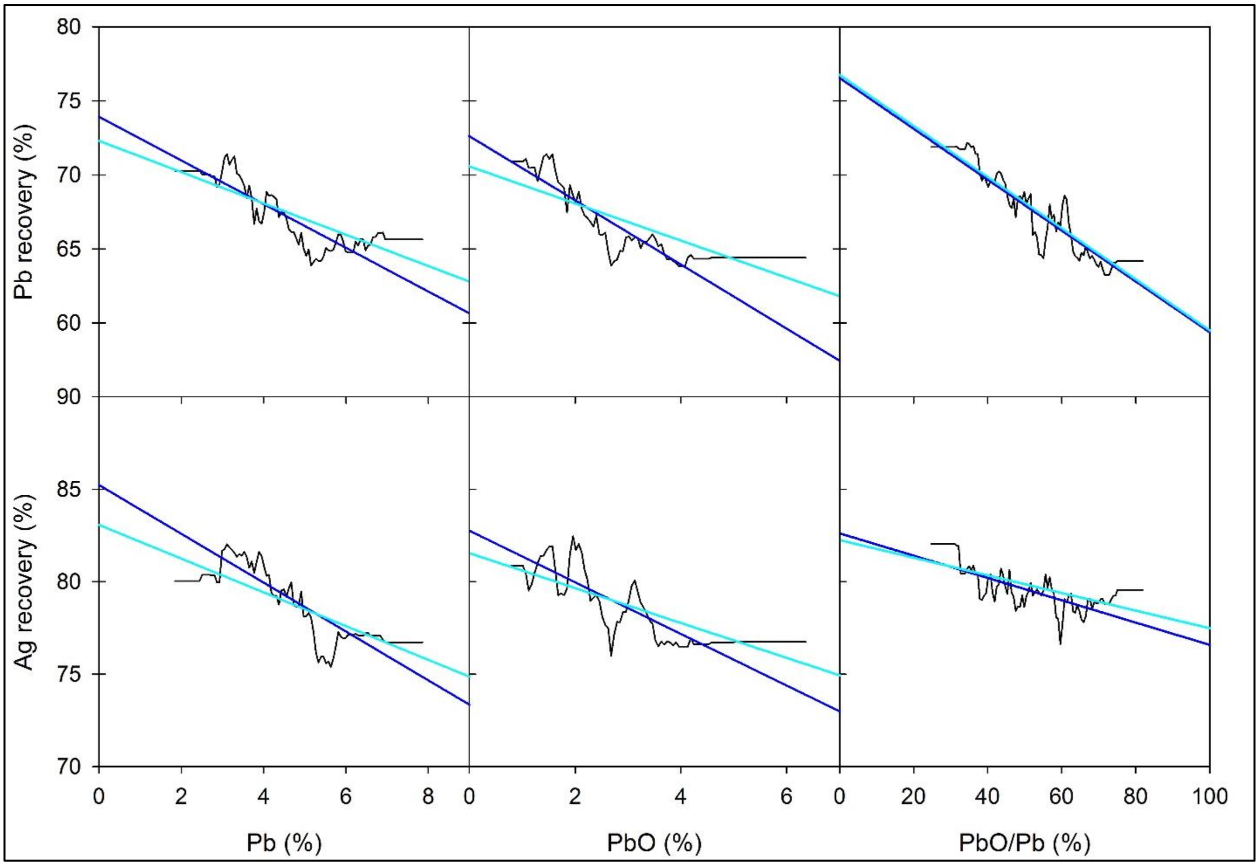
13.3 Modeling Metallurgical Recovery

The information shown in Figure 13-3 can be used to address certain mine operating issues. For example, it can be applied in short- and long-term production planning, as mining restrictions at Del Toro often require the mill to be fed with transition ore. However, it is necessary to develop reliable mathematical relationships that quantitatively correlate head assays with the metallurgical grade-recovery performance of the plant. Examples of the development of such relationships is given in Figure 13-4.

The figure shows the effect of lead and PbO head grades on the recovery of lead and silver using three line charts (black, dark blue and light blue). The black line results from applying a statistical smoothing algorithm (moving average) to the 2016 daily production database. It can be seen that lead and silver recovery decreases with increasing lead head grade, until a point (approximately 5% Pb) above which the recovery ceases to decrease and levels out. A similar trend can be observed for PbO but, in this case, the recovery levels out at approximately 4%.

This behaviour between head grades (lead and PbO) and recovery occurs because of the metallurgical processing strategy: the circuit targets first the recovery of the PbS followed by sulphidisation conditioning that promotes PbO flotation. As shown in Figure 13-2, PbO increases with increasing PbS, and even ore classified as 100% sulphide contains significant PbO. Consequently, PbO plays a controlling role on recovery since PbO floats significantly slower than PbS: as PbS increases so does PbO, tempering the overall flotation kinetics. Above a threshold lead head grade (5%, in this case) the detrimental effect of PbO on recovery is counterbalanced.

Figure 13-4: Effect of Head Grade on Plant Metallurgical Recovery



Note: Figure prepared by FMS, 2017. Smoothed raw production data (black line); Regression line from raw data (dark blue line); Regression from smoothed line (light blue). Model is valid provided both regression lines match, which only occurs when modeling in terms of the ratio PbO/Pb.

The coloured graphs are linear regression attempts to model the plant data. The dark blue line is obtained from the raw data (the entire 2016 daily production database), while the light blue line is calculated using the smoothed data (black line chart). The criterion to determine whether a model is reliable requires both regression lines to match.

It is evident that modeling attempts using individual assays (lead and PbO) were unsuccessful. However, the problem was resolved by performing the analysis in terms of the ratio of PbO/Pb: the regression lines for silver reasonably match, while the agreement is nearly perfect in the case of lead. The proposed metallurgical recovery models are:

$$\text{Pb recovery (\%)} = 77 - 17\,\frac{PbO}{Pb} \qquad (13\text{-}1)$$

$$\text{Ag recovery (\%)} = 83 - 6\,\frac{PbO}{Pb} \qquad (13\text{-}2)$$

The ratio of PbO/Pb represents the fraction of total lead occurring as oxide and, thus, it could be regarded as a metric gauging the "degree of oxidation" of lead. This facilitates interpretation: lead recovery varies linearly between 77% and 60% (i.e., when total lead occurring is oxides), and silver between 83% and 77%, depending on the degree of oxidation (the higher the oxidation degree, the lower the recovery). It should be noted that the model intrinsically assumes that all lead-bearing species occur either as galena (PbS) or lead oxide (PbO), which is a reasonable assumption. The projected average metallurgical recoveries used in the Life of Mine (LOM) model are 82.3% for silver and 67.5% for lead.

Production at Del Toro originates from three different mines, each mine hosting multiple geological domains. This condition represents a considerable variability of the types of minerals comprising the plant feed. Mineralogical variability is managed by blending the feed from the different mines. In the opinion of the QP, this variability is better captured in the historical performance data of the processing plant, which is the information used for modeling the metallurgical recoveries in the LOM plan.

13.4 Modeling Concentrate Grade and Deleterious Elements

An approach similar to that followed to develop the metallurgical recovery equations was applied to model concentrate grade, as shown in Figure 13-5. The analysis shows that the relationship between head and concentrate grades is linear in the case of lead, whereas for arsenic it is exponential. The proposed models are:

$$\text{Pb concentrate grade (\%)} = 34.7 + 1.9x \qquad (13\text{-}3)$$

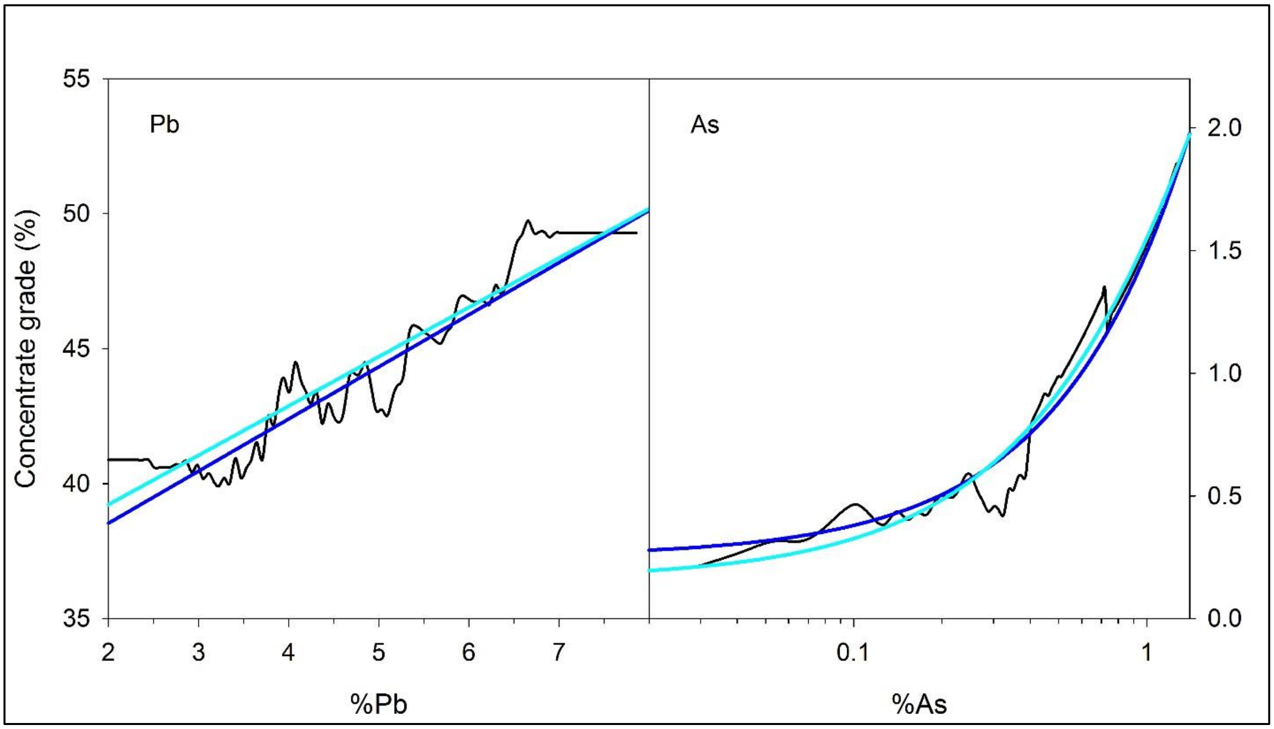
$$\text{As concentrate grade (\%)} = 0.254 + 33.36\,(1 - 0.963^{y}) \qquad (13\text{-}4)$$

where x and y are the head assays (%) of Pb and As, respectively.

Figure 13-5 indicates that controlling the plant feed with < 0.6% arsenic is necessary to produce a flotation concentrate with < 1% arsenic. Arsenic content was adequately controlled at 0.5% average in 2016 and, according to the current mine plan, will continue to be under control.

Selenium is another deleterious element that occurs in the ore. However, it has not been an issue for concentrate marketing to date and it is being regularly monitored.

Figure 13-5: Modeling Concentrate Grade



Note: Figure prepared by FMS, 2017.

13.5 Comments on Section 13

The opinion of the QP includes the following considerations:

- The models proposed were developed using production data from a full year of operation (2016). Consequently, they are applicable to mining sequences and ore compositions similar to those indicated in Figure 13-1. Significant plant feed composition changes (e.g., a reduction of San Juan ore) would require recalibrating the models. It is recommended to perform routine checks, for example, every six months.

- There are alternatives—other than the ratio PbO/Pb—to estimate "degree of oxidation." One example is the direct measurement of sulphide and total sulphur using the LECO analyser (combustion followed by infrared detection). It is recommended to explore this possibility to improve production planning and metallurgical performance modelling.

- The models are valid for typical milling conditions (~920 t/h and ~80 μm P_{80}). Significant variations from these conditions would also need recalibration.

- Metallurgical recovery of silver is estimated to range between 83% and 77% as a function of the degree of oxidization of the ore. Similarly, metallurgical recovery of lead is estimated to range between 77% and 60%.

- As shown in Table 13-1, ore grindability is not an issue, as the grinding circuit has ample capacity to reach the target grind size (82-84 μm) and plant throughput (920 t/d).

- The recovery model shows that it is important to control the plant feed with < 0.6% As in order to produce a flotation concentrate with < 1% arsenic.

14 MINERAL RESOURCE ESTIMATES

Mineral Resource estimation at Del Toro was performed on four vein systems within three mining operations and three exploration veins:

- The Dolores mine - Inclusive of the Santa Teresa, Santa Teresa de Alto, Santa Teresa de Bajo, Purisima and Dolores veins;
- The Perseverancia mine - Inclusive of the San Nicolas and Escondida veins;
- The San Juan mine - Inclusive of the Lupitas, Lupitas Alto, San Jose and San Jose Alto, Cuerpo 1, Cuerpo 2 and Cuerpo 3 veins;
- The Zaragoza exploration vein; and
- The Carmen and Consuelo exploration veins.

Three estimation methodologies were used within the estimation process to address both the varying geological and mineralisation characteristics. For reporting purposes, the veins have been grouped as follows:

- Section 14.1 Mineral Resources for Dolores, Perseverancia, San Juan-Lupitas;
- Section 14.2 Mineral Resources for San Juan Cuerpo 3; and
- Section 14.3 Mineral Resources for Minor Veins.

14.1 Mineral Resources for Dolores, Perseverancia and San Juan-Lupitas

14.1.1 Introduction

The Mineral Resource estimate for the Dolores, Perseverancia and San Juan-Lupitas (DPL) vein systems was estimated with reference to the 2003 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines (2003 CIM Guidelines), and the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards).

The resource estimate is based on the current drill hole database, underground level mapping, and digitized data for underground drifts and stopes. The geological modelling was completed in Leapfrog Geo 4.0. Compositing, interpolation, model validation, depletion and classification were undertaken in GEOVIA Surpac™ 6.7. Exploratory Data Analysis (EDA) was undertaken in Geovariances Isatis™ 2016.1.

The DPL Mineral Resource evaluation methodology involved the following processes:

- Drill hole database three-dimensional (3D) spatial validation and assay, collar, and survey crosschecks against hard copy logs;
- Interpretation of 3D geological solids representing dominant host lithologies and the late stage of barren intrusive dikes;
- Exploratory Data Analysis of waste and mineralized raw sample and subsequent composite data
- Block model grade estimation for silver, gold, lead, zinc, and arsenic using Ordinary Kriging (OK) and inverse distance and density estimation when possible;
- Coding of block models for mine depletion, dikes and density average assignment when insufficient measurements were available for density interpolation; and
- Classification and risk assessment.

14.1.2 Database Summary

The DPL resource estimate was based on the drill hole database, underground level mapping, power-saw channel samples, and digitized data for underground drifts and stopes for depletions.

The data used for the estimate contained all available collar, assay, survey, and lithology information up to the following close-out dates:

- Santa Teresa, Purisima, and Dolores: 13 September 2016;
- Perseverancia: 13 February 2017; and
- San Juan-Lupitas: 6 March 2017.

Database drilling and channel sample data available for the estimate are presented in Table 14-1.

Table 14-1: Drill Hole Database Records

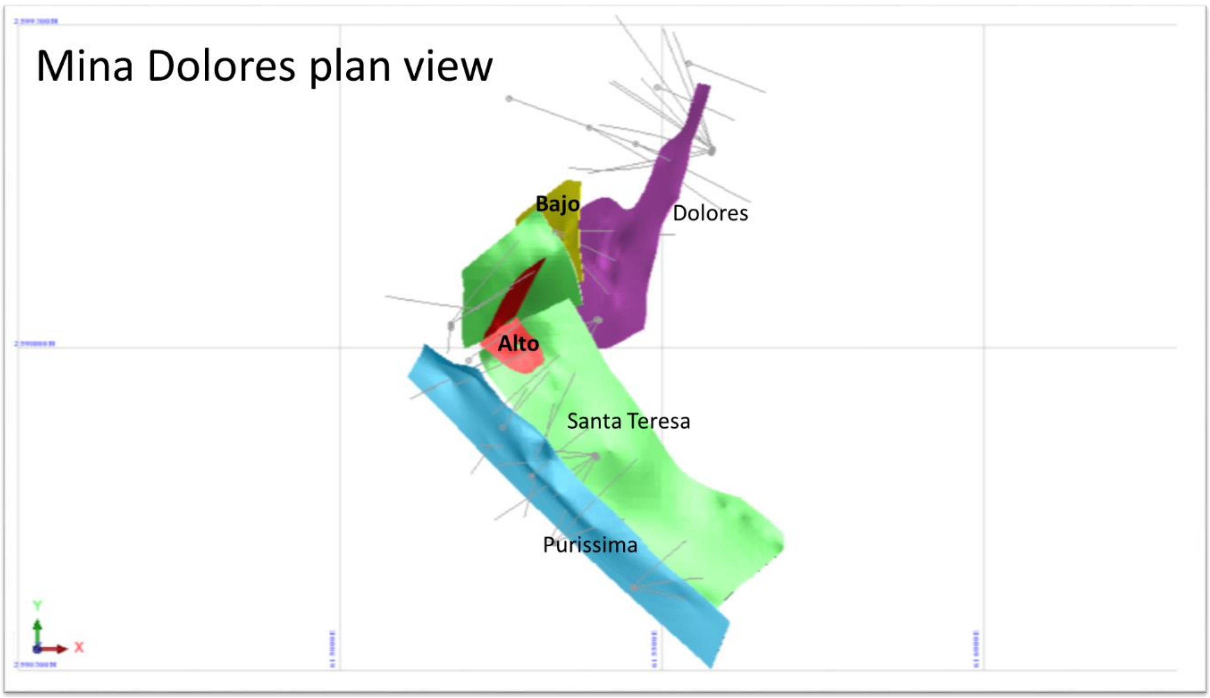
Data Records	Collar	Lithology	Assay (Ag)	Survey
Dolores	45	2,492	4,352	234
Perseverancia	91	5,951	11,338	416
San Juan-Lupitas	50	2,698	3,033	241

Validation steps were undertaken on assay data to ensure all results were within expected ranges and the background values were consistent.

14.1.3 Geological Model

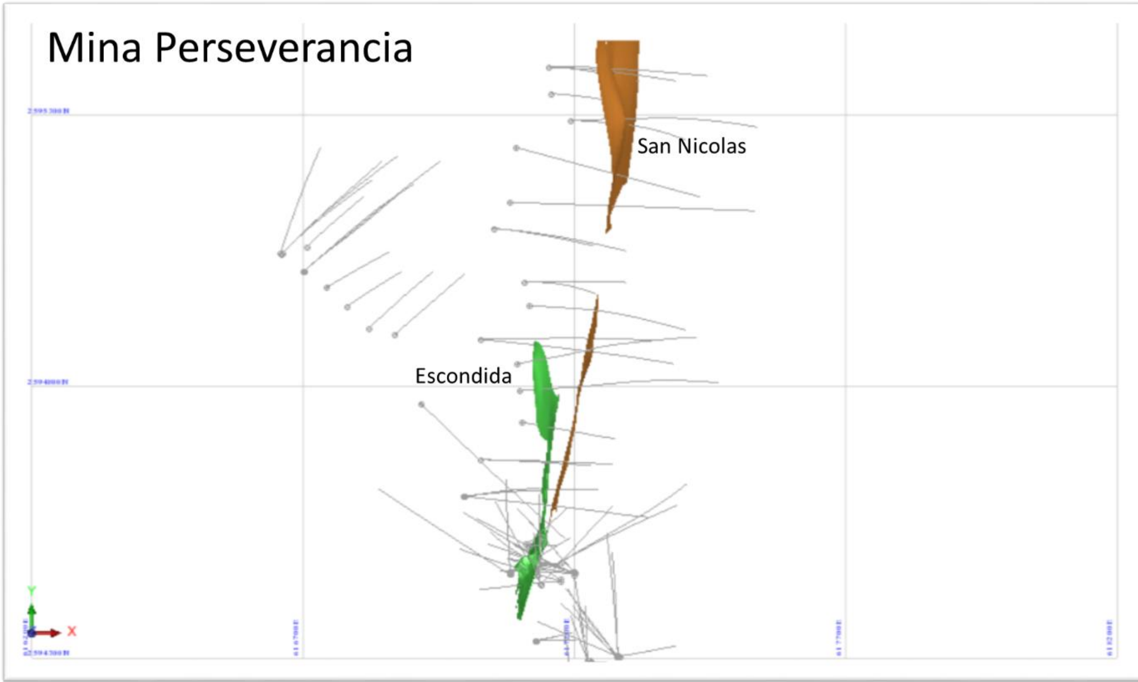
The hanging wall and footwall limits of the veins were delineated from drill hole geological logs and drill core photo review, together with associated sample assay values. Geological mapping from underground mining levels was used to further constrain the geological model. The geological models were constructed using Leapfrog Geo 4.0. Figure 14-1, Figure 14-2 and Figure 14-3 show the modelled solids for Dolores, Perseverancia, and San Juan-Lupitas, respectively.

Figure 14-1: Geological Model for Dolores



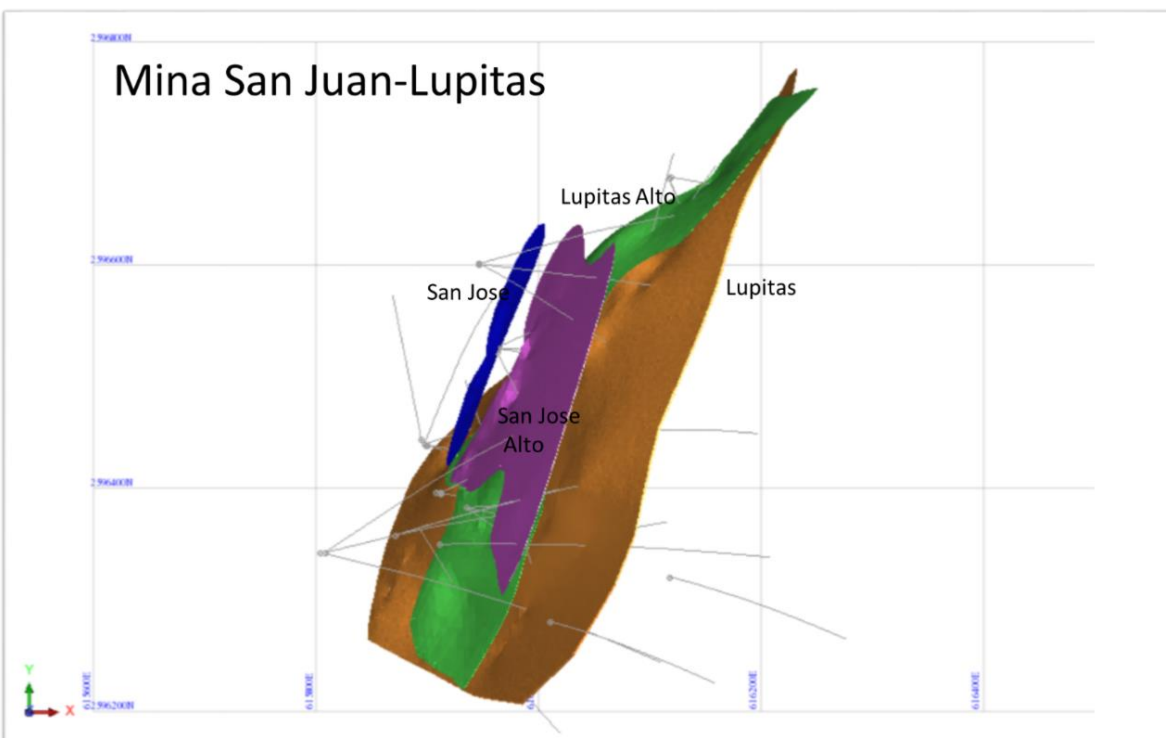
Note: Figure prepared by Entech 2017. Plan view showing the Dolores vein (purple) Santa Teresa vein (green), Santa Teresa de Alto vein (red), Santa Teresa Bajo vein (yellow) and Purisima vein (blue). Full projection of all levels, north is up. Grid is in metres.

Figure 14-2: Geological Model for Perseverancia



Note: Figure prepared by Entech 2017. Plan view showing Escondida vein (green) and San Nicolas vein (brown). Full projection of all levels, north is up. Grid is in metres.

Figure 14-3: Geological Model for San Juan-Lupitas



Note: Figure prepared by Entech 2017. Plan view showing the Lupitas vein (brown), Lupitas del Alto vein (green), San Jose de Alto vein (purple) and San Jose vein (blue). Full projection of all levels, north is up. Grid is in metres.

14.1.4 Assay Sample Values and Compositing

Exploratory Data Analysis

All available drilling and channel intercept within the veins were flagged with a unique code. This table was used for both sample and composite data extraction of silver, gold, lead, zinc, and arsenic.

Data were split into core and channel samples, and assessed for bias.

Review of the core versus channel data indicated that:

- Channel sample data are subject to a grade-clustering bias, due to the limited production areas sampled and batch sampling approach;
- Core sample data was widely spaced with limited coincident core and channel sampled areas;
- Core spacing was widely spaced within all vein systems; and
- The channel sample methodology represented a half core extraction with a power saw across the roof of the drives and was undertaken using equipment and procedures to approximate a core intercept and reduce the sample bias inherent with chip channel sampling.

Both core and channel composite data were used for estimation purposes.

Mineralisation Composites

Sample length analysis indicated a large variance in intercept sample size with many instances of single domain intercepts of 0.25 m to 4.25 m in length and a mean of 0.65 m to 0.89 m. The variable sample lengths were addressed with a two-dimensional (2D) compositing and interpolation approach using the true width. This was considered appropriate in instances where mining selectivity across the domain is unlikely. An additive accumulation variable was calculated using the following formula:

Accumulation Variable "Uncut Accum" = True Width x Uncut Composite Grade Value

Density Composites

Raw density measurements were statistically investigated for outliers and then interval-composited in each of the DPL domains. Each drill hole intercept that had been measured for density thus contained one density g/cm^3 composite.

A density regression study was undertaken for the composite data within the Santa Teresa domain to investigate the application of a regression for density value derivation within the block model. The resulting regression, however, was compromised by limited data and was not used for estimation purposes.

Waste Composites

Waste intercept intervals were composited downhole to 2 m best-fit lengths with a minimum of 0.4 m included. Intervals of less than 0.4 m (residuals) were length-weighted and added into the preceding composite. Where an isolated intercept less than 0.4 m was not able to be added into a neighbouring composite, it was removed from the data set.

Domaining Analysis and Statistics

Statistical and visual analysis was performed in order to validate the overall domain controls on mineralisation and to ensure further domaining was not required. To assess the global, unbiased characteristics of the composite sample values for silver, arsenic, gold, lead, and zinc within the geological domains, the data were declustered by a cell declustering method. Each composite was assigned a weight proportional to the volume it may represent.

The summary statistics are presented in Table 14-2.

Table 14-2: Summary Composite Statistics for Silver, Gold, Lead, and Zinc by Domain

Deposit	Number	Minimum	Maximum	Mean	Median	Std Deviation	CV
Ag							
Santa Teresa	43	2	1401	236	121	288	1.22
Santa Teresa Alto	6	30	634	171	71	230	1.34
Santa Teresa Bajo	4	325	694	499	340	194	0.38
Purisima	16	1	400	97	16	122	1.25
Dolores	15	22	1900	202	64	472	2.33
San Nicolas	35	0	876	78	8	194	2.48
Lupitas	53	0	1006	156	63	225	1.44
Lupitas Alto	25	3	933	227	115	282	1.24
San Jose	9	99	1126	566	444	390	0.68
San Jose Alto	11	12	937	191	66	272	1.42
Au							
Santa Teresa	43	0.002	2.120	0.320	0.130	0.440	1.370
Santa Teresa Alto	6	0.037	0.480	0.140	0.090	0.170	1.170
Santa Teresa Bajo	4	0.042	0.850	0.390	0.280	0.340	0.880
Purisima	16	0.007	1.050	0.240	0.110	0.220	1.170
Dolores	15	0.002	2.480	0.830	0.560	0.770	0.930
San Nicolas	35	0.000	1.090	0.080	0.020	0.190	2.470
Lupitas	53	0.001	0.360	0.080	0.050	0.080	1.080
Lupitas Alto	25	0.001	0.350	0.070	0.040	0.082	1.190
San Jose	9	0.006	0.090	0.030	0.010	0.037	1.110
San Jose Alto	11	0.006	0.080	0.030	0.030	0.020	0.690
Pb							
Santa Teresa	43	0.01	28.43	3.99	1.29	5.86	1.47
Santa Teresa Alto	6	0.57	16.21	4.26	1.80	5.90	1.38
Santa Teresa Bajo	4	10.20	20.99	15.51	12.27	5.10	0.33
Purisima	16	0.00	12.00	1.98	0.05	4.06	2.05
Dolores	15	0.47	11.83	2.45	1.92	2.79	1.14
San Nicolas	35	0.00	21.89	3.31	1.03	5.38	1.62
Lupitas	53	0.00	42.97	5.31	1.51	8.74	1.65
Lupitas Alto	25	0.01	29.45	4.45	1.12	7.68	1.72
San Jose	9	3.06	23.83	12.52	11.49	6.89	0.55
San Jose Alto	11	0.10	23.71	5.33	1.27	7.71	1.45
Zn							
Santa Teresa	43	0.00	8.48	1.20	0.22	2.08	1.73
Santa Teresa Alto	6	0.03	3.82	1.26	0.08	1.53	1.21
Santa Teresa Bajo	4	0.14	9.87	4.18	2.37	4.16	0.99
Purisima	16	0.00	1.19	0.15	0.01	0.31	1.98
Dolores	15	0.00	3.46	0.56	0.03	1.03	1.83
San Nicolas	35	0.00	3.80	0.55	0.14	0.92	1.68
Lupitas	53	0.00	9.70	1.42	0.35	2.29	1.61
Lupitas Alto	25	0.00	5.50	0.76	0.22	1.37	1.80
San Jose	9	0.08	4.33	0.88	0.32	1.36	1.55
San Jose Alto	11	0.00	3.13	0.57	0.13	0.96	1.67

14.1.5 Outliers Evaluation

A combination of histograms, log-transformed probability plots, and percentile analysis was used to identify population outliers for the "Uncut Accumulation" and "Uncut Intercept" composites for all variables. After the spatial location of these outliers was examined, a metal sensitivity analysis was undertaken before appropriate capping values were applied to the composites. Silver, gold, lead, zinc, and arsenic values were assessed.

All applied capping values were individually reviewed for each domain to ensure the reduction in metal was statistically appropriate and locally relevant (Table 14-3).

Table 14-3: Applied Capping Values for Silver, Gold, Lead and Zinc by Domain

Deposit	Applied Cap	Number Capped	Uncapped		Capped	
			Mean	CV	Mean	CV
Ag						
Santa Teresa	800	3	242	1.1	230	1.0
Santa Teresa Alto	-	0	289	0.8	-	-
Santa Teresa Bajo	800	1	471	0.5	389	0.2
Purisima	800	1	137	1.6	115	1.3
Dolores	500	1	191	1.3	159	0.9
San Nicolas	800	1	129	2.3	105	1.8
Lupitas	600	1	87	1.5	85	1.5
Lupitas Alto	800	2	224	1.2	219	1.2
San Jose	1000	1	554	0.6	544	0.5
San Jose Alto	1000	1	414	2.0	255	1.4
Au						
Santa Teresa	1.0	2	0.3	1.1	0.3	1.0
Santa Teresa Alto	-	0	0.2	0.6	-	-
Santa Teresa Bajo	-	0	0.4	1.0	-	-
Purisima	1.0	2	0.4	1.4	0.3	1.1
Dolores	3.0	2	1.2	1.0	1.1	1.0
San Nicolas	1.0	1	0.2	3.6	0.1	1.8
Lupitas	0.2	2	0.1	2.1	0.0	1.0
Lupitas Alto	0.2	1	0.1	1.0	0.1	0.8
San Jose	-	0	0.0	0.8	-	-
San Jose Alto	-	0	0.0	0.7	-	-
Pb						
Santa Teresa	15.0	4	4.36	1.26	4.07	1.17
Santa Teresa Alto	15.0	1	7.39	0.82	7.31	0.81
Santa Teresa Bajo	15.0	1	15.70	0.56	12.20	0.15
Purisima	15.0	1	2.26	1.98	2.16	1.92
Dolores	5.0	2	2.81	0.56	2.74	0.53
San Nicolas	20.0	2	6.42	1.68	4.97	1.20
Lupitas	18.0	2	2.93	1.80	2.71	1.61
Lupitas Alto	18.0	3	5.46	1.70	4.27	1.53
San Jose	-	0	12.51	0.40	-	-
San Jose Alto	-	0	15.23	1.33	-	-
Zn						
Santa Teresa	-	0	1.05	1.1.61	-	-
Santa Teresa Alto	-	0	1.76	1.4	-	-
Santa Teresa Bajo	-	0	2.49	0.8	-	-
Purisima	-	0	0.22	1.9	-	-
Dolores	4	1	0.87	1.9	0.76	1.8
San Nicolas	-	0	1.09	1.6	-	-
Lupitas	5	1	0.75	1.6	0.73	1.5
Lupitas Alto	5	1	1.03	1.9	0.85	1.5
San Jose	-	0	0.81	1.3	-	-
San Jose Alto	-	0	0.59	1.7	-	-

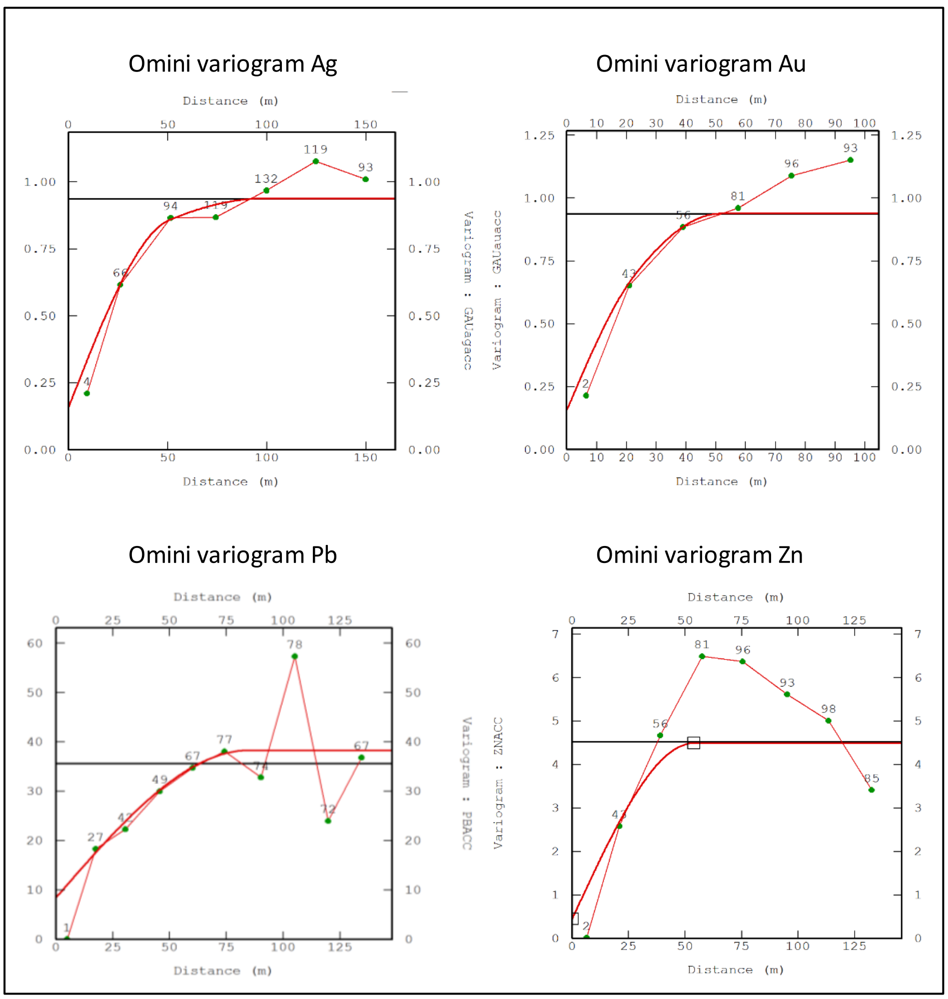
14.1.6 Variography

Geostatistical modelling in the 2D space of the top cut accumulated variables within well-sampled domains resulted in robust semi-variogram models for the Dolores mine domain (Figure 14-4), which were used for Kriging Neighbourhood Analysis (KNA) and subsequent grade interpolation of the Santa Teresa, Alto, Bajo, Purisima and Dolores domains.

Variography was undertaken within the Perseverancia and San Juan Lupitas vein systems; however, robust models were not delineated due to the limited number of composite data.

A summary of the variogram model parameters as used for the DPL model interpolation is presented in Table 14-4.

Figure 14-4: Santa Teresa Omni-Directional Variogram for Silver, Gold, Lead and Zinc.



Note: Figure prepared by Entech, 2017.

Review of available density composites indicated that the Santa Teresa domain contained a sufficient number for robust variography and subsequent OK estimation.

Table 14-4: Omni-Directional 2D Variogram Model Parameters - Santa Teresa Domain

Variable	Relative Nugget	Structure	Relative Sill	Range (m)
Ag	22%	1st	59%	51.2
		2nd	19%	98.2
Au	23%	1st	25%	23.1
		2nd	52%	51.5
Pb	22%	1st	78%	84.4
Zn	10%	1st	90%	53.9
Density	26%	1st	74%	73.1

The Santa Teresa variogram models were considered appropriate for use within the statistically similar and spatially localised domains of Santa Teresa Alto, Santa Teresa Bajo, Purisima and Dolores. Robust semi-variogram models for these domains were compromised by a limited number of composites; however, the relative variogram models for the Santa Teresa domain were overlain on the Santa Teresa Alto, Santa Teresa Bajo, Purisima and Dolores semi-variograms to ensure reasonable proportionality of nuggets, sills and ranges prior to interpolation.

14.1.7 Specific Gravity

FMS conducted Specific Gravity (SG) measurements using the wax-coated water displacement method on 72 drill core samples. The samples were collected both from the veins and from the surrounding waste rocks, and the values ranged from 2.4 to 4.9 g/cm3. Outliers were not identified in the composited data. No capping was undertaken. The true width compositing process used averaged multiple density measurements within each drill hole vein intersection, therefore minimizing the impact of local higher values.

A density regression study was undertaken for the composite data within the Santa Teresa domain to investigate the application of a regression for density value derivation within the block model. The resulting regression, however, was compromised by the limited data.

Density composites were independently interpolated into 2D block models using GEOVIA Surpac™ and the following estimators:

- OK (2D) - Santa Teresa domain; and
- Inverse Distance Cubed (ID^3; 2D) - Lupitas vein system (Lupitas, Lupitas Alto, San Jose Alto).

Some domains were assigned a global or localised density mean depending on available composite data and density variability across the domain, as shown in Table 14-5.

Table 14-5: Assigned Density Values

Mineralized Vein Domain	Composite Count	Density g/cm3	
		Vein	Waste
Santa Teresa	11	Estimated	2.8
Santa Teresa Alto	0	3.00	2.8
Santa Teresa Bajo	0	3.00	2.8
Purisima	7	3.00	2.8
Dolores	4	3.00	2.8
San Nicolas – Skarn	6	Estimated	2.95
San Nicolas - Granodiorite		Estimated	2.71
Lupitas	24	Estimated	2.79
Lupitas Alto	9	Estimated	2.79
San Jose	1	3.18	2.79
San Jose Alto	10	Estimated	2.79

14.1.8 Resource Estimation Methodology

Interpolation of silver, gold, lead, and zinc within the domains was undertaken using a 2D compositing and estimation approach. A combination of estimation methodologies was used within the DPL estimate to allow for interpolation where limited composite data and unstable variogram models were not able to capture the spatial continuity required for OK.

The 2D block model was used for interpolation, validation, and back-calculation of the block silver, gold, lead, zinc, and arsenic grades, and was followed by a transformation of the block centroids into 3D space. All 2D block estimates were based on interpolation into 10m x 10m x 1m parent cells with no sub-cells. Block discretization points were set to 5(Y) x 5(X) x 1(Z) points.

Mineralized Vein Interpolation

The 2D accumulated and top-cut silver, gold, lead, zinc, and arsenic and vein true width variables were independently interpolated into 2D block models for Santa Teresa, Alto, Bajo, Purisima and Dolores with OK using GEOVIA Surpac™. The San Nicolas, Lupitas, Lupitas Alto, San Jose and San Jose Alto block models were estimated with Inverse Distance Squared (ID^2).

Relative variogram, OK and ID^3 search neighbourhood parameters were applied to the entire composite file for each respective domain.

The back-calculated block grade for each estimated variable was used for all further model validations and subsequent resource tabulations.

Waste Interpolation

The downhole composites of silver, gold, lead, zinc, and arsenic within waste domains were estimated with ID^3 (3D) for the Santa Teresa and Lupitas Vein systems, using an ellipse of similar orientation and anisotropy as nearby domains.

Blocks that were not estimated were assigned background values as presented in Table 14-6.

Table 14-6: Mineralisation and Waste Background Values

	Ag ppm	Au ppm	Pb %	Zn %	As %
Vein	0.5	0.01	0.001	0.001	0.001
Waste	0.5	0.01	0.001	0.001	0.001

For the areas with sparse drill hole or channel sample data that was near to mining activity, grades were assigned based on production sampling. This occurred locally within the Lupitas and San Jose domains as summarised in Table 14-7.

Table 14-7: Assigned Production Blocks

MVD	Block Number	Ag	Au	Pb	Zn
		ppm	ppm	%	%
Lupitas	DT-SJU-VLUP-2192-SUL-6240	204	0.01	5.99	1.74
	DT-SJU-VLUP-2168-SUL-6240	203	0.01	6.05	1.79
San Jose	DT-SJU-VSJO-2171-SUL-6323	188	0	5.16	0.81
	DT-SJU-VSJO-2165-SUL-6323	188	0	5.16	0.81
	DT-SJU-VSJO-2195-SUL-6323	188	0	5.16	0.81

Search Strategies

Kriging neighbourhood analysis was undertaken on the Santa Teresa domain using Geovariances Isatis™ software to optimise search neighbourhoods with a focus on generating a robust block estimate whilst minimising estimation error and conditional bias. For each variogram model a series of estimation quality tests were undertaken on poor-to-well-informed blocks within the 2D block model.

The resulting search ellipses broadly reflected the direction of maximum continuity within the plane of mineralisation, ranges, and anisotropy ratios from the variogram models (Table 14-8).

Table 14-8: Search Neighbourhood Parameters

Estimation Variables	Min. Composite	Max. Composite	Range (m)	2D Orientation (Azi/Plunge/Dip)	Ratio SemiMajor:Minor
Santa Teresa and Purisima					
Ag Au Pb Zn As Density	2	8	100 75 100 75 100 100	000/0/0	1.0 : 1.0
Santa Teresa del Alto					
Ag Au Pb Zn As	2	6	100 75 100 75 100	000/0/0	1.0 : 1.0
Santa Teresa del Bajo					
Ag Au Pb Zn As	2	4	100 75 100 75 100	000/0/0	1.0 : 1.0
Dolores					
Ag Au Pb Zn As	2	8	50	000/0/0	1.0 : 1.0
San Nicolas					
Ag Au Pb Zn As	2	8	120	000/0/0	1.0 : 1.0
Lupitas and Lupitas de Alto					
Ag Au Pb Zn As Density	2	8	150	000/0/0	1.0 : 1.0
San Jose					
Ag Au Pb Zn As	2	5	100	000/0/0	1.0 : 1.0
San Jose del Alto					
Ag Au Pb Zn As Density	2	5	175	000/0/0	1.0 : 1.0

14.1.9 Model Validation

Validation of the estimated block grades for the DPL deposits was completed for each of the metals estimated in each of the geological domains. The resource block model was validated by:

- Visual comparison of composite grades against the block grades;
- Statistical comparison of global declustered composite grade against estimated grade; and
- Swath plots along the long section axis of the domains, comparing declustered composite grades, estimated grades, number of composites, and tonnage estimated.

Visual Validation

Estimated grades were compared to the composite grades by visual inspection in plan, long and cross-section views with the model block grades considered comparable to composite values and a fair representation of the supporting composite data.

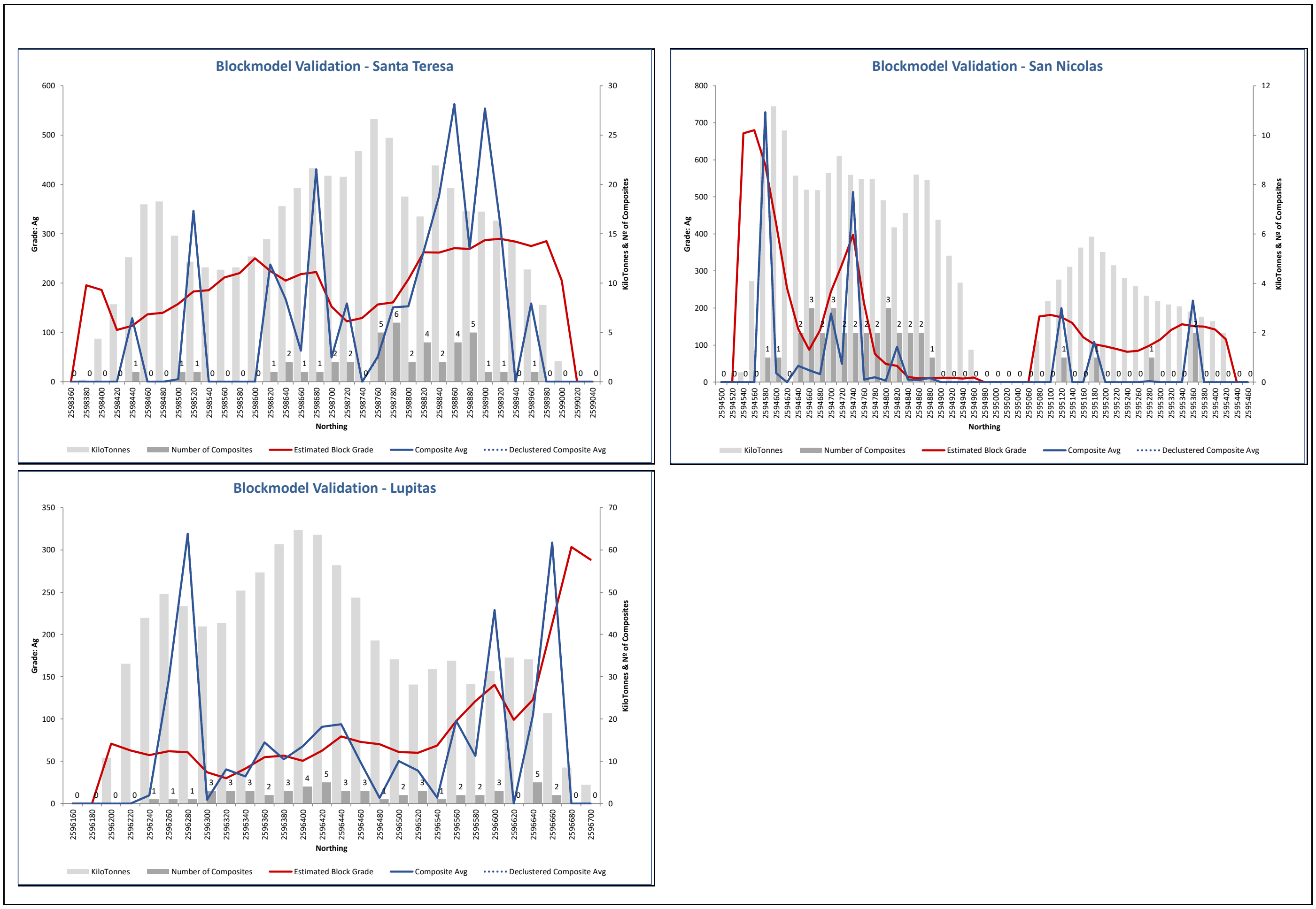
Global and Local Bias

Global estimated silver OK and ID^3 grades were nominally negative at 5.5% below the global declustered composite grade. Results were widely variable, by individual domain due to:

- Limited number of informing composites: Santa Teresa Alto, Santa Teresa Bajo, Purisima, Dolores, San Jose, and San Jose Alto; and
- Volume variance effect, whereby an isolated high-grade silver composite has informed large volumes of the vein estimate: Purisima, Dolores, and San Jose.

The swath plot validations indicated that the interpolation appropriately reflects the variations in declustered composite grades. Example swath plots for the largest domain, by volume, and for each mine, are presented in Figure 14-5.

Figure 14-5: Silver Swath Plots



Note: Figure prepared by Entech, 2017.

14.1.10 Mineral Resource Classification

Mineral Resources were classified as Measured, Indicated, or Inferred.

A range of criteria were considered when addressing the suitability of the classification boundaries for the Mineral Resource estimate for the DPL. These criteria included:

- Geological continuity and volume models;
- Drill spacing and drill data quality;
- Recent mining activity;
- Modelling technique; and
- Estimation properties, including search strategy, number of composites, average distance of composites from blocks, and kriging quality parameters such as slope of regression.

In general, drilling, surveying, sampling, analytical methods and controls are appropriate for the style of deposit under consideration. Analysis of the drilling Quality Assurance and Quality Control (QA/QC) database has confirmed that no obvious material discrepancies exist in the assay data.

Measured Mineral Resources were defined when the grade continuity was confirmed by recent production drives, identified by FMS as areas where:

- The geological confidence for volume and grade definition was high because of recent mining activity, within 25 m or less; and
- There was a high confidence level in, and understanding of, the geology and controls on mineralisation.

Indicated Mineral Resources were defined where a high level of geological confidence in the geometry, continuity and grade was demonstrated, and were identified as areas where:

- There was good support from drilling - averaging a nominal 50 m or less between drill hole +/- mining activity intercepts along strike and down dip spacing; and
- The estimation quality was considered reasonable, as delineated by a slope of regression (true to estimated blocks) of greater than 0.6.

Inferred Mineral Resources were defined where a low level of confidence in the geometry, continuity and grade was demonstrated, and were identified as areas where:

- The drill spacing was averaging a nominal 75 m x 75 m along strike/down dip spacing, or where drilling was within 80 m of the block estimate; and
- The estimation quality was low, as delineated by a slope of regression (true to estimate blocks) of between 0.2–0.6.

Post processing was performed in order to remove isolated block categories.

14.1.11 Mineral Resource Statement

The Mineral Resources are reported using the following considerations:

- Metal prices considered were $19.00 /oz Ag, $1,300.00 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn.
- Cut-off grade for DPL of 120 g/t silver equivalent (Ag-Eq) is based on actual and budgeted operating and sustaining costs.
- Metallurgical recovery for sulphides was 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn.
- Metal payable used was 95% for Ag, Au and Pb and 85% for Zn in concentrates produced from sulphide minerals.
- Ag-Eq grade is estimated as: Ag-Eq = Ag Grade + [(Au Grade x Au Recovery x Au Payable x Au Price / 31.1035) + (Pb Grade x Pb Recovery x Pb Payable x Pb Price x 2204.62) + (Zn Grade x Zn Recovery x Zn Payable x Zn Price x 2204.62)] / (Ag Recovery x Ag Payable x Ag Price / 31.1035).

