

# **SEC Technical Report Summary Initial Assessment on Mineral Resources Charcas Mine San Luis Potosí, México**

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**Report Prepared for**

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## List of Abbreviations

The metric system has been used throughout this report. Tonnes are metric of 1,000 kg, or 2,204.6 lb. All currency is in U.S. dollars (US\$) unless otherwise stated.

Abbreviation	Unit or Term
%	percent
<	less than
>	greater than
°C	degrees Centigrade
2D	two-dimensional
3D	three-dimensional
AAS	atomic absorption spectrometry
Ag	silver
Al	aluminum
Ar	argon
As	arsenic
Au	gold
Ba	barium
Be	beryllium
Bi	bismuth
Ca	calcium
Cd	cadmium
Charcas	Charcas Polymetallic Mine
CIC	Charcas intrusive complex
CIM	Canadian Institute of Mining, Metallurgy, and Petroleum
cm	centimeter
cm <sup>3</sup>	cubic centimeter
Co	cobalt
CoG	cut-off grade
Company	Industrial Minera México, S.A. de C.V
Cr	chromium
CRIRSCO	Committee for Mineral Reserves International Reporting Standards
CSRM	certified standard reference materials
Cu	copper
CuFeS	chalcopyrite
Fe	iron
FOG	fall-of-ground
FoS	factor of safety
g	gram
G&A	general and administrative
g/t	grams per tonne
GWh	gigawatt-hour
ha	hectare
HCl	hydrochloric acid
Hg	mercury
HNO <sub>3</sub>	nitric acid
I	Indicated
ICP	inductively coupled plasma
IMMSA	Industrial Minera México, S.A. de C.V
IP	induced polarization
K	potassium
kg	kilogram
km	kilometer
km <sup>2</sup>	square kilometer
koz	thousand troy ounce
kt	thousand tonnes
kW	kilowatt
L	liter

<b>Abbreviation</b>	<b>Unit or Term</b>
La	lanthanum
lb	pound
Li	lithium
LoM	life-of-mine
M	Measured
m	meter
m <sup>2</sup> /s	square meters per second
m <sup>3</sup>	cubic meter
Ma	million years ago
masl	meters above sea level
Mg	magnesium
mm	millimeter
Mn	manganese
Mo	molybdenum
mV/V	millivolts per volt
MVA	Mega Volt-Amp
Na	sodium
Na <sub>2</sub> O <sub>2</sub>	sodium peroxide
Ni	nickel
NSR	Net Smelter Return
OES	optical emission spectrometry
oz	troy ounce
P	phosphorus
Pb	lead
PbS	galena
ppm	parts per million
QA/QC	quality assurance/quality control
QP	Qualified Person
REPDA	Public Register of Water Rights
RQD	rock quality designation
S	sulfur
Sb	antimony
Sc	scandium
SCC	Southern Copper Corporation
SD	standard deviation
SEC	U.S. Securities and Exchange Commission
SGS	SGS Laboratory
SME	Society for Mining Metallurgy and Exploration
Sn	tin
Sr	strontium
SRK	SRK Consulting (U.S.), Inc.
t	tonnes
t/d	tonnes per day
t/m <sup>3</sup>	tonnes per cubic meter
Ti	titanium
UTM	Universal Transverse Mercator
V	vanadium
VMS	volcanogenic massive sulfide
W	tungsten
WGS84	World Geodetic System
Y	yttrium
Zn	zinc
ZnS	sphalerite
Zr	zirconium

# 1 Executive Summary

This report was prepared as an initial assessment (mineral resource) technical report summary in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 until 1305) for Southern Copper Corporation (SCC) on their Industrial Minera México, S.A. de C.V (IMMSA or Company), a wholly owned subsidiary of Southern Copper Corporation, by SRK Consulting (U.S.), Inc. (SRK) on the Charcas Polymetallic Mine (Charcas), located in San Luis Potosí, México.

## 1.1 Property Description (Including Mineral Rights) and Ownership

IMMSA currently holds 13 mining titles over the Charcas project covering a total area of 88,643.2597 hectares (ha), with the titles held 100 percent (%) by the Company. The 13 mining concessions are valid for 50 years and extendable to 50 more years. The oldest concession was originally awarded in 1974 and has a current expiration date of 2024; however, the concession may be extended 50 more years.

IMMSA owns surface lands covering an area of 1,900.13 ha with rights to conduct any work or exploration required to advance or continue of activities within the Charcas project.

## 1.2 Geology and Mineralization

The Charcas mining district is in the east-central part of the central mesa of México, which is part of the larger metallogenic province of Sierra Madre in México.

The mineral deposits found within the Charcas mining district are tertiary polymetallic skarn (silver (Ag), lead (Pb), zinc (Zn), and copper (Cu)) deposits hosted in carbonate rocks of the Jurassic-Cretaceous periods and in shales and sandstones of the Late Triassic. In the carbonate rocks, veins and mantos form predominant mineralization, while less mineralized fractures tend to occur within the shales and sandstones. The varied style of mineralization largely corresponds to the lithological variety of units that serve as host rocks.

The Charcas intrusive complex (CIC) was emplaced in Triassic to upper Cretaceous sedimentary rocks. Some dikes from the CIC have developed metamorphic halos with related polymetallic mineralization.

There are two recognized stages of mineralization. In the first stage, the mineralization is enriched in silver, lead, and zinc and characterized with calcite and small quantities of quartz and chalcopyrite (CuFeS) present. In the second stage, the mineralization is copper and silver rich with lesser amounts of chalcopyrite. The mineralization also includes lead ore with associated silver, plus pyrite and only minor amounts of sphalerite (ZnS). The mineralization occurs as replacement sulfides in carbonate rocks and as filling fracture veins. The typical sulfides found at the Charcas include chalcopyrite, sphalerite, galena (PbS), and silver minerals.

## 1.3 Status of Exploration, Development, and Operations

IMMSA has been exploiting the deposit since 1925 and currently operates three underground mines (San Bartolo, Rey-Reina, and La Aurora) and a flotation plant that produces zinc, lead, and copper concentrates with silver content.

Charcas is exploited underground by room and pillar with hydraulic cut and fill. The crushed material is transported to the surface for processing in the flotation plant.

Drilling at Charcas is completed by the mine geology department to support routine mining grade control; drilling follows internal protocols. In the Qualified Person's (QP) opinion, historical drilling does not follow generally accepted industry best practice. Charcas established a new QA/QC protocol for drilling and rock sampling. In 2023, Charcas started the implementation inclusion of some controls and the use of NQ drilling core size. Therefore, there is some risk in using historical data during the estimation process that could lead to some degree of inaccuracy, which may limit the assignment of higher levels of confidence to the estimates.

Exploration at Charcas is ongoing with drills targeting economic extensions of the main deposit and new satellite orebodies. The Charcas exploration department drilling activities are conducted following industry best practices, including QA/QC protocols.

The exploration in 2024 was focused on the Buen Suceso, Las Eulias, and Santa Rita zones to the south of the Charcas unit, while to the north, drilling was carried out in the orebodies Veta Leones and Bufa Aurora. In 2025, the exploration will be carried out from within the mine, targeting the continuities of the orebodies of Santa Batolo, El Rey, San Sebastian, and Veta Leones.

The exploration was conducted in orebodies to the east of Charcas Mine, including "Buen Suceso" with 36 DDH and "Santa Rita" with 2 DDH. In the southeast, "Las Eulalias" was explored with 10 DDH. To the north of Charcas Mine, the "Bufa Aurora" and Leones Vein were explored. For the 2025, the focus will be on exploring the Leones Vein, San Sebastian, El Rey and San Bartolo below level 26.

## 1.4 Mineral Resource Estimates

Historically, Charcas has collected samples from diamond core drilling (surface and underground) and channel samples from underground workings. This historical work was conducted by the mine geology department but was not supported by QA/QC protocols. The QP notes that the historical drillholes completed by the mine geology department also lack downhole surveys, which in the QP's opinion is not in-line with industry's best practices and could lead to some inaccuracy in the interpretation of the veins/mantos locations when historical drilling holes longer than 100 meters (m). Since 2023, Charcas's mine department implemented the use of the Gyro equipment to take drillhole deviations every 30 m (approximately), which is a standard practice.

SRK considers that the QA/QC protocol implemented by the mine geology department of Charcas in 2024 for the core samples is in line with the industry's best practices, However, a similar protocol should be implemented for the rock samples from the underground workings.

Based on the available data, the Qualified Person (QP) considers that the variability of the mineralization, as characterized by the mantos and vein deposits at Charcas, has been appropriately interpreted, despite any potential local inaccuracies. The QP has reviewed the reconciliation of the planned versus actual grades and tonnages reported at Charcas. Given the extensive mining history, the QP considers the grades obtained from drilling and channel rock sampling to be representative of the mined material

In 2023, Charcas completed the digitalization of the available information and in 2024 completed the three-dimensional (3D) geological model and constructed the resource block model, implemented typical statistical analyses for mineral resource estimation presented in this report.

The geological team at Charcas and SRK completed the geological modeling and Mineral Resource Estimation (MRE) utilizing Seequent Leapfrog Geo and Leapfrog Edge software tools. The geological modeling process involved creating wireframe solids to delineate the geological and mineralization domains. Additionally, the team conducted data compositing and capping, geostatistical and variography analyses. Subsequent steps included block modeling, grade interpolation techniques, and a validation of estimates versus entry data. SRK and Charcas worked together throughout the process to ensure that the geological modeling and mineral resource estimates adhered to standard practices of the industry.

A single density value of 3 tonnes per cubic meter ( $t/m^3$ ) is used to obtain tonnages. The Charcas operation has used this density value for an extended period of time, and the density value is reportedly based on historical tests, which have not been documented and were not available for QP review. The QP considers the lack of testwork and documentation to represent a potential risk to estimating the correct tonnage and has therefore considered this during the classification process. The QP notes that this is also the same tonnage applied by the operation. The risk is limited to some extent by the support for the reconciliation, which demonstrates a reasonable correlation between the planned and measured tonnages at the plant. Since 2023, the areas of exploration and the mine geology team have been collection of core density tests using the Archimedes' principle. Currently, the database is quite small, but in 2025 it is planned to upgrade the database for these areas.

The classification of resources is based on the following criteria.

#### **1.4.1 Measured**

No Measured resources are stated, as insufficient overall confidence exists to confirm geological and grade continuity between points of observation to the level needed to support detailed mine planning and final evaluation studies. Due to the lack of QA/QC protocols for the historical drilling and channel sampling, deficiencies in the channel sampling procedures, and the lack of downhole surveys, SRK determined there are no Measured mineral resources at Charcas. In the future new areas explored following the consistent best practices can be obtained this classification.

#### **1.4.2 Indicated**

Blocks within areas with sufficient geological confidence and with drill spacing of 40 m, utilizing a minimum of two drillholes or rock channels. Blocks withing a distance of 20 m to underground sampling.

### 1.4.3 Inferred

Blocks in zones located 40 m to the closest single hole or channel sample in each mineralized structure or drill spacing of 80 m, using at least one drillhole or channel sample, and demonstrating reasonable geological continuity.

### 1.4.4 Methodology

The estimate was categorized in a manner consistent with industry standards. Mineral resources have been reported using economic and mining assumptions to support the reasonable potential for economic extraction of the resource. A cut-off grade (CoG) has been derived from these economic parameters, and the resource has been reported above this cut-off. The mineral resource is reported exclusive of reserves.

It is SRK's opinion that the mineral resources stated herein are appropriate for public disclosure and meet the definitions of Indicated and Inferred resources established by SEC guidelines and industry standards.

In 2023, IMMSA finalized the digitalization of the historical core and rock sampling and geological horizontal and vertical sections, imported the data to Leapfrog, and initiated the construction of the 3D geological model of all the deposit of Charcas that was finalized in 2024. Charcas the resource block model. The block model provides greater flexibility for the operation and enable more dynamic mine planning following industry-standard practices.

Charcas's mineral resources adhere to the S-K 1300 resource definition requirement, ensuring reasonable prospects for economic extraction. Depletions have been incorporated into the block model based on the surveyed underground works as of December 31, 2024.

In the QP's opinion, the assumptions, parameters, and methodology used for the Charcas underground mineral resource estimates, provide flexibility in the planning processes, are appropriate for the style of mineralization and mining methods.

The QP has recommended to IMMSA that a commercial geologic database be created to provide secure storage of drilling data. The database will provide better data control and a potential audit trail for any changes made in the system over time.

In addition, there is potential for some of the uncertainties or risks, noted above, to be mitigated or reduced through additional study. Section 23 of this report summarizes recommendations for these studies. It is the QP's opinion that measures that should be taken to mitigate the uncertainty include, but are not limited to:

- Continual drilling in the most critical areas of the deposit, locally to spacing of less than 50 m x 50 m
- Maintain the database, periodically update the 3D geological model (Leapfrog Geo software), and implement the storage of data into a commercial secure database.
- Continue the systematic and consistent implementation of QA/QC protocols for drilling and rock sampling
- Extensive QA/QC analysis and monitoring to understand relative impacts to local inherent variability within resource domains

- Continue collecting density sampling within the mineralization to confirm level of fluctuation from the current uniform assignment of a single 3.0 t/m<sup>3</sup> value

Mineral resources have been reported based on economic and mining assumptions to support the reasonable potential for economic extraction of the resource. A CoG has been derived from these economic parameters, and the resource has been reported above this cut-off. Table 1-1 summarizes current mineral resources, exclusive of reserves.

**Table 1-1: Charcas Summary Mineral Resources at End of Fiscal Year Ended December 31, 2024, SRK Consulting (U.S.), Inc.<sup>(1)</sup>**

IMMSA Underground - Charcas							Cut-Off <sup>(2)</sup>	NSR <sup>(3)</sup> \$69.84			
Category	Tonnage Quantity (kt)	Grade					Metal				
		Ag (g/t)	Zn (%)	Pb (%)	Cu (%)	NSR <sup>(3)</sup> (US\$)	Ag (koz)	Zn (kt)	Pb (kt)	Cu (kt)	
Measured											
Indicated	18,085	57	3.74	0.24	0.35	128	33,198	677.1	44.0	63.0	
M+I	18,085	57	3.74	0.24	0.35	128	33,198	677.1	44.0	63.0	
Inferred	15,752	63	3.32	0.35	0.32	121	31,776	522.8	55.8	49.8	

Source: SRK, 2024

<sup>(1)</sup>Mineral resources are reported exclusive of mineral reserves on a 100% basis. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimates. Gold, silver, lead, zinc, and copper assays were capped where appropriate. Given historical production, it is the QP's opinion that all the elements included in the metal equivalent calculation have a reasonable potential to be recovered and sold.

<sup>(2)</sup>Mineral resources are reported at metal equivalent CoGs based on metal price assumptions, \* variable metallurgical recovery assumptions, \*\* mining costs, processing costs, general and administrative (G&A) costs, and variable NSR factors.\*\*\* Mining, processing, and G&A costs total US\$69.84/tonne (t).

\*Metal price assumptions considered for the calculation of metal equivalent grades are Silver (US\$/oz 23.0), Lead (US\$/lb1.09), Zinc (US\$/lb 1.32) and Copper (US\$/lb 3.80).

\*\*CoG calculations and NSR values assume variable metallurgical recoveries as a function of grade and relative metal distribution. For the purpose of this mineral resource declaration, average metallurgical recoveries are silver (76%), lead (39%), zinc (87%), and copper (63%), assuming recovery of payable metal in concentrate.

<sup>(3)</sup>CoG calculations assume variable NSR factors as a function of smelting and transportation costs. The NSR Values (inclusive of recovery) are calculated using the following calculation:

$$NSR = [Ag\_gt]*0.48139+[Pb\_%]*8.9546+[Cu\_%]*51.36337+[Zn\_%]*21.51111.$$

Note: The mineral resources were estimated by SRK Consulting (U.S.), Inc., a third-party QP under the definitions defined by S-K 1300.

## 1.5 Conclusions and Recommendations

### 1.5.1 Property Description and Ownership

Mineral rights are held by IMMSA through ownership or lease of the land parcels as disclosed in Table 3-1. All mineral resources stated are contained within these boundaries, internal to an optimized pit that is also limited by these boundaries.

### 1.5.2 Geology and Mineralization

The geology and mineralization controls are very well known, supported by the many years of the mining operation. Geological information supporting mineral resources is available in paper documents and now in digital format. The new digitalized database is in Excel spreadsheets and in Leapfrog, which includes the 3D geological model and resource block model in Leapfrog Geo software.

### 1.5.3 Status of Exploration, Development, and Operations

The exploration department has been conducting drilling operations in the Leones Vein, Buen Suceso, Aurora, and Las Eulalias areas in collaboration with the contractor Bylsa Drilling. From February to

April 2024, a total of 5,000 meters were completed. A second phase, targeting an additional 20,000 meters, commenced in July 2024 and is currently underway.

The exploration activities have been focused on San Bartolo area in the 27-20W level, in El Rey area 26-100W level and in the new area “La Fortuna” (Santa Rita level 2).

Exploitation activities were conducted in 32 sites places, distributed in the areas of San Bartolo, Eulalias, El Rey, Santa Rosa, San Sebastian and Leones Vein.

#### 1.5.4 Mineral Resource Estimates

The estimate was categorized in a manner consistent with industry standards, using methodologies consistent with older mining operations. Mineral resources have been reported using economic and mining assumptions to support the reasonable potential for economic extraction of the resource. A CoG has been derived from these economic parameters, and the resource has been reported above this cut-off. The mineral resource is exclusive of reserves.

In SRK’s opinion, the mineral resources stated herein are appropriate for public disclosure and meet the definitions of Indicated and Inferred resources established by SEC guidelines and industry standards.

In the QP’s opinion, measures should be taken to mitigate the uncertainty, including but not limited to:

- Continual drilling in the most critical areas of the deposit, locally to spacing of less than 50 m x 50 m
- SRK recommends to the mine geology department continuing implementing the new updated procedures of drilling and sampling, and the QA/QC protocol in a systematic and consistent manner.
- IMMSA implemented the use of NQ drilling core size and, in the last months of 2023.
- Regarding the QA/QC protocol of the exploration and mine geology departments, SRK recommends continuing with the second laboratory controls (Tercerías) periodically.
- Continue the digitization of all the new geological information and implement the storage of data into a commercial secure database.
- Keep the geological model constructed in Leapfrog updated, integrating all relevant geological data to achieve the most accurate model possible at the current level of study.
- Extensive QA/QC analysis and monitoring to understand relative impacts to local inherent variability within resource domains
- Introduction of more routine density sampling within the mineralization to confirm level of fluctuation from the current uniform assignment of a single 3 t/m<sup>3</sup> value
- Rigorous approach to classification that appropriately considers the noted detractors in confidence and utilizes criteria designed to address them

## 2 Introduction

### 2.1 Registrant for Whom the Technical Report Summary was Prepared

This technical report summary was prepared in accordance with the SEC S-K regulations (Title 17, Part 229, Items 601 and 1300 through 1305) for IMMSA, a subsidiary of SCC, by SRK on Charcas, located in San Luis Potosí, México.

### 2.2 Terms of Reference and Purpose of the Report

The quality of information, conclusions, and estimates contained herein are consistent with the level of effort involved in SRK's services, based on:

- Information available at the time of preparation
- Assumptions, conditions, and qualifications set forth in this report

This report is intended for use by IMMSA subject to the terms and conditions of its contract with SRK and relevant securities legislation. The contract permits IMMSA to file this report as a technical report summary with American securities regulatory authorities pursuant to the SEC S-K regulations, more specifically Title 17, Subpart 229.600, item 601(b)(96) - Technical Report Summary and Title 17, Subpart 229.1300 - Disclosure by Registrants Engaged in Mining Operations. Except for the purposes legislated under U.S. federal securities law, or with other securities regulators as specifically consented to by SRK, any other uses of this report by any third party is at that party's sole risk. The responsibility for this disclosure remains with IMMSA.

The purpose of this technical report summary is to report mineral resources for the Charcas project.

The effective date of this report is December 31, 2024.

References to industry best practices contained herein are generally in reference to those documented practices as defined by organizations, such as the Society for Mining Metallurgy and Exploration (SME), the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM), or international reporting standards as developed by the Committee for Mineral Reserves International Reporting Standards (CRIRSCO).

### 2.3 Report Version Update

This technical report summary is an update of a previously filed technical report summary and is the most-recent report. This report presents an update from the previously filed technical report summary entitled, "SEC Technical Report Summary Initial Assessment on Mineral Resources Charcas Mine San Luis Potosí, México, effective date December 31, 2023 and reported February 21, 2023." The current report accounts for 2024 mining depletion completed and updated mineral resources based on 2024 exploration activities.

### 2.4 Sources of Information

This report is based in part on internal Company reports, previous studies, maps, published government reports, and public information as cited throughout this report and listed in the References Section (Section 24).

Reliance upon information provided by the registrant is listed in Section 25 when applicable.

SRK’s report is based upon the following information:

- Site visits to the project
- Discussions and communication with the key personnel of the Charcas operation
- Data collected by the Company from historical mining operation
- Review of the methodologies of data collection and protocols, including sampling, QA/QC, assaying, etc.
- Horizontal maps, including geological interpretations, sampling, and sampling location, in paper format and part in AutoCAD files
- Original drillhole logging sheets
- Documents including interpretation sections, spreadsheets, and calculations (part of this information was provided in digital format (AutoCAD, Excel, Leapfrog Geo software, and Word))

## 2.5 Details of Inspection

Table 2-1 summarizes the details of the personal inspections on the property by each QP.

**Table 2-1: Site Visits to Charcas**

Expertise	Date(s) of Visit	Details of Inspection
Geology, Exploration, and Mineral Resources	June 16 to 19, 2021	Review drilling and sampling procedures, visit to underground workings, and review of procedures of estimation of resources
Geology, Exploration, and Mineral Resources	October 5 to 10, 2021	Review of procedures of resources estimation and supporting data, review of QA/QC procedures for sampling, and validation sampling
Geology, Exploration, and Mineral Resources	December 1 to 3, 2021	Review of procedures of estimation and check of resource blocks and supporting data
Geology, Exploration, and Mineral Resources	November 22 to 24, 2022	Review of exploration procedures and the updated resource blocks and supporting data and visit to underground workings
Geology, Exploration, and Mineral Resources	November 1 to 3, 2023	Review of exploration procedures and the updated resource blocks and supporting data and visit to preparation and chemical analysis laboratory
Geology, Exploration, and Mineral Resources	June 24 to 26, 2024	Review exploration procedures, 3D geological model, QAQC protocols, rock and core sampling and preparation and chemical analysis laboratory

Source: SRK, 2024

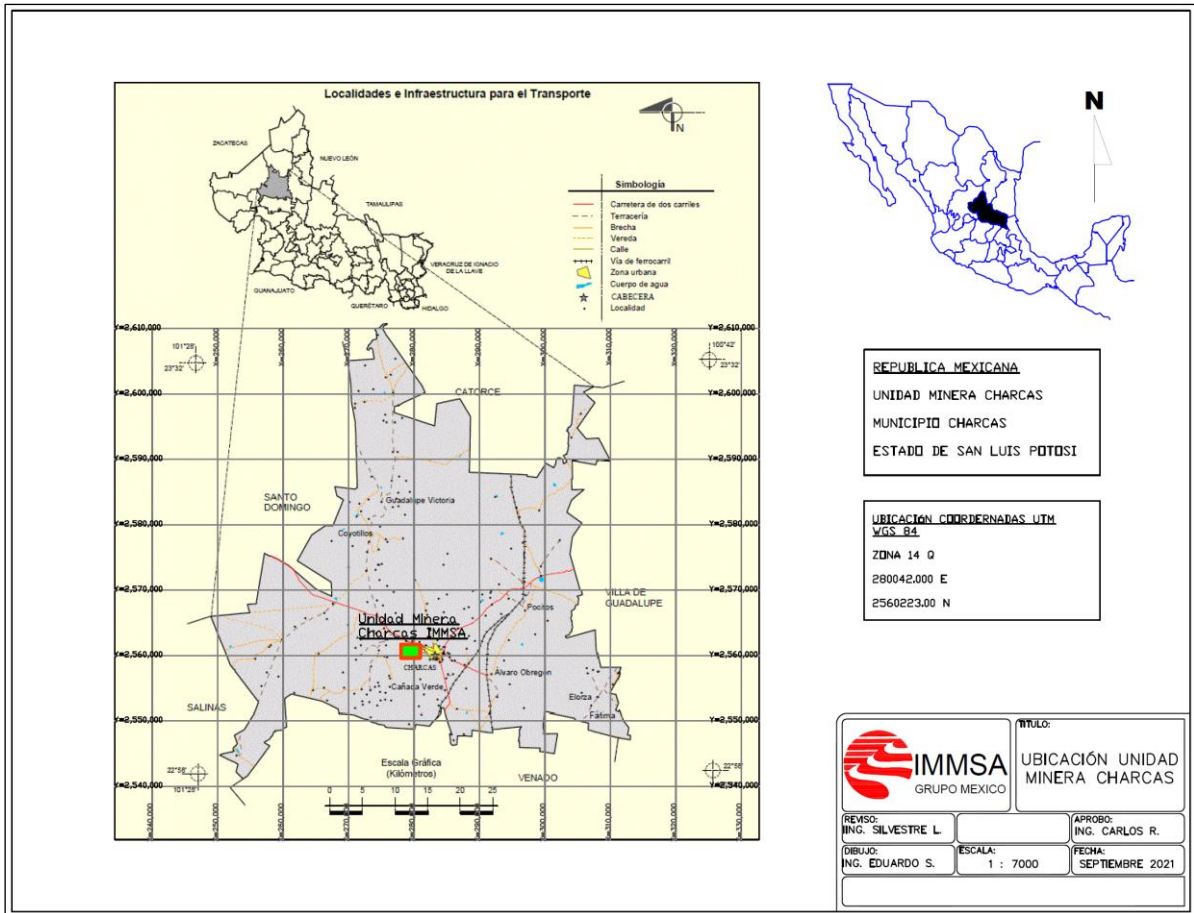
## 2.6 Qualified Person

This report was prepared by SRK Consulting (U.S.), Inc., a third-party firm comprising mining experts in accordance with § 229.1302(b)(1). IMMSA has determined that SRK meets the qualifications specified under the definition of QP in § 229.1300. References to the Qualified Person or QP in this report are references to SRK Consulting (U.S.), Inc. and not to any individual employed at SRK.

### 3 Property Description

#### 3.1 Property Location

The Charcas project is located in central México, approximately 110 kilometers (km) north of the city of San Luis Potosí in the central portion of the region of the same name (Figure 3-1). The mine uses the Universal Transverse Mercator (UTM) World Geodetic System (WGS84) Zone 14Q coordinate system and is located at 2 560 223 N and 280 042 E at an altitude of 2,150 meters above sea level (masl). Access to the mine is connected to the state capital by a paved road of 130 km in length.



Source: IMMSA, 2021

Figure 3-1: Charcas Location Map

#### 3.2 Mineral Title, Claim, Mineral Right, Lease, or Option Disclosure

IMMSA currently holds 13 mining titles over the Charcas project, covering a total area of 88,643.2597 ha, with the titles held 100% by the Company.

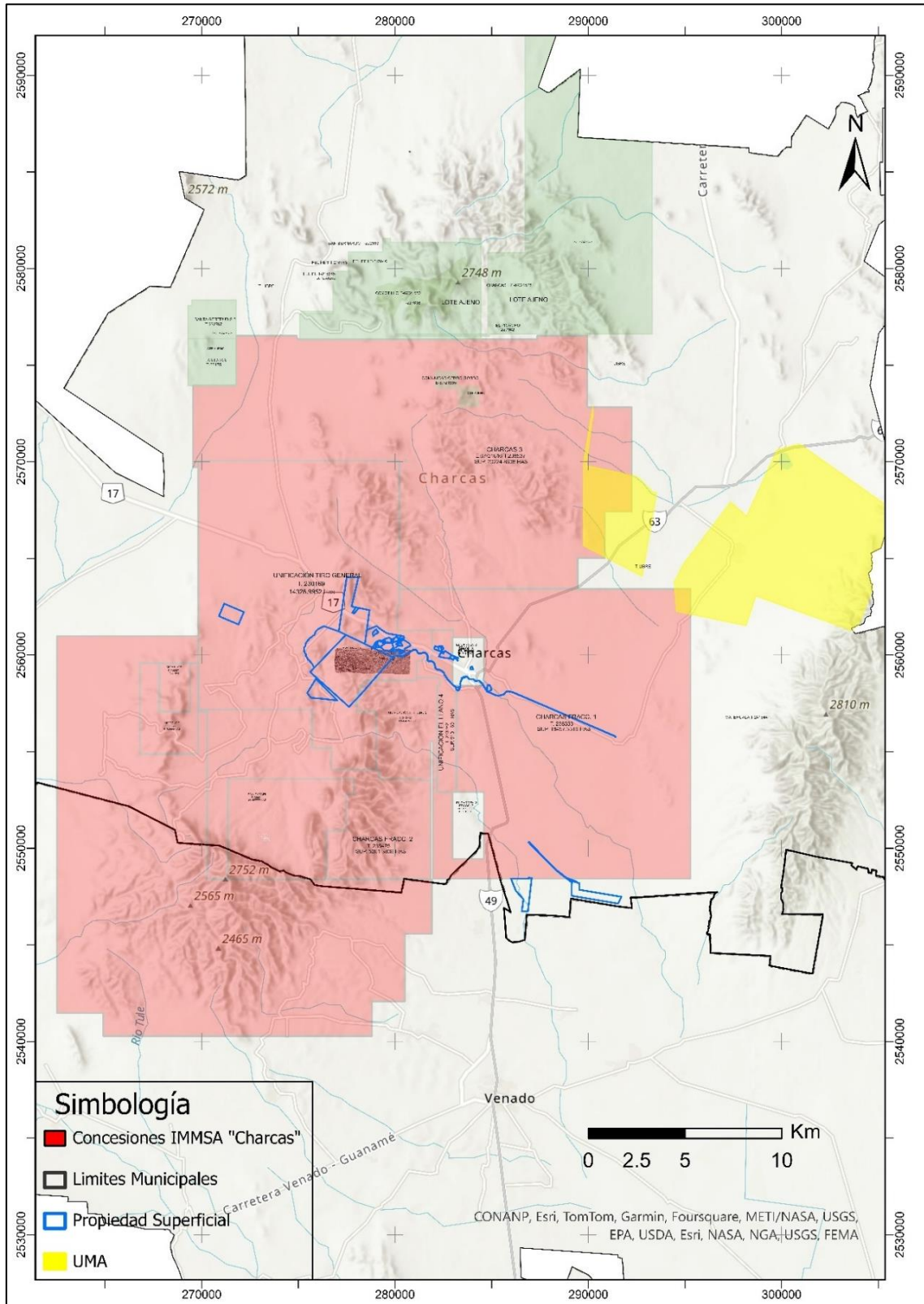
The 13 mining concessions are valid for 50 years and extendable to 50 more years. The oldest concession was originally awarded in 1974 and has a current expiration date for 2024; however, the concession may be extended 50 more years. IMMSA will extend the terms of all the current mining concessions and will work in all the required legal requirements when necessary.

IMMSA owns surface lands covering an area of 1,744.4 ha with rights to conduct any work or exploration required to advance or continue of activities within the Charcas project (Table 3-1, Figure 3-2, and Figure 3-3). SRK was provided legal documentation by IMMSA and has relied on that information for the purposes of this section. SRK has relied on this information and disclaims responsibility for its accuracy or any errors or omissions in that information.

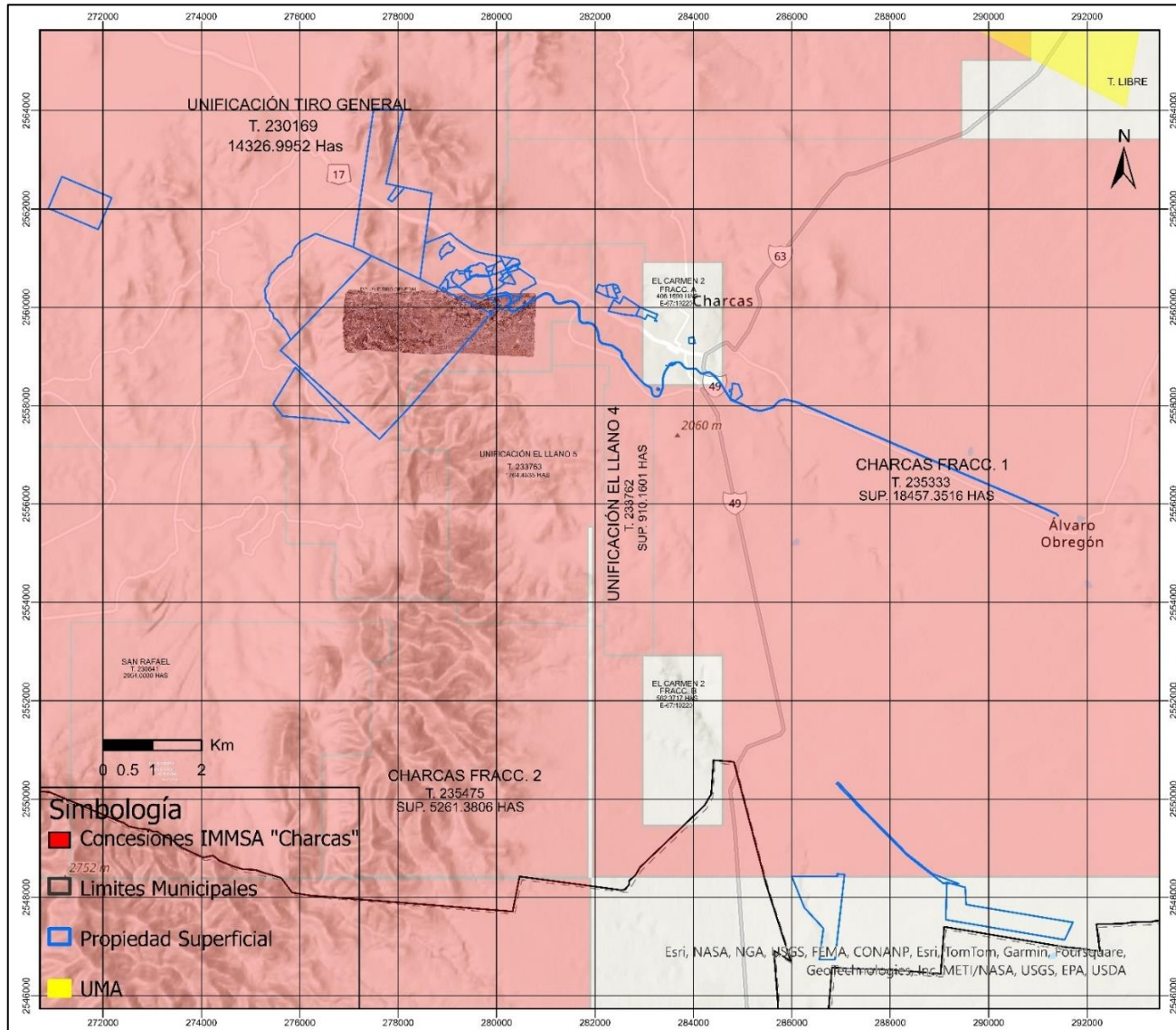
**Table 3-1: Charcas Mining Title Tenure**

Number	Title Number	Concession Name	Holder	Awarded	Valid Until	Surface (ha)
1	159990	EL BUEN SUCESO Y SU ANEXION	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	18.04.1974	17.04.2024	14.7866
2	218477	MORELOS	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	05.11.2002	23.03.2052	1,010.0000
3	219287	MORELOS 1	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	25.02.2003	24.02.2053	400.0000
4	230169	UNIFICACIÓN TIRO GENERAL	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	27.07.2007	26.07.2057	14,326.9952
5	230641	SAN RAFAEL	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	28.09.2007	27.09.2057	2,912.0000
6	233762	UNIFICACION EL LLANO 4	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	08.04.2009	30.05.2055	910.1601
7	233763	UNIFICACION EL LLANO 5	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	08.04.2009	01.12.2054	1,764.4635
8	235333	CHARCAS FRACCION 1	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	12.11.2009	11.11.2059	18,457.3516
9	235475	CHARCAS FRACCION 2	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	04.12.2009	03.12.2059	5,261.3806
10	238537	CHARCAS 3	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	23.09.2011	22.09.2061	20,024.8608
11	238935	CHARCAS 4	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	11.11.2011	10.11.2061	22,592.7206
12	245853	EL CARMEN 2 FRACCION B	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	07.12.2017	07.12.2067	562.3717
13	246432	EL CARMEN 2 FRACC. A	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	21.06.2018	21.06.2068	406.1690

Source: IMMSA, 2022



**Figure 3-2: Map Showing Concession Titles**



Source: IMMSA, 2024

**Figure 3-3: Map Showing Charcas's Concessions, Local Infrastructure, and Properties IMMSA.**

### 3.3 Mineral Rights Description and How They Were Obtained

The Charcas mining unit is made up of 13 mining concessions, which were requested with an antiquity ranging from 1901 to 2010, covering a total area of 88,643.2597 ha.

The procedure for each of the mining concessions begins with the presentation to the Secretaría de Economía, Dirección General de Minas of México, of the Application for Concession or Mining Assignment, format SE-FO-10-001, with all the sections duly completed and accompanied by the required documentation, including payment of the application study and procedure, photographs of the physical evidences of the boundary markers following the standards of the mining law, and information supporting the existence of the person or entity responsible of the application.

The following are the obligations of the registrant to retain the properties at Charcas:

- Execute and verify the works and works foreseen by the Mexican Mining Law in the terms and conditions established by it and its regulations.
- Pay the mining rights established by the law on the matter.
- Comply with all the general provisions and the official Mexican standards applicable to the mining-metallurgical industry in terms of safety in mines and ecological balance and environmental protection.
- Allow the personnel commissioned by the Mexican mining entity (Secretaría) to carry out inspection visits.
- The execution of works and works will be proven by means of investments in the area covered by the mining concession or by obtaining economically exploitable minerals. The regulations of the law will set the minimum amounts of the investment to be made and the value of the mineral products to be obtained.
- The holders of mining concessions or those who carry out works and works by contract must designate an engineer legally authorized to practice as responsible for compliance with the safety regulations in the mines, as long as the work involves more than nine workers in the case of coal mines and more than 49 workers in other cases.
- The mining law stipulates investments in works and works that are mandatory for the registrant of a mining concession.
- The investments in the works and works foreseen by the law that are carried out in mining concessions or the value of the mineral products obtained must be equivalent at least to the amount that results from applying the quotas to the total number of hectares covered by the mining concession or the grouping of these.

The reports that are delivered to the Mexican mining entity (Secretaría) to verify the execution of the mining works and works must contain:

- Name of the holder of the mining concession or of the person who carries out the mining works and works by contract
- Name of the lot or of the one that heads the grouping and title number
- Period to review
- Itemized amount of the investment made or amount of the billing value or settlement of the production obtained or an indication of the cause that motivated the temporary suspension of the works or works
- Surplus to be applied from previous verifications and their updating

- Amount to be applied in subsequent checks
- Location plan and description of the works carried out in the period

The mining entity (Secretaría) shall consider the works and works of exploration or exploitation to have not been executed and legally verified when, in the exercise of its powers of verification, it finds:

- That the verification report contains false data or does not conform to what was done on the ground
- That the non-adjacent mining lots object of the grouping do not constitute a mining or mining-metallurgical unit, from the technical and administrative point of view

In the above cases, the Secretaría will initiate the cancellation procedure of the concession or of those mining lots incorporated into the grouping, in the terms of Article 45 of the Mexican Mining Law, final paragraph of the Law.

### **3.4 Encumbrances**

SRK is not aware of any legal encumbrances on IMMSA-owned or leased surface or mineral rights but has relied on IMMSA's legal documentation regarding this aspect of the project.

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

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

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

Mining duties must be paid to the Secretaria de Economía in advance in January and July of each year and are determined on an annual basis under the Mexican Federal Rights Law.

Duties are based on the surface area of the concession and the number of years since the mining concession was issued. Mining duties totaled MXN\$37,354,090.00 in 2024.

Permits to conduct mining work at Charcas have been obtained. Existing permits will require updates or extensions based on the life-of-mine (LoM) plan outlined in this report, and additional permits will be necessary should the method of tailings storage change.

### **3.5 Other Significant Factors and Risks**

The mine is subject to risk factors common to most mining operations in México, and IMMSA has an internal process in place to study and mitigate those risks that can reasonably be mitigated. No known factors or unusual risks affect access, title, or the ability to conduct mining. Specific exploration activities are authorized into 2025.

### **3.6 Royalties or Similar Interest**

There is no payment for royalties or similar interests. 100% of the concessions are owned by IMMSA.

## **4 Accessibility, Climate, Local Resources, Infrastructure, and Physiography**

### **4.1 Topography, Elevation, and Vegetation**

The property lies within the Mexican Mesa Central or Altiplano. This region is flanked to the west by the Sierra Madre Occidental and to the east by the Sierra Madre Oriental Mountain ranges. The Altiplano in this region is dominated by broad alluvium-filled valleys between mountain ranges with an average elevation of approximately 1,700 masl. Mine is located at an altitude of 2,150 masl. Local mountain ranges reach 3,000 masl. Elevations on the property itself range from 2,050 to 2,450 masl, and the terrain is moderate to rugged.

Vegetation is sparse and consists mainly of grasses, low thorny shrubs, and cacti with scattered oak forests at higher elevations. Figure 4-1 shows the characteristics of the area surrounding the tailings facility at Charcas.



Source: Ariel Image whit Dron from 180m, IMMSA, 2024.

**Figure 4-1: Photography of the Charcas Operation Area and the Tailings Facility, Looking to NW**

## 4.2 Means of Access

Access to the Charcas project is well supported via public links. The state of San Luis Potosí has an area of 62,304.74 square kilometers (km<sup>2</sup>), has a network of railways (over 1,279 km), and has good road infrastructure covering 12,524 km in total, of which 6,890 km are paved, 5,538 km lined, and 96 km are dirt roads. A paved road connects Charcas to the city of Matehuala via a federal highway and begins at the northeast of the Charcas townsite. Charcas connects with Highway 63, which leads directly to the capital of San Luis Potosí 130 km away. The paved road also connects with Highway 17, which in turn connects with Highway 54 that leads to the city of Zacatecas 218 km to the west.

## 4.3 Climate and Length of Operating Season

The climate in central México is warm and arid. Temperatures vary from 0 to greater than (>) 40 degrees Centigrade (°C), with an average temperature of 17°C. According to the Köppen climate classification, the climate of Charcas corresponds to the BSh category (warm semi-arid). The average annual precipitation is approximately 300 millimeters (mm), with rain typically occurring between June to October. Exploration, development, and mining activities can be completed year-round.

## 4.4 Infrastructure Availability and Sources

The Charcas project is a currently producing mining operation that includes three underground mines (San Bartolo, Rey-Reina, and La Aurora) and one flotation plant that produces zinc, lead, and copper concentrates with significant amounts of silver. The asset is considered mature and is reported to be one of México's largest zinc producers.

### 4.4.1 Water

The operation has an underground water concession for the extraction of 1,113,850 cubic meters (m<sup>3</sup>) per year. Additionally, Charcas has other minor concessions from different surficial sources. The water consumption comes from three main sources, and Table 4-1 shows the consumption numbers from January to December 2024:

- Recovery of the process water from the tailings dam and workings; 4,553,214 m<sup>3</sup> were recovered
- Fresh water from concession wells, which represented 617,384 m<sup>3</sup>

**Table 4-1: Water Consumption, January to December 2024**

Month	Fresh Water (m <sup>3</sup> )	Recovered Water (m <sup>3</sup> )
January	58516	402,108,000
February	37630	386,561,000
March	39399	346,619,000
April	68372	389,589,000
May	61685	383,166,000
June	51115	413,329,000
July	48045	359,261,000
August	42431	415,338,000
September	49624	334,670,000
October	51347	384,265,000
November	53478	365,950,000
December	55742	372,358,000
<b>Total</b>	<b>617,384</b>	<b>4,553,214,000</b>

The fresh water supply is obtained from six deep wells: three in Charcas (Clérigo-Laborcilla-Campo Santo Stations) 17 km away and three in Venado. Initially, the water is stored in pools adjacent to the wells, pumped to a pumping pool (Clérigo-Laborcilla), and taken to the freshwater tanks and pools within the mining operation.

#### 4.4.2 Electricity

The unit receives a power supply of 115,000 volts in two 7.5-Mega Volt-Amp (MVA) transformers, distributed to electrical substations located in the different areas of mining operation. The consumption for the period of January to November 2024 was 49.1 gigawatt-hours (GWh).

Electricity is supplied by Eólica el Retiro S A P I DE CV, Energía San Luis de la Paz, SA de CV, and since august 2024 with the E. Fenicias (payment for transmission).

Two generators are used as backup:

- One Caterpillar-brand generator, with an acoustic cabin of 1,500 kilowatts (kW), a diesel engine, and a 2,000-liter (L) fuel tank, provides energy to the mine’s pumping stations.
- One Caterpillar-brand generator, with an open cabin of 500 kW, a diesel engine, and a 1,200-L fuel tank, provides electricity to the employee neighborhood that is attached to the IMMSA industrial zone.

#### 4.4.3 Fuel

Average annual diesel consumption is 2,761,486 L/year. Fuel is stored in a series of tanks located on the surface. The diesel is sent through a sequence of tubes to the various deposits inside the mine, and from these it is fed to the equipment through dispatch guns.

The current diesel supplier is Grupo Saro , with the diesel coming from a local distribution point in the City of San Luis Potosí.

The diesel is received in tanks with a capacity of 8,000 L, with a supply frequency of one to two tanks per week. Diesel is supplied through scheduled supply orders.

2,761,483 L of diesel and 46,346 L of gasoline were consumed between January and November of 2024. The gasoline is supplied by a gas station located in the city of Charcas located 5 km from the mining unit.

#### **4.4.4 Personnel**

The site provides good access to qualified personnel with a history of mining within the region and from the neighboring region. The Charcas mine site currently employs 990 staff and unionized employees.

#### **4.4.5 Supplies**

Local communities in the surrounding area are well suited with basic accommodations, fuel, industrial materials, contractor services, and bulk suppliers. Supplies to the mine can be transported with ease via the rail or road network system. The unit's supplies are received from suppliers sourced from different states of the country, with ground transportation the main supply methodology (trucks, vans, or trailers).

At the mine, 351 tires were replaced on the mining fleet. In the plant, 59,500,000 kilograms (kg) of sodium cyanide and 434,550 kg of copper sulfate were consumed between January and December 2024.

## 5 History

The following section provides a brief summary of the history of the project, reconstructed from historical publications and internal corporate records. Records of activity on the Charcas property precede the 1960s; however, records from this period are incomplete.

### 5.1 Previous Operations

Mining activity at the Charcas project dates back over hundreds of years. The first exploitation in the district were carried out in 1583 in the Leones and Santa Isabel veins, and since that time the mines have been exploited by several companies. In 1911, Metalúrgica Nacional and American Smelting and Refining Company acquired exploitation rights of Minera del Tiro General, and in 1924, 100% ownership passed to Asarco, S.A, which built a plant that came into operation in 1925. Mining has continued throughout the Charcas project's history to the present, and production has gradually increased over time. In 1978, the name changed to Industrial Minera México S.A de C.V. The Charcas mine is characterized by low operating costs and good-quality ores and is situated near the zinc refinery. Table 5-1 shows the summary of the information of production and characteristics of the concentrates produced at Charcas between 2002 and 2024. Table 5-2 summarizes the production for the year 2024 of January to December.