Alternatively, the Ag-Eq can be calculated using the following factors:

$$\text{Ag-Eq (g/t)} = \text{Ag (g/t)} + \text{Au (g/t)} * 66.5 + \text{Pb (\%)} * 29.6 + \text{Zn (\%)} * 7.1$$

Table 14-9: Measured and Indicated Mineral Resource Statement, DPL

Mine / Project	Category	K Tonnes	Grades					Contained Metal				
			Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (Oz)
Dolores	Measured	9	108	1.16	2.87	0.86	276	32	0.34	580	174	82
	Indicated	8	159	0.35	2.24	0.03	249	39	0.09	381	5	62
	Total Measured and Indicated	17	131	0.79	2.58	0.48	264	71	0.43	961	179	143
Purisima	Measured											
	Indicated	20	150	0.54	5.97	0.20	364	97	0.35	2,651	90	236
	Total Measured and Indicated	20	150	0.54	5.97	0.20	364	97	0.35	2,651	90	236
Santa Teresa	Measured	38	257	0.25	4.33	0.93	409	314	0.31	3,626	778	500
	Indicated	160	230	0.27	4.47	1.52	391	1183	1.41	15,769	5,379	2,013
	Total Measured and Indicated	198	235	0.27	4.44	1.41	395	1497	1.72	19,394	6,157	2,512
Total Dolores	Measured	47	228	0.43	4.04	0.92	383	346	0.65	4,206	952	581
	Indicated	188	218	0.31	4.54	1.32	382	1319	1.84	18,800	5,474	2,310
	Total Measured and Indicated	235	220	0.33	4.44	1.24	383	1666	2.50	23,006	6,426	2,892
San Nicolas	Measured											
	Indicated	20	189	0.23	8.13	1.30	454	122	0.15	3,594	575	293
	Total Measured and Indicated	20	189	0.23	8.13	1.30	454	122	0.15	3,594	575	293
Total Perseverancia	Measured											
	Indicated	20	189	0.23	8.13	1.30	454	122	0.15	3,594	575	293
	Total Measured and Indicated	20	189	0.23	8.13	1.30	454	122	0.15	3,594	575	293
Lupitas	Measured	0										
	Indicated	88	210	0.04	7.15	0.87	431	593	0.12	13,806	1,672	1,214
	Total Measured and Indicated	88	210	0.04	7.15	0.87	431	593	0.12	13,806	1,672	1,214
Lupitas Alto	Measured											
	Indicated	119	161	0.07	2.26	1.02	239	616	0.26	5,952	2,674	918
	Total Measured and Indicated	119	161	0.07	2.26	1.02	239	616	0.26	5,952	2,674	918
San Jose	Measured											
	Indicated	21	328	0.02	8.50	0.93	587	225	0.01	4,002	436	403
	Total Measured and Indicated	21	328	0.02	8.50	0.93	587	225	0.01	4,002	436	403
San Jose Alto	Measured											
	Indicated	19	508	0.06	9.87	0.76	810	306	0.04	4,071	311	487
	Total Measured and Indicated	19	508	0.06	9.87	0.76	810	306	0.04	4,071	311	487
Total San Juan - Lupitas	Measured											
	Indicated	247	219	0.05	5.11	0.94	381	1740	0.43	27,831	5,093	3,023
	Total Measured and Indicated	247	219	0.05	5.11	0.94	381	1740	0.43	27,831	5,093	3,023
TOTAL DPL	***Measured***	***47***	***228***	***0.43***	***4.04***	***0.92***	***383***	***346***	***0.65***	***4,206***	***952***	***581***
	Indicated	***455***	***217***	***0.17***	***5.01***	***1.11***	***385***	***3181***	***2.42***	***50,226***	***11,142***	***5,626***
	Total Measured and Indicated	***502***	***218***	***0.19***	***4.92***	***1.09***	***384***	***3527***	***3.08***	***54,432***	***12,094***	***6,207***

Notes:

1. Mineral Resources were prepared by Entech. The Qualified Person for the estimate is Jesus M. Velador Beltran, an employee of FMS.
2. Mineral Resources are reported inclusive of Mineral Reserves, and have an effective date of December 31st, 2016. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 120 g/t Ag-Eq, calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

Table 14-10: Inferred Mineral Resource Statement, DPL*

Mine / Project	Category	K Tonnes	Grades					Contained Metal				
			Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Dolores	Inferred	13	119.0	0.85	2.73	0.50	260	50.6	0.36	797	146	111
Purisima		17	122.1	0.46	5.26	0.17	309	67.8	0.25	1,999	64	172
Santa Teresa		191	270.2	0.38	5.46	1.81	470	1,656.2	2.30	22,944	7,585	2879
San Nicolas		51	205.1	0.21	7.89	0.86	459	334.0	0.34	8,809	964	747
Lupitas		142	105.5	0.04	4.13	0.71	235	480.1	0.18	12,878	2,229	1071
Lupitas Alto		88	208.8	0.06	4.60	0.70	354	591.7	0.17	8,942	1,360	1003
San Jose		25	470.1	0.03	9.56	0.59	759	384.2	0.02	5,353	329	620
San Jose Alto		78	266.4	0.04	4.98	1.26	425	664.6	0.10	8,509	2,150	1061
Total Inferred		*605*	*218*	*0.19*	*5.27*	*1.11*	*394.28*	*4229*	*3.73*	*70,232*	*14,826*	*7663*

Notes

1. Mineral Resources were prepared by Entech. The Qualified Person for the estimate is Jesus M. Velador Beltran, an employee of FMS.
2. Mineral Resources are reported inclusive of Mineral Reserves, and have an effective date of December 31st, 2016. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 120 g/t Ag-Eq, calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

The Mineral Resources may be impacted by additional infill and exploration drilling that may identify additional mineralization or cause changes to the current domain shapes and geological assumptions. The Mineral Resources may also be affected by subsequent assessments of mining, environment, processing, permitting, taxation, socio-economics, and other factors.

14.1.12 Sensitivity of the Block Model to Selection of Cut-Off Grade

Mineral Resources can be sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, the block model quantities and grade estimates are presented at different cut-off grades in Tables 14-11 to 14-13.

Table 14-11: Mineral Resource Sensitivity to Cut-Off Grade for Dolores Mine.

Classification	Cut-Off Grade Ag-Eq (g/t)	K Tonnes	Grades					Contained Metal				
			Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Measured	> 200	42	242	0.43	4.38	0.99	388	329	0.6	4,084	923	528
	> 175	45	236	0.43	4.22	0.96	379	338	0.6	4,141	942	542
	> 150	46	232	0.43	4.11	0.93	371	344	0.6	4,179	946	550
	> 120*	**47**	**228**	**0.43**	**4.04**	**0.92**	**383**	**346**	**0.7**	**4,206**	**952**	**581**
	> 100	48	225	0.43	3.96	0.9	360	348	0.7	4,211	957	558
Indicated	> 200	170	231	0.31	4.84	1.31	384	1,260	1.7	18,089	4,896	2,092
	> 175	178	225	0.31	4.7	1.34	374	1,292	1.8	18,483	5,270	2,146
	> 150	183	222	0.31	4.63	1.34	369	1,307	1.8	18,680	5,406	2,170
	> 120*	**188**	**218**	**0.31**	**4.54**	**1.32**	**382**	**1,319**	**1.8**	**18,800**	**5,474**	**2,310**
	> 100	191	216	0.3	4.5	1.31	359	1,324	1.8	18,902	5,503	2,201
Inferred	> 200	203	263	0.4	5.68	1.67	443	1,715	2.6	25,443	7,481	2,896
	> 175	208	260	0.4	5.57	1.65	438	1,735	2.7	25,483	7,549	2,923
	> 150	215	254	0.41	5.4	1.62	428	1,760	2.8	25,624	7,687	2,963
	> 120*	**221**	**250**	**0.41**	**5.28**	**1.6**	**420**	**1,775**	**2.9**	**25,743**	**7,801**	**2,988**
	> 100	232	240	0.41	5.09	1.59	406	1,790	3.1	25,989	8,118	3,025

Table 14-12: Mineral Resource Sensitivity to Cut-Off Grade for San Nicolas.

Classification	Cut-Off Grade Ag-Eq (g/t)	K Tonnes	Grades					Contained Metal				
			Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Indicated	> 200	16	221	0.26	9.15	1.33	518	117	0.1	3,328	484	275
	> 175	17	212	0.25	8.87	1.37	501	119	0.1	3,406	526	280
	> 150	19	201	0.24	8.51	1.35	478	120	0.1	3,497	555	287
	> 120*	**20**	**189**	**0.23**	**8.13**	**1.3**	**454**	**122**	**0.1**	**3,596**	**575**	**293**
	> 100	21	185	0.22	7.98	1.28	445	122	0.1	3,626	582	295
Inferred	> 200	46	222	0.22	8.34	0.85	489	326	0.3	8,423	858	721
	> 175	48	213	0.22	8.11	0.86	474	331	0.3	8,642	916	736
	> 150	50	209	0.21	7.99	0.87	466	333	0.3	8,740	952	743
	> 120*	**51**	**205**	**0.21**	**7.89**	**0.86**	**459**	**334**	**0.3**	**8,809**	**960**	**747**
	> 100	53	196	0.2	7.63	0.83	441	336	0.3	8,980	977	757

Table 14-13: Mineral Resource Sensitivity to Cut-Off Grade for the Lupitas Vein System

Classification	Cut-Off Grade Ag-Eq (g/t)	K Tonnes	Grades					Contained Metal				
			Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Indicated	>200	196	246	0.06	6.01	0.9	434	1,545	0.4	25,914	3,881	2,728
	> 175	231	228	0.05	5.35	0.95	397	1,690	0.4	27,199	4,830	2,941
	> 150	241	223	0.05	5.2	0.94	387	1,725	0.4	27,580	4,986	2,994
	> 120*	**247**	**219**	**0.05**	**5.11**	**0.94**	**381**	**1,739**	**0.4**	**27,830**	**5,119**	**3,023**
	> 100	250	218	0.05	5.07	0.94	378	1,746	0.4	27,902	5,173	3,032
Inferred	>200	214	265	0.05	6.18	0.77	457	1,820	0.3	29,141	3,631	3,139
	> 175	256	237	0.05	5.64	0.76	412	1,948	0.4	31,836	4,290	3,393
	> 150	286	221	0.05	5.32	0.78	387	2,025	0.5	33,490	4,910	3,549
	> 120*	**333**	**198**	**0.04**	**4.87**	**0.83**	**351**	**2,120**	**0.4**	**35,725**	**6,089**	**3,756**
	> 100	359	187	0.04	4.62	0.85	333	2,166	0.5	36,612	6,736	3,850

14.2 Mineral Resources for San Juan Cuerpo 3

14.2.1 Introduction

The Mineral Resource estimate for the Cuerpo 3 deposit was prepared by SRK Consulting (Canada) Inc. (SRK) personnel.

The resource estimate is based on the current drill hole database, underground-level mapping, and digitized data for underground drifts and stopes. The geological modeling was completed with Leapfrog Geo 4.0, and the estimation of block model Mineral Resources was completed using GEOVIA GEMS™ Version 6.74. Data statistics, semi-variogram analysis, and block model validation were completed using Snowden Supervisor™ Version 8.7.

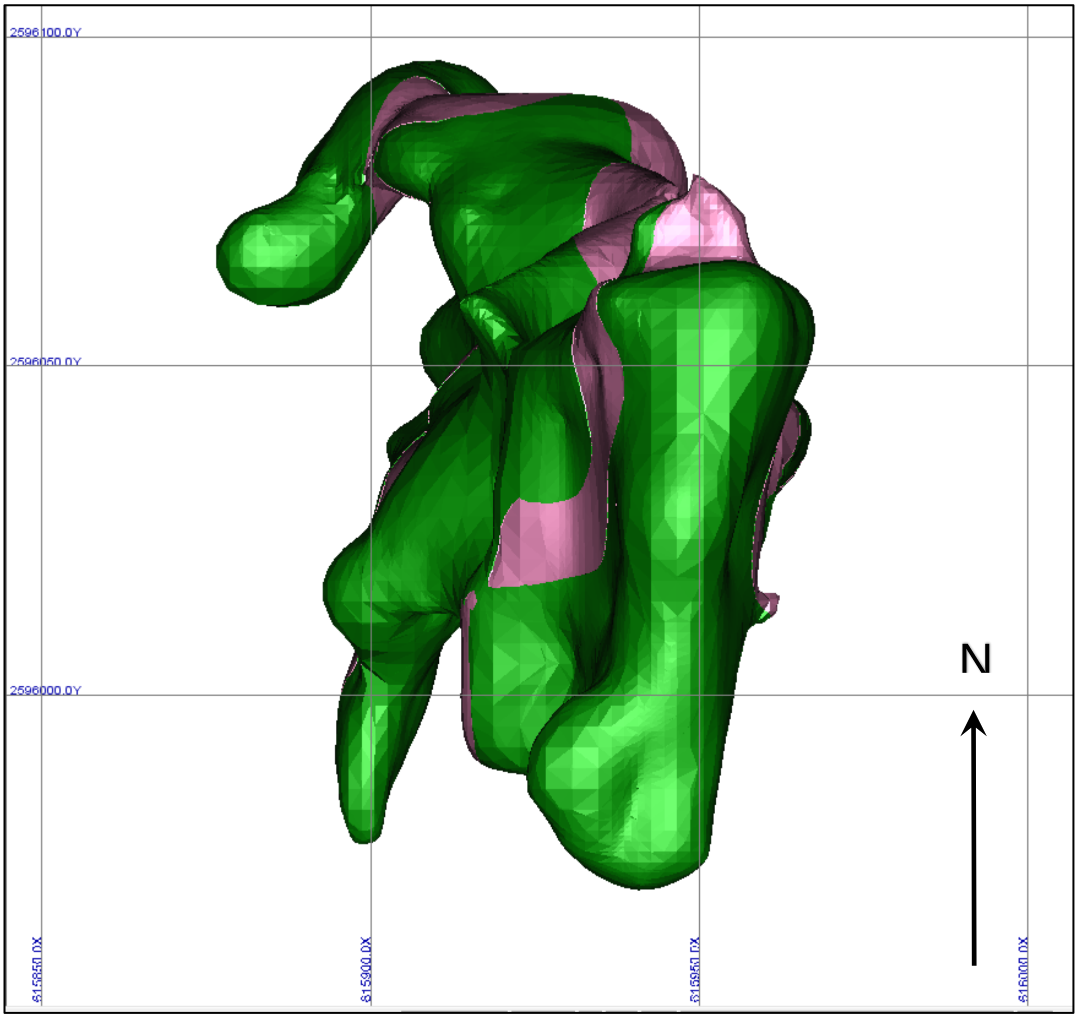
14.2.2 Database Summary

The data set used for the DPL estimate contained all available collar, assay, survey, and lithology information up to the close-out date of December 31, 2016. Validation steps were undertaken on assay data to ensure all results were within expected ranges and the background values were consistent.

14.2.3 Geological Model

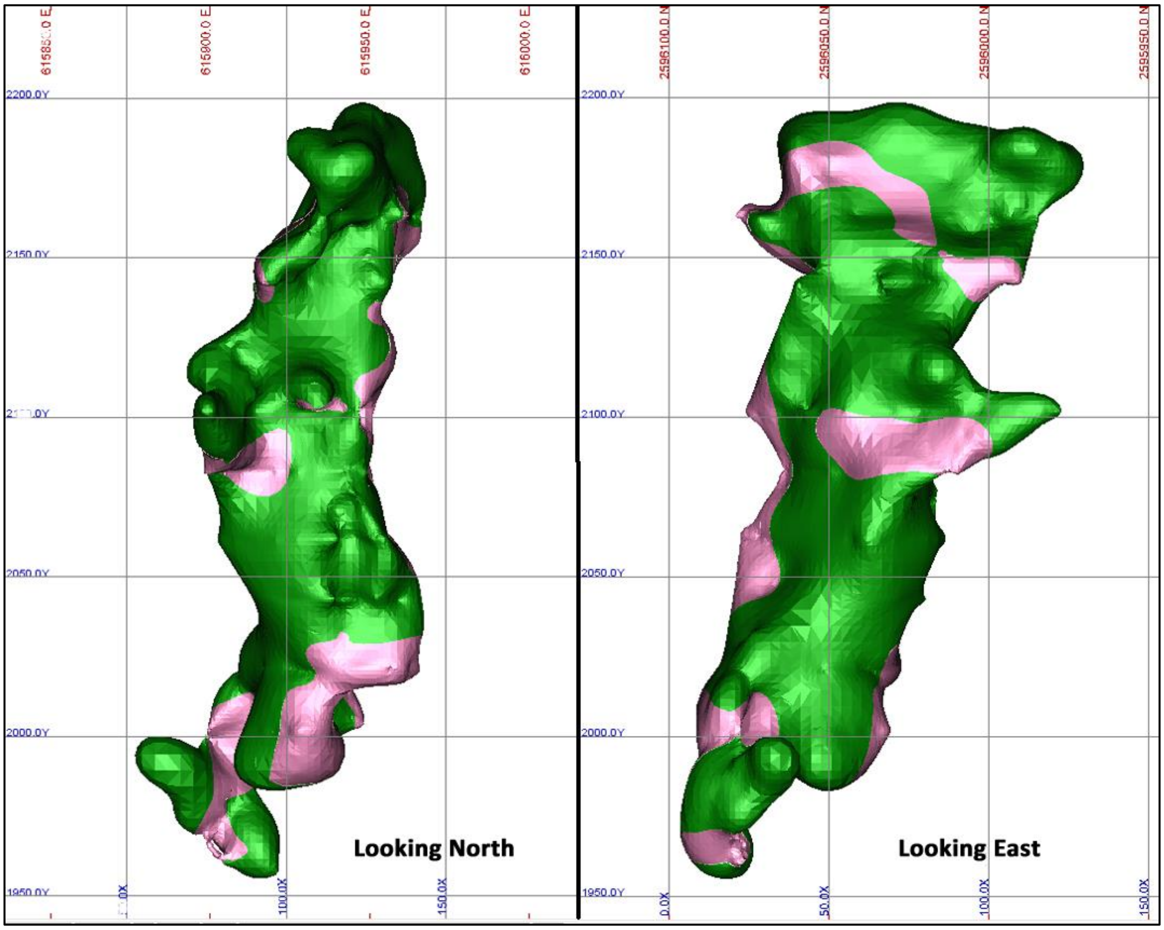
The resource estimate was constrained by a geological model that outlines the breccia body hosting the Cuerpo 3 deposit, and consists of two primary host lithology domains, skarn breccia and granodiorite breccia. The breccia body limits and the internal boundary between the two lithological domains were delineated from drill hole logs and drill core photo review, together with associated sample assay values. Geological mapping from underground mining levels was used to further constrain the geological model and guide the development of the internal domain boundaries. The geological model was constructed using Leapfrog Geo 4.0, and is represented by Figure 14-6 and Figure 14-7.

Figure 14-6: Geological Model for the Cuerpo 3 Deposit - Plan View Projection



Note: Figure prepared by SRK, 2017. Plan view showing skarn breccia (green) and granodiorite breccia (pink). Full projection of all levels, north is up. Grid is in metres.

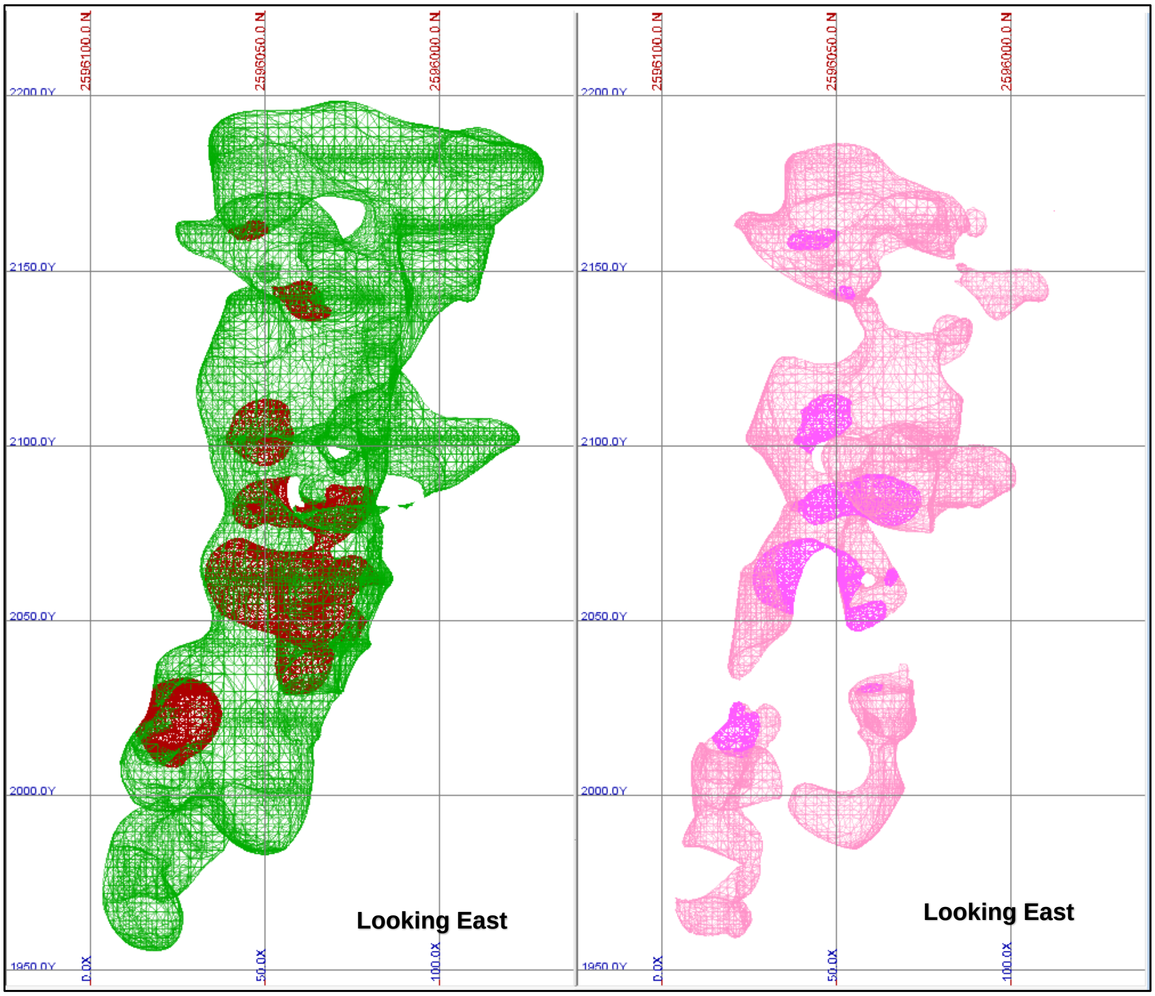
Figure 14-7: Geological Model for the Cuerpo 3 Deposit - Cross Section Projections



Note: Figures prepared by SRK, 2017. Side-by-side vertical sections showing skarn breccia (green) and granodiorite breccia (pink). Full projection looking north and east. Grid is in metres.

The skarn and granodiorite lithologies were further subdivided into oxide and sulphide weathering domains (Figure 14-8). The modelled extents of the sulphide domain were based on geological level maps, drill hole data, and inputs from FMS staff. Once the sulphide domain wireframe was constructed, the oxide zone wireframe was assigned to all remaining areas of breccia located outside of the sulphide domain. The most important domain volumetrically is the breccia skarn oxide domain (Figure 14-8).

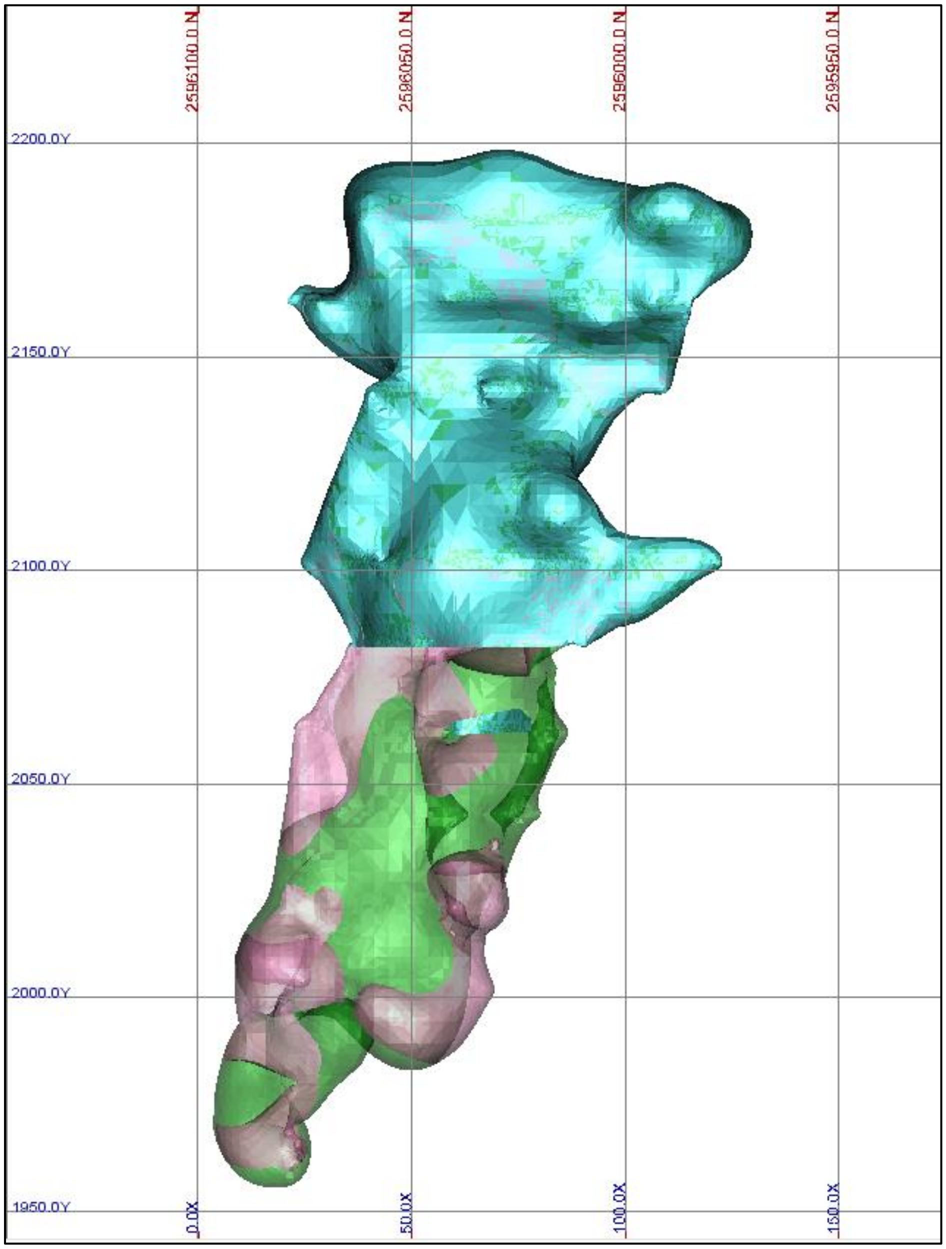
Figure 14-8: Geological Wireframes



Note: Figure prepared by SRK, 2017. Side-by-side vertical sections separated by rock type showing oxide zones within skarn and granodiorite breccia as green (skarn oxide) and pink (granodiorite oxide). Respective sulphide zones for skarn and granodiorite are shown in red and dark pink. Full projection looking east.

Extensive underground mining and related local collapse has taken place within the upper half of the Cuerpo 3 deposit (Figure 14-9). Based on discussions with FMS personnel, a wireframe was constructed that captures the breccia body located above 2082 metres in elevation and includes a smaller area of workings below this level. The entire breccia body and associated drill hole samples are included in the resource estimate, but the regions outlined by the wireframe are considered depleted or un-mineable and are not included in the final tabulation of the Mineral Resources.

Figure 14-9: Vertical Section Showing Depleted Zone



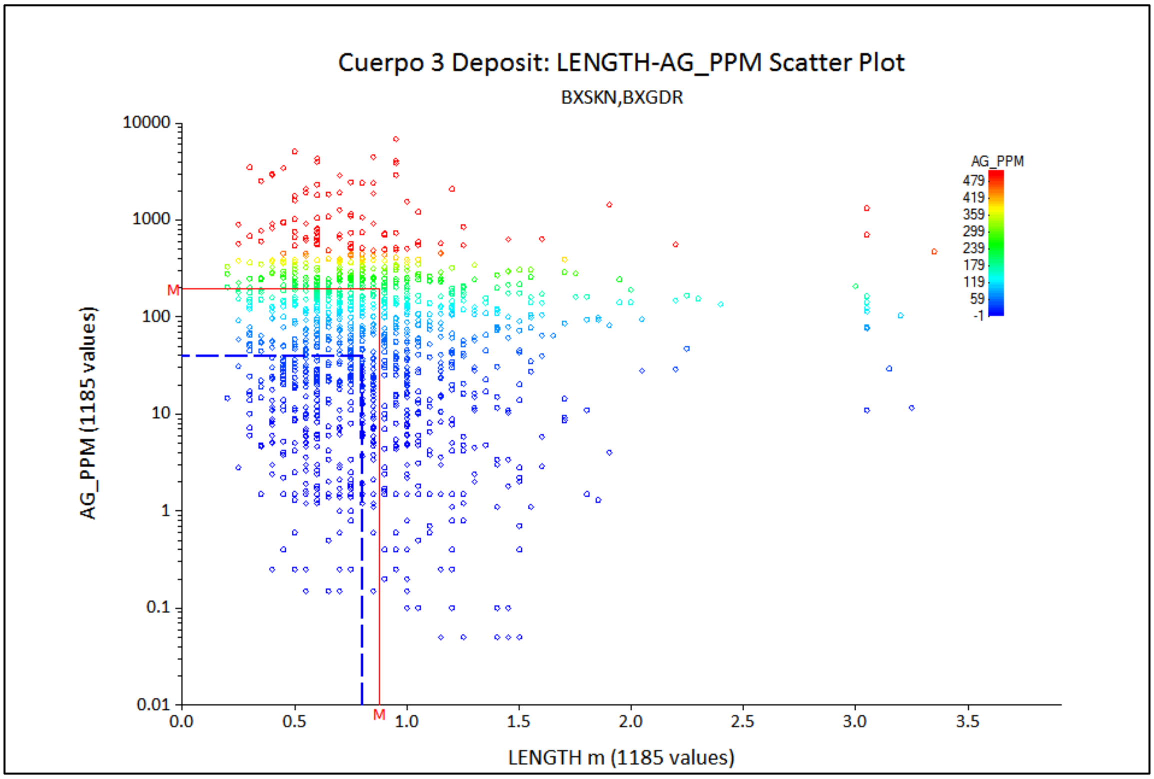
Note: Figure prepared by SRK, 2017. Vertical section of the Cuerpo 3 deposit looking east showing the depleted or un-mineable region (cyan).

14.2.4 Assay Sample Values and Compositing

Prior to constructing the composite samples, assay values from drill hole sample values were compared to the corresponding sample interval lengths (Figure 14-10). Higher-grade values are commonly observed to correlate with sample lengths shorter than the most common sample length of 0.87 m. A decision was made to cap extreme values after construction of the composite samples.

The original assays were composited to 1.5 m lengths. The composite intervals were constructed within the limits of the breccia domains and then tagged with the appropriate domain code assigned to each of the four domains from the geological model. Any residual composite samples left at the end of the domain intercept that were < 0.35 m in length were removed.

Figure 14-10: Scatter Plot of Ag X Length within Breccia Body



Note: Figure prepared by SRK, 2017.

14.2.5 Outlier Evaluation

Block grade estimates may be unduly affected by very high-grade assay values. Therefore, the drill hole composite samples were evaluated for high-grade outliers, and those outliers were capped to values deemed appropriate for the estimation.

All composite samples captured within the skarn and granodiorite breccia domains were evaluated separately by domain for the presence of high-grade values. The capping values for silver, arsenic, gold, lead, and zinc were established from inflection points of probability plots at the highest end of the grade distributions. Grades above these inflection points were capped (Table 14-14). The impact on the metal-at-risk was assessed by comparing Ag-Eq values in the block model, and the total metal-at-risk was <3%.

Instead of capping a larger sample set of high-grade assays above observable inflections in cumulative probability plots, SRK elected to limit the influence of high-grade intersections during the estimation process by using a restricted search ellipse.

Table 14-14: Composite Sample Capping

	Ag (g/t)	As (%)	Au (g/t)	Pb (%)	Zn (%)	Domain
Number of Samples	495	487	495	495	495	Breccia Skarn Oxide Domain 110
Maximum Value	4088	17.36	2.65	33.94	51	
Cap Value	2000	14	2.5	28	35	
Number Capped	2	3	1	2	3	
Mean Uncapped	175	1.12	0.15	3.41	4.86	
Mean Capped	172	1.11	0.15	3.4	4.81	
Lost Metal (%)	-2%	-1%	0%	0%	-1%	
Number of Samples	101	101	101	101	101	Breccia Skarn Sulphide Domain 111
Maximum Value	3487	19.8	3.77	64.61	46	
Cap Value	2000	14	2.5	28	35	
Number Capped	4	2	3	3	3	
Mean Uncapped	306	2.83	0.39	5.08	12.07	
Mean Capped	273	2.76	0.37	4.59	11.96	
Lost Metal (%)	-11%	-3%	-5%	-10%	-1%	
Number of Samples	119	110	119	119	119	Granodiorite Skarn Oxide Domain 120
Maximum Value	2668	10.16	1.42	14.49	21	
Cap Value	700	4	0.75	8	16	
Number Capped	1	3	1	2	2	
Mean Uncapped	85	0.45	0.06	0.94	2.61	
Mean Capped	77	0.35	0.06	0.9	2.57	
Lost Metal (%)	-10%	-22%	0%	-4%	-2%	

14.2.6 Boundary Analysis

Contact plots for silver, lead and zinc were constructed to test the nature of the mineralization at the domain boundaries, and hard boundaries were adopted between all four domains.

Metal grades across both domain boundaries can change substantially at distances shorter than the average drill hole spacing.

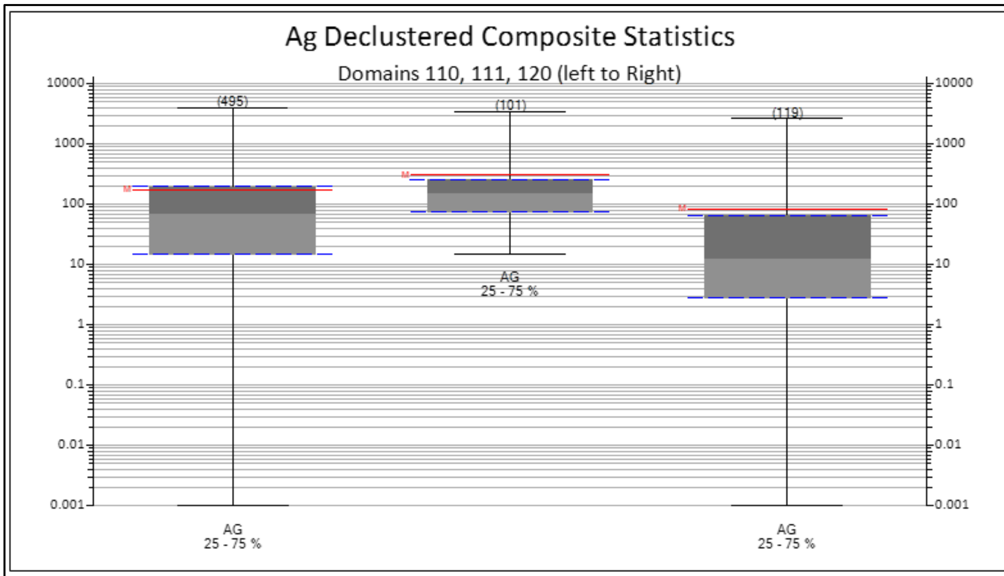
Local exceptions were made for small isolated regions of sulphide and oxide rock where soft boundary conditions were applied due to limited sample availability.

14.2.7 Composite Data Statistics

Composite data for silver, arsenic, gold, lead, and zinc were declustered using a cell declustering method. Each composite was assigned a weight proportional to the volume it might represent. Figure 14-11 shows a silver box-whisker plot and basic statistics.

No composite samples were captured by the granodiorite breccia sulphide domain.

Figure 14-11: Silver Box-Whisker Plot and Basic Statistics



Domain	110 AG		111 AG		120 AG	Domain
Samples	495		101		119	Samples
Minimum	0	g/t	15.14	g/t	0	Minimum
Maximum	4088.13	g/t	3487.35	g/t	2668.05	Maximum
Mean	174.77	g/t	305.9	g/t	85.45	Mean
Standard deviation	312.35		552.58		215.99	Standard deviation
CV	1.79		1.81		2.53	CV

Note: Figure prepared by SRK, 2017

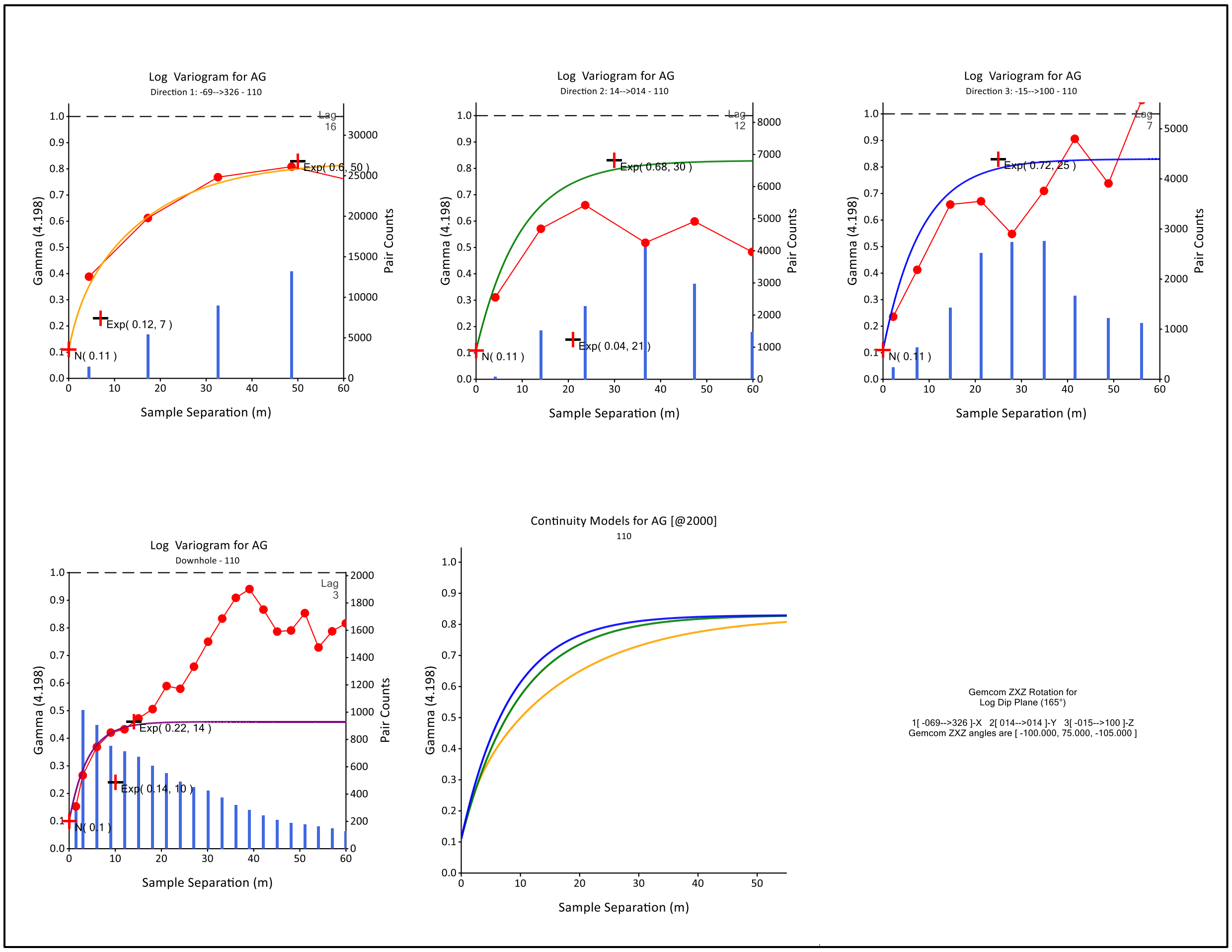
14.2.8 Variography and Search Strategy Design

Semi-variogram models were developed from the composite samples for silver, arsenic, gold, lead, and zinc. Due to the low number of composite samples available, composite samples were combined into either a skarn or a granodiorite breccia domain.

Variogram maps and model semi-variograms developed during the variogram analysis were used to design the rotations and search ellipsoids for the estimation domains. The orientation of the pipe-shaped, breccia-hosted deposit was carefully considered when evaluating the variogram maps and search ellipsoids.

An example of a variogram model, for silver, is presented in Figure 14-12. The variogram model parameters used for grade estimation of all metals are summarized in Table 14-15.

Figure 14-12: Variogram Models Developed for Silver in the Skarn Breccia Estimation Domain



Note: Figure prepared by SRK, 2017. Three directions of continuity are shown along with the downhole variogram, the final continuity variogram models, and the axis rotation properties for the three directions of the variogram model.

Table 14-15: Cuerpo 3 Variogram Models by Estimation Domain

Structural Domain	Metal	GEMS ZXZ Rotations			Nugget C_0	Sill C_1 and C_2	Range of Influence			Model Structure Type
		around Z	around X	around Z			Direction-1 X	Direction-2 Y	Direction-3 Z	
Skarn Breccia: Domains 110-111	Ag	-100	75	-105	0.11	0.12	7	21	25	Exponential
						0.6	50	30	29	Exponential
	Au	-100	65	-95	0.11	0.44	16	10	23	Exponential
						0.58	53	25	25	Exponential
	Pb	-100	85	-105	0.06	0.16	48	33	18	Exponential
						0.72	55	35	25	Exponential
	Zn	-100	75	-70	0.07	0.23	30	8	11	Exponential
						0.34	50	30	25	Exponential
	As	-80	80	-100	0.11	0.35	45	16	8	Exponential
						0.58	60	35	25	Exponential
Granodiorite Breccia: Domains 120-121	Ag	-100	75	-105	0.06	0.62	52	38	29	Exponential
	Au	-115	85	-95	0.06	0.03	42	23	17	Exponential
						0.91	55	35	25	Exponential
	Pb	-115	85	-90	0.06	1.03	50	39	30	Exponential
	Zn	-120	85	-150	0.06	0.08	9	22	27	Exponential
						0.77	48	35	35	Exponential
	As	-115	60	-30	0.06	1.02	45	35	26	Exponential

Note: GEMS ZXZ Rotation Type, Major Direction 1 Axis = X, Semi-Major Direction 2 = Y, Minor Direction 3 = Z.

14.2.9 Specific Gravity

Specific gravity samples were collected from breccia domain and waste rock. Values ranged from 2.00 to 5.09. A total of 152 SG samples were located with the breccia estimation domains. An ID^2 interpolation was used for SG estimation purposes. Six SG samples were identified as high-value outliers, and those numbers were capped to lower values. The mean SG for the skarn breccia oxide is 2.83, the mean SG for the skarn breccia sulphide domain is 3.24, and the mean SG for the granodiorite breccia oxide domain is 2.56.

14.2.10 Resource Estimation Methodology

Block grades were estimated by OK using the semi-variogram models observed for composite samples within the structural domains for silver, arsenic, gold, lead, and zinc. Hard boundary conditions were applied during resource estimation between all four of the domains developed for the geological model.

Local exceptions were made for small isolated regions of sulphide and oxide rock where soft boundary conditions were applied due to limited sample availability.

Blocks were estimated with two successive interpolation passes for all metals. The first pass was designed to estimate the majority of blocks that are well-informed by drill hole composite samples, and the search ellipsoid radius represents roughly 85% of the variogram range of continuity found within the geological domains. The second pass was designed to estimate most of the remaining blocks within the geological domains, including extrapolated estimates.

Within each estimation domain for each metal, extreme composite assay values were capped and additional high-grade sample populations were restricted by shorter search ellipsoid radii to limit the range of influence from these high-grade sample sets.

Specific gravity was estimated within the geologic domains using ID^2 methodology and using hard boundary conditions between domains. The blocks were estimated using the search orientations and ranges from silver for each geological domain. All blocks not estimated by a single search pass were assigned the average SG for the respective domain.

A summary of all estimation parameters is listed in Table 14-16 and Table 14-17.

Table 14-16: Summary of Metal Estimation Parameters for the Cuerpo 3 Block Model Interpolation

Metal	Domain	Interpolation Name	Boundary Conditions	Samples Included	Search	Gemcom ZXZ Rotations			Search Ellipse Radius			High Grade Search Limit				No of Samples		Max. Samples	No of Holes Required	Search Type	Method
					Pass	Around Z	Around X	Around Z	x (m)	y (m)	z (m)	x (m)	y (m)	z (m)	Limit Value	Min	Max	per Hole			
Ag	110	OKAG1101	Hard	110	1	-100	75	-105	42	25	20	30	20	15	1300.00	8	21	7	2	Octant	OK
	110	OKAG1102			2	-100	75	-105	90	54	45	30	20	15	1300.00	7	21	7	1	Ellipsoidal	OK
Ag	111	OKAG1101	Hard	111	1	-100	75	-105	35	25	25	20	15	15	800.00	8	21	7	2	Octant	OK
	111	OKAG1102			2	-100	75	-105	40	35	35	20	15	15	800.00	7	21	7	1	Ellipsoidal	OK
Ag	111	OKAG1103	Mixed	110, 111	1	-100	75	-105	35	25	25	20	15	15	800.00	8	21	7	2	Octant	OK
	111	OKAG1104			2	-100	75	-105	40	35	35	20	15	15	800.00	7	21	7	1	Ellipsoidal	OK
Ag	120	OKAG1201	Hard	120	1	-100	75	-105	42	25	20	30	20	15	400.00	8	21	7	2	Octant	OK
	120	OKAG1202			2	-100	75	-105	90	50	40	30	20	15	400.00	7	21	7	1	Ellipsoidal	OK
Ag	121	OKAG1211	Mixed	120, 121	1	-100	75	-105	42	25	20	30	20	15	400.00	8	21	7	2	Octant	OK
	121	OKAG1212			2	-100	75	-105	90	50	40	30	20	15	400.00	7	21	7	1	Ellipsoidal	OK
As	110	OKAG1101	Hard	110	1	-80	80	-100	42	25	20	30	20	15	10.00	8	21	7	2	Octant	OK
	110	OKAG1102			2	-80	80	-100	90	45	40	30	20	15	10.00	7	21	7	1	Ellipsoidal	OK
As	111	OKAG1101	Hard	111	1	-100	75	-105	35	25	25	20	15	15	10.00	8	21	7	2	Octant	OK
	111	OKAG1102			2	-100	75	-105	40	35	35	20	15	15	10.00	7	21	7	1	Ellipsoidal	OK
As	111	OKAG1103	Mixed	110, 111	1	-100	75	-105	35	25	25	20	15	15	10.00	8	21	7	2	Octant	OK
	111	OKAG1104			2	-100	75	-105	40	35	35	20	15	15	10.00	7	21	7	1	Ellipsoidal	OK
As	120	OKAG1201	Hard	120	1	-115	60	-30	42	30	20	30	20	15	1.00	8	21	7	2	Octant	OK
	120	OKAG1202			2	-115	60	-30	90	65	40	30	20	10	1.00	1	21	7	1	Ellipsoidal	OK
As	121	OKAG1211	Mixed	120, 121	1	-115	60	-30	42	30	20	30	20	15	1.00	8	21	7	2	Octant	OK
	121	OKAG1212			2	-115	60	-30	90	65	40	30	20	10	1.00	7	21	7	1	Ellipsoidal	OK
Au	110	OKAG1101	Hard	110	1	-100	65	-95	42	25	20	30	20	15	1.75	8	21	7	2	Octant	OK
	110	OKAG1102			2	-100	65	-95	90	45	40	30	20	15	1.75	7	21	7	1	Ellipsoidal	OK
Au	111	OKAG1101	Hard	111	1	-100	75	-105	35	25	25	20	15	15	1.75	8	21	7	2	Octant	OK
	111	OKAG1102			2	-100	75	-105	40	35	35	20	15	15	1.75	7	21	7	1	Ellipsoidal	OK
Au	111	OKAG1103	Mixed	110, 111	1	-100	75	-105	35	25	25	20	15	15	1.75	8	21	7	2	Octant	OK
	111	OKAG1104			2	-100	75	-105	40	35	35	20	15	15	1.75	7	21	7	1	Ellipsoidal	OK
Au	120	OKAG1201	Hard	120	1	-115	85	-95	42	25	20	30	20	15	0.30	8	21	7	2	Octant	OK
	120	OKAG1202			2	-115	85	-95	90	45	40	30	20	15	0.30	7	21	7	1	Ellipsoidal	OK
Au	121	OKAG1211	Mixed	120, 121	1	-115	85	-95	42	25	20	30	20	15	0.30	8	21	7	2	Octant	OK
	121	OKAG1212			2	-115	85	-95	90	45	40	30	20	15	0.30	7	21	7	1	Ellipsoidal	OK
Pb	110	OKAG1101	Hard	110	1	-100	85	-105	42	25	20	30	20	15	17.00	8	21	7	2	Octant	OK
	110	OKAG1102			2	-100	85	-105	90	50	40	30	20	15	17.00	7	21	7	1	Ellipsoidal	OK
Pb	111	OKAG1101	Hard	111	1	-100	75	-105	35	25	25	20	15	15	17.00	8	21	7	2	Octant	OK

Metal	Domain	Interpolation Name	Boundary Conditions	Samples Included	Search	Gemcom ZXZ Rotations			Search Ellipse Radius			High Grade Search Limit				No of Samples		Max. Samples	No of Holes Required	Search Type	Method
					Pass	Around Z	Around X	Around Z	x (m)	y (m)	z (m)	x (m)	y (m)	z (m)	Limit Value	Min	Max	per Hole			
	111	OKAG1102			2	-100	75	-105	40	35	35	20	15	15	17.00	7	21	7	1	Ellipsoidal	OK
Pb	111	OKAG1103	Mixed	110, 111	1	-100	75	-105	35	25	25	20	15	15	17.00	8	21	7	2	Octant	OK
	111	OKAG1104			2	-100	75	-105	40	35	35	20	15	15	17.00	7	21	7	1	Ellipsoidal	OK
Pb	120	OKAG1201	Hard	120	1	-115	85	-90	42	25	20	30	20	15	3.00	8	21	7	2	Octant	OK
	120	OKAG1202			2	-115	85	-90	90	45	40	30	20	15	3.00	7	21	7	1	Ellipsoidal	OK
Pb	121	OKAG1211	Mixed	120, 121	1	-115	85	-90	42	25	20	30	20	15	3.00	8	21	7	2	Octant	OK
	121	OKAG1212			2	-115	85	-90	90	45	40	30	20	15	3.00	7	21	7	1	Ellipsoidal	OK
Zn	110	OKAG1101	Hard	110	1	-100	75	-70	42	25	20	30	20	15	28.00	8	21	7	2	Octant	OK
	110	OKAG1102			2	-100	75	-70	90	50	40	30	20	15	28.00	7	21	7	1	Ellipsoidal	OK
Zn	111	OKAG1101	Hard	111	1	-100	75	-105	35	25	25	20	15	15	28.00	8	21	7	2	Octant	OK
	111	OKAG1102			2	-100	75	-105	40	35	35	20	15	15	28.00	7	21	7	1	Ellipsoidal	OK
Zn	111	OKAG1103	Mixed	110, 111	1	-100	75	-105	35	25	25	20	15	15	28.00	8	21	7	2	Octant	OK
	111	OKAG1104			2	-100	75	-105	40	35	35	20	15	15	28.00	7	21	7	1	Ellipsoidal	OK
Zn	120	OKAG1201	Hard	120	1	-120	85	-150	42	25	20	30	20	15	9.00	8	21	7	2	Octant	OK
	120	OKAG1202			2	-120	85	-150	90	60	60	30	20	15	9.00	7	21	7	1	Ellipsoidal	OK
Zn	121	OKAG1211	Mixed	120, 121	1	-120	85	-150	42	25	20	30	20	15	9.00	8	21	7	2	Octant	OK
	121	OKAG1212			2	-120	85	-150	90	60	60	30	20	15	9.00	7	21	7	1	Ellipsoidal	OK

Table 14-10: Summary of Estimation Parameters for the Density Model at Cuerpo 3

SG	Domain	Interpolation Name	Boundary Conditions	Samples Included	Search	Gemcom ZXZ Rotations			Search Ellipse Radius			High Grade Search Limit				No of Samples		Max. Samples	No of Holes Required	Search Type	Method
					Pass	Around Z	Around X	Around Z	x (m)	y (m)	z (m)	x (m)	y (m)	z (m)	Limit Value	Min	Max	per Hole			
SG	110	110SG	Hard	110	1	-100	75	-105	42	25	20					2	6		1	Ellipsoidal	ID2
	111	111SG	Hard	111	1	-100	75	-105	35	25	25					2	6		1	Ellipsoidal	ID2
	120	120SG	Hard	120	1	-100	75	-105	42	25	20					2	6		1	Ellipsoidal	ID2
	121	121SG	Hard	121	1	-100	75	-105	42	25	20					2	6		1	Ellipsoidal	ID2

14.2.11 Model Validation

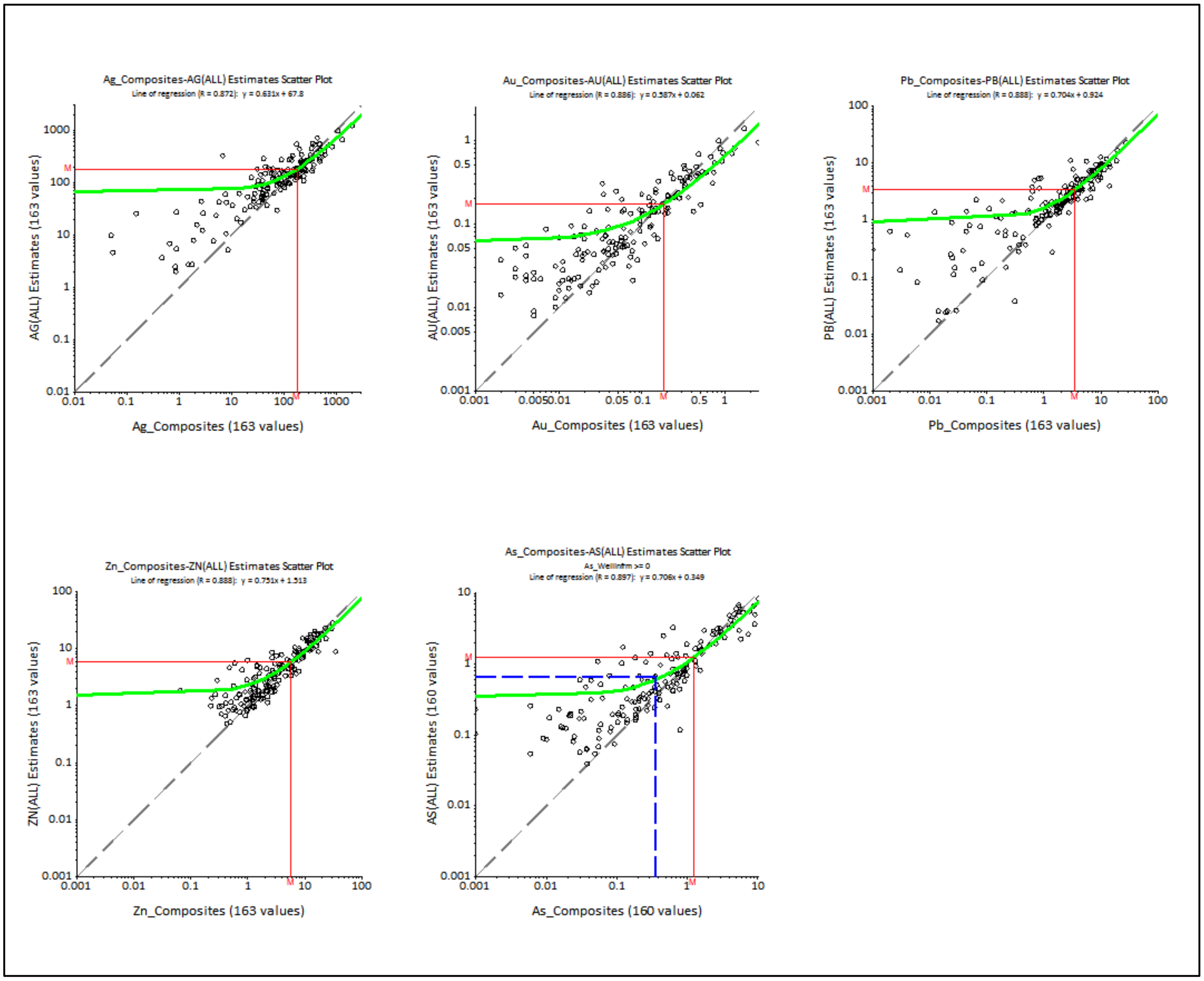
The resource block model was validated by:

- Completing a series of visual inspections by comparisons of composite sample grades to estimated block values across the Cuerpo 3 deposit;
- Comparing "well informed" block grades with composite sample values contained within those blocks using both scatter and cumulative probability plots; and
- Comparing average composite sample values with average estimated block grades along east, north, and elevation orientations using swath grade trend plots.

Estimated grades were compared to the composite grades by visual inspection in plan, long and cross-section views. The model block grades were considered comparable to composite values and a fair representation of the supporting composite data.

Figure 14-13 compares estimated block grade distributions with drill hole composite sample grades for silver, arsenic, gold, lead, and zinc for the undifferentiated breccia domain. The scatter plots demonstrate that the estimated block grades fairly reproduce the composite data.

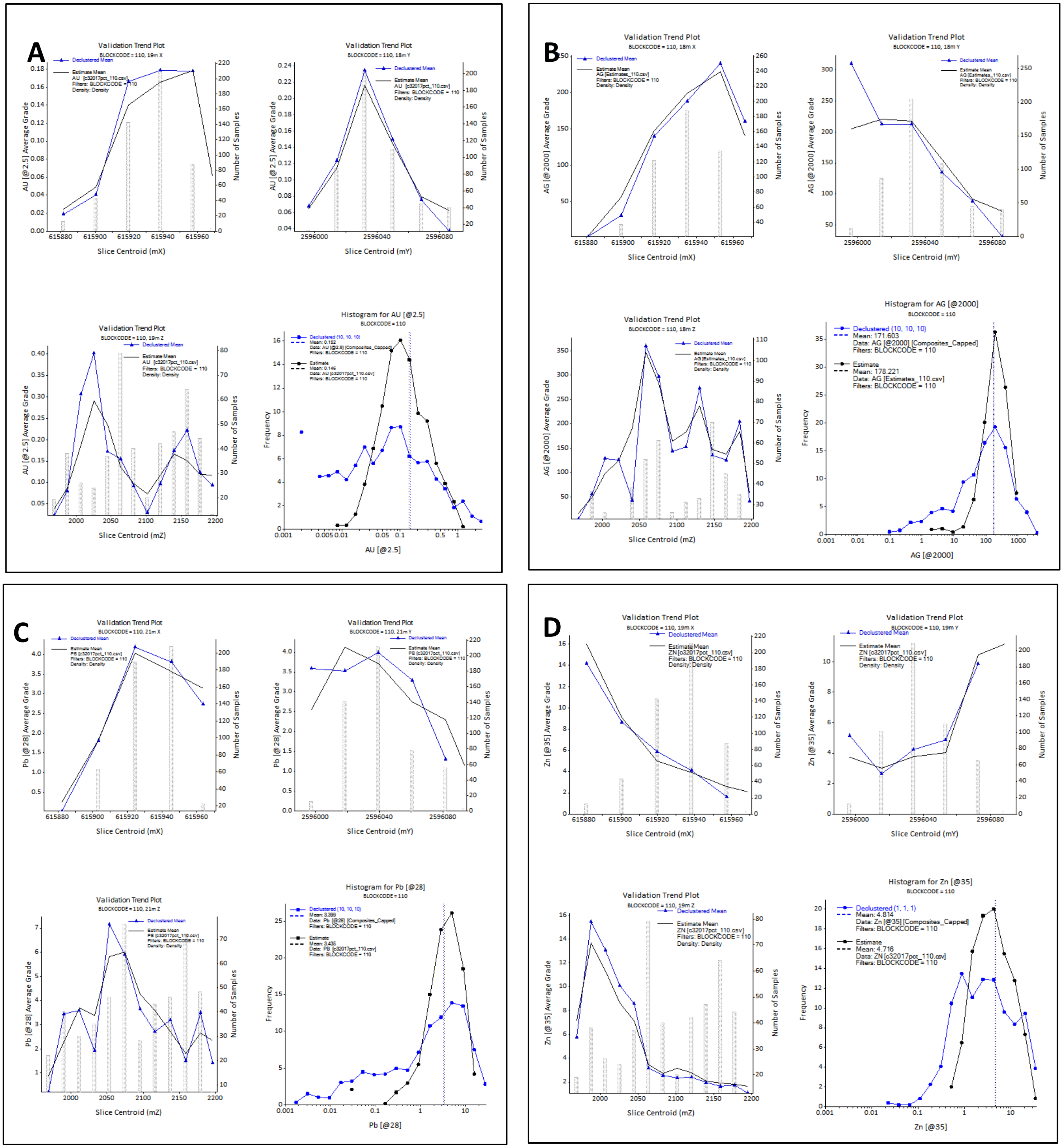
Figure 14-13: Scatter Plot Comparison of Block Estimates and Composites



Note: Figure prepared by SRK, 2017. Scatter Plot of Ag, Au, Pb, Zn, and As for Cuerpo 3 breccia deposit. All domains included.

The block estimates were further validated by comparing the mean of the estimate block grade to the mean of the de-clustered composite sample data within a series of slices through the Cuerpo 3 deposit (swath plots). The swath plots developed for silver, gold, lead, and zinc for the skarn breccia oxide domain, 110, are shown in Figure 14-14. The estimated block grades and the composite sample data are similar in all directions. Overall, the validation shows that current resource grade estimates are a good reflection of the drill hole assay data.

Figure 14-14: Swath Plots for Skarn Breccia Oxide Domain



Note: Figure prepared by SRK, 2017. Gold(A), silver(B), lead(C) and zinc(D)

14.2.12 Mineral Resource Classification

No blocks were classified as Measured Mineral Resources.

Estimated blocks were classified as either Indicated or Inferred according to the following:

- Confidence in geometric interpretation of the mineralized zones;
- Continuity of silver grades defined from variogram models;
- Number of samples used to estimate a block;
- Number of drill holes used to estimate a block; and
- Number of octants required to estimate a block.

To select blocks for the Indicated class, the following procedure was implemented:

1. Blocks were flagged by a classification search pass that used:
    - Silver composite values from each respective rock type domain;
    - A 30 m x 20 m x 20 m search volume obtained from the silver variography of domain 110 (Oxide Skarn breccia);
    - At least 8 samples;
    - At least 2 drill holes; and
    - At least 3 octants. Octants are necessary to demonstrate that minimal spatial support exists from drilling to allow regions into the Indicated class.
2. Final broad areas of flagged blocks were outlined by constructing a classification wireframe designed to encompass zones predominantly flagged by the search pass used. This process allows review of the geological control/confidence on the deposit, and expands certain areas but excludes others from Indicated. The number of blocks flagged for Indicated class was increased by the wire-framing process.
3. Blocks were finally selected as Indicated if more than 50% of the block was contained inside the classification wireframe.

All blocks not assigned to the Indicated class are classified as Inferred.

14.2.13 Mineral Resource Statement

Extensive underground mining and local collapse of the deposit and has taken place within the upper half of the breccia-hosted Cuerpo 3, primarily above 2082 metres in elevation. The regions outlined by a wireframe related to the mined areas are considered depleted or un-mineable and are not included in the final Mineral Resource tabulation.

The Mineral Resources for the Cuerpo 3 deposit are reported in Table 14-18 as oxide or sulphide for both Indicated and Inferred classes. The silver, arsenic, gold, lead, and zinc Mineral Resources are reported above a silver-equivalent block grade cut-off of 195 g/t Ag-Eq. Mineral Resources are reported per the following considerations:

- Metal prices considered were $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb zinc.
- Cut-off grade for Cuerpo 3 of 195 g/t Ag-Eq is based on actual and budgeted operating and sustaining costs.
- Metallurgical recovery used for transition and sulphides minerals was 82% for silver, 80% for gold, 67% for lead and 15% for zinc.
- Metal payable used was 95% for silver, gold and lead and 85% for zinc in concentrates produced from transition and sulphides minerals.
- Silver equivalent (Ag-Eq) grade is estimated as: Ag-Eq = Ag Grade + [(Au Grade x Au Recovery x Au Payable x Au Price / 31.1035) + (Pb Grade x Pb Recovery x Pb Payable x Pb Price x 2204.62) + (Zn Grade x Zn Recovery x Zn Payable x Zn Price x 2204.62)] / (Ag Recovery x Ag Payable x Ag Price / 31.1035).

Alternatively, the Ag-Eq can be calculated using the following factors:

$$\text{Ag-Eq (g/t)} = \text{Ag (g/t)} + \text{Au (g/t)} * 66.5 + \text{Pb (\%)} * 29.6 + \text{Zn (\%)} * 7.1$$

The Mineral Resources may be impacted by additional infill and exploration drilling that may identify additional mineralization or cause changes to the current domain shapes and geological assumptions. The Mineral Resources may also be affected by subsequent assessments of mining, environment, processing, permitting, taxation, socio-economics, and other factors.

Table 14-11: Mineral Resource Statement, Cuerpo 3

Mine / Project	Category	Mineral Type	K Tonnes	Grades					Contained Metal				
				Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Cuerpo 3	Indicated	Oxides	230	217	0.24	5.27	8.44	449	1605	1.77	26,715	42,784	3,319
	Indicated	Sulphides	84	336	0.39	6.90	11.29	646	909	1.05	12,774	20,902	1,748
	Total Indicated		314	249	0.28	5.71	9.20	502	2514	2.83	39,489	63,686	5,067
	Inferred	Oxides	19	163	0.21	5.13	9.39	395	101	0.13	2,149	3,933	244
	Inferred	Sulphides	4	138	0.40	3.16	10.61	334	18	0.05	279	936	43
	Total Inferred		23	159	0.24	4.79	9.60	385	118	0.18	2,428	4,869	288

Notes:

1. Mineral Resources were prepared by SRK Consulting (Canada) Inc. The Qualified Person for the estimate is Jesus M. Velador Beltran, an employee of FMS.
2. Mineral Resources are reported inclusive of Mineral Reserves, and have an effective date of December 31st, 2017. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 195 g/t Ag-Eq, calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; and metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates produced from all materials.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

14.2.14 Sensitivity of the Block Model to Selection of Cut-Off Grade

Mineral Resources can be sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, the block model quantities and grade estimates are presented at different cut-off grades for the Mineral Resources (Table 14-19).

Table 14-12: Mineral Resource Sensitivity to Cut-Off Grade

Classification	Cut-Off Grade Ag-Eq (g/t)	K Tonnes	Grade					Contained Metal				
			Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Indicated	> 250	289	263	0.29	6.00	9.38	527	2,444	2.69	38,196	59,720	4,893
	> 195*	**314**	**249**	**0.28**	**5.71**	**9.20**	**502**	**2,514**	**2.83**	**39,489**	**63,686**	**5,067**
	> 150	338	236	0.27	5.41	9.15	479	2,561	2.93	40,347	68,213	5,202
	> 100	375	217	0.25	4.99	9.00	445	2,609	3.01	41,162	74,353	5,353
Inferred	> 250	19	175	0.28	5.28	9.88	420	106	0.17	2,203	4,119	255
	> 195*	**23**	**159**	**0.24**	**4.79**	**9.60**	**385**	**118**	**0.18**	**2,428**	**4,869**	**288**
	> 150	26	149	0.23	4.40	9.13	359	126	0.19	2,559	5,308	305
	> 100	30	134	0.20	3.92	8.94	327	131	0.19	2,624	5,984	319

*Base case cut-off used on the Mineral Resource Statement. The table shows oxide and sulphide resources combined.

14.3 Mineral Resources for Minor Veins

Mineral Resource estimation of minor veins at Del Toro was undertaken using a polygonal method supported by channel samples across mineralization, diamond drill holes and underground mapping carried out between October 2008 and the effective date of this Report. The polygonal method was used to construct longitudinal sections of vein structures.

Polygons of Measured Mineral Resources are projected vertically (up and down) 20 m away from mine levels informed by chip samples. Indicated Mineral Resources are projected 20 additional metres from Measured resources, away from mine levels, and 20 m around drill hole intercepts where there is continuity of mineralization, as indicated by drilling information or by mine levels with sample lines reporting potentially economic grades. Inferred Mineral Resources are projected 50 m from drill hole intercepts or polygons of Indicated Mineral Resources. In most cases, Inferred Mineral Resources are projected 20 m beyond Indicated Mineral Resources.

Drill hole spacing varies generally from 15 to 75 m in zones of Measured and Indicated Mineral Resources, whereas chip sample lines are spaced between 1.5 and 3.0 m in those mine levels with Measured or Indicated Mineral Resources.

The December 31, 2016, Mineral Resource estimate does not report Measured Mineral Resources.

Figures 14-15 to 14-22 show longitudinal sections for Cuerpo 1 (A, B and C), Cuerpo 2, Escondida, Zaragoza, Carmen, and Consuelo.

Once the polygons for Measured, Indicated and Inferred Mineral Resources are drawn on longitudinal sections (using BRISCAD Pro V12 © software), the area, average width, volume, and weighted mean grade are calculated for every polygon.

Grade caps are defined by analysing cumulative frequency histograms; the grade at the 95th percentile is selected. Capping is done per sample before compositing by length of channel line or drill hole intercept. Tonnage is calculated using the calculated volume and an average SG of 3.

Figure 14-15: Longitudinal Section of Cuerpo 1 A (San Juan Mine)

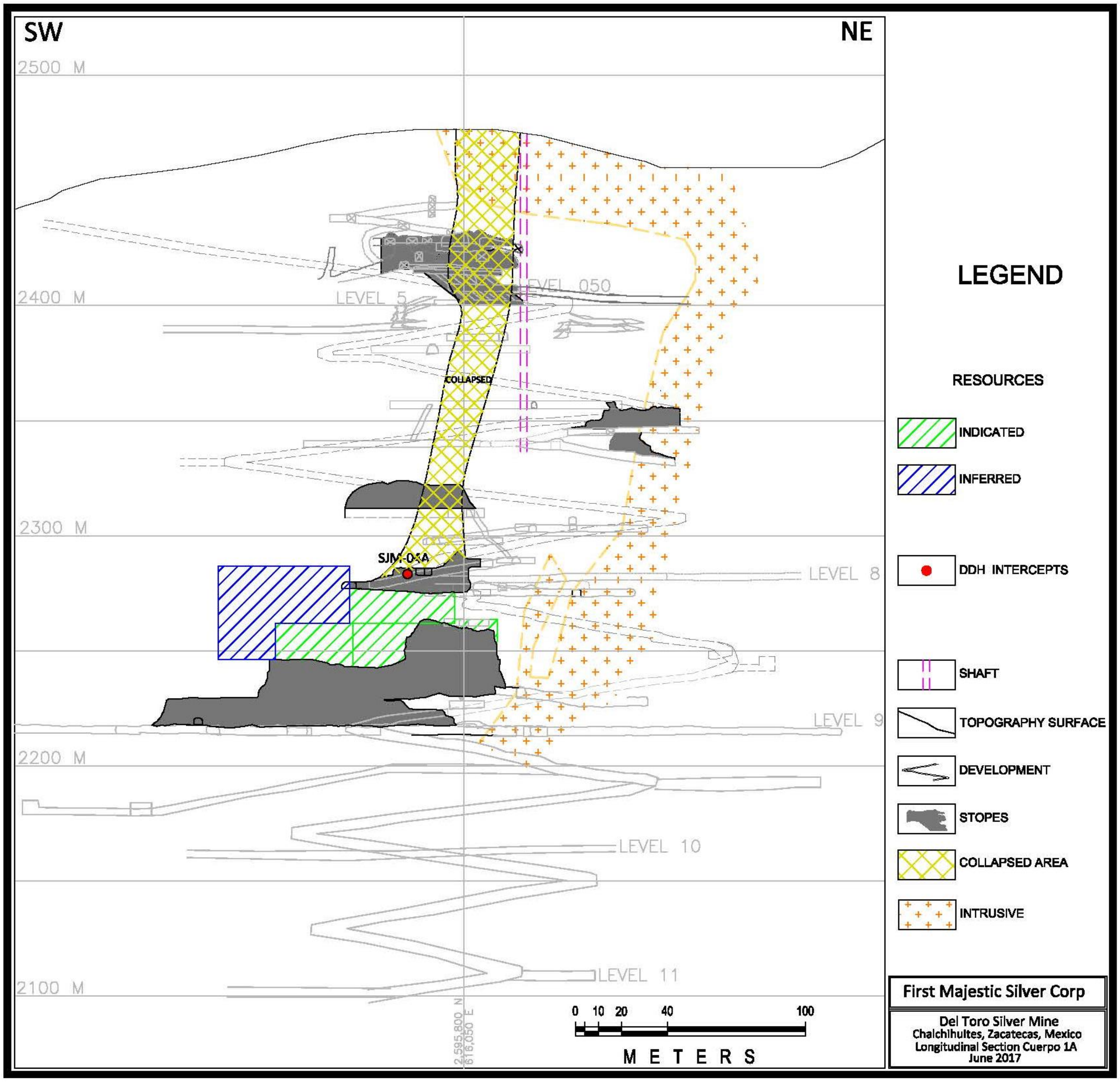


Figure 14-16: Longitudinal Section of Cuerpo 1 B (San Juan Mine)

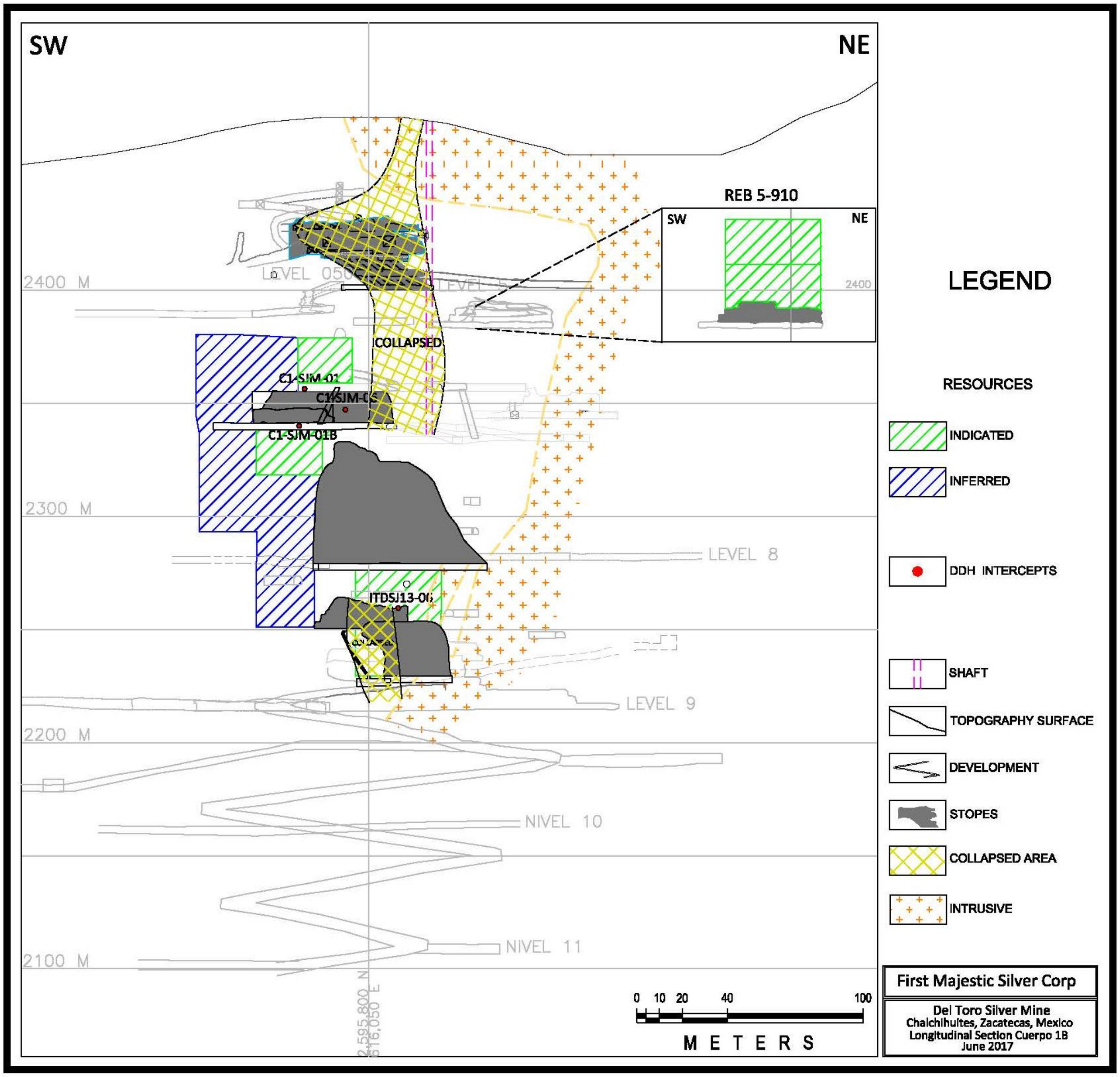


Figure 14-17: Longitudinal Section of Cuerpo 1 C (San Juan Mine)

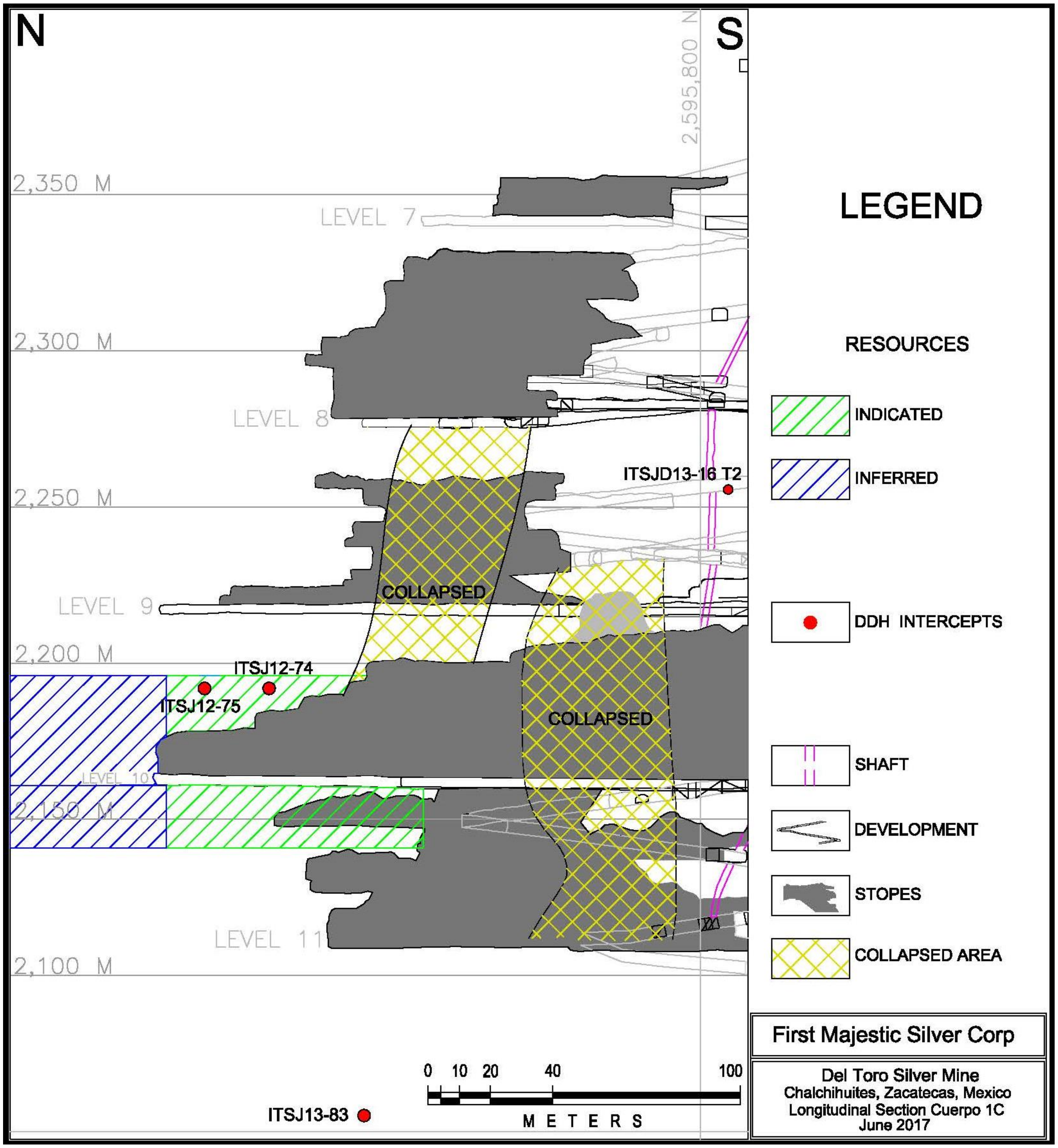


Figure 14-18: Longitudinal Section of Cuerpo 2 (San Juan Mine)

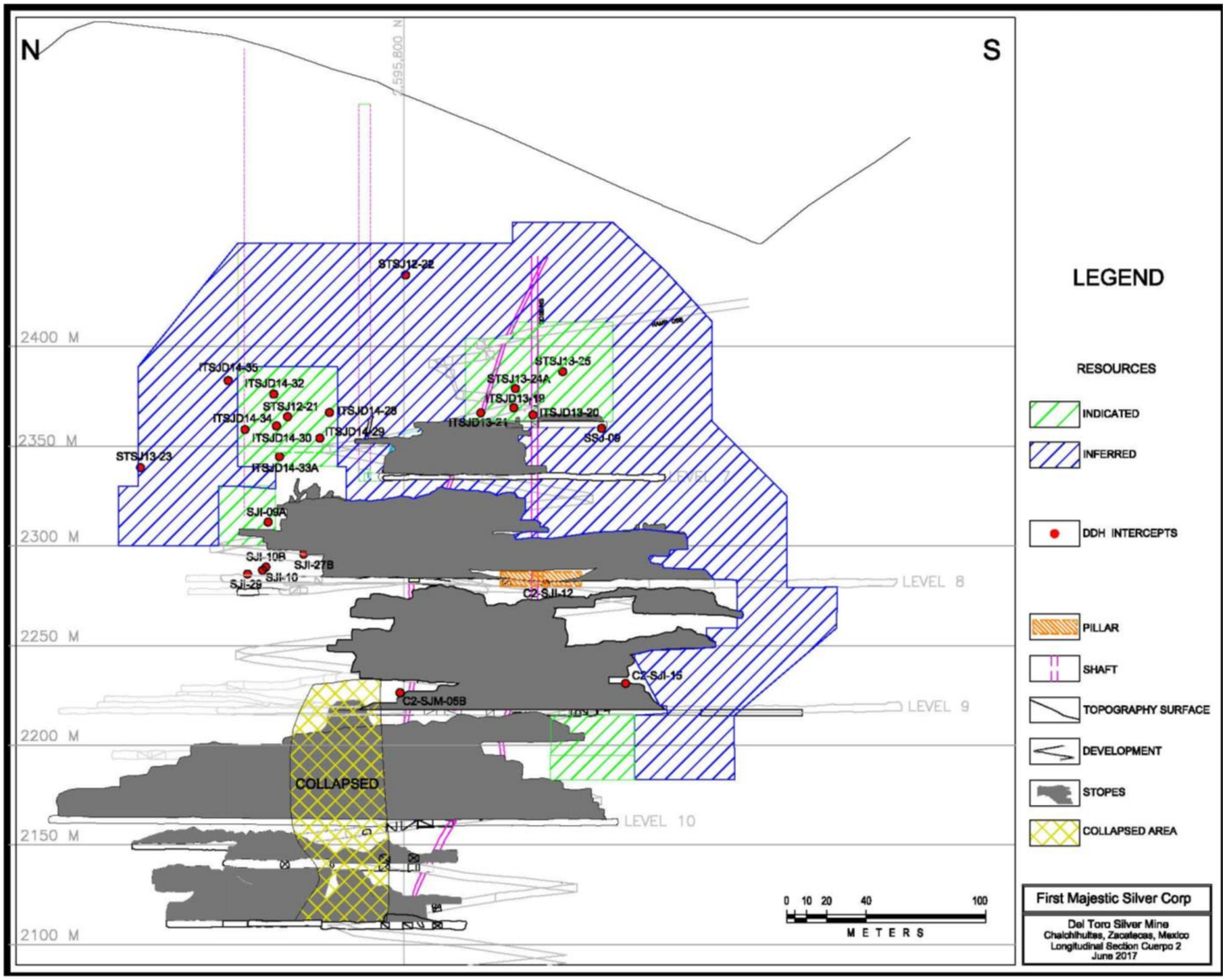


Figure 14-19: Longitudinal Section of Escondida (Perseverancia Mine)

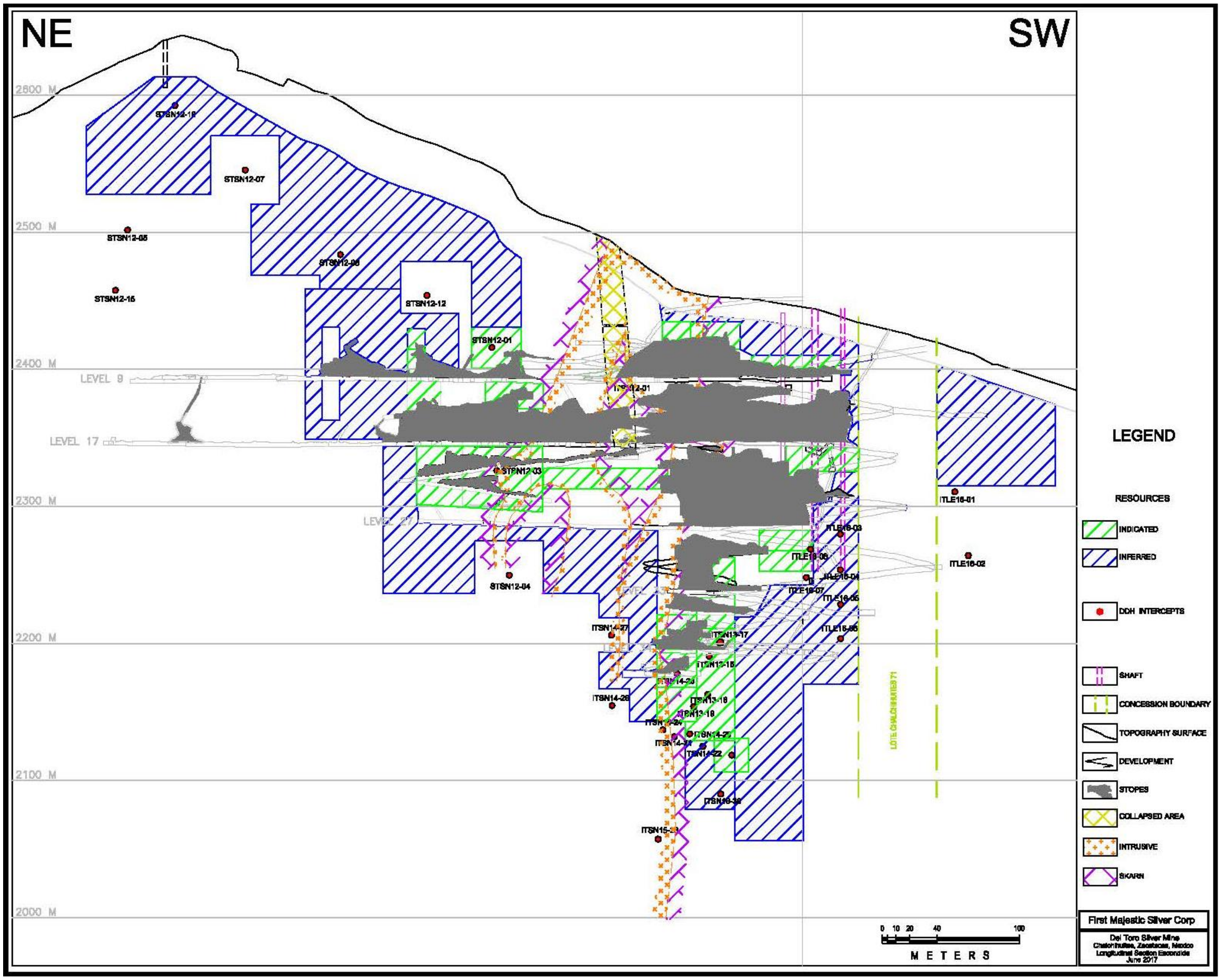


Figure 14-20: Longitudinal Section of Zaragoza

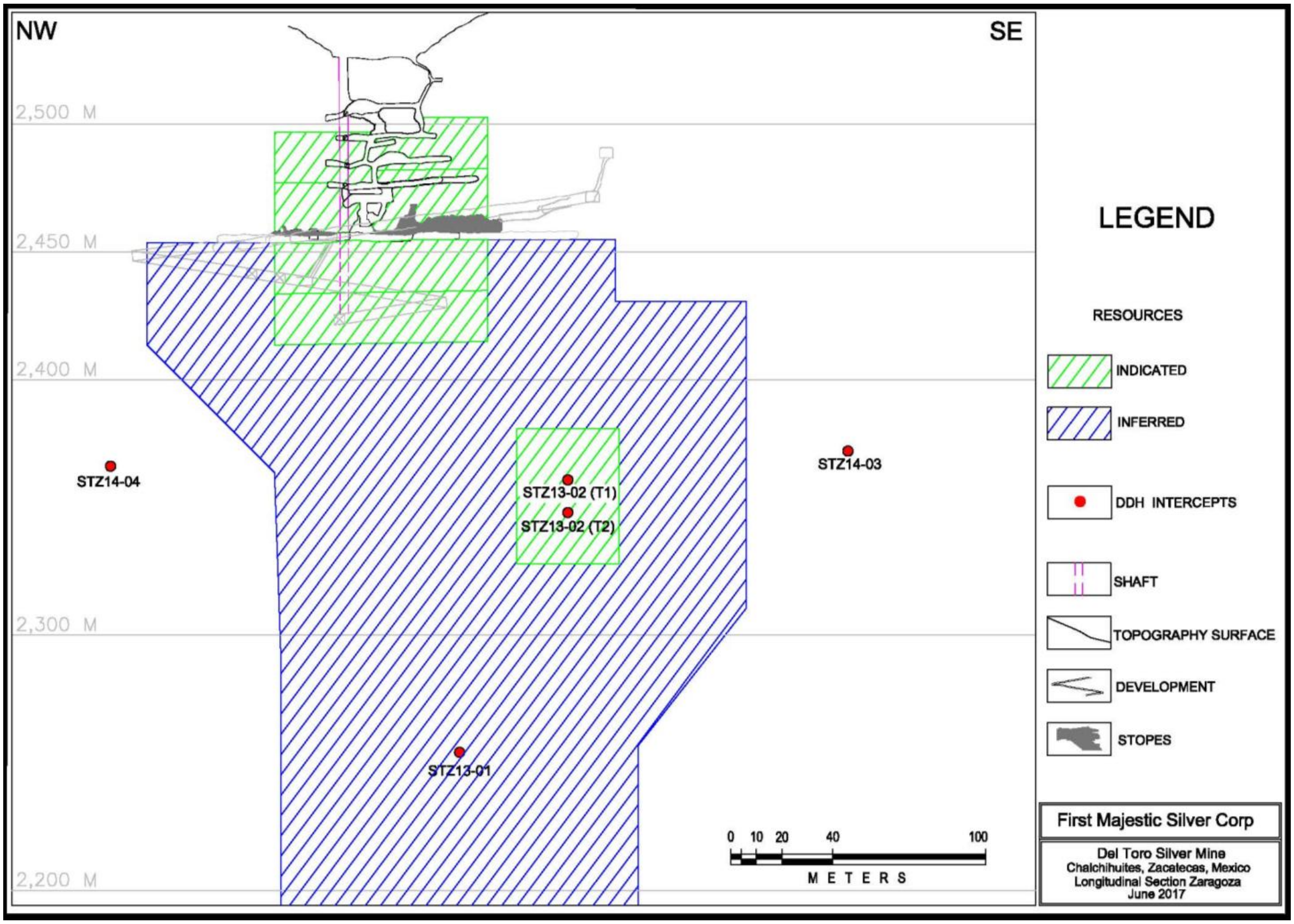


Figure 14-21: Longitudinal Section of Carmen

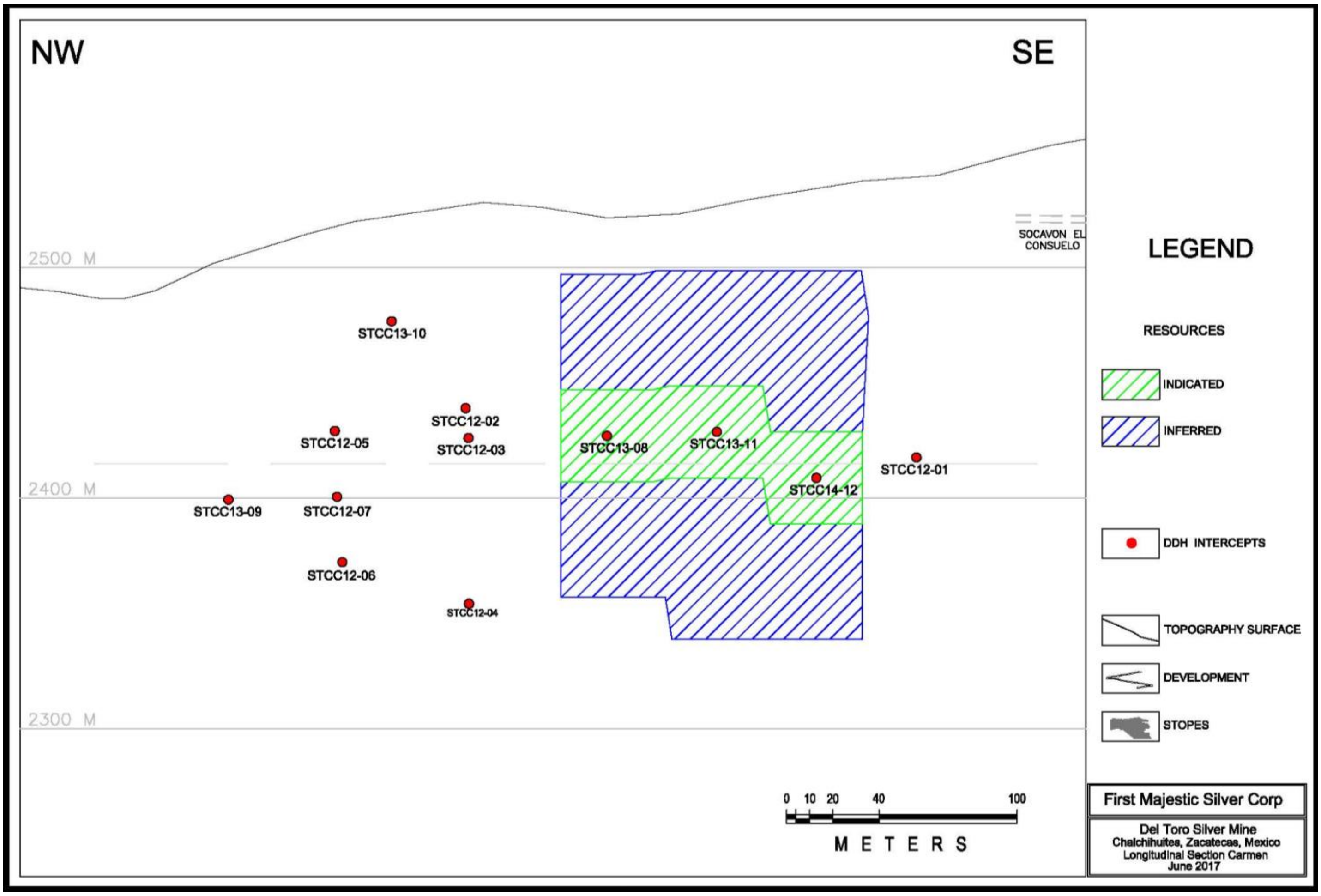
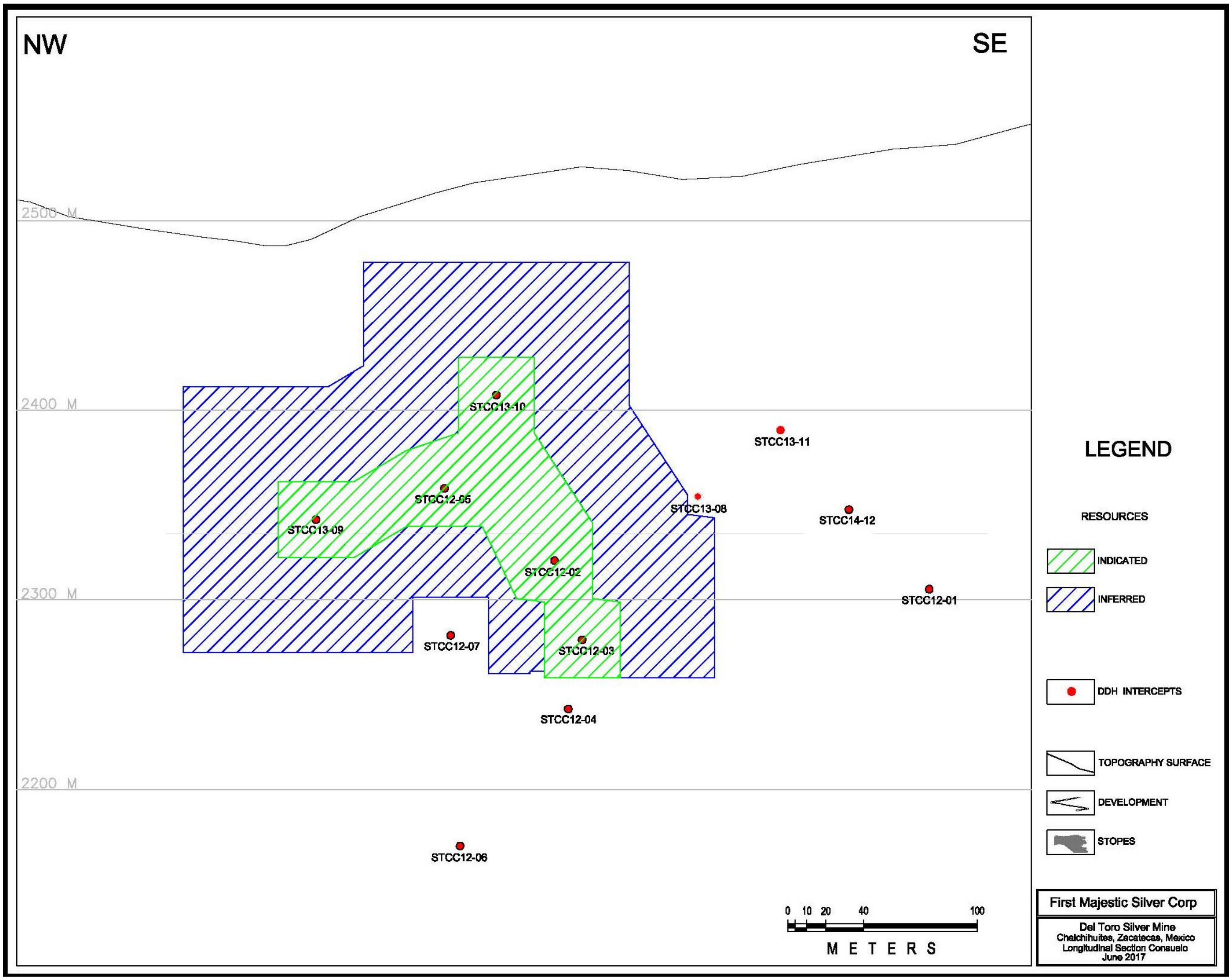


Figure 14-22: Longitudinal Section of Consuelo



14.3.1 Mineral Resource Statement

Mineral Resources are reported per the following considerations:

- Metal prices considered were \$19.00 /oz Ag, \$1,300 /oz Au, \$1.00 /lb Pb and \$1.20 /lb zinc;
- The cut-off grade of 195 g/t Ag-Eq is based on actual and budgeted operating and sustaining costs;
- Metallurgical recovery used for all material was 82% for silver, 80% for gold, 67% for lead and 15% for zinc;
- Metal payable used was 95% for silver, gold, and lead and 85% for zinc in concentrates produced from all materials; and
- Ag-Eq grade is estimated as: Ag-Eq = Ag Grade + [(Au Grade x Au Recovery x Au Payable x Au Price / 31.1035) + (Pb Grade x Pb Recovery x Pb Payable x Pb Price x 2204.62) + (Zn Grade x Zn Recovery x Zn Payable x Zn Price x 2204.62)] / (Ag Recovery x Ag Payable x Ag Price / 31.1035).

Alternatively, the Ag-Eq can be calculated using the following factors:

Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1

The Mineral Resources may be impacted by additional infill and exploration drilling that may identify additional mineralization or cause changes to the current domain shapes and geological assumptions. The Mineral Resources may also be affected by subsequent assessments of mining, environment, processing, permitting, taxation, socio-economics, and other factors.

Table 14-13: Indicated Mineral Resource Statement, Minor Deposits

Mine / Project	Category	Mineral Type	K Tonnes	Grades					Contained Metal				
				Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Escondida	Indicated	Sulphides	143	204	0.01	4.23	2.46	347	934	0.04	13304	7733	1,592
Cuerpo 1	Indicated	Sulphides	128	203	0.02	2.22	1.81	283	834	0.08	6241	5079	1,161
Cuerpo 2	Indicated	Sulphides	123	202	0.02	3.12	1.83	308	795	0.06	8432	4951	1,215
Zaragoza	Indicated	Sulphides	30	146	0.07	2.98	2.10	254	141	0.07	1981	1392	246
Carmen	Indicated	Sulphides	9	248	0.02	6.42	4.34	470	72	0.00	1279	864	137
Consuelo	Indicated	Sulphides	33	209	0.08	3.65	0.79	328	222	0.09	2667	575	349
Total	*Total Indicated*	*Sulphides*	*465*	*201*	*0.02*	*3.31*	*2.01*	*314.42*	*2999*	*0.34*	*33905*	*20593*	*4699*

Table 14-14: Inferred Mineral Resource Statement, Minor Deposits

Mine / Project	Category	Mineral Type	K Tonnes	Grades					Contained Metal				
				Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Escondida	Inferred	Sulphides	288	226.8	0.03	6.16	3.06	433	2,098	0.31	39048	19407	4,006
Cuerpo 1-A	Inferred	Sulphides	11	196.5	0.04	3.89	2.09	329	72	0.01	973	522	120
Cuerpo 1-C	Inferred	Sulphides	14	137.6	0.05	2.10	0.63	208	61	0.02	642	192	92
Cuerpo 1-B	Inferred	Sulphides	26	231.2	0.01	2.02	1.90	305	191	0.01	1139	1074	252
Cuerpo 2	Inferred	Sulphides	201	222.8	0.00	4.89	1.96	381	1,438	0.00	21615	8693	2,461
Zaragoza	Inferred	Sulphides	110	150.7	0.34	2.88	1.98	272	533	1.20	6985	4794	964
Carmen	Inferred	Sulphides	26	248.4	0.02	6.42	4.34	470	205	0.01	3633	2453	388
Consuelo	Inferred	Sulphides	59	211.2	0.07	3.78	1.30	337	404	0.14	4958	1704	645
Total	*Total Inferred*	*Sulphides*	*735*	*212*	*0.07*	*4.88*	*2.40*	*378.08*	*5002*	*1.71*	*78994*	*38839*	*8929*

Notes:

1. Mineral Resources were prepared by FMS. The Qualified Person for the estimate is Jesus M. Velador Beltran, MMSA, QP, an employee of FMS.
2. Mineral Resources are reported inclusive of Mineral Reserves, and have an effective date of December 31st, 2016. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 195 g/t Ag-Eq, calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zb; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; and metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates produced from all materials.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

14.4 Consolidated Mineral Resource Statement

Mineral Resources are reported per the following considerations:

- Metal prices considered were $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb zinc.

- All Mineral Resources are mined by underground methods, mainly by cut-and-fill stoping (resue), less often by shrinkage. Two additional methods are being considered for Cuerpo 3 (drift-and-fill) and Santa Teresa (long hole stoping).

- The cut-off grades of 195 g/t Ag-Eq for Cuerpo 3 and 120 g/t Ag-Eq for all other areas include consideration for stoping costs, processing costs, indirect costs and selling costs, and they are based on actual and budgeted estimates.

- Metallurgical recovery used for all material was 82% for silver, 80% for gold, 67% for lead and 15% for zinc.

- Metal payable used was 95% for silver, gold, and lead, and 85% for zinc in concentrates produced from all materials.

- Ag-Eq grade is estimated as: Ag-Eq = Ag Grade + [(Au Grade x Au Recovery x Au Payable x Au Price / 31.1035) + (Pb Grade x Pb Recovery x Pb Payable x Pb Price x 2204.62) + (Zn Grade x Zn Recovery x Zn Payable x Zn Price x 2204.62)] / (Ag Recovery x Ag Payable x Ag Price / 31.1035).

Alternatively, the Ag-Eq can be calculated using the following factors:

$$\text{Ag-Eq (g/t)} = \text{Ag (g/t)} + \text{Au (g/t)} * 66.5 + \text{Pb (\%)} * 29.6 + \text{Zn (\%)} * 7.1$$

The Mineral Resources may be impacted by additional infill and exploration drilling that may identify additional mineralization or cause changes to the current domain shapes and geological assumptions. The Mineral Resources may also be affected by subsequent assessments of mining, processing, environment, permitting, taxation, socio-economics, and other factors.