**Table 5-1: Recent Production Summary of Charcas (2002 to 2024)**

Concept	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
<b>Tonnes milled (x 1,000)</b>	<b>1,343</b>	<b>1,213</b>	<b>1,317</b>	<b>1,328</b>	<b>1,344</b>	<b>1,258</b>	<b>1,169</b>	<b>1,162</b>	<b>1,165</b>	<b>1,124</b>	<b>1,164</b>	<b>1,180</b>	<b>752</b>	<b>1,040</b>	<b>1,229</b>	<b>1,250</b>	<b>1,290</b>	<b>1,293</b>	<b>1,146</b>	<b>1,232</b>	<b>1,191</b>	<b>1,270</b>	<b>1,301</b>	
<b>Grades (mill feed)</b>																								
Gold (Au) (g/t)																0.11	0.12	0.14	0.15	0.06	0.09	0.10	0.07	0.08
Ag (g/t)	58	53	54	53	45	53	55	52	54	51	52	50	43	49	52	50	53	46	48	51	51	60	52	
Pb (%)	0.38	0.38	0.33	0.29	0.20	0.29	0.53	0.47	0.40	0.37	0.26	0.16	0.13	0.15	0.15	0.18	0.15	0.12	0.21	0.17	0.17	0.27	0.19	
Cu (%)	0.24	0.23	0.20	0.20	0.22	0.20	0.23	0.22	0.23	0.24	0.27	0.32	0.30	0.35	0.40	0.36	0.36	0.37	0.37	0.37	0.40	0.35	0.33	
Zn (%)	5.44	5.85	5.76	5.68	5.37	5.68	5.70	5.50	5.10	4.83	4.42	4.00	3.21	2.81	2.57	2.61	2.41	2.20	2.46	2.32	2.41	2.40	2.08	
Tonnes of Pb concentrate	6,156	7,359	7,143	5,987	4,387	5,987	9,695	7,947	6,817	5,389	3,744	1,770	821	1,501	1,532	1,805	1,418	1,041	2,023	1,720	1,745	1,694	1,436	
<b>Assays</b>																								
Au (g/t)																2.63	2.82	4.39	5.81	3.34	6.11	5.32	5.99	8.35
Ag (g/t)	4,674	4,086	4,108	4,720	4,660	4,720	3,253	3,782	4,714	4,466	5,291	5,992	7,408	9,282	9,294	8,347	10,246	11,557	7,444	8,046	9,165	9,030	7916	
Pb (%)	50.66	41.78	38.44	36.50	27.39	36.50	46.74	52.81	48.15	50.10	40.50	34.61	48.66	55.42	56.28	59.96	57.43	48.81	62.73	60.24	59.39	61.23	59.10	
Cu (%)	8.56	8.48	8.08	8.83	9.22	8.83	5.34	6.96	8.31	7.68	9.73	10.99	5.84	4.59	5.03	4.70	4.47	6.90	4.23	5.79	5.75	6.00	4.89	
Zn (%)	5.58	11.22	13.03	12.91	16.91	12.91	10.16	6.85	7.33	7.64	9.99	7.08	4.38	3.37	3.19	2.74	2.98	6.90	2.45	2.46	2.10	2.03	1.93	
Tonnes of Cu concentrate	4,428	2,586	2,451	2,913	4,358	2,913	3,569	3,177	3,097	3,651	4,744	9,578	7,340	12,338	14,648	12,680	12,725	15,102	12,883	14,068	14,001	13,086	12,045	
<b>Assays</b>																								
Au (g/t)																1.11	1.14	2.14	2.89	2.95	3.58	2.94	3.16	3.77
Ag (g/t)	2,973	2,388	2,289	2,067	2,199	2,067	1,620	1,519	1,715	1,683	1,890	1,760	1,436	1,458	1,731	1,849	2,063	1,901	1,945	2,007	2,126	2,394	2,606	
Pb (%)	13.84	13.61	10.28	10.54	9.27	10.54	9.04	8.90	8.10	8.96	10.97	6.49	2.54	2.97	3.05	4.02	3.12	2.40	4.83	4.86	5.42	7.16	8.63	
Cu (%)	21.60	26.56	25.49	27.71	26.27	27.71	28.82	29.54	30.26	29.70	27.54	22.47	20.80	21.16	24.44	24.78	25.38	25.00	24.01	23.73	23.26	21.33	21.60	
Zn (%)	9.35	4.73	8.77	5.32	6.89	5.32	3.26	3.03	2.68	3.37	4.20	9.20	13.41	14.52	10.86	11.25	10.91	9.18	10.69	11.82	10.04	10.26	10.18	
Tonnes of Zn concentrate	117,686	116,570	123,848	123,585	117,716	123,585	109,702	108,872	101,805	93,646	93,165	83,855	42,685	49,462	53,371	54,474	53,893	50,627	49,117	49,613	43,025	45,865	44,910	
<b>Assays</b>																								
Au (g/t)																0.30	0.31	0.32	0.35	0.31	0.44	0.31	0.35	0.28
Ag (g/t)	126	122	148	129	116	129	117	124	127	146	158	152	147	128	142	148	172	141	151	176	230	213	177	
Pb (%)	0.50	0.50	0.62	0.43	0.37	0.43	0.73	0.66	0.62	0.75	0.64	0.44	0.35	0.30	0.31	0.40	0.37	0.25	0.51	0.57	0.63	0.70	0.59	
Cu (%)	0.78	0.79	0.78	0.67	0.68	0.67	0.67	0.76	0.71	0.74	0.82	1.06	1.11	1.09	1.18	1.22	1.19	1.05	1.12	1.34	1.75	1.88	1.57	
Zn (%)	57.14	57.42	57.34	57.18	57.05	57.18	57.04	56.98	56.78	56.25	53.89	54.49	54.19	54.35	54.05	55.29	55.13	54.46	53.32	53.35	51.40	52.41	52.32	

Source: IMMSA, 2024

**Table 5-2: Production Summary of Charcas (2024)**

<b>Production</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
<b>Total (t)</b>	<b>114,888</b>	<b>110,446</b>	<b>99,034</b>	<b>111,311</b>	<b>109,476</b>	<b>118,094</b>	<b>102,646</b>	<b>118,668</b>	<b>95,620</b>	<b>109,790</b>	<b>104,577</b>	<b>106,388</b>	<b>1,300,938</b>
Rate (tonnes/day (t/d))	4,541	4,508	4,502	4,452	3,808	4,415	4,106	4,238	4,250	3,992	4,101	4,576	4,279
Au	0.06	0.08	0.10	0.08	0.07	0.09	0.08	0.07	0.08	0.07	0.07	0.07	0.08
Ag	51	52	48	53	47	49	65	48	50	53	54	57	52
Pb	0.20	0.17	0.19	0.18	0.19	0.13	0.21	0.20	0.21	0.22	0.18	0.27	0.19
Cu	0.35	0.41	0.33	0.26	0.30	0.36	0.34	0.29	0.32	0.32	0.33	0.32	0.33
Zn	1.95	2.09	2.42	2.46	2.20	1.85	2.07	2.24	1.97	2.00	1.88	1.82	2.08
<b>Recovery (%)</b>													
Au	88.46	70.48	89.98	70.00	85.10	71.37	80.31	59.13	47.88	61.54	59.96	55.28	70.92
Ag	64.77	73.64	77.07	70.98	79.10	64.86	76.74	82.96	80.21	74.58	77.78	78.54	74.80
Pb	31.48	21.34	25.46	26.67	38.91	24.52	22.15	37.17	44.58	48.40	36.92	39.05	33.72
Cu	55.03	65.84	65.08	53.31	49.35	56.51	66.72	64.92	68.76	67.00	66.46	50.08	60.81
Zn	88.74	85.34	86.30	84.37	89.89	81.05	84.56	84.77	90.54	90.61	91.16	87.07	86.90
<b>Metal content</b>													
Au (kg)	6.14	6.32	9.08	5.96	6.81	7.26	6.94	4.67	3.48	4.85	4.11	4.01	69.84
Ag (kg)	3,809	4,198	3,676	4,175	4,093	3,755	5,102	4,730	3,806	4,347	4,370	4,755	50,706
Pb (t)	70.80	39.01	47.61	53.83	79.12	37.99	47.13	88.77	88.18	114.70	69.89	111.89	848.78
Cu (t)	223.85	301.33	214.40	154.93	161.42	240.83	233.55	225.31	208.13	232.74	231.77	172.38	2,601.28
Zn (t)	1,993	1,970	2,066	2,309	2,160	1,773	1,798	2,257	1,704	1,985	1,789	1,690	23,496
Zn equivalent (thousand pounds)	9,874	10,762	10,044	10,368	10,074	9,565	10,654	11,193	9,044	10,413	9,876	9,536	121,624

Source: IMMSA, 2024

## **5.2 Exploration and Development of Previous Owners or Operators**

Since 1924, Asarco S.A. has controlled the Charcas property and operations. Information regarding exploration and development activities completed by previous owners is not available. Previous owners included Metalúrgica Nacional y American Smelting and Refining Company and Minera del Tiro General. Exploration and sampling used to contribute to the current mineral resources are limited to work by the current company and are detailed in Section 7 of this report.

## 6 Geological Setting, Mineralization, and Deposit

### 6.1 Regional, Local, and Property Geology

#### 6.1.1 Regional Geology

The Charcas mining district is in the east central part of the Central Mesa in central México. The Charcas Zn-Pb-Ag deposit is an historical district discovered and exploited for silver by Spaniards in 1572. The exploitation is still active, and reportedly over 30 million tons of ore has been extracted.

The local geology could be divided in two domains (east and west) separated by a north-northwest to south-southeast regional fault (Maxima Fault, Figure 6-1).

Triassic rocks (Late Triassic in age) form the western block. They consist of black shales, sandstone, and conglomerate of the Zacatecas-La Ballena formations and conglomerate and andesitic to rhyolitic volcanic rocks of the Nazas Formation (Centeno-García and Silva-Romo, 1997; Barbosa et al., 2008; Zavala-Monsivais et al., 2012). These rocks were uplifted and eroded during the Middle Jurassic.

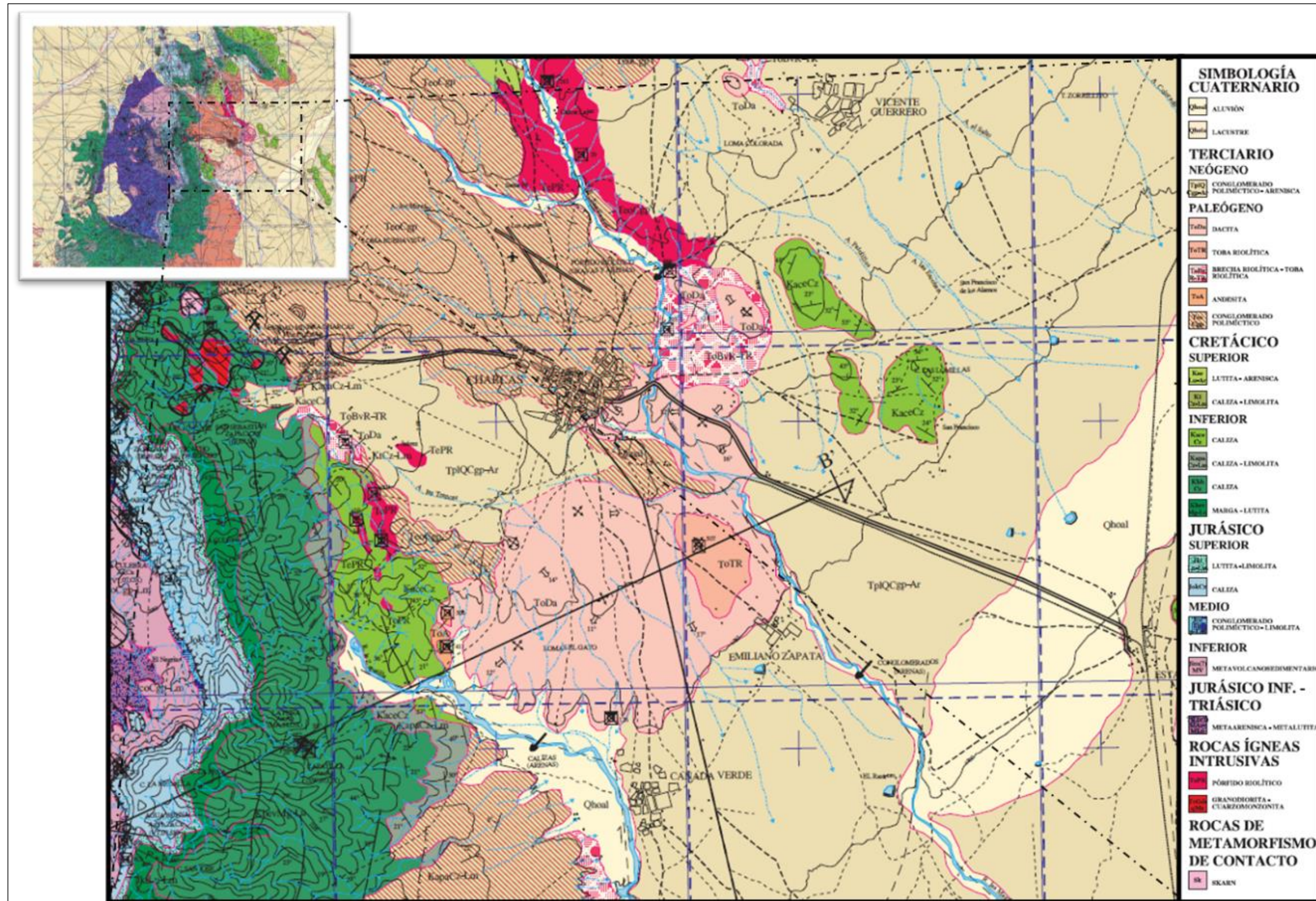
The eastern block consists of Mesozoic-aged sedimentary rocks covered by Cenozoic volcanism. The Upper Jurassic La Joya formation unconformably overlays the Triassic Lower-Jurassic formations.

The La Joya Formation is composed by reddish shale, andesitic tuff, and arenaceous conglomerate that contains clasts of the underlying La Nazas Formation. The La Joya Formation is unconformably overlain by the Zuloaga Formation of Upper Jurassic age, which in the Charcas area is comprised of about 600 m of thick bedded limestone, the upper portion of which contains black chert lenses.

The La Caja Formation of Upper Jurassic age conformably overlies the La Joya Formation and varies upwards from fine-crystalline limestone to grey, argillaceous limestone with black calcareous concretions; to argillaceous limestone, and uppermost, to blue-grey limestone with black chert bands (Butler, 1972).

Six formations of Cretaceous age make up the uppermost portion of the stratigraphic sequence: the Taraises and Cupido Formations, comprised of argillaceous limestone with iron nodules; the La Peña Formation, comprised of calcareous shale and argillaceous limestone with black chert bands; the Cuesta del Cura Formation, of Albian to Cenomanian age that is made up of limestone with argillaceous intercalations and black chert bands; the Indidura Formation, of Turonian age comprised of thin strata of argillaceous limestone, shales, and mudstone; and the Caracol Formation, of Coniacian to Maastrichtian age made up of thin strata of sandstone and shale.

The entire Mesozoic column was deformed during the Laramide Orogeny (which started 70 to 80 million years ago (Ma) during the late Cretaceous). The compression formed tight to open folds with well-developed axial cleavage and a north-to-northwest trend (Nieto-Samaniego et al., 2005). This deformational fabric is superimposed upon Triassic northwest-folding and Jurassic east-trending faults that were subsequently reactivated during the Laramide Orogeny (Tristan-Gonzalez and Torres-Hernandez, 1994). All the deformed Mesozoic column is crosscut by granodioritic intrusions that locally develop a discrete metasomatic aureole. Cenozoic units cover the deformed sedimentary column. They are mostly conglomerates and volcanic rocks of andesitic to rhyolitic composition. The last Cenozoic magmatic felsic event is characterized by the presence of fluorine-rich rhyolites with normative topaz (Orozco-Esquivel et al., 2002; Tristan et al., 2009). Locally, very small alkaline basalt flows of Miocene to Quaternary age also appear.



Source: SGM et. al., 2000

Figure 6-1 Regional Geology Map

## 6.1.2 Local Geology

The Charcas district presents a complex magmatic history. Swarm dikes consist predominantly of monzogranite, granodiorite, and granite. They represent four distinctive magmatic pulses dated at 157, 50, from 48 to 45, and 30 Ma.

### **Structural Geology**

The main structure observed in the area is an anticline with an approximate north-south orientation called San Rafael. There are also several local anticline and synclinal structures both in Triassic rocks and on the flanks of this folding.

Fault and fracture systems active during the Laramide Orogeny are mineralized by the CIC intrusions. The intrusives appear to have created extensional fissures that are mineralized, as well.

Three systems of mineralized structures are defined:

- A northwest-trending set that includes the Leones and Santa Isabel, Santa Rosa, La Viejita, Santa Inés, Veta Nueva, San Rafael, and Progreso veins. This northwest set is a subordinate group of coincident east-west-trending veins that includes the Las Margaritas, El Potosí, and San Rafael veins.
- Faults and veins that are oriented sensibly to the northeast, such as the San Salvador and San Sebastián veins
- Faults and concentric mineralized fractures that are on the margins of the El Temeroso stock. The main mineralized replacement bodies are in this system.

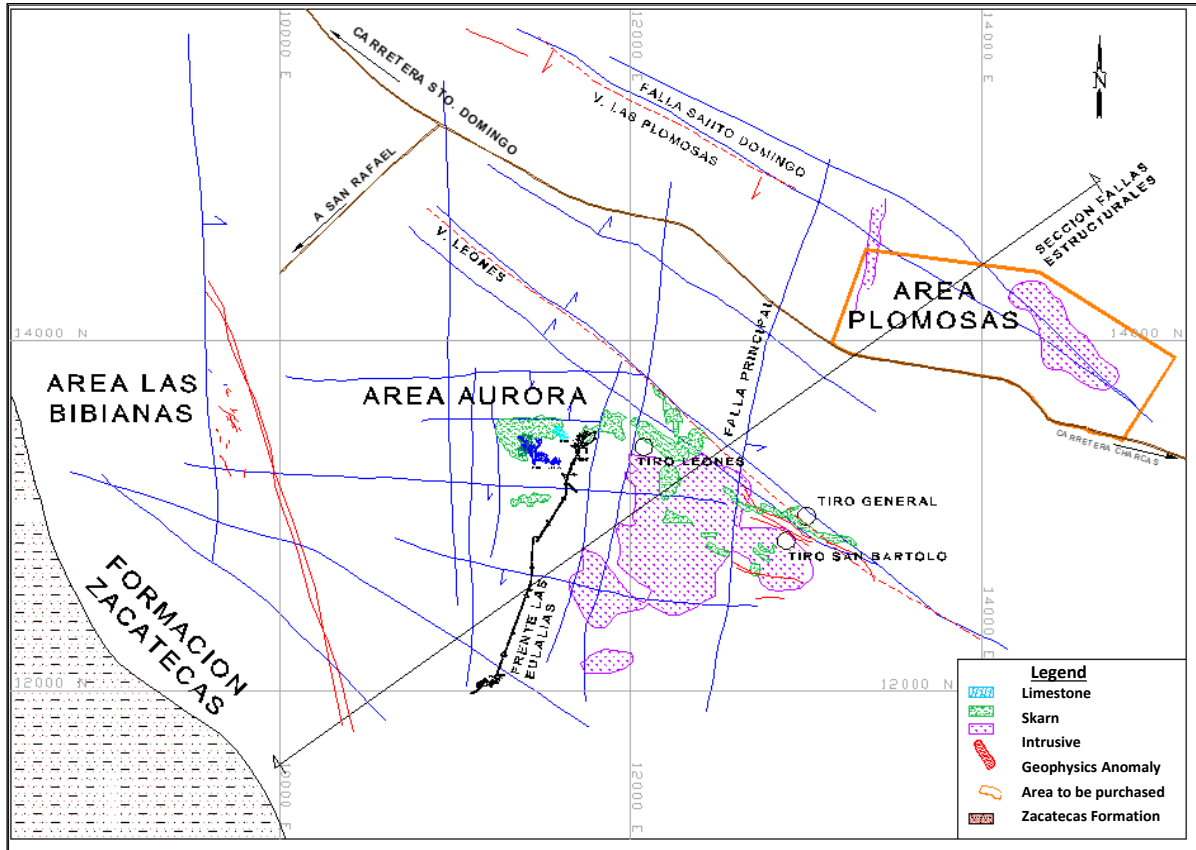
### **Sedimentary Rocks**

Post-mineralization, a period of uplift was followed by a relatively short period of extension and a prolonged erosion that resulted in a deposit of conglomerate and terrigenous material that filled the depressions. These continental sediments are interspersed and/or cut by intrusive igneous rocks of age 46.6 Ma and andesites of an age of 44 Ma.

### **Intrusive Rocks**

The most significant intrusive rock in the local area (in terms of importance and size) are the rocks associated with the Temeroso stock. This intrusive is part of the CIC varying from quartz monzodiorite to monzogranite. The CIC mineralogical assemblage shows variable quantities of plagioclase + alkaline feldspar + quartz ± amphibole + biotite ± orthopyroxene + clinopyroxene + iron-titanium oxides. The CIC was emplaced in Triassic to upper Cretaceous sedimentary (Dobarganes et al., 2012b). The Temeroso stock has been age-dated by potassium (K)-argon (Ar) dating methods and aged at 46.6 Ma (determined the crystallization of biotite). It is possible that crystallization extended until the end of the Eocene (36 Ma).

Figure 6-2 presents Charcas's local geology map. The best outcrops of the CIC are exposed to the west of the San Bartolo Mine and at Rampa El Rey, which can be found extending towards the southwest of the San Sebastián Mine.



Source: IMMSA, 2021

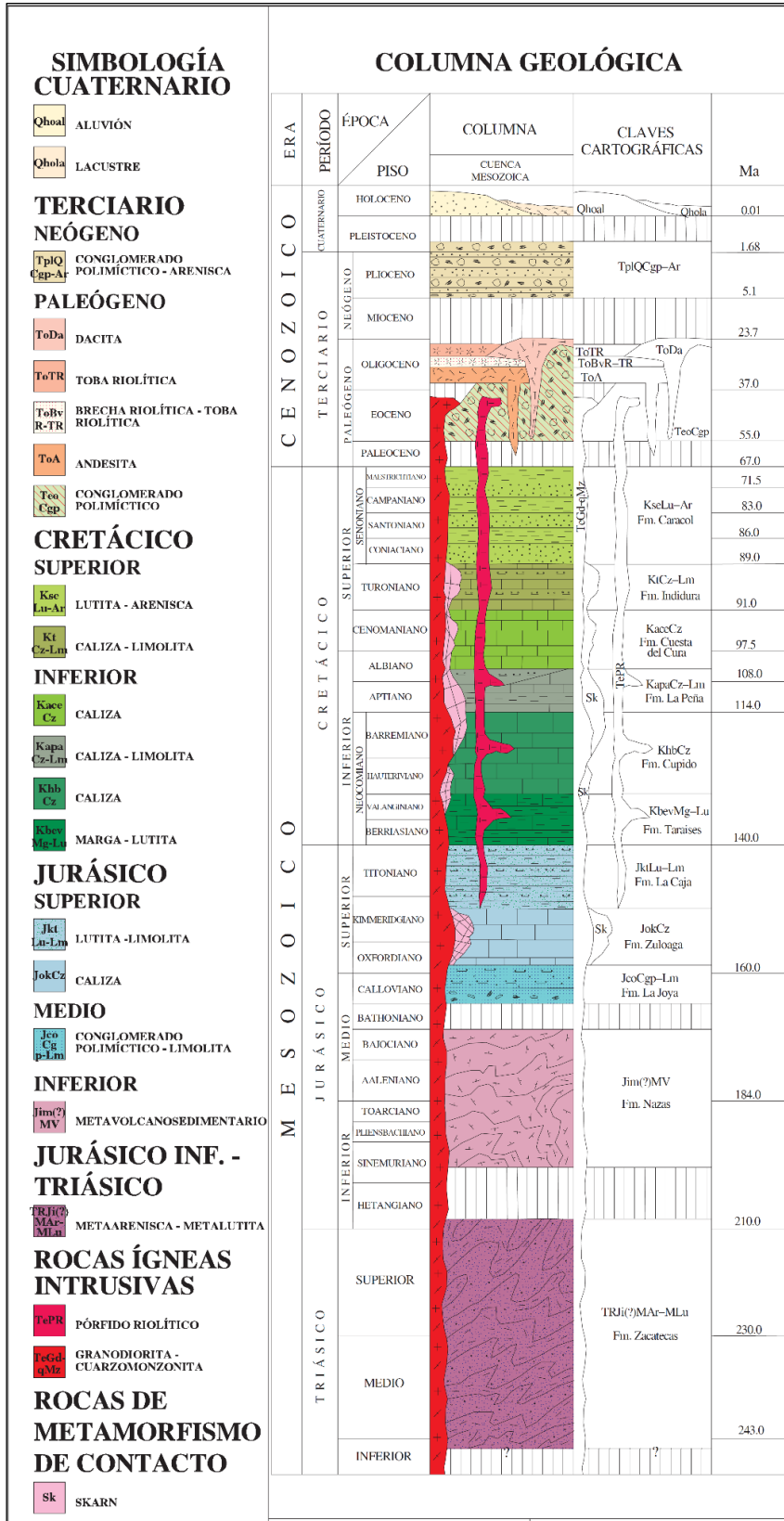
**Figure 6-2: Charcas’s Local Geology Map**

Rhyolitic and granitic dikes closely related to the Temeroso stock are distributed in the regional fracturing system and display trends running north-south and east-west. The age of the dikes predates mineralization as they form the host rock for the fracture filling mineralization of the deposits.

**Extrusive Rocks**

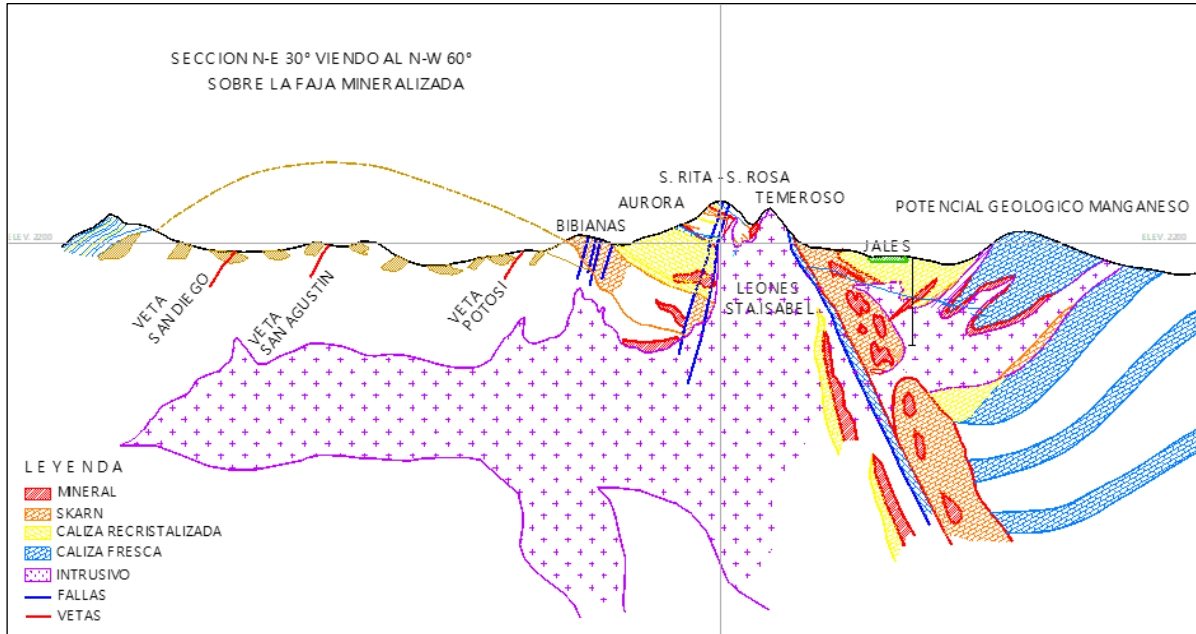
Volcanic rocks constitute isolated outcrops, forming plateaus with steep edges. Some of them are located to the east and south of the population of Charcas where they reach a thickness of between 150 and 200 m. They are made up of tuffs, lithic tuffs, rhyolitic tuffs, and a rhyolitic ignimbrite.

Figure 6-3 presents the stratigraphic column for the Charcas district. Figure 6-4 shows a schematic vertical section across the mineralization trend of Charcas.



Source: SGM et al., 2000

Figure 6-3: Stratigraphic Column of the Charcas District



Source: IMMSA, 2021

**Figure 6-4: Schematic Vertical Cross-Section N30°E Looking to N60°W across the Mineralization Trend of Charcas**

### 6.1.3 Property Geology

Two main types of mineralization are found at Charcas. IMMSA describes the mineralization as either veins or replacement bodies (in the form of skarn/mantos). The mineralization of Charcas is associated to fracture systems that strike at N65°W to N80°E and dip up to 70°NE and up to 60°SW. Near the Tiro General Mine, there is fissure-fill mineralization, which forms parallel to the contact between the intrusive and the limestones. The Leones Vein is hosted in limestone, and the Santa Isabel vein is hosted in the intrusive and is characterized by reduced widths. The formation of the mineralized fissures is associated to normal faulting.

The Principal Fault (which runs parallel to the Temeroso intrusive stock boundary) cuts all the mentioned veins. Many replacement orebodies are reported to be occurring along the fault. The El Rey and La Reyna replacement orebodies are generated by the Leones-Santa Isabel trend to the west of the Principal Fault. Parallel to the Temeroso intrusive contact is the Bufa Fault that controls other replacement mineralization.

Replacement mineralization occurs as massive sulfides, mineralized breccias, and as “banded white tiger ore” (Levresse et al., 2015). The mineralization of the veins and the associated replacements are similar, including the following hypogene and supergene minerals: arsenopyrite, pyrite, sphalerite, tetrahedrite, galena, bornite, covellite, digestive, chalcocite, native silver, and hematite goethite. This mineralogy is typical of Pb-Zn-Cu-Ag deposits in carbonate rocks. The Leones vein type is considered to be the first stage of mineralization and the second related to the Santa Isabel type, which have copper and silver enrichment associated. Copper contents increase with depth, and lead and silver values decrease towards the east, whereas zinc and copper increase. Lead decreases at depths below 250 m.

The replacement mineralized bodies have irregular forms and sometimes are tabular, indicating that some bedding planes are more favorable for replacement mineralization. The extension and distribution of the replacement mineralization following the structural trends, and the contact with the intrusive is considered variable. The horizontal extension of the replacements and veins reach up to 1,000 m in the area of San Bartolo, 550 m in Leones, and 600 m in Aurora. The mineralization is open at depth, and the tested vertical extension in San Bartolo and Leones is approximately 900 and 450 m in the Aurora area.

The Charcas deposit, as currently known, extends 2.6 km west-northwest to east-southeast and 2.8 km north-northeast to south-southwest.

## 6.2 Mineral Deposit

### 6.2.1 Skarn Deposit

The mineral deposits found within the Charcas mining district are Tertiary polymetallic skarn (Ag, Pb, Zn, and Cu) deposits hosted in carbonate rocks of the Jurassic-Cretaceous period and in shales and sandstones of the Late Triassic. In the carbonate rocks, veins and mantos (replacement mineralization) form the predominant mineralization, while less-mineralized fractures tend to occur within the shales and sandstones. The varied style of mineralization largely corresponds to the lithological variety of units that serve as host rocks.

The CIC was emplaced in Triassic to upper Cretaceous sedimentary rocks. Some dikes from the CIC have developed metamorphism halos with related polymetallic mineralization. The inner and outer alteration patterns and the mineralogical sequence found are compatible with the description of distal skarn type (Dobarganes et al., 2012a).

The magmatic origin of the fluids and the evolutionary history of the Charcas zinc skarn deposits of the inner calcite zone is highlighted by high temperature/high salinity fluids and carbon dioxide. In the outer zone, the mixing of the degassed rich magmatic brines with meteoric water may be responsible for boiling, dilution, and cooling of the resulting solution, processes that could cause the deposition of the mineralization (Dobarganes et al., 2012a).

### 6.2.2 Fracture Filling Mineralization (Veins)

Fracture filled mineralization is a characteristic of hypothermal processes. These deposits are representative bodies as veins, with the most important veins at the mine being those of Leones and Santa Isabel veins. This group of veins occupy a fault zone in the contact between the limestones and the intrusive rock. It is evident that the original deposits were subject to the processes of oxidation and supergene enrichment in the most superficial part, which consisted of the solution and deposit of silver ores due to the percolation of surface waters.

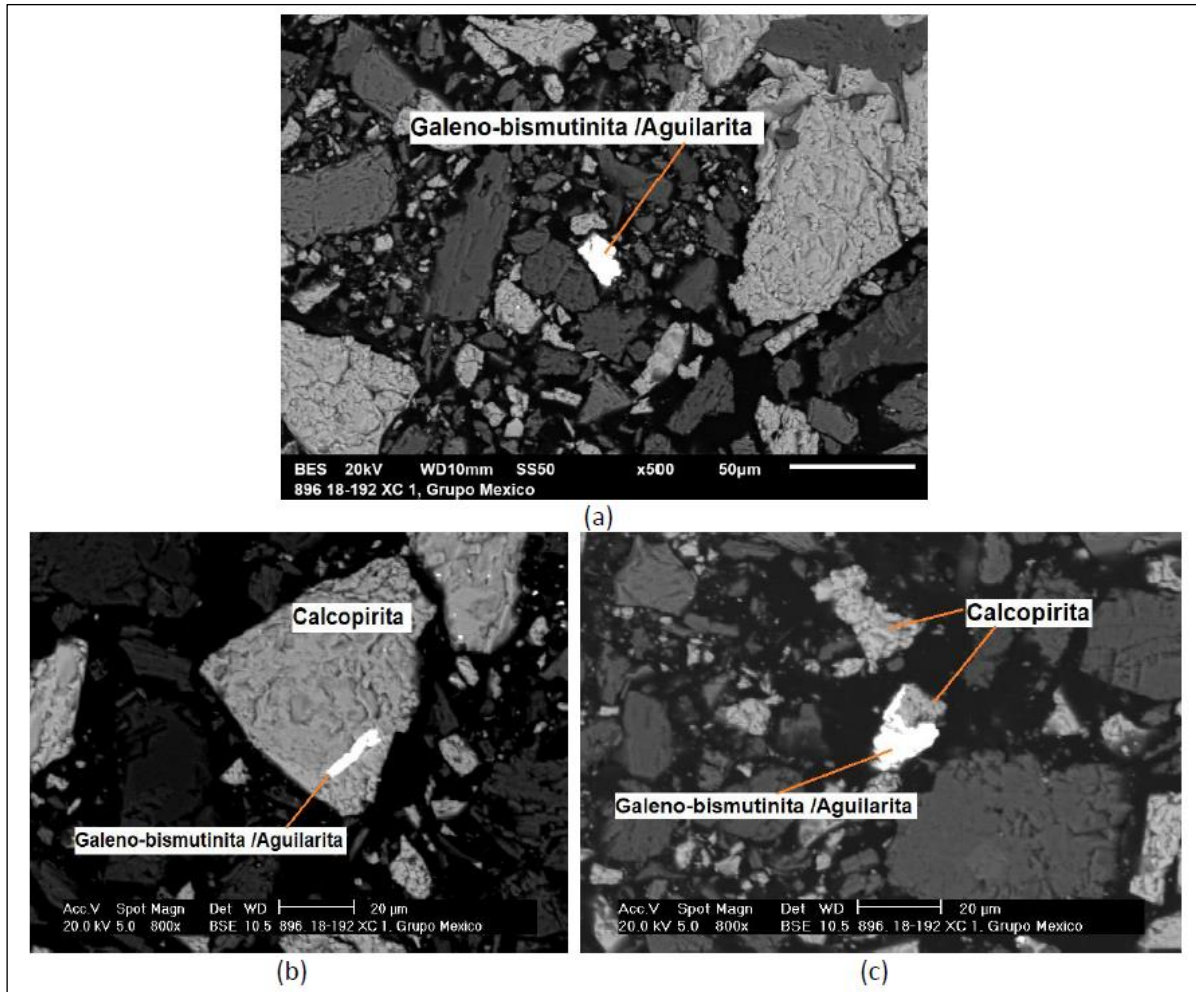
### 6.2.3 Paragenesis of Charcas

IMMSA has developed the following paragenesis for the mine:

- The first stage comprises minerals rich in silver, lead, and zinc with abundant calcite and small amounts of quartz and chalcopyrite.
- The second stage is where there is a relationship of copper and silver, in which the most characteristic minerals are chalcopyrite, argentiferous galena, pyrite, and scarce sphalerite.

The mineralogy of economic mineralization is comprised predominantly of chalcopyrite, sphalerite, galena, and silver minerals as diaphorite (Pb, Ag, Sb, and S).

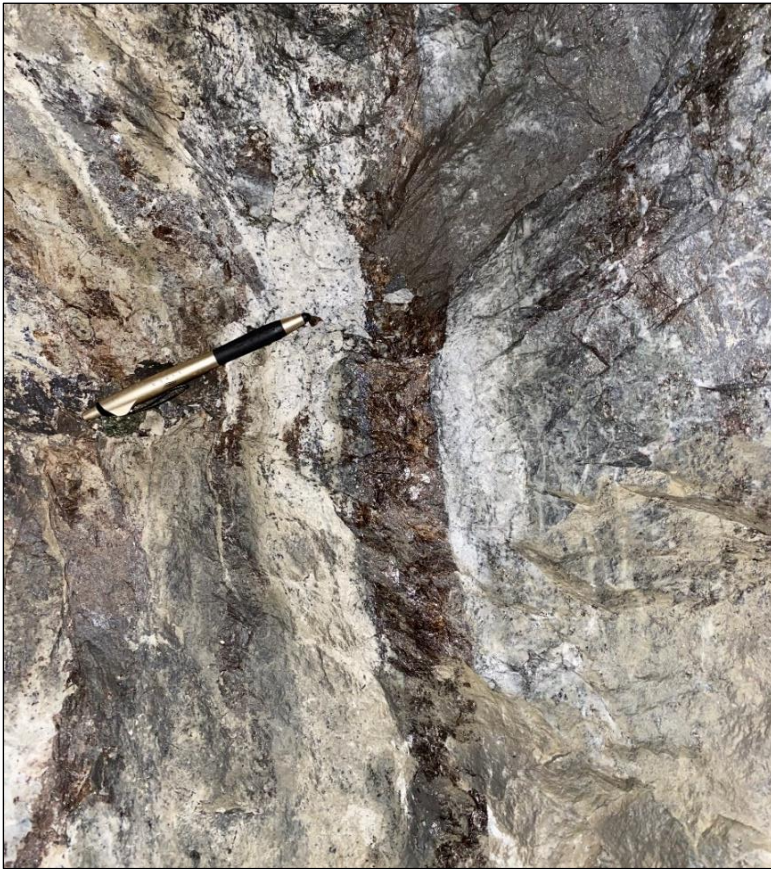
Figure 6-5 shows an image of electron microscope scan showing examples of minerals associated to the mineralization of lead, copper, and silver. Figure 6-6 shows the sphalerite/galena mineralization in a band found in a Charcas underground working. Figure 6-7 shows the characteristic chalcopyrite in Charcas.



Source: IMMSA, 2021

Notes: (a): Libre, 10 micras; (b) y (c): Asociada a la calcopirita

**Figure 6-5: Galena-Bismuthinite/Aguilarite**



Source: IMMSA, 2024

**Figure 6-6: Photograph of Sphalerite Mineralization in Charcas**



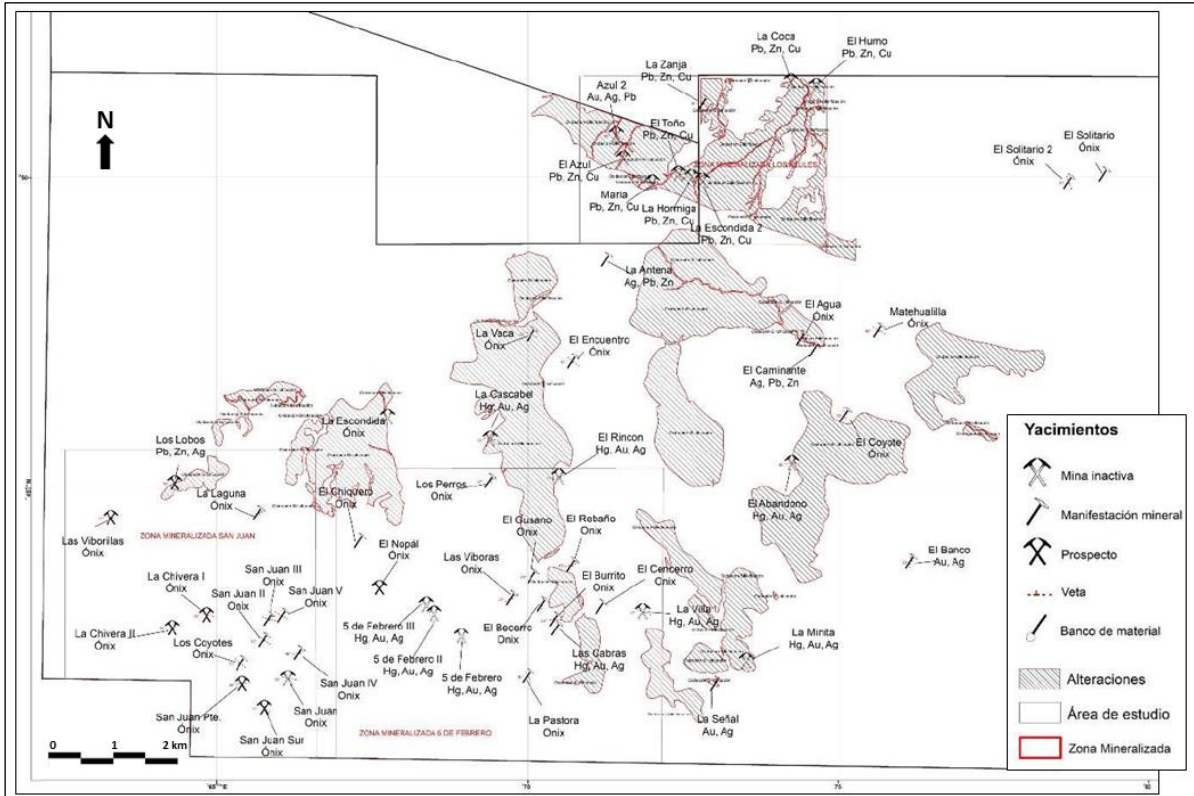
Source: SRK, 2024

**Figure 6-7: Photography of Chalcopyrite Mineralization in Charcas**

# 7 Exploration

Since early last century, exploration activities have advanced alongside mining activities, focusing on extending the known mineralization as mining advanced.

In 2021, IMMSA finalized the geological reconnaissance of 30,000 ha in the mining titles of the company in Charcas to acquire the geological and mineral potential in the IMMSA mining titles and to define new targets. The study included geological mapping and geochemical sampling, including the location and description of abandoned mines and prospects (Figure 7-1).

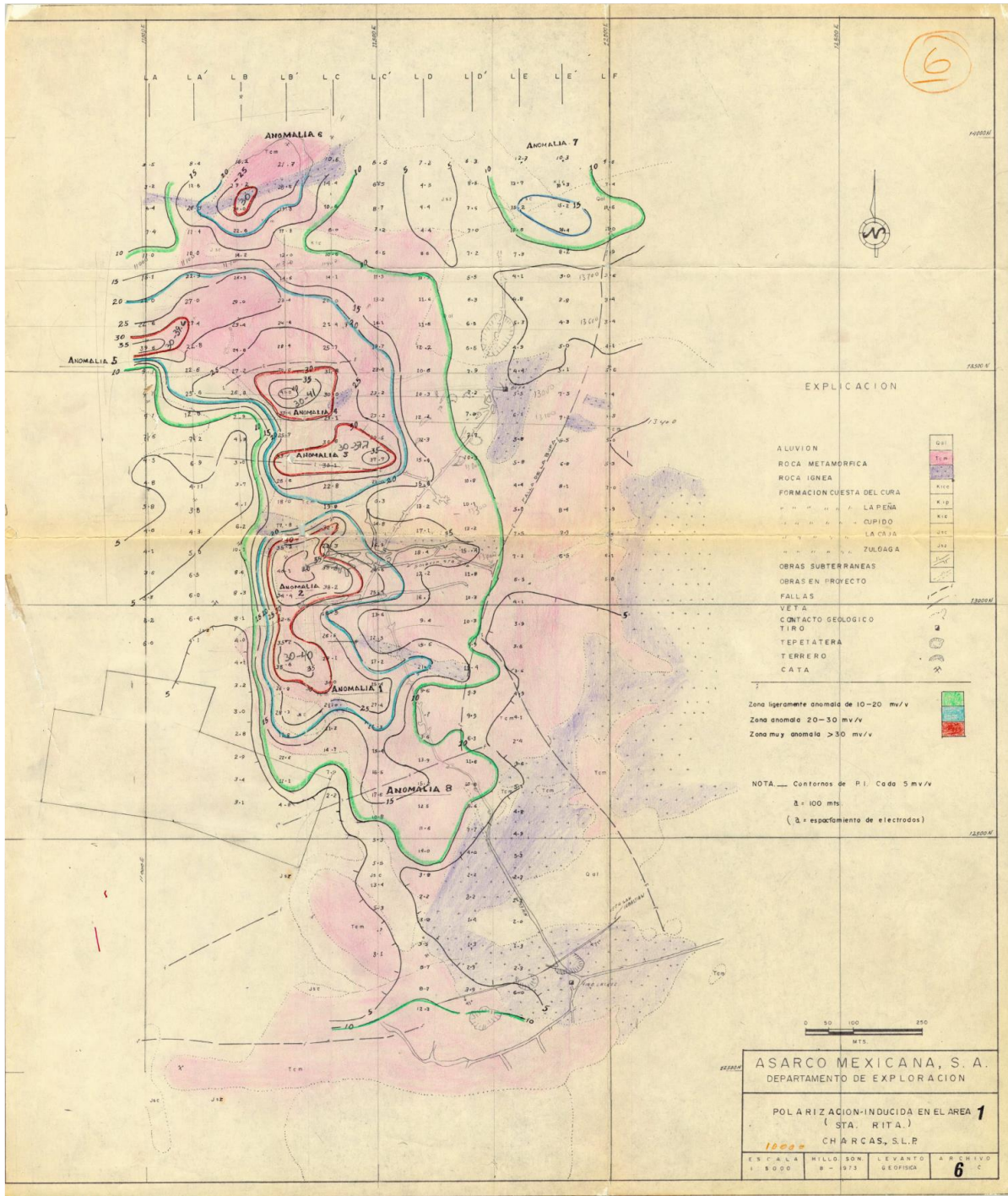


Source: Vásquez et al., 2021

**Figure 7-1: Map Showing Location of Mineral Occurrences and Mineral Deposits Identified during the Geological Reconnaissance of Charcas**

## 7.1 Exploration Work (Other Than Drilling)

In 1973, Asarco completed an induced polarization (IP) survey (Figure 7-2) over the Charcas area. According to IMMSA, other magnetometric and IP studies have been completed, but no clear documentation of the procedures used is available. The studies found eight zones of interest (indicating potential concentrations of metallic sulfides), including a number of localized anomalies related to contact zones between the metamorphic and igneous rocks within the property along a north-south trend. Figure 7-2 presents the results of the IP study in the Santa Rita area, showing a zone in red (chargeability >30 millivolts per volt (mV/V)) with an approximate north-south trend. Based on the results of the geophysical studies (IP and magnetics), it was decided that follow-up drilling was warranted to test the economic potential of selected anomalies.



Source: Asarco, 1973

**Figure 7-2: Map of Results of IP Study in the Area of Santa Rita -Charcas Mine**

**7.1.1 Geological Reconnaissance (30,000 ha)**

The study recognized a total of 56 potential mineral deposits which include mineral occurrences, prospectus, and inactive mines. Not all of the deposits were previously reported; some of them related

to tabular bodies and irregular hydrothermal mineralization type, with mineralization of onyx and presence of mercury, and other structures include more-tabular hydrothermal mineralization of Pb-Zn-Cu-Au and Ag, interpreted to be related to volcanogenic massive sulfide (VMS)-type deposits. The exploration identified the location of a potential mineralized (Figure 7-1) zone located approximately 7 km to the south of the Charcas operation. A total of 388 chip samples were collected for chemical analysis from stockwork type zones, mineralized structures, and alteration zones (Vásquez et al., 2021).

Three main mineralized zones were recognized: San Juan, February 5, and El Azul.

In the San Juan mineralized zone, the most important deposits are the inactive San Juan Mine with its onyx 300-m long, 60-m wide thickness, and 40-m depth tabular structure, with Au and Zn tracers, and the Los Lobos Prospect, with important tracers of Pb, Zn, Au, Ag, and antimony (Sb), mainly.

In the February 5 mineralized zone, the most important deposits are the inactive Mine 5 de Febrero, with tracers of Au and Zn, and El Nopal, with tracers of As, Au, Pb, and Zn.

In the El Azul mineralized zone, most of the deposits present favorable mineralization for Pb-Zn-Cu and Au. However, the main deposits are El Azul, Azul 2, Toño, and La Hormiga. Further exploration is needed to provide more detailed studies of the identified areas to evaluate the geological and mineral potential be completed.

## 7.1.2 Procedures and Parameters Relating to the Surveys and Investigations

Access to underground workings due to the long mining history provides opportunities to the Company to gather good geological information via mapping and sampling of the workings. To ensure the information can be accurately placed to develop mine-scale models, there is a requirement to georeference (survey) the location of mapping and sampling points. The underground workings are surveyed with Total Station and historically using theodolite instruments.

The information obtained from sampling, geology, structural, and mineralization is registered on maps. The historical maps were completed in paper format and are stored in the mine geology office. It is the QP's opinion that the processes in place are well established and follow generally accepted best practices for survey methods underground. The QP highlights that all the information related to exploration has been digitalized and is kept in Excel files and in Seequent Leapfrog Geo software but not in a commercial database system, which is considered best practice. The QP highlights that there is still a limited risk that not all information is used when generating maps and cross-sections or that the process of updating the interpretations can result in a time-consuming process for the geological staff. The current mineral resources are focused on the known mining areas, and therefore this risk is considered low.

The new 3D geological model and resource block model prepared in 2024 will help to optimize the exploration and mine planning processes.

The interpretation and integration of data in 3D will provide improved productivity. It is the QP's opinion that the mine has demonstrated sufficient quality in the survey process to accurately reflect the geology, which is supported by the long mining history of the deposit.

### 7.1.3 Sampling Methods and Sample Quality

#### Mine Channel/Rock Chip Sampling

Rock samples from the underground workings are being collected from channels in the roofs (if channels from fronts are not collected due to security or operational factors) and preferably in fronts of drifts using long steel bars and/or hammer and chisel (Figure 7-3). Sample limits are defined by the geologists according to changes in mineralization and lithology and are collected approximately perpendicular to the mineralization controls (veins and stratigraphy).



Source: IMMSA, 2022

**Figure 7-3: Rock Sampling using Hammer and Chisel (Left) and Long Bars (Right)**

The geologists complete the geological description of the channel. The samples are described including the following information:

- Lithology
- Alteration (type, intensity, and mineralogy)
- Mineralization (styles, intensity, and mineralogy)
- Structures (description, aptitude, and mineralogy)

The rock chips are collected simulating a channel by the geology technicians. Sample lengths vary from 1 to 2 m. The geologists try to use 5-m systematic distance between the sampling channels.

Each rock sample is collected in a piece of fabric disposed in the floor, and then the big pieces of rock are homogenized to a size of approximately 2.5 to 4.0 centimeters (cm) using a hammer (Figure 7-4).

The sample is mixed inside the fabric, split by hand, and then a sample of 2 to 5 kg is packed in plastic bags that are labelled and then closed with ties.