Table 14-15: Consolidated Mineral Resource Statement Del Toro

Mine / Project	Category	Mineral Type	K Tonnes	Grades Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Contained Metal Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Dolores	Measured	Sulphides	9	108	1.16	2.87	0.86	276	32	0.34	580	174	82
	Indicated	Sulphides	8	159	0.35	2.24	0.03	249	39	0.09	381	5	62
	Total Measured and Indicated		17	131	0.79	2.58	0.48	264	71	0.43	961	179	143
Purisima	Measured												
	Indicated	Sulphides	20	150	0.54	5.97	0.20	364	97	0.35	2,651	90	236
	Total Measured and Indicated		20	150	0.54	5.97	0.20	364	97	0.35	2,651	90	236
Santa Teresa	Measured	Sulphides	38	257	0.25	4.33	0.93	409	314	0.31	3,626	778	500
	Indicated	Sulphides	160	230	0.27	4.47	1.52	391	1183	1.41	15,769	5,379	2,013
	Total Measured and Indicated		198	235	0.27	4.44	1.41	395	1497	1.72	19,394	6,157	2,512
Total Dolores	Measured	Sulphides	47	228	0.43	4.04	0.92	383	346	0.65	4,206	952	581
	Indicated	Sulphides	188	218	0.31	4.54	1.32	382	1319	1.84	18,800	5,474	2,310
	Total Measured and Indicated		235	220	0.33	4.44	1.24	383	1666	2.50	23,006	6,426	2,892
Escondida	Measured												
	Indicated	Sulphides	143	204	0.01	4.23	2.46	347	934	0.04	13,304	7,733	1,592
	Total Measured and Indicated		143	204	0.01	4.23	2.46	347	934	0.04	13,304	7,733	1,592
San Nicolas	Measured												
	Indicated	Sulphides	20	189	0.23	8.13	1.30	454	122	0.15	3,594	575	293
	Total Measured and Indicated		20	189	0.23	8.13	1.30	454	122	0.15	3,594	575	293
Total Perseverancia	Measured												
	Indicated	Sulphides	163	202	0.04	4.71	2.32	360	1056	0.19	16,898	8,308	1,884
	Total Measured and Indicated		163	202	0.04	4.71	2.32	360	1056	0.19	16,898	8,308	1,884
Lupitas	Measured												
	Indicated	Sulphides	88	210	0.04	7.15	0.87	431	593	0.12	13,806	1,672	1,214
	Total Measured and Indicated		88	210	0.04	7.15	0.87	431	593	0.12	13,806	1,672	1,214
Lupitas Alto	Measured	Sulphides											
	Indicated	Sulphides	119	161	0.07	2.26	1.02	239	616	0.26	5,952	2,674	918
	Total Measured and Indicated		119	161	0.07	2.26	1.02	239	616	0.26	5,952	2,674	918
San Jose	Measured												
	Indicated	Sulphides	21	328	0.02	8.50	0.93	587	225	0.01	4,002	436	403
	Total Measured and Indicated		21	328	0.02	8.50	0.93	587	225	0.01	4,002	436	403
San Jose Alto	Measured	Sulphides											
	Indicated	Sulphides	19	508	0.06	9.87	0.76	810	306	0.04	4,071	311	487
	Total Measured and Indicated		19	508	0.06	9.87	0.76	810	306	0.04	4,071	311	487

				Grades					Contained Metal				
Mine / Project	Category	Mineral Type	K Tonnes	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Cuerpo 1	Measured												
	Indicated	Sulphides	128	203	0.02	2.22	1.81	283	834	0.08	6,241	5,079	1,161
	Total Measured and Indicated		128	203	0.02	2.22	1.81	283	834	0.08	6,241	5,079	1,161
Cuerpo 2	Measured												
	Indicated	Sulphides	123	202	0.02	3.12	1.83	308	795	0.06	8,432	4,951	1,215
	Total Measured and Indicated		123	202	0.02	3.12	1.83	308	795	0.06	8,432	4,951	1,215
Cuerpo 3	Measured												
	Indicated	Oxides	230	217	0.24	5.27	8.44	449	1605	1.77	26,715	42,784	3,319
	Indicated	Sulphides	84	336	0.39	6.90	11.29	646	909	1.05	12,774	20,902	1,748
	Total Measured and Indicated		314	249	0.28	5.71	9.20	502	2514	2.83	39,489	63,686	5,067
Total San Juan	Measured												
	Indicated		811	226	0.13	4.59	4.41	401	5883	3.40	82,022	78,792	10,466
	Total Measured and Indicated		811	226	0.13	4.59	4.41	401	5883	3.40	82,022	78,792	10,466
Zaragoza	Measured												
	Indicated	Sulphides	30	146	0.07	2.98	2.10	254	141	0.07	1,981	1,392	246
	Total Measured and Indicated												
Carmen	Measured												
	Indicated	Sulphides	9	248	0.02	6.42	4.34	470	72	0.00	1,279	864	137
	Total Measured and Indicated												
Consuelo	Measured												
	Indicated	Sulphides	33	209	0.08	3.65	0.79	328	222	0.09	2,667	575	349
	Total Measured and Indicated												
Total Other Veins	Measured												
	Indicated		72	187	0.07	3.72	1.78	315	435	0.17	5,927	2,831	732
	Total Measured and Indicated		72	187	0.07	3.72	1.78	315	435	0.17	5,927	2,831	732
TOTAL Del Toro	***Measured***		***47***	***228***	***0.43***	***4.04***	***0.92***	***383***	***346***	***0.65***	***4,206***	***952***	***581***
	Indicated		***1,234***	***219***	***0.14***	***4.55***	***3.51***	***388***	***8694***	***5.59***	***123,647***	***95,404***	***15,393***
	Total Measured and Indicated		***1,281***	***219***	***0.15***	***4.53***	***3.41***	***388***	***9040***	***6.25***	***127,853***	***96,357***	***15,974***

Notes:

1. Mineral Resources were prepared by FMS (Other Veins), SRK Consulting (Cuerpo 3) and Entech (DPL). The Qualified Person for the estimate is Jesus M. Velador Beltran, MMSA, an employee of FMS.
2. Mineral Resources are reported inclusive of Mineral Reserves, and have an effective date of December 31st, 2016. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 195 g/t Ag-Eq for Cuerpo 3 and 120 g/t Ag-Eq for all other veins. Silver equivalent was calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zb; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; and metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates produced from all materials.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

Table 14-16: Consolidated Inferred Mineral Resource Del Toro

Mine / Project	Category	K Tonnes	Grades Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Contained Metal Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Dolores	Inferred	13	119.0	0.85	2.73	0.50	260	51	0.36	797	146	111
Purisima		17	122.1	0.46	5.26	0.17	309	68	0.25	1,999	64	172
Santa Teresa		191	270.2	0.38	5.46	1.81	470	1,656	2.30	22,944	7,585	2,879
San Nicolas		51	205.1	0.21	7.89	0.86	459	334	0.34	8,809	964	747
Escondida		288	226.8	0.03	6.16	3.06	433	2,098	0.31	39,048	19,407	4,006
Lupitas		142	105.5	0.04	4.13	0.71	235	480	0.18	12,878	2,229	1,071
Lupitas Alto		88	208.8	0.06	4.60	0.70	354	592	0.17	8,942	1,360	1,003
San Jose		25	470.1	0.03	9.56	0.59	759	384	0.02	5,353	329	620
San Jose Alto		78	266.4	0.04	4.98	1.26	425	665	0.10	8,509	2,150	1,061
Cuerpo 3		23	159	0.24	4.79	9.60	385	118	0.18	2,428	4,866	285
Cuerpo 1-A		11	196.5	0.04	3.89	2.09	329	72	0.01	973	522	120
Cuerpo 1-C		14	137.6	0.05	2.10	0.63	208	61	0.02	642	192	92
Cuerpo 1-B		26	231.2	0.01	2.02	1.90	305	191	0.01	1,139	1,074	252
Cuerpo 2		201	222.8	0.00	4.89	1.96	381	1,438	0.00	21,615	8,693	2,461
Zaragoza		110	150.7	0.34	2.88	1.98	272	533	1.20	6,985	4,794	964
Carmen		26	248.4	0.02	6.42	4.34	470	205	0.01	3,633	2,453	388
Consuelo		59	211.2	0.07	3.78	1.30	337	404	0.14	4,958	1,704	645
Total		*1,362*	*213*	*0.13*	*5.05*	*1.95*	*385*	*9,349*	*5.61*	*151,654*	*58,531*	*16,877*

Notes:

1. Mineral Resources were prepared by FMS (Other Veins), SRK Consulting (Cuerpo 3) and Entech (DPL). The Qualified Person for the estimate is Jesus M. Velador Beltran, MMSA, an employee of FMS.
2. Mineral Resources are reported inclusive of Mineral Reserves, and have an effective date of December 31st, 2016. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are reported above a silver-equivalent grade of 195 g/t Ag-Eq for Cuerpo 3 and 120 g/t Ag-Eq for all other veins. Silver equivalent was calculated using the equation Ag-Eq (g/t) = Ag (g/t) + Au (g/t) * 66.5 + Pb (%) * 29.6 + Zn (%) * 7.1. Assumptions include metal prices of $19.00 /oz Ag, $1,300 /oz Au, $1.00 /lb Pb and $1.20 /lb Zn; metallurgical recoveries of 82% for Ag, 80% for Au, 67% for Pb and 15% for Zn; and metal payability of 95% for Ag, Au and Pb, and 85% for Zn in concentrates produced from all materials.
4. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding

15 MINERAL RESERVES ESTIMATES

15.1 Initial Cut-Off Grade

A design silver equivalent (Ag-Eq) Cut-Off Grade (COG) was estimated to complete the initial design and initiate the process of optimisation for each underground mine. This was developed using the following inputs:

- Commodity prices and exchange rate assumptions;
- Current processing plant recoveries for silver, lead, gold, and zinc;
- Selected mining method;
- Current mining costs;
- Processing, surface haulage, general and administration costs; and
- Treatment and refining costs through current contracts with smelting and refining companies.

The all-in-sustaining mining cost for Del Toro was $95.20/t for 2016, which includes sustaining development and sustaining capital. A COG estimate based on the actual 2016 financial numbers was generated by mining method as presented in Table 15-1.

A multiple-COG approach will be used for each mining method, as this allows the operation to benefit from the opportunity of extracting lower-grade material. Otherwise, this material may be left behind and the opportunity lost. Lower COGs can be used when the operation has already invested in development and mining does not need to cover these costs. Similarly, when lower-grade mineralisation is mined to access higher-grade material, if the low-grade material can cover the incremental haulage, processing, treatment, and overhead costs, then it will be sent to the processing plant rather than the waste storage facility.

There were three COGs used:

- Fully Costed Cut-Off Grade (FCOG) – a grade of material in which recoverable value pays for all associated costs, including but not limited to development, stoping, processing, treatment, and all administration costs. For high-level assessments, FMS allows for some capital in the determination (sustaining capital);
- Incremental Cut-Off Grade (ICOG) – a grade of material in which recoverable value pays for stoping, processing, treatment, and administration (if the material adds to mine life). Development and sustaining capital are excluded under the premise that these costs have already been absorbed by material deemed economic by the consideration of the FCOG; and
- Marginal Cut-Off Grade (MCOG) – a grade of material in which recoverable value pays for the incremental haulage cost between the waste dump and the processing facility, processing costs (variable component) and administration costs (if mine life is extended).

Table 15-1: Initial Cut-Off Grade Applied to All Mining Locations

Component	Unit	Value	Recovery	Payability
Silver	USD / oz.	18.00	82.30%	95%
Lead	USD / lb.	1.00	67.50%	93%
Zinc	USD / lb.	1.15	15.00%	85%
Gold	USD / oz.	1,250.00	80.00%	95%
Component		**PB**	**Zn**	**Au**
Ag Equivalent Ratio	Ag-Eq.	29.60	7.10	66.50
Value (Ag-Eq)	$ / g	0.45		
Operating Costs		**Total Costs**	**Stoping Costs**	**Transport & Processing**
Direct Stoping Costs				
Stoping – Cut-and-Fill (40% stoping) ^	*$ / t ore*	21.00	21.00	
Stoping – Shrinkage (20% stoping) ^	*$ / t ore*	25.00	25.00	
Stoping – Longhole (20% stoping) ^	*$ / t ore*	12.00	12.00	
Stoping – Drift-and-Fill (20% stoping) ^	*$ / t ore*	40.00	40.00	
Other Direct Costs				
Sill Development, Including Exploration Development	*$ / t ore*	10.80		
Processing and Surface Haulage	*$ / t ore*	16.00	16.00	16.00
Treatment, Transport, Refining and Penalties	*$ / t ore*	27.00	27.00	27.00
Indirect Operating Mining Costs				
Diesel, Equipment, Utilities	*$ / t ore*	3.00	3.00	1.00
Labour, Contract Labour	*$ / t ore*	4.60	4.60	
General Mining Services	*$ / t ore*	2.00	2.00	
Geology	*$ / t ore*	0.50	0.50	
General and Administration	*$ / t ore*	2.50	2.50	0.50
Taxes, Profit Share, Safety, Corporate Allocation Costs	*$ / t ore*	5.00	5.00	0.50
Total	*$ / t ore*	*95.20*	*84.40*	*45.00*
Cut-Off Grade		**Full Cost**	**Increm. Cost**	**Marg. Cost**
Cut-Off Grade: Cut-and-Fill	g/t Ag-Eq	200	180	100
Cut-Off Grade: Shrinkage	g/t Ag-Eq	215	190	100
Cut-Off Grade: Longhole	g/t Ag-Eq	185	160	100
Cut-Off Grade: Drift-and-Fill	g/t Ag-Eq	245	220	100

^ Includes some portion of capital expense. Estimate of percentage of deposit is suited to selected mining method.

15.2 Dilution and Ore Loss

Dilution is waste material that enters the ore stream and often has two negative impacts: increase in costs (mining, processing, treatment and increasing the storage of tailings) and increase in ore loss (through processing and impacting on mining recoveries). There are multiple sources of dilution which can be classified within the following two categories:

- Planned dilution; and
- Unplanned dilution.

Planned dilution is additional waste that is mined concurrently with the target mineralized material to allow the mineralized material to be recovered, ultimately leading to an overall lower grade being mined. An economic trade-off study between selective and less productive methods that require less waste to be mined versus bulk methods that are more productive and mine more waste is completed to test which method benefits the company the most.

Unplanned dilution is waste material that finds its way into the ore stream. Some examples of sources of unplanned dilution are provided below:

- Over-break during mining;
- Mucking of waste (or backfill / road base material) during the mucking of mineralized rock;
- Dumping of waste material at the ore stockpile (run of mine) at the processing facility; and
- Dumping of waste into ore passes, leading to a mixing of mineralized rock and waste rock.

Table 15-2 shows the unplanned dilution and mining recovery used sorted by mining method and by mine.

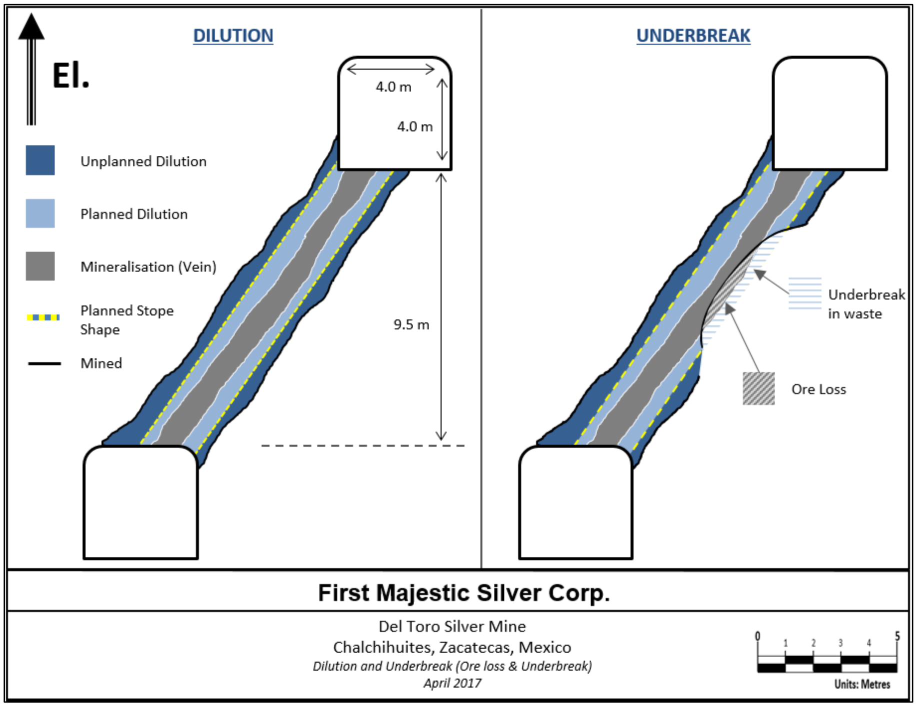
Table 15-2: Dilution and Recovery Parameters

Mine	Mining Method	Unplanned Dilution	Mining Recovery
Dolores	Cut-and-Fill	10%	95%
	Long Hole Stoping	15%	95%
	Development	10%	95%
San Juan	Cut-and-Fill	10%	95%
	Shrinkage	10%	95%
	Drift-and-Fill	20%	90%
Perseverancia	Cut-and-Fill	10%	95%

Ore loss has a significant impact on the mining business, with a reduction of revenue through the loss of mineralized material. Ore loss can occur in a variety of different ways such as poor blasting, poor stope recovery, and ground conditions impacting access to the mineralized material. Ore loss occurs in most operations, and an allowance for a reduction in revenue is prudent for budgeting and assessing profitability.

An example of dilution and ore loss via underbreak (poor blasting practices) is illustrated in Figure 15-1. Note that underbreak in waste is an economic benefit; however, it reflects that the operation is not achieving the target mining shape.

Figure 15-1: Schematic Example of Dilution and Underbreak



Note: Figure prepared by Entech, 2017.

15.3 Final Underground Cut-Off Grade

Following completion of the mine designs and initial schedules, the various COGs were revised based on the detailed financial model and are summarised in Table 15-3.

Table 15-3: Final Underground COG Used to Estimate Mineral Reserves (Plant at Full Capacity)

Component	Unit	Value	Recovery	Payability
Ag	USD / oz.	18.00	82.30%	95%
Pb	USD / lb.	1.00	67.50%	95%
Zn	USD / lb.	1.15	15.00%	85%
Au	USD / oz.	1,250.00	60.00%	95%
Component		**Pb**	**Zn**	**Au**
Ag Equivalent Ratio	Ag-Eq	31.2	7.1	50.6
Value (Ag-Eq)	$ / gram	0.45		
Operating Costs		**Total Costs**	**Stoping Costs**	**Transport Processing**
Direct Stoping Costs				
Stoping – Cut-and-Fill (67% stoping)	*$ / t ore*	22.00	22.00	
Stoping – Shrinkage (1% stoping)	*$ / t ore*	30.00	30.00	
Stoping – Longhole (13% stoping)	$ / t ore	8.60	8.60	
Stoping – Drift-and-Fill (20% stoping)	$ / t ore	71.30	71.30	
Other Direct Costs				
Sill Development, Including Exploration Development	*$ / t ore*	8.00		
*Processing and Surface Haulage**	*$ / t ore*	16.00	16.00	12.80[#]
Treatment, Transport, Refining and Penalties*	$ / t ore	22.80	22.80	18.20[#]
Royalties	$ / t ore			
Indirect Operating Mining Costs				
Diesel, Equipment, Utilities	*$ / t ore*	3.00	2.00	0.50
Labour, Contract Labour	*$ / t ore*	5.00	1.00	
General Mining Services	*$ / t ore*	2.00		
Geology	*$ / t ore*	0.50	0.50	
General and Administration	$ / t ore	2.50	2.50	2.50
Taxes, Profit Share, Safety, Corporate Allocation Costs	*$ / t ore*	5.00	2.00	2.00
Total	*$ / t ore*	*95.10*	*77.10*	*36.00*
Cut-Off Grade		**Full Cost**	**Increm Cost**	**Marg. Cost**
Cut-Off Grade: Cut-and-Fill*	g/t Ag-Eq	195	150	80
Cut-Off Grade: Shrinkage*	g/t Ag-Eq	210	170	80
Cut-Off Grade: Longhole*	g/t Ag-Eq	160	120	80
Cut-Off Grade: Drift-and-Fill*	g/t Ag-Eq	300	270	80

^ Includes some portion of capital expense.

* Expenses estimated to be related to Cuerpo 3 treatment and refining were assigned to Cuerpo 3 mining costs. COG is rounded to an increment of 5 g/t Ag equivalent.

[#] 80% of processing and treatment costs are applied to account for reduction of fixed costs per tonne (increase in base unit as opportunity ore fills production gaps).

15.4 Economic Constraints

The COG was used as the main economic constraint and was derived from a Net Smelter Return (NSR) model prepared with the parameters described earlier; for this purpose, the silver, gold, lead and zinc grades were expressed in terms of Ag-Eq. The Ag-Eq grade formula used was:

Ag-Eq Grade = Ag Grade + [(Au Grade * Au Recovery * Au Payable * Au Price / 31.1035) + (Pb Grade * Pb Recovery * Pb Payable * Pb Price * 22.0462) + (Zn Grade * Zn Recovery * Zn Payable * Zn Price * 22.0462)] / (Ag Recovery * Ag Payable * Ag Price / 31.1035)

The resulting COG for estimating Mineral Reserves was included in Table 15-3.

15.5 Geometric Constraints

Mineable zones were first determined by the initial COG and classification criteria. Stopes were then optimized based on selected mining methods and minimum stope widths. The stope design methodology is discussed in Sections 16.4, 16.5and 16.6.

15.6 Mineral Reserve Estimate

Mineral Reserve estimates are based on mining modifying factors gathered from actual operations data as well as from estimates that follow industry best practices.

Modifying factors for mining were applied to the Measured and Indicated Mineral Resources on a stope-by-stope evaluation, and have been determined suitable for conversion to Mineral Reserves. To convert from Mineral Resources to Mineral Reserves, the resource blocks were interrogated by applying economic criteria as well as geometric constraints based on the mining method envisioned. Mineable blocks or stopes were defined by following this process.

The Del Toro Mineral Reserve estimate is provided in Table 15-4. Factors that could affect the Mineral Reserves include changes to the following assumptions:

- Unplanned dilution;
- Mining recovery;
- Geotechnical conditions;
- Equipment productivities;
- Metallurgical recoveries;
- Metal prices and exchange rates;
- Mill throughput capacities;
- Operating costs; and
- Capital costs

Table 15-4: Mineral Reserve Statement Del Toro

Mine / Project	Category	Mineral Type	K Tonnes	Grade Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Contained Metal Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Dolores	Proven												
	Probable	Sulphides	18	120	0.72	2.35	0.44	240	69	0.42	932	175	139
	Total Proven and Probable	Sulphides	18	120	0.72	2.35	0.44	240	69	0.42	932	175	139
Purisima	Proven												
	Probable	Sulphides	42	65	0.12	2.60	0.09	151	88	0.16	2,407	83	204
	Total Proven and Probable	Sulphides	42	65	0.12	2.60	0.09	151	88	0.16	2,407	83	204
Santa Teresa	Proven	Sulphides	20	155	0.12	1.25	0.34	203	100	0.08	551	150	131
	Probable	Sulphides	299	124	0.12	2.39	0.75	208	1,192	1.15	15,750	4,942	2,000
	Total Proven and Probable	Sulphides	319	126	0.12	2.32	0.72	207	1,292	1.23	16,311	5,062	2,123
Total Dolores Mine	*Proven*	*Sulphides*	*20*	*155*	*0.12*	*1.25*	*0.34*	*203*	*100*	*0.08*	*551*	*150*	*131*
	Probable	*Sulphides*	*359*	*117*	*0.15*	*2.42*	*0.66*	*203*	*1,350*	*1.73*	*19,148*	*5,222*	*2,343*
	Total Proven and Probable	*Sulphides*	*379*	*119*	*0.15*	*2.35*	*0.64*	*203*	*1,450*	*1.83*	*19,630*	*5,346*	*2,474*
Escondida	Proven												
	Probable	Sulphides	129	183	0.01	3.78	2.01	310	759	0.04	10,747	5,715	1,286
	Total Proven and Probable	Sulphides	129	183	0.01	3.78	2.01	310	759	0.04	10,747	5,715	1,286
San Nicolas	Proven												
	Probable	Sulphides	24	95	0.08	3.91	0.71	221	73	0.06	2,068	376	171
	Total Proven and Probable	Sulphides	24	95	0.08	3.91	0.71	221	73	0.06	2,068	376	171
Total Perseverancia Mine	*Proven*												
	Probable	*Sulphides*	*153*	*169*	*0.02*	*3.80*	*1.80*	*296*	*831*	*0.10*	*12,814*	*6,070*	*1,456*
	Total Proven and Probable	*Sulphides*	*153*	*169*	*0.02*	*3.80*	*1.80*	*296*	*831*	*0.10*	*12,814*	*6,070*	*1,456*
Lupitas	Proven												
	Probable	Sulphides	102	172	0.01	5.81	0.74	350	564	0.03	13,061	1,664	1,148
	Total Proven and Probable	Sulphides	102	172	0.01	5.81	0.74	350	564	0.03	13,061	1,664	1,148
Lupitas Alto	Proven												
	Probable	Sulphides	122	137	0.02	1.93	0.83	201	537	0.08	5,190	2,232	788
	Total Proven and Probable	Sulphides	122	137	0.02	1.93	0.83	201	537	0.08	5,190	2,232	788
San Jose Alto	Proven												
	Probable	Sulphides	28	297	0.01	5.80	0.50	473	267	0.01	3,579	309	426
	Total Proven and Probable	Sulphides	28	297	0.01	5.80	0.50	473	267	0.01	3,579	309	426
San Jose	Proven												
	Probable	Sulphides	27	201	0.00	5.16	0.55	357	174	0.00	3,071	327	310
	Total Proven and Probable	Sulphides	27	201	0.00	5.16	0.55	357	174	0.00	3,071	327	310

Mine / Project	Category	Mineral Type	K Tonnes	Grade					Contained Metal				
				Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag-Eq (g/t)	Ag (k Oz)	Au (k Oz)	Pb (k lb)	Zn (k lb)	Ag-Eq (k Oz)
Cuerpo 2	Proven												
	Probable	Sulphides	123	186	0.01	2.88	1.69	284	736	0.04	7,807	4,581	1,123
	Total Proven and Probable	Sulphides	123	186	0.01	2.88	1.69	284	736	0.04	7,807	4,581	1,123
Cuerpo 3	Proven												
	Probable	Sulphides	338	186	0.23	4.33	7.84	385	2,021	2.50	32,256	58,404	4,184
	Total Proven and Probable	Sulphides	338	186	0.23	4.33	7.84	385	2,021	2.50	32,256	58,404	4,184
Total San Juan Mine	*Proven*												
	Probable	*Sulphides*	*870*	*181*	*0.10*	*3.69*	*3.77*	*324*	*5,063*	*2.80*	*70,755*	*72,289*	*9,063*
	Total Proven and Probable	*Sulphides*	*870*	*181*	*0.10*	*3.69*	*3.77*	*324*	*5,063*	*2.80*	*70,755*	*72,289*	*9,063*
Carmen	Proven												
	Probable	Sulphides	12	182	0.01	4.72	3.19	345	70	0.00	1,248	844	133
	Total Proven and Probable	Sulphides	12	182	0.01	4.72	3.19	345	70	0.00	1,248	844	133
Consuelo	Proven												
	Probable	Sulphides	39	168	0.07	2.94	0.63	263	211	0.09	2,527	542	330
	Total Proven and Probable	Sulphides	39	168	0.07	2.94	0.63	263	211	0.09	2,527	542	330
Zaragoza	Proven	Sulphides											
	Probable	Sulphides	13	133	0.10	2.78	2.12	237	56	0.04	797	607	99
	Total Proven and Probable	Sulphides	13	133	0.10	2.78	2.12	237	56	0.04	797	607	99
Total Other areas	*Proven*	*Sulphides*											
	Probable	*Sulphides*	*63*	*163*	*0.06*	*3.23*	*1.41*	*273*	*330*	*0.12*	*4,485*	*1,958*	*553*
	Total Proven and Probable	*Sulphides*	*63*	*163*	*0.06*	*3.23*	*1.41*	*273*	*330*	*0.12*	*4,485*	*1,958*	*553*
Total	***Proven***	***All***	***20***	***155***	***0.12***	***1.25***	***0.34***	***203***	***100***	***0.08***	***551***	***150***	***131***
	Probable	***All***	***1445***	***163***	***0.10***	***3.36***	***2.68***	***288***	***7,573***	***4.65***	***107,009***	***85,352***	***13,380***
	Total Proven + Probable	***All***	***1465***	***163***	***0.10***	***3.33***	***2.65***	***287***	***7,677***	***4.71***	***107,521***	***85,565***	***13,518***

Notes:

1. The Qualified Person for the Mineral Reserve estimate is Ramon Mendoza Reyes, a FMS employee. Mineral Reserves have an effective date of 31 December, 2016.
2. Mineral Reserves are defined using multiple, variable cut-off grades, then stope designs are optimized based on selected mining methods and minimum stope widths. Mining methods will include cut-and-fill (resue), drift-and-fill, shrinkage stoping and longhole stoping with cemented fill methods.
3. The Ag-Eq grade formula used was Ag-Eq Grade = Ag Grade + [(Au Grade * Au Recovery * Au Payable * Au Price / 31.1035) + (Pb Grade * Pb Recovery * Pb Payable * Pb Price * 22.0462) + (Zn Grade * Zn Recovery * Zn Payable * Zn Price * 22.0462)] / (Ag Recovery * Ag Payable * Ag Price / 31.1035).
4. Key assumptions and parameters include: Metal price of US$18/oz Ag, US$1.00/lb Pb, US$1.15/lb Zn, US$1,250/oz Au; metallurgical recoveries of 82.3% for Ag, 67.5% for Pb, 15.0% for Zn, 60.0% for Au; metal payabilities of 95% for Ag, Pb and Au, and 85% for Zn; direct costs of US$49.3/t mill feed, process and treatment costs of US$38.80/t mill feed and general and administration (indirect costs) of US$18.0/t. Ore loss and dilution is variable by mine, and by mining method. Mining recoveries range from 90–95%. Unplanned dilution assumptions range from 10–20%.
5. Numbers have been rounded as required by reporting guidelines. Totals may not sum due to rounding.

16 MINING METHODS

16.1 Hydrogeological Considerations

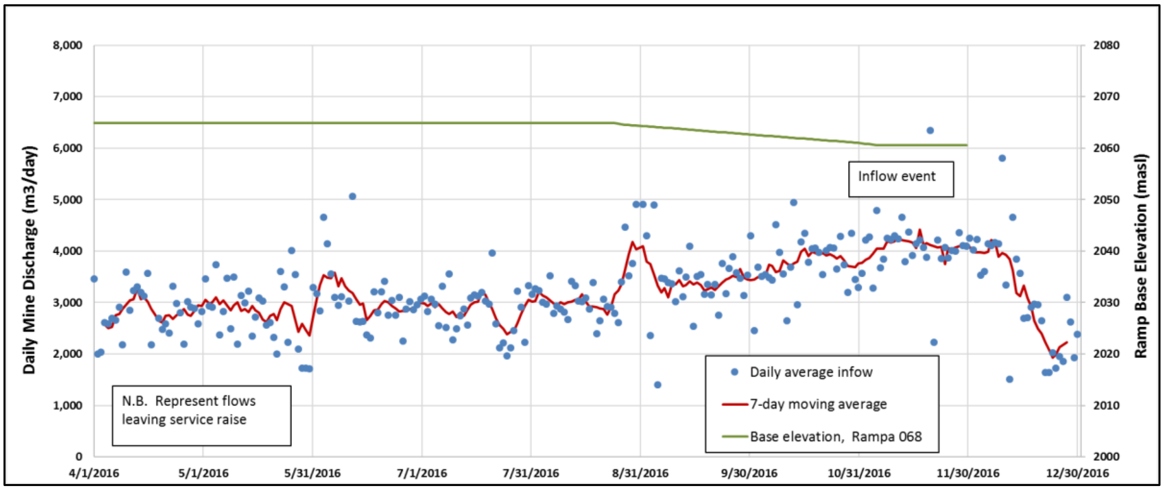
Most of the information in this section of the Report has been obtained from an internal report prepared for FMS by SRK Consulting Canada Inc. (SRK; March 2017), unless otherwise stated.

There has been only limited hydrogeological investigation at the site to date. Del Toro monitors mine discharge daily with magnetic flowmeters, and monitors hydrochemistry of discharge water on a quarterly basis. Two groundwater monitoring wells are used to monitor the groundwater quality downgradient of the tailings impoundment.

Based on data from the nearby Suchil meteorological station, mean annual precipitation is estimated at about 550 mm, while mean annual potential evaporation is estimated at 1394 mm. Peak monthly precipitation for the period 2007-2012 was 321 mm, and peak daily precipitation was 105 mm. The San Juan mine area drains to the Cañada El Cajon, a narrow, steep gully perched above the water table, except for its lower section near the confluence with the Rio Chalchihuites. Recharge is expected to occur dominantly in late summer, with the highest areas of recharge in the bases of gullies, and is estimated at about 10 to 30 mm/yr in the mine area. The pre-mining water table is estimated to have been as deep as 200 m.

In December, 2016, mine inflows were about 4,000 m^3/day (46 L/s), as shown in Figure 16-1. Most of the mine inflows are associated with sub-vertical faults within the skarn unit. The contact metamorphism process has silicified the antecedent limestone and leached soluble minerals, resulting in enhanced porosity and permeability (see Figure 16-2). Appreciable inflows have been observed on four separate structural trends, with the northeast–southwest fault trend the most productive. An inflow event in late September 2016 resulted in the flooding of the lower portion of Ramp 068. FMS has since upgraded its pumping system to handle the increased flows. The total capacity of the system in March 2017 was 1,100 USgpm (6,000 m^3/d or 69 L/s), and auxiliary pumps are in place.

Figure 16-1: San Juan Mine Inflow and Base Elevation



Note: Figure prepared by SRK, 2017.

Assessed rock strength in the Cuerpo 3 orebody suggests the orebody should be pre-drained, to the extent possible prior to extraction, to limit the effect that elevated pore pressures and discharging groundwater could have on the wall rock stability and on dilution. Pre-drainage of the orebody would also improve blasting effectiveness, reduce explosives costs, lower the risk of sudden inflows, and improve operational flexibility, predictability and adhesion of shotcrete to tunnel walls and back. It may also result in improved mine water discharge quality if water is handled to minimize contact with the walls and floor of tunnel.

Figure 16-2: Highly Leached and Oxidized Skarn

Note: Figure prepared by SRK, 2017.

To advance Ramp 2068 to access the Cuerpo 3 orebody at depth, the following groundwater control plan has been recommended:

- Regularly map key groundwater-bearing structures in level workings and ramps and monitor groundwater flow draining from level workings on at least a weekly basis;
- Maintain access ramps at least two sub-levels (70 m) below active mining sub-levels. Drill cover holes through identified key inflow risk areas and grout if necessary to advance ramp;
- Drill sub-horizontal drainage holes from purpose-excavated drainage drifts off the orebody side of the access ramp at vertical intervals equivalent to the sub-level spacing, designed to intersect the orebody and key structures at 10 m lateral intervals. Monitor flows from drainage holes on a weekly basis and drill additional drainage holes should drainage of the lowest active level appear to be inadequate;
- Maintain adequate pumping capacity, ideally 50% more than recent maximum flows; and
- Review and modify the drainage plan based on drainage performance data. Use pore pressure flow monitoring to evaluate drainage effectiveness. Use resource drilling programs to collect additional hydrogeological data and for installation of pressure-monitoring piezometers.

16.2 Geotechnical Investigation for Cuerpo 3

Information in this part of the report is partially summarized from:

- Structural, Geotechnical and Hydrogeological Studies for the Del Toro Silver Mine, Zacatecas, Mexico, SRK Consulting (Canada) Inc., dated February 2017; and
- Del Toro Cuerpo3 Geotechnical Assessment, SRK Consulting (Canada) Inc., dated February 2017.

The geotechnical domain model and representative rock design parameters for the San Juan mine's Cuerpo 3 mining area was generated following approximately four months of geotechnical review, structural investigations and rock mass evaluation. The Cuerpo 3 area differs substantially from the narrow-vein mining conducted at higher elevations. The current interpretation of the ore body is of an irregular breccia pipe, partially fault bounded, with poor ground conditions encompassing mineralization.

The investigations started off with a high-level review of the conditions at the mine. A hydrological review of the mine was also implemented. There was some available geotechnical data from drilling and mapping, but a qualitative core photo logging program was also implemented by SRK for independent review of drill holes in the vicinity of the Cuerpo 3 orebody. A structural mapping program was initiated with three-dimensional (3D) structural model development because the fault system impacts the geotechnical domains and groundwater flow.

16.2.1 Structural Geology Assessment

The most common structures in the mine are north to north–northeast-trending dip-slip vein-faults, northwest and northeast trending strike-slip faults and steeply dipping northeast to east–southeast-trending dip-slip faults. The fault systems are interpreted as being part of tectonic compression and magmatic intrusive events during the Paleogene. Ten structural domain boundaries and 417 faults were 3-D modelled and named according to their trend orientations.

Data were compiled into Leapfrog Geo™ Version 4.0 for 3-D analysis and interpretation. Lithological, structural, and structural domain wireframes were built to represent the mine geology and then used to define the geotechnical domains. The structural model was also used to help define the breccia body used for the Cuerpo 3 resource model.

16.2.2 Rock Mass Characterization

Geotechnical conditions at the mine site vary greatly, from good ground conditions within the country rock to extremely poor, heavily altered ground within the Cuerpo 3 orebody and close to the fault structures. Having correlated the core logging with direct observations made at the mine site, it was determined that majority of the rock mass could be summarized within five geotechnical classes:

Class 1 – Represents good ground in the country rock. This rock is generally unsupported at the mine and regarded as stable in mine tunnels. This is anticipated to be the dominant geotechnical class across the deposit outside of mineralized zones.

Class 2 – Reduced Rock Quality Designation (RQD) in the country rock due to small-scale faults or heavier fracturing. May be supported with shotcrete or spot bolting at the mine.

Class 3 – Brittle, unaltered or weakly-altered fault zones. This is the general condition of the fault-vein system type structural domains, as defined in the structural model.

Class 4 – Altered zones proximal to and within the Cuerpo 3 breccia/orebody. The rock mass includes high intact strength zones, partially-altered zones and fracture-controlled clay alteration intercepts (<50 cm) of Class 5 type material.

Class 5 – Severely clay-altered and brecciated zones within the Cuerpo 3 orebody. Where intersected by fault structures, these zones tend to be difficult to develop through and support.

Geotechnical parameters were derived from mine logging data, but classified based on photo-logging the geotechnical boreholes. Each rock mass class was assigned representative rock mass classification parameters (Table 16-1).

Table 16-1: Geotechnical Parameters for Each Geotechnical Class

Class	RQD	Jn	Jr	Ja	Q'	RMR
1	100	6	4	3	22	70
2	60	9	3	4	5	55
3	10	15	3	4	0.5	25
4	50	6	1	4	2.1	30
5	10	20	1	13	0.04	10

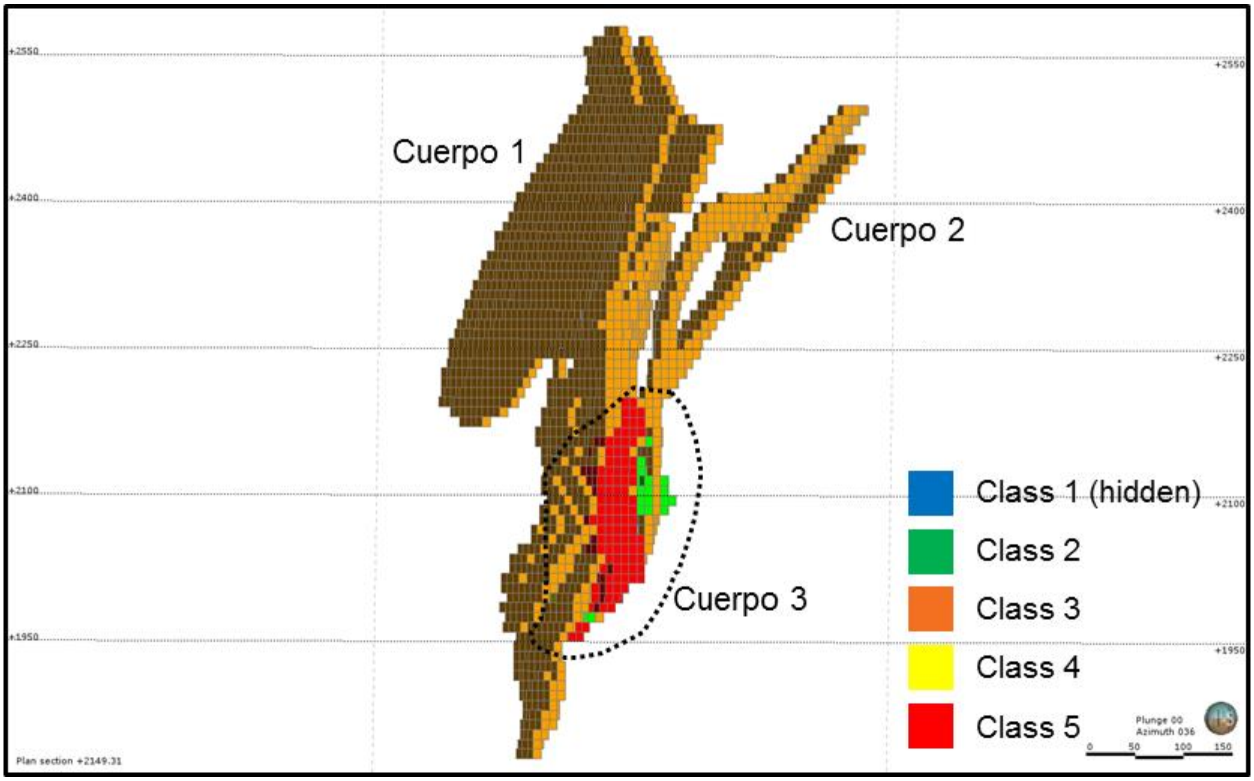
16.2.3 Clay Alteration

Two distinct clay types are recognized within the Cuerpo 3 breccia body, a sticky, swelling, saturated clay, and a less-saturated, more-freely draining clay unit. The water-absorbent clay is interpreted to be generated from the granodiorite intrusive rock. It is unlikely to drain easily and may pose a greater risk during mining. The less-saturated clay is interpreted to be generated from the skarn rock, and may drain more freely and be easier to manage during mining. These two clay type domains were 3-D modelled within the breccia body outline.

16.2.4 Three-Dimensional Geotechnical Model

A block model was generated using Gems V6.7.1 to describe the geotechnical rock conditions in the proximity of the Cuerpo 3 orebody and extended to surface using the structurally interpreted vein system boundaries produced by SRK (Figure 16.3). The block model is intended to be used holistically to orient infrastructure, but should be assessed in detail for damage surrounding fault intersections. The structural and geotechnical models should be updated on an on-going basis, as further underground development is mapped and the understanding of the litho-structural systems evolve.

Figure 16-3: Geotechnical Domain Model



Note: Figure prepared by SRK 2017. The model is based on the derived large-scale fault-vein structural domains and the Cuerpo 3 breccia body (outlined, and predominantly Class 5).

16.2.5 Recommendations for Mining

Geotechnical conditions within the Cuerpo 3 body are poor to extremely poor. Sand- and clay-rich conditions within the breccia will be difficult to mine. Underhand mining has been recommended to limit exposure to the degraded conditions. The geotechnical domain model will assist with predictive mining through the variable ground conditions, and the clay model will inform potential mining risks. The model should be regularly updated with new drill hole and mapping data.

16.3 Geotechnical Investigation for narrow veins

Field data collection for the characterization of rock quality and geotechnical properties began in 2014, consisting of mapping of the rock-mass in the exposed levels of the mine to obtain information on the structure and lithology. Later, the geotechnical characterization of exploration drill holes was integrated to form a database that covers the active areas of operation as well as areas to be explored in the future.

16.3.1 Rock-Mass Characterization

Determination of rock quality for the main geological domains of the Del Toro mines is carried out using the Rock Tunneling Quality Index methodology (Q) (Barton et.al., 1974) and the Rock Mass Rating (RMR) index approach (Bieniawski et.al., 1979). For this, the information gathered from field geotechnical mapping and the exploration drill hole data is integrated. As a result of this characterization, different domains or geotechnical units were categorized by their geomechanical behavior.

The methodology carried out consists of collecting data for each of the structures and lithologies recognized in the unit, in each of its different areas. Q and RMR indices for the main geological domains of the three mines in operation at Del Toro (San Juan, Perseverancia and Dolores) were derived. The expected value as well as representative range are indicated in Table 16-2.

Table 16-2: Typical Q and RMR Values for the Main Geological Domains

Area	Vein/Body	Q			RMR		
		Expected Value	Maximum	Minimum	Expected Value	Maximum	Minimum
San Juan	San Jose	13.8	28.0	6.1	65	75	61
	Cuerpo 2	4.4	6.4	3.0	41	38	43
	Lupita	7.0	9.8	5.2	63	58	70
	Lupita del Alto	8.3	26.6	0.1	52	75	29
Perseverancia	San Nicolas	7.4	21.3	3.0	54	72	44
Dolores	Santa Teresa	0.4	0.7	0.1	32	40	23
	Dolores	0.8	0.8	0.8	42	42	42
	Purisima	0.5	0.5	0.5	38	38	38
Hosting Rock		26.7	96.0	0.3	68	88	34

Geological-geotechnical domains were first assessed individually and subsequently integrated into units of similar behavior. Within the domains recognized in the Del Toro mine, the following lithological units can be mentioned:

- Intrusive Rock: Generally of granodioritic composition, this is a fairly unaltered unit with moderate fracturing. It is usually considered to be of good quality (UCS estimated 90–120 MPa). The fractures are filled with calcite and hard materials; however, in the contact zones the intrusive unit tends to have been argillically altered, which substantially weakens its structure, especially in the presence of moisture. Under these conditions, the intrusive unit is classified as of poor quality (UCS estimated 40–60 MPa). This unit can be found in any of the areas in San Juan, Perseverancia and Dolores mine.
- Skarn: The skarn is the most predominant hosting rock unit, especially in the areas of San Juan and Perseverancia. Like the intrusive unit, it is a fairly unaltered unit with low-to-moderate fracturing, and is classified as good quality (UCS estimated 70–100 MPa). However, when the skarn unit is subjected to some degree of alteration, this material becomes brittle (UCS estimated 25–40 MPa) and therefore a lower classification is assigned.
- Limestone: This rock unit is predominant in the area of Dolores. It shows an irregular behaviour due to frequent structural deformations, with different fracturing degrees and alteration. Under favourable conditions of low fracturing and low alteration, it is considered a good quality rock (UCS estimated 70–90 MPa). The fracture fill is predominantly hard without clay. Under unfavourable conditions in the vicinity of deformation zones and lithological contacts where

fracturing and alteration increase, the rock is classified as regular quality since the fracture fill includes a greater quantity of soft materials (UCS estimated 30–50 MPa).

- Sulphide Breccia: This unit is associated with the intrusive unit and is usually accompanied by very high argillic alteration, which generate very weak geomechanical behaviour (UCS estimated <10 MPa). It is classified as a rock of very poor quality, being the lowest quality unit in the Del Toro Mine. An example of sulphide breccia is the San Nicolas pipe in the area of Perseverancia and Cuerpo 3 in the San Juan mine.
- Massive Sulphide Vein: Structures such as Lupita, San Jose and Dolores veins are representative examples of these veins. The sulphide veins display little alteration and a moderate fracturing degree, resulting in a classification predominantly of good quality (UCS estimated 50–60 MPa). This unit's geomechanical behaviour depend mainly on the structure width, since wider veins frequently become unstable due to a confinement loss effect.
- Oxidized Veins (Breccia): These structures are mostly classified as of regular to poor quality. Fracturing degree is generally high, and in some cases brecciated structures are observed. The fractures are filled with oxidized fine-grained materials and sometimes clays are observed (estimated UCS <20 MPa). Due to the filling of soft materials, especially in the presence of moisture, the cohesion degree is also low – thus it can be classified as brittle material.

The similar geomechanical behaviors for some of these domains allow grouping them into five classification types applicable to most areas of the Del Toro mine: Good, Regular, Poor, Very Poor and Extremely Poor, thus forming a geological-geotechnical model that allows for defining the type of support required (Table 16-3).

Table 16-3: Del Toro Geotechnical Parameters

Domain	Structure	Alteration	Q Index		RMR		Support Standard
			Range	Classification	Range	Classification	
Fresh Intrusive	Host Rock	Low argillic	9 -11	Regular	60 - 65	Good	Unsupported
Intrusive with Alteration	Host Rock	Advanced argillic	0.1 - 0.5	Very Poor	36 - 41	Poor	Type 4
Fresh Skarn	Host Rock	Low argillic	12 - 16	Good	65 - 68	Good	Unsupported
Skarn with Alteration	Host Rock	Moderated - advanced argillic	1.2 - 1.5	Poor	43 - 47	Regular	Type 1
Fresh Limestone	Host Rock	Low argillic	15 - 25	Good	62 - 65	Good	Unsupported
Limestone with Alteration	Host Rock	Low argillic, oxidation in fractures	0.8 - 4	Poor	48 - 52	Regular	Type 2
Sulphide Breccia	Cuerpo 3	Advanced argillic	0.06 - 0.1	Extremely Poor	17 - 21	Very Poor	Type 5
Massive Sulphide Vein	Lupitas and Dolores	Low argillic and moderated oxidation	12 - 16	Good	60 - 64	Good	Unsupported
Oxide Vein	Cuerpo 1 and 2, Santa Teresa and Purisima	Argillic and advanced oxidation	0.5 - 1	Very Poor	35 - 40	Poor	Type 3

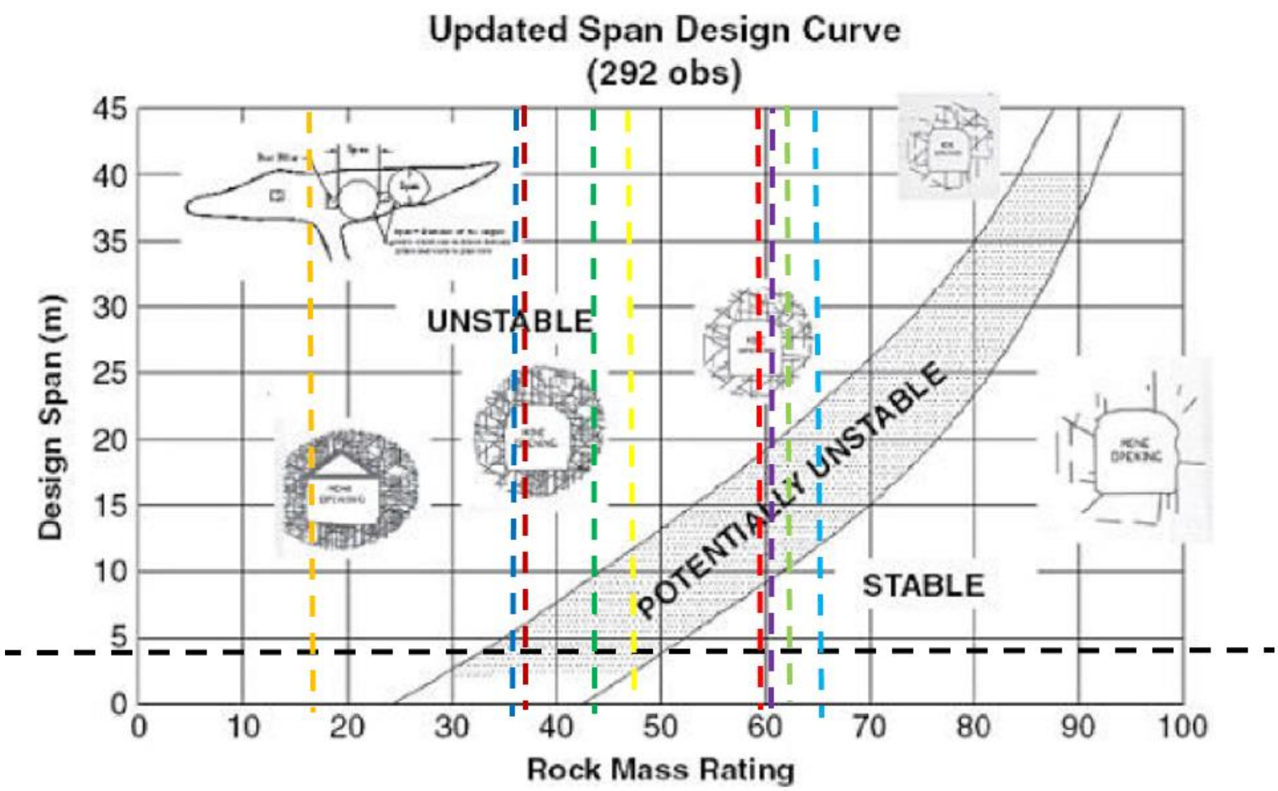
Note: Support Standard types are described on table 16-4.