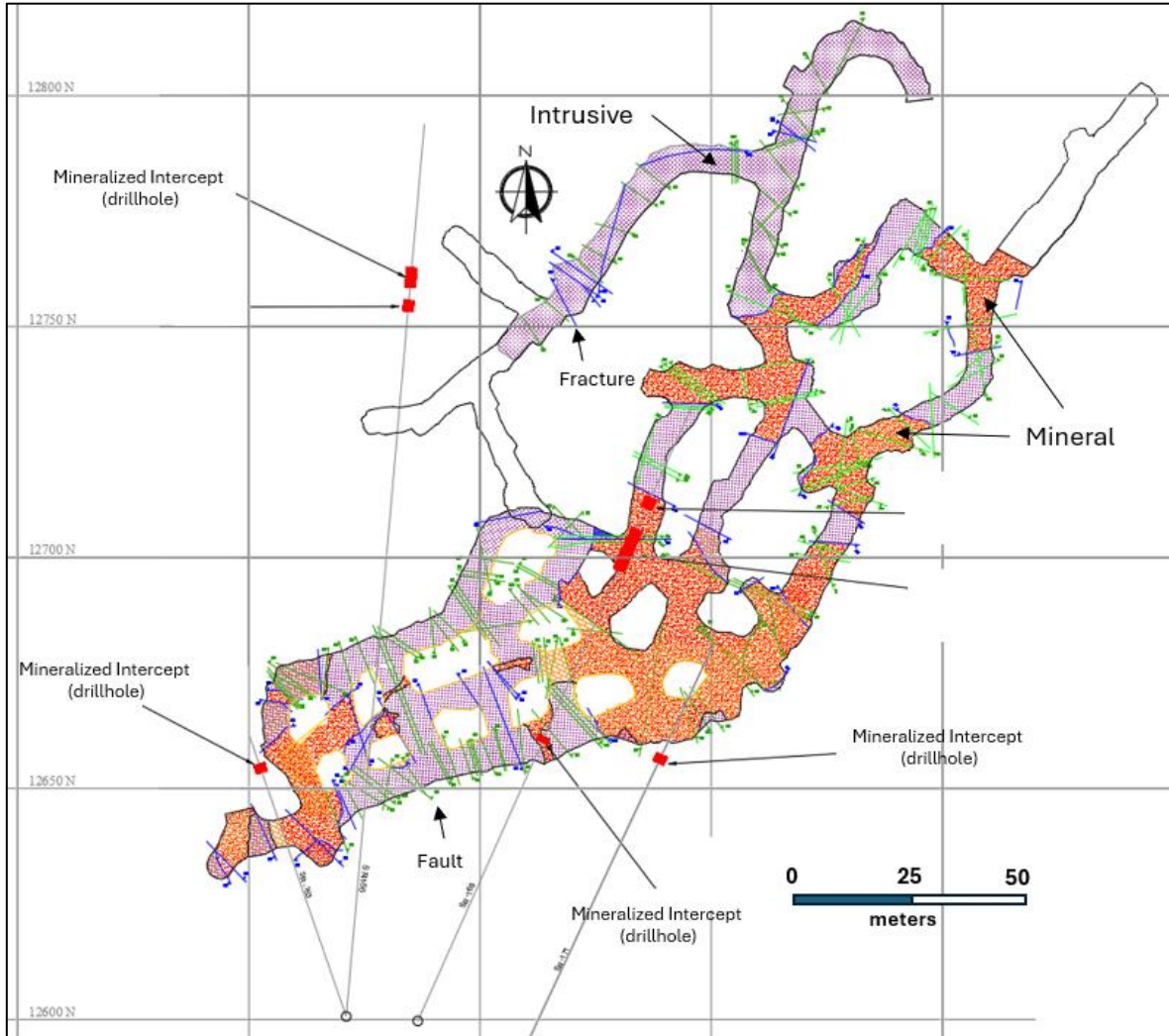
A new procedure was designed ending 2024 to collect samples from the production fronts from panels, which is in process of implementation.



Source: IMMSA, 2022

**Figure 7-4: Homogenization Process of Sample Particle Size**

The sample channels are located using compass and tape from existing points located using a total station along the underground workings. The mine topography maps provided by the mine topography department are used to draw the geology interpretation (Figure 7-5), The complexity distribution of the mineralization is a distinctive feature of this deposit.



Source: IMMSA, 2024

**Figure 7-5: Geology Map of level 8-192W**

The QP considers that the procedures of rock sampling from roofs using long bars are not in-line with industry best practices, and potential sampling errors can be introduced due to changes in rock hardness and noncontinuous channel sampling when using long bars to collect the rock chip samples. The lack of an adequate rock sampling protocol results in poor-quality rock sampling and potential uncertainty associated to the results.

The samples are collected by the geology technicians and delivered to a company geologist who reviews the samples and delivers the samples to the on-site laboratory to provide a chain of custody. Internal quality controls are not included in the sample stream by Charcas’s geologists, which is not considered industry best practice.

All the chip channel samples collected by the operation are sent to the internal on-site laboratory, where assaying is completed as described in Section 8.

The assay results received by the geology staff are recorded in Excel spreadsheets. For historical sampling, the assay results were initially received in paper tables, which geologists then digitized into Excel spreadsheets and subsequently exported to Leapfrog software. Historically, the chemical results were directly annotated onto maps and the supporting documents for resources and reserves.

The sample information in Excel contains information of the sample length and silver, copper, lead, and zinc grades and sometimes gold grades when the chemical analysis is performed by the internal Estacion Santiago Laboratory.

Lithology, alteration, and mineralization historical descriptions were not included in the Excel spreadsheets, which is required to generate a 3D geological model. During the process of defining the current mineral resource, the QP visited the mine numerous times and reviewed the paper sheets to validate the results and positioning.

In 2024, Charcas collected 8,879 rock samples as part of the exploration and grade control activities.

#### **7.1.4 Information About the Area Covered**

The main part of the Charcas project, where the exploitation and exploration have been focused covers an approximate area of approximately 420 ha. Previous geological reconnaissance campaigns have covered areas of up to 30,000 ha. In the Charcas operation, all the underground workings and stopes are sampled. The distance between the sampling lines is approximately 5 m. Once a stope is advanced, a new set of samples is collected from the roof of the stope, maintaining the sampling spacing, which is then used for the mineral resource updates.

#### **7.1.5 Significant Results and Interpretation**

Although the sampling methods and sample quality were not in-line with best practices, the results are still considered representative of the geological units and mineralization controls. The results from channel sampling are accepted for the definition of the geological interpretations and mineral resources at Charcas, but it is one of the factors that does not allow for the assignment of a measured resource classification, as it is a source of uncertainty

The geological reconnaissance completed in 2021 identified 56 potential mineral deposits that include mineral occurrences, prospectus, and inactive mines in the mineral titles of IMMSA in Charcas, located approximately 7 km to the south of the mining complex of Charcas. This study provides important information, and additional detailed investigations are required to evaluate the geological and mineral potential of the identified areas. In 2024, Charcas did not complete new geological reconnaissance.

### **7.2 Exploration Drilling**

Exploration drilling in Charcas has been documented since the early 1900s with variable levels of quality. Drilling information is available after 1976. Most of the drilling completed by the operation has utilized NQ and BQ diameter core, and the mine geology department has recently implemented the use of NQ as the smaller core size (for exploration purposes).

The surveyors from the mining department carry out the preliminary location of the scheduled drilling points and install guides for the drilling machines orientation. Once a drillhole is completed, its collar

surveyed with a total station. This activity is carried out for both drilling from surface and from underground works. The surveying team has a network of reference points around the project and inside the mine.

IMMSA recently implemented the use of the Gyro equipment to measure drillhole deviation surveys approximately every 10 m. The majority of the drillholes are over 100 m in length, and depending on the zone of the Charcas project, there are a considerable number of drillholes of more than 200 m long. A lack of downhole surveys for the historical drilling can result in location errors of the drillhole intercepts and potential mining panels (stopes) defined with the drilling, representing a moderate risk level. It is the QP's opinion that this risk is limited as the drillholes defining the Indicated portion of the deposit are relatively close to the current underground workings and therefore will have limited deviation. Impact on Inferred resource for longer holes will likely have slightly higher risk. The QP has considered this risk during the classification process the reflect the levels of confidence.

Currently there are nine drill rigs in Charcas, collecting mainly NQ core size. Seven drills are working and two in surface

Figure 7-6 and Figure 7-7 show characteristics of an underground drilling setup in Charcas and a drill rig owned by IMMSA. Figure 7-8 and the core boxes used by the mine geology department.



Source: SRK, 2024

**Figure 7-6: Underground Drilling Setup**



Source: SRK, 2024

**Figure 7-7: Underground Drilling Setup**



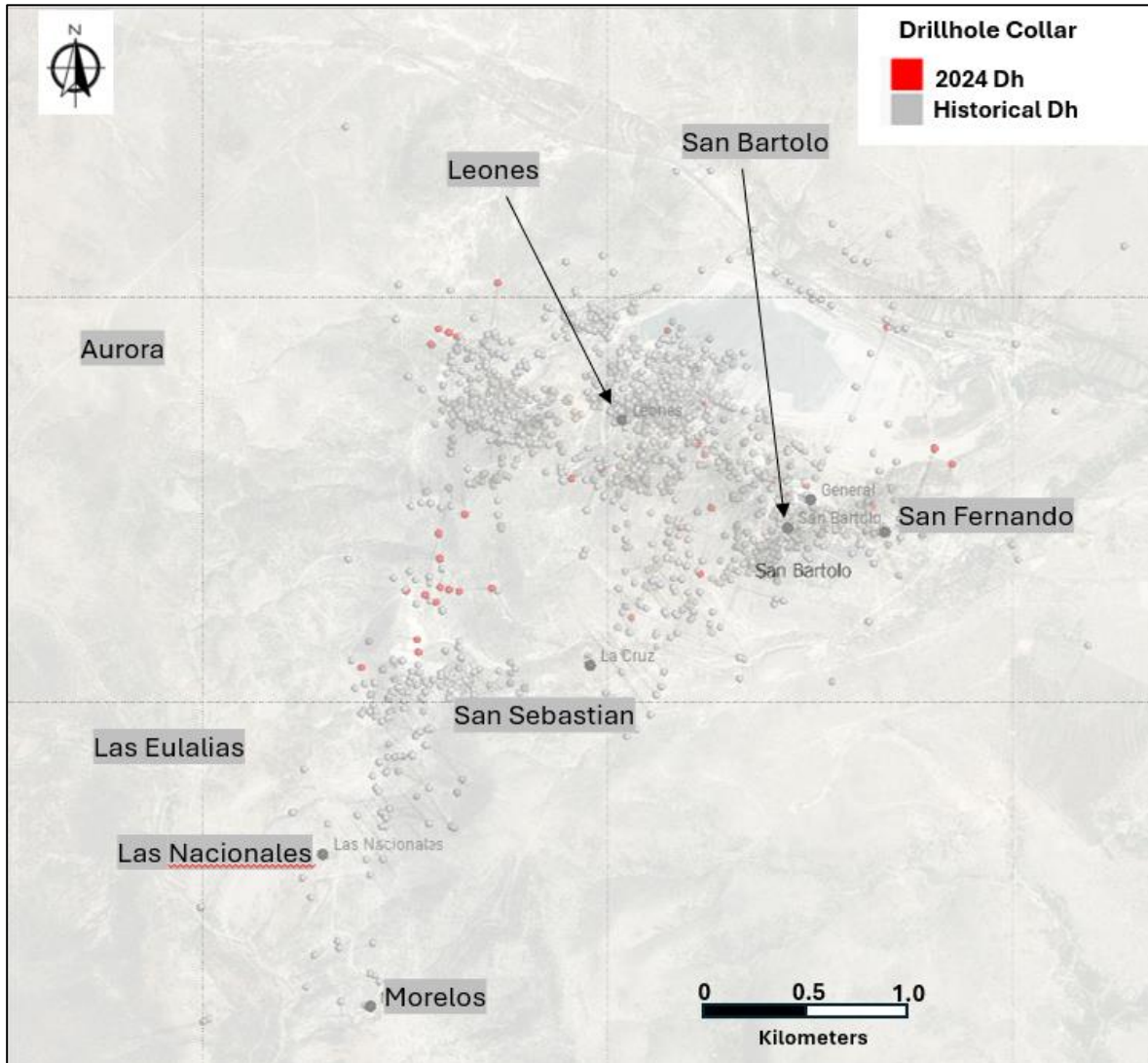
Source: SRK, 2024

**Figure 7-8: Drill Core Boxes Collected by the Mine Geology Drilling Department**

All exploration and development have been completed by IMMISA under its current legal name or by the previous name, Asarco. The following is a summary for the past 10 years.

- Mine exploration in 2015 included 32,144 m of surface drilling and 20,536 m from underground stations.
- Mine exploration in 2016 included 20,000 m of surface drilling and 20,754 m from underground stations.
- Mine exploration in 2017 included 5,999 m of surface drilling and 23,098 m from underground stations.
- Mine exploration in 2018 included 11,757 m of diamond drilling and 20,285 m from underground stations.
- Mine exploration in 2019 included 20,105 m of diamond drilling and 9,012 m from underground stations.
- Mine exploration in 2020 included 10,609 m of drilling from underground stations.
- In 2021, the exploration department completed 39 drillholes from surface, totaling 14,673 m of diamond drilling focused in Las Eulalias. 21,200 m were completed by the operation from underground in Las Eulalias.
- In 2022, Charcas's mine geology department completed 60 drillholes, totaling 9,015 m and 2,467 core samples, using eight drill rigs (six recently adapted for NQ core size). The areas drilled included Las Eulalias, Rey y Reina, San Bartolo, Santa Rosa, and La Bufa.
- In 2022, Charcas's exploration department focused on the Las Eulalias, Rey-Reina-Este, Leones, and El Manganeso zones and completed 20 drillholes totaling 7,430 m.
- In 2023, Charcas's mine geology department completed 46 drillholes from underground in San Bartolo, Leones Vein and San Sebastian between January and November, totaling 13,187 m and 1,215 core samples.
- In 2023, Charcas's exploration department completed 22 drillholes from surface, totaling 13,424 m using contractors (Tecmin) in Santa Rita and La Reina.
- In 2024, Charcas's mine geology department completed 42 drillholes from underground between January and December, totaling 17,357.5 m and 4,027 core samples in Santa Rosa, Leones Vein and San Bartolo.
- In 2024, Charcas's exploration department completed 63 drillholes from surface, totaling 23,595.05 m using contractor (Bylsa). In the Buen Suceso, La Bufa, and Santa Rita areas.

Figure 7-9 presents the location of the digitized collars, including the 2024 collars (Bylsa and Mine Geology).



Source: SRK, 2024

**Figure 7-9: Location of Drillhole Collars at Charcas**

### 7.2.1 Drilling Type and Extent

According to Charcas at least 9,500 drillholes have been completed since the last century, but the actual number is not clear due to lack of a historical drilling register stored in a central database. Table 7-1 presents the number and depth of drillholes per year that Charcas has in its historical registry until 2024. The drilling database has been digitized in 2023 and 2024 stored in Excel spreadsheets and imported into Charcas’s database to generate the new 3D geological model. The geological model was constructed in 2024; therefore, the 2024 mineral resource estimation included the block model construction and estimation of zinc, lead, copper and silver, using the software Leapfrog Geo and Edge (Version 2024.1.1). The QP highlights to the reader that this is not the complete database but demonstrates that from the captured data there is a reasonable level of coverage over the mine area. The implicit geological model was completed in 2024.

**Table 7-1 Summary of Drillhole by Year (Charcas historical registry)**

<b>Year</b>	<b># Drillholes</b>	<b>Meters</b>
1940	7	814.6
1941	12	1,181.9
1942	6	425.2
1943	35	2,134.2
1944	16	1,035.4
1945	39	1,699.5
1946	1	66.5
1949	1	8.5
1951	1	18.6
1954	29	1,600.5
1955	34	2,627.7
1956	2	44.8
1958	5	399.9
1960	1	22.9
1965	17	636.8
1966	21	660.8
1973	3	241.7
1974	6	552.8
1975	15	1,411.4
1976	17	1,568.1
1977	10	926.0
1978	12	1,607.3
1979	47	5,522.7
1980	18	2,731.8
1981	25	3,570.9
1982	40	4,088.4
1983	71	5,786.9
1984	52	5,974.6
1985	38	4,016.5
1986	41	4,405.2
1987	46	3,343.4
1988	54	4,271.0
1989	57	6,154.6
1990	53	5,346.0
1991	57	6,259
1992	46	5,235
1993	56	8,386
1994	37	5,180
1995	54	9,215
1996	59	11,380
1997	63	10,123
1998	108	18,168
1999	109	21,067
2000	128	19,020
2001	114	16,986
2002	86	11,806
2003	60	9,359
2004	57	8,467
2005	281	39,969
2007	37	21,330
2008	153	46,871
2009	138	27,526
2010	116	37,165
2011	183	43,793
2012	179	39,783

<b>Year</b>	<b># Drillholes</b>	<b>Meters</b>
2013	181	34,998
2014	200	48,644
2015	188	52,680
2016	192	40,754
2017	107	29,097
2018	108	32,042
2019	110	29,117
2020	128	10,609
2021	94	35,873
2022	80	16,445
2023	68	26,611
2024	105	40,953
<b>Total</b>	<b>4,514</b>	<b>889,804</b>

Source: IMMSA, 2024

Underground diamond drilling completed by the mine geology department includes drilling in sections spaced 25 to 30 m apart perpendicular to the main mineralization trend, with each section consisting of a fan of various holes.

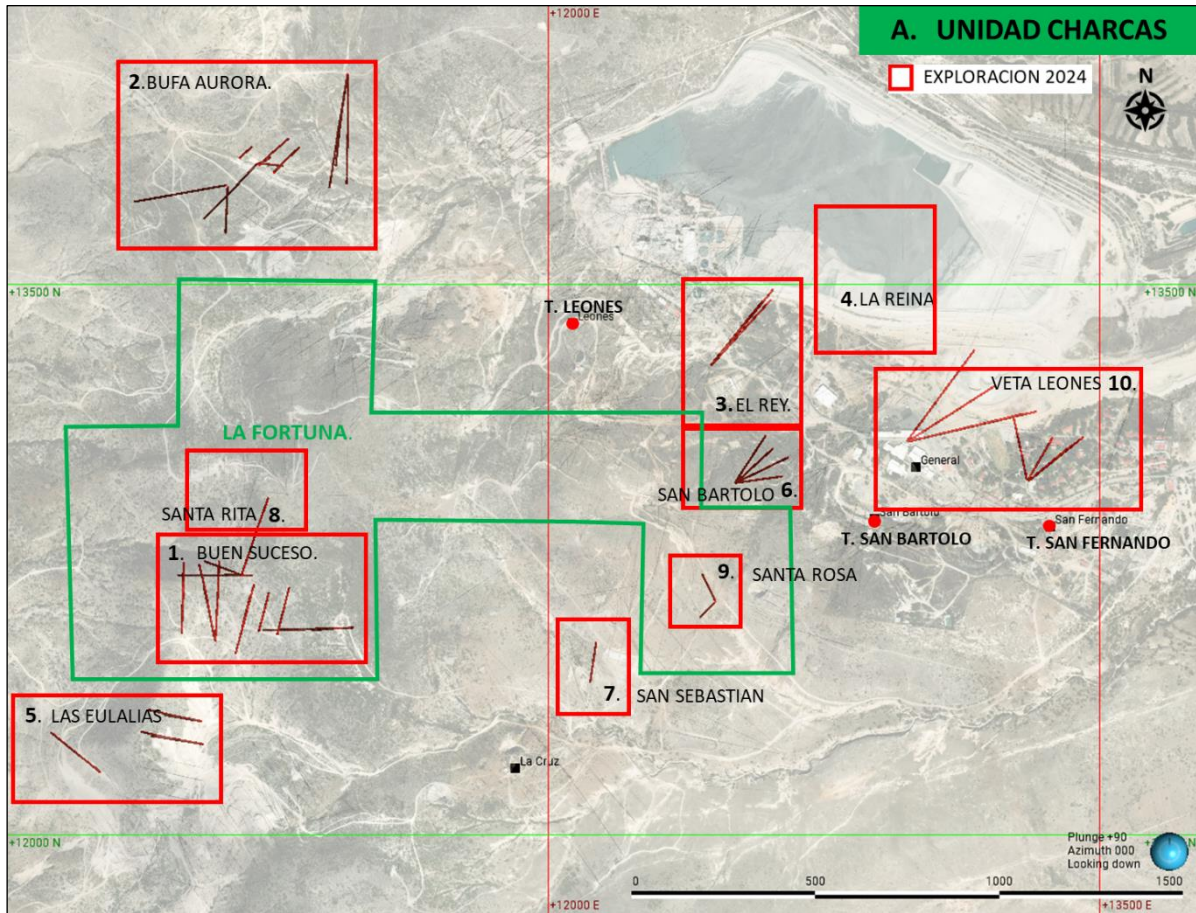
On completion of each drillhole, the collar location is surveyed, and the downhole surveys are completed (recent drilling). The following information is recorded on paper drill log sheets:

- Hole number, with collar location, length, dip, and azimuth
- Start and completion dates of drilling
- Collar location (X, Y, and Z coordinates), azimuth, and dip
- Core lengths and recoveries
- Geological and mineralogical descriptions
- Assay results

The location of the collars has historically been registered in several different formats, including Excel tables, and paper logging sheets. The drill traces and projections have been reviewed by the QP using traces found in individual paper maps, sections, and in AutoCAD files. The QP has undertaken further manual checks to validate the database in previous years.

The historic mine geology drillholes are used in conjunction with the contractors' (Tecmin and Bylsa) drillholes in the mineral resource estimation.

Since 2019, Tecmin and Bylsa has completed a series of drilling campaigns as part of the current exploration activities, focused in areas surrounding the main project. There are several resource blocks defined in those areas. In 2024, the exploration department completed 63 drillholes, totaling 23,595.05 m using the contractor (Bylsa) (Figure 7-10) as part of the program to evaluate the mineralization structures and resources/reserves evaluation. The exploration drilling from surface was completed in one of the exploration targets defined by Charcas (La Fortuna) that include Buen Suceso and Santa Rita, 1 km to the west of the operation, in Bufa Arora to the NW and in the Leones Vein area and Santa Rosa. The exploration completed from underground drilling chambers included the areas of San Bartolo, El Rey and Leones Vein.



Source: IMMSA, 2024

**Figure 7-10: Location of exploration drilling campaign 2024 (La Fortuna exploration area shown in green)**

## 7.2.2 Drilling, Sampling, or Recovery Factors

### Mine Geology Drilling Programs

The mine geologists complete the core logging in paper formats according to defined (IMMSA) protocols, the QP notes there is historical information that includes different logging coding or lack geological detail. The definition of a data capture protocol that unifies criteria for all the previous and recent drilling and rock sampling was defined by IMMSA for the digitizing process. Assessment of the data gaps were completed in 2023 for the data capture to the digital database (Excel spreadsheets). IMMSA started the data capturing using GVMapper™ software. The description of core includes the lithological, structural, alteration, and mineralization characteristics. The sample limits are defined according to changes in geology and mineralization. Only the areas of visible mineralization and its halo of 4 to 5 m around the mineralized zones (hangingwall and footwall) are sampled.

A core splitter or an electrical saw has been used to cut the core, and half of the core is collected in plastic bags and sent to two external laboratories for chemical analysis (gold, silver, copper, lead, and zinc). The remaining core from the sampled zones is stored at the operation complex. Small core

pieces, ranging from 10 to 20 cm in length, from the drillhole intervals described as non-mineralized rock, are also stored.

The logging formats include the zinc, lead, copper, silver and gold grades, which are completed after the reception of the results. Charcas's personnel digitized and created the database, including collar, survey, assays, and lithology tables.

Before 2023, all the drilling was completed by the mine geology department without an established internal QA/QC protocol. In 2023, IMMSA designed a QA/QC protocol and initiated the insertion of controls including blanks, standards (Certified Reference Materials) and duplicates.

The previous years, the QP conducted site visit inspections to review the hard copies of the logging, digitized databases and completed sufficient levels of checks to consider the historical data sources to be reasonable to form the basis for use in the mineral resource estimate.

### **Exploration Drilling**

In addition to the drilling completed by the operation, the contractors (Tecmin and, recently, Bylsa) have completed the drilling for the IMMSA exploration department for the last 8 years, totaling 23,595.05 m for 2024. This drilling includes downhole surveying every 50 m, and recently, the contractors collect deviation measurements using the Gyro equipment. The Exploration department has implemented a QA/QC protocol that includes the use of blanks, duplicates, and certified reference materials checks. It is the QP's opinion that the QA/QC protocols implemented by the exploration department are in-line with the generally accepted industry best practices.

Once the diamond drilling is completed by the contractors and the core has been recovered, the core is transported to a separate IMMSA facility where the holes are logged. Logging is completed by IMMSA geologist. Figure 7-11 presents the core shed of Charcas's exploration department located in Charcas town.



Source: SRK, 2024

**Figure 7-11: Core Shed Area of Charcas’s Exploration Department**

Once at the logging facility, the core boxes are placed in order on logging tables with the run blocks (from – to) clearly visible, and the core is then washed. Standard checks are completed to ensure all core is accounted for, including cross checks of the length and from – to information provided. The core is then logged (with the following features recorded: structures, mineralization, alteration, rock type, contacts, and clasts), and sample intervals are marked.

Geotechnical information, such as recovery and rock quality designation (RQD), are also recorded, as these data are needed to assess rock quality and determine mining widths, pillars, and mine support programs.

The drillhole information, including core logging and sampling, is registered in paper format and is captured digitally for all new holes using the GVMapper™ software. Logging includes both descriptive information and a graphical log, with assay information updated once received (Figure 7-12). The hard copies of the drilling logs are physically stored in Charcas, and the digital information is compiled and organized according to a data capturing protocol that defines the data codification and formatting. Based on the site inspections completed since 2021, the QP considers that the logging information and database are reasonable to form the basis for use in the mineral resource estimate.



Gyro equipment has been used since 2016. Historical drilling (before 2000) was completed without downhole surveys. The lack of a QA/QC protocol and downhole surveys for most of the drilling history do not follow industry best practices and may result in errors in the location of the mineralization intersections and quality of the samples and results.

The lack of downhole surveys in the historical drilling represents a moderate risk associated to location of mineralized intercepts in areas unsupported by underground workings. Recent drilling completed by the exploration team and underground drilling completed by operations have downhole surveys.

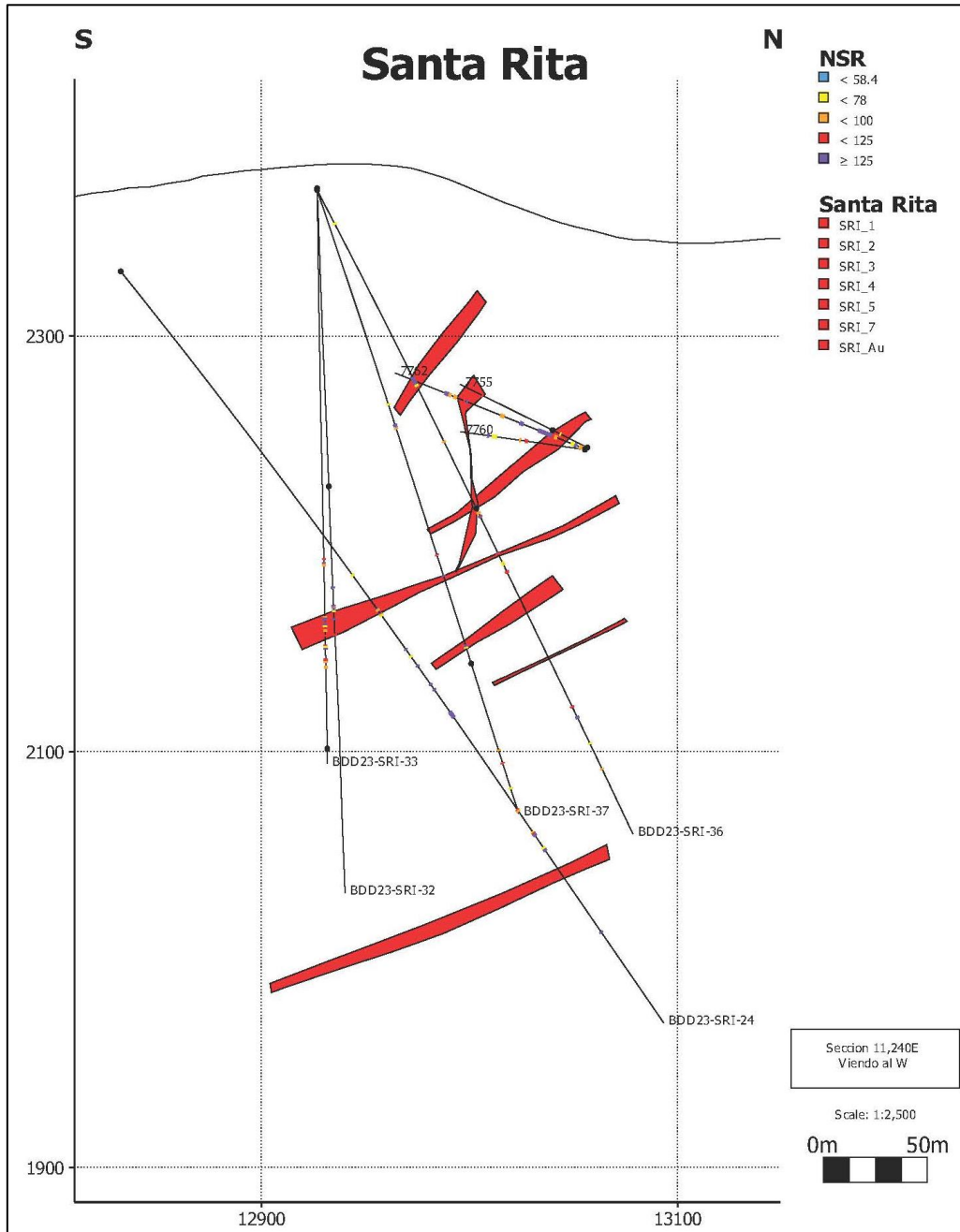
Core recovery is not an issue, with recent drilling showing core recoveries above 90%. However, old drilling technology used for part of the historical drilling could have had issues during the previous century.

In 2023, IMMSA implemented the use of NQ in all the mine geology department drilling and using BQ only if strictly necessary. HQ and NQ drilling diameters are more specifically related to exploration of drillholes completed by the contractors in recent years.

The mine geology department drillholes have been drilled from underground drilling chambers with Charcas's rigs. Drillholes have been drilled in a fan pattern with variable azimuth and dip angles dependent on the zone of the Charcas project. The routine drilling of the operation is typically completed using fan drilling from the existing drives to aid in the mapping and delineation of mineralization.

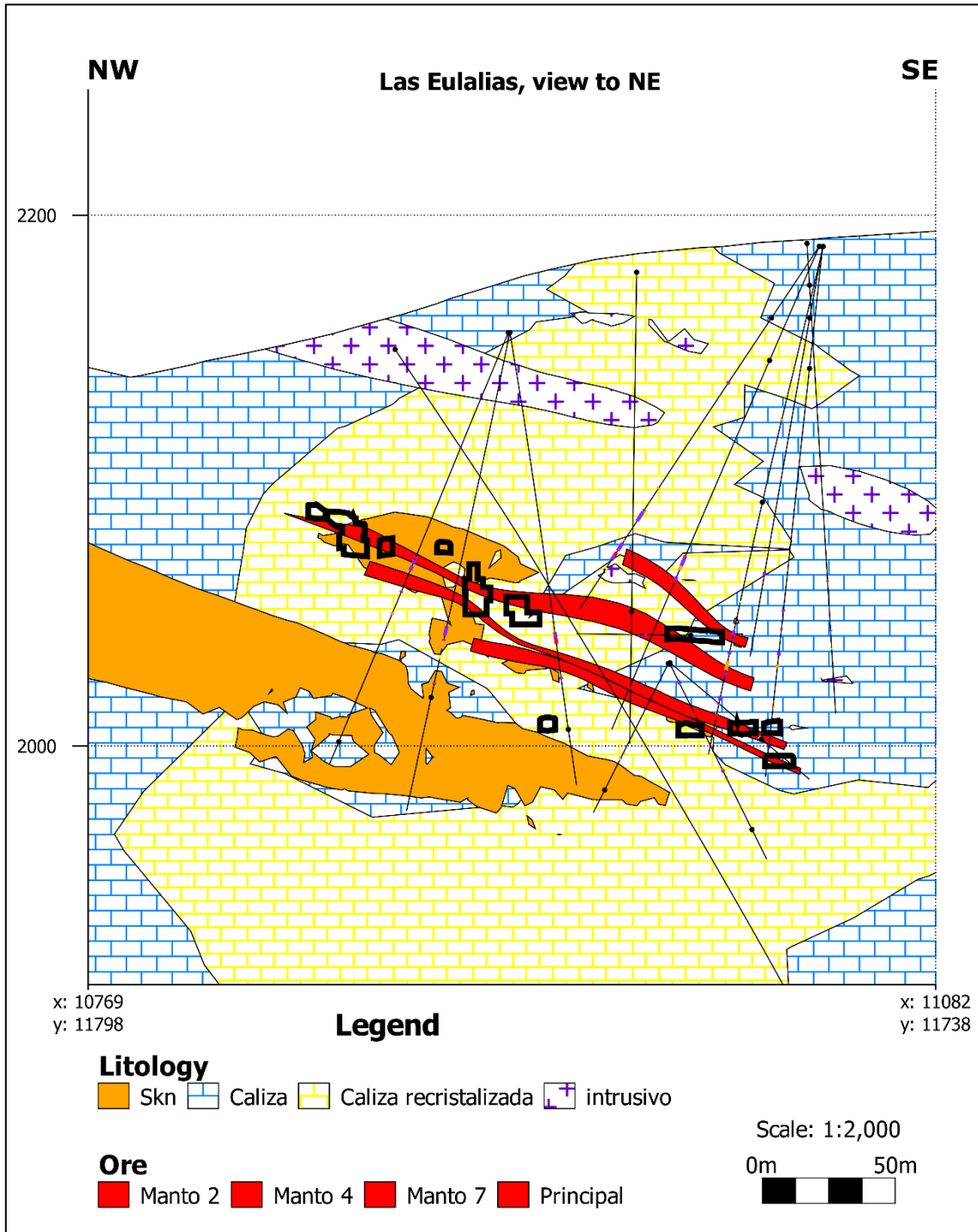
The information obtained from the description of the core is transcribed in the hole books (a file that is carried out in physical format), after which this same information is reflected in its corresponding cross-sections of drilling in physical and digital format in AutoCAD. The information obtained is interpreted in the sections and in plan. Charcas is using DH Logger software for data capturing.

Drillholes are orientated as perpendicular as possible to the mineralization controls (stratigraphy and veins). The geology of Charcas is complex, and the distribution of the intrusive and the associated replacement mineralization type makes it difficult to perpendicularly intercept the mineralization and geology. In the QP's opinion, the variable drilling inclination is acceptable considering geology. Figure 7-13 and Figure 7-14 show the intersection angles relative to the interpreted geology in Santa Rita and Las Eulalias.



Source: IMMSA, 2024

**Figure 7-13: Example of a Fan Drilling in Relation to Mineralization (vertical section)**



Source: IMMSA, 2024

**Figure 7-14: Example of a Fan Drilling in Relation to Mineralization (vertical section)**

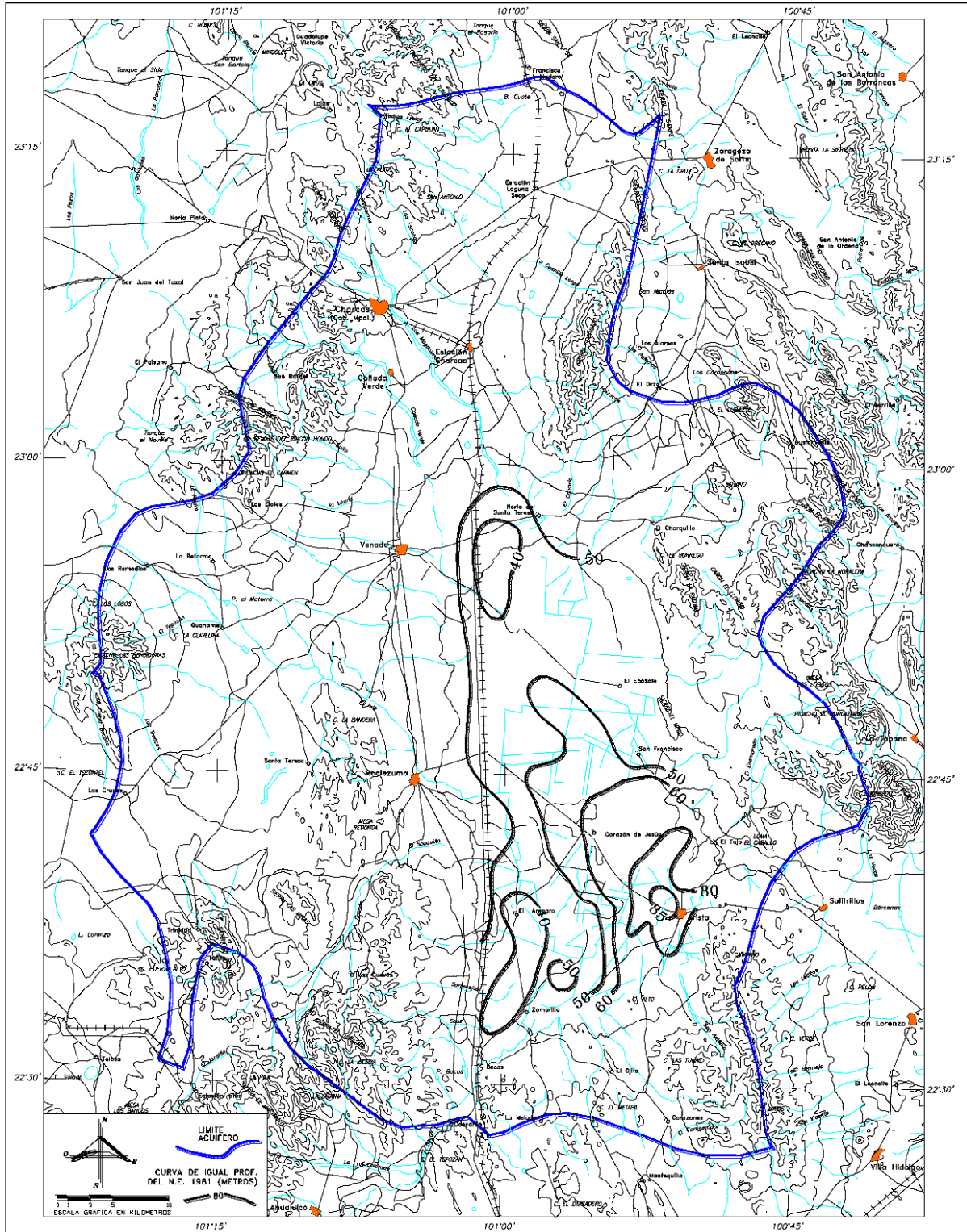
The information of drilling in conjunction with channel sampling and geological interpretations from underground workings mapping is consolidated in plan and vertical sections and have been used for the 3D geological model construction in 2024. The variability of the mineralization that characterizes the skarn and veins deposit of Charcas is appropriately interpreted using the different sources of

information. SRK relied upon reconciliation of the planned versus executed grades and tonnages system of Charcas to determine the performance of the drilling, which is considered reasonable considering the long history of mining at Charcas.

### **7.3 Hydrogeology**

The following information was extracted from the report prepared for IMMSA entitled, “Actualización de la Disponibilidad Media Annual de Agua en el Acuífero Villa de Arista (2408), Estado de San Luis Potosí,” prepared by Conagua (Comision Nacioal del Agua), Ciudad de México, 2020.

In the hydrogeological zone of the Villa de Arista valley, located to the east of the Charcas town and operations of the Charcas mine, the known aquifer system is hosted in the alluvial material and lake sediments that fill the pit. Both the lateral borders and the rocky floor are considered waterproof, since they are derived from formations of a calcareous-clayey nature. The thickness of this aquifer varies from 100 m in its northwestern portion to 250 m or more in the Villa de Arista area. Through pumping tests, it has been shown that the behavior of this aquifer is free to semi-confined. The recharge takes place mainly in the western edge of the valley along a strip that extends from Venado towards the south to Potrero el Mezquital through the alluvial fans of the Sierra de Guanamé; the extension of this recharging zone is approximately 40 km. Figure 7-15 shows the area of the Villa de Arista Valley and the iso-values of the depth of the static level for 1981.



Source: CONAGUA, 2020

**Figure 7-15: Map showing Hydrogeological Iso-Values of the Depth of the Static Level for 1981**

Other recharging areas are the edges of the Alto de Melada mountain range and the edge of the Coronado mountain range. Currently, there is an additional component of recharge that is induced by seepage from irrigation returns. The discharge takes place by extraction through pumping, which is mainly concentrated in the surroundings of the town of Villa de Arista, as can be seen in the static level elevation configuration plan. Evapotranspiration is another discharge phenomenon that is important in the Venado and Moctezuma areas, where the static level is at shallow depths. It is considered that at present there are no underground exits through the area of El Tajo or Guardaraya due to the formation of the piezometric cone to the north of Villa de Arista.

53 pumping tests were carried out by a contractor Cía. Hidrotec in 1971. It was observed that the transmissivities vary from  $0.36 \times 10^{-3}$  to  $5 \times 10^{-3}$  square meters per second ( $m^2/s$ ), with the majority of values between  $2.5$  and  $4 \times 10^{-3} m^2/s$ ; however, most of the wells are considered not fully penetrating, so the transmissivity values for the aquifer are probably higher.

For industrial use, the aquifer is exploited through six drilled works (1% of the total). These wells include three deep wells located north of Troncón that supply the plant of the Charcas mining unit; the remaining three are used for packing of agricultural products.

The extraction of groundwater is determined by adding the annual volumes of water assigned and approved by the commission through the titles conditions which are registered in the Public Register of Water Rights (REPDA). The extraction of groundwater is the equivalent to the sum of the estimated water volumes based on the technical studies submitted to support the mining application. The permits in some cases may detail the volumes of water or areas where extraction is forbidden from part of the same aquifer. For this aquifer, the volume of groundwater extraction is  $102,445,448 m^3$  per year, which is reported by REPDA of the General Sub-Directorate of Water Administration, as of the cut-off date of February 20, 2020.

The availability of groundwater constitutes the average annual volume of groundwater available in an aquifer, which the users (IMMSA) will have the right to exploit, use, or take advantage of, in addition to the extraction already approved under the terms of the permit, and the natural discharge compromised, without endangering to ecosystems.

IMMSA reported that the results of most studies indicate that there is no volume available to grant new concessions; on the contrary, there is a deficit of  $-54,245,448 m^3$  per year has been extracted at the expense of the non-renewable storage of the aquifer. Further review to support the declaration of reserves under S-K 1300 should be completed to understand the potential impact of this deficit on the operation.

## 7.4 Geotechnical Data, Testing, and Analysis

During 2023, SRK conducted three geotechnical site visits to Charcas to support the underground geotechnical assessment for reserves certification and to provide operational support. The following sections contain a summary of relevant information and recommendations for geotechnical mine stability that are largely based on SRK's site visits. There have been no new studies conducted in 2024.

### 7.4.1 Geotechnical Data

The ground conditions observed during SRK's 2023 underground visit at Charcas were generally observed to be competent. More challenging ground conditions were observed in altered ground near mineralization contacts and in higher stress levels in the lower part of the mine.

A 3D brittle-fault model needs to be established for each mine within Charcas. These models need to be developed and interpreted using structural data from mapping, lineation models, and drillhole data. SRK understands that Charcas's geology department routinely undertakes geological-structural mapping of current developments, which is usually presented in two-dimensional (2D) drawings. The development of a major structural model needs to integrate this mapping information. Structural integration with the lithology is highly recommended, correlating mineralization trends with interpreted structural trends and other supporting orientation data. Also, a level of confidence needs to be assigned to the structural geology model for use in geotechnical design work and ground support assessment.

There is no integration of the lithology models or mapped structures by IMMSA's geology department into the previous design studies completed to date, including design stability analyses and ground support design.

Rock mass data are sparse at Charcas, with mapping being the main source of information. Previous studies have not assessed rock mass variability. A diamond core photographic review of exploration drilling should be undertaken in the short term to define a basic geotechnical model, supplemented with additional geotechnical drillholes and mapping to support further domaining work. Review of exploration logs showed that there were no RQD logging data to review to support basic characterization review across the deposit. Geotechnical drilling and logging are needed to improve spatial coverage and understanding of the rock mass variability.

Structural domains have not been defined for Charcas.

Laboratory test results are very limited; empirical estimations from indirect uncalibrated strength measurements (e.g., point load test and Schmidt hammer) were used in previous studies. The response of intact rock under loading conditions needs to be assessed through a comprehensive laboratory testing campaign to provide insight into the overall rock mass behavior. The following tests need to be undertaken:

- Uniaxial compressive strength
- Elastic modulus measurement
- Triaxial compressive strength
- Brazilian tensile
- Direct shear of discontinuities

A 3D geotechnical model is not available at Charcas. This model is required to assess variations in geotechnical parameters within the rock mass and constitutes the basis for designing excavations and rock reinforcement.

Stress measurements have not been undertaken at Charcas to date.

## 7.4.2 Ground Support Practices

Mine support consists of a 1- x 1-m pattern of 8-foot-long split-sets or cement grouted 5/8-inch-diameter rebar. Shotcrete is used when surficial support is required. The bolting pattern was observed to be applied with good control; however, in some areas, it was noted that the level of ground support could be optimized.

There is no ground support data collected to date. Aspects of interaction between rock bolts, bonding agents, and the rock mass or friction capacity of anchors in different ground conditions can be investigated with pull tests.

## 7.4.3 Geotechnical Monitoring Program

Previous studies (IMMSA, 2017; IMMSA, 2020; Knight Piésold Consulting, 2015; and Nava and Avila, 2015) have reported several seismic events at Charcas, with a large event registered in 2015 in the San Bartolo Mine. SRK understands that a seismic monitoring system is available at the mine complex, consisting of nine uniaxial and two triaxial geophones on three levels of the San Bartolo Mine. The mine has had at least one instance of a mine-scale seismic event, with a high-magnitude event causing extensive damage on October 15, 2015. A moment magnitude 4.0 was recorded by the national seismic system, although the reliability of this magnitude is unknown.

A robust monitoring system is required to assess fall-of-ground (FOG) risks. Once FOG controls have been implemented, monitoring systems are required to assess the performance of these controls and to ensure that if changes in conditions occur, they are detected in time and corrective action is taken. Since ground support highly depends on the quality of its installation, IMMSA should define QA/QC procedures and standards for the installation of ground support that are critical to prevent FOG.

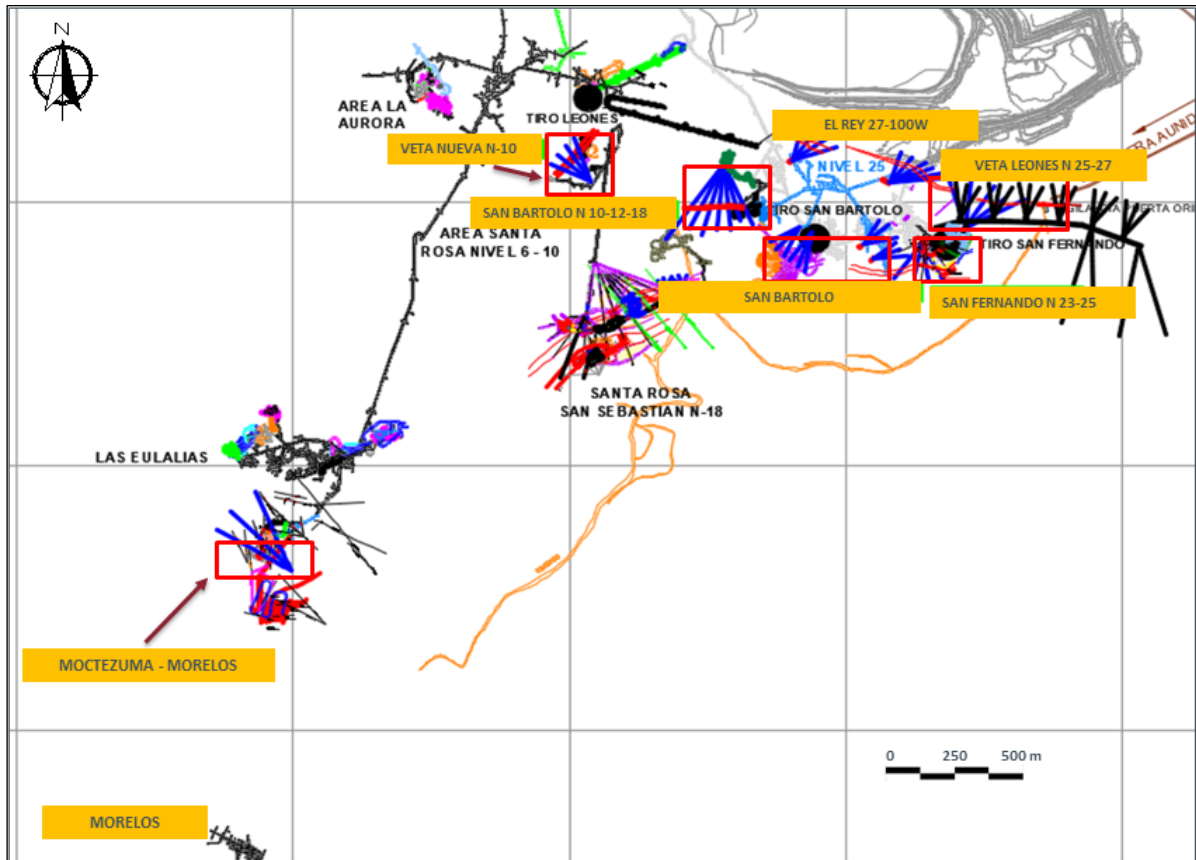
## 7.4.4 Mining Method and Operational Considerations

The mine produces 4,200 t/d using four mining methods, including overhand cut-and-fill, post pillar cut-and-fill, underhand benching, and overhand longhole open stoping. Room and pillar is also sparingly used.

The reliability of the geotechnical data inputs into the previous stability studies needs to be assessed. The design acceptance needs to be redefined given the low confidence in the geotechnical model aspects. For example, IMMSA has used a minimum factor of safety (FoS) of 1.2 for pillar design, which can be considered low in comparison with industry standard recommendations, such as Lunder and Pakalnis (1997) that suggests a minimum FoS of 1.6.

## 7.5 Exploration Target

Charcas is planning to continue the exploration drilling in 2025 to define the continuity and extension of the mineralization to depth, in levels 27-70W and 27-20W in San Bartolo and 26-100W level in El Rey. Charcas has a drilling plan for 2025 of 42,000 m using a contractor for underground drilling exploration underground in San Sebastian, Leones Vein, Santa Rosa. IMMSA will to operate in the areas La Reina, Santa Rosa Vein and El Rey with its drill rigs from underground and in Santa Rita from surface. The plan consists of approximately 20,000 m of drilling. Figure 7-16 presents the location of the areas of interest within Charcas for reference.



Source: IMMSA, 2024


**Figure 7-16: Location of Zones to Explore with Drilling from Underground and Surface**

## **8 Sample Preparation, Analysis, and Security**

### **8.1 Sample Preparation Methods and Quality Control Measures**

Trained Charcas personnel are involved at every stage of the sampling, sample packaging, and sample transportation process. Following geological logging and sample selection, the core is longitudinally split in half using an electric core saw. Core pieces are placed in the cutter machine and cut along the line marked by the geologist. Historically, a core splitter was used. One half of the core is assayed, while the other half is stored by the exploration department in the core box for future assaying or relogging. The practice of the mine geology department is to store the remaining core from the sampled intervals and small core pieces from the intervals described as non-mineralized rock, ranging from 10 to 20 cm in length.

The half cut core sample is placed in plastic bags with its corresponding sample tag and sent to the laboratory using defined laboratory submission sheets to track the number of samples and batch numbers. The sampling identification tags included with the samples in the plastic bags are preprinted by IMMSA (no barcode) for the samples sent to the internal laboratory or to LES for chemical analysis. The commercial laboratory sends barcoded tags which IMMSA uses to identify the samples for assaying. Figure 8-1 presents an example of the submission sheet used by the Charcas exploration team.



**SGS Servicios Minerales – Geoquímica**  
**Formato de recepción de muestras**

Para uso del laboratorio  
Orden de trabajo núm.: \_\_\_\_\_  
Fecha de recepción: .SEPT.2021

Ubicación del Lab. SGS: **Durango, Dgo**      En atención a:

Detalles de envío		Detalles de facturación <span style="float: right;">Igual que datos del reporte <input type="checkbox"/></span>	
Enviado por:	Ing. Edgard Iván Rodríguez Hernandez	O. de compra núm.:	Cotización SGS: MX09L92200272
Nombre de la compañía:	INDUSTRIAL MINERA MEXICO	Nombre:	INDUSTRIAL MINERA MEXICO RFC: IMM8505281U0
Teléfono:	(486) 85 2 14 03	Nombre de la compañía:	INDUSTRIAL MINERA MEXICO
Email:	edgar.rodriguez@mm.gmexico.com	Teléfono:	
Transporte/núm. guía:		Dirección:	CAMPOS ELISEOS 400 OFNA, 1102, LOMAS DE CHAPULTEPEC
País de origen de la muestra:	MEXICO	Ciudad:	DEL. MIGUEL HIDALGO Provincia/Estado: CD. DE MEXICO
Instrucciones para reporte			
Reportar a:	Edgard Iván Rodríguez Hernandez	País:	MEXICO Código Postal: 11000
Nombre de la compañía:	INDUSTRIAL MINERA MEXICO	Email 1:	
Teléfono:	(486) 85 2 14 03	Email 2:	
Dirección:	Primero de Mayo N°137	Destino de la muestra <small>(a menos que otra cosa se indique, el almacenamiento será cobrado)</small>	
Ciudad:	Charcas Provincia/Estado: S.L.P.	<b>Rechazos</b>	<b>Pulpas</b>
País:	MEXICO Código Postal: 78590	<input checked="" type="checkbox"/> Regresar después 30 días	<input checked="" type="checkbox"/> Regresar después 30 días
Email 1:	edgar.rodriguez@mm.gmexico.com PDF <input checked="" type="checkbox"/> XLS <input checked="" type="checkbox"/> CSV <input checked="" type="checkbox"/>	<input type="checkbox"/> Disponer después 30 días	<input type="checkbox"/> Disponer después 30 días
Email 2:	arcadio.marin@mm.gmexico.com PDF <input checked="" type="checkbox"/> XLS <input checked="" type="checkbox"/> CSV <input checked="" type="checkbox"/>	<input type="checkbox"/> Pagar después de 30 días	<input type="checkbox"/> Pagar después de 30 días
Email 3:	romeya_38@hotmail.com PDF <input checked="" type="checkbox"/> XLS <input checked="" type="checkbox"/> CSV <input checked="" type="checkbox"/>	Regresar con atención a:	
Email 4:	PDF <input type="checkbox"/> XLS <input type="checkbox"/> CSV <input type="checkbox"/>	Dirección de regreso:	
El reporte final y la factura serán enviados en PDF por email. Para términos y condiciones de SGS consulte: <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> .			
Identificación de la muestra e instrucciones de análisis.		Servicio urgente deberá ser aprobado por el lab. Cargo extra será aplicado.	
Nombre del proy.:	CHARCAS	<input checked="" type="checkbox"/> Servicio estándar	<input type="checkbox"/> Servicio urgente
Tipo de muestra:	<input checked="" type="checkbox"/> Núcleo <input type="checkbox"/> Rocas <input type="checkbox"/> Sedimentos <input type="checkbox"/> Pulpa <input type="checkbox"/> Suelo <input type="checkbox"/> Concentrados <input type="checkbox"/> Metales <input type="checkbox"/> Otro:		
Tipo análisis:	<input checked="" type="checkbox"/> Grado exploración <input type="checkbox"/> Grado mineral <input type="checkbox"/> Grado control <input type="checkbox"/> Grado venta <input type="checkbox"/> Tercería		
Instrucciones especiales:			
IMPORTANTE: Si tiene conocimiento que las muestras contienen materiales peligrosos por favor indíquelo <input type="checkbox"/> Asbestos <input type="checkbox"/> Radiactivo			
Identificación de Muestras			Preparación de muestras y análisis requeridos
De:	A:	Núm.	Elementos de interés
324357	324434 (LE-280)	78	ORO
			34 ELEMENTOS
Número total de muestras enviadas: 78			<input checked="" type="checkbox"/> Ver archivo adjunto para datos de muestras <input checked="" type="checkbox"/> Ver archivo adjunto para análisis requeridos
Autorización del cliente (Firma):			Fecha: .SEPT.2021

QF-NA-MN-23 Ver. 2.1 emitida en Marzo 2018

Escribanos a: [minerals@sgs.com](mailto:minerals@sgs.com)  
Página: <http://www.sgs.com/en/Mining/Analytical-Services.aspx>  
Vea nuestra guía de servicios: <http://www.sgs.com/~media/Global/Documents/Brochures/SGS%20Analytical%20Guide%202015%20Web.pdf>

Source: IMMSA, 2021

**Figure 8-1: Laboratory Submission Sheet Example**

## 8.2 Sample Preparation, Assaying, and Analytical Procedures

### 8.2.1 Density Analysis

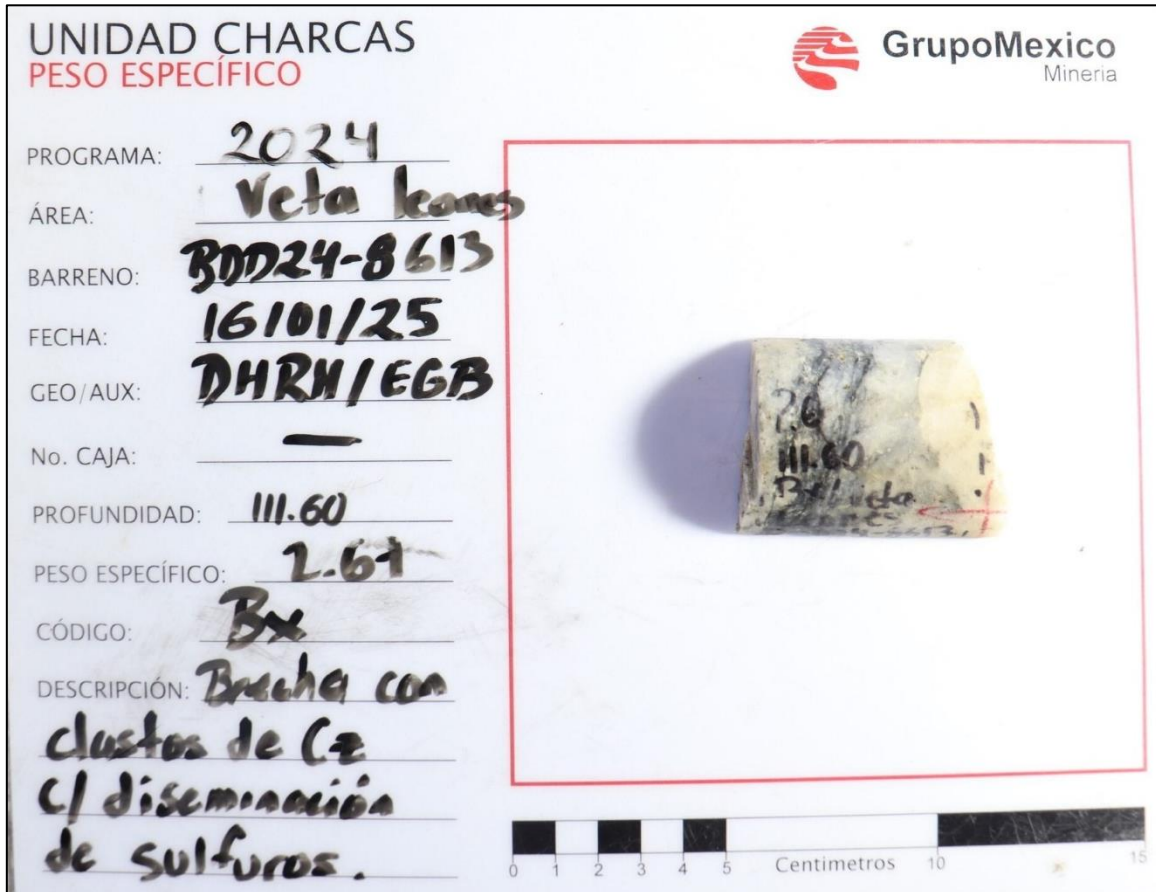
Since 2023, Charcas's mine geology department has collected a limited number of density tests using the Archimedes' principle-based method. However, the database is currently too small to adequately support comprehensive density analysis. Figure 8-2 shows an example of a photograph of the core density test. The plant and the mine have been using a standard density value of 3.0 t/m<sup>3</sup> for decades, but work is need to statistically support these values or test for potential variability as the test work continues.

The exploration department has been collecting density measurements; however, these data are collected outside of the mining area and are therefore not considered representative of mineralization. The exploration department has the following process for density analysis based on the Archimedes' principle-based methodology:

- Sample location and cut:
  - Draw hole trajectory.
  - Write down the nomenclature in the core:
    - Hole ID
    - Depth
  - The sample size will be at the discretion of the personnel who select the sample and depending on the capacity of the scale used. The sample data collected should be noted down in the core box. Sample fragment sizes vary between 5 and 10 cm.
- Wash the sample with water to remove residues.
- Dry the sample in an electric oven or in sunlight if an oven is not available.
- Level the balance until the bubble is centered using the help of the position adjustments of each leg of the balance, then calibrate the balance before starting to measure the samples and make sure that it reads zero (in case of a precision digital scale).
- Weigh the dry sample (P).
- Waterproof seal the sample with an appropriate material (consider the density of this material in sample density calculations). Seal at least three times. Wait a period of time for optimal drying of the samples.
- Weigh the sample in purified water (preferably) and take the data (P\_Agua).
- Wash the sample and reincorporate it into the core from where it was collected.
- Determine the specific gravity with the data obtained and fill in the hole density format.

Photographs and brief descriptions were taken, and the corrections to obtain the density data were applied. Then, the density data were recorded in the database.

The QP considers this procedure to follow industry standards and recommends that the process be expanded to include all material (host rocks and mineralization) and be completed at regular intervals within the core and send samples to a laboratory for validation and quality control. Continuation of programs to increase the size of the density database to confirm the current density values used should be considered a priority activity for the Company.



Source: IMMSA, 2024

**Figure 8-2: Core Samples for Density Testing – Mine Geology Department**

### 8.2.2 Sample Preparation, Internal Laboratory

The internal laboratory prepares the channel samples and assays all the samples collected by the mine geology. The laboratory is internal in the nature that it is owned and run by the operation and therefore is not considered independent.

The internal laboratory is owned by the mine and run by IMMSA employees. The laboratory has been certified by Bureau Veritas to NMX-CC-9001-IMNC-2015/ ISO 9001: 2015. The certification was completed initially in 2015 and renewed in 2018 and 2019. The date of the certification reviewed by the QP expired on August 7, 2021. It is the QP’s opinion that while out of date, this represents a minimal risk as the procedures used in the latter half of 2021 will follow the same procedures. SRK recommends that IMMSA obtain an updated certification for 2025.

In 2024 the rock samples from underground channels were sent to the Charcas laboratory. Core is being sent to the Grupo México Estación Santiago laboratory (LES), in San Luis Potosi or to the commercial SGS Laboratory in Durango.

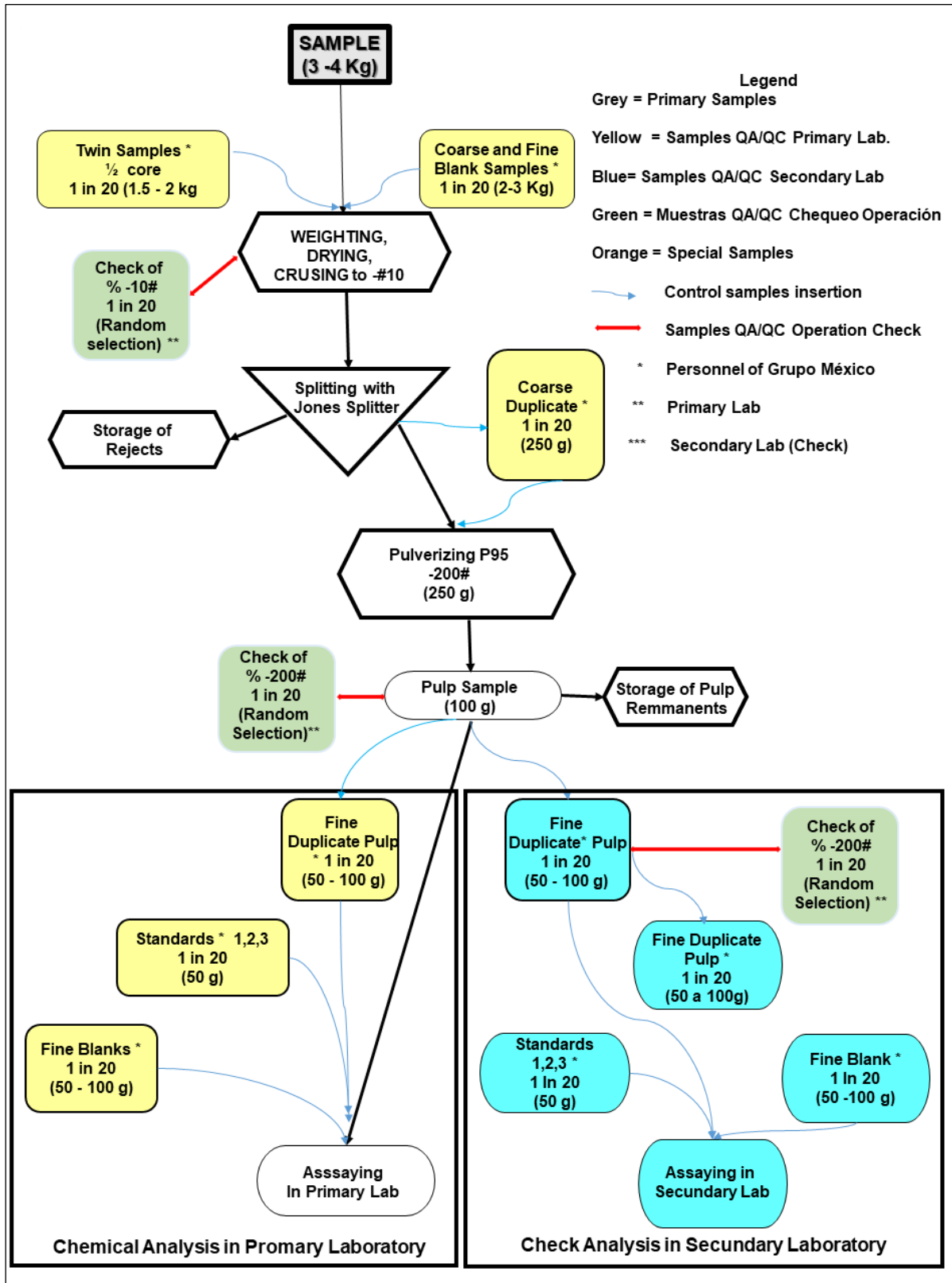
The laboratories follow internal QA/QC protocols which include continuous maintenance and calibration of equipment, monitoring of sample contamination, and use of certified standard reference materials, which in SRK’s opinion are considered in-line with industry standards.

Sample preparation in the internal laboratory includes:

- Sample weighing
- Sample drying
- Crushing, 75% passing 10 mesh (checks: one every 20 samples)
- Subsampling (Jones Separator) to obtain a sample of 250 grams (g)
- Pulverizing, 85% passing 200 mesh (check: one every 20 samples)
- Subsampling to obtain pulp samples of 100 g
- Storage of pulps and rejects

The QP observed that the issues observed in previous site visits were addressed by IMMSA, who implemented some control measurements including continuous supervision of the sample preparation process, which resulted in an important improvement. The QP considers that the preparation process is adequate and suggest some additional measurements to reduce contamination, including the construction of cubicles with compressed air and dust extractors to perform the sample crushing. Additionally, the QP recommends documenting all the QA/QC controls followed during preparation.

Figure 8-3 shows the flow chart of the preparation process and QA/QC controls used during the process in the Charcas and LES. The Charcas internal laboratory uses fine duplicates, certified reference materials, and blanks during the preparation process. Additionally, pulps are sent to LES for secondary laboratory checks as part of the quality control protocol.



Source: IMMSA, 2021

Figure 8-3: Flow Chart of Sample Preparation (Charcas internal laboratory)

### 8.2.3 Chemical Analysis, Internal Laboratory

The following chemical analyses are used at Charcas's and LES laboratories, using 100 g pulp samples:

- **Inductively coupled plasma (ICP):** multielement (Ag, Au, Pb, Zn, Cu, iron (Fe), cadmium (Cd), arsenic (As), bismuth (Bi), and Sb) plasma analytic method (ICP AVIO 500); ICP-optical emission spectrometry (OES); ICP atomic emission spectrophotometer:
  - Detection limits:
    - Au: 0.01 to 10 g/t
    - Ag: 1 to 3,000 g/t
    - Zn: 0.001% to 16%
    - Cu: 0.001% to 24%
    - Pb: 0.001% to 20%
- **Fire assay (gravimetric method):** Determination of Au and Ag by fire assay and gravimetric termination (detection limits: Au: 1 to 50 g/t; Ag: 10 to 30,000 g/t)
- **Volumetric determination of zinc:** For high zinc concentrations (detection limits: 4% to 60%)
- **Volumetric determination of copper:** For high copper concentrations (detection limits: 15% to 40%)
- **Volumetric determination of lead:** For high lead concentrations (detection limits: 15% to 85%)

Charcas's internal laboratory (Unidad Charcas – Laboratorio de Ensaye: Mina Tiro General S/N, Col. Mina Tiro General, Charcas, San Luis Potosí) has a certification with the Bureau Veritas management system according to Norm NXM-CC-9001-IMNC-2015-ISO9001:2015. The certification includes the chemical-metallurgical analysis of mineral products and subproducts of galena, chalcopyrite, sphalerite, and pyrite. The last cycle of certification started on February 1, 2019, and was valid until August 7, 2021. IMMSA will work to obtain the certification, which should be a priority.

The Estacion Santiago Laboratory (LES) in San Luis Potosí holds a current certification under ANIAB and Orion (ISO 9001:2015).

### 8.2.4 Sample Preparation, SGS Laboratory

The core samples collected by Charcas's exploration department are sent to the SGS Laboratory (SGS) in Durango. Since 2024 part of the core samples collected by the Mine Geology Department are being sent to this laboratory. SGS is independent of IMMSA and holds accreditation under ISO/IEC 17025:2017 under the Standards Council of Canada, which indicates the laboratory is accredited under the general requirements for the competence of testing and calibration laboratories.

The sample preparation procedures at SGS comprised of drying the sample, crushing the entire sample in two stages to -6 and -2 mm by jaw crusher (more than 95% passing), riffle splitting the sample to 250 to 500 g, and pulverizing the split to more than 95% passing -140 mesh in 800-cubic-centimeter (cm<sup>3</sup>) chrome steel bowls in a Labtech LM2 pulverizing ring mill.

## 8.2.5 Chemical Analysis, SGS Laboratory

The following chemical analysis packages are used at SGS by the Charcas exploration department:

- **GE\_ICP21B20:** multielement (34 elements) analysis by aqua regia digestions and ICP-OES: Ag, aluminum (Al), As, barium (Ba), beryllium (Be), Bi, calcium (Ca), Cd, chromium (Cr), cobalt (Co), Cu, Fe, mercury (Hg), K, lanthanum (La), lithium (Li), magnesium (Mg), manganese (Mn), molybdenum (Mo), sodium (Na), nickel (Ni), phosphorus (P), Pb, sulfur (S), Sb, scandium (Sc), tin (Sn), strontium (Sr), titanium (Ti), vanadium (V), tungsten (W), yttrium (Y), Zn, zirconium (Zr), nitric acid (HNO<sub>3</sub>), and hydrochloric acid (HCl)
- **GE\_FAA30v5:** Au analysis by 30-g fire assay with atomic absorption spectrometry (AAS) finish (Au: 30 g, 50 g; HNO<sub>3</sub>; HCl) (Detection limits 5 to 10,000 parts per billion Au)
- **GO\_FAG37v Ag:** used for the determination of over-limits of Ag by fire and gravimetric termination using a 50-g sample (detection limits 10 to 100,000 parts per million (ppm) Ag)
- **GO\_ICP90Q100:** analysis of ore grade samples (Pb, Cu, Zn, Fe, and As) by sodium peroxide fusion and ICP-OES (As, Fe, Cu, Ni, Pb, Sb, Zn, and sodium peroxide (Na<sub>2</sub>O<sub>2</sub>)) (detection limits: 0.01% to 30% for each element)
- **GC\_CON12V Zn:** used for the determination of zinc using a volumetric and gravimetric concentration for samples with zinc >32% (detection limits: 5% to 65% Zn). Process involves preparation and determination of zinc in ores, concentrates, and metallurgical products by separation, precipitation and titration of acid solubles, fusion with ICP-OES-AAS of acid insoluble.

## 8.3 Quality Control Procedures/Quality Assurance

### 8.3.1 Security Measures, Chain of Custody

The mine geology and exploration departments have control and supervision over the process of sample collection from drilling and channel sampling, maintaining the custody chain for the samples until the delivery of the samples to the laboratory.

At the drill rig, the contractor's and Charcas's drillers are responsible for removing the core from the core barrel (using manual methods) and placing the core in prepared core boxes. The core is initially cleaned in the boxes, and once the box is full of core, it is closed and transported by the authorized personnel to the logging facility where Charcas's (mine geology and exploration) geologists or technicians take possession. On receipt at the core shed, geologists follow the logging and sampling procedures. The samples are transported to the laboratories (Charcas, LES and SGS) by authorized personnel.

In the QP's opinion, there are sufficient protocols in place to ensure the quality and integrity of the samples from exploration to the laboratory. Storage of data using a central repository system is recommended to ensure data security is maintained.

### 8.3.2 Mine Geology Department

Since September 2023, the mine's geology department has implemented quality control protocols for its drilling and rock sampling activities. These protocols comply with the insertion of control samples, such as blanks, duplicates and certified reference materials (CRM). The control samples inserted in

the core samples in 2024 are shown in Table 8-1, and include 474 control samples with an insertion rate of 12%, which SRK considers reasonable.

**Table 8-1: 2024 QA/QC Control Samples (core) – Mine Geology Department**

Type of Sample/Control	Number of Samples	Insertion Rate (%)
Fine Blank	85	2.11
Coarse Blank	86	2.14
OREAS C22i (CRM)	5	0.12
OREAS-C26e (CRM)	18	0.45
CND-ME-1404 (CRM)	14	0.35
CND-ME-1409 (CRM)	16	0.40
CND-ME-1808 (CRM)	12	0.30
CND-ME-1812 (CRM)	9	0.22
CND-ME-1903 (CRM)	42	1.04
Fine Duplicates	60	1.49
Coarse Duplicates	70	1.74
Core Duplicates	57	1.42
<b>Total Control Samples</b>	<b>474</b>	<b>11.77</b>
Primary Sample	3,553	88.23
<b>Total</b>	<b>4,027</b>	<b>100.00</b>

Source: IMMSA, 2024

Half of the core that remains after sampling is stored in the Charcas operation. The historical core were discarded after several years, and not all the historical drilling core is conserved in the operation, which has limited the ability to undertake a detailed re-assay program. Since 2023 all the core is being stored in the operation. The Charcas and LES conserve the pulps for 1 month after assaying and then discards the samples.

In 2023, IMMSA moved the core boxes to old underground chambers that are under continuous vigilance; the conditions are not considered in the QP's opinion the best for core conservation, but this underground storage ensures the core is kept secure. The QP recommends continuous vigilance of the core and monitoring the quality of the boxes and core (Figure 8-4).



Source: SRK, 2023

**Figure 8-4: Core Storage at Charcas (Mine Geology Department)**

The Certified Reference Materials (CRM) or Standards were procured primarily from CDN Resource Laboratories, Canada, with two CRM's procured from OREAS, Australia. Three types of CRM were utilized: low, medium, and high grade, with a total of seven different CRM used overall. The coarse blank samples are not certified by the laboratory, and there is a lack of clarity regarding the origin of the rock used. A quarter of the core is used for core duplicates (twin samples). Coarse and pulp duplicates are the rejects provided by the laboratory. Check assays using a third laboratory have not been incorporated into the QA/QC protocol, which SRK would recommend be completed.

Charcas has established limits of acceptability for the different controls, including:

- Blanks: Contamination is identified when assay results exceed three times the detection limit for a specific element evaluated by SGS and two times for LES. When contamination occurs, Charcas notifies the laboratory to review internal protocols and, if necessary, repeat the assaying of a specific batch if the contamination is deemed repetitive and continuous. The blank samples are not certified by a laboratory.
- Duplicates: Coarse duplicates use an acceptability level of  $\pm 20\%$  relative error range from the 45° line (scatter plot). For fine duplicates a  $\pm 10\%$  relative error is used. Checks outside of these acceptability ranges are considered failures, and if they occur in a certain period (e.g.,

failures are more than 10% of the total control samples), Charcas contacts the laboratory to review their preparation procedures.

- Certified Reference Material (CRM) / Standard: The performance of these checks is evaluated using graphs where the 2 and 3 standard deviations (SD) reference lines are drawn in conjunction with the assay results obtained. A failure is considered when a specific CRM assay result is outside of the  $\pm 3$ -SD reference line or when two contiguous CRM's are outside of the  $\pm 2$ -SD reference line. In these cases, Charcas requests the reanalysis of some samples (two to five) above and below the failure in a specific batch of samples included in the laboratory assay certificate.
- Second laboratory checks: Charcas is not using second laboratory checks (Tercerías) for core samples. SRK recommends sending pulps of part of the assayed samples to a third commercial laboratory as part of the QA/QC protocol. The rock samples collected from the underground workings and sent to the Charcas laboratory undergo analysis both at Charcas and at a secondary laboratory, LES. These results have not yet been reviewed. SRK recommends documenting these duplicates as part of the QA/QC process to ensure a secondary laboratory checks for the rock samples

Blank control samples have systematically fallen outside the allowed detection limits, particularly for lead, copper and Zn in both Estación Santiago and SGS laboratories. Charcas should review the quality of the material used as blanks, as both laboratories exhibit similar behavior.

Figure 8-5 through Figure 8-22 provide a summary of the QA/QC control samples results.

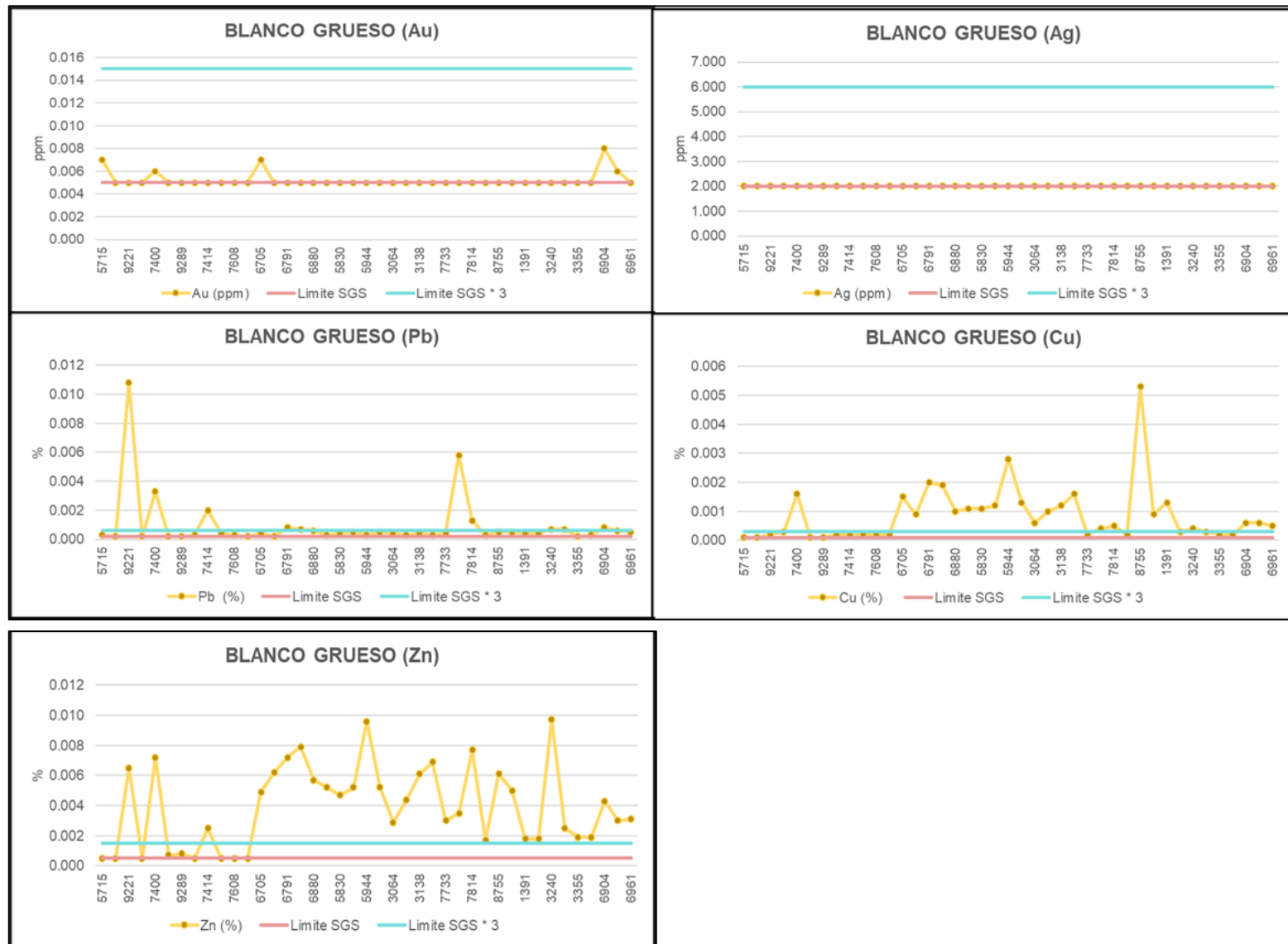
In general, the QP has reviewed the information and notes there is no indication of bias (high or low) in the CRM results for SGS and LES. Some individual CRM's have reported outside of the 2-SD limits assigned in LES, but no failures were reported and overall trends are noted to not display any systematic bias.

SRK suggest continuing with the QA/QC protocol as currently established in a consistent and systematic manner for the 2025 core sampling and introducing the use of secondary laboratory checks. In addition to the core sampling QA/QC protocols SRK recommends Charcas should implement a similar QA/QC protocol for the underground sampling.

It is recommended that IMMSA seek another quarry with lower values within the allowed detection limits or purchase certified blank samples. SRK suggests the Charcas geological department should follow up with the laboratory and request information about the failure samples, and to maintain communications with SGS in Durango and LES laboratory in San Luis Potosí when there are failures in standards, blanks and duplicates.

There is no consolidated report, which is recommended in order to track the results of the protocols and their evolution.

SRK considers that the QA/QC protocol implemented by the mine geology department of Charcas in 2024 for the core samples are in line with the industry's best practices. However, a similar protocol should be implemented for the rock samples from the underground workings.