16.3.2 Mine Design Parameters

Taking into consideration the geotechnical characterization of the domains, it is possible to provide the design parameters guidelines for development and production workings. Due to the configuration of the deposit and the variety of mineral bodies, two main types of mining methods have been considered: cut-and-fill (variant with horizontal developments and vertical cut) and long-hole by sub-levels.

Cut-and-Fill: For the evaluation of the design parameters, two types of excavations are considered: infrastructure drifts with a section of 4.5 x 4.5 m and sills for stope preparation in veins of 3 x 3 m.

Figure 16-4: Stability Curve (Lang et. al. 1994) for Del Toro Domains

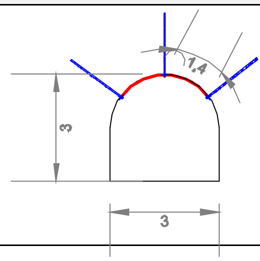
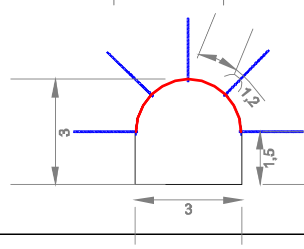
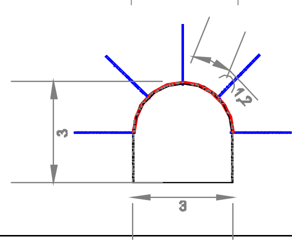
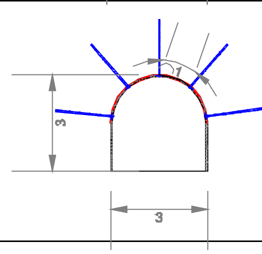
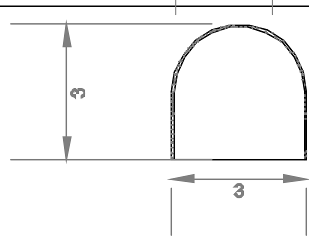


Geotechnical Domain									Drift Type	
Fresh Intrusive	Intrusive with Alteration	Fresh Skarn	Skarn with Alteration	Fresh Limestone	Limestone with Alteration	Sulphide Breccia	Massive Sulphide Vein	Oxide Vein	Development Drift	Production Drift

Note: Figure prepared by FMS 2017.

Based on the resulting domains and maximum width due to rock quality, FMS classifies the rock-mass quality domains into three basic groups. The first group consists of host rock domains that are not altered, and therefore behave stably in all design sections. This group does not require any support. The second group, encompassing host rock domains with alteration degrees as well as oxide veins, has the potential to be unstable so it requires support such as rock-bolts and steel-wire mesh. The third group, related to the sulphide breccia domain, is classified as unstable. This third group requires strict ground control measures that includes the installation of shotcrete to help confine the weak material. Table 16-4 shows the recommended primary and secondary ground support for each of the rock mass quality domains.

Table 16-4: Del Toro Ground Support Standards

Ground Support		**Primary**	**Secondary**
TYPE 1		Split set bolting of 8 ft. length, in pattern of 1.4 m + Welded mesh	
TYPE 2		Split set bolting of 8 ft. length, in pattern of 1.2 m + Welded mesh	
TYPE 3		Rebars of 8 ft. length, in pattern of 1.2 m + Welded mesh	Shotcrete of 2" in back and walls
TYPE 4		Rebars of 8 ft. length, in pattern of 1 m + Welded mesh	Shotcrete of 2" in back and walls
TYPE 5		Fibercrete of 3" full face	

Sublevel Stoping: This mining method was evaluated mainly for Santa Teresa and Purisima, in the Dolores mine, because of favorable geological characteristics and geomechanical behavior, good quality host rock, and regular- to good-quality sulphide veins.

The analysis was performed using the modified stability-graph method (Nickson et.al., 1992). Analysis consisted of an initial geotechnical characterization prepared from drill hole information, resulting in the parameters set out in Table 16-5.

Table 16-5: Design Parameters and Hydraulic Radius for Stope Dimensioning.

Vein	Domain	Height	Width	Area	Perimeter	Condition (According the Graph)	Hydraulic Radius (Calculated)	Hydraulic Radius (Maximum)	Maximum length (Calculated)	Hydraulic Radius (with length)	Condition
Dolores	Vein	24	2	48	52	Stable	0.92	1.2	3	1.3	Stability limit
	HW	24	2	48	52	Stable	0.92	13.7	250	11	Stable
	FW	24	2	48	52	Stable	0.92	16.3	250	11.0	Stable
Santa Teresa	Vein	24	2	48	52	Stable	0.92	2.8	7	2.7	Stability limit
	HW	24	2	48	52	Stable	0.92	14.2	250	11	Stable
	FW	24	2	48	52	Stable	0.92	14.8	250	11	Stable

16.4 Planned Mining Methods

In mineralisation that exhibits fair to good geotechnical conditions, Del Toro uses the following mining methods for extraction:

- Cut-and-fill (resue); and
- Shrinkage stoping.

Both methods have been successfully employed at the site and recover the mineralisation with limiting ore loss and dilution, albeit at a low productivity. A recent trade-off study completed by the operation indicated that, where mineralisation was greater than 1.0 m in width, longhole stoping with fill could be more productive and cost effective than the current methods. In conjunction with the mining team on site, suitable areas were identified for all three mining methods, while considering the cost of extraction, dilution, and recovery as well as the capabilities at site and local experience.

In poor ground, in particular with the extraction of Cuerpo 3, various methods have been tried to maximise recovery of the mineralisation with limited success. FMS completed a mining methods analysis to arrive at a recommendation of overhand drift-and-fill as the method of choice for extraction.

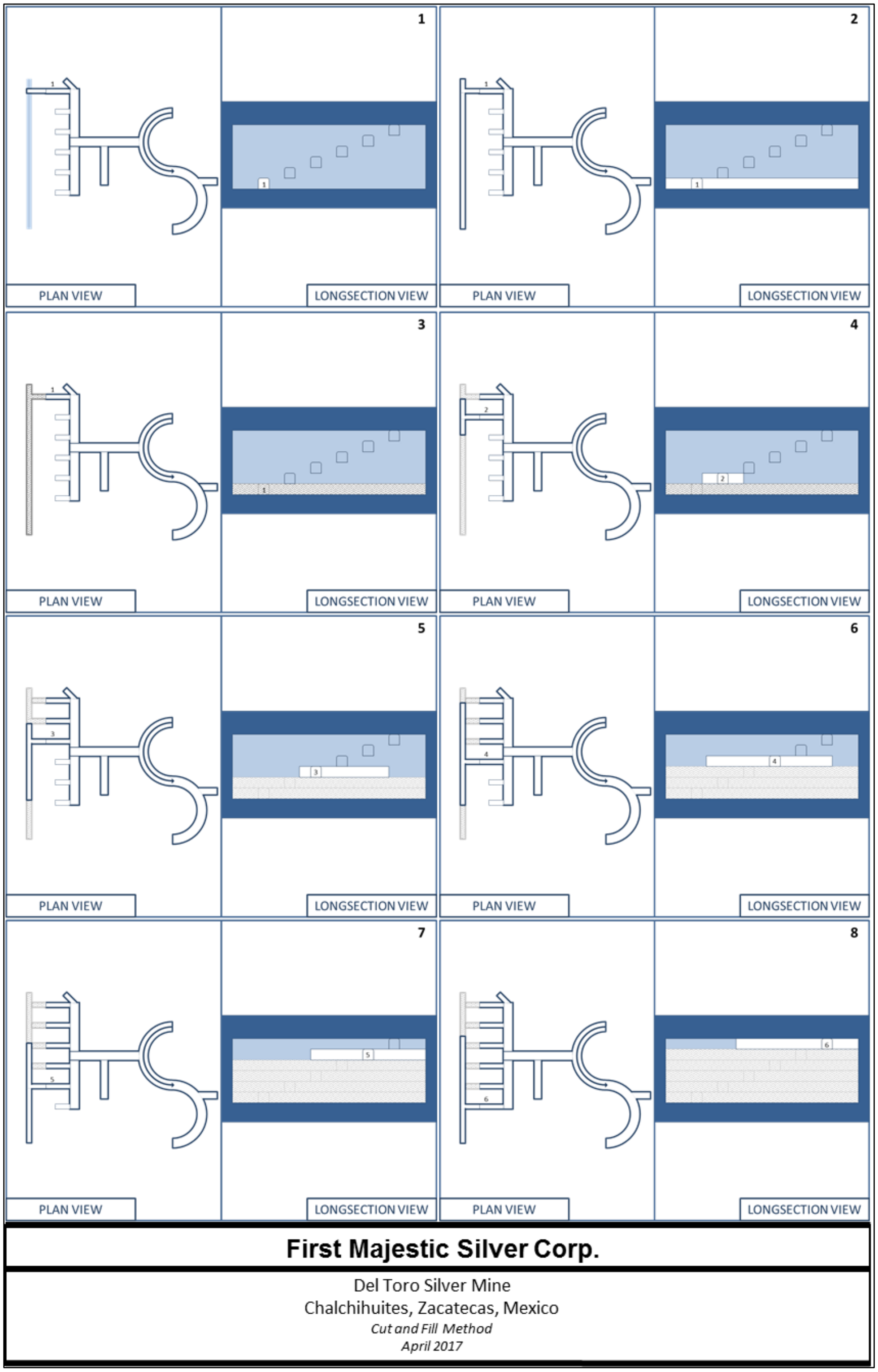
The following sections detail each method that is planned for extraction of the various zones of mineralisation at Del Toro.

16.4.1 Cut-and-Fill (Resue)

Cut-and-fill mining has been extensively used at Del Toro. A recent change to this method has been the application of resue mining. Resue mining is a selective mining technique which employs two-pass blasting, where on the first blast, either the mineralisation or the waste portion is blasted and mucked, then the remaining is mined. The decision on whether to mine the mineralisation or the waste first depends on the geometry of the waste and ore portions and whether the ore can be blasted without incurring too much dilution or ore loss. Typically, at Del Toro, the ore is blasted and mucked out with smaller loaders and then the waste portion is mined next.

Cut-and-fill mining that is used at Del Toro is mined from bottom-up (i.e., overhand) and the fill is uncemented. Sill pillars are left between mining horizons and are generally located in lower grade or very narrow sections of the deposit. A current practice at Del Toro locates the access ramp in mineralisation; this practice reduces the need to develop in waste, but increases the potential for sterilisation and has a lower productivity. Going forward, the ramp will be located in waste and, where the stand-off distance is constrained (distance from mineralisation to ramp), an inclined access ramp will be mined parallel to the mineralisation with multiple access points. After completing a lift, the accesses can be used for storage of muck or locating mine infrastructure (dewatering pumps, sub stations, etc.) as the mine progresses deeper. This method is illustrated in Figure 16-5.

Figure 16-5: Schematic of Cut-and-Fill Stoping with Rock Fill

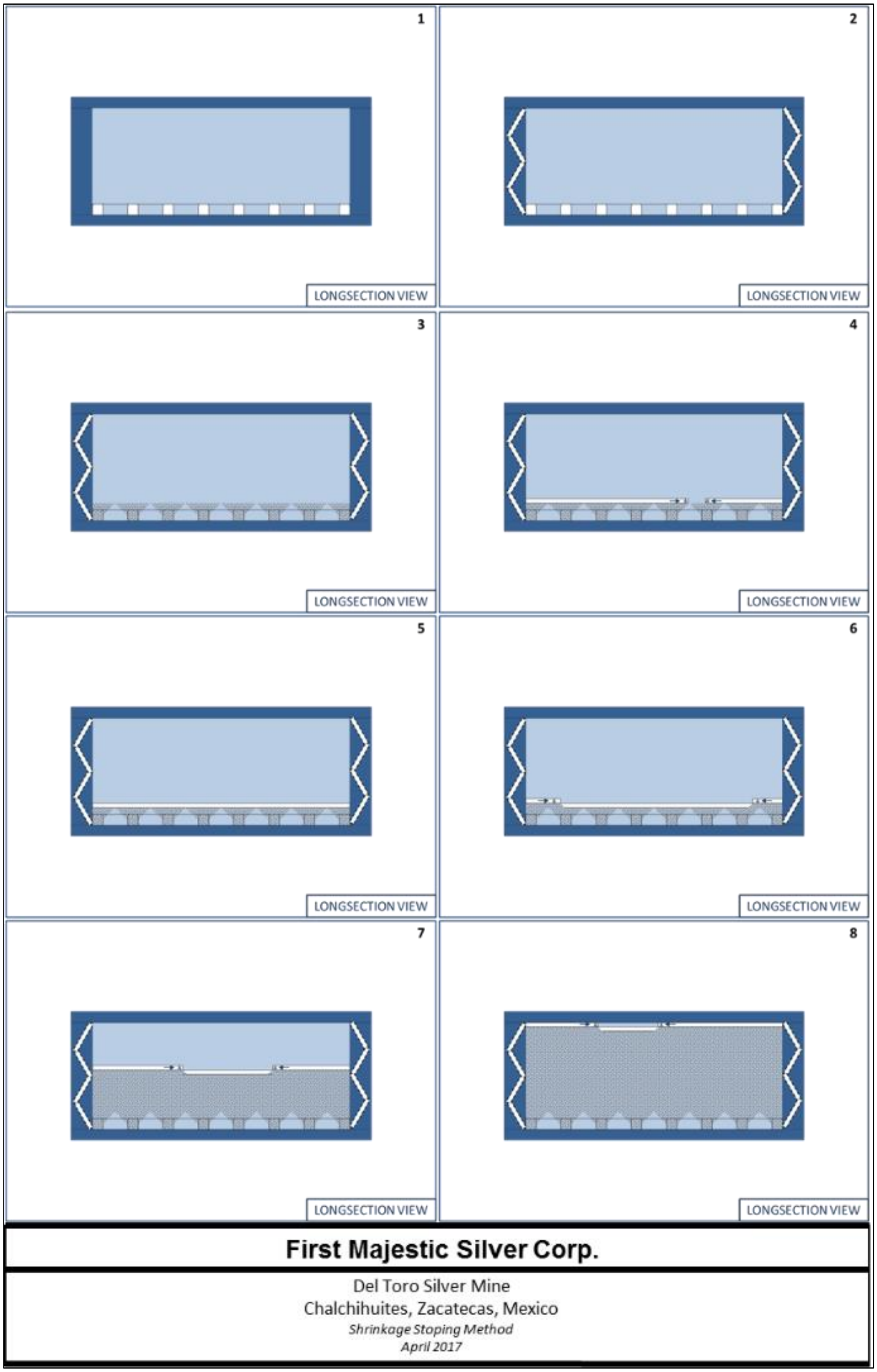


16.4.2 Shrinkage Stoping

Shrinkage stoping is a labour-intensive mining method that uses conventional mining (i.e., mining with pneumatic hand-held drills) to mine in successive horizontal slices, up-dip a steeply inclined and narrow orebody. Working from a manway (a vertical travelway that connects two levels together) the miners advance from one end of the panel towards the other end. As the miner breaks the rock, the swell is removed by drawing the material via draw points located at the bottom of the panel, allowing the miner to work off the broken material, as the next round is prepared for advancing.

Shrinkage stoping is widely used in Mexican mines and is successfully employed. As there are more productive and safer methods available, this method will only be used in suitable ground conditions and where the mineralisation is very narrow. An illustration of shrinkage stoping is provided in Figure 16-6.

Figure 16-6: Schematic of Shrinkage Stoping

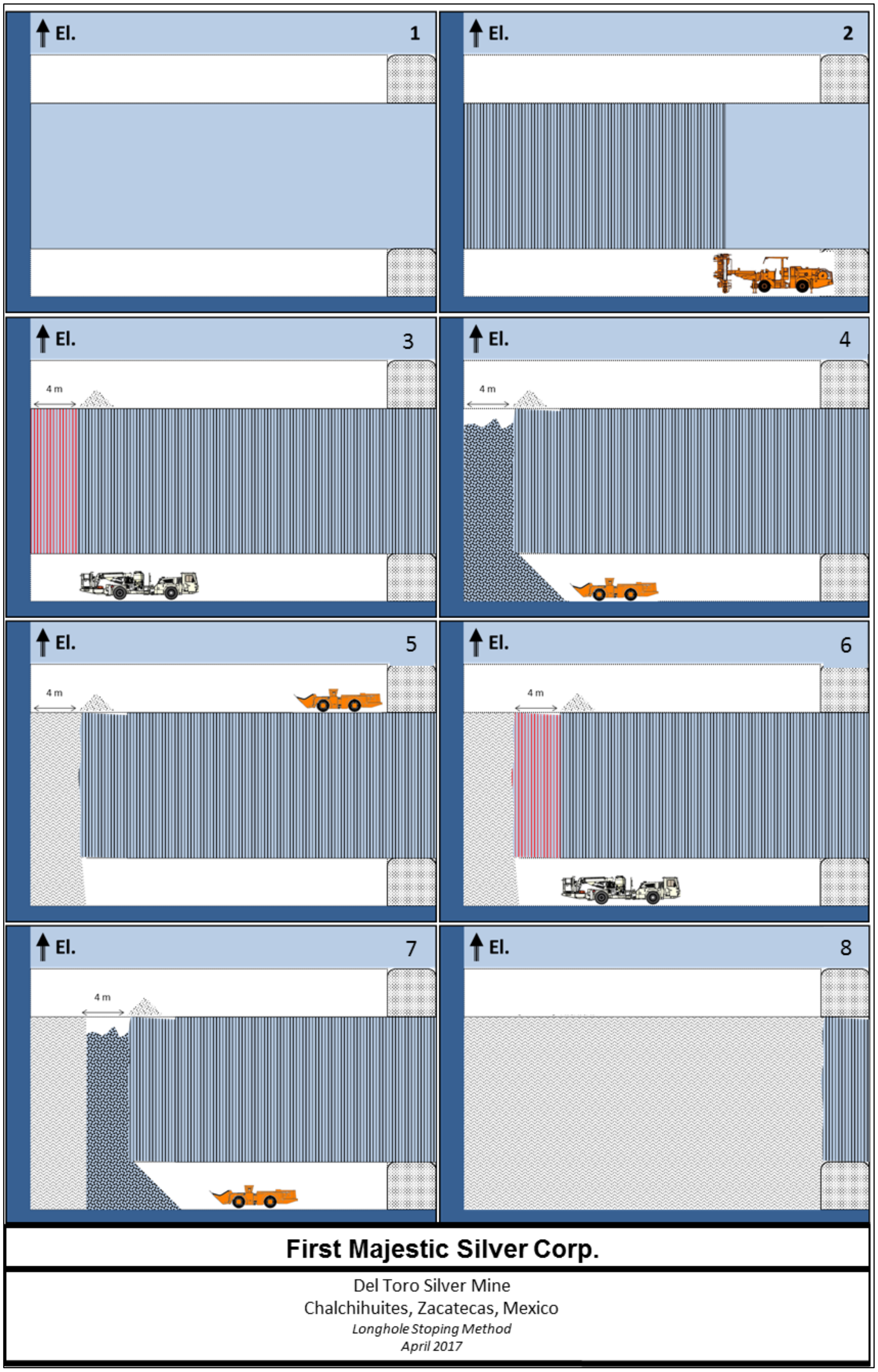


16.4.3 Longhole Stoping with Cemented Fill

Longhole stoping involves excavating the mineralized rock in panels by drilling blast holes between one level and another and blasting the material into a void. The initial void, or slot, is created by raising techniques (either manually or using a specialised drill) and designed to allow the rock to expand (or swell) as it is blasted. Vertical slices of each panel, where each panel is determined by the amount of void ratio available or the length that can be safely mucked, is blasted until the panel is completed. After mucking is complete and the desired panel length has been achieved, the void may either be filled with backfill or left open. For all of the mines at Del Toro, designated longhole stopes will be backfilled with cemented (1.5% cement) rock fill.

Although FMS has employed longhole stoping methods at other operations, Del Toro has yet to use such a method. A contractor will be employed to carry out the longhole drilling until the practice is established. Panel lengths will be limited to 4 m to minimise unplanned dilution and the need for remote mucking. After filling, holes will be fired against the fill, without the need for re-slotting. An example of this method is presented in Figure 16-7.

Figure 16-7: Schematic of Longhole Stoping with Cemented Rock Fill



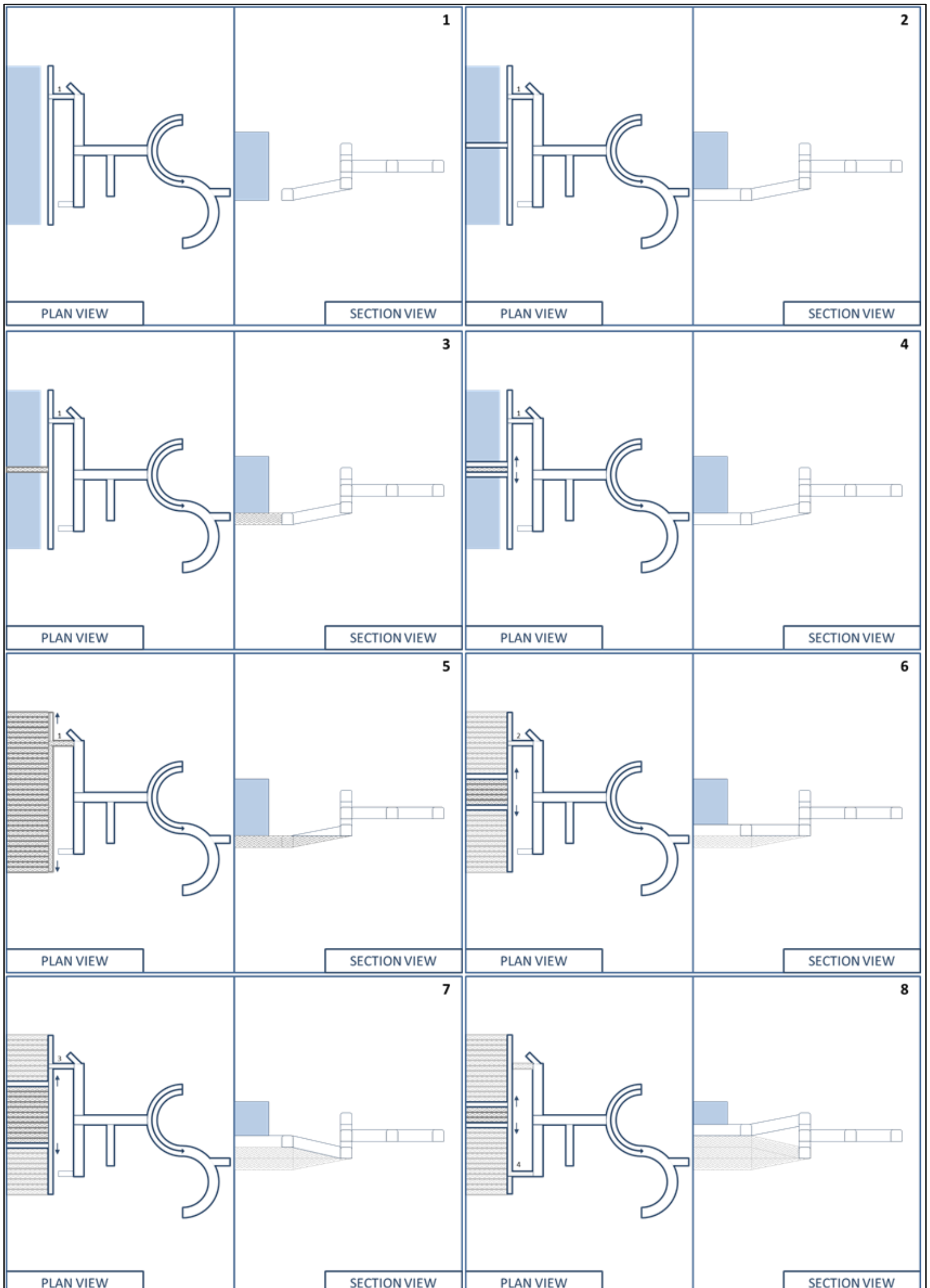
16.4.4 Drift-and-Fill

Drift-and-fill mining is similar to cut-and-fill; however, drift-and-fill extracts the full width of the mineralisation with successive and parallel cuts, using suitably-sized development and sequencing, before advancing up-dip to mine the next slice. As each drift is mined from one side of the mineralisation to the other, the drift is filled before mining the adjacent drift. Depending on the ground conditions, primary-secondary extraction may be possible, or in poor conditions, a centre-out approach may be preferred.

Overhand drift-and-fill is proposed for Cuerpo 3, a zone of mineralisation with very poor rock conditions. A centre-out sequence was selected and intersections were limited to outside the mineralisation until the operation has sufficient understanding of the conditions and can safely mine larger openings. Although mining overhand, all fill material includes 3% cement to limit fill sloughing into adjacent drifts. The average cement content is typically above the requirement to maintain cohesion to allow for a higher cement content on the first lift of the panel. This is to allow multiple panels to be mined at any given time (after mineralisation has been dewatered), and allows a lower panel to mine up against a filled horizon.

An illustration of the mining method is presented in Figure 16-8.

Figure 16-8: Schematic of Drift-and-Fill Stoping with Cemented Rock Fill



First Majestic Silver Corp.

Del Toro Silver Mine
Chalchihuites, Zacatecas, Mexico
Drift and Fill Method
April 2017

16.5 Underground Mining - Dolores Mine

16.5.1 Mining Method Selection

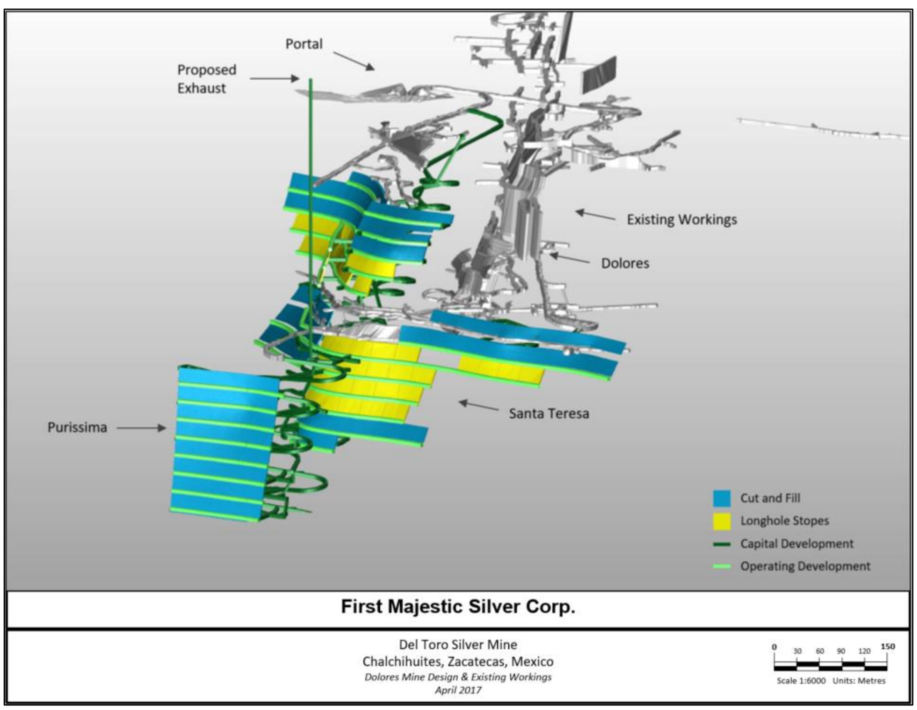
After completing a mining method analysis with key site personnel, areas of the deposit were delineated by method, or methods, depending on if more than one method could be applied. If more than one method was suitable, the method with lowest mining cost was generally selected; however, geotechnical, estimated feed grade, resource recovery and productivity impacts were also considered when making the selection.

Based on this process and supported by current mining activities, the following two primary mining methods are proposed to complete extraction:

- Longhole stoping with cemented rock fill; and
- Cut-and-fill using resue mining techniques.

Figure 16-9 illustrates the mining locations by mining method proposed for the Dolores Mine.

Figure 16-9: Dolores Mine: Schematic Showing Proposed Mining Methods



Based on an estimate of mining costs, a Cut-Off Grade (COG) was calculated and then applied to the different portions of the deposit to identify areas for mining. The various COGs used to identify potential mining locations include the following.

Cut-and-Fill Stoping (Resue) – Cut-Off Grade

The three COGs applied to cut-and-fill stoping are as follows:

- FCOG – 195 g/t Ag equivalent;
- ICOG – 120 g/t Ag equivalent; and
- MCOG – 80 g/t Ag equivalent.

Longhole Stoping – Cut-Off Grade

The three COGs applied to cut-and-fill stoping are as follows:

- FCOG – 150 g/t Ag equivalent;
- ICOG – 120 g/t Ag equivalent; and
- MCOG – 80 g/t Ag equivalent.

Once the mining locations were identified, stope design was followed by development design using GEOVIA Surpac™. The design component was then imported into mining planning software for sequencing and scheduling (GEOVIA MineSched™).

16.5.2 Stope Design Methodology

A minimum mining width of 1.5 m was designed for longhole stopes and 1.0 m for cut-and-fill zones. Existing cut-and-fill stoping has been successful at narrower widths (0.8 m); however, to allow for redundancy, a minimum width of 1.0 m was used.

For cut-and-fill stoping, after designing the production areas to the minimum mining width of 1.0 m, additional waste was included to meet the minimum mining width for access. The additional waste was identified separately to be sent to the waste storage facility. As the final planned width was 2.5 m by 0.75 m wide, waste was designed and scheduled on either side of the mineralisation.

Sills mined for longhole stoping areas are proposed to be 3 .0 m wide, 4.0 m high, and suitable for modern drilling equipment. Production stopes were designed with a minimum width of 1.5 m and a vertical distance of 9.5 m (13.5 m floor to floor). The proposed mining width was deemed appropriate given that blast holes should experience limited drill deviation with good drilling practices employed. For design and scheduling purposes, stope panels were designed 20 m long (9.5 m high); however, in practice, mining will not exceed 5 m before filling occurs to limit the amount of remote mucking required. The development and stoping locations were sequenced and scheduled in mine planning software.

16.5.3 Ore Dilution and Loss

The dilution and recovery factors that were applied for mining activities at Dolores, based on the selected mining method, are presented in Table 16-6.

Table 16-6: Dolores Mine: Dilution and Recovery Parameters

Category	Cut-and-Fill	Long Hole Stoping	Development
Unplanned Dilution	10%	15%	10%
Mining Recovery	95%	95%	95%

16.5.4 Development

Updated designs incorporate a minimum stand-off distance of 20 m to locate the ramp away from mineralisation. This distance will minimise any damage to the ramp due to ground stress changes and blasting from stope extraction. This stand-off distance will also allow sufficient space between the ramp and the orebody for the excavation of the level accesses, stockpiles and sumps.

A ramp mined with an arched profile will be excavated to a width of 3.5 m and a height of 3.5 m. This profile allows sufficient room to accommodate current underground fleets as well as secondary ventilation ducting and service piping. Other planned development includes the following:

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

A typical level layout for both methods, cut-and-fill and longhole stoping, is provided in Figure 16-10 and Figure 16-11.

Figure 16-10: Dolores Mine: Typical Level Layout for Cut-and-Fill

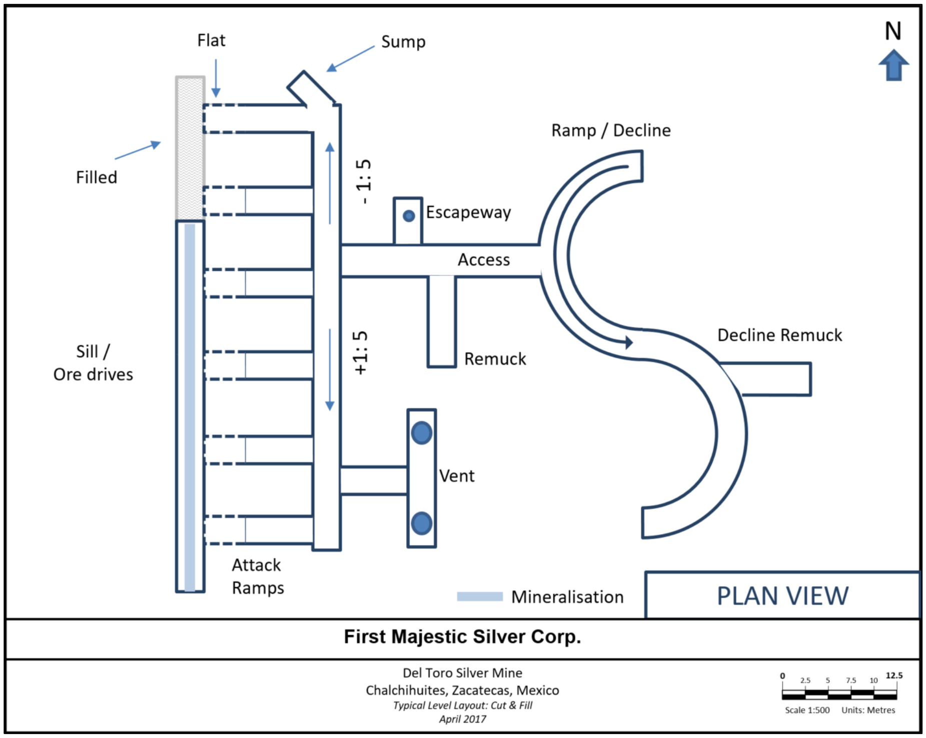
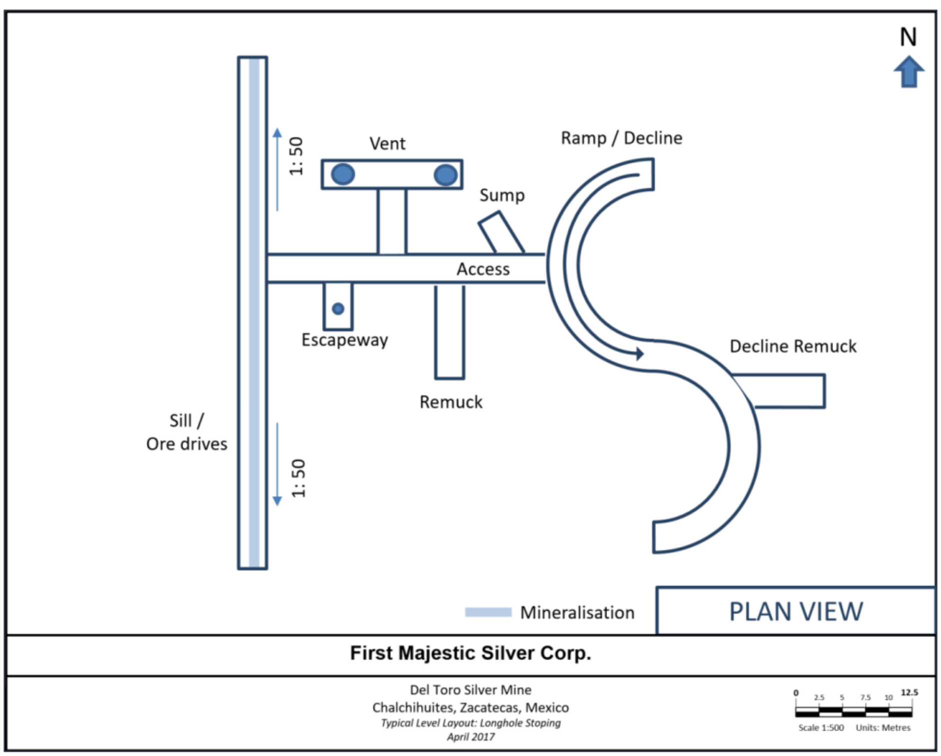


Figure 16-11: Dolores Mine: Typical Level Layout for Longhole Stoping



The various development profiles are shown in **Error! Reference source not found.**

Table 16-7: Development Profiles

Development Type	Width (m)	Height (m)
Ramp	3.5	3.5
Access	3.5	3.5
Stockpile	3	4
Return Air Accesses	3.5	3.5
Escapeway Access	3	3
Sump	3	3
Ore Drifts – C&F	2.5	3
Ore Drifts - LH	3	4
Ore Drifts - Shrinkage	2	2.5
Ore Drifts – D&F	3	3
Escapeways	3	3
Return Airways	3.5	3.5

16.5.5 Mine Schedule

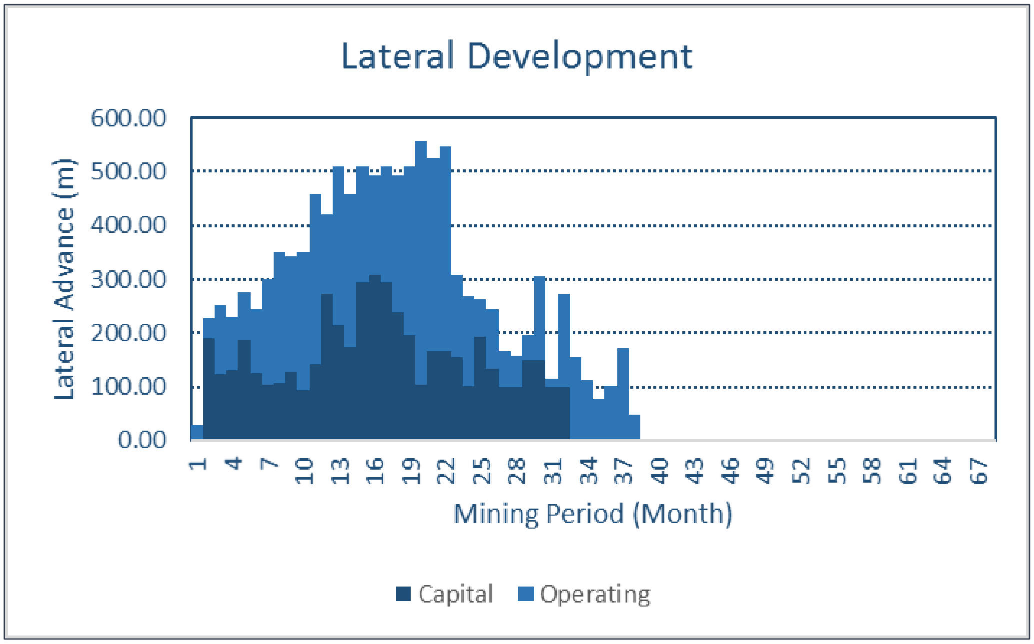
Del Toro has well-established productivities which were applied in the mine schedule. For development, the monthly productivity, including the time taken to drill, blast, muck and support each round, is presented in Table 16-8.

Table 16-8: Typical Jumbo Development Productivity

Available Headings	Units	Rate Per Heading
1 – 3 Headings	m / month	120
> 3 Headings	m / month	250

Initially the mining team at site committed one jumbo to the Dolores Mine. After completing a trade-off study, site operations justified refurbishment of a second jumbo to assist with the development requirements. The ramp-up in development will be timed with the refurbishment of the second jumbo and the jumbo is expected to be ready when there are ample headings available, as shown in Figure 16-12.

Figure 16-12: Dolores Mine: Underground Capital and Operating Lateral Development



Note: Figure prepared by Entech 2017

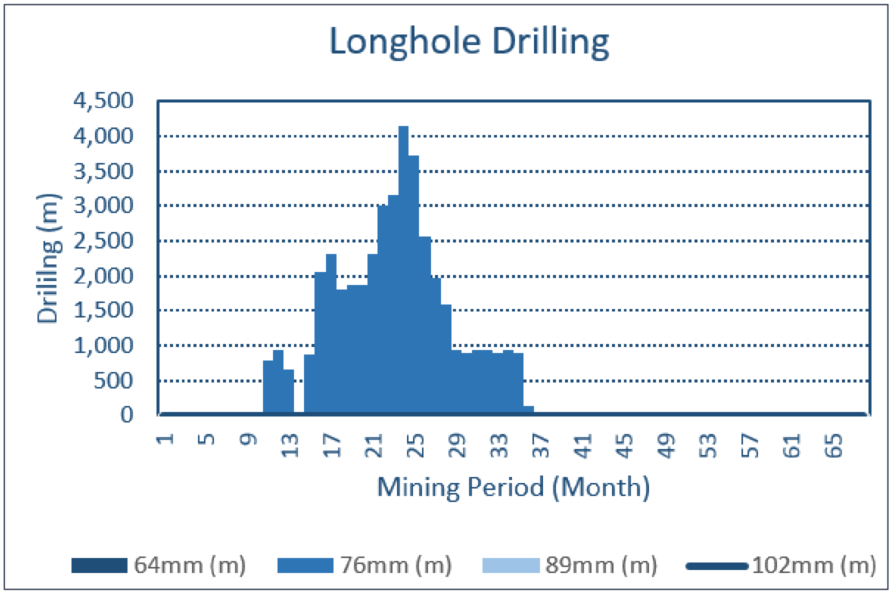
Vertical Development

Vertical development will primarily be completed by conventional mining techniques up to a size of 1.5 m by 1.5 m. Large diameter raises will be excavated either by a raisebore machine (contract) or by longhole raising. For scheduling, a development rate of 3 m per day has been applied to all vertical development.

Longhole Drilling

Longhole drilling productivity is expected to be between 70–100 m per shift to an average of 150 m per day. The majority of drilling requirements will be production blast holes, with some drilling capacity allocated for service holes. For the Dolores Mine, only one drill rig will be required to meet the production drilling requirements (Figure 16-13).

Figure 16-13: Dolores Mine: Underground Longhole Drilling Requirements



Note: Figure prepared by Entech, 2017.

Material Movement

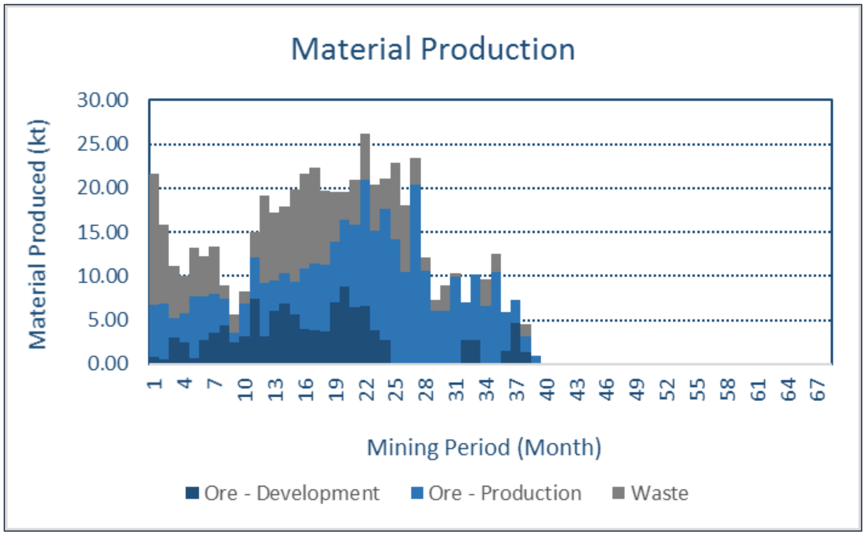
The existing load-and-haul fleet currently handles up to 1,500 tpd (45 kt per month) for all mines, with additional haulage requirements met by the onsite contractor through the provision of additional haulage trucks. The estimated load-and-haul fleet requirements for the Dolores Mine is shown Table 16-9.

Table 16-9: Dolores Mine: Load-and-Haul Fleet

Equipment Type	Model	Quantity
LHD	LH-203	2
LHD	LH-307	1
Truck	30t - Rigid Axle	2

The overall material production profile for the Dolores Mine is presented in Figure 16-14.

Figure 16-14: Dolores Mine: Material Production

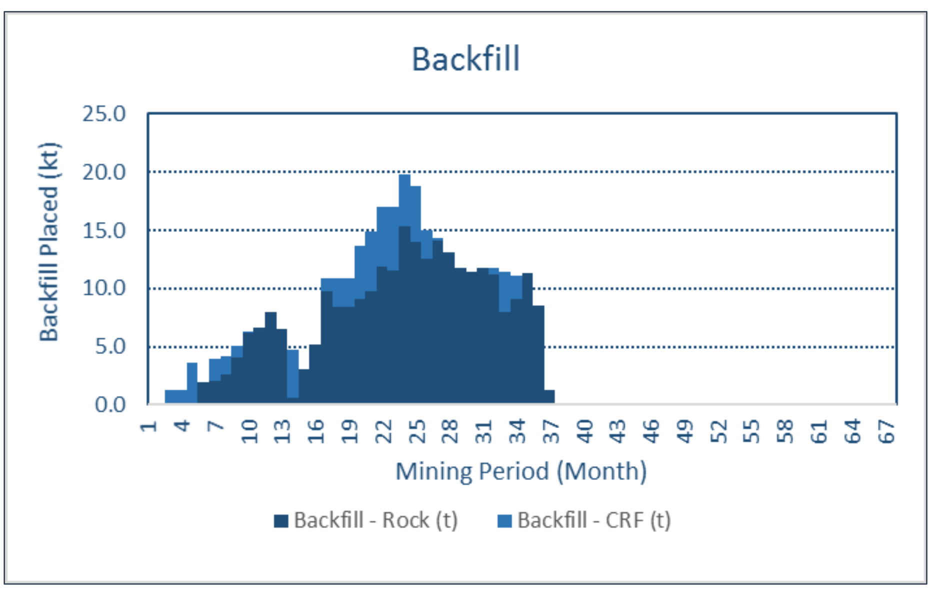


Note: Figure prepared by Entech, 2017.

Backfill

All future production voids, with the exception of shrinkage stopes, will be backfilled. The backfill will either be cemented rock fill or uncemented waste rock, depending on the extent of exposure. Longhole stopes will be backfilled with approximately 1.5 % cement content, and cut-and-fill stopes will be filled with uncemented waste rock, except in cases where a cemented rock-fill sill pillar will be left. All backfill will be placed with the primary stope loaders (1.5 m^3). Total backfill requirements for the Dolores Mine are presented in Figure 16-15.

Figure 16-15: Dolores Mine: Backfill Requirements



Note: Figure prepared by Entech, 2017.

16.5.6 Underground Mine Physicals Summary

The mine plan is based on Measured and Indicated Mineral Resources; therefore, the current mine plan expects the Dolores Mine to be completed over the next four years (Figure 16-10).

Table 16-10: Mining Physicals - Dolores Mine

Type	Units	Total	Year 1	Year 2	Year 3	Year 4
Physicals						
Lateral (Ramp, Access)	m	3,069	1,254	1,093	722	0
Lateral (Ore Sills, Operating Waste)	m	6,511	1,877	3,273	1,142	219
All Other Lateral Development	m	2,442	824	1,315	303	0
Total Lateral Development	m	12,022	3,954	5,681	2,167	219
Vertical Development	m	543	315	206	22	0
Longhole Drilling	m	42,118	1,716	24,023	16,379	0
Waste Movement						
Backfill	kt	328.2	42.3	134.4	150.3	1.3
Waste	kt	182.8	66.9	83.6	30.8	1.4
Production						
Development	kt	112.7	34.1	65.6	7	6
Production - Longhole Stoping	kt	120	4.9	68.5	46.7	0
Production – Cut-and-Fill	kt	81.9	10.3	15.5	50.8	5.3
Production - Shrinkage	kt	64.6	37.9	13.4	13.4	0
Total	kt	379.2	87.3	162.9	117.8	11.3
Grades						
Ag	g/t	119	126	94	149	103
Pb	%	2.35	2.45	1.69	3.13	3.05
Zn	%	0.64	0.69	0.54	0.73	0.73
Au	g/t	0.15	0.09	0.13	0.23	0.05

If mineralization that is currently classified as Inferred can be upgraded to higher confidence categories and eventually converted to Mineral Reserves, there is potential that the mine life can be extended.

16.5.7 Underground Infrastructure and Services

Portals

The Dolores Mine portal is shown in Figure 16-16. Near the portal (to the right in the figure) is a maintained tag board, general safety information, and signage.

Figure 16-16: Dolores Mine Portal

Note: Picture taken during Entech site visit in 2016.

__Primary Ventilation__

The ventilation system at the Dolores Mine is undergoing a major upgrade. FMS is planning to install a new ventilation raise from surface to the 11 L near the new ramp to the Purisima deposit. An exhaust system (pull system) will be provided by primary fans, located atop the raise, which will draw fresh air into the mine via the main portal to the bottom of the ventilation system. The return air will then be drawn into the exhaust raises to be discharged on surface. Through a series of ventilation raises, the ventilation circuit will be extended to the lower levels of the mine, with auxiliary ventilation forcing fresh air from the ramp to the active headings.

The ventilation circuit was imported into Ventsim™, an industry-standard software used in ventilation modelling, to model the flows predicted for the mine. The estimated primary ventilation demand was calculated based on a factor of 0.6 m^3/s of fresh air per kW and is shown in Table 16-11.

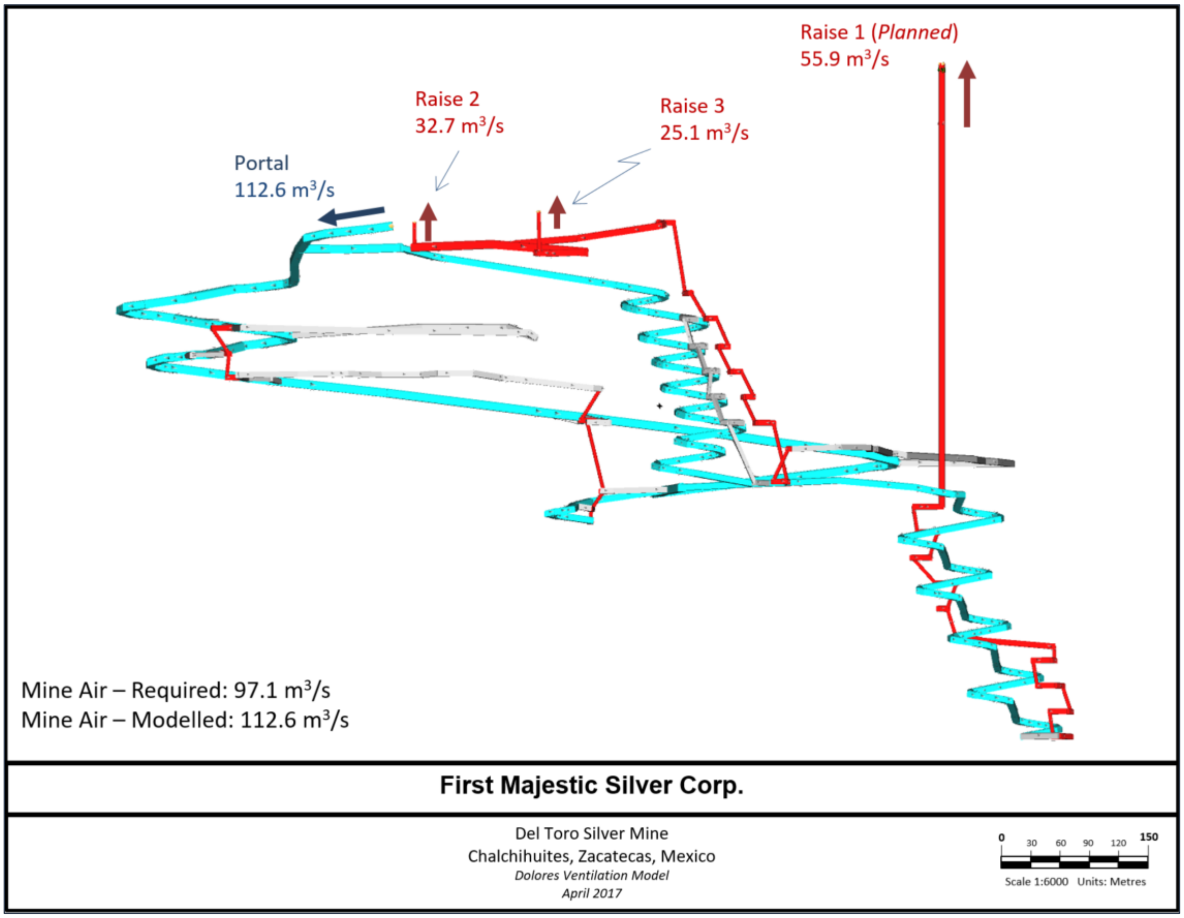
Table 16-11: Dolores Mine: Ventilation Demand Estimate

Equipment Type	Model	Power Output (kW)	Max. Units	Airflow Required per Unit (m3/s)	Utilisation	Total Airflow Required (m3/s)
Jumbo Development Drill	Single Boom	55	1	3.3	0.25	0.8
Longhole Production Drill		55	0	3.3	0.25	0
Truck	30t - Rigid Axle	330	2	19.8	1	39.6
LHD	LH-203, LH-307	100	3	6	1	18
Light Vehicle and Ancillary		125	2	7.5	0.25	3.8
Production Contingency*			1	22	1	22.3
Leakage (15%)						12.7
Airflow Required						***97.1***

*An allowance for a potential production increase is included in the ventilation design.

The Ventsim schematic of the primary ventilation circuit is presented in Figure16-17. Compared to the ventilation audit completed in late 2016, the model indicated approximately 15% leakage would occur into historical workings.