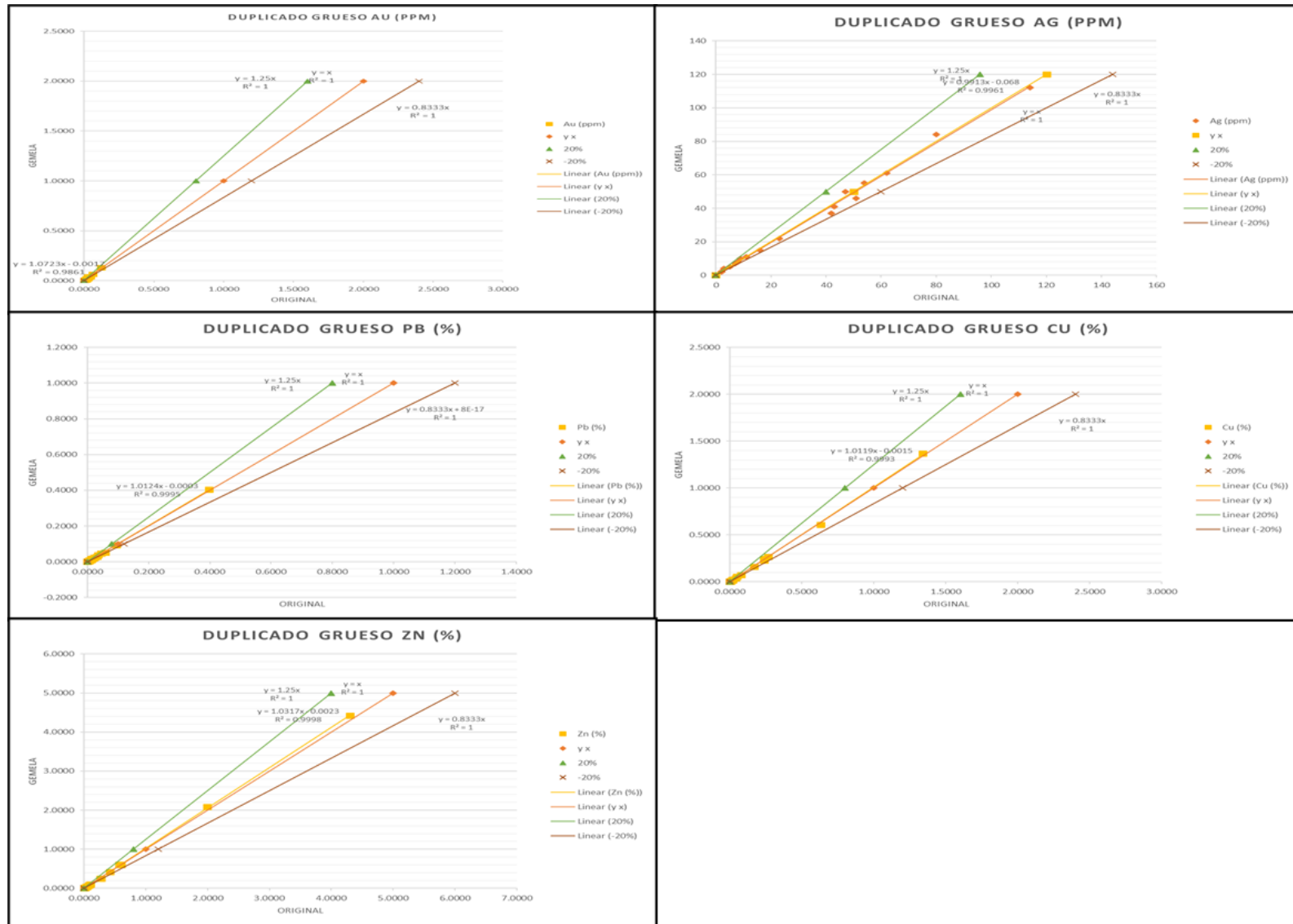
Source: IMMSA, 2024

**Figure 8-5: Coarse Blank Results – 2024 Mine Geology Drilling Campaign**



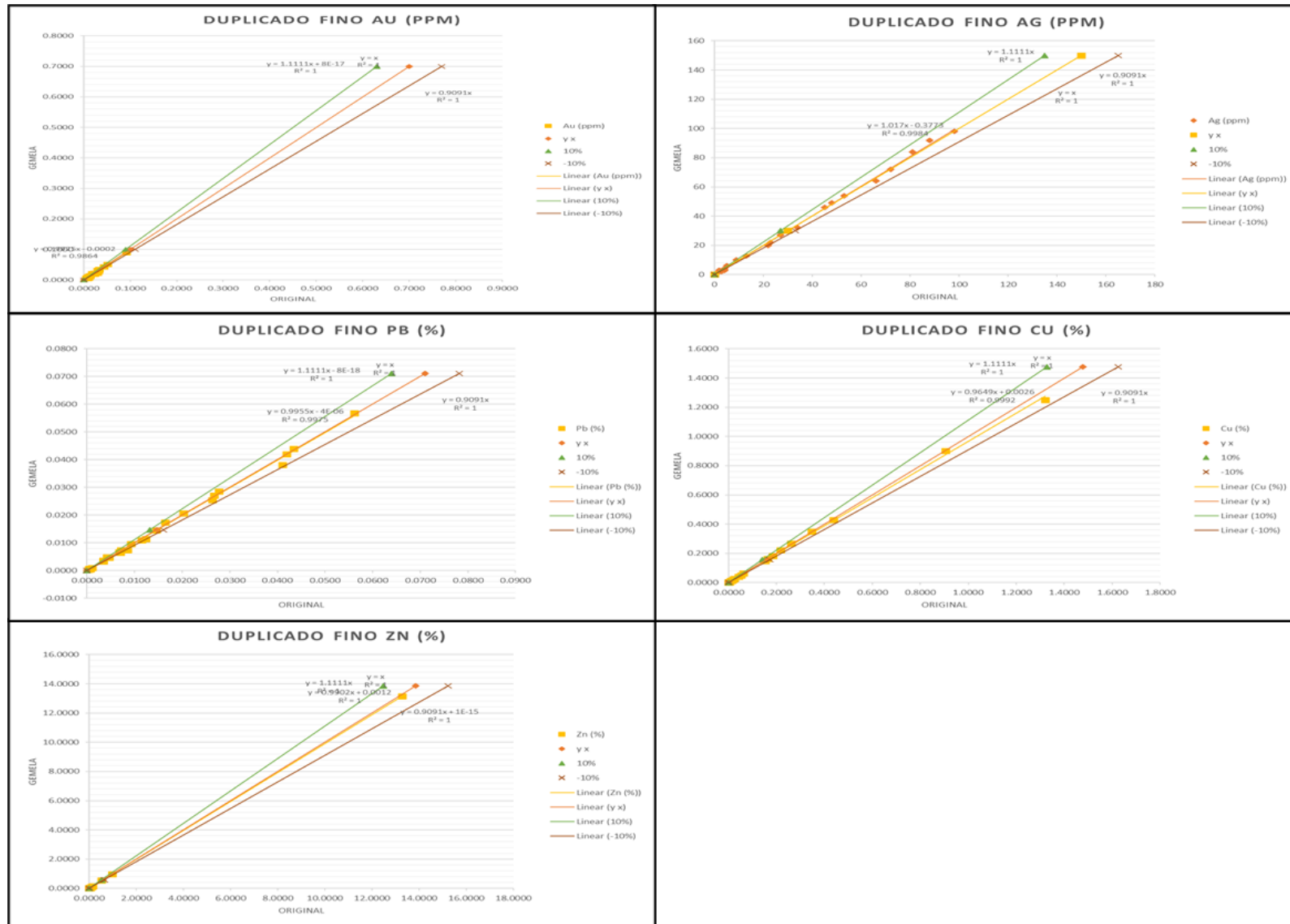
Source: IMMSA, 2024

Figure 8-6: Mine - Fine Blank Results – 2024 Estación Santiago Lab



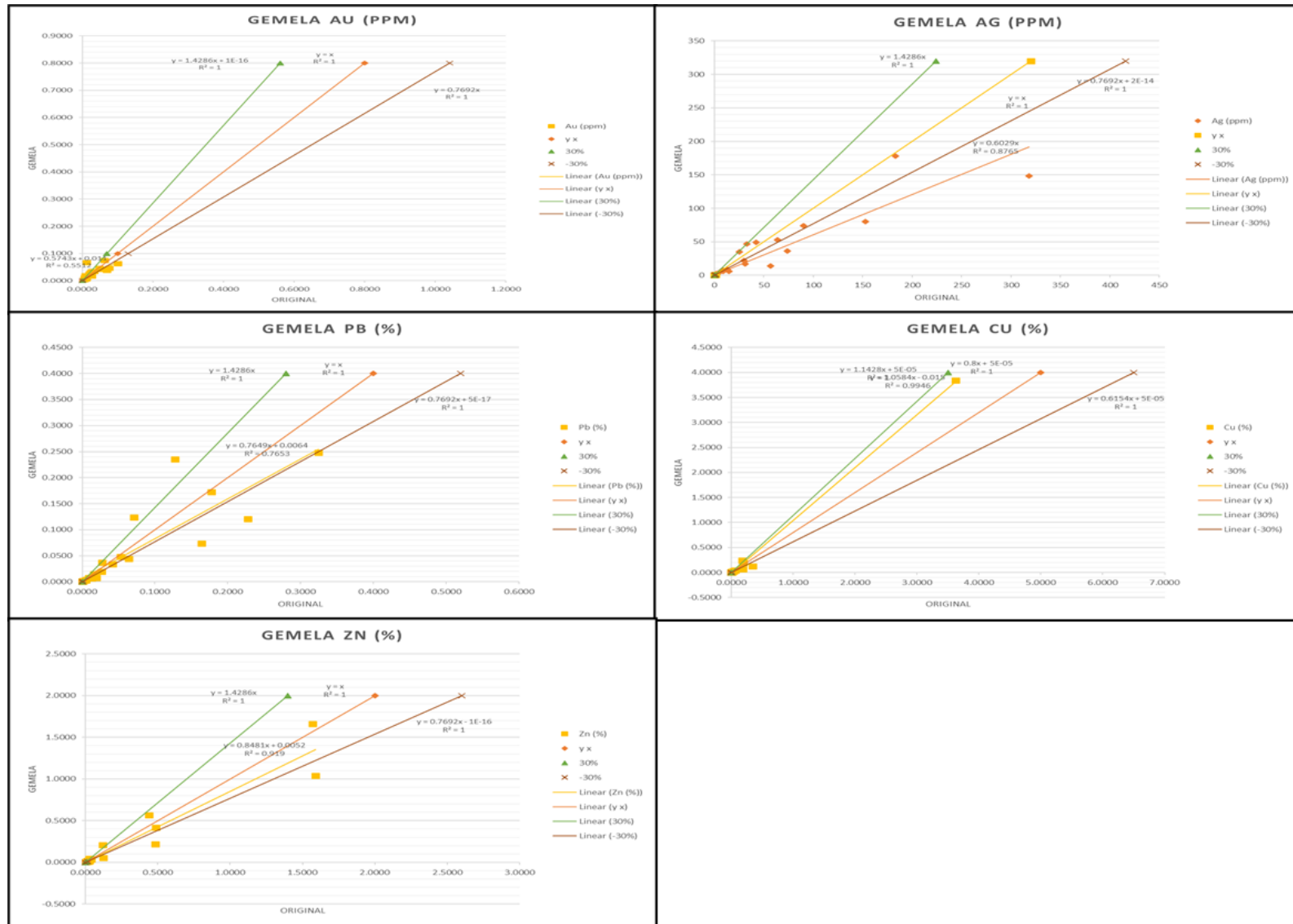
Source: IMMSA, 2024

**Figure 8-7: Mine - Coarse Duplicate Results – 2024 Estación Santiago Lab**



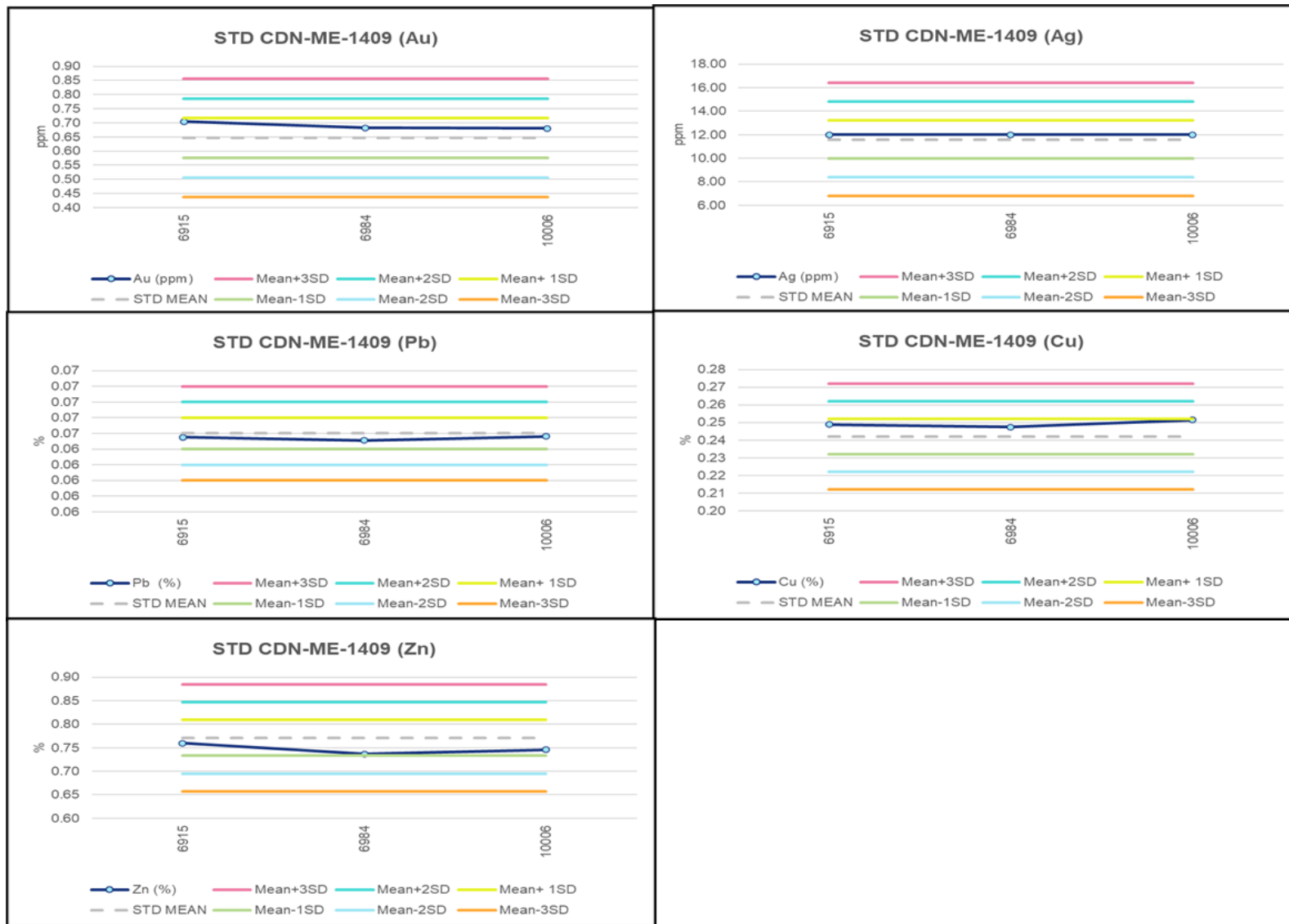
Source: IMMSA, 2024

**Figure 8-8: Mine - Fine Duplicate Results – 2024 Estación Santiago Lab**



Source: IMMSA, 2024

**Figure 8-9: Mine - Core Duplicate Results – 2024 Estación Santiago Lab**



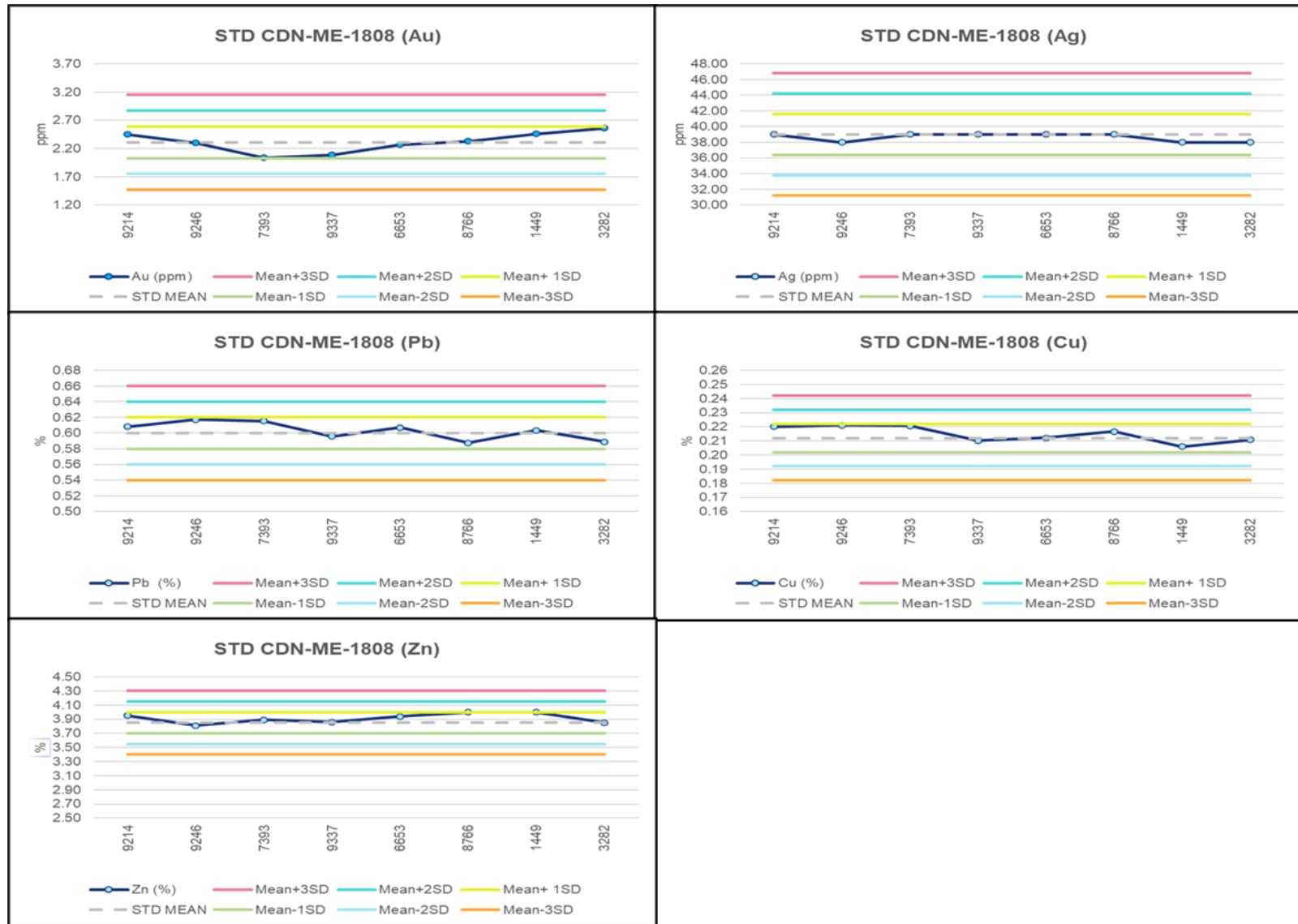
Source: IMMSA, 2024

**Figure 8-10: Mine - CDN-ME-1409 CRM Results – 2024 Estación Santiago Lab**



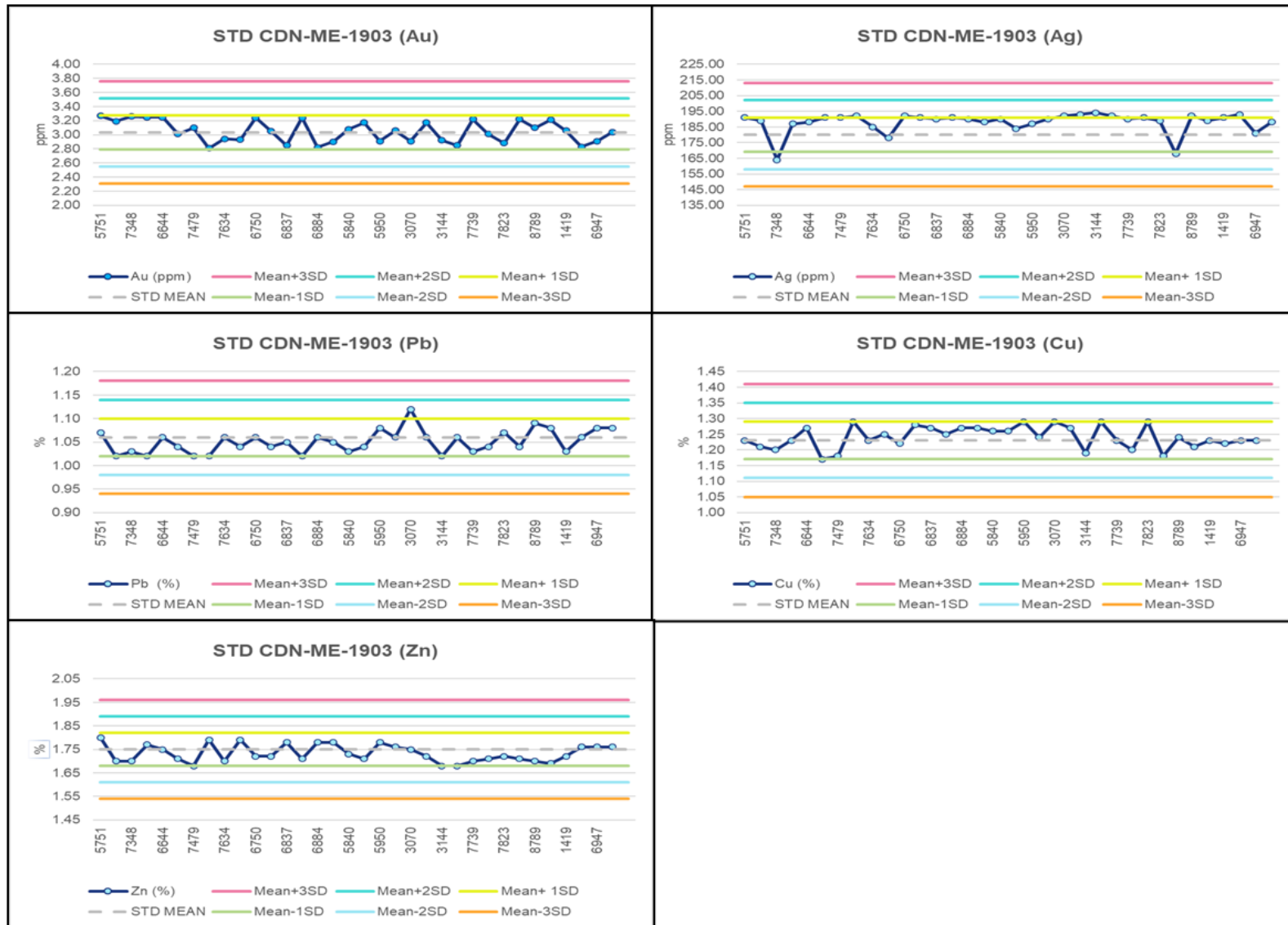
Source: IMMSA, 2024

**Figure 8-11: Mine - CDN-ME-1404 CRM Results – 2024 Estación Santiago Lab**



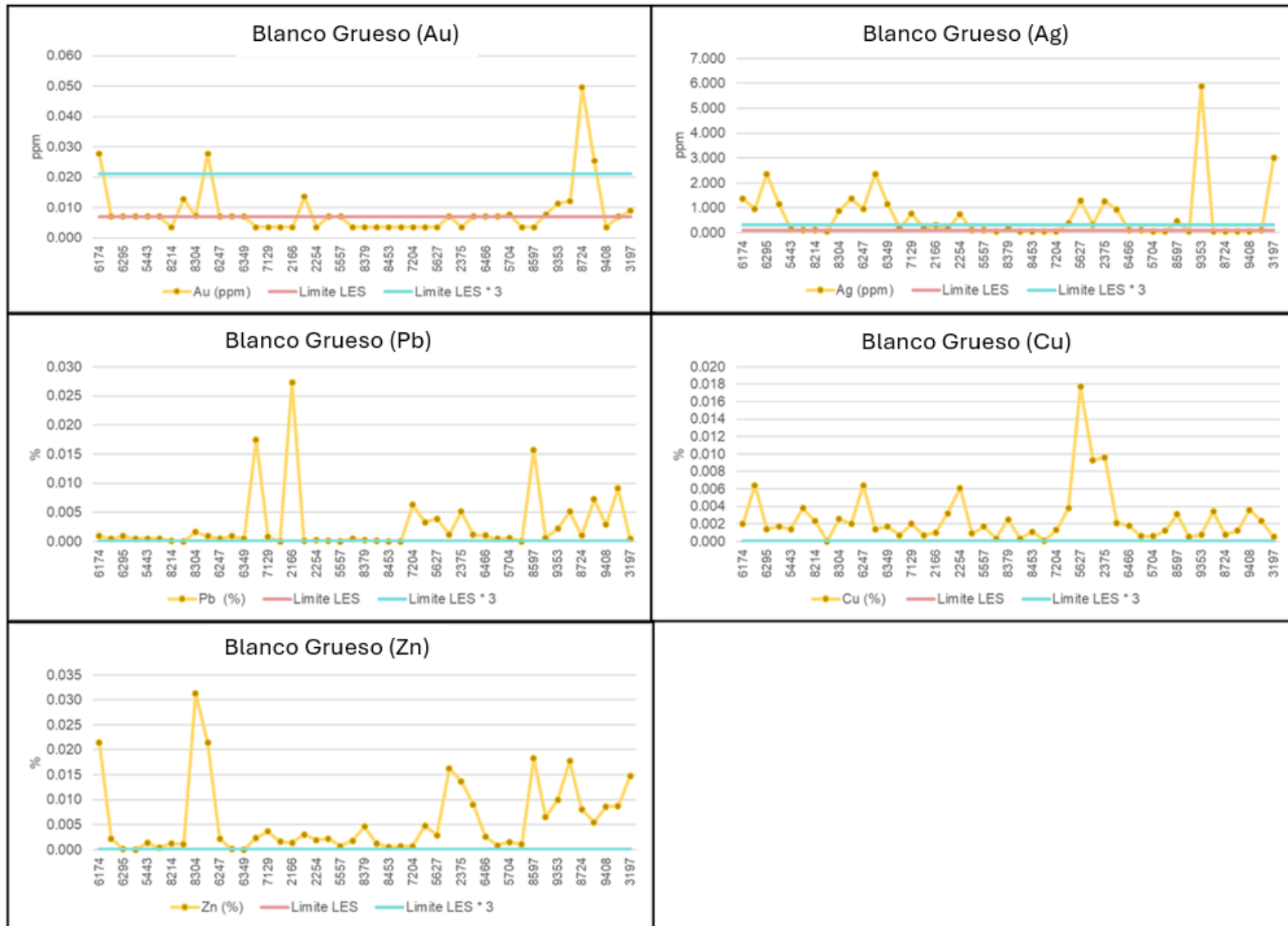
Source: IMMISA, 2024

**Figure 8-12: Mine - CDN-ME-1808 CRM Results – 2024 Estación Santiago Lab**



Source: IMMSA, 2024

**Figure 8-13: Mine - CDN-ME-1903 CRM Results – 2024 Estación Santiago Lab**



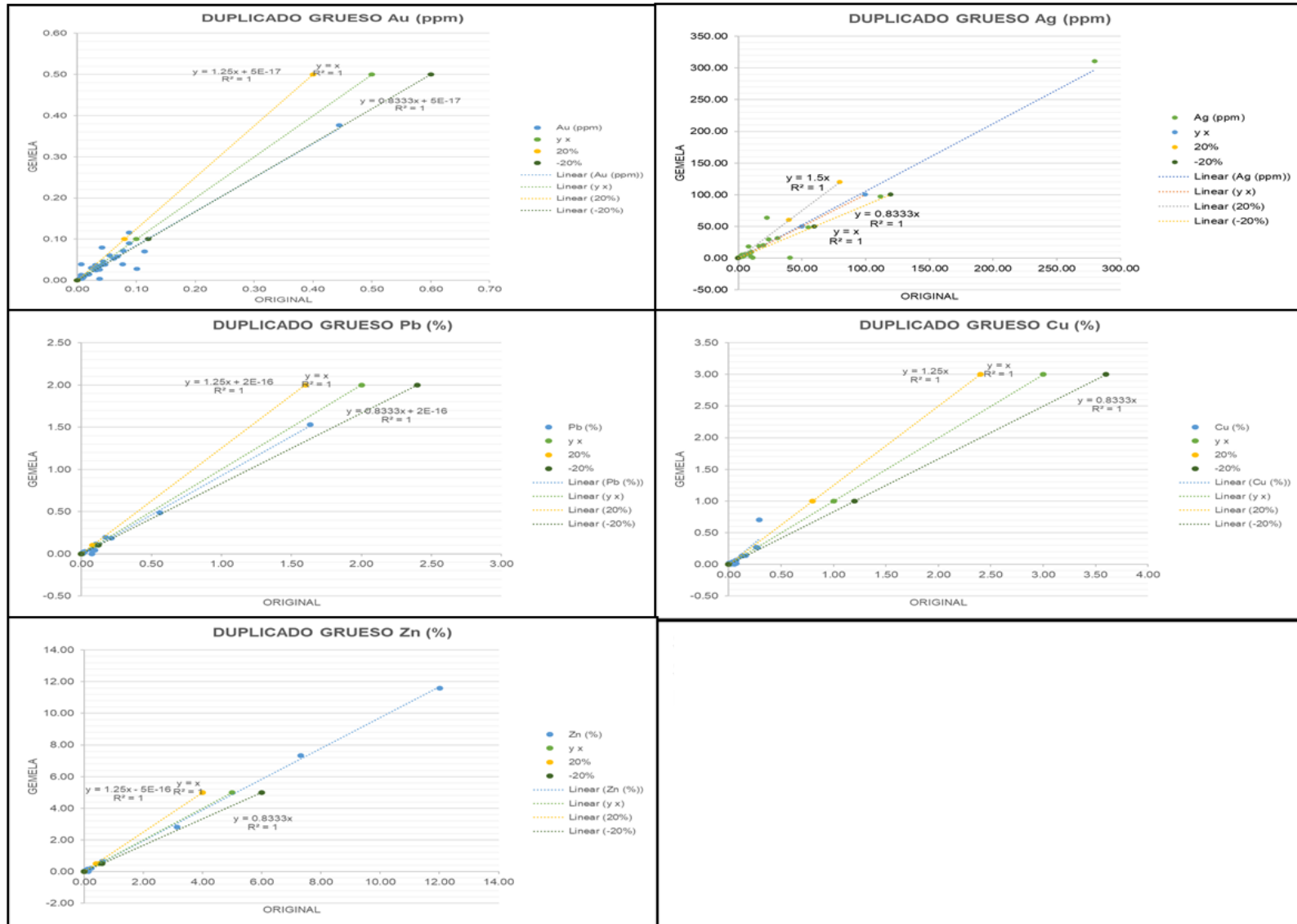
Source: IMMSA, 2024

**Figure 8-14: Mine - Coarse Blank Results – 2024 SGS Lab**



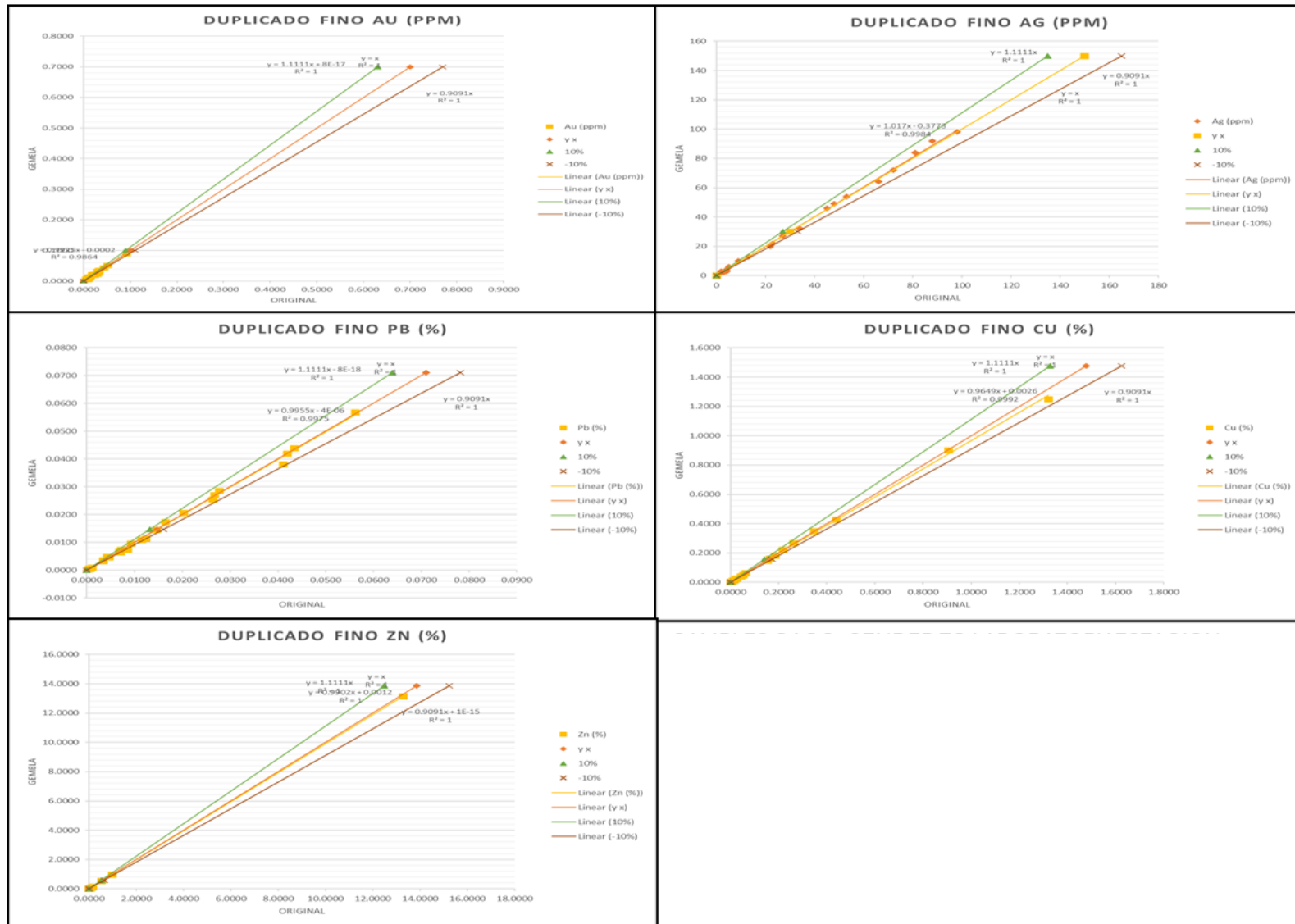
Source: IMMSA, 2024

**Figure 8-15: Mine - Fine Blank Results – 2024 SGS Lab**



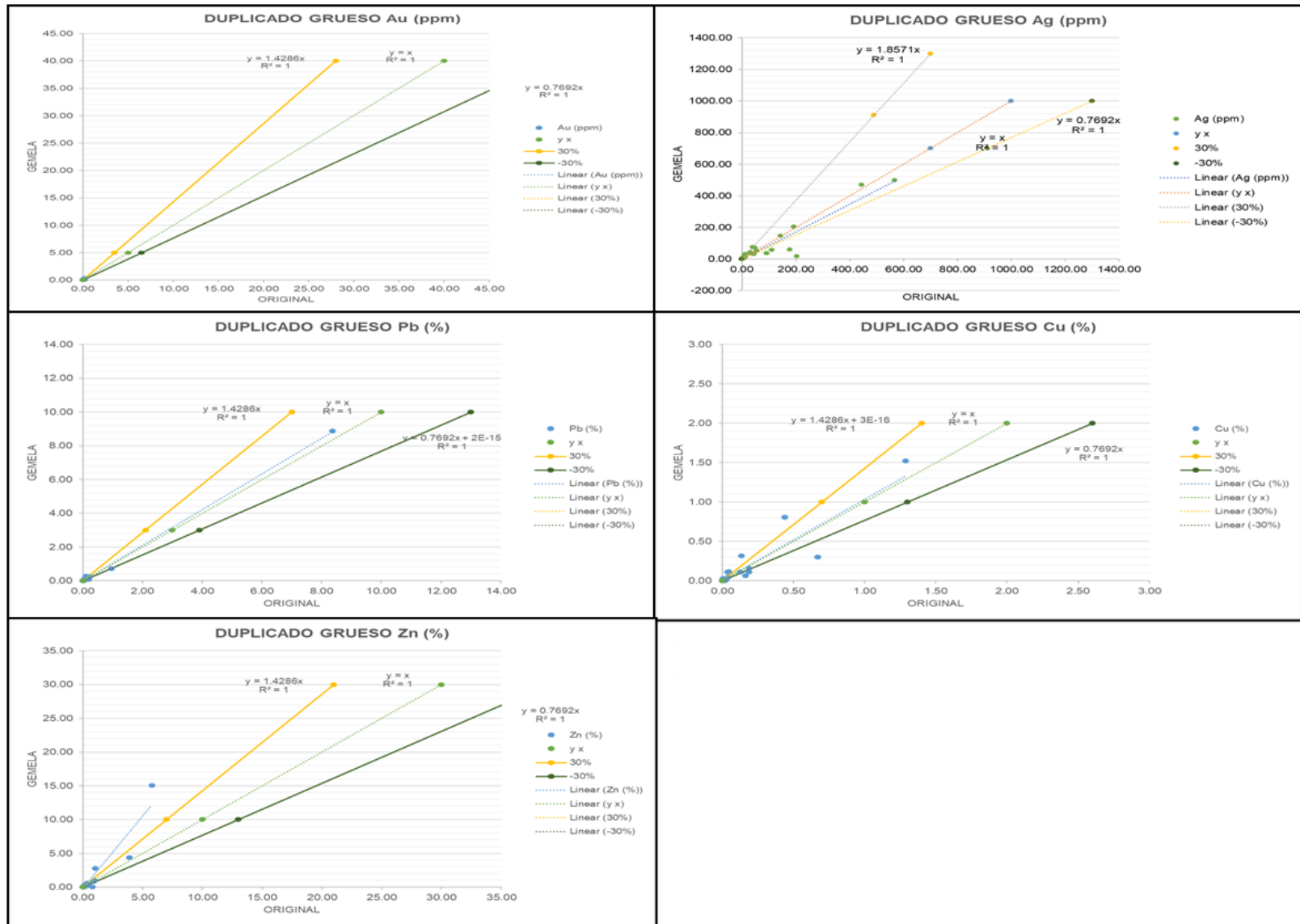
Source: IMMSA, 2024

**Figure 8-16: Mine - Coarse Duplicate Results – 2024 SGS Lab**



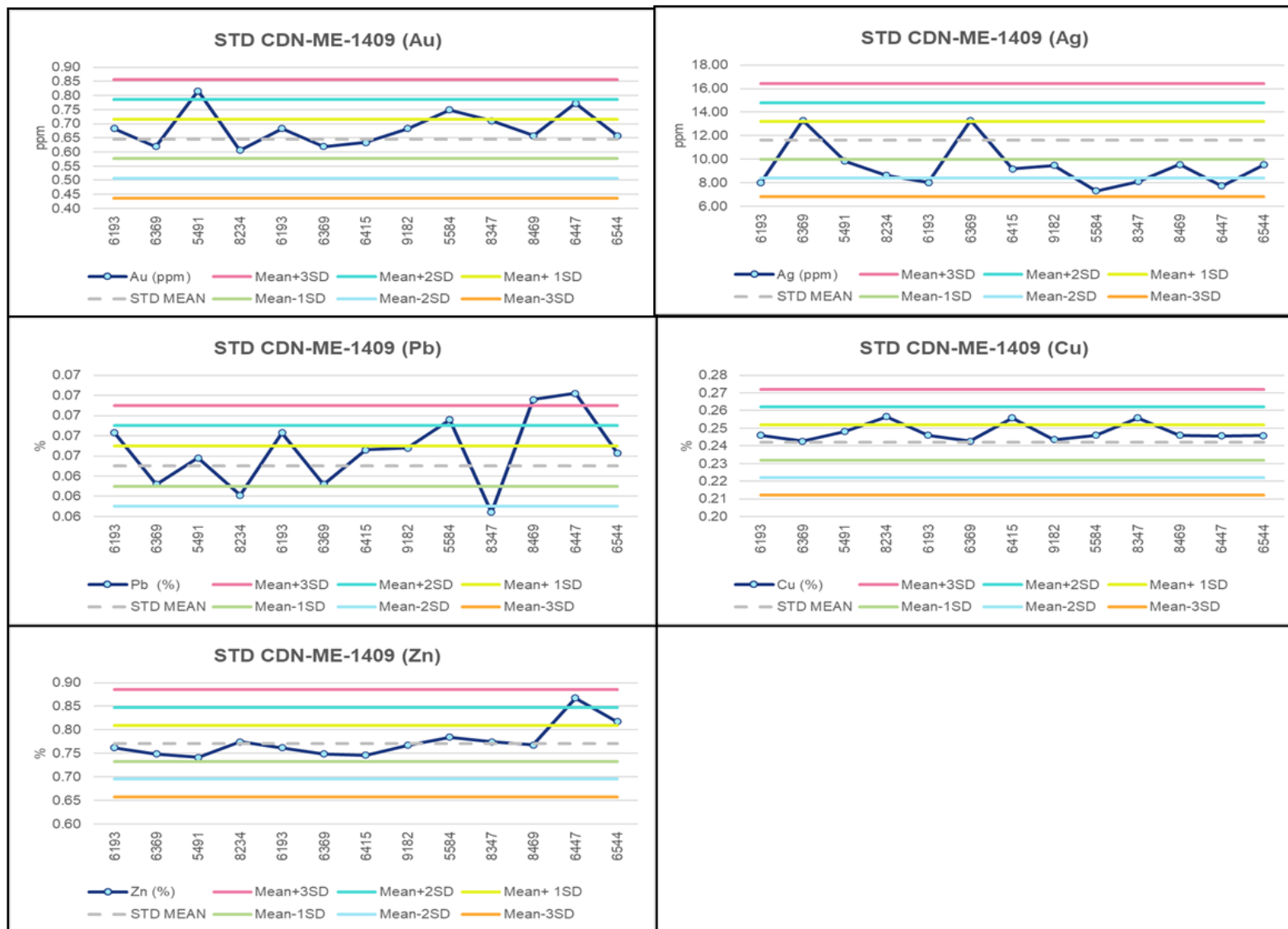
Source: IMMSA, 2024

Figure 8-17: Mine - Fine Duplicate Results – 2024 SGS Lab



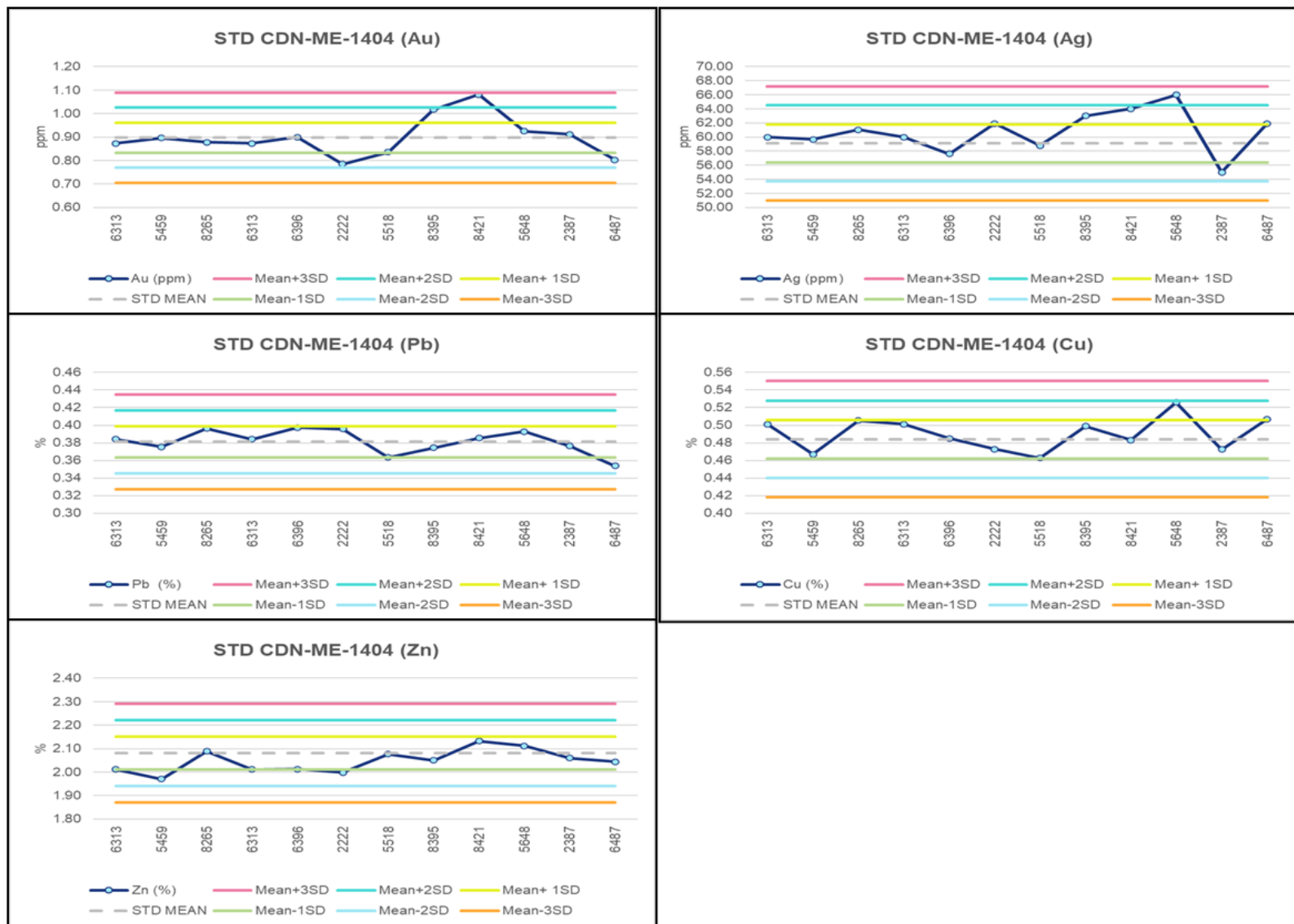
Source: IMMSA, 2024

**Figure 8-18: Mine - Core Duplicate Results – 2024 SGS Lab**



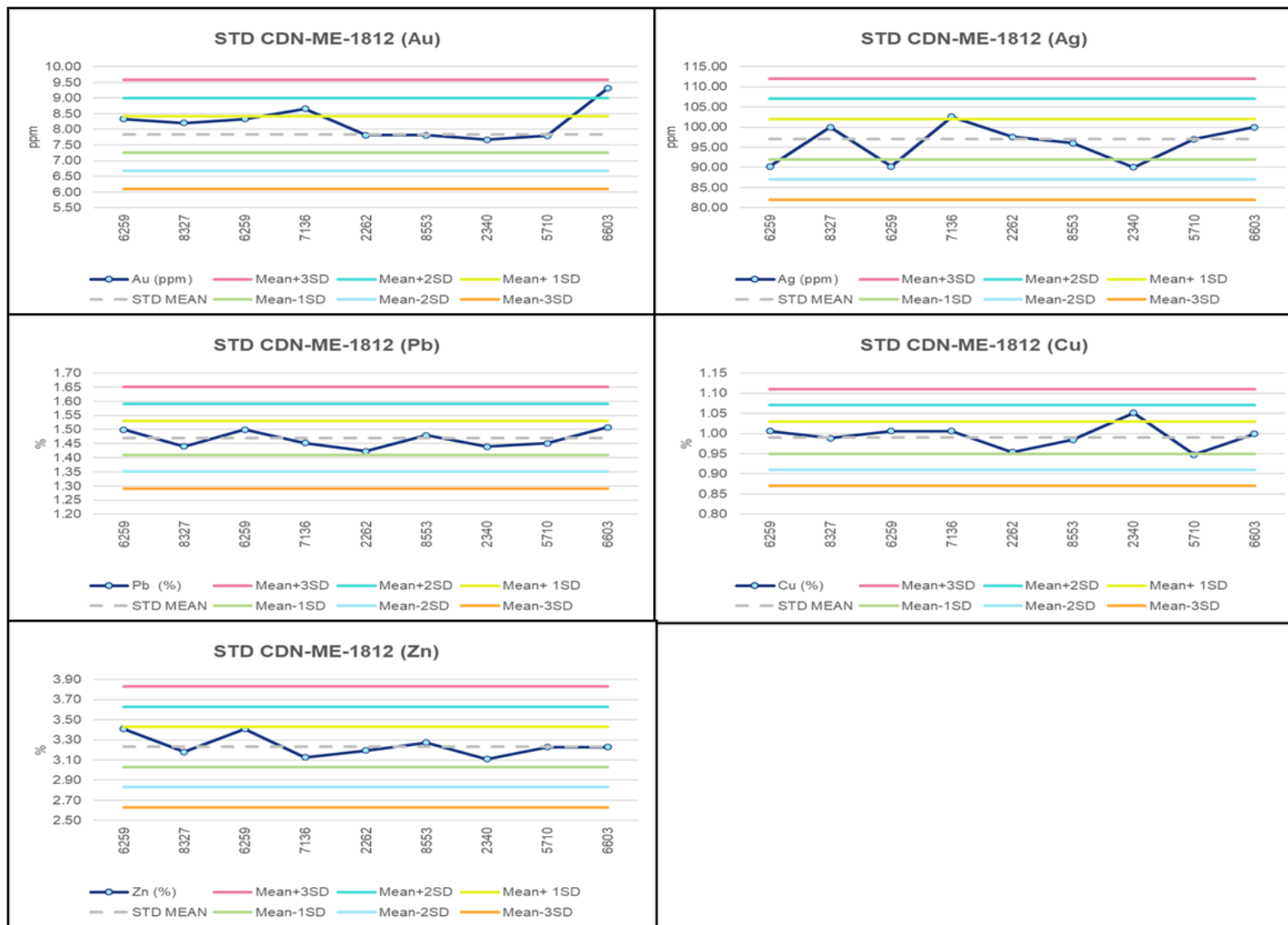
Source: IMMSA, 2024

Figure 8-19: Mine - CDN-ME-1409 CRM Results – 2024 SGS Lab



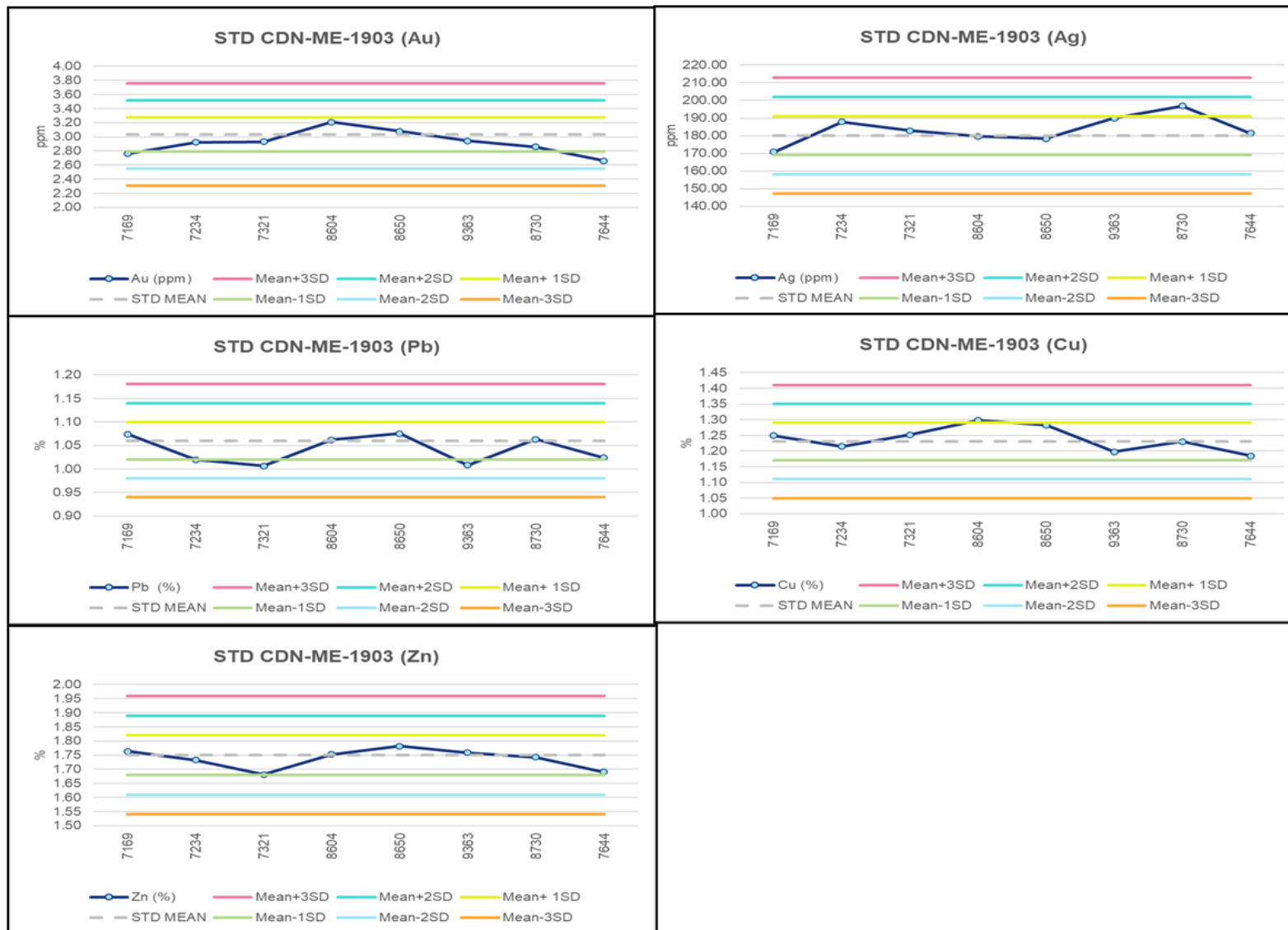
Source: IMMSA, 2024

**Figure 8-20: Mine - CDN-ME-1404 CRM Results – 2024 SGS Lab**



Source: IMMSA, 2024

Figure 8-21: Mine - CDN-ME-1812 CRM Results – 2024 SGS Lab



Source: IMMSA, 2024

**Figure 8-22: Mine - CDN-ME-1903 CRM Results – 2024 SGS Lab**

### 8.3.3 Exploration Department

The Exploration Department's QA/QC protocol includes the insertion of coarse and fine blanks, Certified Reference Materials (CRMs), and coarse, fine, and core duplicates. No secondary laboratory checks were conducted in 2024. In previous years, checks were sent to the LES Lab. The Qualified Person (QP) recommends resuming the submission of check controls to LES or another commercial laboratory. Table 8-2 shows the control samples sent in the 2024 drilling campaign and the insertion rates.

**Table 8-2: Control Samples (core), Exploration Department Drilling 2024**

Type of Sample/Control	Number of Samples	Insertion Rate (%)
Fine Blank	133	1.8%
Coarse Blank	152	2.0%
OREAS C22iBlank	91	1.2%
OREAS-22DBlank	18	0.2%
CND-ME-1404CDN-ME 1409	52	0.7%
CND-ME-1409CDN-ME 1812	46	0.6%
CND-ME-1812CDN-ME 1414	36	0.5%
Fine Duplicates	121	1.6%
Coarse Duplicates	147	2.0%
Core Duplicates	95	1.3%
Control Samples	891	12%
Primary Samples	6,597	88%
<b>Total</b>	<b>7,488</b>	<b>100%</b>

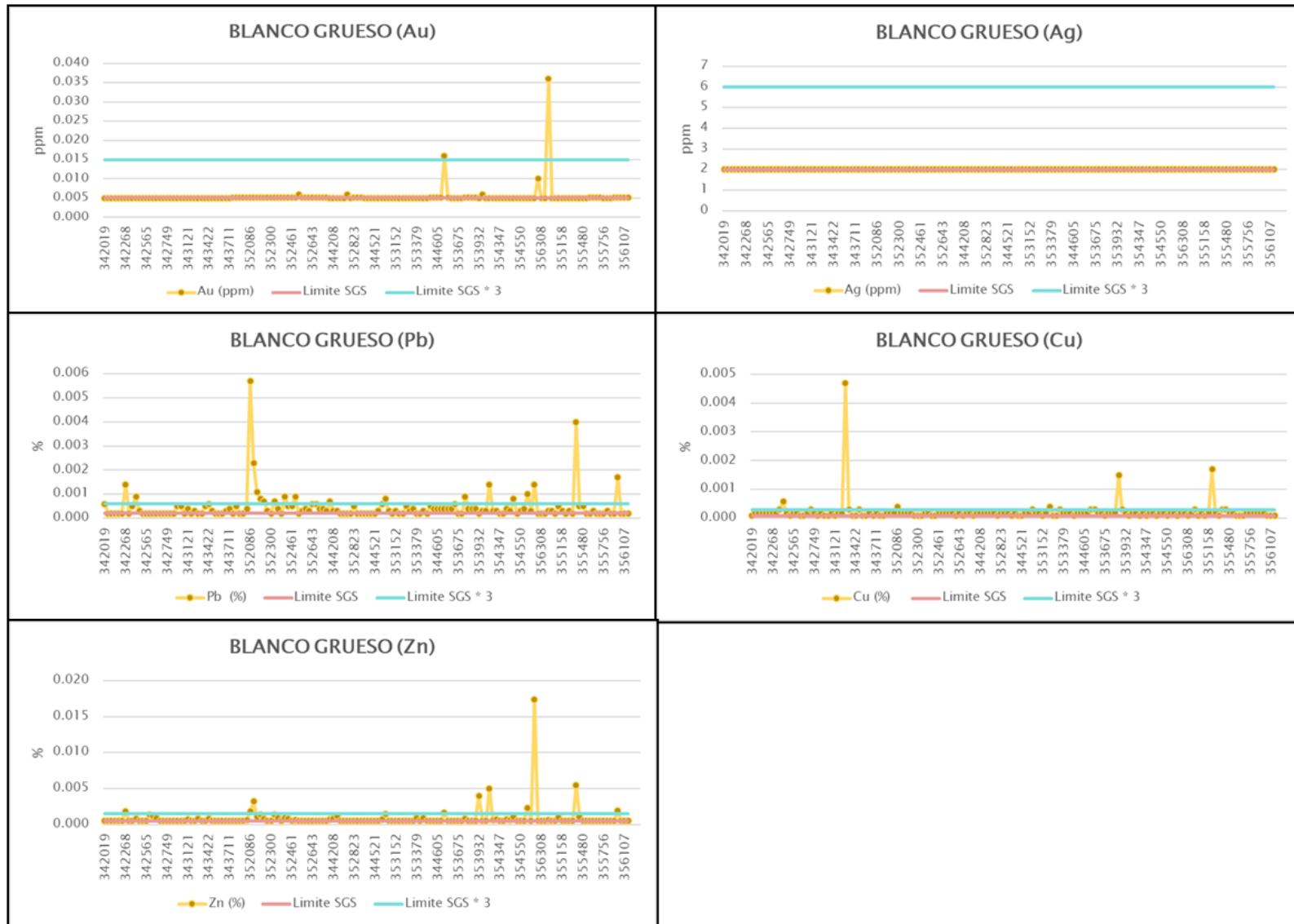
Source: IMMSA, 2024

The exploration department has established limits of acceptability for the different controls including:

- Duplicates:** Duplicates use an acceptability level of  $\pm 30\%$ ,  $\pm 20\%$  and  $\pm 10\%$  relative error range from the 45-degree line (scatter plot) for core, coarse, and fine duplicates respectively. Checks outside of these acceptability ranges are considered failures, and if in a certain period there are more than 10% failures, Charcas contacts the laboratory to review their preparation procedures. Figure 8-23, Figure 8-24 and Figure 8-25 show the scatter plots of the results of the coarse, fine, and core duplicates sent in 2024. In general, the results are reasonable.
- Blanks:** There is contamination when the assay results are above 3 times the detection limit for a specific element evaluated. When contamination occurs, Charcas informs the laboratory to check the internal protocols and, if necessary, repeat the assaying of a specific batch if the contamination is considered repetitive and continuous. Figure 8-26 and Figure 8-24Figure 8-27 show the graphs of evaluation of results of the fine and coarse blanks. There is evidence of contamination for some elements, which Charcas should review with the laboratory.
- CRMs:** The CRMs are bought from commercial laboratories, which are selected (grades and mineralization type) consistent with Charcas's mineralization and rock types. The performance of these checks is evaluated using graphs where the 2 and 3 standard deviations (SD) reference lines are drawn in conjunction with the assay results obtained. A failure is considered when a specific CRSM assay result is outside of the 3 SD reference line or when two contiguous CRSMs are outside of the 2 SD reference line. In these cases, Charcas requests the reanalysis of some samples (two to five) above and below the failure in a specific batch of samples included in the laboratory assay certificate. Figure 8-28, Figure 8-29 and Figure 8-30 present the graphs showing the results of the CRMs controls (CDN lab ), which

indicate that all the elements are inside the acceptability range (mean  $\pm 3$  SD) and not bias is observed. The Exploration Department should review the graphs results of the OREAS Certified Reference Materials (CRMs) as they are incorrect.

- **Check assays:** In 2022, IMMSA sent 791 check samples to the IMMSA internal laboratory (Estación Santiago). In general, there is good correlation between both laboratories. SRK recommends resuming the check control submission and implementing a methodology of evaluation of the check assays results.



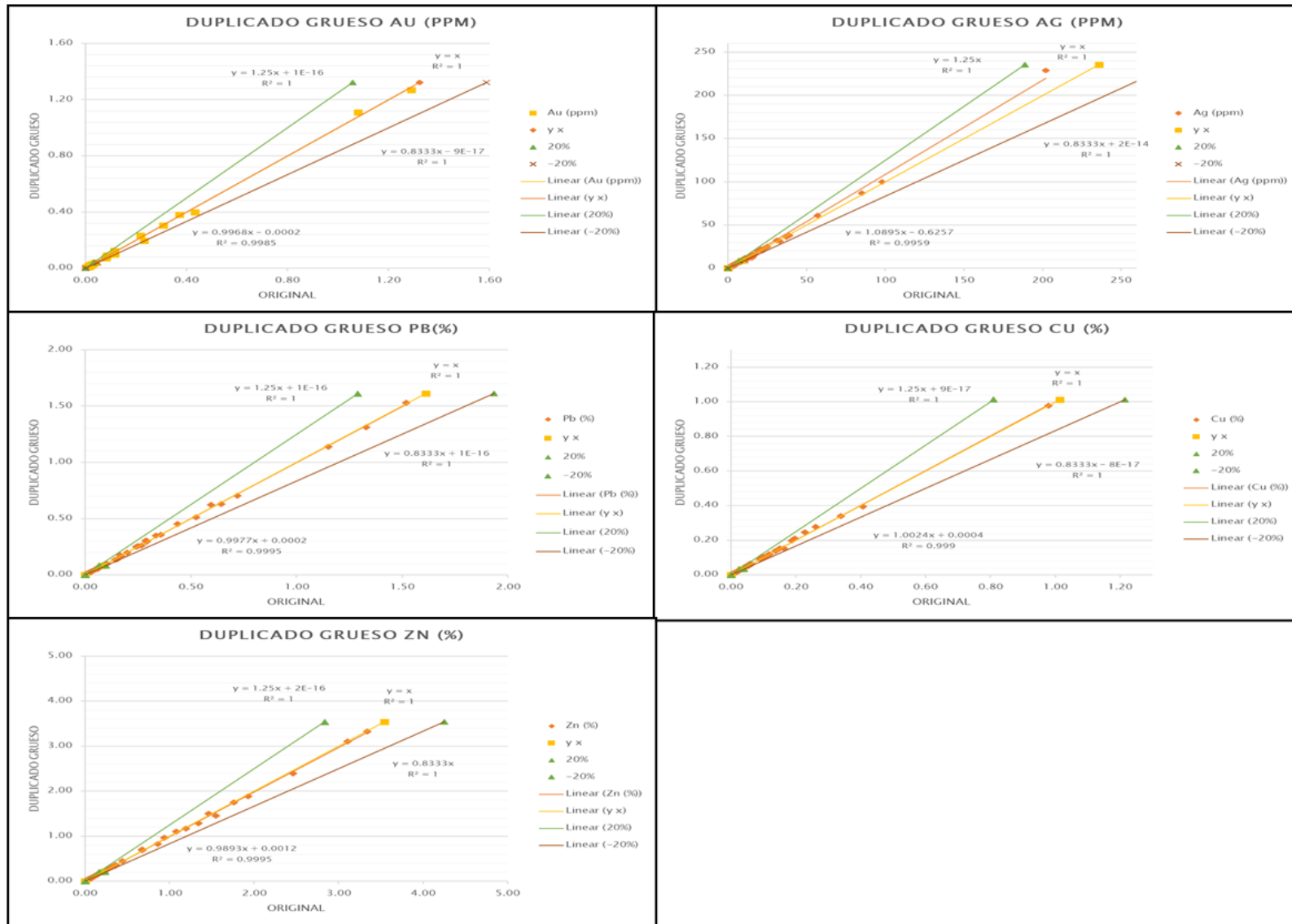
Source: IMMSA, 2024

**Figure 8-23: Exploration - Coarse Blank Results – 2024 SGS Lab**



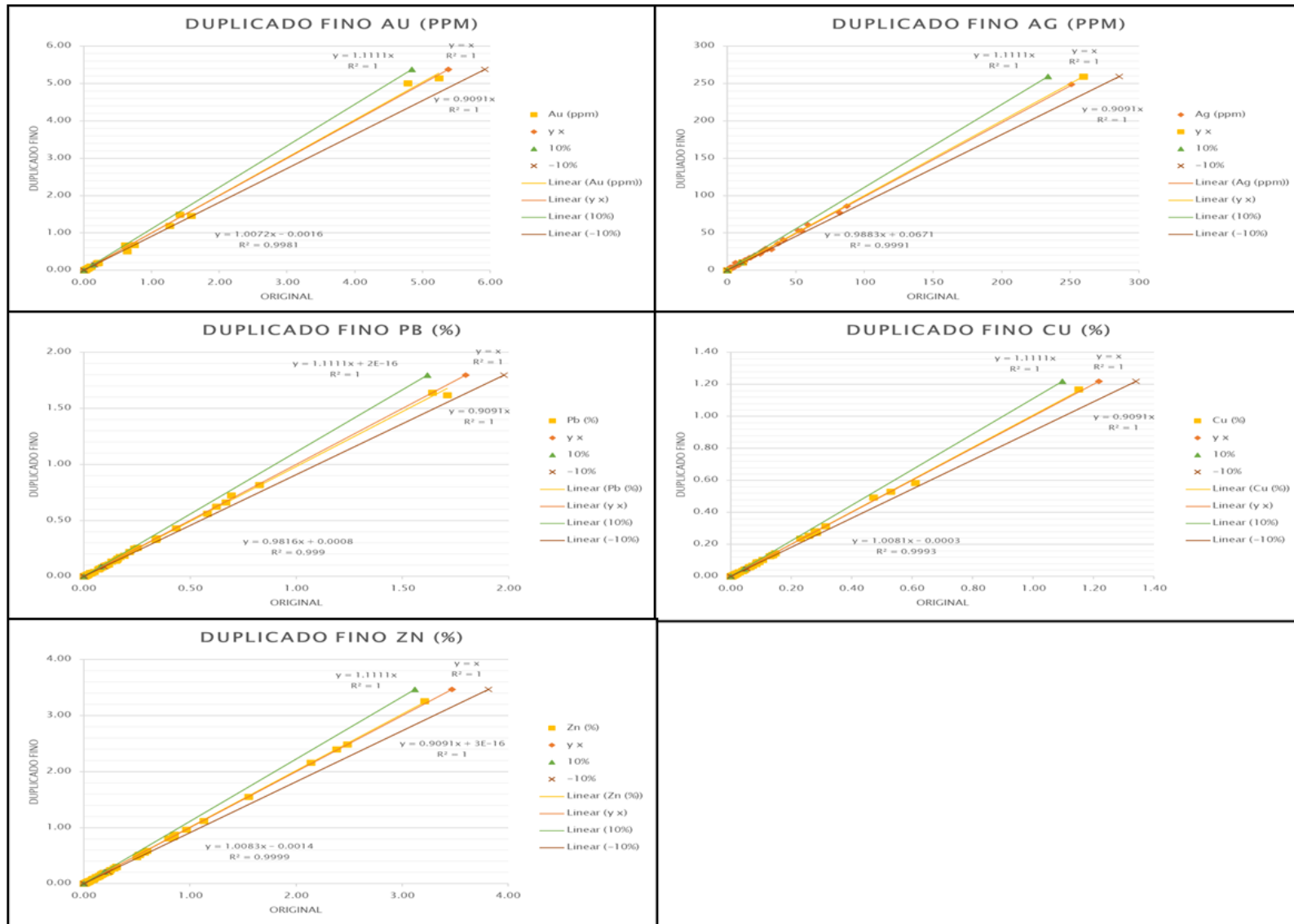
Source: IMMSA, 2024

**Figure 8-24 Exploration - Fine Blank Results – 2024 SGS Lab**



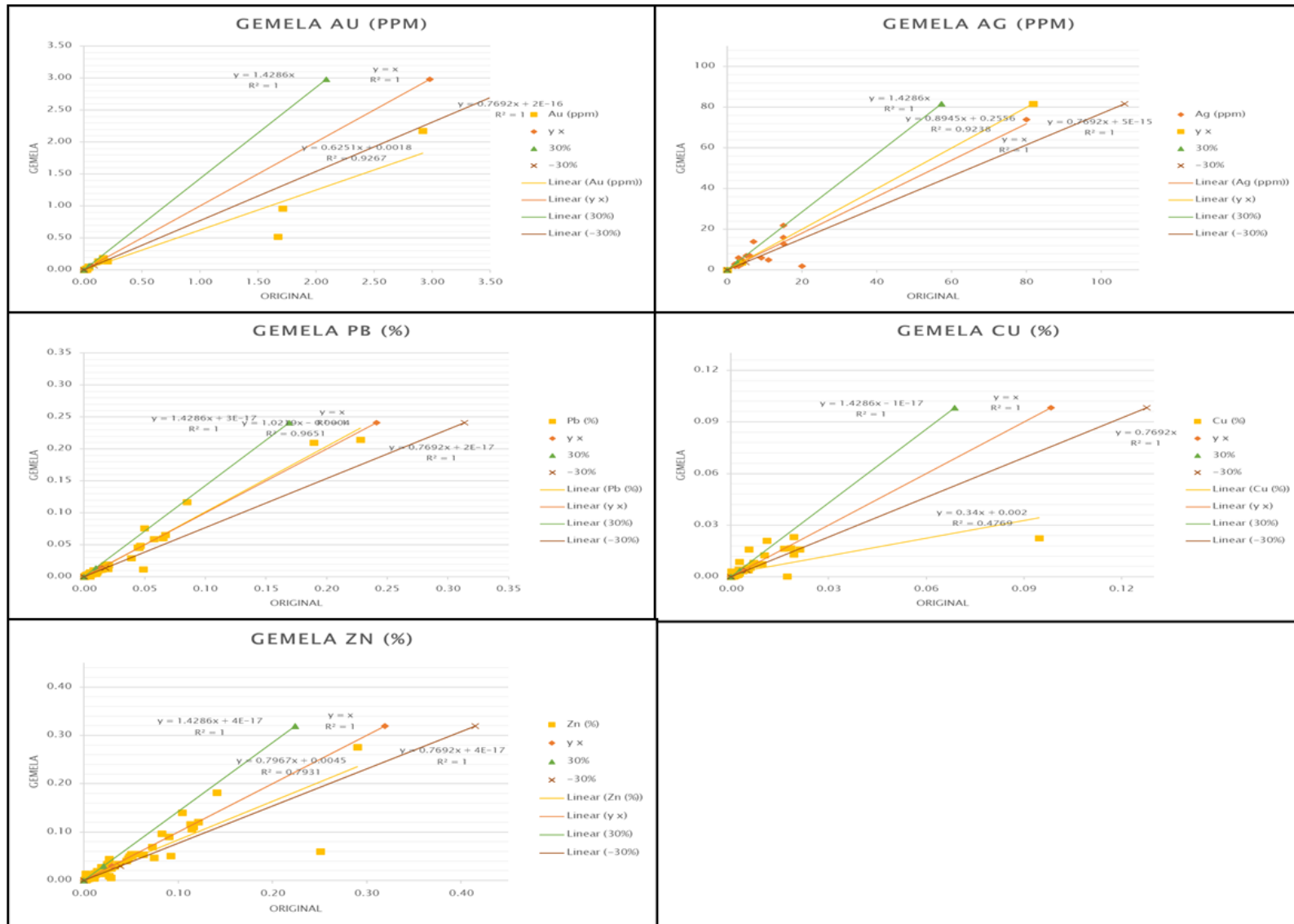
Source: IMMSA, 2024

Figure 8-25 Exploration - Coarse Duplicate Results – 2024 SGS Lab



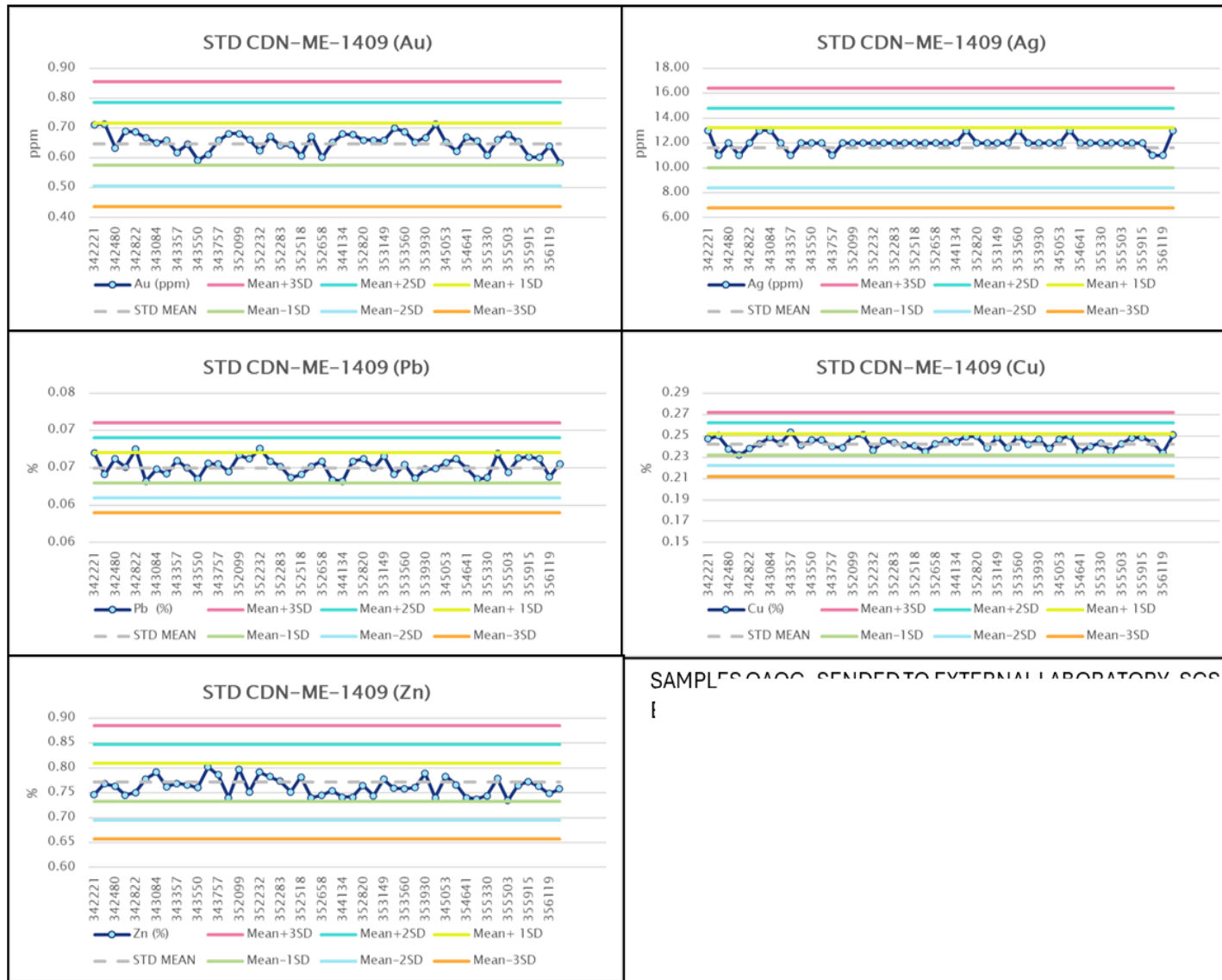
Source: IMMSA, 2024

Figure 8-26 Exploration - Fine duplicate results – 2024 SGS Lab



Source: IMMSA, 2024

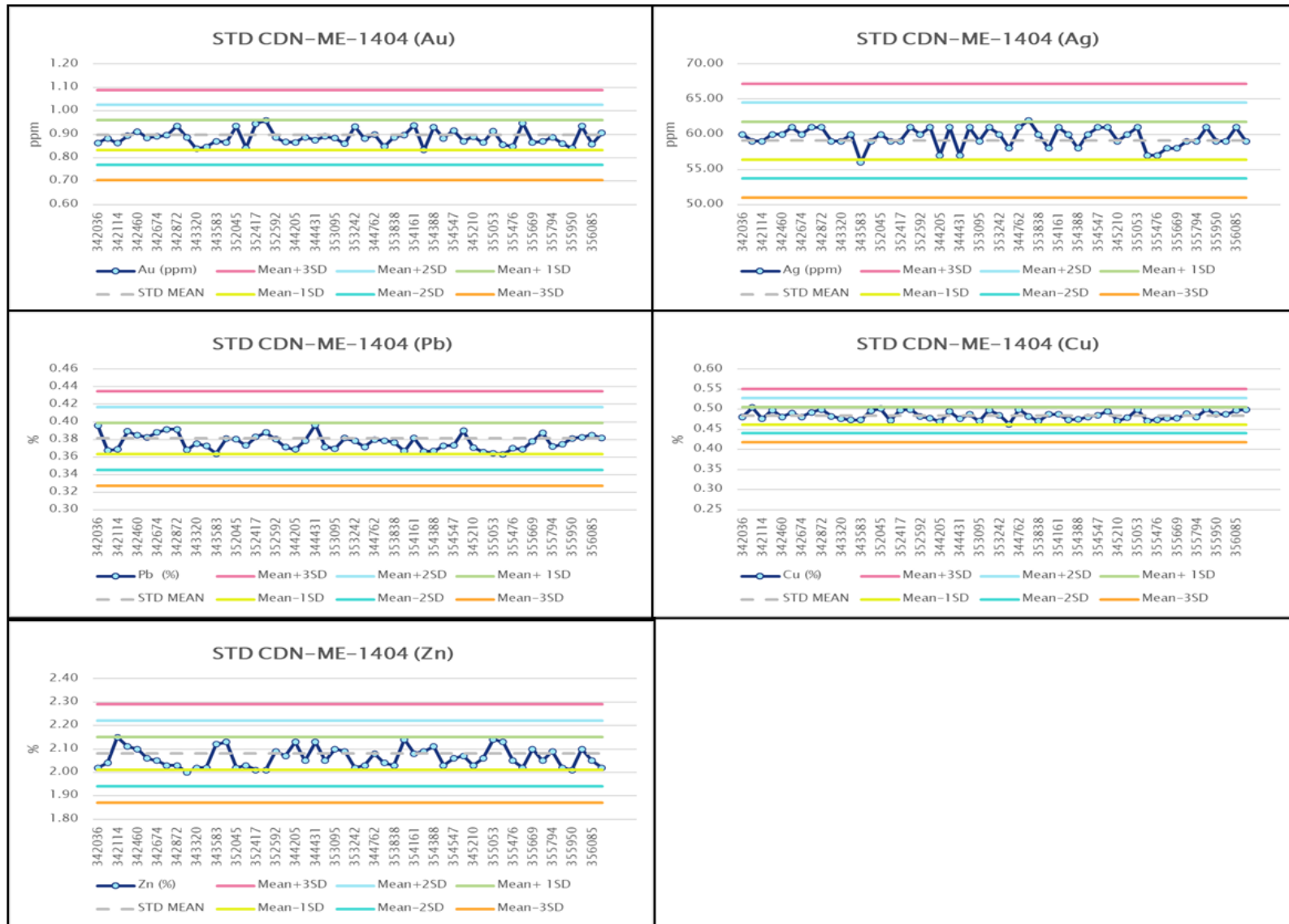
Figure 8-27 Exploration - Core Duplicate Results – 2024 SGS Lab



SAMPLES ACC SENDED TO EXTERNAL LABORATORY SGS  
 [

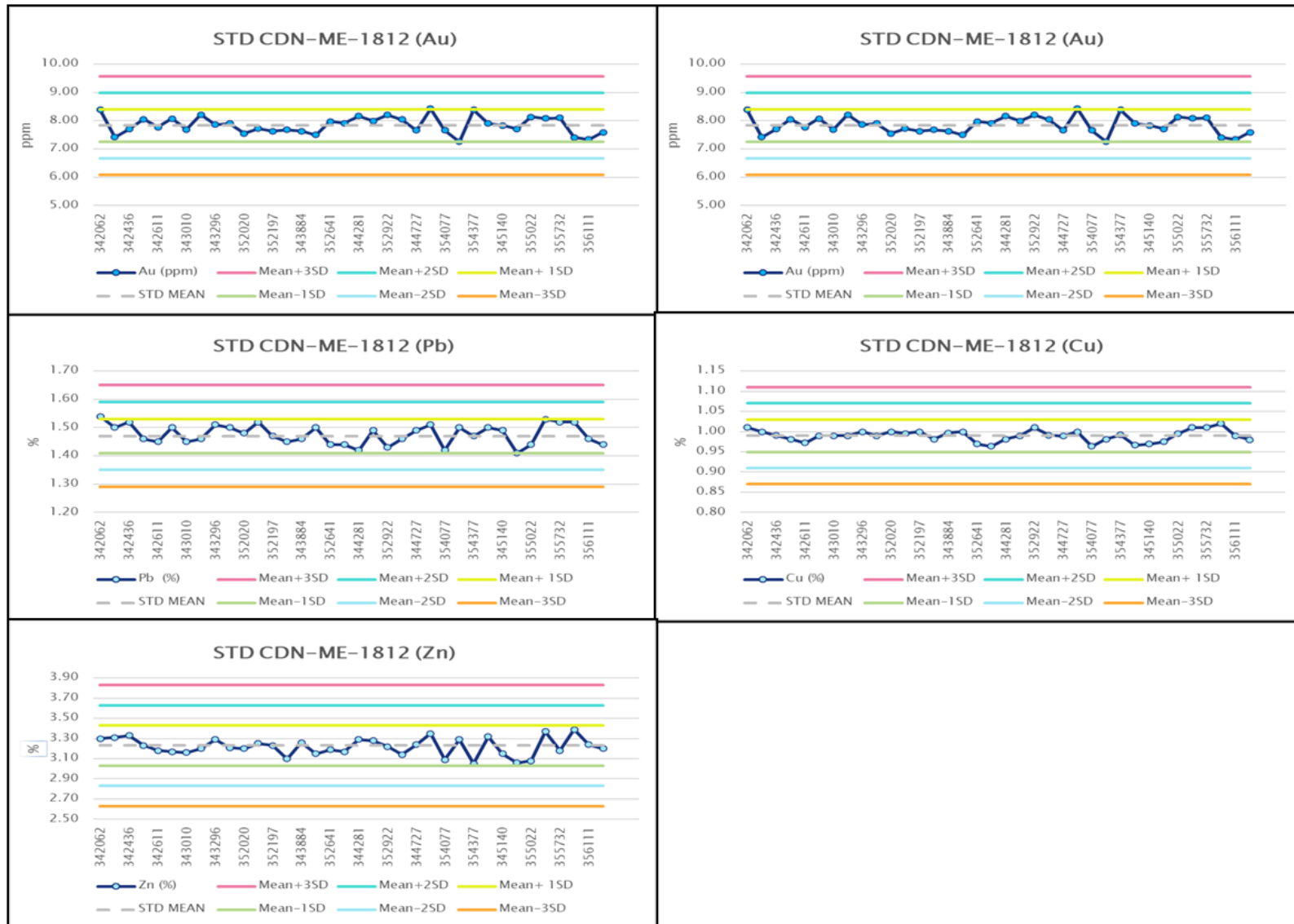
Source: IMMISA, 2024

Figure 8-28 Exploration - CDN-ME-1409 CRM results – 2024 SGS Lab



Source: IMMISA, 2024

**Figure 8-29 Exploration - CDN-ME-1404 CRM Results – 2024 SGS Lab**



Source: IMMSA, 2024

**Figure 8-30: Exploration - CDN-ME-1812 CRM Results – 2024 SGS Lab**

## 8.4 Opinion on Adequacy

Charcas's mine geology and exploration departments' security of the drilling and channel sampling is considered in line with the industry best practices.

In 2024 the Mine Geology department inserted quality controls, including blanks, duplicates and CRMs, which is an important advance and in-line with the industry practices. However, no controls have been inserted in the rock samples from the underground works. SRK recommends initiating the implementation of a similar protocol and ensuring that the protocols are established consistently and systematically. Second, laboratory checks (umpire laboratory checks) should be implemented in the core and rock sampling quality controls on a routine basis (i.e. end of program or per quarter). SRK notes the quality of the material used as blank should be reviewed. Overall based on SRK review of the data presented it is the QP's opinion that the results are reasonable and assays are reasonable for use in the current estimates.

The exploration department has procedures for drilling and core sampling, which SRK considers to be in-line with industry best practices. The results are reasonable in all the control types. SRK recommends resuming the practice of periodically shipping check assays to a second laboratory, ideally to a commercial laboratory, and implementing a methodology to evaluate the results of this comparison (i.e., not only via the use of scatterplots).

The sample preparation laboratory has enhanced its operational protocols, as confirmed during the 2023 and 2024 site visits. To further mitigate potential contamination during sample preparation, additional measures should be implemented.

Charcas's internal laboratory's and SGS's chemical analysis procedures and protocols are in-line with industry standards, but SRK recommends confirming certification of the internal laboratory be completed on a routine basis.

## 8.5 Non-Conventional Industry Practice

It is the QP's opinion that the historical procedures of sampling and QA/QC of Charcas's mine geology department were not in-line with best practices and represent a potential source of uncertainty in the estimate. Given the large database and lack of historical raw material (core) to complete detailed checks, it is the QP's opinion that this must be addressed via the classification of the deposit.

SRK has relied on data from the mining operation to assess potential risks and achieve confidence in the sampling information. The current mineral resource of the Charcas project is based on extensive data collected through drilling and rock channel sampling over the operation's history. The long-standing history of mining operations, which began in the early part of the last century, lends credibility to the historical data, supported by the recognized performance of the Charcas operation over several decades. Section 9 of this report summarizes the work completed by the QP.

## 9 Data Verification

### 9.1 Data Verification Procedures

The QPs have undertaken several data verification processes during 2021 to 2024. The verification process included the following activities:

- SRK QPs visited the Charcas project five times between June 2021 and June 2024. The purpose of the site visits was to:
  - Complete an underground site inspection and recognize the geology, mineralization controls, and rock sampling procedures from 2021 to 2024.
  - Review geological plans and sections to validate information used by IMMSA to generate updated grade estimates and geological models.
  - Review the exploration procedures, including the sampling methods and sampling quality, drilling procedures, core sampling, and management of data.
  - Undertake review of the raw sampling data (physical documents and Excel files) used to generate the grade estimates.
  - Review historical data supporting the resource calculations.
  - Inspect the sample preparation and chemical analysis laboratory.
  - Review the 2024 geological model, block model and resource estimates.
  - Collect core samples and chemical analysis of available stored core in 2021. The validation sampling included 81 samples collected from 18 drillholes.

#### 9.1.1 Results of the Validation Samples (2021)

Charcas does not maintain the core and discards the core after several years. The internal laboratory does not maintain a pulp record and has discarded the pulps and rejects of all the historical samples, which has limited the ability to conduct validation. Only a limited number of historical drill cores remain available at the mine. The selection of the drillholes was limited to the core available and does not provide spatial coverage of the entire operation supporting the current mineral resources. It is the QP's opinion that this process provides validation on the protocols being used.

SRK's QP completed a review of the available core and notes that IMMSA. After 2021, IMMSA improved the core boxes organization and storage facilities in the operation.

Upon completing the review in 2021, SRK's QP selected samples from drillholes covering different zones of the deposit. To ensure the quality of the check analysis, SRK also utilized coarse and fine blanks, coarse duplicates, and a CSRM inserted in the samples sent to SGS for QA/QC purposes. The results of the QA/QC controls passed the acceptability criteria in all cases.

Table 9-1 presents the results of the samples of the original data (registered in the logging sheets) and the results from SGS.

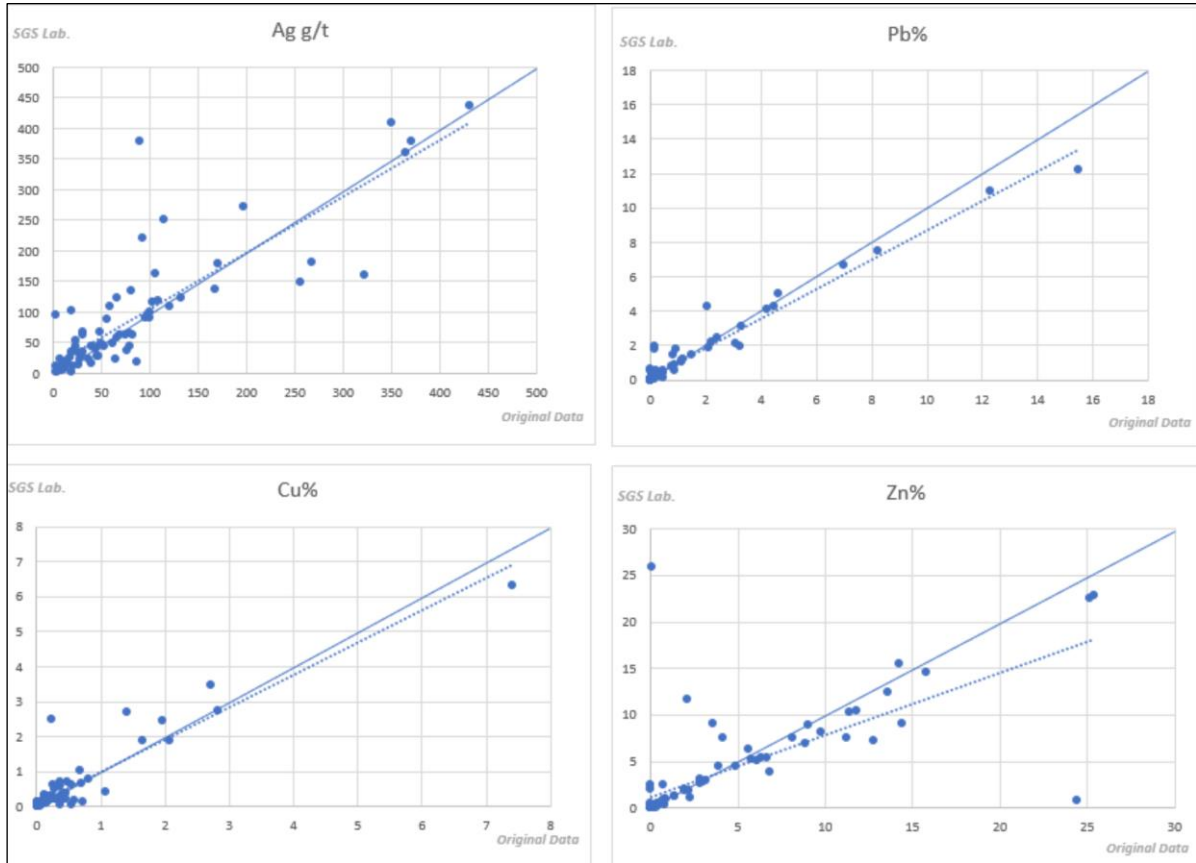
**Table 9-1: Validation Samples, SGS and Charcas’s Original Data - 2021**

Drillhole	Interval			SGS Results				Charcas’s Original Data			
	From (m)	To (m)	Length (m)	Ag (ppm)	Pb (%)	Cu (%)	Zn (%)	Ag (ppm)	Pb (%)	Cu (%)	Zn (%)
7765	49.90	51.85	1.95	24.00	0.01	0.11	3.55	34.00	0.03	0.32	9.05
	51.85	53.30	1.45	79.00	0.02	0.59	12.80	45.00	0.64	0.18	7.22
	53.30	54.90	1.60	43.00	0.01	0.37	14.40	40.00	0.04	0.26	9.06
	71.85	73.65	1.80	28.00	0.02	0.17	5.62	23.00	0.03	0.12	6.29
	73.65	75.20	1.55	23.00	0.03	0.19	2.13	53.00	0.30	0.31	11.60
7850	70.85	72.45	1.60	76.00	0.02	0.72	6.80	37.00	0.00	0.11	3.80
	105.20	107.25	2.05	99.00	3.06	0.39	13.60	91.00	2.11	0.23	12.50
	107.25	109.80	2.55	31.00	0.46	0.12	8.99	68.00	0.56	0.16	8.93
7957	246.20	248.30	2.10	56.00	0.00	1.95	0.01	88.00	0.01	2.45	2.55
	248.30	249.70	1.40	15.00	0.00	0.55	0.01	20.00	0.00	0.63	0.16
	349.10	351.10	2.00	105.81	0.01	1.41	0.01	162.00	0.00	2.70	0.07
8017	242.65	244.65	2.00	45.00	0.04	0.25	0.26	28.00	0.03	0.62	0.25
	244.65	246.70	2.05	267.11	0.22	1.07	0.38	182.00	0.18	0.41	0.18
	246.70	248.75	2.05	102.49	0.08	0.37	0.30	115.00	0.10	0.06	0.04
8049	71.73	73.75	2.02	66.00	0.03	0.28	0.20	124.00	0.06	0.51	0.06
	73.75	75.00	1.25	26.00	0.01	0.37	0.02	14.00	0.01	0.14	0.01
	75.00	77.50	2.50	80.00	0.02	0.68	0.04	134.00	0.04	1.03	0.23
	77.50	79.50	2.00	46.00	0.02	0.45	0.02	43.00	0.02	0.22	0.49
8074	74.06	75.60	1.55	64.00	0.02	0.26	0.03	24.00	0.04	0.23	0.24
	78.60	80.00	1.40	52.00	0.02	0.38	0.82	43.00	0.02	0.56	0.36
	75.60	78.60	3.00	48.00	0.02	0.34	0.73	67.00	0.03	0.26	2.42
8244	37.20	37.90	0.70	89.00	0.17	0.45	2.86	380.00	1.97	0.37	3.08
	37.90	38.50	0.60	197.34	0.80	0.40	3.90	272.00	1.45	0.20	4.42
	38.50	40.20	1.70	23.00	0.12	0.01	0.21	43.00	0.23	0.12	0.17
	40.20	40.40	0.20	2.00	0.01	0.00	0.08	94.00	0.56	0.14	25.90
	40.40	41.00	0.60	86.00	0.46	0.55	24.40	19.00	0.12	0.06	0.83
8330	103.50	105.50	2.00	167.12	0.03	2.83	0.02	136.00	0.02	2.74	0.00
	105.50	107.50	2.00	321.47	0.03	7.40	0.05	160.00	0.06	6.31	0.12
8334	115.00	115.35	0.35	113.94	2.03	0.12	14.20	250.00	4.31	0.17	15.50
	115.35	116.20	0.85	40.00	0.33	0.06	2.25	45.00	0.20	0.03	1.08
	116.20	116.35	0.15	37.00	0.05	0.29	8.87	23.00	0.05	0.23	6.88
	116.35	118.05	1.70	6.00	0.01	0.01	0.09	4.00	0.00	0.00	0.14
	118.05	120.50	2.45	29.00	0.04	0.23	6.66	31.00	0.04	0.31	5.45
8335	122.00	124.50	2.50	18.00	0.01	0.23	0.01	34.00	0.00	2.49	1.95
	124.50	126.80	2.30	7.00	0.00	0.06	0.02	23.00	0.01	0.01	0.00
	126.80	127.30	0.50	92.00	0.02	2.71	0.01	220.00	0.01	3.48	0.02
8553	141.00	143.00	2.00	19.00	0.00	0.47	0.04	102.00	0.07	0.70	0.28
	143.00	145.00	2.00	30.00	0.01	0.36	0.23	35.00	0.01	0.72	0.10
	145.00	147.00	2.00	59.00	0.01	1.65	0.03	108.00	0.02	1.87	0.08
8369	157.50	159.50	2.00	30.00	0.95	0.03	4.17	63.00	1.75	0.09	7.56
	159.50	161.50	2.00	21.00	0.30	0.11	2.97	36.00	0.36	0.30	2.81
	161.50	163.00	1.50	17.00	0.07	0.08	9.77	26.00	0.16	0.14	8.15

Drillhole	Interval			SGS Results				Charcas's Original Data			
	From (m)	To (m)	Length (m)	Ag (ppm)	Pb (%)	Cu (%)	Zn (%)	Ag (ppm)	Pb (%)	Cu (%)	Zn (%)
LE-139	119.55	120.70	1.15	99.80	4.63	0.22	11.40	100.00	4.99	0.21	10.33
	120.70	121.80	1.10	11.00	0.48	0.01	0.89	8.00	0.50	0.01	0.88
	121.80	122.60	0.80	119.53	4.22	0.25	6.06	109.00	4.09	0.24	5.07
	122.60	124.30	1.70	430.65	12.30	0.81	25.10	438.00	10.97	0.79	22.56
	124.30	125.65	1.35	370.35	8.24	0.70	15.80	379.00	7.54	0.67	14.60
	125.65	127.95	2.30	18.00	0.41	0.03	0.50	3.00	0.46	0.03	0.48
	127.95	130.40	2.45	6.00	0.16	0.11	0.49	6.00	0.20	0.11	0.46
	130.40	131.40	1.00	4.00	0.09	0.08	0.06	4.00	0.12	0.08	0.04
	131.40	133.40	2.00	46.00	2.12	0.14	6.34	27.00	1.88	0.13	5.43
	133.40	133.90	0.50	11.00	0.45	0.05	0.64	6.00	0.48	0.05	0.63
	133.90	135.85	1.95	364.23	15.50	0.25	11.20	360.00	12.22	0.24	7.60
	135.85	136.90	1.05	40.00	1.18	0.12	0.67	15.00	1.21	0.13	0.68
	136.90	139.80	2.90	8.00	0.18	0.04	0.16	5.00	0.59	0.03	0.12
	139.80	141.70	1.90	82.00	1.48	0.02	0.24	62.00	1.44	0.01	0.21
	141.70	142.40	0.70	62.00	0.89	0.05	0.14	48.00	0.91	0.03	0.10
142.40	145.40	3.00	7.00	0.16	0.01	0.17	7.00	1.81	0.01	0.15	
LE-150	137.20	139.35	2.15	66.00	2.19	0.07	1.96	58.00	2.17	0.04	1.96
	139.35	140.65	1.30	4.00	0.17	0.02	0.45	6.00	0.19	0.01	0.51
	140.65	142.70	2.05	50.00	2.40	0.16	5.75	49.00	2.49	0.18	5.27
	142.70	143.60	0.90	11.00	0.38	0.03	0.27	9.00	0.41	0.03	0.28
	143.60	144.75	1.15	11.00	0.45	0.01	0.45	13.00	0.47	0.01	0.41
	144.75	146.50	1.75	95.90	0.36	0.19	0.36	91.00	0.38	0.19	0.37
	146.50	148.00	1.50	2.00	0.15	0.01	0.15	12.00	0.17	0.02	0.15
148.00	149.85	1.85	132.59	4.47	0.19	4.91	122.00	4.27	0.20	4.42	
149.85	150.80	0.95	10.00	0.75	0.05	2.18	14.00	0.82	0.06	1.81	
LE-172	278.40	280.60	2.20	68.00	1.11	0.18	8.12	63.00	1.02	0.13	7.46
	280.60	282.30	1.70	7.00	0.06	0.02	1.40	6.00	0.06	0.02	1.33
	282.30	283.00	0.70	2.00	0.01	0.00	0.01	3.00	0.02	0.00	0.01
	282.30	284.80	2.50	74.00	3.30	0.14	11.80	63.00	3.09	0.09	10.49
LE-177	186.85	187.90	1.05	4.00	0.39	0.01	0.78	6.00	0.35	0.01	0.88
	187.90	189.45	1.55	108.62	6.99	0.40	25.40	118.00	6.70	0.39	22.91
	189.45	190.30	0.85	6.00	0.31	0.01	0.61	8.00	0.34	0.01	0.67
	189.45	191.75	2.30	15.00	1.15	0.01	1.97	17.00	1.10	0.01	1.86
SR-161	478.20	479.85	1.65	255.39	0.11	2.06	1.34	149.00	0.16	1.89	1.28
	479.85	481.55	1.70	349.45	0.17	0.13	0.71	408.00	0.20	0.15	0.84
	481.55	484.30	2.75	170.15	0.09	0.25	0.38	179.00	0.10	0.26	0.43
SS-28	276.60	277.00	0.40	20.00	0.87	0.01	2.87	11.00	0.55	0.01	2.62
	277.00	278.55	1.55	4.00	0.15	0.01	0.29	2.00	0.09	0.00	0.36
	278.55	280.45	1.90	79.00	3.26	0.15	3.13	64.00	1.97	0.15	2.87
Mean of samples				74.15	1.13	0.44	3.79	81.32	1.14	0.48	3.69

Source: SRK, 2021

Figure 9-1 shows the results scatter plots of the SGS results and the original data found in the logging sheets. High variability is observed in the scatter plots that compare the original data and the SGS results. It is difficult to exactly replicate the original values due to the state of the boxes that have been stored for some years in inappropriate conditions. Analysis of the mean grades for the 81 samples shows the highest variability exists within the silver values, which reported a mean grade of 81 and 74 g/t in the original versus SGS, respectively, which represents a difference of approximately +8.8%. In comparison, the difference between the lead, zinc, and copper values are +0.9%, -2.7%, and +6.7%. Although the element grades are not exactly matching, the correlation is generally reasonable.



Source: SRK, 2021

**Figure 9-1: Scatter Plots of Analysis Results, SGS versus Original Data in the Logging Sheets**

### 9.1.2 Review of Reconciliation Information Planned versus Real Grades

The QP has relied upon reconciliation of Charcas’s planned versus real grades and tonnages system to determine the performance of the channel sampling, which is considered reasonable considering the long history of mining at Charcas. Table 9-2 shows the production planned versus real tonnages and grades for Charcas, 2024. The differences are reasonable except for lead and copper, which require IMMSA’s review.

**Table 9-2: Planned vs. Real Production, Tonnage and Grades, 2024**

Parameter	Real 2024													Plan 2024	Difference Real vs. Plan (%)
	January	February	March	April	May	June	July	August	September	October	November	December	Total		
Charcas total (t)	114,888	110,446	99,034	111,311	109,476	118,094	102,646	118,668	95,620	109,790	104,577	106,388	1,300,938	1,260,210	-3.2%
Rate (t/d)	4,541	4,508	4,502	4,452	3,808	4,415	4,106	4,238	4,250	3,992	4,101	4,576	4,279	4,200	-1.9%
Au (g/t)	0.06	0.08	0.10	0.08	0.07	0.09	0.08	0.07	0.08	0.07	0.07	0.07	0.08	0.07	-14.3%
Ag g/t)	51	52	48	53	47	49	65	48	50	53	54	57	52	54	3.7%
Pb (%)	0.20	0.17	0.19	0.18	0.19	0.13	0.21	0.20	0.21	0.22	0.18	0.27	0.19	0.16	-18.8%
Cu (%)	0.35	0.41	0.33	0.26	0.30	0.36	0.34	0.29	0.32	0.32	0.33	0.32	0.33	0.35	5.7%
Zn (%)	1.95	2.09	2.42	2.46	2.20	1.85	2.07	2.24	1.97	2.00	1.88	1.82	2.08	2.08	0.0%

Source: IMMSA, 2024

## 9.2 Limitations

Charcas stores the core of recent drilling completed by the mine geology team, and after some years, the core is discarded. Since 2023, Charcas has been storing the The samples collected in 2021 were selected from the available drillholes from different areas of the Charcas project. The internal laboratory does not store the rejects or pulps from the core and channel samples collected by the mine geology team.

The historical data could not be independently verified due to the non-existence of the core and lack of the original assay certificates. SRK considers there to be limited risk in the use of the historical data, as this information has been supporting the exploitation of Charcas for decades.

## 9.3 Opinion on Data Adequacy

Based on the validation work completed, SRK is of the opinion that data supporting the resources is adequate to support the mineral resource estimate. The lack of QA/QC data for historical exploration information remains a concern, but in the QP's opinion, the historical mining and production for more than 50 years provides additional verification of the historical data supporting the resources. Since 2023 Charcas has improved the QA/QC protocols for the drilling campaigns that aligns to the best industry best practices. Given the uncertainty related to the limited QA/QC, in the QP's opinion, assigning the highest level of confidence (Measured) to the estimated stopes has been limited by the QP in the current estimates. It is the QP's opinion that until procedures are improved consistently to ensure no bias exists (positive or negative) for the level of accuracy considered within this category and confirmation of the updated certification of the internal laboratory is completed, the use of Measured resources should not be obtained. The Qualified Person (QP) recommends implementing the QA/QC protocols for underground rock sampling, similar to those used for drilling. This includes incorporating external laboratories and third-party checks on a routine basis for the Charcas exploration and geology mine departments' QA/QC protocols.

## 10 Mineral Processing and Metallurgical Testing

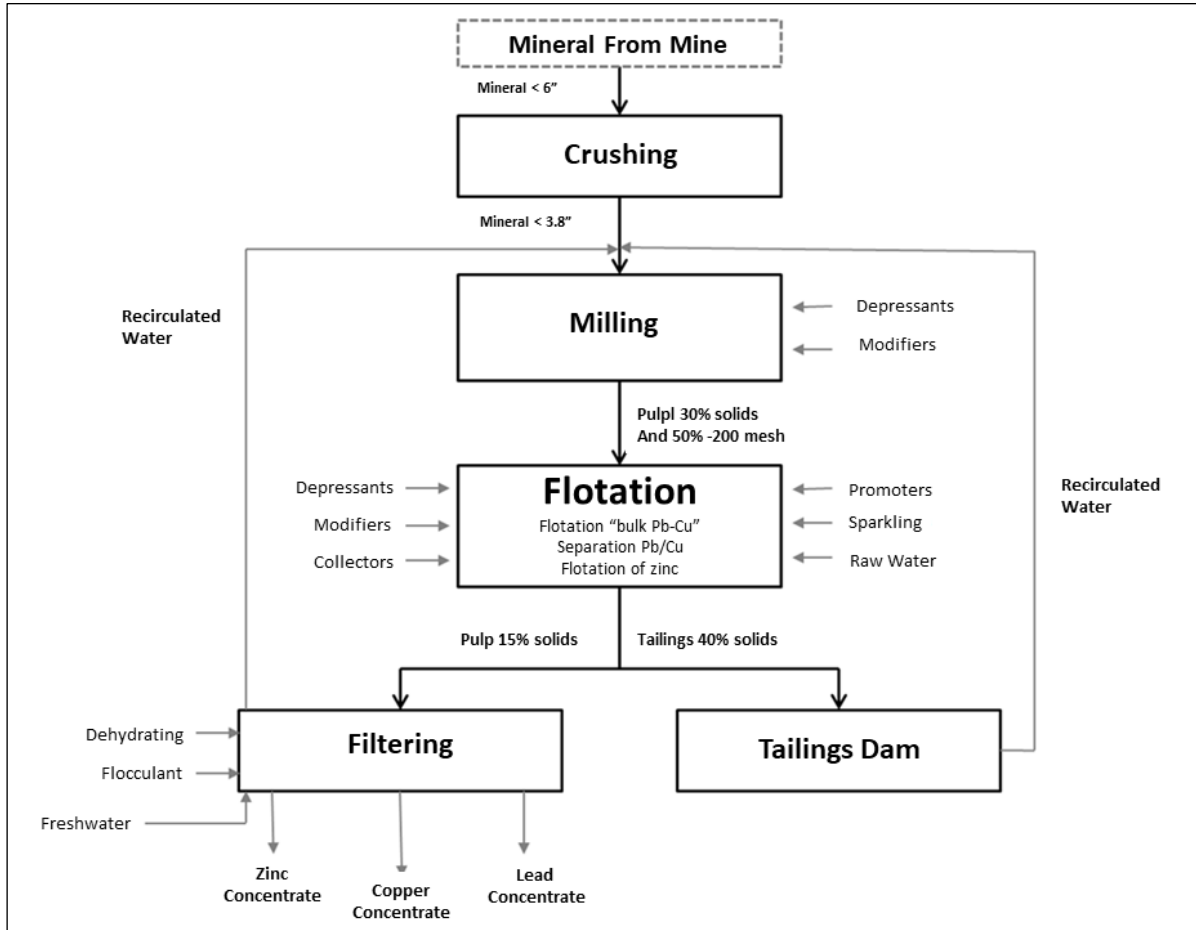
### 10.1 Testing and Procedures

Charcas is an operating mine and has been in operation under the current Company since 1978. The Charcas mine is characterized by low operating costs and good-quality ores and is situated near the zinc refinery. Mineral processing is completed via conventional flotation processes with three concentrates being produced (in order of scale):

- Zinc concentrate
- Copper concentrate
- Lead concentrate

The mine is not currently conducting any specific metallurgical testwork specifically to support the current disclosure. The QP has therefore relied on the production data from the three concentrates to determine the recoveries to support the declaration of the mineral resources.

The mineral benefit plant was built with the purpose of concentrating the metallic minerals of interest (zinc, copper, and lead) and has a nominal capacity to process 4,100 tons/day. Figure 10-1 presents the flow chart of Charcas's process plant.



Source: IMMSA, 2021

**Figure 10-1: Flow Chart of Charcas’s Process Plant**

## 10.2 Sample Representativeness

The QP has assumed that the current material is representative of the future mining areas, with no known changes in the mineralization styles expected over the short term. Should the mine conduct further exploration on potential exploration targets, additional metallurgical testwork will be required. At a minimum, this should include a sensitivity study for potential recoveries using the current operating setup to estimate potential recoveries.

## 10.3 Laboratories

Currently all sampling for the Charcas mill (plant sampling) are conducted on-site at the mine laboratory. The mine laboratory is directly owned by IMMSA. The laboratory has been certified by Bureau Veritas to NMX-CC-9001-IMNC-2015/ISO 9001: 2015. The certification was completed initially in 2015 and renewed in 2018 and 2019. Updated certification of the laboratory is recommended to reduce any potential risk, and IMMSA will work in 2025 to obtain the updated certification.

## 10.4 Relevant Results

Table 10-1 summarizes the metallurgical performance from the operation. The results indicate that an increase in the recoveries occurred between 2019 and 2024 within the lead concentrate. It is also noted that the recoveries within the zinc concentrate for 2019 were higher than the current levels, which accounts for the largest bulk (tonnage) of the produced concentrate streams at the operation.

**Table 10-1: Metallurgical Performance 2019 to 2024**

Component	Year	Tonnage (t)	Assay Grade						Recovery (%)					
			Au (g/t)	Ag (g/t)	Pb (%)	Cu (%)	Zn (%)	Fe (%)	Au	Ag	Pb	Cu	Zn	Fe
Head grade	2019	1,293,137	0.1	46	0.1	0.4	2.2	4.6	100.0	100.0	100.0	100.0	100.0	100.0
	2020	1,145,897	0.1	48	0.2	0.4	2.5	4.1	100.0	100.0	100.0	100.0	100.0	100.0
	2021	1,232,076	0.1	51	0.2	0.4	2.3	4.3	100.0	100.0	100.0	100.0	100.0	100.0
	2022	1,190,694	0.1	60	0.2	0.4	2.1	4.5	100.0	100.0	100.0	100.0	100.0	100.0
	2023	1,270,149	0.1	59	0.2	0.4	2.1934	4.3	100	100	100	100	100	100
	2024	1,300,938	0.1	52	0.2	0.3	2.1	4.1	100	100	100	100	100	100
Lead concentrate (Pb%)	2019	1,041	5.8	11,557	48.8	6.9	2.9	6.8	3.2	20.1	33.1	1.5	0.1	0.1
	2020	2,023	4.2	7,444	62.7	4.2	2.5	4.1	6.7	27.2	52.7	2.0	0.2	0.2
	2021	1,720	6.1	8,046	60.2	5.8	2.5	5.2	9.3	22.1	48.8	2.2	0.1	0.2
	2022	1,745	5.3	9,165	59.4	5.8	2.1	5.2	10.5	22.2	47.0	2.1	0.1	0.2
	2023	1,695	6	9,030	61.2	6	2	5.8	10.9	20.6	37.7	2.2	0.1	0.2
	2024	1,436	8.3	7,916	59.1	4.9	1.9	4.2	12.8	16.8	33.7	1.6	0.1	0.1
Copper concentrate (Cu%)	2019	15,102	2.9	1,901	2.4	25.0	9.2	23.7	23.0	48.0	23.7	79.1	4.9	6.0
	2020	12,883	3.0	1,945	4.8	24.0	10.7	22.9	30.9	45.2	25.8	73.2	4.9	6.2
	2021	14,068	3.6	2,007	4.9	23.7	11.8	20.4	44.6	45.0	32.2	73.1	5.8	5.5
	2022	14,001	2.9	2,126	5.4	23.3	10.0	22.4	46.8	41.4	34.4	67.7	5.6	5.8
	2023	13,086	3.2	2,393	7.2	21.3	10.3	20.9	44.4	41.7	34.1	59.9	4.8	5
	2024	12,045	3.8	2,605	8.6	21.6	10.8	20.7	46.1	46.3	41.2	60.8	4.5	4.6
Zinc concentrate (Zn%)	2019	50,627	0.3	141	0.3	1.0	54.5	6.3	9.3	11.9	8.4	11.1	98.4	5.3
	2020	49,117	0.4	151	0.5	1.1	53.3	6.7	14.3	13.4	10.5	13.1	92.8	6.9
	2021	49,613	0.4	176	0.6	1.3	53.4	6.4	19.1	13.9	13.3	14.5	92.5	6.0
	2022	43,025	0.3	230	0.6	1.8	51.4	7.5	15.2	13.8	12.3	15.7	88.5	6.0
	2023	45,865	0.3	213	0.7	1.9	52.4	6.8	17.4	13	11.8	18.4	86.3	5.7
	2024	44,910	0.3	176	0.6	1.6	52.3	6.8	12.7	11.7	10.5	16.5	86.9	5.8
Tails	2019	1,226,367	0.1	10	0.0	0.0	-0.1	4.3	64.6	20.0	34.8	8.3	-3.4	88.6
	2020	1,081,874	0.1	7	0.0	0.0	0.1	3.8	48.1	14.2	11.0	11.7	2.2	86.6
	2021	1,166,675	0.0	10	0.0	0.0	0.0	4.0	27.0	19.0	5.6	10.1	1.6	88.3
	2022	1,131,923	0.02	14	0.0	0.1	0.1	4.2	27.5	22.6	6.3	14.5	5.8	88.0
	2023	1,209,502	0	16	0	0.1	0.2	4	27.3	25	16.3	19.5	8.7	89.1
	2024	1,242,545	0	14	0	0	0.2	3.8	29.1	25.2	14.5	21.1	8.5	89.5

Source: IMMISA, 2024

The QP has compared the current recovery performance with 3-year trailing averages (2022 to 2024) for the recoveries for use in the assessment of the CoG. Based on the review and the slightly lower recoveries presented in the 2023 data especially in the Pb and Cu recoveries, SRK has elected to use the results from the trailing average as a basis for the current assessment. The use of the trailing average is noted to smooth out the changes in the Pb and Cu recovery, with the highest recoveries reported in 2022. Overall, there was a reduction in the recovery for gold, but this is not quoted in the mineral resources and is not considered to be material. SRK notes if the current trend continues there is a risk of lower recoveries being achieved in 2025.

The QP elected to use the average recoveries from the production information for the assessment of the CoG, as described in Section 11.4 of this report.

Using the information provided in Table 10-1 and by calculating the total recovery for the key elements, Table 10-2 shows the cumulative recoveries that have been used for the purpose of the CoG analysis.

**Table 10-2: Cumulative Recovery used for CoG Analysis**

Element	2022 Recovery (%)	2023 Recovery (%)	2024 Recovery (%)
Au	58.9	74.44	72.01
Ag	74.4	78.42	75.74
Pb	44.0	46.60	39.14
Cu	67.7	68.82	62.89
Zn	88.5	89.72	87.18

Source: SRK, 2024

## 10.5 Adequacy of Data and Non-Conventional Industry Practice

In SRK’s opinion, the results to date are sufficient for the definition of a mineral resource with the potential for economic extraction of the three concentrate products produced. SRK is not aware of non-conventional industry practice utilized.

# 11 Mineral Resource Estimates

The mineral resource estimate presented herein represents the current resource evaluation prepared for the Charcas project in accordance with the disclosure standards for mineral resources under §§229.1300 through 229.1305 (subpart 229.1300 of Regulation S-K).

## 11.1 Key Assumptions, Parameters, and Methods Used

This section describes the key assumptions, parameters, and methods used to estimate the mineral resources. The technical report summary includes mineral resource estimates, effective December 31, 2024.

Between 2021 and 2023, SRK conducted a manual validation of the previous Mineral Resources, which had been generated using traditional 2D polygonal methods. In 2024, IMMSA completed the digitization of all available rock sampling and drilling information. Utilizing this digitized data, SRK and IMMSA collaboratively prepared the geological model and mineral resource estimation. This comprehensive model incorporated geological interpretations in both horizontal and vertical sections

### 11.1.1 Mineral Titles and Surface Rights

The MRE stated herein is done so on 100% terms of the resources contained within mineral title and surface leases which are currently held by IMMSA as of the effective date of this report. All conceptual optimizations to constrain statement of mineral resources have been limited to within these boundaries, as well. Current and future status of the access, agreements, or ownership of these titles and rights is described in Section 3 of this report.

### 11.1.2 Database

IMMSA finalized the digitizing of the historical database and constructed the 3D geological model in Leapfrog Geo. The QP considers the procedures used by IMMSA to be reasonable and in-line with industry standards. The digitized database is stored in Excel files and uploaded into Leapfrog Geo software for the geological modeling and resource. IMMSA is implementing the use of DH Logger for data capturing and database management.