Figure 16-17: Dolores Mine: Primary Ventilation Model



Auxiliary Ventilation

Following a ventilation audit done by Timothy Stoke from Entech in June 2016, additional auxiliary fans will be required to deliver the required airflow to the working areas. Auxiliary fans (sized at 22, 45 and 55 kW) will be installed; and the appropriate fan size will be selected based on airflow demands, length of run, size of duct and size of heading. The typical configuration will be a 45-kW fan with 1,067-mm-diameter ducting. The overall aim is to deliver approximately 5–8 m^3/s of airflow.

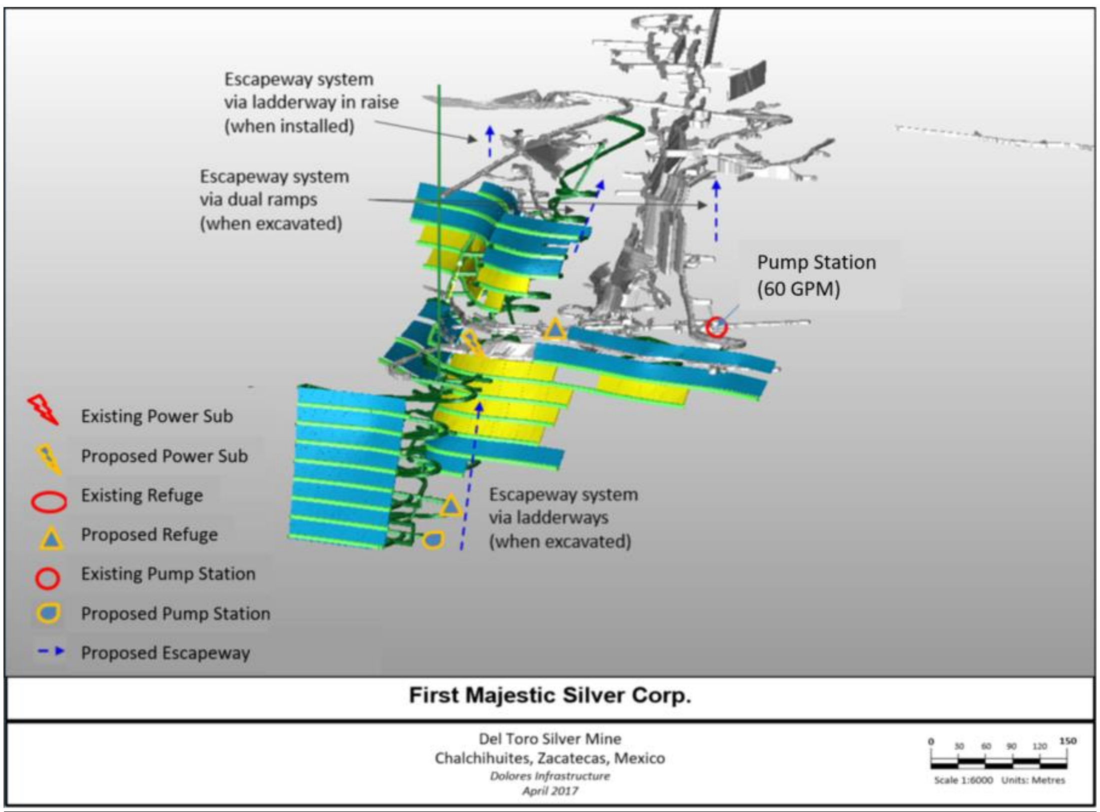
Secondary Means of Egress and Refuge Chambers

Additional refuge chambers will be located in each mine and will be able to provide safe refuge for mining personnel when required. All refuge chambers will be fitted with drinking water and breathing air sufficient for a minimum of 36 hrs of refuge. A second means of egress (escape route) has also been designed to interconnect the planned levels. This will allow for egress from the mine if the main access ramp becomes inaccessible. Figure 16 14 illustrates the current and proposed second means of egress and refuge locations.

Water Management

The existing underground dewatering system is capable of pumping 60 gal/min from underground. Mine water will be transferred from the dewatering pumps to the surface for disposal. As the ramp continues to the lower levels, the dewatering system will be extended to maintain access to the workings. Minor sumps will have smaller 5 kW / 8 kW pumps, or as needed to meet requirements. Figure16-18 illustrates the current and proposed dewatering system.

Figure 16-18: Dolores Mine: Existing and Proposed Mine Infrastructure



Electrical Power

Electrical power will be supplied by the site power station located at the processing facility. The underground mining operation is estimated to require approximately 0.55 MW of power during peak production and under peak load, with ventilation fans requiring the majority of the supplied power. Table 16-12 presents the estimated power (installed) without the consideration of diversity and utilisation factors. Additional capital has been allocated to estimate and plan for future power requirements for the Dolores mine.

Table 16-12: Estimated Power Consumption Underground

Equipment	Power Rating (kW)	Quantity	Installed Power (kW)
Primary Pump Stations	55	2	110
Sump / Face Pump	5	3	15
Surface Primary Fan	90	2	180
Auxiliary Fans**	45	3	135
Drills – Longhole*	110	1	110
Total Installed Power *(Excludes Diversity and Utilisation Factors)*			***550***

* Contractor may supply diesel / pneumatic drill

** Average configuration

16.6 Underground Mining, San Juan Mine

The San Juan Mine currently consists of a number of mineralisation zones targeted for mining and are listed below as follows:

- Cuerpo 1, Cuerpo 2 veins and Cuerpo 3 breccia;
- Lupitas vein system which includes the Lupitas, Lupitas Alto, San Jose and San Jose Alto; and
- “Other veins” – Carmen, Consuelo, and Zaragoza.

Each deposit has been investigated for which mining method is most suitable for extraction. The following sections describe the mining approach and assumptions for mining the mineralized zones.

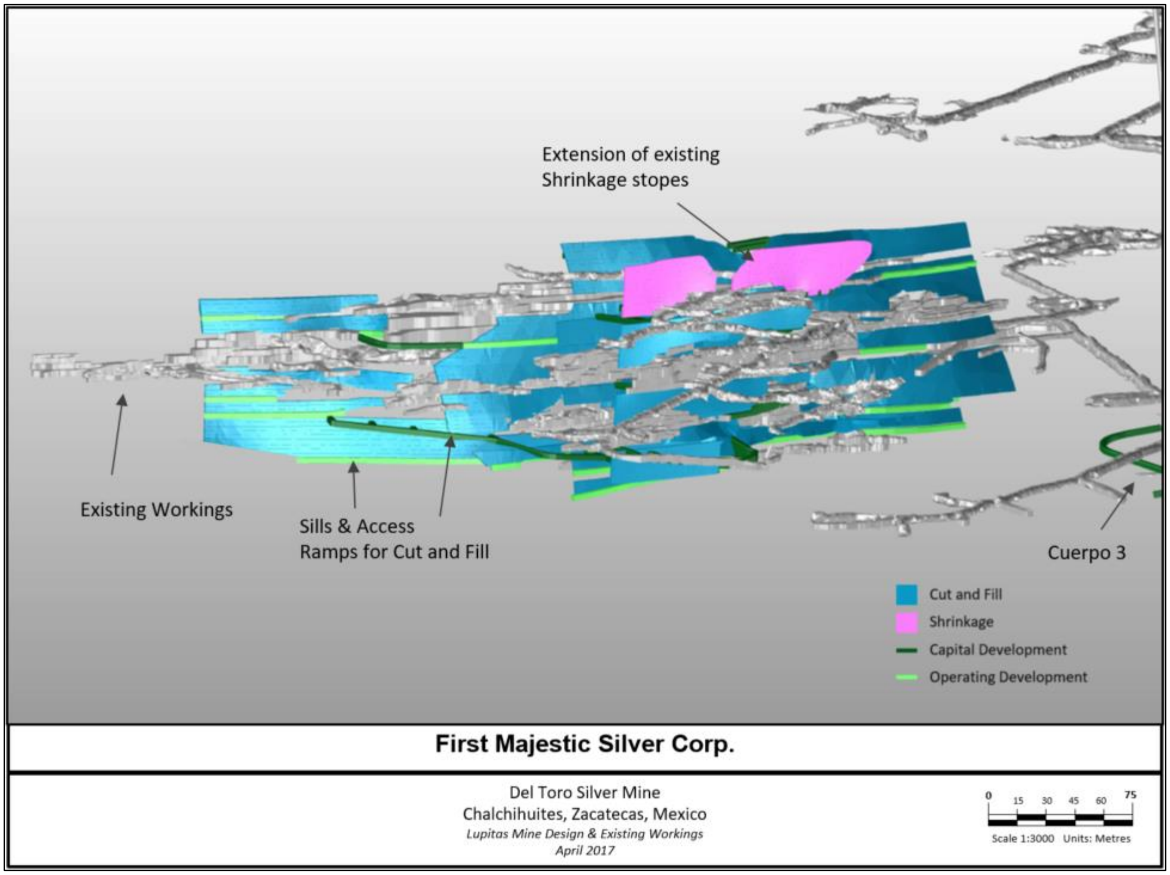
16.6.1 Mining Method Selection

For Lupitas, Cuerpo 1 and Cuerpo 2 the current mining practices are as follows:

- Shrinkage stoping; and
- Cut-and-fill using resue mining techniques.

There is limited opportunity to optimise the mining methods that can be applied to Cuerpo 1, Cuerpo 2 and the “other” veins, as they are well-established and nearing completion. Changing methods would see limited upside with higher risk of not meeting forecast targets. Shrinkage stoping, using a minimum mining width of 1.0 m, was designed for additional stoping areas. For cut-and-fill stoping, a minimum mining width of 1.0 m was used for design (resue portion), with a final width of 2.5 m for excavated width (1.5 m of waste blasting). Figure16-19 illustrates proposed mining methods.

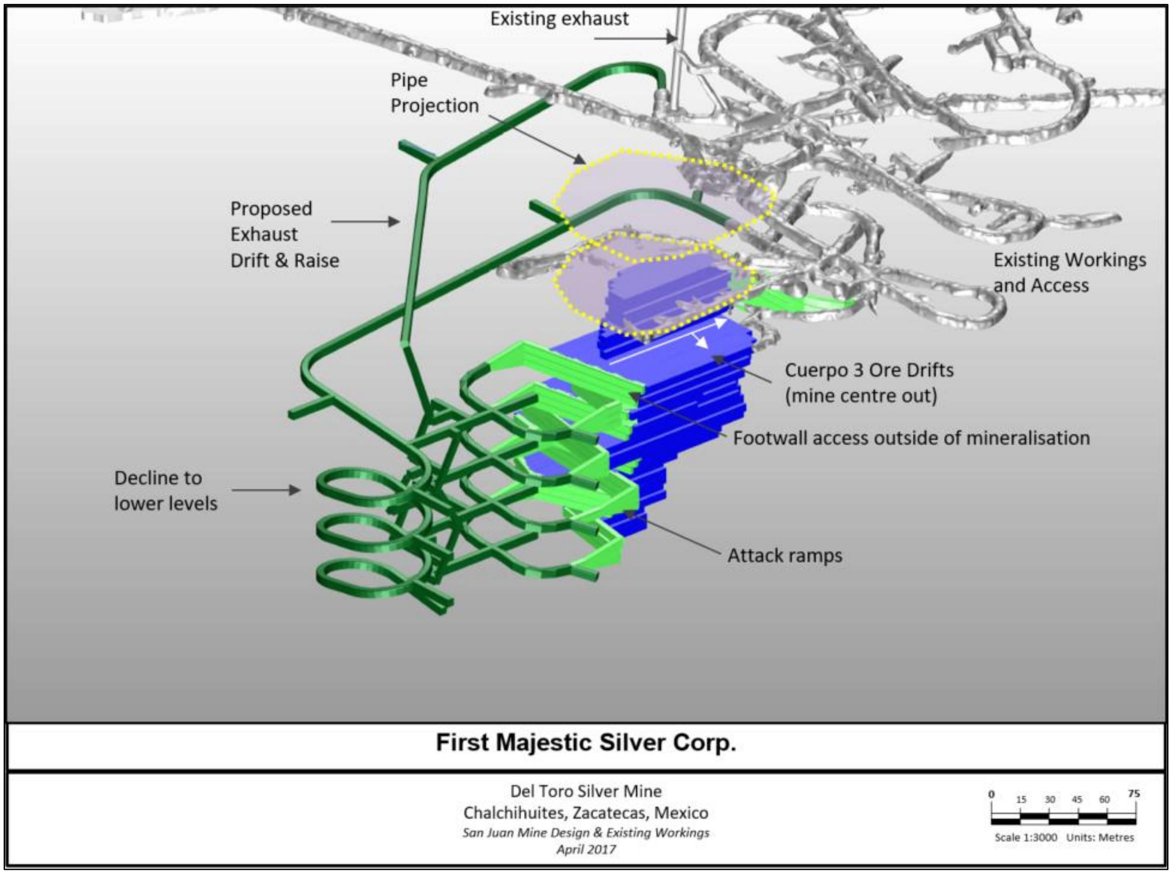
Figure 16-19: San Juan Mine: Lupitas



Cuerpo 3 is the most complicated deposit at San Juan. It consists of very poor to poor rock quality and has had drainage issues, with water being observed to seep, and sometimes flow, from the rock mass. For this deposit, the site currently employs a pseudo-caving mining method with introduced fill which has had limited success. Following a technical review by FMS management, mining personnel, and external consultants, a dewatering and mining strategy was developed to replace the current mining method with conventional overhand drift-and-fill, after the zone has been allowed to drain for a period of three months. Each lift will be 3 m high, and there will be six lifts per sublevel. This mining method was selected because it limits the exposed back (under weak ground), and is more flexible than the method currently employed.

Figure16-20 illustrates the proposed layout and mining method for Cuerpo 3.

Figure 16-20: San Juan Mine: Cuerpo 3



Based on an estimate of mining costs, a COG was calculated and then applied to the different portions of the deposit to identify areas for mining. The various COGs used to identify potential mining locations are described below.

Shrinkage and Cut-and-Fill Stoping (Resue) – Cut-Off Grade

The three COGs applied to cut-and-fill stoping are as follows:

- FCOG – 195 g/t Ag equivalent;
- ICOG – 120 g/t Ag equivalent; and
- MCOG – 80 g/t Ag equivalent.

Drift-and-Fill – Cut-Off Grade

The three COGs applied to cut-and-fill stoping are as follows:

- FCOG – 300 g/t Ag equivalent;
- ICOG – 195 g/t Ag equivalent; and
- MCOG – 80 g/t Ag equivalent.

Once the mining locations were identified, stope design was followed by development design, and then each design component was imported into mining planning software for sequencing and scheduling.

16.6.2 Stope Design Methodology

For cut-and-fill stoping, after designing the production areas to the minimum mining width of 1.0 m, additional waste was incorporated to meet the minimum mining width for access. The additional waste was identified separately to be sent to the waste storage facility. As the final planned width was 2.5 m by 0.75 m wide, waste was designed and scheduled on either side of the mineralisation.

Drift-and-fill used 3.0 m square profiles for development. The whole drift, once inside the mineralisation, was interrogated to meet the cut-off analysis. After completing the layout configuration, the design was imported into purpose-built mine planning software and scheduled.

16.6.3 Ore Dilution and Loss

The dilution and recovery factors that were applied for mining activities at San Juan, based on the selected mining method, are presented in Table 16-13.

Table 16-13: San Juan Mine: Dilution and Recovery Parameters

Category	Cut-and-Fill	Shrinkage	Drift-and-Fill
Unplanned Dilution	10%	10%	20%
Mining Recovery	95%	95%	90%

16.6.4 Development

The cut-and-fill and shrinkage stope designs for the Lupitas vein system are similar to those proposed for the Dolores mine. Generally, the ramps have been moved from ore into waste to reduce the potential for sterilisation and to increase productivity.

The drift-and-fill mining method requires a mine design that is similar to cut-and-fill. The access ramp designs for Cuerpo 3 are 60 m from the ore body. This stand-off distance will allow sufficient space between the ramp and the orebody for the excavation of the level accesses, stockpiles and sumps. The main ramp has a profile of 3.5 m by 3.5 m to accommodate the rigid axle trucks and ancillary services, and has a maximum grade of 15%. The production levels will be spaced vertically every 18 m, allowing for 6-x-3-m-high levels. A typical level layout for the production area access is shown in Figure 16-21. The various development profiles are presented Table 16.14

Figure 16-21: San Juan Mine: Typical Cuerpo 3 Drift-and-Fill Capital Access

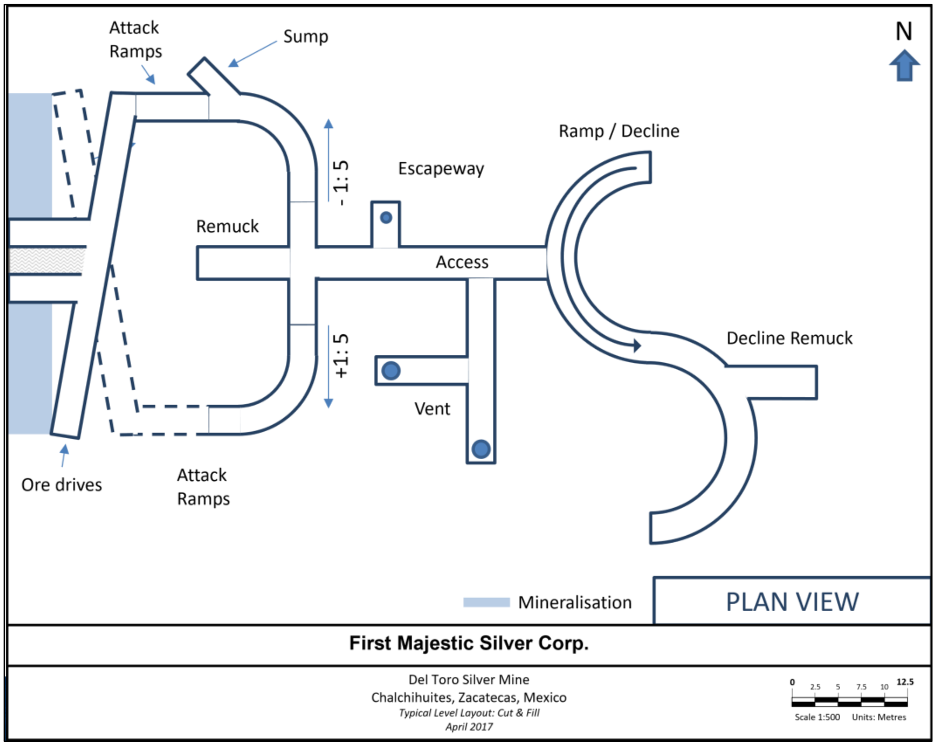


Table 16-14: Development Profiles

Development Type	Width (m)	Height (m)
Ramp	3.5	3.5
Access	3.5	3.5
Stockpile	3	4
Return Air Accesses	3.5	3.5
Escapeway Access	3	3
Sump	3	3
Ore Drifts – C&F	2.5	3
Ore Drifts - LH	3	4
Ore Drifts - Shrinkage	2	2.5
Ore Drifts – D&F	3	3
Escapeways	3	3
Return Airways	3.5	3.5

16.6.5 Mine Schedule

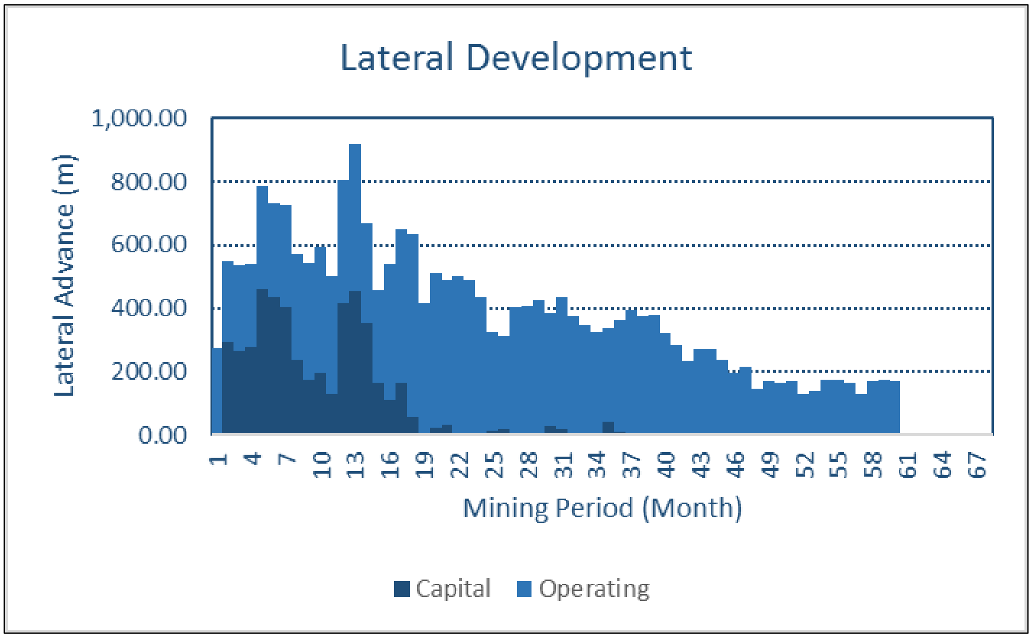
Del Toro has well-established productivities that were applied in the mine schedule. For development, the monthly productivity, including the time taken to drill, blast, muck and support each round, is presented in Table 16-15.

Table 16-15: Typical Jumbo Development Productivity

Available Headings	Units	Rate Per Heading
1 – 3 Headings	m / month	120
> 3 Headings	m / month	250
Production Headings for Cuerpo 3	m / month	60

The San Juan Mine currently operates two jumbos, with the potential to add a third when needed. Both the Lupitas and Cuerpo 3 schedules require two jumbos. The jumbos will be split between operating and capital development and the excavation of production drifts. Lateral development by period is shown in Figure16-22.

Figure 16-22: San Juan Mine: Underground Capital and Operating Lateral Development



Note: Figure prepared by Entech, 2017.

Vertical Development

Vertical development will primarily be completed by conventional mining techniques up to a size of 1.5 m by 1.5 m. Large diameter raises will be excavated either by a raisebore machine (contract) or by longhole raising. For scheduling, a development rate of 3 m per day has been applied to all vertical development.

Load-and-Haul

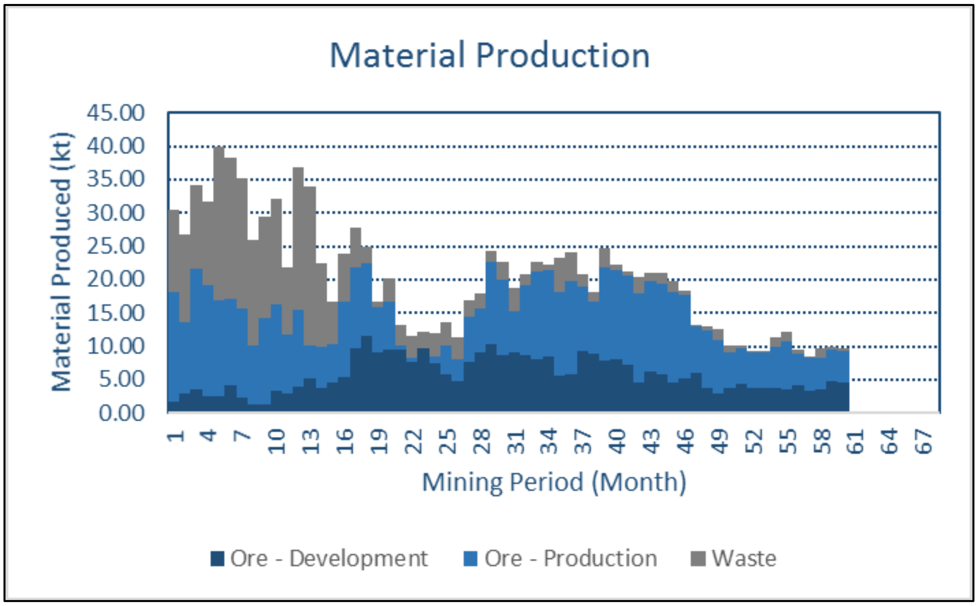
The existing load-and-haul fleet currently handles up to 1,500 tpd (45 kt per month) for all mines, with additional haulage requirements met by the onsite contractor through the provision of additional haulage trucks. The estimated load-and-haul fleet requirements for the San Juan mine are shown in Figure16-16.

Table 16-16: San Juan Mine: Load-and-Haul

Equipment Type	Model	Quantity
LHD	LH-203	3
Trucks	30t - Rigid Axle	4

The overall material production profile for the San Juan Mine is presented in Figure16-23.

Figure 16-23: San Juan Mine: Material Production



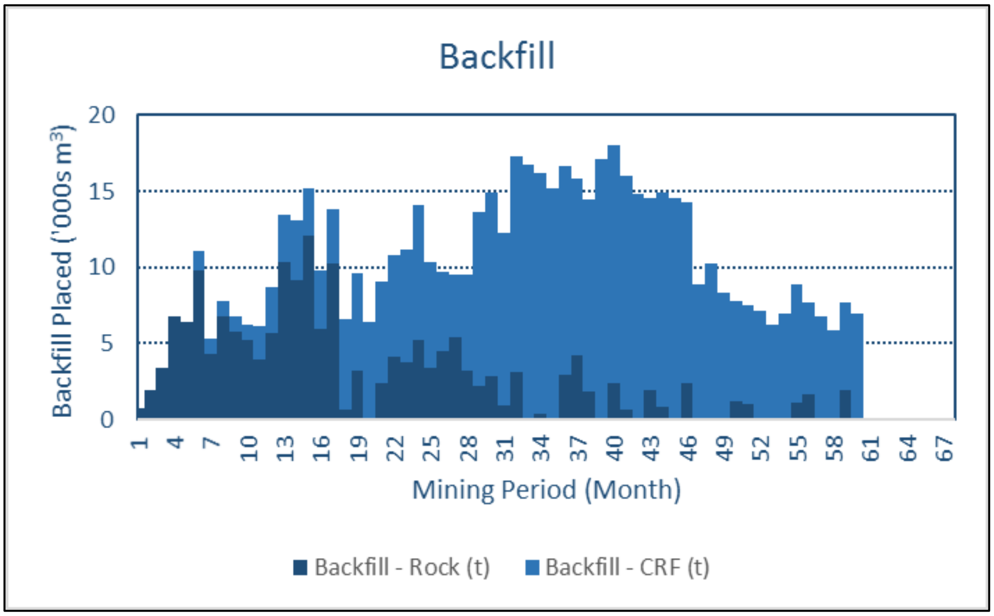
Note: Figure prepared by Entech, 2017.

Backfill

All future production voids, with the exception of shrinkage stopes, will be backfilled. The backfill will either be cemented rock fill or uncemented waste rock. In the cut-and-fill stopes where there is no plan to create a sill pillar, uncemented waste rock will be used. If a sill pillar is required, then cement will be added to the waste rock (1.5% cement content). All backfill placed in Cuerpo 3 will be cemented to prevent sloughing of material into the neighbouring production drift. All backfill will be placed using primary stope loaders (1.5 m^3).

Total backfill requirements for the San Juan mine are presented in Figure16-24.

Figure 16-24: San Juan Mine: Backfill Requirements



Note: Figure prepared by Entech, 2017.

16.6.6 Underground Mine Physicals

The mine plan is based on Measured and Indicated Mineral Resources; therefore, the current mine plan expects the San Juan Mine, exclusive of Cuerpo 3, to be completed in three years. Cuerpo 3 will have a mine life of approximately seven years.

The current summary of the San Juan mine is provided in Table 16-17, Table 16-18, and Table 16-19 for Lupitas, Cuerpo 3 and "other," respectively.

Table 16-17: Mining Physicals, San Juan Mine - Lupitas

Type	Units	Total	Year 1	Year 2	Year 3
Physicals					
Lateral (Ramp, Access)	m	916	558	358	0
Lateral (Ore Sills, Operating Waste)	m	3,749	1,967	1,682	100
All Other Lateral Development	m	175	20	155	0
Total Lateral Development	m	4,840	2,544	2,195	100
Vertical Development	m	32	0	32	0
Waste Movement					
Backfill	kt	115	57.3	50.9	7.2
Waste	kt	55.7	38.5	17	0.1
Production					
Development	kt	32.9	18.6	14	0.4
Production - Shrinkage	kt	10.8	10.3	0.5	0.00
Production - Cut-and-Fill	kt	235	147.6	67.1	20.4
Total	kt	279	176.5	81.6	20.8
Grades					
Silver					
Lead	%	4.05	4.05	3.87	4.73
Zinc	%	0.74	0.82	0.42	1.28
Gold	g/t	0.01	0.02	0.00	0.00

Table 16-18: Mining Physicals, San Juan Mine – Cuerpo 3

Type	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6/7
Physicals								
Lateral (Ramp, Access)	m	1,061	792	269	0	0	0	0
Lateral (Ore Sills, Operating Waste)	m	15,031	694	3,569	4,210	3330	1936	1,292
All other Lateral Development	m	823	530	156	137	0	0	0
Total Lateral Development	m	16,916	2,016	3,994	4,348	3330	1936	1,292
Vertical Development	m	152	111	41	0	0	0	0
Longhole Drilling	m	0	0	0	0	0	0	0
Waste Movement								
Backfill	kt	363.4	14	82.1	103.2	85.2	45.7	33.2
Waste	kt	175.2	69.8	41.4	33	16.4	8.8	5.8
Production								
Drift-and-Fill	kt	338.5	13.6	78.8	91.6	77.5	46.2	30.8
Total	kt	338.5	13.6	78.8	91.6	77.5	46.2	30.8
Grades								
Silver	g/t	186	387	182	145	173	240	178
Lead	%	4.33	6.92	4.32	3.87	4.28	4.89	4
Zinc	%	7.84	7.46	7.98	8.24	8.44	6.78	7
Gold	g/t	0.23	0.3	0.21	0.21	0.24	0.27	0

Table 16-19: Mining Physicals, San Juan Mine - Cuerpo 1, Cuerpo 2 and Other

Type	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Physicals								
Lateral (Ramp, Access)	m	2,000	1,600	400	0	0	0	0
Lateral (Ore Sills, Operating Waste)	m	1,301	1,201	100	0	0	0	0
All Other Lateral Development	m	90	60	30	0	0	0	0
Total Lateral Development	m	3,391	2,861	530	0	0	0	0
Waste Movement								
Backfill	kt	198.9	0	0	51.5	88.6	42.2	16.6
Waste	kt	100.7	84.1	16.7	0	0	0	0
Production								
Cuerpo 1 – Cut-and-Fill	kt	130	0	0	28.2	54.9	31.9	14.9
Cuerpo 2 – Cut-and-Fill	kt	122.5	0	0	39	46.8	25.3	11.4
Other Veins – Cut-and-Fill	kt	62.4	0	0	14.3	38.5	9.7	0
Total	kt	314.9	0	0	81.5	140.2	66.9	26.4
Grades								
Silver	g/t	197	0	0	181	179	182	185
Lead	%	2.83	0	0	2.64	2.64	2.52	2.39
Zinc	%	1.76	0	0	1.62	1.59	1.62	1.66
Gold	g/t	0.03	0	0	0.02	0.03	0.02	0.02

If mineralization that is currently classified as Inferred can be upgraded to higher confidence categories and eventually converted to Mineral Reserves, there is potential that the mine life can be extended.

16.6.7 Underground Infrastructure and Services

Portals

The primary access for the San Juan Mine is the main portal. The portal is illustrated in Figure 16-25.

Figure 16-25: San Juan Mine Main Portal

Note: Picture taken during Entech site visit in 2016.

<u>Primary Ventilation</u>

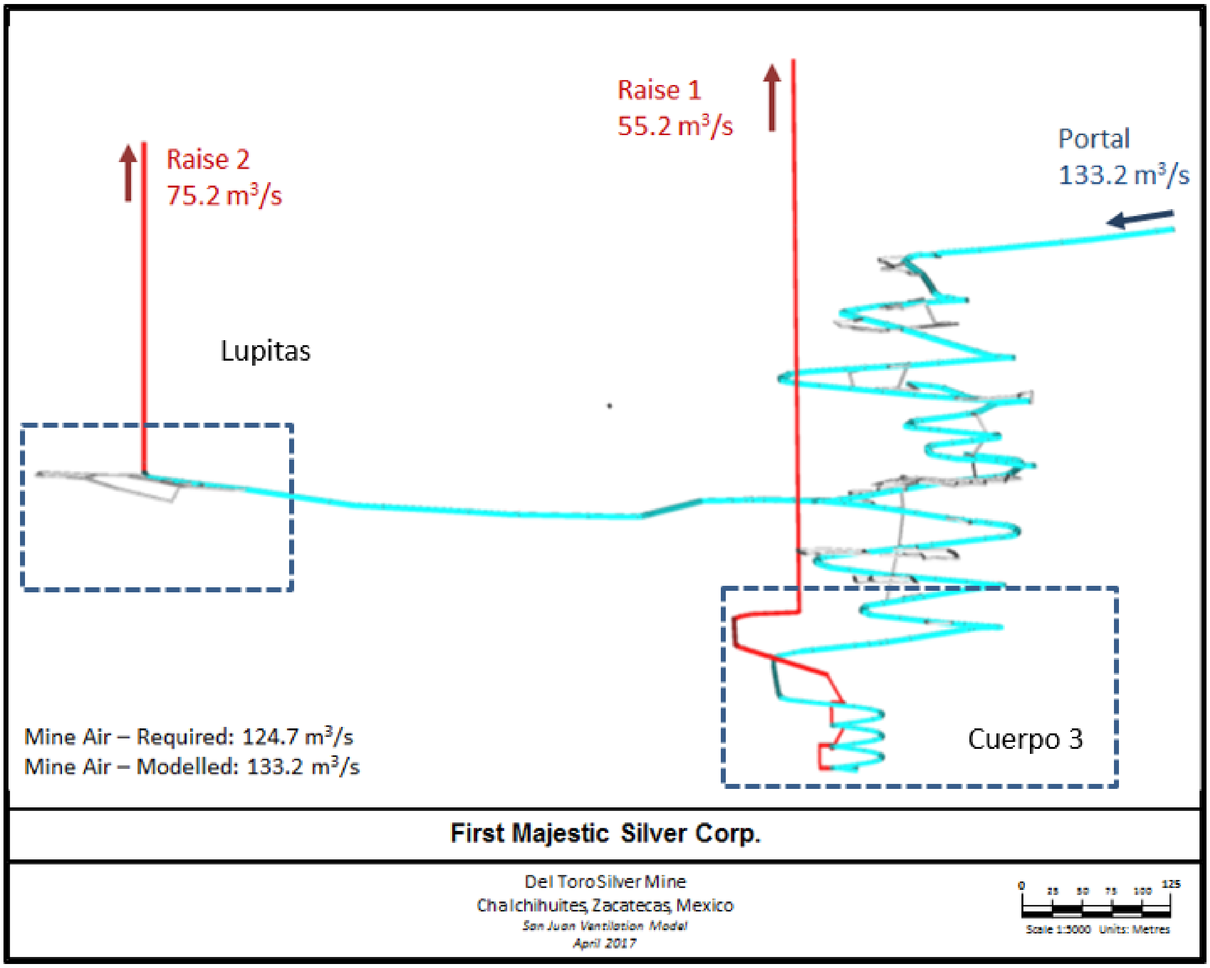
The ventilation circuit for the San Juan mine (including all of the Lupitas, Cuerpo1, 2, and 3, and “other” areas) is a pull system with fresh air coming into the portal and being exhausted through two ventilation raises. The ventilation circuit was imported into Ventsim^{TR}, to model the flows predicted for the mine. The ventilation demand was calculated based on a factor of 0.6 m^3/s of fresh air per kW and is shown in Table 16-20 (which includes a 15% leakage factor). The system configuration is shown in Figure 16-26.

The Lupitas exhaust raise was modelled with a 4.0 m diameter, while the Cuerpo3 exhaust raise was modelled with a 3.1 m diameter. The ventilation model estimates that a 120 kW fan on each raise can create a total airflow of approximately 133 m^3/s in the mine, which is greater than the estimated demand.

Table 16-20: San Juan Mine: Ventilation Demand Estimate

Equipment Type	Model	Power Output (kW)	Max. Units	Airflow Required per Unit (m3/s)	Utilisation	Total Airflow Required (m3/s)
Jumbo Development Drill	Single Boom	55	4	3.3	0.25	3.3
Truck	30t - Rigid Axle	330	4	19.8	1	79.2
LHD	LH-203 Scooptram	71	3	4.26	1	12.8
Light Vehicle and Ancillary		125	7	7.5	0.25	13.1
Leakage (15%)						16.3
Airflow Required						***124.7***

Figure 16-26: San Juan Mine: Primary Ventilation Model



Auxiliary Ventilation

Following a ventilation audit, additional auxiliary fans will be required to deliver the required airflow to the working areas. Auxiliary fans (sized at 22, 45 and 55 kW) will be installed, and the appropriate fan size will be selected based on airflow demands, length of run, size of duct and size of heading. The typical configuration will be a 45-kW fan with 1,067-mm-diameter ducting, with the overall aim to deliver approximately 5–8 m^3/s of airflow at the face (sufficient for the LHD or jumbo that would be generally be working).

Secondary Means of Egress and Refuge Chambers

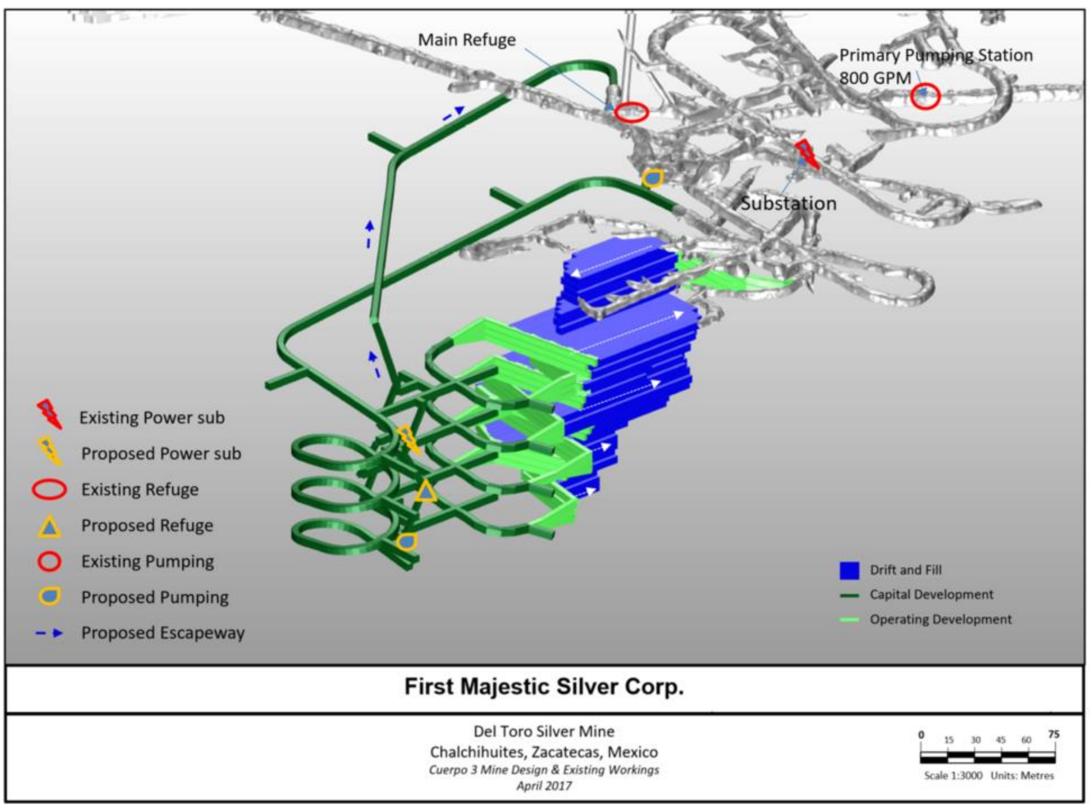
Additional refuge chambers will be located in each mine and are able to provide safe refuge for mining personnel when required. All refuge chambers will be fitted with drinking water and breathing air sufficient for a minimum of 36 hours of refuge. A second means of egress (escape route) has also been designed to interconnect the planned levels. This will allow for egress from the mine if the main access ramp becomes inaccessible. Figure 16-27 illustrates the current and proposed second means of egress and refuge locations.

Water Management

The current water management system at the San Juan mine includes a 30 hp submersible pump from the bottom of Rampa 068 to a sump located on Level 11-800, and has a capacity of 250 USgpm. From this sump, 30 hp and 15 hp submersible pumps direct water to a sump on Level 11, which also receives flows from 60 hp and 25 hp pumps located in separate sumps on Level 11. A 200 hp centrifugal pump with capacity to pump 250 USgpm at 560 m pumps to the sedimentation ponds on surface.

As the ramp continues to the lower levels, the dewatering system will be extended to maintain access to the workings. Figure 16-27 illustrates the current and proposed dewatering system and mine infrastructure.

Figure 16-27: San Juan Mine: Existing and Proposed Mine Infrastructure



Electrical Power

Electrical power will be supplied by the site power station located at the processing facility. The underground mining operation is estimated to require approximately 0.9 mW of power during peak production and under peak load, with ventilation fans requiring the majority of the supplied power. Table16-21 presents the estimated power (installed) without the consideration of diversity and utilisation factors. As this area is proposed for expansion, additional capital has been allocated to estimate and plan for the future power requirements for Cuerpo 3, Lupitas, Cuerpo 1, Cuerpo 2 and the “other” veins.

Table 16-21: San Juan Mine - Estimated Power Consumption Underground

Equipment	Power Rating (kW)	Quantity	Installed Power (kW)
Primary Pump Stations	55	4	220
Sump / Face Pump	5	8	200
Surface Primary Fan	120	2	240
Auxiliary Fans*	45	6	270
Total Installed Power *(Excludes Diversity and Utilisation Factors)*			***930***

*Average configuration

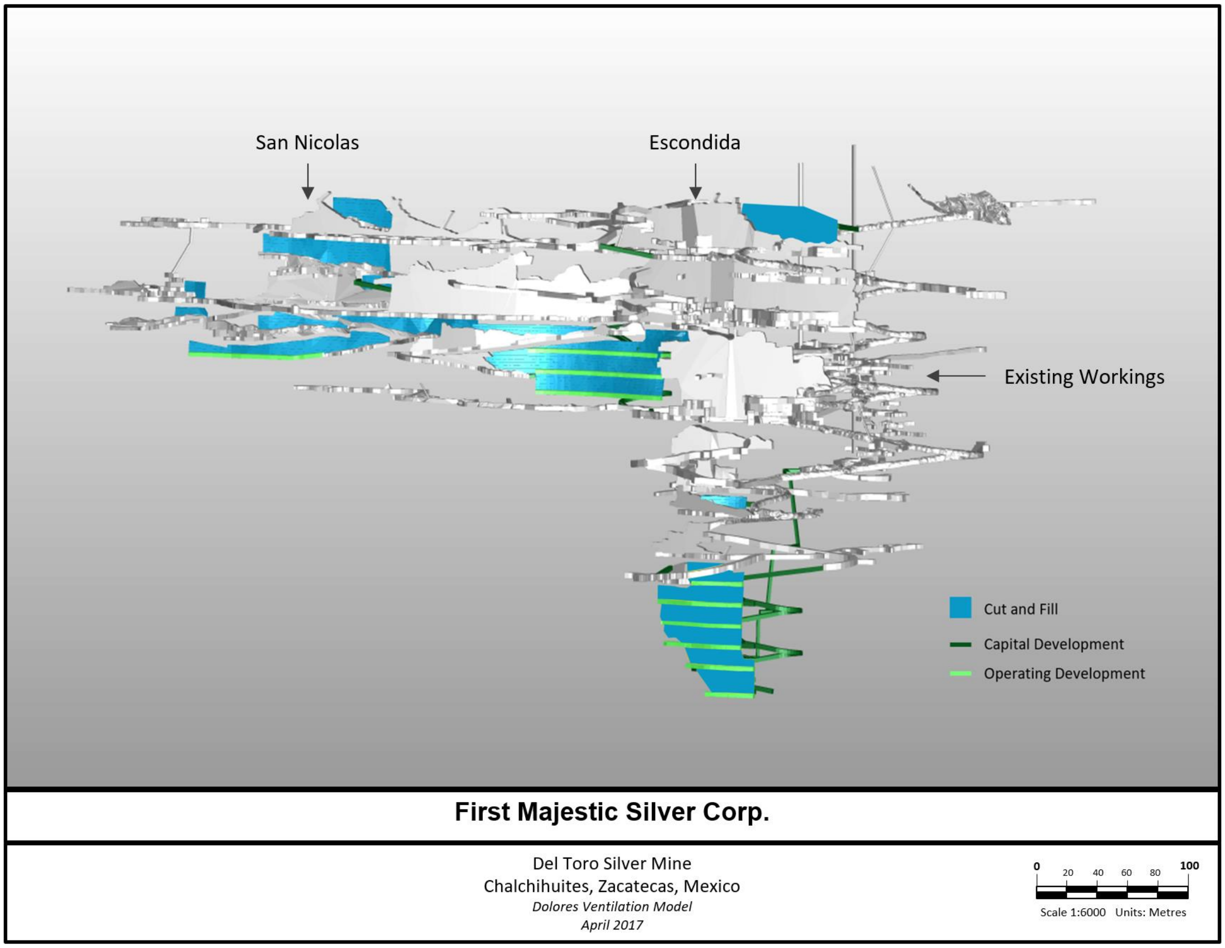
16.7 Underground Mining, Perseverancia Mine

The Perseverancia mine consists of two ore bodies: Escondida and San Nicolas. Escondida has been in production for over 25 years and San Nicolas since 2012, when it was discovered while developing Escondida. These are mature ore bodies with well-understood geotechnical conditions and production methods.

16.7.1 Mining Method Selection

Although there is a small amount of shrinkage stoping occurring at the Perseverancia Mine, the primary method will be cut-and-fill using resue mining techniques. Figure 16-28 illustrates where cut-and-fill mining will occur.

Figure 16-28: Perseverancia Mine: Proposed Mining Methods



Based on an estimate of mining costs, a COG was calculated and then applied to the different portions of the deposit to identify areas for mining. The various COGs used to identify potential mining locations are described below.

Cut-and-Fill Stoping (Resue) – Cut-Off Grade

The three COGs applied to cut-and-fill stoping are as follows:

- FCOG – 195 g/t Ag equivalent;
- ICOG – 120 g/t Ag equivalent; and
- MCOG – 80 g/t Ag equivalent.

Once the mining locations were identified, stope design was followed by development design, and then each design component was imported into mining planning software for sequencing and scheduling.

16.7.2 Stope Design Methodology

The production areas in the Perseverancia Mine were designed to a minimum mining width of 1.0 m, after ore dilution and loss were considered. Additional waste was designed to meet the minimum mining width for access, and identified separately to be sent to the waste storage facility. As the final planned width was 2.5 m, 0.75 m of waste on either side of the mineralisation was designed and scheduled.

16.7.3 Ore Dilution and Loss

The dilution and recovery factors that were applied for mining activities in the Perseverancia Mine are presented in Table 16-22.

Table 16-22: Perseverancia Mine: Dilution and Recovery Parameters

Category	Cut-and-Fill
Unplanned Dilution	10%
Mining Recovery	95%

16.7.4 Development

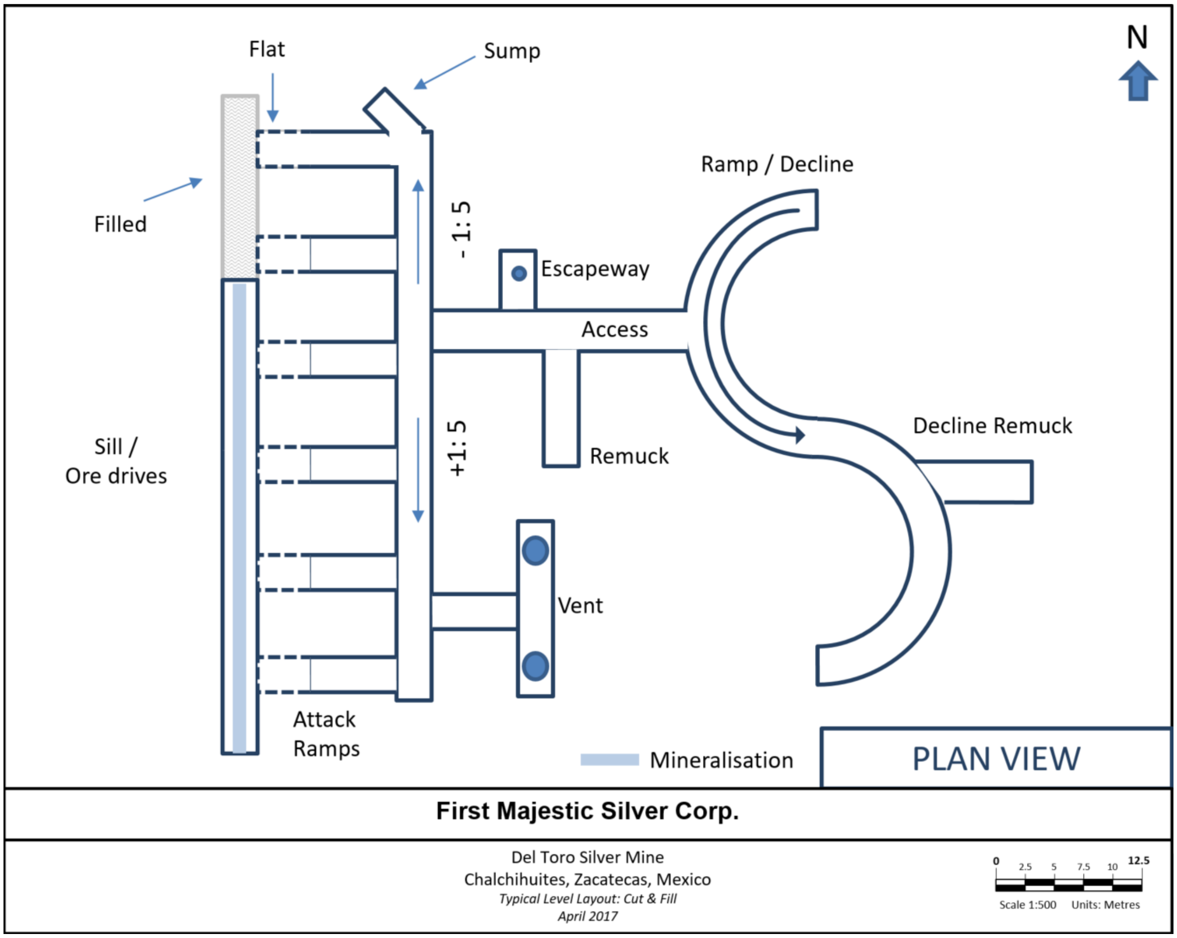
The cut-and-fill stope designs for the Perseverancia Mine are similar to those for the Dolores Mine. Generally, the ramps have been moved from the ore into waste to reduce sterilized ore and increase productivity.

A ramp mined with an arched profile will be excavated to a width of 3.5 m and a height of 3.5 m. This profile allows sufficient room to accommodate current underground fleets well as auxiliary ventilation ducting and service piping. Other planned development will include the following:

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

A typical level layout for cut-and-fill is included as Figure 16-29.

Figure 16-29: Perseverancia Mine: Typical Level Layout for Cut-and-Fill



The various development profiles are provided in Table 16-23.