All drilling and sampling completed by the Company are logged for a variety of geological parameters, including rock types, mineralogy, and structure. Historical drilling featured cross-sections, and maps have been used locally for modeling purposes for the mineralization contacts. SRK considers movement to a digital database containing the mine geology department and exploration information resulted in improvements in the ability to develop a robust geological model supporting the MRE now can be used for more-detailed mine planning.

Table 11-1 and Table 11-2 present the drillholes and rock sampling channels per zone completed by Charcas included in the Leapfrog software database used for the geological modeling and resource estimation. A plan view of the location of the drillhole traces are presented in Figure 11-1. Figure 11-2 presents the 3D view of the location of the rock channels.

**Table 11-1: Drillholes Database**

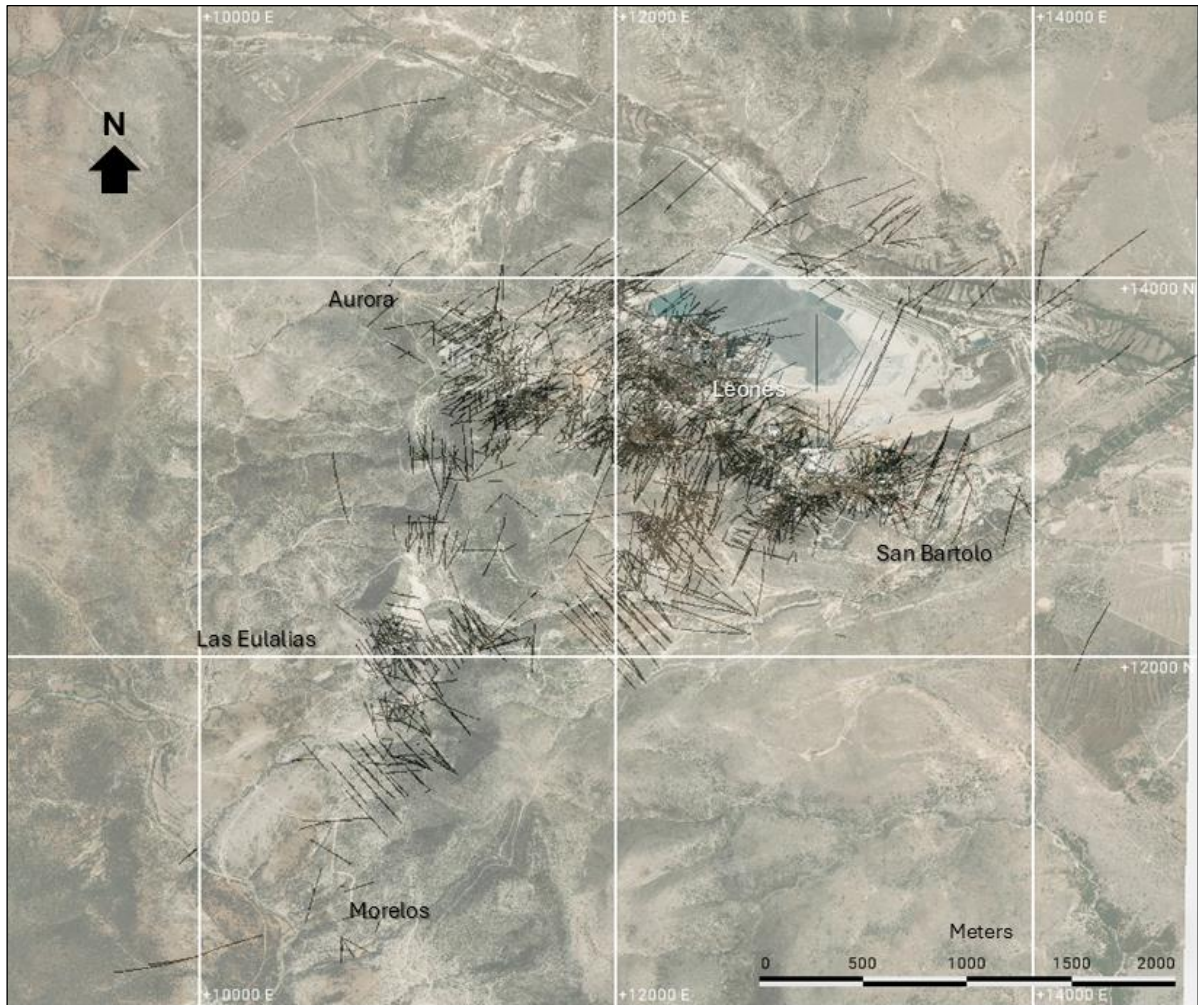
Area	No.# of Drillholes	Length (m)
Aurora	629	89,516.9
Buen Suceso	50	15,091.3
Bufa Aurora	12	5,619.8
Coralillo	1	659.5
El Rey	326	53,830.3
Eulalias	488	110,460.1
Hormigas	2	1,150.1
La Blanca	3	2,252.0
La Reina	1,309	191,577.9
Las Eulalias	9	2,156.4
Las Lupes	5	1,535.0
Manganeso	61	29,279.8
Piloncillo	1	533.7
Plateros	30	12,632.0
Rey	4	492.5
Rey Reina - E Leones	6	4,506.1
San Bartolo	547	79,300.7
San Fernando	97	20,055.3
San Sebastian	10	2,218.9
Santa Rita	93	17,537.2
Santa Rosa	293	103,347.5
Servicios	2	525.7
Sto. Tomas	3	1,572.5
Sur San Bartolo	13	9,129.4
Veta Leones	61	18,412.5
Veta Nueva	407	74,964.9
Other	58	10,325.9
<b>Total</b>	<b>4,520</b>	<b>858,683.1</b>

Source: IMMSA, 2024

**Table 11-2: Channels per Area**

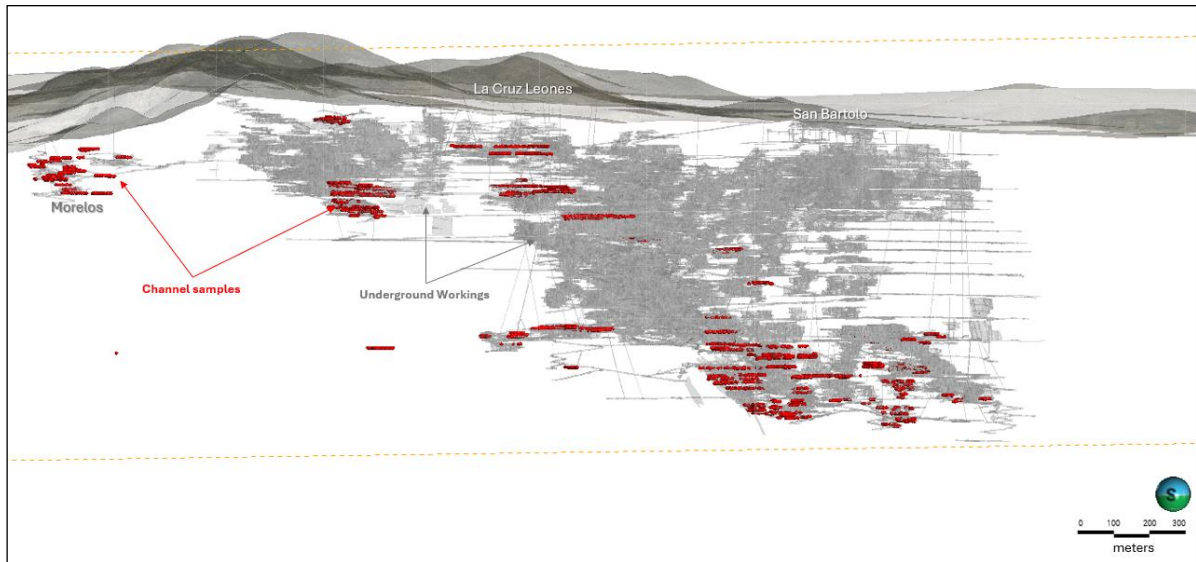
Area	No.# of Channels	Length (m)
Aurora	2,020	8,746
El Rey	150	1,222
Eulalias	671	4,469
Reina	381	1,697
San Bartolo	4,783	24,876
San Fernando	45	138
San Sebastian	315	2,298
Santa Rosa	856	6,898
Veta Leones	155	990
<b>Total</b>	<b>9,376</b>	<b>51,334</b>

Source: IMMSA, 2024



Source: IMMSA,2024

**Figure 11-1: Drillhole Traces – Plan View**

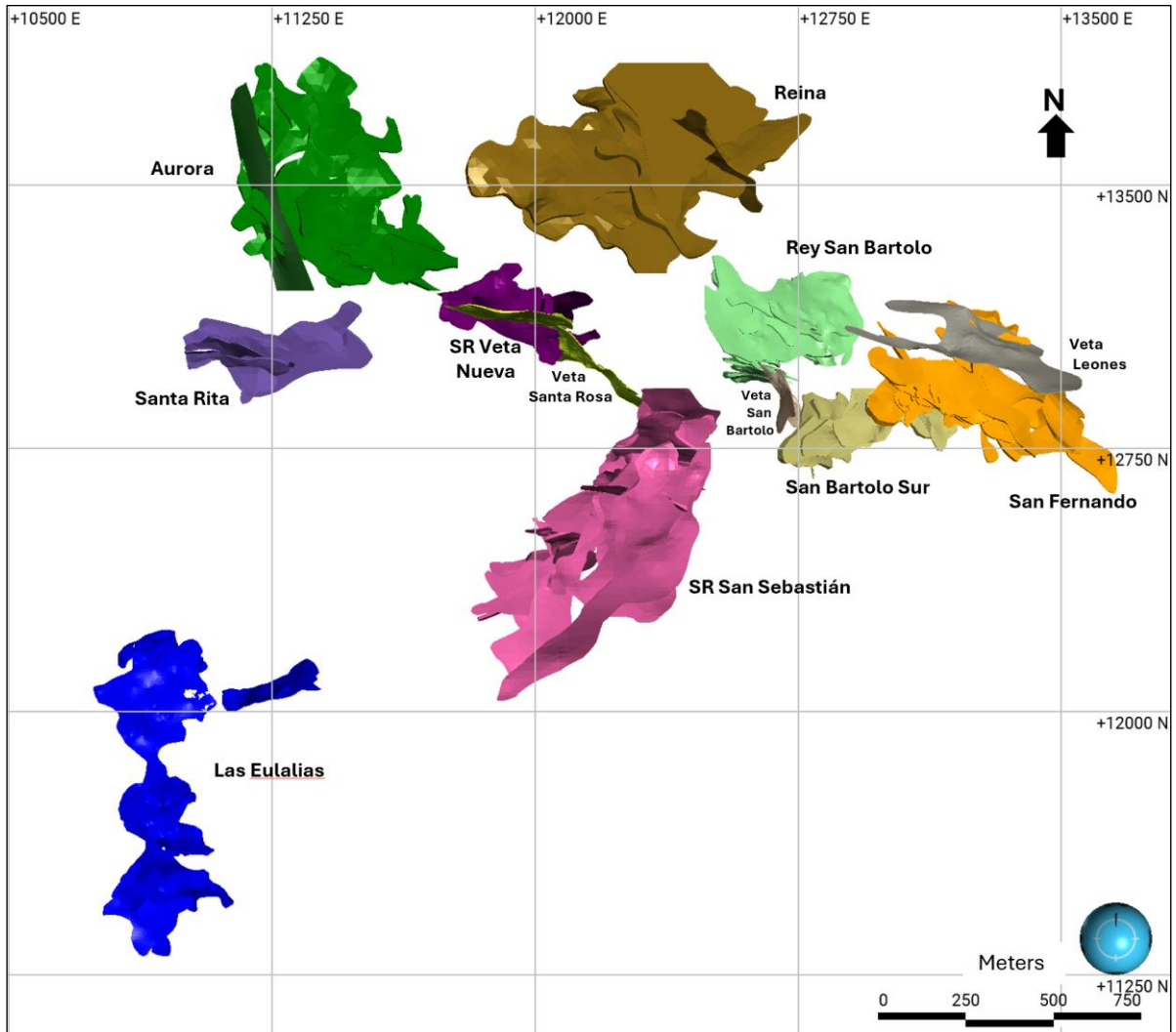


Source: IMMSA, 2024

**Figure 11-2: Channel Samples Location (3D view – Looking to North)**

## 11.2 Geological Model

Extensive knowledge exists regarding the geology, structural, and mineralization controls of the Charcas deposit. The construction of the 3D geological model began in 2023 and was completed in 2024. Historical information, including underground workings, lithology, structure, and mineralization, is stored on maps. Under SRK's supervision, IMMSA prepared the geological model based on horizontal and vertical sections, utilizing lithological descriptions from the drillhole and rock samples database. Figure 11-3 shows the location of the geological models constructed with Leapfrog software, prepared for each zone in the Charcas project.



Source: IMMSA, 2024

**Figure 11-3: Plan view of the 3D Geological Models constructed by IMMSA**

IMMSA consolidated the 3D geological model, the following activities are in process:

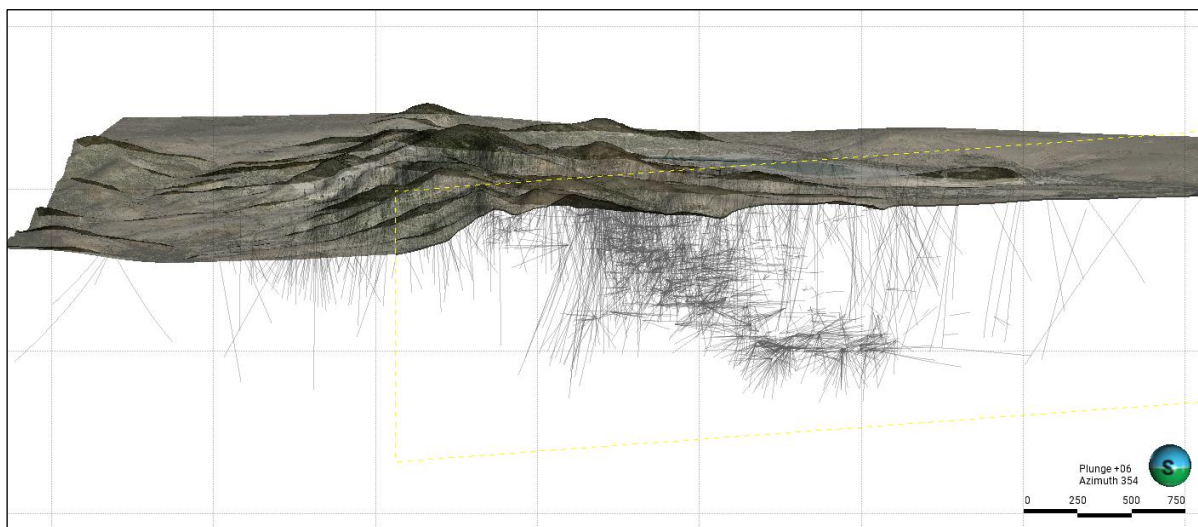
- Compile the 3D database of the underground chip channel samples. The exclusion of samples in already-mined zones should be defined by the QP in charge of the geological modeling.
- Convert all the information to a unique coordinate system when necessary.
- Consolidate the rock and drill core sampling database (collar, survey, assay, lithology, alteration, vein codes, etc.) currently in Excel.
- Use digitized sections and maps with lithology information to help in the geological interpretation and implicit geological modeling.
- Construct and review the depletion solids based on the topographic information collected by the mine planning department.
- Codification of the drillhole and channel intervals with the vein/mineralized structure identifier.

- Construct the solids using the implicit modeling tool of Leapfrog using the codes and interpretation of the geologist
- Construct control lines in the hanging wall and footwall of each structure to ensure the capture of the mineralized intervals.
- Define and generate interactions between structures according to geological chronology.

Set boundary lines to restrict the expansion of solids to a maximum of 80 meters from mineralized intercepts

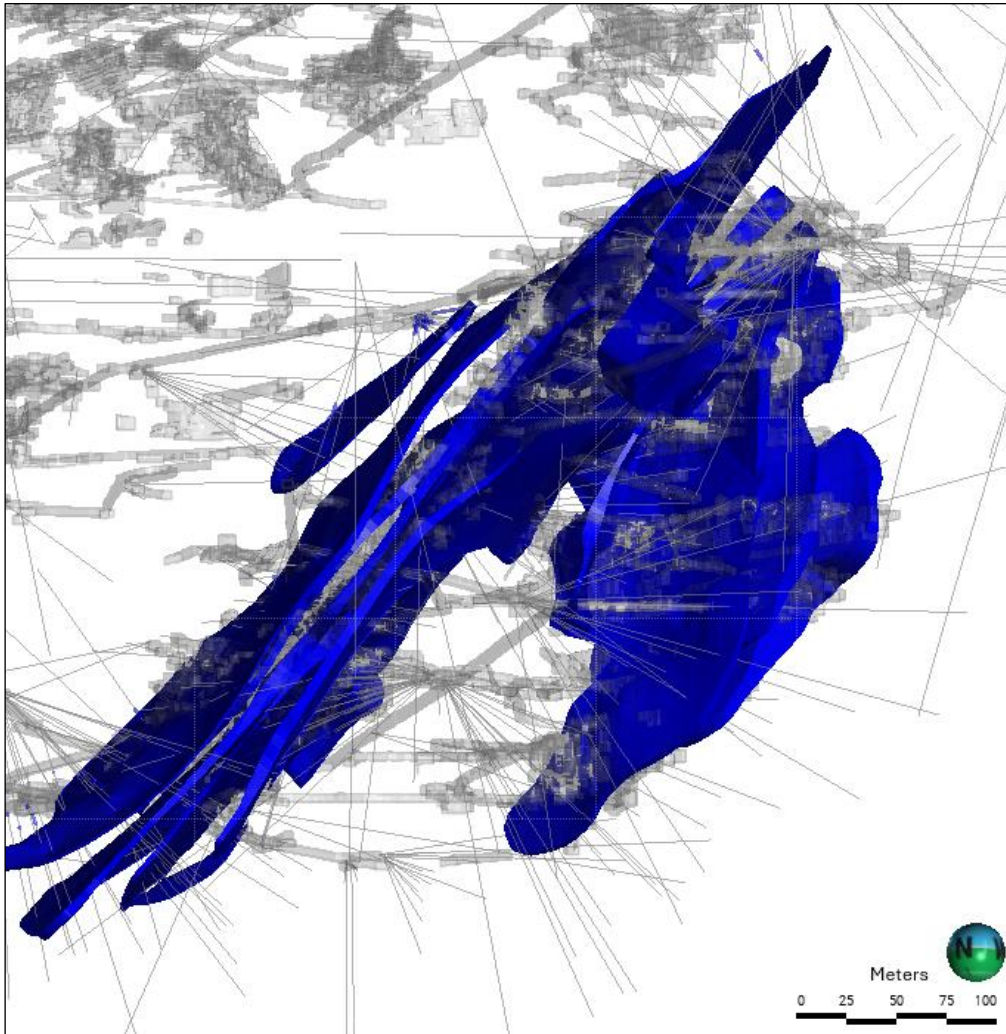
Figure 11-4 presents the 3D view of the drillhole data imported into Leapfrog Geo software, including 4,520 drillholes. Figure 11-5 and Figure 11-6 Source: IMMSA, 2024

Figure 11-6 show the Rey-San Bartolo and Las Eulalias 3D geological models, the drillhole traces and the mine infrastructure. Additionally, Charcas prepared the geological models for Aurora, Reina, Rey-San Bartolo, San Bartolo Sur, San Fernando, Santa Rita, Sn Sebastian, Veta Nueva, Veta Leones, Veta San Bartolo and Veta Santa Rosa.



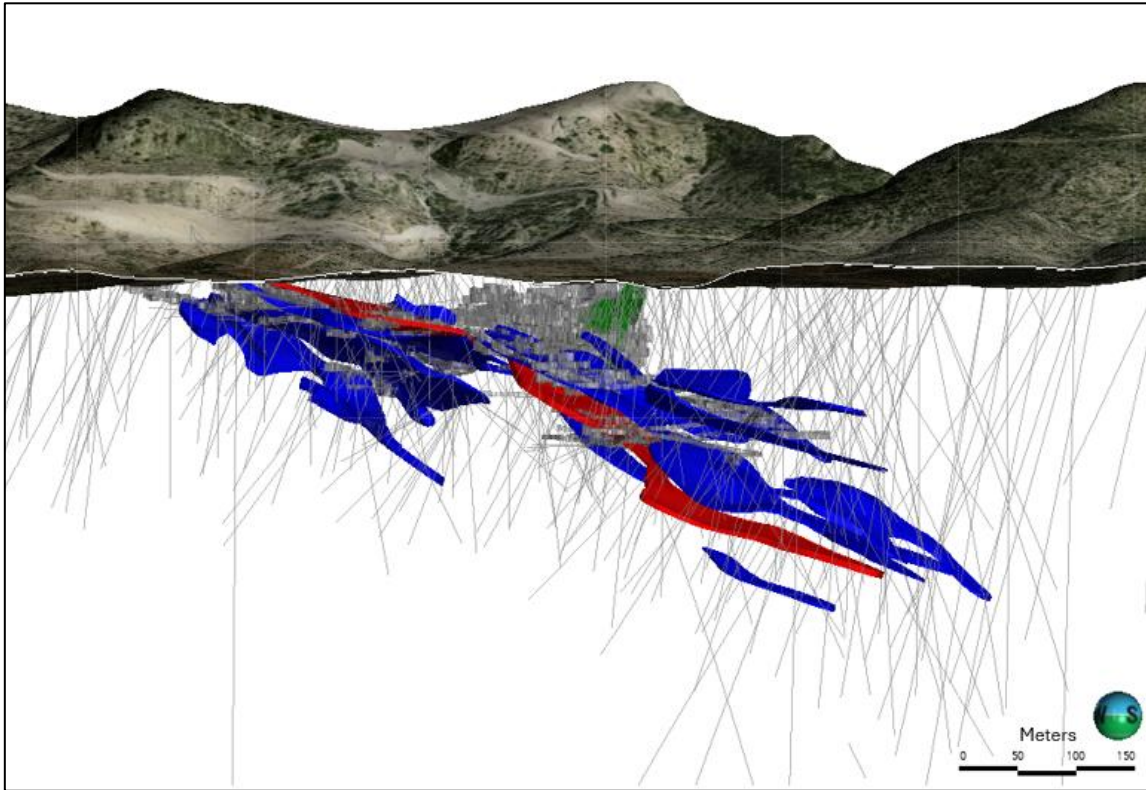
Source: IMMSA, 2023

**Figure 11-4: 3D View of the Drillhole Data, Leapfrog Geo Software**



Source: IMMSA, 2024

**Figure 11-5: 3D View of the Rey-San Bartolo geological model**



Source: IMMSA, 2024

**Figure 11-6: 3D View of Las Eulalias Geological Model**

The following are the general characteristics of each area in the project:

**Las Eulalias:** This area is located in the southwest of the project, with a general elongated NS direction in its main zone, measuring 950 m in length and 330 m in width. It consists of 16 mineralized bodies, 15 sub-horizontal mantos dipping slightly to the SSE, and a subvertical vein-like structure with an EEN direction dipping towards the NNW. Elevation ranges from 1,840 to 2,230 meters above sea level (masl).

**SR San Sebastian:** This area is located in the central-southern part of the project, with an elongated general shape towards the NE. The mantos have an EW direction dipping south between 30 and 65 degrees. It has a horizontal extension of 1,000 m and a width of 400 m, consisting of 26 mineralized mantos. Elevation varies between 1,300 and 2,170 masl.

**Aurora:** This area is located in the NE of the project, consisting of 15 mantos and a subvertical vein-like structure with a NNW direction dipping 70 degrees to the EES. The mantos have a NW direction and dip 20 to 35 degrees to the NE. It has an irregular area of 550 x 600 m. Elevation varies between 1,840 and 2,220 masl.

**Santa Rita:** This area is located in the west of the project, consisting of 8 mantos with an EW direction dipping 25 to 45 degrees to the south. It has an elongated EW area measuring 530 m in length and 240 m in width. Elevation varies between 1,950 and 3,340 masl.

**San Fernando:** This area is located in the east of the project, consisting of 16 mantos with a NNW-NW direction dipping 35 to 65 degrees to the NE. The zone is elongated in a NW direction, measuring 800 meters in length and 400 meters in width. Elevation varies between 1,200 and 1,850 masl.

**San Bartolo Sur:** This area is located in the east of the project, consisting of 15 mantos with a NNW direction dipping 35 to 65 degrees to the EEN. The zone is elongated in an EEN direction, measuring 560 meters in length and 200 meters in width. Elevation varies between 1,200 and 1,650 masl.

**Rey San Bartolo:** This area is located in the central east of the project, consisting of 12 mantos with variable directions between NNW and WNW, dipping 35 to 45 degrees to the EEN, except for mantos SB40 S1, SB40 S2, and SB40 S3, which dip 80 to 90 degrees to the SSW. The zone has an irregular shape, approximately 400 x 400 meters. Elevation varies between 1,230 and 1,700 masl.

**Reina:** This area is located in the north of the project, consisting of 11 mantos with a NW direction dipping 40 to 50 degrees to the NE. The zone has an irregular shape, measuring 700 x 700 meters. Elevation varies between 1,450 and 2,170 masl.

**SR Veta Nueva:** This area is located in the central west of the project, consisting of 8 mantos with variable directions between WNW and NW, dipping variably between 20 to 70 degrees to the SW-SSW. The zone is elongated in an EW direction, measuring 450 x 200 meters. Elevation varies between 1,700 and 2,100 masl.

**Veta Leones:** This vein is located to the east near the San Fernando area, with a WNW direction and a general dip of 65 degrees to the NNE. It has a horizontal extension of up to 780 meters and a vertical extension of 500 meters.

**Veta San Bartolo:** This vein is located in the central eastern area, between San Bartolo Sur and Rey San Bartolo, with a general NNW direction and a variable subvertical dip. It has a variable horizontal extension of up to 200 meters and a more extended vertical extension of 530 meters.

**Veta Leones:** This vein is located in the central area of the project, between SR San Sebastian and SR Veta Nueva, with an irregular shape and a NNW direction, with dips varying between 70 and 90 degrees towards the SSW. It has a horizontal extension of up to 730 meters and a vertical extension of 330 meters, with a small branch extending horizontally 200 meters and vertically 150 meters

In general, the mantos are of variable sizes with irregular shapes, and their thickness ranges from just under 1 meter to 20 meters. The veins have thicknesses varying from less than 1 meter to 10 meters, and in some very localized areas, they may be slightly thicker.

The Qualified Person (QP) concludes that the geological modeling methodology, incorporating geological continuity interpretations from horizontal and vertical sections, along with the utilization of Leapfrog visualization tools, is appropriate for defining the mineralized solids.

### 11.3 Estimation Domain Analysis

The estimation of the mineralized structures was conducted independently for each mineralized solid, treating all contacts as hard boundaries. SRK managed the absent data and non-assayed intervals using minimum values (Ag: 0.001, Cu: 0.001, Pb: 0.001, and Zn: 0.001). The populations of zinc, silver, lead, and copper were referenced to ensure estimation accuracy. Some domains exhibited a high Coefficient of Variation (CoV), indicating significant variability within the populations. The application of capping techniques effectively reduced the variability. Additionally, further compositing was

performed to decrease population variability before grade estimation. In the summary statistics for Charcas. Table 11-3 presents the statistics raw samples per domain in all areas of Charcas.

**Table 11-3: Summary Statistics of Raw Sampling per Domain**

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
<b>Aurora</b>									
Veta Aurora	Ag g/t	47	74	18	31	1.66	930	0.001	134
	Cu %	47	74	0.43	0.72	1.70	0.52	0.001	2.99
	Pb %	47	74	0.01	0.01	1.45	0.0001	0.001	0.04
	Zn %	47	74	0.64	1.87	2.94	3.50	0.001	9.3
Aur_1	Ag g/t	732	1,136	27	35	1.29	1,230	0.001	364
	Cu %	732	1,136	0.48	0.83	1.75	0.70	0.001	9.66
	Pb %	732	1,136	0.02	0.06	2.60	0.0040	0.001	1
	Zn %	732	1,136	2.57	5.08	1.98	25.84	0.001	52.4
Aur_2	Ag g/t	626	952	23	82	3.49	6,665	0.001	1331
	Cu %	626	952	0.25	0.46	1.82	0.21	0.001	5.8
	Pb %	626	952	0.05	0.42	7.85	0.1793	0.001	6.6
	Zn %	626	952	2.72	4.78	1.76	22.87	0.001	38.2
Aur_3	Ag g/t	714	1,107	15	24	1.63	561	0.001	209
	Cu %	714	1,107	0.21	0.71	3.45	0.51	0.001	8.6
	Pb %	714	1,107	0.02	0.04	1.74	0.0014	0.001	0.45
	Zn %	714	1,107	3.36	5.23	1.56	27.36	0.001	42.55
Aur_4	Ag g/t	154	229	15	35	2.31	1,248	0.001	850
	Cu %	154	229	0.07	0.11	1.61	0.01	0.001	0.82
	Pb %	154	229	0.03	0.05	1.49	0.0026	0.001	0.73
	Zn %	154	229	3.62	5.44	1.51	29.63	0.001	31.26
Aur_5	Ag g/t	202	381	13	30	2.31	889	0.001	290
	Cu %	202	381	0.08	0.23	3.09	0.05	0.001	3.9
	Pb %	202	381	0.05	0.31	6.38	0.0932	0.001	4.39
	Zn %	202	381	2.15	4.14	1.93	17.17	0.001	34.9
Aur_6	Ag g/t	248	340	23	28	1.20	794	0.001	440
	Cu %	248	340	0.45	0.94	2.09	0.88	0.001	8.2
	Pb %	248	340	0.02	0.07	3.34	0.0054	0.001	1
	Zn %	248	340	2.36	4.93	2.09	24.29	0.001	35.7
Aur_7	Ag g/t	390	608	20	25	1.26	626	0.001	145
	Cu %	390	608	0.41	0.60	1.48	0.36	0.001	4.43
	Pb %	390	608	0.02	0.04	1.64	0.0013	0.001	1
	Zn %	390	608	1.86	3.97	2.14	15.79	0.001	28.3
Aur_8	Ag g/t	268	426	13	34	2.55	1,124	0.001	430
	Cu %	268	426	0.14	0.32	2.27	0.10	0.001	3.34
	Pb %	268	426	0.03	0.13	5.10	0.0175	0.001	3.05
	Zn %	268	426	2.21	4.06	1.83	16.47	0.001	33
Aur_9	Ag g/t	144	223	13	22	1.70	472	0.001	150
	Cu %	144	223	0.27	0.65	2.37	0.42	0.001	5.2
	Pb %	144	223	0.02	0.08	3.62	0.0065	0.001	1
	Zn %	144	223	2.29	5.26	2.30	27.69	0.001	35
Aur_10	Ag g/t	404	709	25	41	1.62	1,684	0.001	320
	Cu %	404	709	0.26	0.63	2.42	0.40	0.001	9.4
	Pb %	404	709	0.02	0.05	2.18	0.0029	0.001	0.77
	Zn %	404	709	2.90	5.13	1.77	26.35	0.001	42.7
Aur_11	Ag g/t	289	520	22	65	3.03	4,259	0.001	912
	Cu %	289	520	0.11	0.25	2.14	0.06	0.001	2.33
	Pb %	289	520	0.07	0.39	5.37	0.1507	0.001	9
	Zn %	289	520	3.43	6.00	1.75	35.98	0.001	46.2
Aur_12	Ag g/t	51	59	16	27	1.66	718	0.001	162
	Cu %	51	59	0.13	0.44	3.52	0.20	0.001	5.6
	Pb %	51	59	0.02	0.04	1.98	0.0014	0.001	0.22

	Zn %	51	59	2.43	4.65	1.91	21.60	0.001	24
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Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
Aur_13	Ag g/t	68	216	10	24	2.39	567	0.001	166
	Cu %	68	216	0.12	0.52	4.25	0.27	0.001	4.5
	Pb %	68	216	0.02	0.06	2.84	0.0039	0.001	0.61
	Zn %	68	216	1.04	2.64	2.55	6.97	0.001	19.27
Aur_14	Ag g/t	86	208	11	18	1.62	312	0.001	75
	Cu %	86	208	0.22	0.40	1.80	0.16	0.001	1.86
	Pb %	86	208	0.01	0.03	2.64	0.0008	0.001	0.21
	Zn %	86	208	2.22	4.69	2.11	22.02	0.001	25.4
Aur_15	Ag g/t	130	203	23	32	1.41	1,023	0.001	240
	Cu %	130	203	0.57	0.90	1.59	0.81	0.001	5.5
	Pb %	130	203	0.02	0.02	1.02	0.0005	0.001	0.16
	Zn %	130	203	0.88	2.36	2.69	5.59	0.001	23
<b>Eulalias</b>									
Manto 1	Ag g/t	8	9	23	27	1.15	723	1	58
	Cu %	8	9	0.26	0.22	0.85	0.05	0.01	0.51
	Pb %	8	9	0.01	0.01	1.38	0.0001	0.001	0.02
	Zn %	8	9	1.97	1.83	0.93	3.33	0.04	5.01
Manto 2	Ag g/t	380	519	14	22	1.53	474	0.001	189
	Cu %	380	519	0.16	0.35	2.15	0.12	0.001	5.03
	Pb %	380	519	0.13	0.87	6.73	0.7487	0.001	12
	Zn %	380	519	3.32	4.34	1.31	18.86	0.001	28.9
Manto 2-A	Ag g/t	54	58	31	136	4.46	18,539	1	1600
	Cu %	54	58	0.08	0.21	2.62	0.04	0.001	1.26
	Pb %	54	58	0.06	0.12	2.12	0.0148	0.001	1.22
	Zn %	54	58	4.08	6.67	1.64	44.53	0.01	38.82
Manto 3	Ag g/t	41	58	94	145	1.55	21,155	0.001	606
	Cu %	41	58	0.25	0.20	0.81	0.04	0.001	0.76
	Pb %	41	58	4.40	5.80	1.32	33.6037	0.001	20.52
	Zn %	41	58	5.81	6.57	1.13	43.22	0.001	24.92
Manto 4	Ag g/t	467	717	17	31	1.83	984	0.001	423
	Cu %	467	717	0.17	0.27	1.55	0.07	0.001	3.06
	Pb %	467	717	0.22	1.01	4.57	1.0190	0.001	14.86
	Zn %	467	717	4.85	5.72	1.18	32.71	0.001	37.3
Manto 5	Ag g/t	56	29	8	8	1.00	65	0.001	45
	Cu %	56	29	0.07	0.11	1.61	0.01	0.001	0.46
	Pb %	56	29	0.03	0.10	3.52	0.0108	0.001	1.01
	Zn %	56	29	1.70	2.19	1.29	4.81	0.001	8.39
Manto 6	Ag g/t	73	37	17	21	1.22	434	2	101
	Cu %	73	37	0.24	0.44	1.84	0.19	0.001	1.74
	Pb %	73	37	0.07	0.18	2.57	0.0311	0.001	1.17
	Zn %	73	37	4.63	7.12	1.54	50.66	0.02	36.37
Manto 7	Ag g/t	663	1,012	15	27	1.80	722	0.001	632
	Cu %	663	1,012	0.11	0.50	4.73	0.25	0.001	13
	Pb %	663	1,012	0.12	0.90	7.67	0.8024	0.001	21.2
	Zn %	663	1,012	3.59	6.46	1.80	41.78	0.001	45.8
Manto 8	Ag g/t	372	595	46	98	2.13	9,515	0.001	527
	Cu %	372	595	0.20	0.62	3.18	0.39	0.001	5.98
	Pb %	372	595	1.78	4.81	2.70	23.1129	0.001	24.4
	Zn %	372	595	4.90	7.75	1.58	60.00	0.001	39.38
Manto 9	Ag g/t	167	276	14	21	1.51	458	0.001	134
	Cu %	167	276	0.17	0.98	5.73	0.95	0.001	10.8
	Pb %	167	276	0.08	0.38	4.55	0.1459	0.001	3.5
	Zn %	167	276	3.52	6.28	1.79	39.43	0.001	38.2

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
Principal	Ag g/t	743	1,118	18	57	3.11	3,220	0.001	1010
	Cu %	743	1,118	0.14	0.41	2.88	0.17	0.001	6.1
	Pb %	743	1,118	0.09	0.38	4.44	0.1430	0.001	9
	Zn %	743	1,118	2.78	4.54	1.64	20.64	0.001	34.3
El tornillo	Ag g/t	291	464	47	81	1.73	6,602	0.001	466
	Cu %	291	464	0.13	0.19	1.45	0.04	0.001	1.27
	Pb %	291	464	1.46	3.28	2.26	10.7707	0.001	25.09
	Zn %	291	464	3.27	6.05	1.85	36.59	0.001	36.8
Manto 4-A	Ag g/t	116	90	27	41	1.50	1,673	0.001	216
	Cu %	116	90	0.45	0.88	1.97	0.77	0.001	6.32
	Pb %	116	90	0.49	5.36	10.83	28.7088	0.001	68.18
	Zn %	116	90	5.38	7.91	1.47	62.59	0.001	44.58
<b>Reina</b>									
Manto 2	Ag g/t	207	293	61	94	1.55	8,876	0.001	820
	Cu %	207	293	0.11	0.18	1.60	0.03	0.001	1.12
	Pb %	207	293	0.38	0.88	2.33	0.7784	0.001	10
	Zn %	207	293	2.76	4.24	1.54	18.02	0.001	26.3
Manto 3	Ag g/t	740	1,433	69	222	3.24	49,476	0.001	6130
	Cu %	740	1,433	0.11	0.24	2.21	0.06	0.001	4.85
	Pb %	740	1,433	0.25	0.79	3.14	0.6274	0.001	10.5
	Zn %	740	1,433	2.67	5.63	2.11	31.73	0.001	48.3
Manto 4	Ag g/t	892	2,033	42	54	1.29	2,945	0.001	500
	Cu %	892	2,033	0.15	0.27	1.81	0.07	0.001	3
	Pb %	892	2,033	0.14	0.37	2.66	0.1400	0.001	4.3
	Zn %	892	2,033	6.50	9.57	1.47	91.54	0.001	56.5
Manto 5	Ag g/t	841	2,312	66	129	1.96	16,566	0.001	1500
	Cu %	841	2,312	0.19	0.64	3.27	0.40	0.001	7.6
	Pb %	841	2,312	0.45	1.13	2.51	1.2746	0.001	9.3
	Zn %	841	2,312	2.47	5.82	2.36	33.86	0.001	44.3
Manto 6	Ag g/t	342	939	46	98	2.14	9,636	0.001	1650
	Cu %	342	939	0.15	0.36	2.44	0.13	0.001	4.7
	Pb %	342	939	0.26	1.07	4.13	1.1515	0.001	23
	Zn %	342	939	3.28	6.26	1.91	39.25	0.001	44
Manto 7	Ag g/t	780	1,645	66	137	2.06	18,774	0.001	1640
	Cu %	780	1,645	0.14	0.35	2.53	0.13	0.001	6.17
	Pb %	780	1,645	0.35	1.28	3.64	1.6437	0.001	13
	Zn %	780	1,645	5.20	8.37	1.61	70.13	0.001	44.3
Manto 8-A	Ag g/t	246	434	41	55	1.35	3,042	0.001	670
	Cu %	246	434	0.14	0.33	2.36	0.11	0.001	5.1
	Pb %	246	434	0.47	0.98	2.09	0.9644	0.001	9
	Zn %	246	434	3.40	4.89	1.44	23.88	0.001	29.4
Manto 9	Ag g/t	429	1,070	48	90	1.89	8,177	0.001	1360
	Cu %	429	1,070	0.24	0.58	2.40	0.34	0.001	6.7
	Pb %	429	1,070	0.05	0.15	2.99	0.0230	0.001	2.34
	Zn %	429	1,070	3.85	6.59	1.71	43.40	0.001	38.1
Manto 10	Ag g/t	162	536	42	70	1.66	4,864	0.001	340
	Cu %	162	536	0.12	0.24	1.97	0.06	0.001	1.6
	Pb %	162	536	0.39	1.15	2.93	1.3271	0.001	9.3
	Zn %	162	536	2.54	4.32	1.70	18.62	0.001	21.2
Manto 11	Ag g/t	24	60	24	45	1.91	2,064	0.001	161
	Cu %	24	60	0.03	0.08	2.85	0.01	0.001	0.45
	Pb %	24	60	0.27	0.63	2.37	0.3984	0.001	2.2
	Zn %	24	60	0.82	2.59	3.17	6.72	0.001	15.7

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
Manto 140	Ag g/t	335	743	83	168	2.03	28,150	0.001	2090
	Cu %	335	743	0.21	0.44	2.09	0.19	0.001	4.3
	Pb %	335	743	0.36	1.13	3.16	1.2721	0.001	13.88
	Zn %	335	743	2.96	5.26	1.78	27.69	0.001	39.4
<b>Rey San Bartolo</b>									
Rey A	Ag g/t	1002	2,188	31	69	2.21	4,817	0.001	1450
	Cu %	1002	2,188	0.19	0.37	1.95	0.14	0.001	4.96
	Pb %	1002	2,188	0.17	0.77	4.53	0.5854	0.001	13.2
	Zn %	1002	2,188	4.02	5.60	1.39	31.33	0.001	42.9
Rey B	Ag g/t	669	1,385	41	69	1.67	4,704	0.001	891
	Cu %	669	1,385	0.23	0.41	1.80	0.17	0.001	5.1
	Pb %	669	1,385	0.28	0.96	3.38	0.9259	0.001	10.9
	Zn %	669	1,385	4.64	6.29	1.36	39.52	0.001	35
Rey C	Ag g/t	289	535	36	61	1.69	3,714	0.001	660
	Cu %	289	535	0.35	0.84	2.41	0.70	0.001	8
	Pb %	289	535	0.10	0.45	4.64	0.2066	0.001	5.8
	Zn %	289	535	1.87	3.78	2.01	14.26	0.001	30.8
Rey D	Ag g/t	266	481	28	48	1.70	2,325	0.001	345
	Cu %	266	481	0.20	0.41	2.07	0.17	0.001	3.9
	Pb %	266	481	0.13	0.87	6.49	0.7546	0.001	12.8
	Zn %	266	481	2.97	4.72	1.59	22.31	0.001	40.3
Rey D2	Ag g/t	156	321	52	84	1.62	7,095	0.001	959
	Cu %	156	321	0.53	1.07	2.02	1.15	0.001	7.13
	Pb %	156	321	0.10	0.34	3.24	0.1136	0.001	3.87
	Zn %	156	321	2.00	3.66	1.83	13.38	0.001	27.5
Rey E	Ag g/t	226	435	47	60	1.27	3,544	0.001	504
	Cu %	226	435	0.36	0.62	1.71	0.39	0.001	11.2
	Pb %	226	435	0.27	0.75	2.82	0.5589	0.001	6.7
	Zn %	226	435	4.05	5.50	1.36	30.22	0.001	26.2
Rey F	Ag g/t	67	119	37	55	1.51	3,070	0.001	380
	Cu %	67	119	0.26	0.63	2.40	0.39	0.001	4
	Pb %	67	119	0.42	1.32	3.11	1.7458	0.001	9.4
	Zn %	67	119	2.68	4.33	1.62	18.72	0.001	24
Rey G	Ag g/t	124	244	30	91	3.07	8,339	0.001	1030
	Cu %	124	244	0.13	0.53	4.15	0.28	0.001	5.43
	Pb %	124	244	0.16	0.95	6.03	0.8938	0.001	16.9
	Zn %	124	244	1.57	2.94	1.87	8.67	0.001	19.7
Rey I	Ag g/t	71	131	107	155	1.44	23,939	0.001	1550
	Cu %	71	131	0.74	0.88	1.19	0.77	0.001	11.8
	Pb %	71	131	0.05	0.07	1.33	0.0046	0.001	0.59
	Zn %	71	131	3.43	4.33	1.26	18.75	0.001	16.7
SB_40` s 1	Ag g/t	550	943	64	80	1.25	6,445	0.001	794
	Cu %	550	943	0.29	0.54	1.89	0.29	0.001	5.97
	Pb %	550	943	0.92	1.94	2.12	3.7716	0.001	15.2
	Zn %	550	943	5.32	4.82	0.91	23.27	0.001	25.3
SB_40` s 3	Ag g/t	505	787	72	115	1.60	13,277	0.001	1090
	Cu %	505	787	0.43	1.17	2.71	1.36	0.001	16.3
	Pb %	505	787	0.67	1.67	2.48	2.7952	0.001	11.3
	Zn %	505	787	6.17	6.43	1.04	41.40	0.001	34.6
SB_40` s 2	Ag g/t	627	1,145	83	107	1.29	11,419	0.001	1820
	Cu %	627	1,145	0.55	0.74	1.34	0.55	0.001	12.3
	Pb %	627	1,145	0.29	1.07	3.66	1.1375	0.001	24
	Zn %	627	1,145	4.24	4.46	1.05	19.90	0.001	28.4

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
<b>San Bartolo Sur</b>									
SB_70s_1	Ag g/t	792	1,644	59	62	1.05	3,828	0.001	437
	Cu %	792	1,644	0.52	0.72	1.38	0.51	0.001	10.9
	Pb %	792	1,644	0.05	0.12	2.14	0.0136	0.001	1.92
	Zn %	792	1,644	2.13	3.25	1.53	10.58	0.001	20
SB_70s_2	Ag g/t	527	1,022	69	76	1.11	5,790	0.001	544
	Cu %	527	1,022	0.71	0.92	1.29	0.84	0.001	8.7
	Pb %	527	1,022	0.12	0.57	4.74	0.3244	0.001	9.27
	Zn %	527	1,022	0.87	2.66	3.06	7.09	0.001	28.2
SB_70s_3	Ag g/t	381	717	61	59	0.97	3,496	0.001	700
	Cu %	381	717	0.62	0.86	1.38	0.73	0.001	8.57
	Pb %	381	717	0.04	0.06	1.37	0.0034	0.001	1.6
	Zn %	381	717	0.27	0.65	2.40	0.42	0.001	8.64
SB_70s_4	Ag g/t	552	1,191	60	79	1.33	6,294	0.001	592
	Cu %	552	1,191	0.41	0.68	1.65	0.47	0.001	9.03
	Pb %	552	1,191	0.05	0.19	3.52	0.0347	0.001	3
	Zn %	552	1,191	0.97	2.45	2.53	5.99	0.001	21.8
SB_70s_5	Ag g/t	448	882	59	91	1.56	8,347	0.001	1111
	Cu %	448	882	0.36	0.57	1.57	0.32	0.001	6.5
	Pb %	448	882	0.10	0.42	4.12	0.1737	0.001	6.3
	Zn %	448	882	4.17	5.52	1.32	30.42	0.001	38
SB_70s_6	Ag g/t	461	966	62	74	1.20	5,468	0.001	720
	Cu %	461	966	0.48	0.95	1.96	0.90	0.001	13.6
	Pb %	461	966	0.06	0.11	1.76	0.0116	0.001	1.04
	Zn %	461	966	3.92	4.78	1.22	22.87	0.001	39.5
SB_70s_6.1	Ag g/t	30	31	66	67	1.01	4,464	0.001	223
	Cu %	30	31	0.36	0.34	0.94	0.11	0.001	1.23
	Pb %	30	31	0.12	0.30	2.49	0.0884	0.001	1.77
	Zn %	30	31	6.52	8.21	1.26	67.33	0.001	28.3
SB_70s_7	Ag g/t	440	997	62	110	1.76	12,052	0.001	1288
	Cu %	440	997	0.75	1.28	1.70	1.63	0.001	8
	Pb %	440	997	0.04	0.14	3.29	0.0194	0.001	3.5
	Zn %	440	997	2.45	4.20	1.71	17.66	0.001	31.5
SB_70s_8	Ag g/t	945	2,006	35	47	1.36	2,214	0.001	630
	Cu %	945	2,006	0.39	0.67	1.71	0.45	0.001	7.3
	Pb %	945	2,006	0.03	0.06	2.17	0.0038	0.001	1
	Zn %	945	2,006	2.15	3.48	1.62	12.11	0.001	44.3
SB_70s_9	Ag g/t	255	512	34	57	1.70	3,296	0.001	765
	Cu %	255	512	0.23	0.65	2.89	0.43	0.001	7.1
	Pb %	255	512	0.07	0.27	4.18	0.0749	0.001	6.7
	Zn %	255	512	4.22	5.74	1.36	32.97	0.001	28.6
SB_70s_10	Ag g/t	262	507	34	33	0.98	1,096	0.001	258
	Cu %	262	507	0.40	0.59	1.46	0.35	0.001	4.7
	Pb %	262	507	0.03	0.07	2.13	0.0050	0.001	0.7
	Zn %	262	507	1.43	1.88	1.32	3.54	0.001	13
SB_70s_11	Ag g/t	40	121	15	43	2.83	1,877	0.001	260
	Cu %	40	121	0.11	0.37	3.43	0.14	0.001	3.14
	Pb %	40	121	0.03	0.14	5.24	0.0187	0.001	1
	Zn %	40	121	0.50	2.53	5.03	6.39	0.001	19.2
SB_70s_12	Ag g/t	116	216	58	79	1.37	6,173	0.001	650
	Cu %	116	216	0.37	0.55	1.50	0.31	0.001	3.1
	Pb %	116	216	0.07	0.15	2.20	0.0214	0.001	1
	Zn %	116	216	1.10	2.83	2.56	7.99	0.001	20.1