Table 16-23: Perseverancia Mine: Development Profiles

Development Type	Width (m)	Height (m)
Ramp	3.5	3.5
Access	3.5	3.5
Stockpile	3	4
Return Air Accesses	3.5	3.5
Escapeway Access	3	3
Sump	3	3
Ore Drifts – C&F	2.5	3
Ore Drifts - LH	3	4.0.
Ore Drifts - Shrinkage	2	2.5
Ore Drifts – D&F	3	3
Escapeways	3.0.	30
Return Airways	3.5	3.5

16.7.5 Mine Schedule

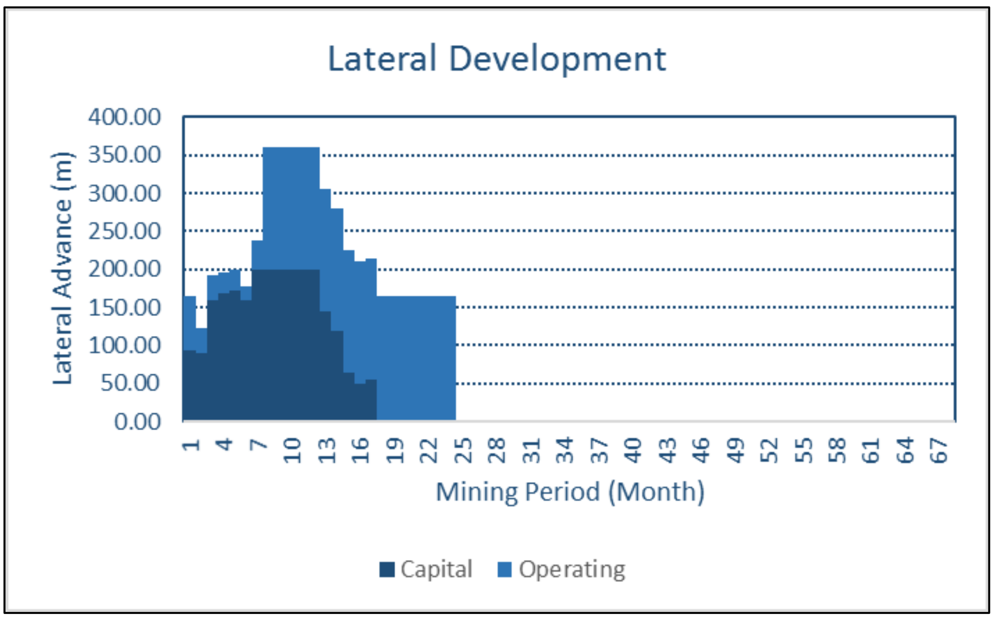
Del Toro has well-established productivities which were applied in the mine schedule. For development, the monthly productivity, including the time taken to drill, blast, muck and support each round, is presented in Table 16-24.

Table 16-24: Typical Jumbo Development Productivity

Available Headings	Units	Rate Per Heading
1 – 3 Headings	m / month	120
> 3 Headings	m / month	250

The Perseverancia Mine is well established, and does not require a large ramp-up period to continue production. The lateral development profile is shown in Figure16-30.

Figure 16-30: Perseverancia Mine: Underground Capital and Operating Lateral Development



Note: Figure prepared by Entech, 2017.

Vertical Development

Vertical development will primarily be completed by conventional mining techniques up to a size of 1.5 m by 1.5 m. Large diameter raises will be excavated either by a raisebore machine (contract) or by longhole raising. For scheduling, a development rate of 3 m per day has been applied to all vertical development.

Load-and-Haul

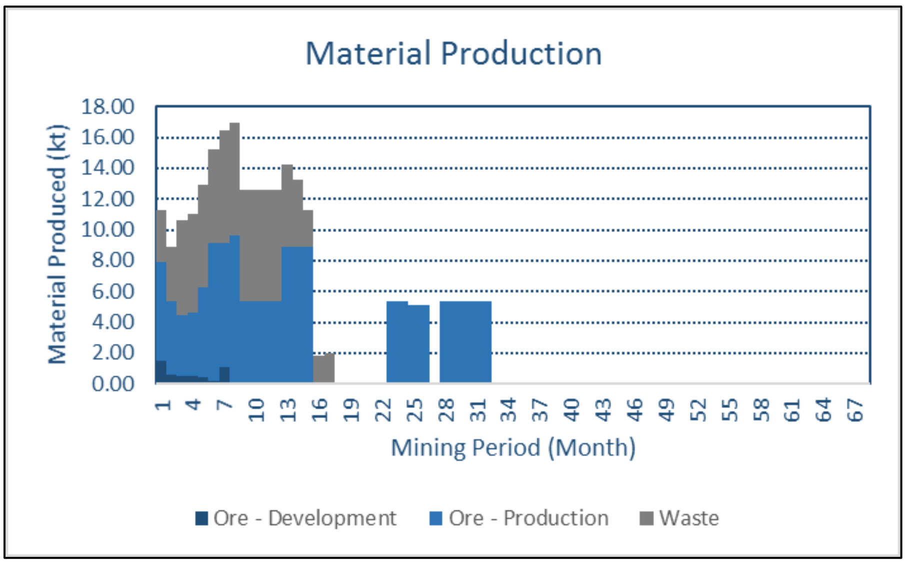
The existing load-and-haul fleet currently handles up to 1,500 tpd (45 kt per month) for all mines, with additional haulage requirements met by the onsite contractor through the provision of additional haulage trucks. The estimated load-and-haul fleet requirements are illustrated Table 16-25.

Table 16-25: Perseverancia Mine: Load-and-Haul Fleet

Equipment Type	Model	Quantity
LHD	LH-203	1
LHD	LH-307	1
Trucks	30t - Rigid Axle	2

The overall material production profile for the Perseverancia Mine is presented in Figure 16-31.

Figure 16-31: Perseverancia Mine: Material Production

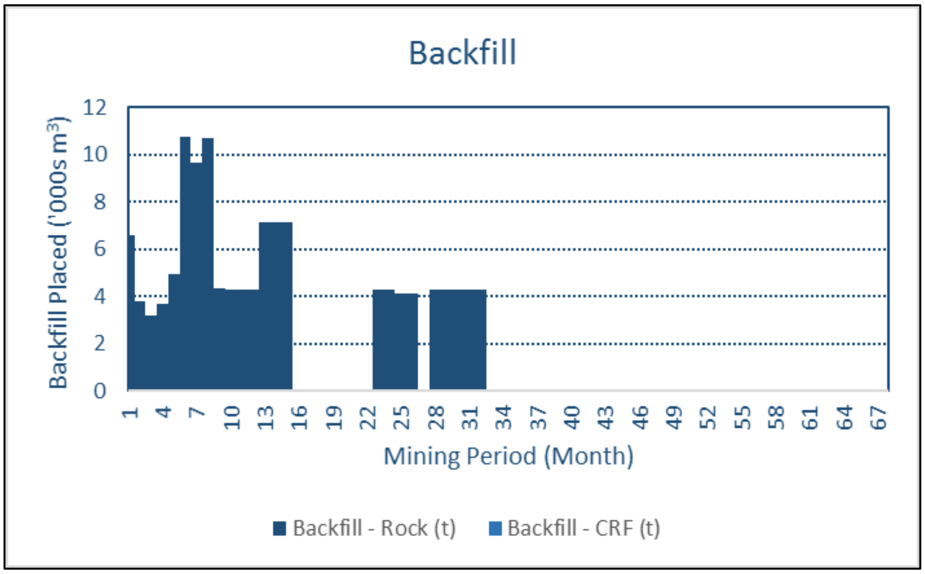


Note: Figure prepared by Entech, 2017.

Backfill

All future production voids will be backfilled. The backfill will be uncemented waste rock. All backfill will be placed with the primary stope loaders (1.5 m^3). Total backfill requirements for the Perseverancia Mine are presented in Figure 16-32.

Figure 16-32: Perseverancia Mine: Backfill Requirements



Note: Figure prepared by Entech, 2017.

16.7.6 Underground Mine Physicals

The Perseverancia Mine is scheduled to be completed in two years. The mining physicals are summarised in Table 16-26.

Table 16-26: Mining Physicals - Perseverancia Mine

Type	Units	Total	Year 1	Year 2	Year 3
Physicals					
Lateral (Ramp, Access)	m	1,743	1,568	175	0
Lateral (Ore Sills, Operating Waste)	m	3,004	1,049	1,955	0
All Other Lateral Development	m	734	474	260	0
Total Lateral Development	m	5,481	3,091	2,390	0
Waste Movement					
Backfill	kt	130.2	70.5	30	29.7
Waste	kt	91.7	75.9	15.8	0
Production					
Development	kt	4.8	4.8	0	0
Escondida – Cut-and-Fill	kt	128.5	54	37.5	37.10
San Nicolas – Cut-and-Fill	kt	19.2	19.2	0	0
Total	kt	152.5	78	37.5	37.1
Grades					
Ag	g/t	169	155	183	184
Pb	%	3.8	4.23	3.78	2.92
Zn	%	1.8	2.33	2.01	0.500
Au	g/t	0.02	0.03	0.01	0.010

16.7.7 Underground Infrastructure and Services

Portals

The Perseverancia mine has two established portals. The main portal used for egress is shown in Figure 16-33.

Figure 16-33: Perseverancia Mine: Main Portal

Note: Picture taken during Entech site visit in 2016.

Primary Ventilation

The current ventilation system at the Perseverancia mine is well established. The current system is sufficient to continue to supply air to the planned areas for the remainder of the mine life. This system consists of fresh air drawn from the two portals, while return air will then be drawn into the exhaust raises to be exhausted to surface. Through a series of ventilation raises, the ventilation circuit will be extended to the lower levels of the mine, with auxiliary ventilation forcing fresh air from the ramp to the active headings.

The ventilation circuit was imported into Ventsim^{TR}, to model the flows predicted for the mine. The estimated primary ventilation demand was calculated based on a factor of 0.6 m^3/s of fresh air per kW and is included in Table 16-27.

Table 16-27: Perseverancia Mine: Ventilation Demand Estimate

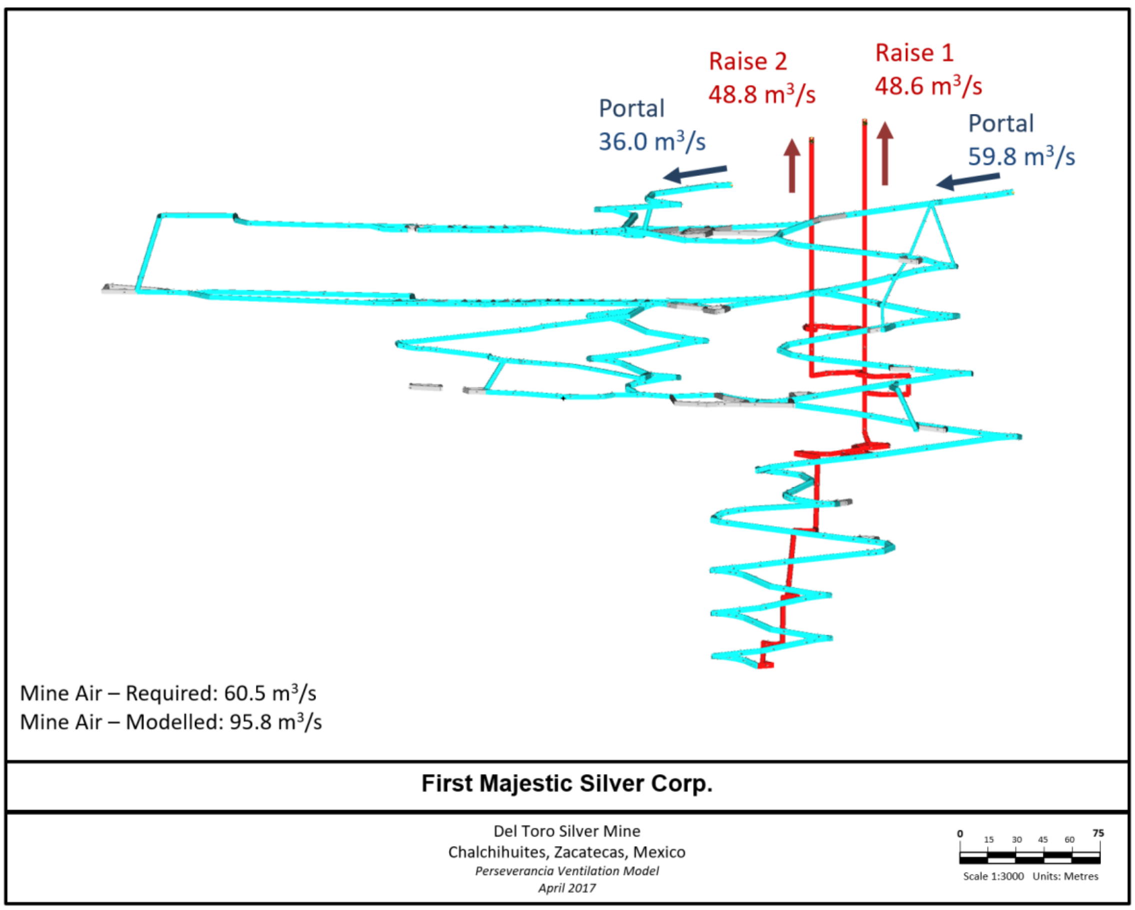
Equipment Type	Model	Power Output (kW)	Max. Units	Airflow Required per Unit (m3/s)	Utilisation	Total Airflow Required (m3/s)
Jumbo Development Drill*	Single Boom	55	0	3.3	0.25	0
Truck	20t - Rigid Axle	175	2	10.5	1	21
LHD	LH-203, LH-307	115	2	6.9	1	13.8
Light Vehicle and Ancillary		125	1	7.5	0.25	1.9
Production Contingency**			1	15.9	1	15.9
Leakage (15%)						7.9
Airflow Required						*60.5*

*Proposed minimum requirements at face achieved through auxiliary air flows.

**An allowance for increased production from this mine has been allowed for in the ventilation design.

The Ventsim schematic of the primary ventilation circuit is presented in Figure 16-34. The 2016 ventilation audit indicated that there would be a 15% airflow loss to previous workings.

Figure 16-34: Perseverancia Mine: Primary Ventilation Model



Auxiliary Ventilation

Following a ventilation audit, additional auxiliary fans will be required to deliver the required airflow to the working areas. Auxiliary fans sized 22, 45 and 55 kW will be installed, and the fans will be selected based on airflow demands, length of run, size of duct and size of heading. Typical configuration will be a 45-kW fan with 1,067-mm-diameter ducting, with the overall aim to deliver approximately 5–8 m^3/s of airflow at the advancing face.

Secondary Means of Egress and Refuge Chambers

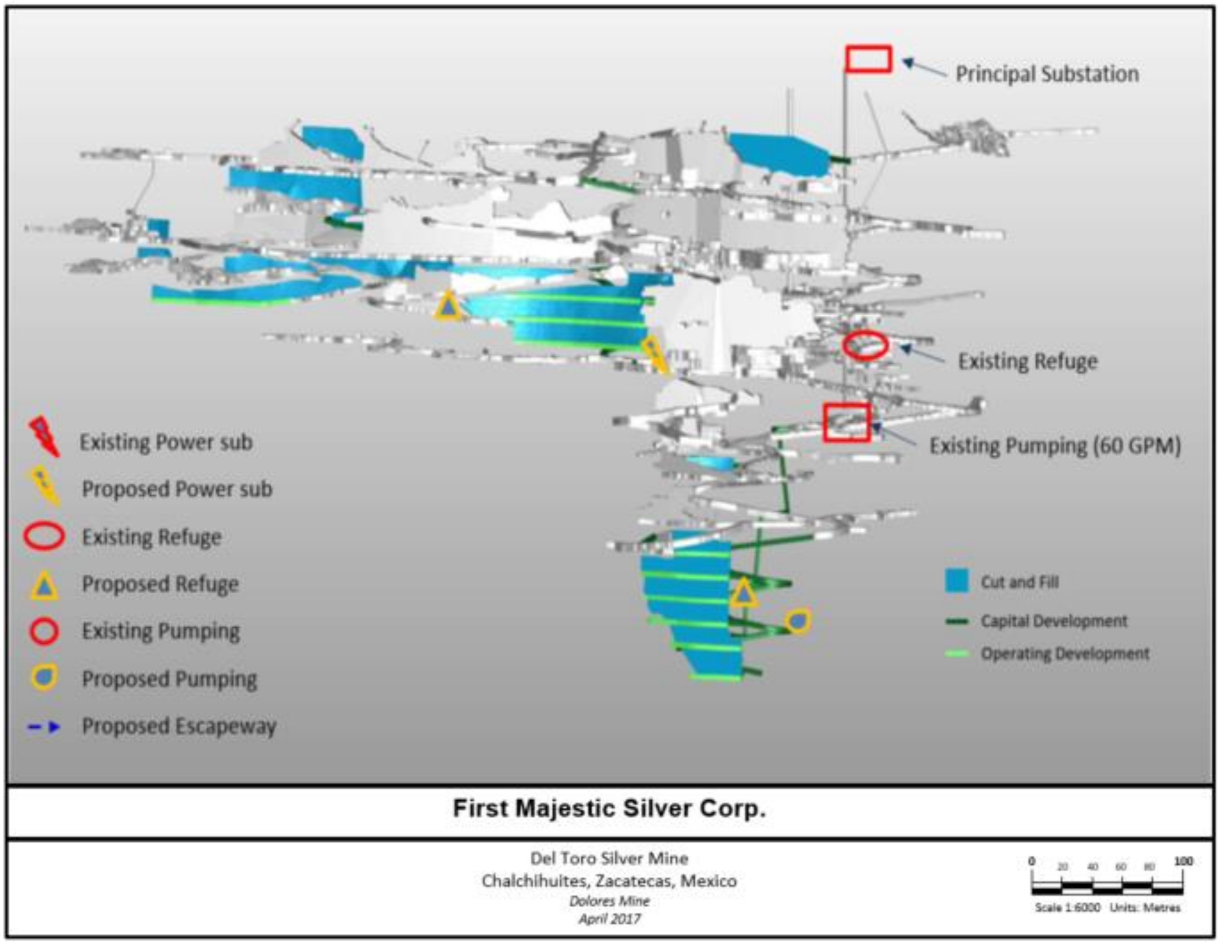
Additional refuge chambers will be located in each mine, and are able to provide safe refuge for mining personnel when required. All refuge chambers will be fitted with drinking water and breathing air sufficient for a minimum of 36 hrs of refuge. A second means of egress (escape route) has also been designed to interconnect the planned levels. This will allow for egress from the mine if the main access ramp becomes inaccessible. Figure 16-35 illustrates the current and proposed second means of egress and refuge locations.

Water Management

The existing underground dewatering system is capable of pumping the requirements for the life of mine. As the ramp continues to the lower levels, the dewatering system will be extended to maintain access to the workings. Minor sumps will have smaller 5 kW / 8 kW pumps, or as needed to meet requirements.

Figure 16-35 illustrates the current and proposed dewatering system.

Figure 16-35: Perseverancia Mine: Existing and Proposed Mine Infrastructure



Electrical Power

Electrical power will be supplied by the site power station located at the processing facility. The underground mining operation is estimated to require approximately 0.44 mW of power during peak production and under peak load, with ventilation fans requiring the majority of the supplied power. Table 16-28 presents the estimated power (installed) without the consideration of diversity and utilisation factors. As this area is proposed for expansion, additional capital and study has been allocated to estimate and plan for future power requirements for the Perseverancia mine.

Table 16-28: Perseverancia Mine: Estimated Power Consumption Underground

Equipment	Power Rating (kW)	Quantity	Installed Power (kW)
Primary Pump Stations	55	2	110
Sump / Face Pump	5	2	10
Surface Primary Fan	90	2	180
Auxiliary Fans*	45	3	135
Total Installed Power *(Excludes Diversity and Utilisation Factors)*			***435***

* Average configuration

16.8 Grade Control and Blending

An overall blending strategy is required to meet smelter targets and control arsenic metal penalties. Grade control requirements will be required to ensure mined grades are above cut-off requirements and to support the blending strategy.

16.9 Production Schedule

The combined Del Toro mine is projected to operate for a total of six years. The annual mining scheduled is shown in Table 16-29.

Table 16-29: Del Toro LOM Production Schedule

Type	Units	Total	2017	2018	2019	2020	2021	2022 /2023
Development								
Total Lateral Development	m	42,650	14,467	14,791	6,615	3,549	1,936	1,277
Vertical Development	m	727	426	279	22			
Waste Mined								
Dolores	kt	182.8	66.9	83.6	30.8	1.4		
Perseverancia	kt	91.7	75.9	15.8				
San Juan	kt	331.6	192.4	75.1	33.1	16.4	8.8	5.8
Total	*kt*	*606.1*	*335.2*	*174.5*	*63.9*	*17.8*	*8.8*	*5.8*
Ore Mined (Dilution and Mining Recovery Applied)								
Dolores	kt	379.2	87.3	162.9	117.8	11.3		
Perseverancia	kt	152.5	78.0	37.5	37.1			
San Juan	kt	932.3	190.1	160.4	193.9	217.8	113.1	56.8
Total	*kt*	*1464*	*355.3*	*360.7*	*348.7*	*229.1*	*113.1*	*56.8*
Mined Grades (Dilution Applied)								
Silver	g/t	163	166	139	161	173	205	181
Lead	%	3.33	3.81	2.98	3.28	3.21	3.48	3.17
Zinc	%	2.65	1.37	2.29	2.92	3.87	3.73	4.26
Gold	g/t	0.10	0.05	0.10	0.14	0.10	0.12	0.14
Ag Equivalent1	***g/t***	***287***	***292***	***250***	***288***	***302***	***343***	***314***
Mined Metal Mass (Process Recovery Not Applied)								
Silver	m oz	7.7	1.9	1.6	1.8	1.3	0.7	0.3
Lead	kt	48.8	13.5	10.7	11.4	7.4	3.9	1.8
Zinc	kt	38.8	4.9	8.3	10.2	8.9	4.2	2.4
Gold	k oz	4.8	0.6	1.2	1.6	0.7	0.4	0.2
Ag Equivalent1	***m oz***	***13.5***	***3.3***	***2.9***	***3.2***	***2.2***	***1.2***	***0.6***

17 RECOVERY METHODS

17.1 General

The plant feed at Del Toro consists of a mixture of transitional and sulphide ore types processed via flotation. The silver-bearing particles are associated with lead minerals, which occur both as lead oxide (PbO) and lead sulphide (PbS). To maximize metal recovery, the circuit targets first the PbS followed by sulphidisation conditioning that promotes PbO flotation.

Plant metallurgical performance is mainly controlled by the transitional/sulphide composition of the ore and by the ratio PbO/Pb, i.e., an index that gauges "degree of oxidation" (refer to Figure 13-3 and Figure

13-4 and their related text discussion). In general, the higher the sulphide content and the lower the PbO/Pb ratio, the higher the recovery.

Since the ore originates from three different mines, each mine hosting multiple geological domains, the plant metallurgical (grade-recovery) performance varies noticeably at times. However, by exercising plant feed blending practices, the metallurgical variability is adequately controlled and the operation consistently achieves its production objectives. Ore blending is performed directly in the primary crusher. This operating practice is possible since the origin of the trucks transporting the ore from the mine to the mineral unloading area (near the crusher) is well defined.

Typically, lead recovery varies linearly (with PbO/lead) between 77% and 60%, and silver between 83% and 77%. The projected average metallurgical recoveries used in the Life of Mine (LOM) model are 82.3% for silver and 67.5% for lead.

Concentrate grade varies between 40% and 50% lead, depending on the percentage of lead in the feed. Concentrate sales penalties due to arsenic content (the only deleterious element of concern) is not an issue, as current commercial agreements specify penalties for arsenic content at > 1%. In 2016, only one shipment out of 729 assayed 1.1% arsenic, just slightly above the penalty threshold. Typically, arsenic content is < 0.5%.

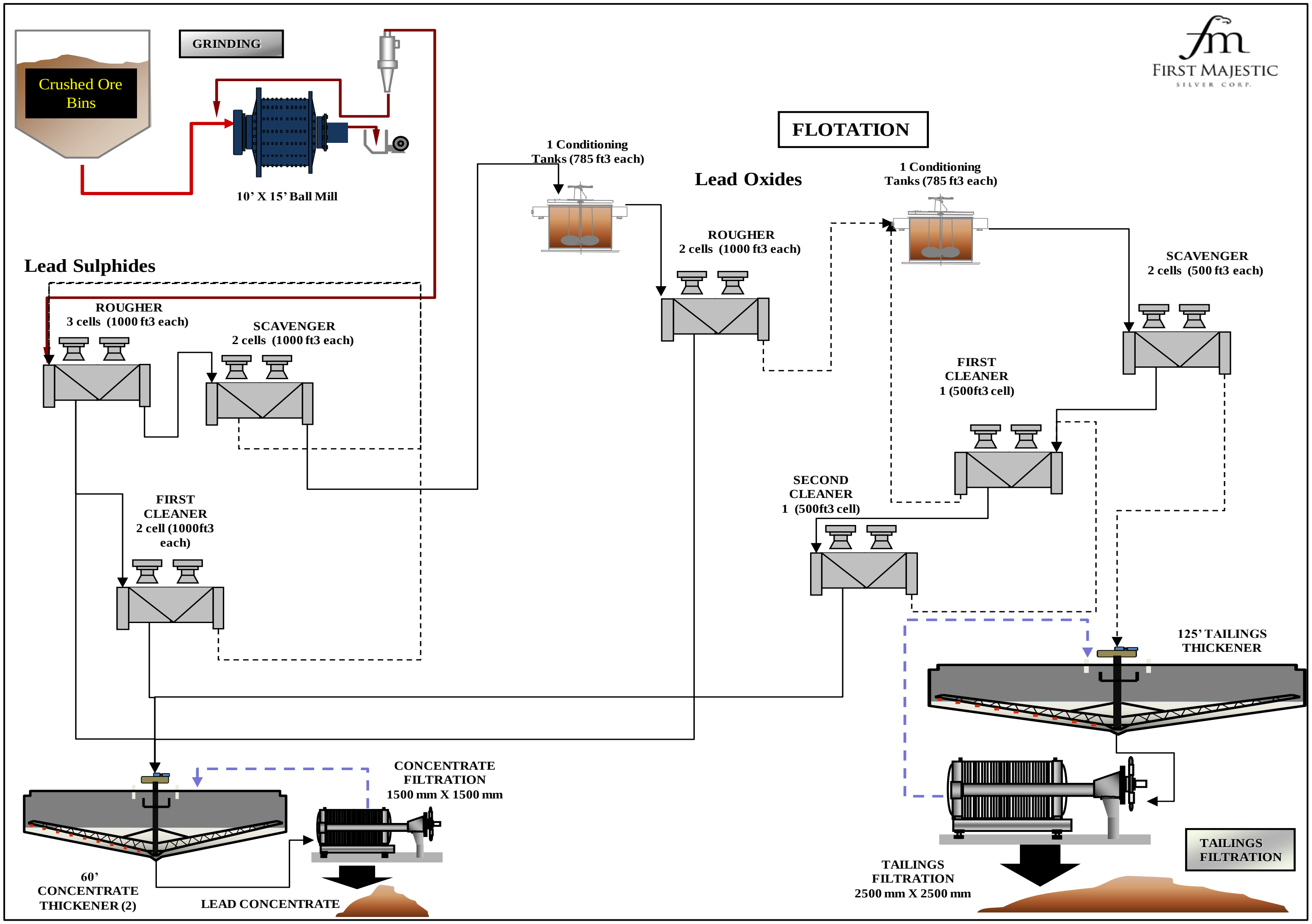
17.2 Processing

Figure 17-1 shows the plant flowsheet at Del Toro. Blended crushed ore is stored in a bin before being fed to the grinding circuit. Grinding takes place in a 10.5’ x 14’ ball mill operating in closed circuit with two cyclones (one of which is normally in standby). The grinding circuit has ample capacity (900 hp mill motor) and flexibility (two cyclone feed pumps, one in standby) to regularly achieve its grinding production targets: 82-84 µm (P_{80}) and 920 t/d throughput. The mill grinding media consists of 3-inch steel balls.

17.2.1 Sulphide Flotation

To promote sulphide flotation, sodium dicresyl dithiophosphate is added in the grinding circuit followed by a modified dithiophosphate reagent added in the rougher cells (three 1,000-ft^3 self-aspirated machines). To control concentrate grade, a selective frother formulation (a blend of alcohol and glycol molecules) is added in the rougher cells.

Figure 17-1: Plant Flowsheet at Del Toro



Note: Figure prepared by FMS, 2017.

The concentrate from the roughers is upgraded in two 1,000-ft^3 cleaner cells that produce the final sulphide concentrate. This concentrate is processed in a dewatering circuit that comprises two 60' diameter thickeners and two 1.5 x 1.5 x 30 m pressure filters

Metal values in the rougher cells are recovered in two 1,000-ft^3 scavenger cells in which concentrate is recycled—along with the tailings from the last cleaner cell—to the head of the circuit. To reduce costs and optimize the circuit operability, this chemical scheme is implemented so that sulphide flotation can take place at natural pH, thus eliminating the need for lime addition.

17.2.2 Oxide Flotation

The final tailings stream from the sulphide scavenger cells is sent to a 785-ft^3 agitated tank in the oxide flotation circuit. Sodium sulphide (Na_2S) is added in this tank to change the electrochemical properties of the PbO particles into those resembling sulphide minerals. This transformation—often referred to as "sulphidisation"—is required so that reagents normally used in sulphide flotation can be used to recover PbO. The collector and frother used in the oxide circuit are Potassium Amyl Xanthate (PAX) and a mixture of glycol and glycol ethers.

Conditioned pulp from the tank is sent to a bank of two rougher cells (1,000-ft^3 each) which produce the final oxide concentrate. The rougher tailings stream is sent to a second agitated tank where further Na_2S and PAX are added. Pulp from this tank is sent to a bank of two scavenger cells (500-ft^3 each), to which concentrate is upgraded in two stages of cleaning arranged in counter-current configuration.

The concentrate from the second cleaning stage is combined with the concentrate from the rougher cells and the concentrate from the cleaner cells in the sulphide circuit to produce the final concentrate.

The final plant tails (from the last scavenger cell in the oxide circuit) are processed in a dewatering circuit that consists of a 125' diameter thickener and two 2.5 x 2.5 x 121 m pressure filters.

17.3 Water and Energy

Because of the operation of tailings filtration, most of the water (80-85%) is recycled in the process. Plant make up water consumption is approximately 3,400 m^3 per month. Make up water originates from groundwater wells.

Power consumption is approximately 46,000 kWh per day. The plant is connected to the grid operated by CFE, or "Comisión Federal de Electricidad" ("Federal Electricity Commission") via 45km extension constructed by FMS in 2011-2012. CFE is a state-owned and is Mexico's dominant electric power company.

17.4 Process Improvement Initiatives

The current plant capacity and infrastructure are considered adequate to continue operating for the remaining mine life. However, there are a number of initiatives to continue improving the metallurgical performance of the plant. These initiatives include the implementation of microbubble flotation and fine grinding technologies to optimize metallurgical recoveries and concentrate grades, and the evaluation of specialty flotation reagents to increase metal recoveries and to inhibit the concentration of arsenic.

18 INFRASTRUCTURE

As an operating mine, the infrastructure at Del Toro is fully developed to support current mining and processing activities.

18.1 Roads and Access

Information on roads and accessibility is presented in Section 5.1.

18.2 Power and Electrical

In 2014, the Company completed a 45-kilometre long, 115 kilovolt power line which crosses two states and five communities, and connects Del Toro to the Mexican national power grid. The power line supplies 100% of the energy needs at Del Toro and allows for a more consistent operation by minimizing power interruptions. Del Toro's average annual power consumption is 26 MW. Emergency power supply is provided by diesel generators to some of the critical equipment like ventilation fans, laboratory equipment, data servers and offices.

18.3 Water Supply and Management

Fresh water for Del Toro is sourced from underground dewatering stations. The two main uses of fresh water are water for production and exploration drilling and make-up water for processing.

Processing water requirements are reduced by the operation of thickeners and press filters that, combined, allow for the recovery of 80% to 85% of the water requirements for the flotation process.

Current flows from underground pumping stations allow for replenishing of the make-up water.

For redundancy and future requirements, FMS investigated other possible sources of water and, in May 2011, reached an agreement with the local authorities to install and operate a gray-water treatment plant for the municipality of Chalchihuites for a period of 50 years. FMS built and operates the plant in exchange for the right to eventually use all treated water in the Del Toro processing plant if needed. The installed capacity of the water treatment plant is approximately 3,900 m^3 per month.

Potable water is sourced from municipal wells and is pumped and stored in Del Toro's tanks for distribution within the facilities.

18.4 Mine Facilities

There are three main portals to access each of the mines: the San Juan mine portal, the Dolores portal and the Perseverancia portal. Figure 18-1 shows the general location of the three mines.

Existing underground workshop facilities in the San Juan mine include: a washing bay, a lube station and several equipped repair stations for mobile equipment. The Dolores and Perseverancia mines are equipped with minor underground repair stations.

The existing surface mining infrastructure includes the processing plant, repair workshops, an analytical laboratory, temporary ore stockpiles, waste rock, a filtration plant for tailings and paste tailings storage facilities, water management and diversion structures, offices, a drill core and logging shack, water ponds, power substations and power lines.

Figure 18-2 shows an image of the San Juan mine and processing infrastructure. Figures 18-3 and 18-4 show details of portal and surface infrastructure for the Dolores and Perseverancia mines.

Figure 18-1: Del Toro's Mine Locations

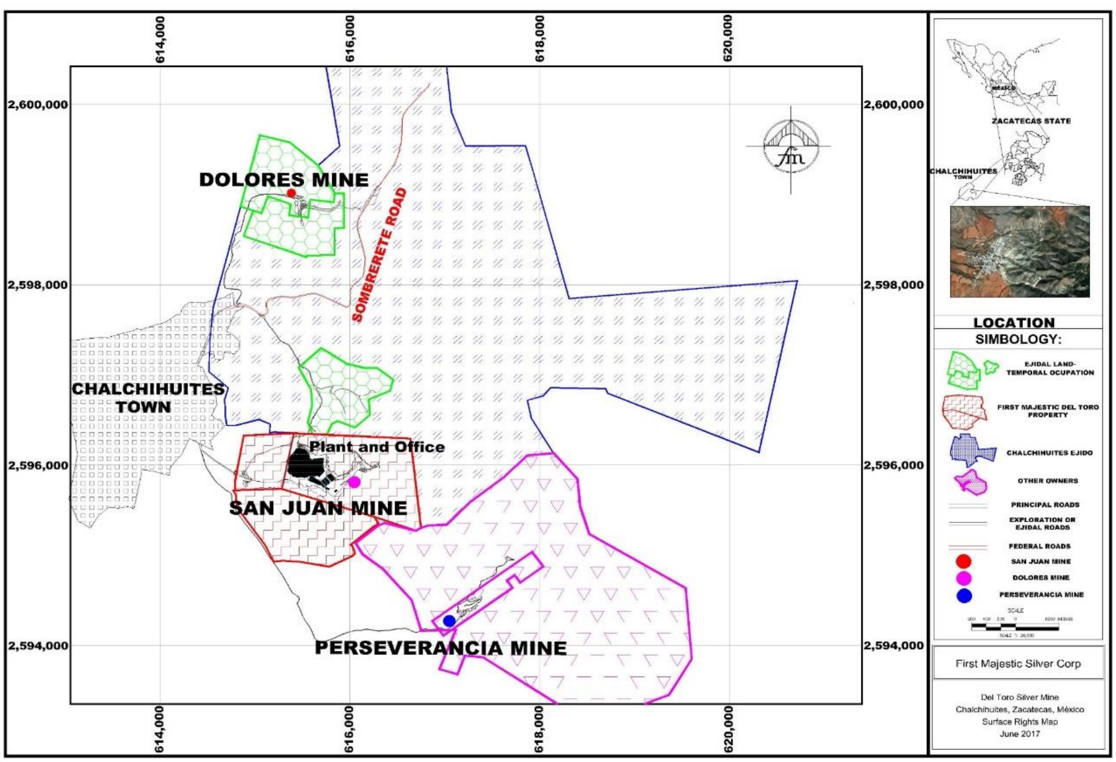


Figure 18-2: Del Toro San Juan Mine Infrastructure

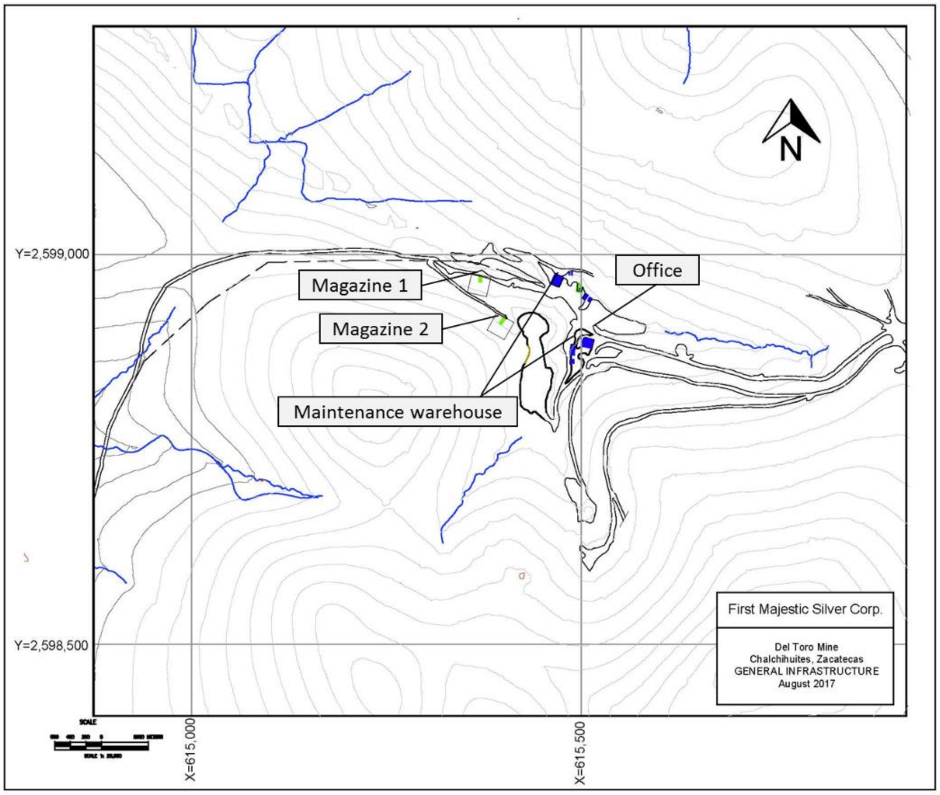


Figure 18-3: Del Toro Dolores Mine Infrastructure

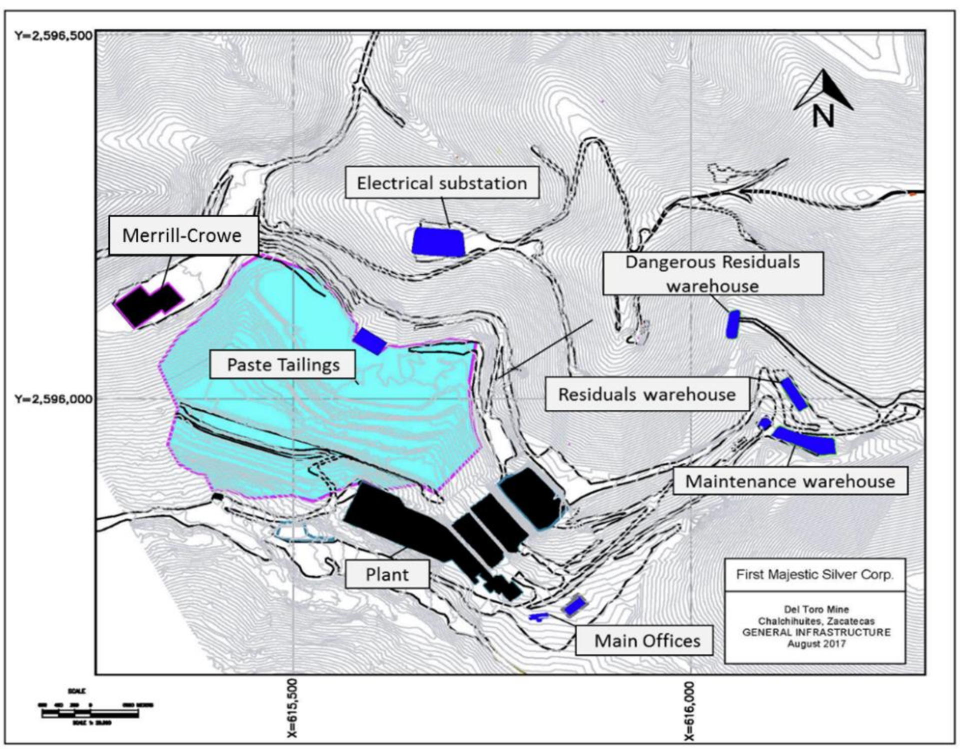
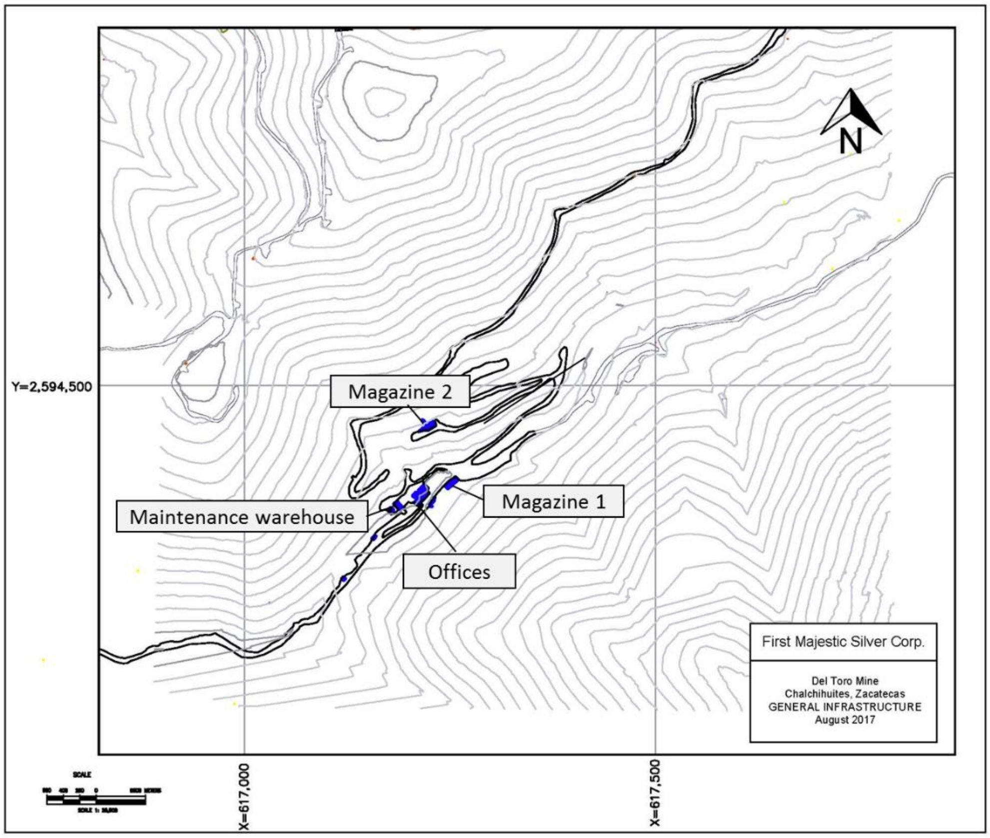


Figure 18-4: Del Toro Perseverancia Mine Infrastructure



Processing facilities are described in Section 17.

18.5 Stockpiles

Short-term plant feed storage stockpiles are located in proximity to the processing plant in the San Juan mine. These stockpiles have the capacity to hold approximately 50 K Tonnes. As of August 2017, the stockpiles hold less than 5,000 tonnes of plant feed due to the higher capacity of the plant in comparison to the mine capacity.

18.6 Waste Storage Facilities

Waste storage facilities are limited to surface dumps outside each of the mines. These facilities hold waste rock generated from underground development. Since the underground mining method used is primarily cut-and-fill, only a limited amount of waste is stored on the surface, and could eventually be a source of backfill for the mined stopes at depth. Current waste storage facilities have the capacity to store the excess waste from underground development for the Life of Mine (LOM) plan.

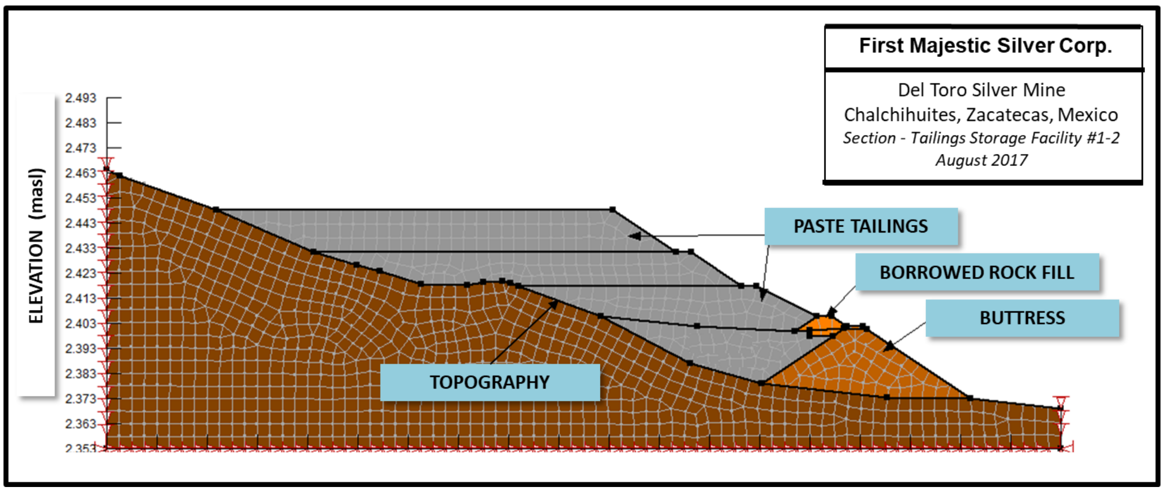
18.7 Tailings Storage Facilities

Del Toro is currently operating Tailings Storage Facility #1-2 (TSF 1-2), which is expected to reach maximum capacity in the first quarter of 2018. Construction of Tailings Storage Facility #3 (TSF3) is ongoing, with expected completion in the fourth quarter of 2017.

18.7.1 Tailings Storage Facility #1-2

Tailings Storage Facility #1-2 was designed to hold 1.77 million tonnes of paste-filtered tailings in three benches for a total height of 50 m. Figure 18-5 shows a typical cross section showing the elevation of each bench in masl.

Figure 18-5: Section View of Tailings Storage Facility #1-2



The design of TSF 1-2 design included the following elements:

- Adjacent soil deposit to hold the recovered soil for future use during reclamation;
- Supporting buttress in front of the first bench constructed with graded rock material compacted to 95% compaction factor. The required volume of material for this buttress is 18,200 cubic metres;
- Each bench crown was designed to have drainage of 1% slope towards the northwest face to allow for proper rainfall water drainage;
- Rainfall collection and diversion channels around the perimeter of the facility; and
- Ramp on the southeast side of the deposit to access each of the benches, including drainage slopes and water collection ditch.

TSF 1-2 was designed with a static stability factor of 1.615 when filtered tailings with less than 15% humidity are deposited and compacted to a 70% to 80% compaction factor. The dynamic stability analysis resulted in a safety factor of 1.3 which is considered adequate for the low-seismicity zone of Chalchihuites.

Tailings are transported from the filter plant to the storage facility using front end loaders and conventional haul trucks. The tailings are then spread, leveled and compacted using a track dozer.

Reclamation of TSF 1-2 considers placement of a 30-cm layer of organic soil on top of each bench and sloped face to allow for vegetation growth.

18.7.2 Tailings Storage Facility #3

Tailings Storage Facility #3 (TSF3) is designed to hold 11.9 million tonnes of paste-filtered tailings in 10 benches of 10 metres high, each one for a total height of 100 m. This capacity is considered sufficient for the current LOM plan. Figure 18-6 shows a plan view of TSF3. Figure 18-7 shows a typical cross section showing the elevation of each bench in masl.

Figure 18-6: Plan View of Tailings Storage Facility #3

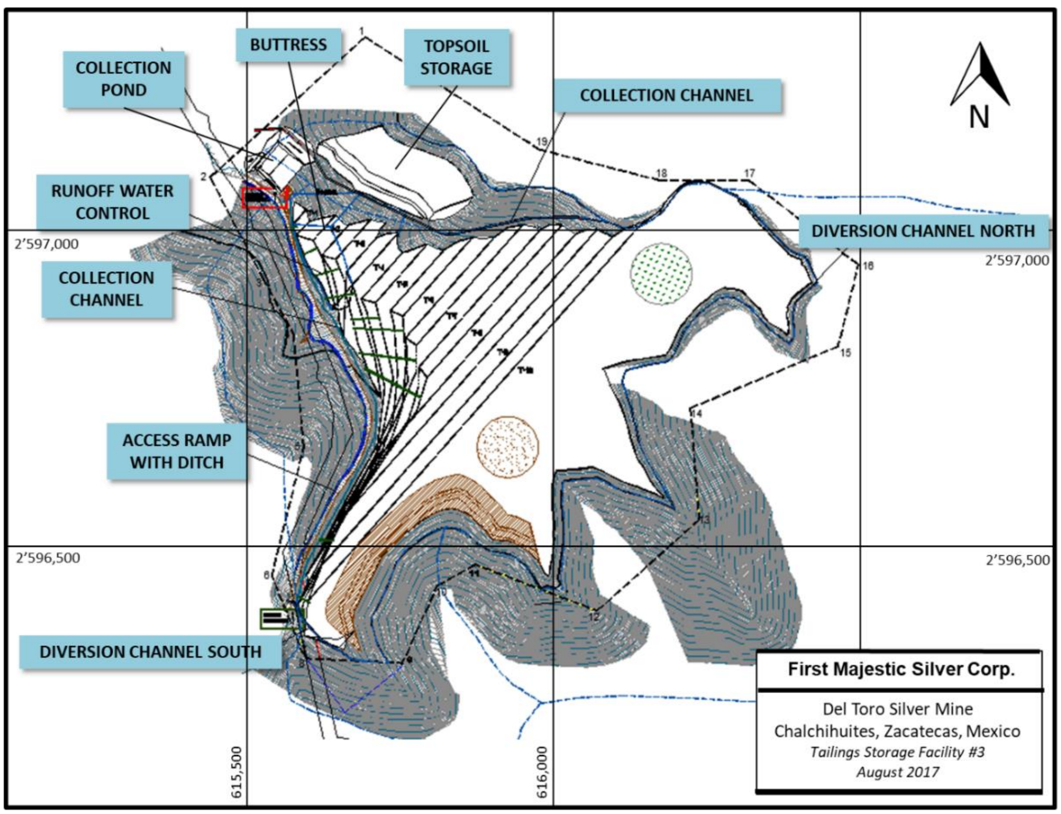
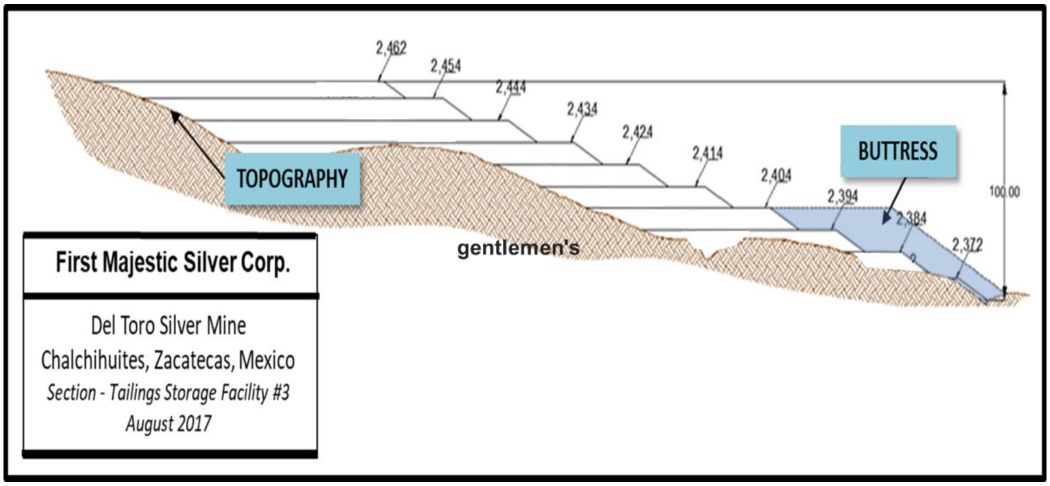


Figure 18-7: Section View of Tailings Storage Facility #3



The TSF3 design includes the following elements:

- Adjacent soil deposit to hold the recovered soil for future use during reclamation;
- Supporting buttress in front of the first four benches constructed with graded rock material compacted to 95% compaction factor. The required volume of material for this buttress is 135,000 cubic metres;
- Each bench crown was designed to have drainage of 2% slope towards the southwest face to allow for proper rainfall water drainage;
- Rainfall collection and diversion channels around the perimeter of the facility;
- Ramp on the southwest side of the deposit to access each of the benches, including drainage slopes and water collection ditch;
- Water collection pond designed to hold rainfall during a 24-hours storm considering a 100-years storm event; and
- Two monitoring wells, one upstream of the deposit and a second one at the bottom of the tailings deposit.

TSF3 was designed with a static stability factor safety factor of 2.1 when filtered tailings with less than 15% humidity are deposited and compacted to 70% to 80% compaction factor. The dynamic stability analysis resulted in a safety factor of 1.8 which is considered adequate for the low-seismicity zone of Chalchihuites.

Tailings will be transported from the filter plant to the storage facility using front end loaders and conventional haul trucks. The tailings will then be spread, leveled and compacted using a track dozer.

Reclamation of TSF3 considers placement of a 30-cm layer of organic soil on top of each bench and sloped face.

18.8 Camps and Accommodations

The location of the Del Toro mines in the vicinity of the municipality of Chalchihuites reduces the need to provide dedicated camp facilities to employees and contractors. The majority of the mine personnel lives in Chalchihuites, which is in walking distance to the mine. A minor portion of the workforce live in surrounding towns and commute each day.

All basic facilities such as hotels, restaurants, medical clinics, and telephone, banking, and postal services are available in the town of Chalchihuites and in most of the major population communities within the region.

18.9 Logistics

Del Toro is well connected by state and federal roads to major cities like Durango and Zacatecas, making logistics for materials supply a matter of standard scheduling and warehousing.

18.10 Communications

Del Toro's communication system includes a dedicated internet access of 30 Mb as the primary connection stream to the FMS Data Center in Monterrey, Mexico. A secondary commercial telephone-based internet access of 4 Mb is used as a redundant connection configured to ensure that at least one connection to the internet is up at all times, allowing critical systems to work continuously.

FMS has a 1 GB fiber optic connection from the Durango office to Del Toro (120 km length). The Del Toro network includes a total of 54 end-users' computers and 2 Windows 2012 servers that use virtualization technology with Hyper-V. The main server contains 5 virtualized servers, and the second server is dedicated to the assay lab data management system. Del Toro's server is connected to the different areas through a 5.2 GHz wireless and in some instances via a fiber optic connection of 100Mbps. The network infrastructure is managed using CISCO Meraki technology.

Del Toro has an integrated Voice Over Internet Protocol (VOIP) telephony cloud system.

18.11 Comments on Section 18

The Del Toro mine is located in a reasonably well-developed municipality with most of the basic services required to support the mine and plant operations available.

The mine has all required infrastructure in place to support operations and the LOM plan.

The capacity of TSF 1-2 is getting close to its limit, and its maximum capacity is expected to be reached in the first quarter of 2018. TSF3 is under construction and is expected to be operational before TSF 1-2 reaches its design capacity. The required capital to complete TSF3 is funded within FMS's 2017 operational budget.

19 MARKET CONSIDERATIONS AND CONTRACTS

The main product obtained from the flotation process at Del Toro is a silver-rich lead concentrate, which is sold under annual contracts to arm's length concentrate traders. Concentrates typically contain approximately 40% lead and 3.6 kilograms of silver per tonne.

19.1 Market Considerations

Silver-rich lead concentrates such as those produced at Del Toro are considered a marketable product commonly sold by mining and processing companies to concentrate traders or to smelting companies.

Based on FMS's proven success in securing sales contracts from this operation and from two of its other properties, FMS has been able to continuously sell Del Toro's concentrates since starting commercial operations in 2014.

19.2 Commodity Price Guidance

FMS has corporately established a standard procedure to determine the medium-term and long-term metal price guideline for silver, gold, lead and zinc, using a consensus-based approach.

This procedure considers the consensus of future metal prices forecasts from credible sources, including major Canadian and global banks, projections from financial analysts specializing in the mining and metals industry, and metal prices forecasts used by other peer mining companies in public disclosures.

Based on the above information, a recommendation as to acceptable consensus pricing is put forward by FMS's QP to the company executives and a decision is made to set the metal guidelines for Mineral Resource and Mineral Reserve estimates. This guidelines is updated at least annually, or on an as-required basis. Metal prices used for Mineral Resource and Mineral Reserve estimates are listed in Table 19-1.

Table 19-1: Metal Prices Used for Mineral Resource and Mineral Reserve Estimates

Metal Price	Units	Used in Resource Estimation	Used in Reserves Estimation and Mine Plan
Silver	$/oz Ag	19.00	18.00
Gold	$/oz Au	1,300	1,250
Lead	$ / lb Pb	1.00	1.00
Zinc	$ / lb Zn	1.20	1.15

Foreign exchange rates utilized in the cost estimates and in the Life of Mine (LOM) model were USD:CAD 1.30 and USD:MXN 18.70.

19.3 Sales Contracts Considerations

At the Report effective date, Del Toro had a number of concentrate sales agreements with smelters and concentrate traders. These sales agreements are valid for one year or more and are reviewed on a regular basis. Terms within the sales contracts are considered by FMS to be within industry norms for such agreements.

Del Toro receives payment for an agreed-upon percentage of the lead and silver contained in the concentrates it sells annually based on stipulated pricing over defined one-month periods after deduction of smelting and refining costs. The price is defined through a tendering process.

Selling costs, including freight, insurance and representation, as well as treatment charges, refining charges, payable terms, and deductions and penalties terms for Del Toro concentrates, have been reviewed by the QP and found to be in line with similar commercial conditions in Mexico. These selling costs have been incorporated into the long-term financial analysis.

19.4 Deleterious Elements

Based on past performance and the characteristics of the ore, the lead-silver concentrates will carry impurities in the form arsenic sulphides that could be penalized at the smelter. In the last three years, the arsenic content has been recorded at a range between 0.6 and 0.9 %. The penalty thresholds for arsenic are set between 0.5 and 1.0 percent. No other relevant impurities have been recorded.

Based on historical data and projected performance from metallurgical tests of drill hole samples, Del Toro concentrate could exceed the defined thresholds for arsenic content. Planning and sequencing of the mineralized material produced in San Juan Cuerpo 1, 2 and 3 is required. Controlling the plant feed to less than 0.6% arsenic is necessary to produce a flotation concentrate with less than 1% arsenic. According to the production schedule, generally, if a blend of less than 40% of this material in the plant feed is maintained, the arsenic level is managed below the upper threshold. There is a chance that further concentrate blending may be required if these thresholds are exceeded in certain concentrate shipments, whereby additional charges or blending costs may be incurred. An allowance for these cases has been incorporated into the selling costs projections for Del Toro.

19.5 Zinc Concentrates Production

Del Toro’s production from the San Juan area shows an increase in zinc concentration at depth. A consideration is included in the long-term mine plan to recondition the zinc flotation circuit and resume production of zinc concentrates. Sales terms were referenced from other FMS operations and were based on actual agreements.

19.6 Other Contracts

As a normal course of business, Del Toro has contracts in place for some of the services required for the mining and processing activities. All these contracts are agreed upon one-year or multi-year terms and, in the opinion of the QP, these contracts and commercial terms are in line with industry norms for such contracts.

Table 19.2 lists the major contracts in place at the Report effective date for Del Toro.

Table 19-2: Main Service Contracts

Service	Contractor / Supplier
Underground mine development	Argentum Administracion y Mineria
Underground mine development	Jesus Reynaldo Guzman Lara
Shotcrete placement in underground excavations	Hugo Alexis Lara Salinas
Exploration diamond drilling	Versa Perforaciones
Maintenance activities	Cesar Humberto Esparza
Concentrate Freight	Transportistas Unidos Ejido Morelos
Concentrate Freight	Setramex
Industrial Security Services	Seguridad Privada para la Industria Minera
General Construction	CAVI de Sombrerete

19.7 Comments

The QP considers that the likelihood of securing ongoing contracts for concentrate sales is a reasonable assumption; however, in downturn market conditions, there can be no certainty that Del Toro will always be able to do so or what terms will be available at that time.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Baseline Studies

Environmental and social baseline studies were performed in order to characterize pre-existing conditions and to support the preparation of Environmental Impact Assessment (EIA) studies in the areas potentially affected by Del Toro activities. Results of work completed to date are included as summaries in the following subsections.

20.1.1 Surface Hydrology

Table 20-1 summarizes the surface hydrological studies completed. Table 20-2 summarizes the geochemical characterization conducted on the surface waters.

Table 20-1: Summary of Surface Hydrology Studies

Study Name	Date	Company	Study Scope	Main Results
Environmental Impact Assessment for the project: Construction and Operation of Treatment Plant and Tailings Deposit for the Del Toro Operations.	Sep-09	Corporación de Servicios Eco Ambientales, S.A. de C.V.	Identify the surface water bodies near the project. Identify the existing water sources (surface and underground) and determine their current uses. Compile EIA for the project: Construction and Operation of Treatment Plant and Tailings Deposit for the Del Toro Mine.	- The project is located within the hydrological basin called "San Pedro - Rosa Morada A" which represents an area of 1,560,240 hectares; this basin is part of Hydrological Region No. 11 "Presidio-San Pedro." The specific location of this project is the sub-basin known as Río Súchil. - Within the area of influence, there are no dams of importance, only a pond for livestock as well as several slopes of a stationary type that join with the creek stream, and this in turn with the river Chalchihuites. - No impacts to the project construction plans or the mine operation were identified if the recommendations made in the study were followed.
Hydrological study for the Tailings Deposit #3 and mining infrastructure	Dec-14	GP Ingeniería	Comply with environmental regulations in addition to establishing an impact mitigation that could be generated during the project development stages. Develop hydrological baseline studies to determine design parameters of the proposed hydraulic work to manage rainfall runoff and drainage during project development.	- Avoid contamination of rainwater with the deposited material by designing hydraulic works that conduct non-contact runoff water towards natural channels such as downstream creeks. - No impacts to the project construction plans or the mine operation were identified if the recommendations made in the study were followed.
Hydrological and hydraulic study and delineation of the Federal Zone for the construction of the Tailings Deposit #3.	Sep-15	Alfa Omega Asesores Profesionales, División Ambiental	Comply with environmental regulations and qualitatively and quantitatively understand the characteristics of the surface waters that flow through the stream channel on which the paste tailings deposit is planned to be constructed.	- Determine the possible effects that could be caused by climatic events assuming a 100-year storm event, evaluate the incidence probability and delineate the channel and the Federal Stream Area. The size of related infrastructure to be constructed was established. - No impacts to the project construction plans or the mine operation were identified if the recommendations made in the study were followed.

Unified Technical Report for the TSF3 and mining infrastructure of the Del Toro Operations.	Apr-15	Clifton Associates Ltd (Natural Environment S.C.)	Provide information for the identification of potential environmental impacts resulting from the construction and operation of TSF3.	- Water channels present in the impacted area are intermittent and only carry water during the rainy season. - The channels bordering impacted areas may see an increase in sediments. - At a local scale, the area is not affected and the natural processes are considered intact and susceptible to possible erosive processes which should be considered during the execution of the planned works. - The impacted area is composed of materials with medium and high potential to retain water. The entire surface of the impacted area has medium to high permeability. - No impacts to the project construction plans or the mine operation were identified if the recommendations in the study were followed.

20.1.2 Surface Water Geochemistry

Table 20-2: Geochemistry of Surface Water Studies

Study Name	Date	Company	Study Scope	Main Results
Annual analyses of water quality of the streams bordering the mining and processing area	May-16	Laboratorio de Servicios Clínicos y Análisis Toxicológicos, S.A. de C.V.	Analyse water quality from upstream and downstream sources relative to the location of the Del Toro operations. Monitor contact and non-contact water to assess impact of the operation.	No impacts to the project construction plans or the mine operation were identified.

20.1.3 Hydrogeology

Table 20-3 summarizes the work done in relation to characterizing the hydrogeological setting of the operations.

Table 20-3: Hydrogeology Studies

Study Name	Date	Company	Study Scope	Main Results
Structural Hydrology Study and Electrical Surveys.	Aug-09	SEGEOMEX Exploración y Laboratorio S. de R.L. de C.V.	Locate favorable sites within the property and identify the most favorable structural zones and traps to contain water in areas of strong structural control, seeking aquifers in fractured media.	Location of the best site to drill a water well that can meet the needs of drinking water for the mine treatment plant.
Hydrogeological Site Review and Assessment	April-17	SRK Consulting (Canada) Inc.	Geotechnical and hydrogeological review of the Del Toro mine, with a focus on the Cuerpo 3 deposit at the San Juan Mine The hydrogeological assessment was intended to assist FMS in planning for underground water management at the mine.	A groundwater control plan for Cuerpo 3 was recommended: - Map key groundwater-bearing structures in level workings and ramps regularly, and monitor groundwater flows draining from level workings on at least a weekly basis; - Maintain access ramps at least two sub-levels (70 m) below active mining sub-levels. - Drill sub-horizontal drainage holes from purpose-excavated drainage drifts off the orebody side of the access ramp at vertical intervals equivalent to the sub-level spacing. - Maintain adequate pumping capacity, ideally 50% more than recent maximum flows; and - Review and modify the drainage plan based on drainage performance data. Use pore pressure flow monitoring to evaluate drainage effectiveness. Use resource drilling programs to collect additional hydrogeological data and for installation of pressure-monitoring piezometers.

20.1.4 Soil

Soil studies undertaken are summarized in Table 20-4.

Table 20-4: Soil Studies

Study Name	Date	Company	Study Scope	Main Results
Unified Technical Report (DTU) for TSF3 and Mining Infrastructure of the Del Toro Operations.	Apr-15	Clifton Associates Ltd (Natural Environment S.C.)	Determine the main soil characteristics to define: prevention, mitigation and/or compensation measures to preserve or improve those characteristics.	- Soil in general is a limiting factor for the development of the ecosystem in the region, with limited soil development on slopes and peaks and higher soil depths towards the valleys and lower altitudes. Most of the project area consists of Leptosols, where the soil depth does not exceed 30 cm. - The soils of the area become unstable during erosion. Sites with no vegetation and higher slopes are vulnerable to erosive processes (mainly by hydraulic effects and secondarily by wind). - Current erosion in the project area is 6 tonnes per hectare per year, considered a low erosion state. - No impacts for the mining plans were identified.

20.1.5 Air Quality

Air quality study results are provided in Table 20-5.

Table 20-5: Air Quality Studies

Study Name	Date	Company	Study Scope	**Main Results**
Perimeter Particle Study	Oct-16	Profesionalismo Ecológico SA de CV	Particle perimeter monitoring (Access Gate 2, Merrill–Crowe area, general offices and workshop)	- The results are within the maximum limits permitted by the Mexican regulation NOM-025-SSA1-1993. - No impacts on mine plans were identified.
Emissions from Fixed Sources	Oct-16	Profesionalismo Ecológico SA de CV	Monitoring of fixed sources (smelter and laboratory) to determine total particles and combustion gases	- The results are within the maximum limits permitted by the Mexican regulation NOM-043-SEMARNAT-1993. - No impacts on mine plans were identified.

20.1.6 Noise

Table 20-6 summarizes the noise impact studies completed to date.

Table 20-6: Noise Impact Studies

Study Name	Date	Company	Study Scope	Main Results
Environmental Impact Assessment for the project: Construction and Operation of Treatment Plant and Tailings Deposit for the Del Toro Mine	Sep-09	Corporación de Servicios Ecológicos Aplicados	Compile information to integrate the EIA for the Project	- Noise sources that affect the environment of the project area are typical of those normally recorded in rural areas. - Ambient noise levels in the study area are relatively low, especially at night. Therefore, baseline ambient noise levels in those areas are mainly due to natural sounds. Noise levels are within a range of 35 to 45 dBA.
Perimeter Noise Study	Oct-16	Profesionalismo Ecológico SA de CV	Perimeter noise monitoring (Access Gates 1 and 2, thickening tanks, general offices, workshop, hazardous waste warehouse, Merrill–Crowe area, San Juan Mine entrance, antenna, electrical substation, main garden, Robbins level 9, pulp filters and platform)	- The results are within the maximum limits permitted by the Mexican regulation NOM-081-SEMARNAT-1994.

20.1.7 Flora and Fauna

Results of the completed flora and fauna impact surveys are provided in Table 20-7.

Table 20-7: Flora and Fauna Impact Studies

Study Name	Date	Company	Study Scope	Main Results
Environmental Impact Assessment for the project: Construction and Operation of Treatment Plant and Tailings Deposit for Del Toro	Sep-09	Corporación de Servicios Ecológicos Aplicados	Compile an inventory of flora and fauna for the EIA.	No species were found within the project area in accordance with the Mexican regulation NOM-059-SEMARNAT-2010.
Unified Technical Report (DTU) for TSF3 and mining infrastructure of the Del Toro Operations.	Apr-15	Clifton Associates Ltd (Natural Environment S.C.)	Establish the inventory of flora and fauna within the environmental system in which the tailings deposit project is located. Determine the existence or absence of species of flora and fauna with some type of risk: danger of extinction, threatened or special protection.	No species were found in accordance with the Mexican regulation NOM-059-SEMARNAT-2010.

20.1.8 Historical and Cultural Aspects

Table 20-8: Historical and Cultural Studies

Study Name	Date	Company	Study Scope	Main Results
Sustainable development, stakeholders analyses and social risks Del Toro	13-Feb	Xanvil Cultura y Ecología	The study was based on documentation provided by Del Toro, interviews with groups of interest, community issues analyses, and an opportunity investigation with 53 stakeholders.	- The study identified three development areas in which Del Toro can support the community: tourism, water conservation and education. - Social risk analyses concluded: 1) The relationship with the community is based on short-term benefits; 2) There is a risk to social license if there is insufficient communication; and 3) The operations currently have an absence of sustainability documentation.

20.2 Relevant Environmental Aspects

20.2.1 Tailings Handling and Disposal

Currently, the tailings handling and disposal is undertaken in accordance with the applicable Mexican regulations. The design and preparation for the new tailings deposit has also been conducted in accordance with the design authorized by SEMARNAT. Annual tailings characterization studies indicate that the tailings to date are not potential generators of acid drainage or of leaching of metals.

20.2.2 Waste Material Handling and Disposal

Del Toro operates three Waste Rock Storage Facility (WRSF) sites at the San Juan, Dolores and Perseverancia mines. The San Juan WRSF is within an authorized impacted area and the EIA process has been completed. The Dolores and Perseverancia WRSFs are not covered by a recent authorization or EIA because these facilities were generated by previous historic operations and pre-date FMS control of the underlying concessions and surface lands. Del Toro has a registered and authorized management plan from SEMARNAT for these facilities, and the permitting of these deposits is in progress.

20.2.3 Mine Effluent Management

Del Toro generates mine-dewatering effluents from all three mines. The mine-dewatering effluent from the San Juan mine is fully registered with the National Water Commission (CONAGUA) for the use and transfer of surplus ground-water excess. The use and transfer of ground-water from the Dolores and Perseverancia mines is in the process of registration with CONAGUA. Water quality samples are being collected to provide the necessary documentation for the registration process.

20.2.4 Process Water Management

The water used in the processing plant comes from the San Juan mine (mine-dewatering effluent), and its use is measured, recorded and reported to CONAGUA. Corresponding water usage rates are paid. All process water is recycled in a closed circuit, so there are no process water discharges. In addition, grey water from the mine facilities is treated and reintegrated into the metallurgical process.

20.2.5 Hazardous Waste Management

The management of hazardous waste within Del Toro is carried out in accordance with the provisions of the applicable Mexican official standards. The company is registered with SEMARNAT for handling and management of this type of waste. Del Toro has adequate handling, labeling and temporary storage protocols. FMS contracts companies authorized by SEMARNAT for waste transportation and final disposal.

Areas that must be monitored for environmental purposes at Del Toro are summarized in Table 20-9.

Table 20-9: Environmental Management Areas

Item	Entity responsible
Water management from mine-dewatering (Dolores and Perseverancia): Characterization of the water from mine-dewatering at the Dolores and Perseverancia mines is in progress so as to establish a sufficient history log and provide CONAGUA with information as to the water quality.	CONAGUA
Sediments in El Cajon stream: Before the operation of the water decantation system at the San Juan Mine, some contact water was discharged to the El Cajon stream without treatment. As a consequence, some sediments were deposited. Cleaning of such sediments is in progress.	CONAGUA - PROFEPA
Subsidence: Two subsidence events have been identified, one in the area of the San Juan mine and the other in Perseverancia. Both events started from historical mining operations pre-dating FMS's involvement in the mines and were re-activated after mining operations. Stabilization has been reached and reclamation efforts are in progress.	SEMARNAT - PROFEPA

20.3 Monitoring

Table 20-10 summarizes monitoring activities currently undertaken.

Table 20-10: Environmental Monitoring Activities

Element	Frequency	Monitoring Activities
Water	Quarterly	Monitoring of mine-dewatering by a certified independent laboratory.
Air	Annually	Monitoring of fixed emissions sources (smelter and laboratory) to determine total particles and combustion gases emissions. Particle perimeter monitoring (Access Gate #2, Merrill–Crowe area, general offices and workshop).
Mining rock Waste and paste tailings	Annually	Characterization of tailings and waste to determine potential generation of acid drainage and leaching of metals. Evidence from periodic monitoring shows that Del Toro's rock waste and paste tailings is non-acid-generating.
Perimeter noise	Annually	Perimeter noise monitoring (Surveillance booths 1 and 2, in front of thickening tanks, general offices, workshop, hazardous waste warehouse, Merrill–Crowe area, San Juan Mine portal, electrical substation, main garden, Robbins level 9, paste filters and platform).

The following is a description of the principal obligations relating to environmental matters for Del Toro:

- Yearly operation licence (COA): Report presented annually containing environmental information on the operation of the mine, including water, air, waste discharge, materials, and production;
- Dangerous waste declaration: Official document that controls the operation of dangerous waste from the mining installation to the site where it will be disposed (final disposal site);
- Quarterly payment for water use;
- Quarterly payment for water disposal; and
- Monitoring plan for water, air, waste and noise carried out in accordance with the different authorizations and conditions of the Official Mexican Norms.

FMS has developed and is implementing an Environmental Management System (EMS) with the following characteristics.

The EMS applies to all FMS operations, processes and products. The EMS is based on the requirements of the international standard ISO 14001:2015 and the requirements to obtain the Certificate of Clean Industry, issued by SEMARNAT, through the Federal Attorney for Environmental Protection (PROFEPA).

FMS establishes, documents, implements, maintains, and continually improves its EMS based ISO 14001: 2015 as follows:

- Identifies the processes required for the EMS and its application throughout the organization;
- Determines the succession and interaction of these processes;
- Determines the criteria and necessary methods to ensure that the operation and control of these processes are effective;
- Ensures the availability of resources and necessary information to support the operation and monitoring of these processes;
- Monitors, measures, and analyses these processes; and
- Applies the necessary actions to achieve the planned results and the continuous improvement of these processes.

20.2 Permits

Del Toro is an operating mine, as such it holds all major environmental permits and licenses required by the Mexican authorities to carry out mineral extracting activities in the San Juan mining complex. Table 20-11 contains a list of the major permits issued to Del Toro; certain areas in the Dolores and Perseverancia Mines are in the permitting process shown in Table 20-12.

Table 20-11: Major Permits Issued

Permit	Number	Authority	Status	Date Granted	Validity Period
Environmental License	LAU-32/0020-2013	SEMARNAT	Current	Apr. 2014	Indefinite
Environmental Impact: Authorization for project construction and operation of the process plant and tailings for Del Toro	DFZ152-203/09/1734	SEMARNAT	Current	Dec. 2009	10 years
Environmental Impact: Authorization to extend the authorized area of the Del Toro Operations for expansion, infrastructure and waste storage	DFZ152-203/12/1256	SEMARNAT	Current	July 2012	20 years
Environmental Impact: Authorization for a 115 kV electric power transmission line to service Del Toro, state of Durango	SG/130.2.1.1/ 000788/14	SEMARNAT	Current	May 2014	25 years
Environmental Impact: Authorization for a 115 kV electric power transmission line to service Del Toro, state of Zacatecas	DFZ152-203/13/0710	SEMARNAT	Current	April 2013	20 years
Environmental Impact: Authorization of a construction project and operation of the process plant and tailings storage of Del Toro (Santa Teresa)	DFZ152-203/14/2272	SEMARNAT	Current	Dec. 2014	10 years
Authorization for Industrial Land Use	DFZ152-201/10/0078	SEMARNAT	Completed / Executed	Jan. 2010	N/A
Authorization for Industrial Land Use: Expansion	DFZ152-201/11/1520	SEMARNAT	Completed / Executed	Nov. 2011	N/A
Authorization for Industrial Land Use: 115 kV electric power transmission line to service Del Toro, Suchil section, Durango	SG/130.2.2/ 1042	SEMARNAT	Completed / Executed	June 2014	N/A
Environmental Impact and Industrial Land Use (DTU) Paste Tailings deposit # 3 and mining infrastructure	DFZ152-203/15/1361	SEMARNAT	Current	Aug. 2015	15 years
Authorization of Land Use in Federal Zones Tailings Deposit #3	03ZAC157797/ 11EDDL16	CONAGUA	Current	Feb. 2016	10 years
Authorization of Construction in Federal Zones, Tailings Deposit #3	2646	CONAGUA	Current	Oct. 2015	15 years
Authorization of Construction in Federal Zones, Arroyo Cajón	719	CONAGUA	Completed / Executed	Mar. 2015	N/A

Table 20-12: Permits in Process

Permit	Number	Authority	Status	Expected Granting Date
Concession for occupation of Federal Zones, El Cajon stream project	ZAC-L-2108-19-12-14	CONAGUA	In process	In revision stage, granting date not available
EIA and change of land use for the construction of a 13.2 kVA power line to service the Dolores mine	32/MC-0061/07/17	SEMARNAT	In process	Q4 2017

20.4 Closure Plan

The closure plan is intended to comply with policies and terms included in the obligations denominated as "Asset Retirement Obligations", in particular those related to the works and activities to be carried out in closure preparation and post-closure. The Del Toro closure plan includes the following concepts: post-operation activities, closure of facilities, reclamation of certain areas, monitoring and site abandonment.

One of the purposes of the plan is to quantify the budget required to support and complete the closing works and mitigation activities relevant to the quality of soils, surface water, groundwater and wildlife in the area of influence of the infrastructure used for the mining and processing activities.

The estimation of restoration and closing costs was carried out using the Standardized Reclamation Cost Estimator (SRCE) model. The SRCE model contains best practices for estimating the remediation and restoration costs of areas impacted by industrial processes. FMS adapted the model to reflect current regulations in Mexico, and it was escalated for inflation. Table 20-13 shows the closure costs as of December 2016.

Table 20-13: Closure Cost Estimate

Facility	Brief Description	SRCE 2016 Model
Exploration	Exploration drill holes abandonment costs	$16,000
Exploration Roads and Pads	Grading, cover placement, ripping/scarifying and revegetation costs	$18,000
Waste Rock Dumps	Ripping/scarifying, grading, cover placement and topsoil placement	$56,000
Tailings Deposits	Embankment regrading, tailings surface grading, cover placement, topsoil placement and revegetation	218,000
Roads	Ripping/scarifying, grading, cover placement, and revegetation	$65,000
Underground Openings	Adits, portals and declines plugging, shaft backfill/cover and shaft capping	$16,000
Generic Material Hauling (for terraces)	Ripping/scarifying cost, hauling/crush/screen/compact, cover placement, topsoil placement and revegetation cost	$407,000
Equipment Removal	Equipment removal	$1,080,000
Drainage Control	Sedimentation pond cover, liner installation, sedimentation pond construct/regrade, diversion ditch rip-rap, diversion ditch construction, diversion ditch liner, ripping/scarifying, sediment pond revegetation and diversion ditch revegetation costs	$10,000
Process Ponds	Backfilling, growth media placement, revegetation, liner cutting and folding costs	$4,000
Buildings and Foundation Demolition	Buildings demolition, walls demolition and concrete slabs demolition	$507,000
	Growth media placement, cover placement and ripping/scarifying costs	$22,000
	Revegetation cost	7,000
Yards	Regrading, cover placement, revegetation, ripping/scarifying and growth media placement costs	$27,000
Waste Disposal	Hazardous materials, off-site solid waste, on-site solid waste and contaminated soils	$10,000
Well Abandonment	Monitoring wells	$10,000
Miscellaneous Cost	Removal of rip-rap, rock lining, substations/transformers, power lines, culverts and buried pipes, fences, surface pipe and other removal items	$166,000
Reclamation, Monitoring and Maintenance	Erosion Maintenance, Revegetation Maintenance, Reclamation Monitoring and Water Quality Monitoring	$140,000
Solution/Water Management	Water treatment, forced evaporation, pumping and decontamination	$50,000
Other Cost	Transport of discarded materials, purchase of topsoil, installation of piezometers, cleaning and decontamination of equipment	$215,000
Indirect Costs	Contractors and contractor administration	$238,000
Total Closing Costs Estimate		***$3,282,000***

20.5 Corporate Social Responsibility

Del Toro has been actively investing in public infrastructure by building a high-voltage powerline and substation and a sewage treatment facility, servicing the entire community. It also sponsors the local children´s symphony orchestra and several handcrafts workshops in the local community center.

A grievance mechanism was implemented to receive complaints related to the operations and provide timely responses to the community.

There are no currently known social or community pressures that materially affect the Mineral Resource and Mineral Reserve estimates or affect the proposed mine plan.

21 CAPITAL AND OPERATING COSTS

21.1 Capital Costs

Del Toro has been under FMS operation since 2011. The sustaining capital expenditures are budgeted on an as-required basis, established on actual conditions of the mine and the processing plant infrastructure.

Sustaining capital expenditures will be mostly allocated for on-going development, infill drilling, mine equipment rebuilding, major overhauls or replacements, plant maintenance and on-going refurbishing, and for tailings management facilities expansion as needed.

Currently, FMS is developing access to new mining blocks in the Santa Teresa, Dolores and Purisima veins in the Dolores Mine, ramping on the lower Escondida vein in the Perseverancia Mine, and developing the Cuerpo 3 and lower Lupitas veins in the San Juan Mine.

Estimated sustaining capital expenditures for the life of mine plan are assumed to average $5.7 million per annum, including infill exploration drilling.

The amount of exploration conducted to find new targets, with the objective of expanding the existing Mineral Reserves, will be dependent on the success of exploration and diamond drilling programs. Table 21-1 and Table 21-2 present the summary of the sustaining and expansionary capital expenditures estimated for Del Toro.

Table 21-1: Del Toro: Mining Capital Costs Summary (Sustaining Capital)

Type	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6/7
Mina Dolores								
Direct Mining Cost	$US M	$0.67	$0.14	$0.29	$0.22	$0.03		
Development (Directs)	$US M	$2.99	$1.15	$1.30	$0.54			
PPE - Mine	$US M	$1.14	$0.55	$0.32	$0.24	$0.03		
PPE - Plant	$US M	$1.03	$0.61	$0.23	$0.17	$0.02		
Mina Perseverancia								
Direct Mining Cost	$US M	$0.25	$0.14	$0.05	$0.05			
Development (Directs)	$US M	$1.34	$1.11	$0.24				
PPE - Mine	$US M	$0.74	$0.62	$0.06	$0.06			
PPE - Plant	$US M	$0.98	$0.90	$0.04	$0.04			
Mina San Juan								
Direct Mining Cost	$US M	$2.81	$0.34	$0.26	$0.34	$0.59	$0.61	$0.66
Development (Directs)	$US M	$2.81	$1.98	$0.75	$0.08			
PPE - Mine	$US M	$4.19	$1.49	$0.29	$0.37	$0.64	$0.67	$0.72
PPE - Plant	$US M	$3.93	$1.98	$0.21	$0.27	$0.46	$0.48	$0.52
Total: Del Toro								
Total Mining Capital Costs	***$US M***	***$22.89***	***$11.00***	***$4.05***	***$2.38***	***$1.77***	***$1.77***	***$1.91***

Table 21-2: Del Toro: Mining Capital Costs Summary (Expansionary Capital)

Type	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6/7
Mina Dolores								
Direct Mining Cost	$US M	$0.16	$0.16					
Development (Directs)	$US M							
PPE - Mine	$US M	$0.85	$0.18	$0.37	$0.27	$0.03		
PPE - Plant	$US M							
Mina Perseverancia								
Direct Mining Cost	$US M	$0.17	$0.17					
Development (Directs)	$US M							
PPE - Mine	$US M	$0.32	$0.19	$0.07	$0.07			
PPE - Plant	$US M							
Mina San Juan								
Direct Mining Cost	$US M	$0.41	$0.41					
Development (Directs)	$US M							
PPE - Mine	$US M	$3.55	$0.46	$0.33	$0.43	$0.74	$0.77	$0.83
PPE - Plant	$US M							
Total: Del Toro								
Total Mining Capital Costs - Sustaining	***$US M***	***$5.46***	***$1.56***	***$0.77***	***$0.77***	***$0.77***	***$0.77***	***$0.83***

21.2 Operating Costs

Del Toro has a well-established cost management system and understanding of the cost of operation. To date, the primary mining methods used at Del Toro are cut-and-fill and shrinkage stoping. Two new methods, longhole stoping and drift-and-fill stoping, have yet to be used at site, therefore first principles cost estimation was used. Although the cost inputs are based on site actuals (e.g., labour, various supplies, etc.) and contractor quotes, there will be variance from the estimates used for this study and the actual costs. The total cost of mining is expected to be within +/- 15%; however, the proportion of operating mining costs between methods (e.g., the estimated cost of longhole stoping versus the actual cost of longhole stoping in a given period) will have a significant variance. The variance will be how equipment, labour and other indirect costs are proportioned to each method, and the amount of material mined for the period. Overall, the cost estimation is of sufficient detail that, with the current experience at Del Toro, Mineral Reserves can be declared.

A summary of the Del Toro operating costs is presented in Table 21-3 and a summary of the annual operating expense is presented in Table 21-4. Operating costs summaries include a 5% contingency allocation.

Table 21-3: Del Toro: Final Underground GOG Used to Estimate Mineral Reserves

Operating Costs	Unit	Total Costs	Stoping Costs	Transport & Processing
Direct Stoping Costs				
Stoping – Cut-and-Fill (64% stoping)	$ / t ore	28.10	28.10	
Stoping – Shrinkage (1% stoping)	$ / t ore	29.80	29.80	
Stoping – Longhole (12% stoping)	$ / t ore	9.50	9.50	
Stoping – Drift-and-Fill (23% stoping)*	$ / t ore	90.10	90.10	
Other Direct Costs				
Sill Development, Including Exploration Development^	$ / t ore	9.00		
Processing and Surface Haulage*	$ / t ore	16.00	16.00	12.80#
Treatment, Transport, Refining and Penalties*	$ / t ore	22.80	22.80	18.20#
Indirect Operating Mining Costs				
Diesel, Equipment, Utilities	$ / t ore	3.00	2.00	0.50
Labour, Contract Labour	$ / t ore	5.00	1.00	
General Mining Services	$ / t ore	2.00		
Geology	$ / t ore	0.50	0.50	
General and Administration	$ / t ore	2.50	2.50	2.50
Taxes, Profit Share, Safety, Corporate Allocation Costs	$ / t ore	5.00	2.00	2.00
Total		*106.0*	*87.1*	*36.0*

^ Includes some portion of capital expense

* Expenses estimated to be related to Cuerpo 3 treatment and refining were assigned to Cuerpo 3 Mining Costs.

80% of Processing and Treatment costs are applied to account for reduction of fixed costs per tonne (increase in base unit as opportunity ore fills production gaps).

Table 21-4: Del Toro: Capital and Operating Cost Summary Annual Expense

Type	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6/7
Mina Dolores								
Direct Mining Cost	$US M	**$2.91**	$0.56	$1.23	$1.08	$0.04		
Indirect Mining Cost	$US M	**$11.65**	$2.53	$5.06	$3.68	$0.39		
Treatment and Refinement	$US M	**$13.05**	$2.92	$4.63	$4.80	$0.71		
Contingency	$US M	**$1.38**	$0.30	$0.55	$0.48	$0.06		
Mina Perseverancia								
Direct Mining Cost	$US M	**$1.35**	$0.65	$0.40	$0.30			
Indirect Mining Cost	$US M	**$4.49**	$2.39	$1.05	$1.05			
Treatment and Refinement	$US M	**$6.66**	$3.51	$1.57	$1.57	$0.01		
Contingency	$US M	**$0.63**	$0.33	$0.15	$0.15			
Mina San Juan								
Direct Mining Cost	$US M	**$17.98**	$1.57	$3.86	$4.66	$4.17	$2.30	$1.42
Indirect Mining Cost	$US M	**$38.22**	$5.86	$4.77	$5.95	$8.36	$6.88	$6.40
Treatment and Refinement	$US M	**$48.28**	$8.21	$7.40	$8.39	$11.33	$7.40	$5.55
Contingency	$US M	**$5.22**	$0.78	$0.80	$0.95	$1.19	$0.83	$0.67
Total Mining Costs		*$151.82*	*$29.60*	*$31.46*	*$33.05*	*$26.26*	*$17.40*	*$14.05*

22 ECONOMIC ANALYSIS

According to Canadian Securities Administrators' National Instrument 43-101, in reference to Item 22: Economic Analysis:

"*Producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production unless the technical report includes a material expansion of current production.*"

Since Del Toro is a producing operation, there is no ongoing material expansion of the production capacity, and the assumptions of this Technical Report are based on current production capacity and current operating practices, there is thus no requirement to disclose information related to Item 22.

23 ADJACENT PROPERTIES

There are no adjacent properties from which exploration and/or mining activities would provide a better understanding of Del Toro's Dolores, Perseverancia, or San Juan areas.

24 OTHER RELEVANT DATA AND INFORMATION

There are no other relevant data or information to be contained in this Technical Report.

25 INTERPRETATION AND CONCLUSIONS

The following interpretations and conclusions are a summary of the QP's opinions based on the information presented in this Report.

25.1 Mineral Tenure, Surface Rights, Agreements and Royalties

Information provided by FMS legal experts supports that the mining tenure held is valid and is sufficient to support declaration of Mineral Resources and Mineral Reserves; Del Toro has adequate mineral concession and surface rights to support mining operations over the planned underground Life of Mine (LOM) presented in the Report.

25.2 Geology and Mineralization

The current knowledge of the deposit models and alteration, as well as the structural and lithological controls on mineralization, is sufficient to support the Mineral Resource and Mineral Reserve estimations.

The styles of deposits occurring in Del Toro vary from high temperature replacements, sulphide-rich mesothermal deposits (chimneys, breccias and veins) and sulphide-poor epithermal veins. Higher temperature deposits are localized to the south in the Perseverancia and San Juan mines, whereas lower temperature epithermal veins occur to the north in the Dolores mine.

25.3 Exploration, Drilling and Data Analysis

The exploration programs completed to date are appropriate for the Del Toro mineralization style. Sampling methods (diamond drill hole and channel sampling) and data collection are acceptable given the Del Toro deposit dimensions, mineralization true widths, and the style of the deposits. The programs are reflective of industry-standard practice and can be used in support of Mineral Resource and Mineral Reserve estimation.

The quality and quantity of the silver, lead and zinc assay data are reliable. Lithological, geotechnical, collar and downhole survey data collected are also considered to be reliable. The Quality Assurance and Quality Control (QA/QC) program is robust and adequately addresses issues of precision, accuracy, and contamination. These data can be used in support of Mineral Resource and Mineral Reserve estimation.

The QA/QC program results do not indicate any problems with the contamination or assay precision and accuracy from commercial laboratories. However, the analyses show problems with Central Laboratory results with respect to analytical accuracy. Re-assays carried out by SGS Durango indicate that the Central Laboratory may be underestimating zinc, lead and silver concentrations. Re-assay results were accepted over Central Laboratory results where available. FMS has taken steps to correct the issue and recent results show improved accuracy.

25.4 Metallurgical Testwork

The metallurgical analysis discussed in this Report is primarily based on plant operational data. This is because laboratory work was considered to be of lesser priority as emphasis was given to tailor the plant to the real run-of-mine mill feed which turned out to be different compared to the samples used in the design stage of the project. Reliable metallurgical relationships were developed using the plant data. It was observed that the metallurgical performance of the plant is controlled by the PbO/Pb ratio, as opposed head grades in isolation (e.g., %Pb or %PbO). The PbO/Pb ratio can be regarded as a metric gauging the “degree of oxidation.”

The metallurgical grade-recovery models developed are considered valid for mining sequences and ore compositions such as those indicated in Figure 13-1. Any significant changes to the mining sequences or ore composition would require model recalibration.

25.5 Mineral Resource and Mineral Reserve Estimation

The Mineral Resource estimation process for the main deposits at Del Toro is in line with standard industry practices. Some minor deposits were modeled using the polygonal method, which is still a regular practice in some small mines in Mexico. However, the QPs recommend that resource estimation practices be improved by using plans, sections, drilling data and channel samples to construct wireframe and block models.

Drill data are typically verified prior to the Mineral Resource (and Mineral Reserve) estimation by running a comprehensive list of validation checks and peer reviews.

Factors which may affect the geological models and the preliminary stope designs used to constrain the Mineral Resources include: commodity price assumptions; dilution assumptions in deeper mining areas; changes to geotechnical, mining, and metallurgical recovery assumptions; changes in interpretations of mineralization geometry and continuity of mineralization zones; and changes to assumptions made as to the continued ability to access the site, retain mineral and surface rights titles, maintain the operation within environmental and other regulatory permits, and retain the social licence to operate.

Mineral Reserves include considerations for dilution, mining widths, ore losses, mining extraction losses, appropriate underground mining methods, metallurgical recoveries, permitting and infrastructure requirements. Factors which may materially affect the Mineral Reserve estimates include: commodity price and exchange rate assumptions used; rock mechanics (geotechnical) constraints; the ability to maintain constant underground access to all working areas; geological variability; and cost escalation.

25.6 Mine Plan

Mining operations can be conducted year-round. The underground mine plan presented in the Report was designed to deliver an achievable plant feed, based on the current knowledge of geological, geotechnical, hydrological, mining and processing conditions. Production forecasts are based on current equipment and plant productivities, with additional equipment included in the mine financials for longhole mining and replacement of aging equipment.

The current mine life to 2023 is achievable based on the projected annual production rate and the estimated Mineral Reserves. There is some upside if some or all of the Inferred Mineral Resources can be upgraded to higher confidence Mineral Resource categories.

25.7 Processing

The process plant is operational and is using conventional methods to generate the saleable concentrate. As the operation will continue processing transitional material, efforts will be directed to improve the flotation response of the oxide minerals. This will be done by optimizing the chemical conditions of the pulp and by retrofitting modern flotation technologies such as microbubble flotation columns.

25.8 Infrastructure Considerations

The existing infrastructure is appropriate to support the current LOM plan.

25.9 Markets and Contracts

The main product obtained from the flotation process at Del Toro is a silver-rich lead concentrate, which is sold under annual contracts from a tendering process, to arm's length concentrate traders. The terms contained within the existing sales contracts are typical and consistent with standard industry practices. The likelihood of securing ongoing contracts for concentrate sales is a reasonable assumption; however, in downturn market conditions, there can be no certainty that Del Toro will always be able to do so or whether economical terms will be available at that time.

25.10 Permitting, Environmental and Social Considerations

Permits held by Del Toro are sufficient to ensure that mining activities are conducted within the regulatory framework required by the Mexican government and that Mineral Resources and Mineral Reserves can be declared. FMS has sufficiently addressed the environmental impact of Del Toro and subsequent closure requirements, that Mineral Resources and Mineral Reserves can be declared, and that the mine plan is appropriate and achievable. Closure provisions are appropriately considered in the mine plan and economic analysis.

25.11 Capital and Operating Cost Estimates

The capital and operating cost provisions for the LOM plan that supports Mineral Reserves have been reviewed. The basis for the estimates is appropriate to the known mineralization, mining and production schedules, marketing plans, and equipment replacement and maintenance requirements.

Capital cost estimates include appropriate sustaining estimates.

25.12 Economic Analysis

Under the assumptions used in this Report, Del Toro has positive project economics for the LOM plan, which supports the Mineral Reserve statement.

26 RECOMMENDATIONS

26.1 Introduction

Recommendations have been broken into two phases. The Phase 1 recommendations are made in relation to exploration activities. Recommendations proposed in Phase 2 are suggestions for improvements in current operating procedures, and the program is not contingent on the results of Phase 1 work.

The total cost for the Phase 1 work is about $12.8 million. Phase 2 is estimated at about $3.3 million.

26.2 Phase 1 Work Program

The Phase 1 work program includes allocations for underground drilling, drill target generation, fluid inclusion and geochemical studies, and geophysical surveys.

26.2.1 Navidad Claims

In order to generate additional drilling targets, it is recommended that detailed geological and alteration mapping be carried out over the Navidad claims located north of the Dolores mine. This program has an estimated cost of $30,000.

26.2.2 Fluid Inclusion and Geochemical Studies

A fluid inclusion study and systematic geochemistry of outcropping veins in the Navidad claims is recommended in order to determine the most favourable elevation for the ore shoot location. It is estimated that forty samples for fluid inclusion studies and approximately 2,000 chip samples for geochemistry are required. The fluid inclusion and geochemistry studies are estimated to cost about $50,000.

26.2.3 Geophysical Surveys

A high-resolution air-borne magnetic survey is recommended over the entire property holdings in order to aid lithological and structural mapping. The estimated cost is $60,000.

26.2.4 Underground Drilling

Underground and surface drilling is recommended in order to identify new areas of mineralization and to infill known mineralization so as to support Mineral Resource estimation. A total 95,000 m of diamond drilling throughout the property over the next five years is recommended in order to explore chimney, breccia bodies and vein targets as follows:

San Juan Cuerpo 3

It is recommended that additional drilling be completed through the deeper levels of the breccia-hosted deposit with drill holes oriented through the centre of the deposit between elevations of 2000 and 2065 masl. Drill holes in this region are currently clustered closer to the margins of the deposit. Confidence in the grade estimates and resulting resource classification would be improved with these additional holes, and there may be potential to add to the resource base at depth. This exploration program of about 35,000 m would cost about $4,300,000, which includes:

- 35,000 m of drilling, core sampling and assaying $4,200,000
- Geological modelling and engineering studies $ 100,000

Lupitas vein system

Deeper drilling should be carried out to the north of the known structures in order to explore for the continuation of vein-type mineralization. This exploration program is estimated at approximately $2,000,000 which includes:

- 15,000 m of drilling, core sampling and assaying $ 1,900,000
- Geological modelling and engineering studies $ 100,000

Dolores Mine

Deeper drilling should be carried out in the Dolores area in order to explore for vein-type mineralization. The approximate cost of testing this target is about $2,500,000, which includes:

- 20,000 m of drilling, core sampling, and assaying $ 2,400,000
- Geological modelling and engineering studies $ 100,000

Perseverancia Chimneys

Deeper drilling should be carried out in the Perseverancia area in order to explore for chimney-type mineralization. The cost of testing this target is estimated at $3,100,000, which includes:

- 25,000 m of drilling, core sampling and assaying $ 3,000,000
- Geological modelling and engineering studies $ 100,000

Minor Deposits (Zaragoza, Carmen and Consuelo)

Additional infill drilling along with detailed structural interpretations is also recommended, since these veins and minor deposits tend to pinch and swell, and are generally irregular in shape. The cost of an infill drilling program is estimated at $800,000, which includes:

- 6,000 m of drilling, core sampling and assaying $ 700,000
- Geological modelling and engineering studies $ 100,000

26.3 Phase 2 Work Program

The Phase 2 work program is designed to provide additional support to the mining operations. It is not dependent on the results of the first work phase and can be conducted concurrently with Phase 1.

26.3.1 Structural Investigations

Further drilling campaigns with detailed structural and geotechnical logging should be designed to target and constrain fault orientations at depth and around the mining infrastructure. Oriented core and televiewer data collection is also recommended to assist with further structural and geotechnical analysis work. The cost of the structural drilling campaign is estimated at $300,000, which includes:

- 1,200 metres of oriented core drilling and core sampling $ 150,000
- Televiewer and interpretation $ 50,000
- Geotechnical logging and modelling $ 100,000

26.3.2 Geotechnical

Although the geotechnical logging systems are in place, adequate quality or validation checks should be incorporated to ensure that the calculated rock mass ratings are appropriately representative of the rock mass in all intervals.

The fault structures within the area of the main infrastructure should be further evaluated. Once a satisfactory 3D structural interpretation has been developed for the access area, the excavation layouts will need to be further optimized to reduce the geotechnical and hydrogeological risk related to these structures.

The Cuerpo 3 orebody needs to be dewatered as much as possible before further mining is undertaken within the ore. Drill holes used to dewater the ore zone should be geotechnically logged in detail and special care taken to assess the clay altered zones and any variability within those. The cost of the dewatering campaign is estimated at $250,000, which includes:

- 1,200 metres of dewatering drilling and core sampling $ 150,000
- Pumping and sealing $ 100,000

Once the orebody is considered dewatered, some trial mining using shotcrete and spilling should be undertaken to further confirm that excavations can be reliably developed within the highly-altered clay zones and to determine the optimal mining and support approaches. The cost of a drifting trial mining in the Cuerpo 3 area is estimated at $350,000, which includes:

- 100 metres of drifting $ 150,000
- 100 metres of shotcrete and spilling $ 100,000
- Instrumentation, monitoring and geotechnical assessment $ 100,000

Water flow into the excavated areas is a critical risk, and management of the risk will require an excellent understanding of ground conditions (including clay type) and diversion of the water away from the excavation. Mud rush risks need to be regularly evaluated as mining progresses.

As the project develops, the excavation stability problems encountered should be documented and compared against good geological mapping of the clay alteration types and alteration intensities observed in order to better understand and predict rock mass behavior, particularly in the breccia body. This work should be conducted as part of day-to-day mining activities.

26.3.3 Hydrogeology for Cuerpo 3

The following recommendations are provided to be conducted as part of day-to-day mining activities.

Key groundwater-bearing structures in level workings and ramps should be mapped regularly, and groundwater flows draining from level workings should be monitored on at least a weekly basis.

Access ramps should be maintained at least two sub-levels (70 m) below active mining sub-levels. Cover holes should be drilled through identified key inflow risk areas, and these should be grouted if necessary to advance the ramp.

Sub-horizontal drainage holes should be drilled from purpose-excavated drainage drifts off the orebody side of the access ramp at vertical intervals equivalent to the sub-level spacing, and should be designed to intersect orebody and key structures at 10 m lateral intervals. Flows from drainage holes should be monitored on a weekly basis and additional drainage holes should be drilled, should the drainage of the lowest active level appear to be inadequate.

Adequate pumping capacity should be maintained, ideally at 50% more than the recent maximum flows.

The drainage plan should be reviewed and modified, based on drainage performance data. Pore pressure flow monitoring should be used to evaluate the drainage effectiveness. Resource drilling programs should also be used to collect additional hydrogeological data and be used for installation of pressure-monitoring piezometers.

26.3.4 Metallurgical and Process

Sulphidisation study

A system to characterize the "degree of sulphidisation" of the ore should be implemented. This can be done from direct measurements of sulphide and total sulphur using the LECO (combustion followed by infrared detection) technology. This is estimated at about $100,000.

Microbubble flotation

The microbubble flotation technology should be implemented to optimize silver and lead recoveries and improve concentrate grades, including arsenic reduction. The program is estimated to cost $600,000, which includes:

- Testing and design $100,000
- Equipment and retrofitting $500,000

Zinc Recovery Program

A geometallurgical study focused on optimizing zinc recovery is recommended. This study will require the use of high-resolution mineralogical characterization methods such as QEMSCAN (Quantitative Evaluation of Minerals by Scanning Electron Microscopy) to better understand mineral textures of the minable areas containing recoverable zinc species. The program, including analytical services, is estimated at $250,000.

Del Toro has produced zinc concentrates in the past, and it is recommended to advance metallurgical testing and flowsheet optimization efforts to implement a zinc recovery circuit. The estimated cost for the flowsheet optimization, detailed engineering and retrofitting is about $900,000, which includes the following elements:

- Testing and detailed flowsheet design $ 150,000
- Flotation and thickening equipment sizing and retrofitting $ 750,000

26.3.5 Mineral Resource and Mineral Reserve Modelling

Database

An accredited geochemist should visit and evaluate all aspects of the sample preparation and analytical procedures currently used at the Central Laboratory. This is estimated at about $50,000 for consultancy services.

As part of day-to-day mining activities, Del Toro staff should continue to regularly and thoroughly evaluate Quality Assurance and Quality Control (QA/QC) results for any ongoing issues, particularly with respect to analytical accuracy.

Three-Dimensional Modeling of Minor Deposits

Mineral Resources for veins and other minor deposits (Zaragoza, Carmen, Consuelo, Cuerpo 1 and Cuerpo 2) have been estimated using a polygonal method. While resource estimation using the polygonal method is still a regular practice in some small mines in Mexico, these resource estimation practices at Del Toro should be updated by using plans, sections, drilling data and channel samples to construct wireframe and block models for veins and minor deposits for the next Mineral Resource estimate update.

- Geological modelling and engineering studies $ 150,000

26.3.6 Mine Planning

It is recommended that the following be considered to further optimise and improve the operation:

Blending

Conduct a blending optimization and recovery study to minimize ore loss and treatment costs:

- Consultancy services $100,000

Ventilation

Upgrade ventilation systems at the Dolores mine, and conduct a ventilation audit following the upgrades:

- Consultancy services $ 50,000
- Ventilation equipment and infrastructure $150,000

Long-Hole stopping trial

Conduct trial long-hole stoping at the Dolores mine as soon as practicable to validate mining assumptions:

- Mine equipment $150,000
- Development and trial mining $150,000

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