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
SF_70s_13	Ag g/t	93	183	74	74	1.00	5,513	0.001	340
	Cu %	93	183	0.79	0.90	1.14	0.82	0.001	3.58
	Pb %	93	183	0.08	0.27	3.44	0.0724	0.001	2.26
	Zn %	93	183	0.27	0.97	3.60	0.95	0.001	8.76
SF_70s_14	Ag g/t	78	180	44	95	2.17	9,036	0.001	842
	Cu %	78	180	0.41	0.81	1.98	0.66	0.001	5.21
	Pb %	78	180	0.05	0.11	2.49	0.0129	0.001	0.7
	Zn %	78	180	2.56	4.76	1.86	22.67	0.001	33.2
<b>San Fernando</b>									
SF_1	Ag g/t	329	508	35	50	1.41	2,499	0.001	790
	Cu %	329	508	0.40	1.23	3.06	1.50	0.001	18.8
	Pb %	329	508	0.08	0.35	4.32	0.1223	0.001	3.58
	Zn %	329	508	1.96	3.42	1.75	11.67	0.001	29.1
SF_2	Ag g/t	367	654	34	64	1.90	4,140	0.001	570
	Cu %	367	654	0.18	0.48	2.62	0.23	0.001	6
	Pb %	367	654	0.11	0.33	2.92	0.1089	0.001	3.4
	Zn %	367	654	3.02	4.91	1.62	24.07	0.001	33
SF_3	Ag g/t	272	429	41	52	1.29	2,742	0.001	380
	Cu %	272	429	0.31	0.60	1.92	0.36	0.001	7.8
	Pb %	272	429	0.05	0.14	2.68	0.0183	0.001	1.3
	Zn %	272	429	3.21	3.80	1.18	14.44	0.001	21.2
SF_4	Ag g/t	26	57	31	62	1.98	3,882	0.001	400
	Cu %	26	57	0.20	0.36	1.82	0.13	0.001	1.75
	Pb %	26	57	0.02	0.04	1.49	0.0014	0.001	0.2
	Zn %	26	57	2.35	3.12	1.32	9.71	0.001	13.7
SF_5	Ag g/t	190	285	44	66	1.52	4,392	0.001	800
	Cu %	190	285	0.30	0.85	2.84	0.72	0.001	11.9
	Pb %	190	285	0.25	0.96	3.78	0.9132	0.001	8
	Zn %	190	285	3.05	3.95	1.30	15.64	0.001	22
SF_6	Ag g/t	356	680	31	56	1.82	3,143	0.001	580
	Cu %	356	680	0.28	0.71	2.56	0.50	0.001	6.5
	Pb %	356	680	0.03	0.09	2.87	0.0075	0.001	1.75
	Zn %	356	680	1.41	3.15	2.24	9.91	0.001	21.1
SF_7	Ag g/t	211	309	36	54	1.48	2,896	0.001	450
	Cu %	211	309	0.20	0.39	1.94	0.16	0.001	7.3
	Pb %	211	309	0.06	0.18	2.80	0.0325	0.001	1.67
	Zn %	211	309	4.43	4.94	1.12	24.44	0.001	27.6
SF_8	Ag g/t	289	537	27	44	1.61	1,962	0.001	540
	Cu %	289	537	0.15	0.47	3.05	0.22	0.001	5
	Pb %	289	537	0.07	0.17	2.44	0.0291	0.001	2.18
	Zn %	289	537	1.45	3.75	2.59	14.06	0.001	37
SF_9	Ag g/t	554	870	33	63	1.92	3,982	0.001	770
	Cu %	554	870	0.30	0.96	3.20	0.93	0.001	9.9
	Pb %	554	870	0.04	0.09	2.24	0.0074	0.001	1
	Zn %	554	870	3.09	5.45	1.76	29.72	0.001	40.6
SF_10	Ag g/t	271	412	30	62	2.04	3,870	0.001	870
	Cu %	271	412	0.31	1.04	3.41	1.09	0.001	17.1
	Pb %	271	412	0.04	0.11	2.49	0.0114	0.001	1
	Zn %	271	412	1.27	2.56	2.01	6.55	0.001	15.7
SF_11	Ag g/t	68	64	50	71	1.41	5,035	0.001	456
	Cu %	68	64	0.37	0.69	1.86	0.48	0.001	3.65
	Pb %	68	64	0.06	0.17	3.00	0.0287	0.001	1
	Zn %	68	64	1.03	2.72	2.65	7.39	0.001	21.5

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
SF_12	Ag g/t	44	73	63	92	1.47	8,508	0.001	465
	Cu %	44	73	0.32	0.48	1.50	0.23	0.001	2.11
	Pb %	44	73	0.17	0.27	1.54	0.0726	0.001	1
	Zn %	44	73	1.83	2.77	1.52	7.70	0.001	10.1
SF_13	Ag g/t	47	28	44	94	2.15	8,846	0.001	542
	Cu %	47	28	0.27	0.58	2.12	0.34	0.001	3.18
	Pb %	47	28	0.05	0.07	1.39	0.0051	0.001	0.3
	Zn %	47	28	1.56	3.39	2.18	11.52	0.001	16.09
SF_14	Ag g/t	34	47	17	15	0.87	221	1	67
	Cu %	34	47	0.05	0.04	0.95	0.00	0.001	0.19
	Pb %	34	47	0.38	0.58	1.52	0.3395	0.01	2.46
	Zn %	34	47	2.54	1.81	0.71	3.29	0.02	7.16
SF_15	Ag g/t	86	146	24	37	1.53	1,396	0.001	217
	Cu %	86	146	0.15	0.37	2.40	0.14	0.001	2.5
	Pb %	86	146	0.07	0.19	2.68	0.0347	0.001	1.12
	Zn %	86	146	3.86	7.30	1.89	53.31	0.001	30.9
SF_16	Ag g/t	51	95	30	88	2.95	7,686	0.001	900
	Cu %	51	95	0.18	0.34	1.94	0.12	0.001	1.58
	Pb %	51	95	0.01	0.03	1.78	0.0007	0.001	0.15
	Zn %	51	95	0.45	2.44	5.47	5.96	0.001	15.9
<b>Santa Rita</b>									
SRI_2	Ag g/t	78	83	33	63	1.91	3,909	0.001	543
	Cu %	78	83	0.07	0.12	1.85	0.02	0.001	0.97
	Pb %	78	83	0.30	0.67	2.26	0.4460	0.001	5.43
	Zn %	78	83	1.12	1.61	1.44	2.60	0.001	8.34
SRI_3	Ag g/t	173	301	28	75	2.73	5,681	0.001	1100
	Cu %	173	301	0.11	0.24	2.21	0.06	0.001	1.7
	Pb %	173	301	0.07	0.37	5.46	0.1393	0.001	7
	Zn %	173	301	1.19	2.53	2.13	6.40	0.001	19.01
SRI_4	Ag g/t	141	221	19	31	1.61	936	0.001	207
	Cu %	141	221	0.10	0.26	2.52	0.07	0.001	3.87
	Pb %	141	221	0.12	0.31	2.52	0.0955	0.001	2.7
	Zn %	141	221	1.41	3.20	2.26	10.21	0.001	23.37
SRI_5	Ag g/t	218	287	35	118	3.34	13,852	0.001	830
	Cu %	218	287	0.16	0.55	3.37	0.30	0.001	5.89
	Pb %	218	287	0.57	2.35	4.13	5.5193	0.001	25.1
	Zn %	218	287	2.11	4.52	2.14	20.40	0.001	29.6
SRI_6	Ag g/t	31	46	33	51	1.54	2,638	0.001	264
	Cu %	31	46	0.16	0.16	1.05	0.03	0.001	0.68
	Pb %	31	46	0.19	0.36	1.87	0.1309	0.001	1.15
	Zn %	31	46	2.95	3.55	1.21	12.62	0.001	16.09
SRI_7	Ag g/t	68	143	41	146	3.57	21,456	0.001	1177
	Cu %	68	143	0.03	0.10	3.32	0.01	0.001	1.85
	Pb %	68	143	0.43	1.43	3.32	2.0570	0.001	8.9
	Zn %	68	143	0.81	2.90	3.57	8.38	0.001	15.1
SRI_Au	Ag g/t	76	86	11	40	3.50	1,581	0.001	323
	Cu %	76	86	0.04	0.13	3.49	0.02	0.001	1.23
	Pb %	76	86	0.02	0.06	3.55	0.0031	0.001	0.44
	Zn %	76	86	0.10	0.36	3.60	0.13	0.001	2.55
SRI_1	Ag g/t	98	108	36	63	1.75	3,935	0.001	346
	Cu %	98	108	0.31	0.73	2.35	0.54	0.001	5.15
	Pb %	98	108	0.06	0.20	3.59	0.0404	0.001	2.64
	Zn %	98	108	0.74	1.36	1.84	1.86	0.001	11.19

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
<b>SR San Sebastian</b>									
SR-A	Ag g/t	89	123	29	29	1.02	866	0.001	156
	Cu %	89	123	0.32	0.43	1.34	0.18	0.001	2
	Pb %	89	123	0.04	0.16	3.64	0.0256	0.001	1.43
	Zn %	89	123	0.86	1.48	1.72	2.19	0.001	7.08
SR-B	Ag g/t	46	58	30	73	2.39	5,283	0.001	331
	Cu %	46	58	0.12	0.22	1.92	0.05	0.001	1.2
	Pb %	46	58	0.36	1.50	4.21	2.2592	0.001	7.12
	Zn %	46	58	2.44	6.24	2.56	38.97	0.001	27.21
SR-C	Ag g/t	33	51	130	226	1.73	50,885	0.001	1040
	Cu %	33	51	0.83	1.49	1.79	2.22	0.001	5.11
	Pb %	33	51	0.11	0.30	2.68	0.0879	0.001	1.69
	Zn %	33	51	0.59	1.41	2.38	1.98	0.001	15.3
SR-Y	Ag g/t	54	88	26	45	1.75	2,058	0.001	192
	Cu %	54	88	0.51	0.76	1.49	0.58	0.001	3.88
	Pb %	54	88	0.01	0.03	2.35	0.0010	0.001	0.13
	Zn %	54	88	0.03	0.05	1.93	0.00	0.001	0.31
SR-X	Ag g/t	69	113	92	159	1.72	25,176	0.001	784
	Cu %	69	113	0.38	1.13	2.96	1.27	0.001	12.3
	Pb %	69	113	0.03	0.05	1.64	0.0026	0.001	0.27
	Zn %	69	113	0.47	1.60	3.40	2.57	0.001	11.44
SR-W	Ag g/t	35	71	35	37	1.04	1,339	1	150
	Cu %	35	71	0.81	0.85	1.05	0.73	0.01	3.61
	Pb %	35	71	0.01	0.01	1.29	0.0001	0.001	0.03
	Zn %	35	71	0.02	0.03	1.29	0.00	0.001	0.1
SR-V	Ag g/t	67	92	24	24	1.01	587	0.001	116
	Cu %	67	92	0.75	0.89	1.18	0.79	0.001	4.74
	Pb %	67	92	0.00	0.01	2.49	0.0000	0.001	0.05
	Zn %	67	92	0.02	0.09	3.74	0.01	0.001	1
SR-U	Ag g/t	107	154	40	59	1.49	3,450	0.001	308
	Cu %	107	154	0.41	0.90	2.19	0.81	0.001	8.64
	Pb %	107	154	0.03	0.04	1.38	0.0018	0.001	0.3
	Zn %	107	154	1.49	2.12	1.43	4.51	0.001	12.06
SR-T	Ag g/t	188	280	115	459	3.98	210,731	0.001	3683
	Cu %	188	280	0.33	0.54	1.64	0.30	0.001	3.1
	Pb %	188	280	0.09	0.35	3.97	0.1239	0.001	2.92
	Zn %	188	280	2.40	4.09	1.70	16.70	0.001	28.5
SR-L	Ag g/t	50	64	38	63	1.66	3,934	0.001	380
	Cu %	50	64	0.67	1.00	1.50	1.01	0.001	6.45
	Pb %	50	64	0.01	0.01	1.24	0.0001	0.001	0.04
	Zn %	50	64	0.15	0.42	2.77	0.17	0.001	2.65
SR-D	Ag g/t	152	189	25	69	2.76	4,708	0.001	574
	Cu %	152	189	0.13	0.34	2.60	0.12	0.001	1.8
	Pb %	152	189	0.29	1.30	4.52	1.6963	0.001	16.2
	Zn %	152	189	1.86	4.81	2.59	23.16	0.001	25
SR-E	Ag g/t	135	220	97	256	2.64	65,316	0.001	1802
	Cu %	135	220	0.35	0.83	2.34	0.69	0.001	12.3
	Pb %	135	220	0.04	0.09	2.14	0.0084	0.001	0.95
	Zn %	135	220	0.53	1.49	2.82	2.22	0.001	11.44
SR-F	Ag g/t	89	104	84	113	1.34	12,758	0.001	575
	Cu %	89	104	0.09	0.21	2.23	0.04	0.001	1.06
	Pb %	89	104	0.96	2.15	2.23	4.6287	0.001	11.12
	Zn %	89	104	1.82	3.57	1.96	12.77	0.001	21.13

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
SR-G	Ag g/t	404	661	71	142	1.99	20,178	0.001	1124
	Cu %	404	661	0.47	1.11	2.33	1.22	0.001	22
	Pb %	404	661	0.12	0.40	3.28	0.1564	0.001	3.57
	Zn %	404	661	2.95	4.82	1.63	23.26	0.001	35.3
SR-H	Ag g/t	25	46	18	34	1.89	1,147	0.001	155
	Cu %	25	46	0.22	0.32	1.48	0.11	0.001	1.27
	Pb %	25	46	0.02	0.05	2.14	0.0023	0.001	0.23
	Zn %	25	46	0.25	1.21	4.90	1.46	0.001	16.1
SR-I	Ag g/t	77	160	46	158	3.45	24,854	0.001	1230
	Cu %	77	160	0.21	1.02	4.90	1.05	0.001	8.4
	Pb %	77	160	0.05	0.13	2.72	0.0173	0.001	0.78
	Zn %	77	160	0.31	1.22	3.94	1.50	0.001	9.95
SR-J	Ag g/t	144	251	50	117	2.34	13,643	0.001	812
	Cu %	144	251	0.20	1.03	5.06	1.06	0.001	14.55
	Pb %	144	251	0.09	0.41	4.56	0.1671	0.001	4.03
	Zn %	144	251	0.51	1.28	2.49	1.64	0.001	8.7
SR-K	Ag g/t	81	100	51	88	1.71	7,658	0.001	694
	Cu %	81	100	0.30	0.89	3.00	0.79	0.001	6
	Pb %	81	100	0.11	0.78	7.02	0.6076	0.001	11.06
	Zn %	81	100	0.72	2.35	3.26	5.51	0.001	28.37
SR-N	Ag g/t	107	220	74	162	2.20	26,396	0.001	1131
	Cu %	107	220	0.15	0.37	2.40	0.14	0.001	3.38
	Pb %	107	220	0.10	0.26	2.48	0.0657	0.001	1.75
	Zn %	107	220	0.95	3.09	3.24	9.55	0.001	21.2
SR-O	Ag g/t	132	263	28	55	1.99	3,046	0.001	370
	Cu %	132	263	0.26	0.67	2.56	0.45	0.001	6.73
	Pb %	132	263	0.04	0.11	2.74	0.0132	0.001	0.92
	Zn %	132	263	1.39	2.50	1.80	6.27	0.001	18.33
SR-Q	Ag g/t	123	166	144	329	2.29	108,345	0.001	2226
	Cu %	123	166	0.10	0.23	2.19	0.05	0.001	1.5
	Pb %	123	166	0.53	1.16	2.19	1.3554	0.001	9.03
	Zn %	123	166	1.24	3.31	2.68	10.99	0.001	22.9
SR-Z	Ag g/t	268	338	105	259	2.46	66,962	0.001	4929
	Cu %	268	338	0.08	0.26	3.18	0.07	0.001	3.8
	Pb %	268	338	0.26	0.84	3.25	0.7021	0.001	25.23
	Zn %	268	338	0.68	2.36	3.47	5.58	0.001	23.7
SR-R	Ag g/t	658	1,148	90	129	1.44	16,740	0.001	966
	Cu %	658	1,148	0.98	1.45	1.49	2.10	0.001	15.16
	Pb %	658	1,148	0.07	0.14	1.93	0.0194	0.001	1.23
	Zn %	658	1,148	0.50	1.30	2.58	1.69	0.001	14.95
SR-M	Ag g/t	767	1,408	59	155	2.62	23,904	0.001	2925
	Cu %	767	1,408	0.48	0.74	1.55	0.55	0.001	7.92
	Pb %	767	1,408	0.11	0.42	3.66	0.1751	0.001	7.67
	Zn %	767	1,408	1.52	2.41	1.59	5.83	0.001	18.7
SR-S	Ag g/t	183	220	88	202	2.29	40,695	0.001	1804
	Cu %	183	220	0.12	0.28	2.42	0.08	0.001	3.59
	Pb %	183	220	0.16	0.54	3.39	0.2879	0.001	6.44
	Zn %	183	220	1.13	3.26	2.88	10.62	0.001	18.84
SR-P	Ag g/t	330	637	169	256	1.52	65,619	0.001	1865
	Cu %	330	637	0.35	0.68	1.93	0.46	0.001	6
	Pb %	330	637	0.20	0.38	1.91	0.1441	0.001	3.59
	Zn %	330	637	1.16	1.77	1.53	3.13	0.001	8.9

Domain	Variable	Count	Length (m)	Mean	SD	CoV	Variance	Min.	Max
<b>SR Veta Nueva</b>									
SRVN-1	Ag g/t	42	60	205	323	1.57	104,500	0.001	1492
	Cu %	42	60	0.17	0.19	1.09	0.03	0.001	0.8
	Pb %	42	60	1.29	1.55	1.20	2.4126	0.001	5.37
	Zn %	42	60	4.44	6.37	1.44	40.63	0.001	36.48
SRVN-A	Ag g/t	168	279	19	59	3.10	3,511	0.001	930
	Cu %	168	279	0.09	0.22	2.47	0.05	0.001	1.21
	Pb %	168	279	0.11	0.44	3.81	0.1896	0.001	4.18
	Zn %	168	279	0.41	1.26	3.12	1.60	0.001	12.79
SRVN-B	Ag g/t	109	188	18	45	2.52	2,012	0.001	374
	Cu %	109	188	0.08	0.21	2.60	0.04	0.001	1.99
	Pb %	109	188	0.09	0.43	4.79	0.1876	0.001	5.98
	Zn %	109	188	0.73	3.60	4.93	12.97	0.001	59.9
SRVN-C	Ag g/t	47	94	27	76	2.79	5,736	0.001	337
	Cu %	47	94	0.13	0.27	2.15	0.08	0.001	2.63
	Pb %	47	94	0.09	0.35	4.02	0.1248	0.001	2.12
	Zn %	47	94	0.24	0.99	4.06	0.99	0.001	7.25
SRVN-D	Ag g/t	56	133	10	26	2.57	664	0.001	233
	Cu %	56	133	0.11	0.28	2.63	0.08	0.001	2.37
	Pb %	56	133	0.04	0.13	3.25	0.0161	0.001	0.75
	Zn %	56	133	0.30	0.93	3.06	0.86	0.001	7.69
SRVN-E	Ag g/t	229	462	21	78	3.65	6,116	0.001	1194
	Cu %	229	462	0.14	0.64	4.77	0.42	0.001	14.17
	Pb %	229	462	0.05	0.16	3.46	0.0254	0.001	1.6
	Zn %	229	462	0.25	0.93	3.78	0.87	0.001	9.77
SRVN-F	Ag g/t	67	86	35	62	1.78	3,814	0.001	269
	Cu %	67	86	0.13	0.30	2.28	0.09	0.001	1.97
	Pb %	67	86	0.07	0.16	2.18	0.0243	0.001	1.2
	Zn %	67	86	0.82	2.85	3.49	8.12	0.001	21.32
SRVN-G	Ag g/t	206	403	41	143	3.51	20,537	0.001	1604
	Cu %	206	403	0.08	0.17	2.06	0.03	0.001	1.9
	Pb %	206	403	0.07	0.22	3.14	0.0481	0.001	2.6
	Zn %	206	403	0.77	3.24	4.18	10.51	0.001	33.82
<b>Veta Leones</b>									
Veta Leones	Ag g/t	200	282	46	74	1.62	5,437	0.001	493
	Cu %	200	282	0.45	0.89	1.99	0.79	0.001	5.33
	Pb %	200	282	0.04	0.18	4.69	0.0333	0.001	2.47
	Zn %	200	282	0.23	0.95	4.10	0.91	0.001	8.32
<b>Veta San Bartolo</b>									
Veta San Bartolo	Ag g/t	192	246	128	165	1.29	27,367	0.001	978
	Cu %	192	246	1.02	1.62	1.58	2.62	0.001	8.49
	Pb %	192	246	0.10	0.15	1.46	0.0215	0.001	1.18
	Zn %	192	246	0.89	1.95	2.20	3.80	0.001	14.70
<b>Veta Santa Rosa</b>									
Santa Rosa I	Ag g/t	472	812	100	286	2.87	81,908	0.001	2,725
	Cu %	472	812	0.13	0.29	2.23	0.09	0.001	3.35
	Pb %	472	812	0.56	1.39	2.50	1.9221	0.001	11.76
	Zn %	472	812	1.42	3.27	2.30	10.69	0.001	36.48
Veta II	Ag g/t	103	175	41	81	1.97	6,561	0.001	564
	Cu %	103	175	0.16	0.36	2.24	0.13	0.001	2.68
	Pb %	103	175	0.35	1.11	3.19	1.2404	0.001	8.74
	Zn %	103	175	0.96	1.88	1.96	3.54	0.001	9.78

Source: SRK, 2024  
 CoV: Coefficient of variability  
 g/t: grams per tonnes  
 SD: Standard deviation  
 Min: Minimum / Max: Maximum

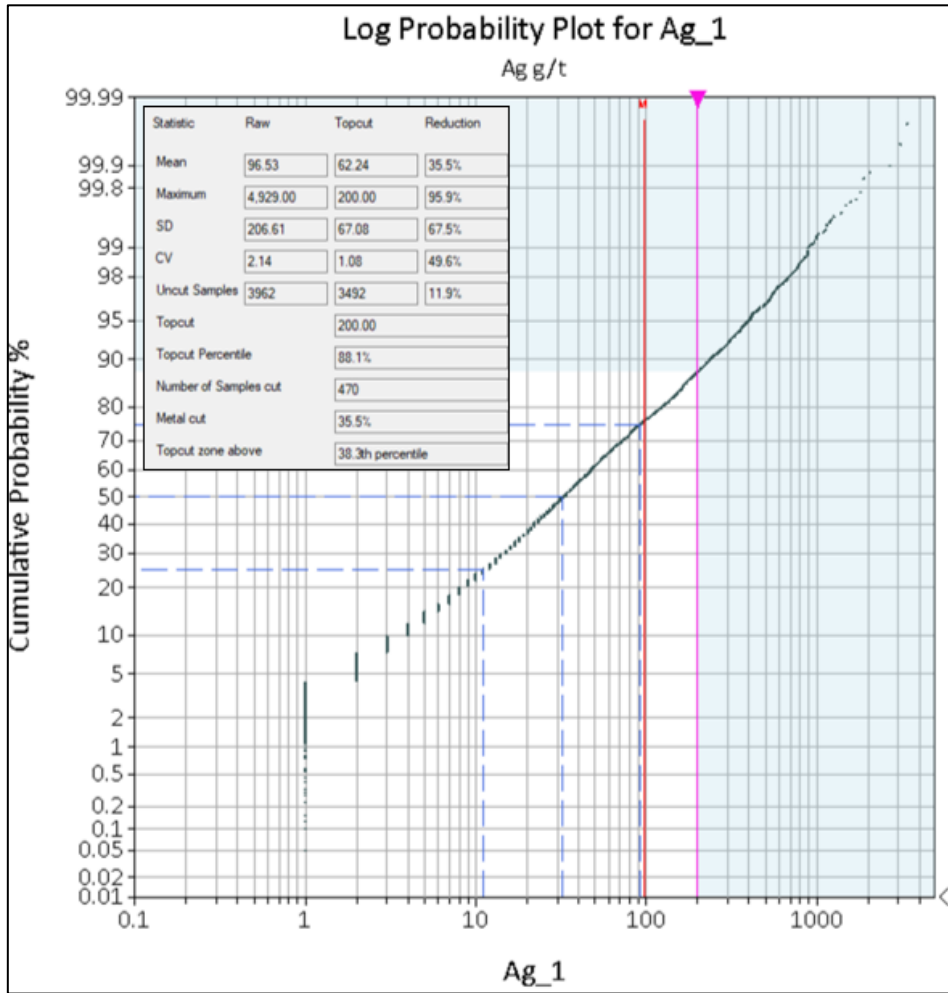
## 11.4 Estimation Methodology

The individual mineralized structures/Domains of the geological models prepared by IMMSA and reviewed by SRK were used as hard boundaries for the MRE process. The methodology of estimation included the following procedures:

- Database review
- Definition of Domains
- Capping and Compositing for statistical and geostatistical analysis
- Variography
- Block model construction
- Grades Interpolation (Zn, Ag, Pb, Cu)
- Resource Classification
- Depletion of Block Model
- Assessment of “reasonable prospects for economic extraction” and selection of appropriate reporting cut-off grades (CoG)
- Mineral Resource Statement

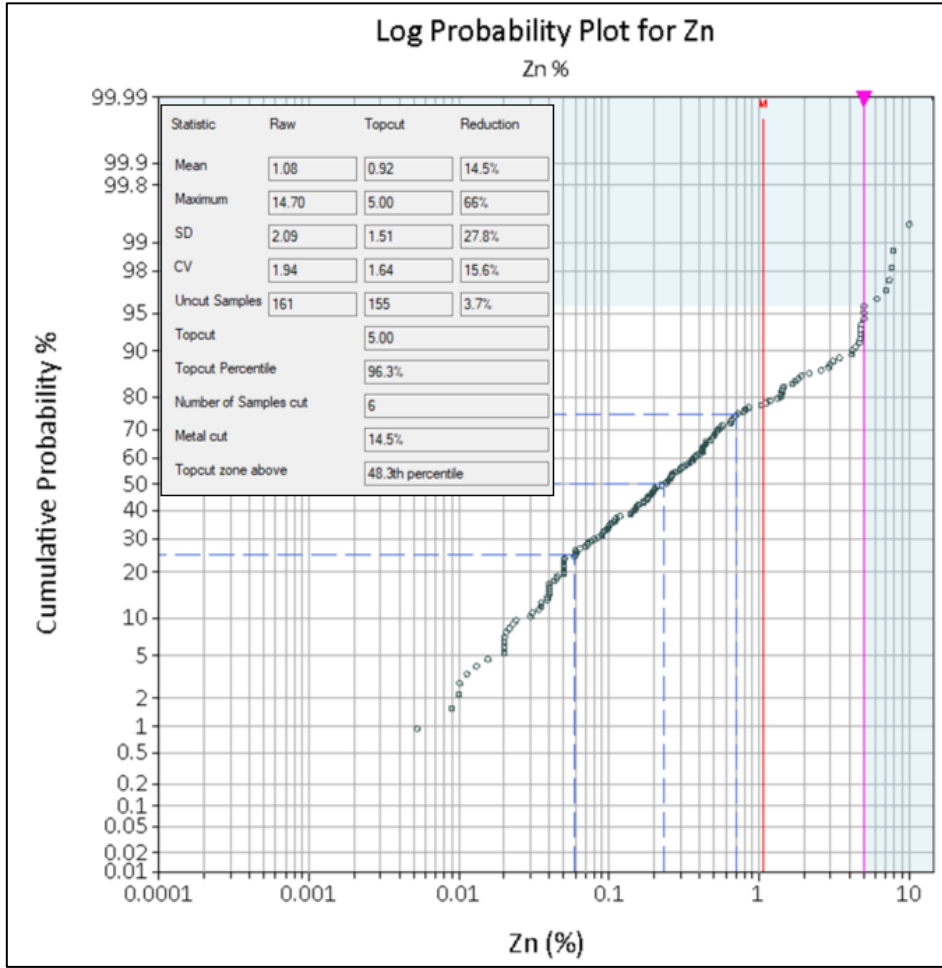
## 11.5 Assay Capping and Compositing

High-grade capping is used when data points are no longer representative of the primary population, making it necessary to manage high-grade outlier values. This technique was applied independently to the raw data for grouped domains by zones. The capping levels considered historical levels used in Charcas for previous estimates, and the performance of the model. To measure the potential impact of selected capping additional analysis was completed using log probability plots, and raw and log histograms to identify grades that significantly impact local and evaluate the impact of the capping. Figure 11-7, Figure 11-8 and Figure 11-9 show the log probability plots examples of Ag, Zn and Cu, and the selected capping levels in the grouped domains in San Sebastian area, Veta San Bartoo and Veta Santa Rosa, along with the comparative statistics of the raw and capped samples. The QP selected capping levels that are conservative for many cases, but are in line with historical resource estimations in Charcas.



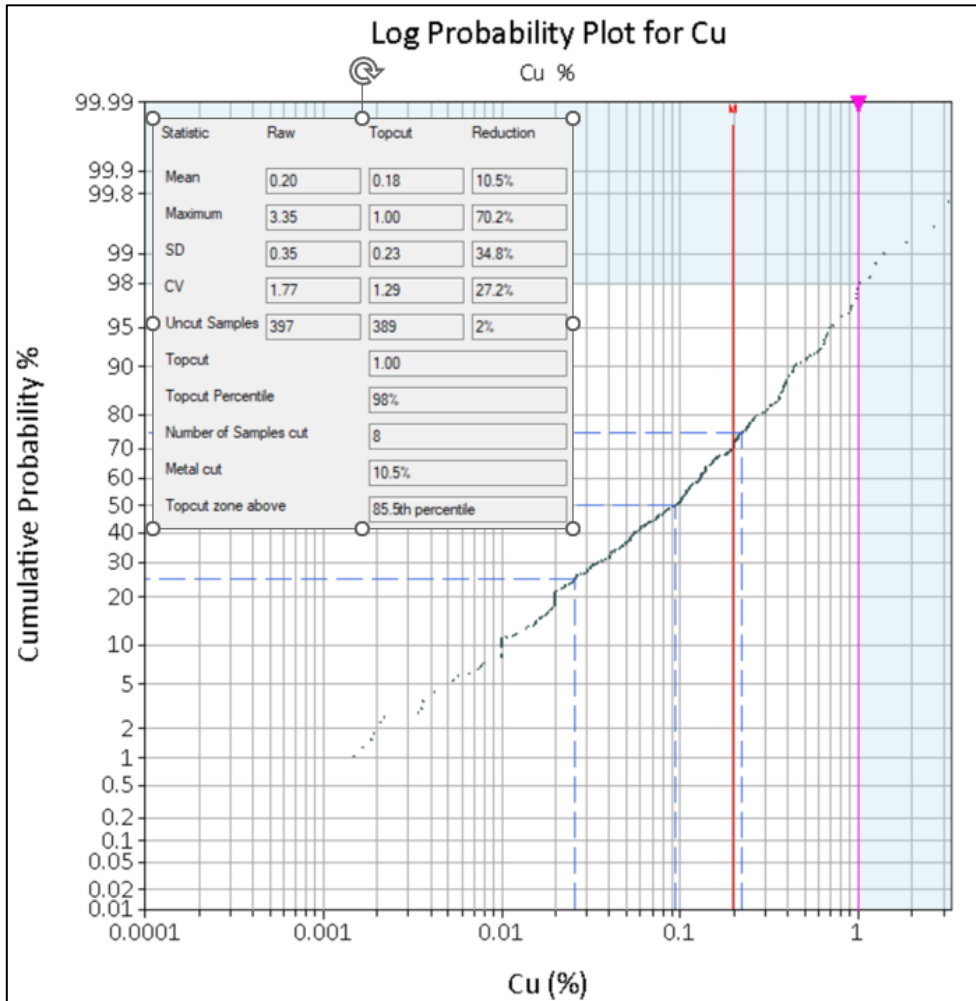
Source: IMMSA, 2024

**Figure 11-7 Capping of Ag in San Sebastian Zone**



Source: IMMSA, 2024

**Figure 11-8 Capping of Zn in San Bartolo Vein**



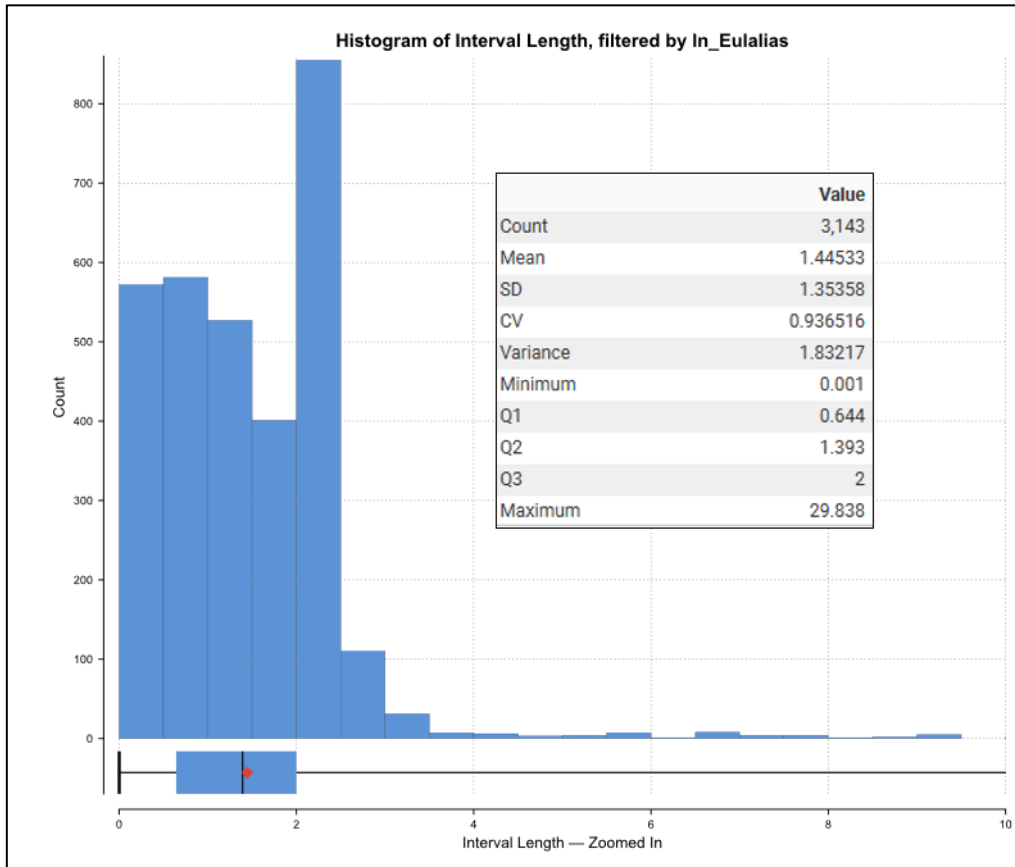
Source: IMMSA, 2024

**Figure 11-9 Capping of Cu in Santa Rosa Vein**

## 11.6 Compositing

Composites were generated to manage data length variability and obtain samples of similar support for spatial analysis and estimation within each domain or group of domains. This ensures that the samples used for analysis are consistent in length, which is crucial for accurate spatial analysis and estimation. In the Las Eulalias zone, a 2.5-meter composite size was selected, as illustrated in Figure 11-10, which presents the length histogram and statistics of the raw samples contained in this zone. The QP has selected to use 2.5 m composites in the other zones of Charcas except in Santa Rita where 2 m composite length was used.

The generation of composites is a critical step in data preparation. It addresses the variability in sample lengths, which can otherwise lead to inaccuracies in the estimation process. By standardizing the sample lengths, composites provide a more reliable basis for spatial analysis and estimation. This approach helps reduce potential biases that may arise from using raw samples of varying lengths.



Source: IMMSA, 2024

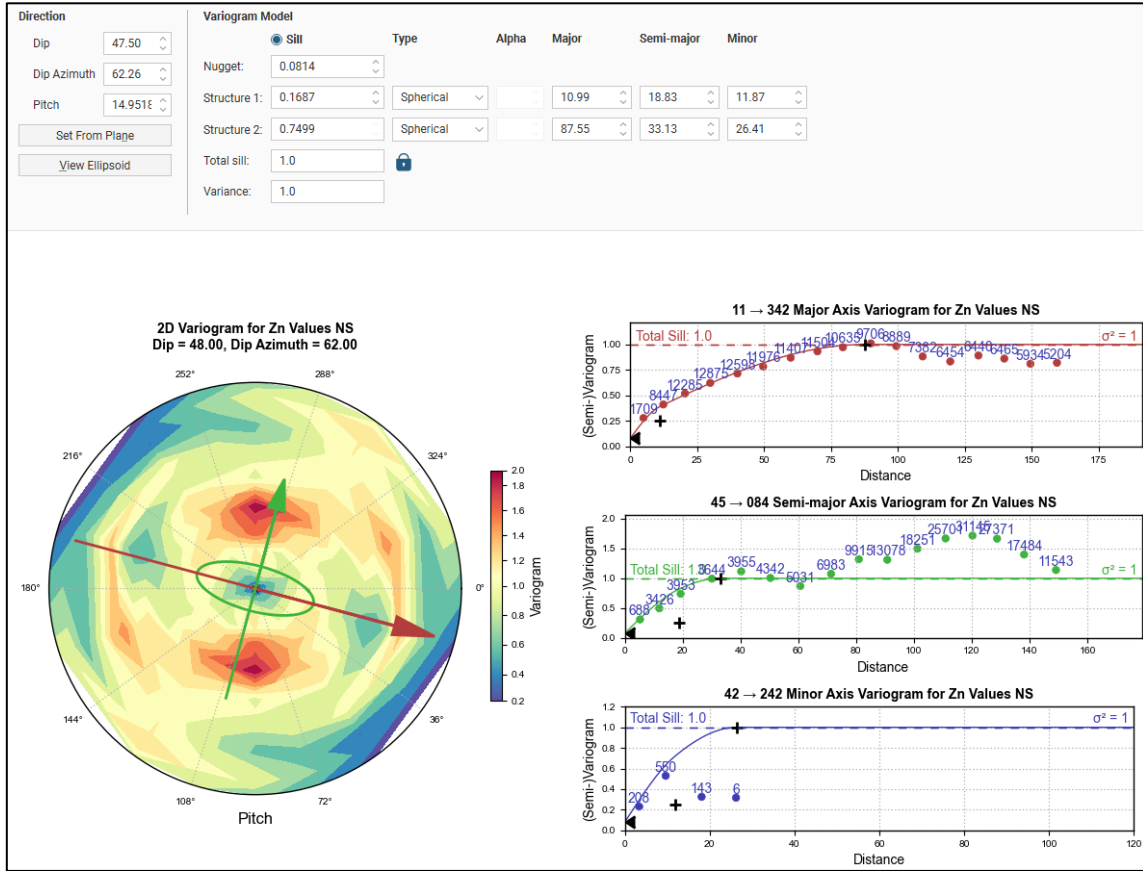
**Figure 11-10: Length Histogram – Las Eulalias**

## 11.7 Variography Analysis

SRK assessed the geostatistical characteristics of the domains using the Leapfrog variogram analysis tool. This evaluation included the review of the variogram map to define the main orientation, followed by the definition of the major, semi-major, and minor axis variograms.

The variogram shown in Figure 11-11 corresponds to zinc in the Rey A domain, In the Rey San Bartolo area, which contains the largest amount of data. The variogram shows ranges of up to 80 meters in the major axis and 30 meters in the intermediate axis with 8% nugget effect.

The orebodies (domains) in Charcas are generally small containing few sample intercepts. Therefore, the Qualified Person (QP) selected the inverse distance weighting interpolation method for the final estimates, as it showed good results in combination with the use of declustered samples. The variography of many structures with elevated coefficient of variations (CVs) were unsatisfactory. Additional variography analysis can be done in each domain or grouped domains to implement ordinary kriging in future resource estimations.



Source: IMMSA.2024

**Figure 11-11** Semi Variograms and Model of Zinc – Rey A Domain (Rey San Bartolo)

### 11.8 Block Model

Individual block models have been constructed for each area, including Rey-San Bartolo, Las Eulalias, Aurora, Reina, Rey-San Bartolo, San Bartolo Sur, San Fernando, Santa Rita, SR-San Sebastian, SR-Veta Nueva, Veta Leones, Veta San Bartolo and Veta Santa Rosa. Leapfrog Edge was used to build them and estimate silver, lead, zinc, and copper within each domain.

Parent block sizes were selected based on the minimum mining unit and sampling grid, targeting sizes that are one-third to one-half of the sampling grid in well-informed zones. SRK employed sub-blocks to add detail and fill the domain solids. Each block was assigned a domain code for estimation purposes. Table 11-4 presents the block model parameters for each area in Charcas.

**Table 11-4: Block Models Origin, Extents, and Block Sizes**

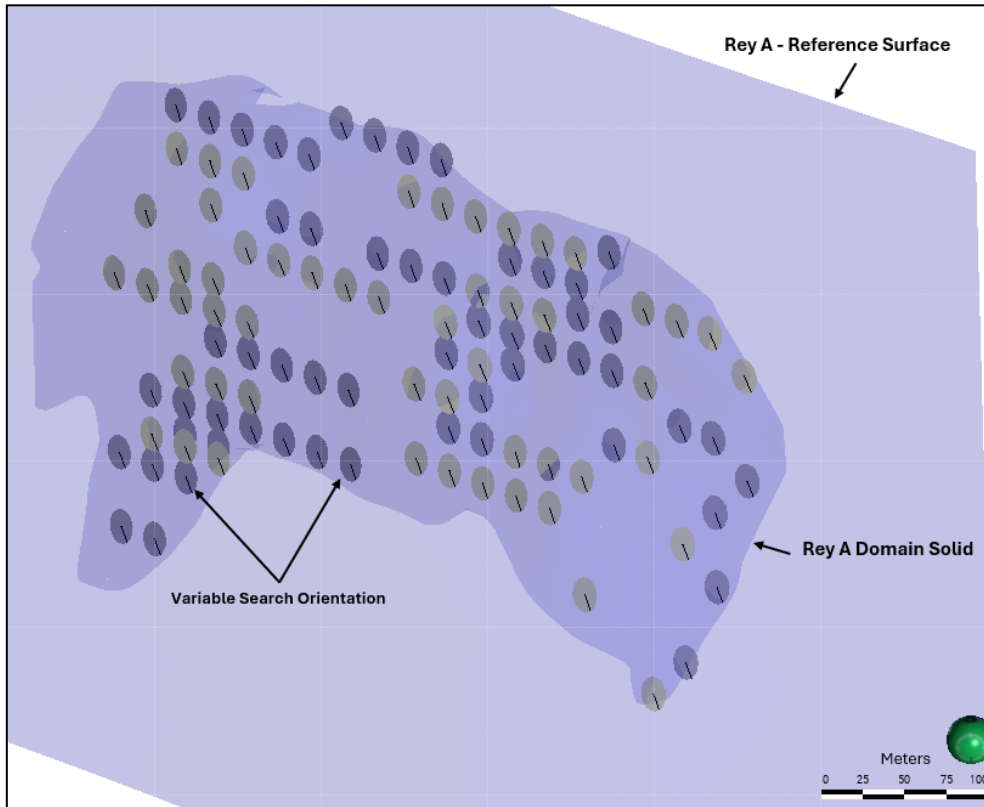
	<b>Easting (X)</b>	<b>Northing (Y)</b>	<b>Elevation (Z)</b>
<b>Aurora</b>			
Base Point (m)	10,950	12,200	2,342
Boundary size (m)	832	720	584
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	0.5	0.5	0.25
Rotation: Azimuth, Dip	NA		
<b>Las Eulalias</b>			
Base Point (m)	10,720	11,290	2,230
Boundary size (m)	688	968	408
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	NA		
<b>Reina</b>			
Base Point (m)	11,780	13,240	2,200
Boundary size (m)	1,024	592	736
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	NA		
<b>Rey</b>			
Base Point (m)	12,457	13,290	1,751
Boundary size (m)	496	624	200
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	61°/47°		
<b>San Bartolo Norte</b>			
Base Point (m)	12,510	13,050	1,624
Boundary size (m)	272	312	112
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	20°/83°		
<b>San Bartolo Sur</b>			
Base Point (m)	12,740	12,920	1,760
Boundary size (m)	368	672	432
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	61°/47°		
<b>San Fernando</b>			
Base Point (m)	13,150	13,170	1,980
Boundary size (m)	688	680	616
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	73°/40°		
<b>Santa Rita</b>			
Base Point (m)	11,560	13,070	2,410
Boundary size (m)	560	448	352
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth/Dip/Pitch	180°/40°/4°		
<b>SR-San Sebastian</b>			
Base Point (m)	11,800	12,010	2,190
Boundary size (m)	760	936	912
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	NA		

	Easting (X)	Northing (Y)	Elevation (Z)
<b>SR-Veta Nueva</b>			
Base Point (m)	11,710	12,960	2,090
Boundary size (m)	496	320	400
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	NA		
<b>Veta Leones</b>			
Base Point (m)	12,860	12,880	1,710
Boundary size (m)	720	328	504
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	NA		
<b>Veta San Bartolo</b>			
Base Point (m)	12,630	12,710	1,870
Boundary size (m)	168	312	560
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.5
Rotation: Azimuth, Dip	NA		
<b>Veta Santa Rosa</b>			
Base Point (m)	11,695	12,905	2,250
Boundary size (m)	680	304	488
Parent Block Dimensions (m)	8	8	8
Sub-Cell Size (m)	1	1	0.25
Rotation: Azimuth/Dip/Pitch	5°/5°/1°		

Source: IMMSA, 2024

## 11.9 Grade Estimation

The estimation of silver, zinc, copper, and lead was conducted using Inverse Distance (ID3) methodology using 3 passes and declustered composites to mitigate the data clustering. To align with the varying orientations of the mineralized structures, the variable orientation of search ellipses was applied across all domains. This alignment was achieved by using the variable orientation search tool of Leapfrog, that utilizes the reference surfaces of each domain as illustrated in Figure 11-12.



Source: SRK, 2024

**Figure 11-12: Variable Orientation for Rey A Domain (Rey San Bartolo area)**

Implementing a variable orientation allows for the re-orientation of the search on local characteristics, thereby enhancing the accuracy of local value estimates. The search ellipsoids parameters are detailed in Table 11-5. Minimum sample requirements ensure that at least three drillholes are used during the first pass of estimation, two drillholes for the second pass, and a single drillhole for the third pass. The 3 search sizes, as well as the minimum, maximum number of samples and maximum number of composites per drillhole per interpolation pass are determined based on the composite size, parent block size, and the composites distribution. The QP defined one search strategy for all domains as shown in Table 11-5.

**Table 11-5: Search Parameters**

Pass	Ellipsoid Ranges			Variable Orientation	Number of Samples		Drillhole Limit
	Maximum (m)	Intermediate (m)	Minimum (m)		Minimum	Maximum	Max Samples per Hole
<b>All Domains</b>							
1st	30	30	15	yes	9	16	4
2nd	60	60	30	yes	5	16	4
3rd	120	120	60	yes	1	16	4

Source: SRK, 2024

## 11.10 Density

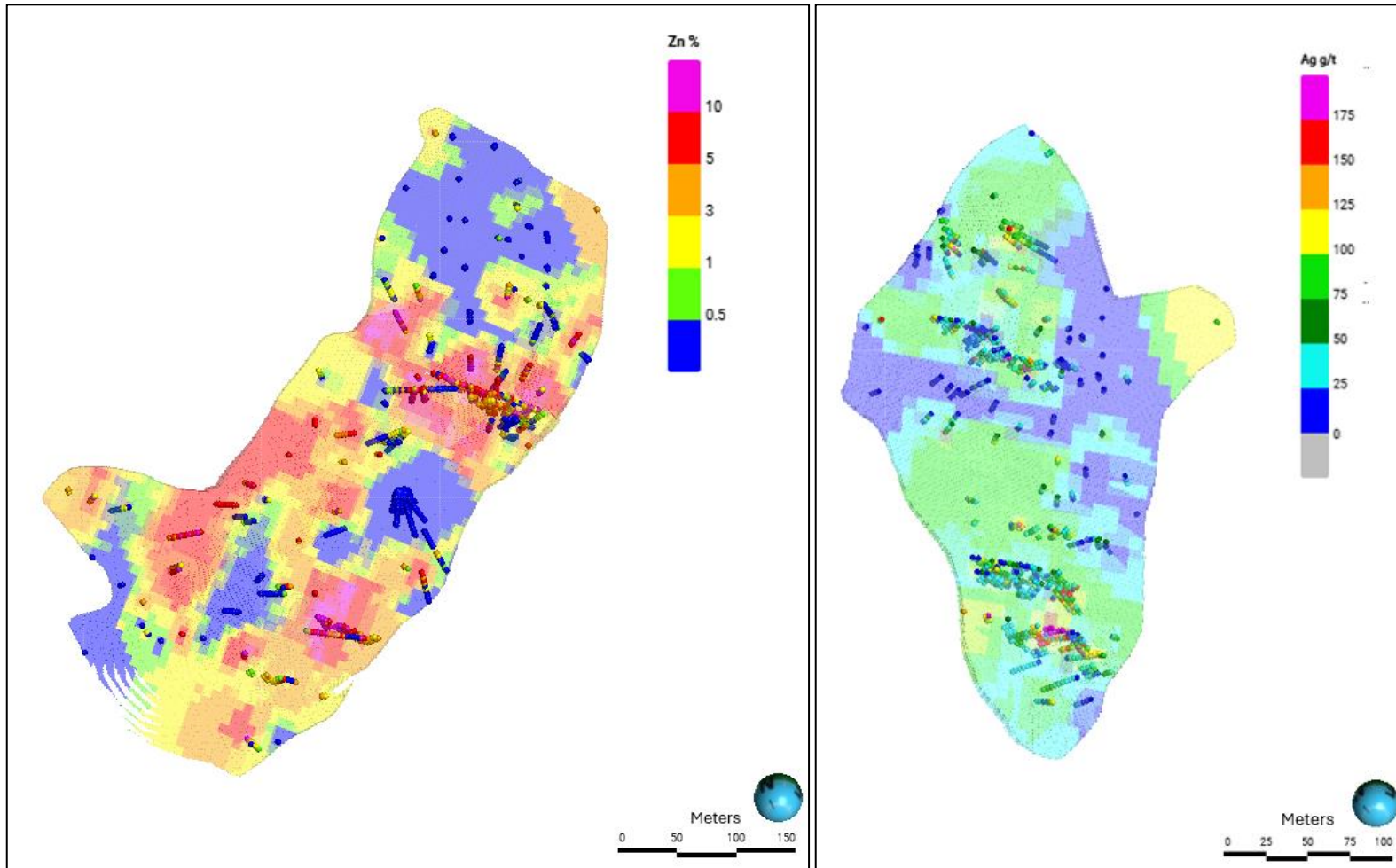
The density used by Charcas is 3.0 t/m<sup>3</sup>. This number was provided by the mine. The plant and the mine have been using this density value for decades as part of the on-going operations, which provides confidence. The determination method was not clear, and documentation related to this was not provided to SRK. It is the QP's opinion that the use of a standard density without underlying technical information is not considered industry best practice. A level of risk exists when using unsupported values in the estimation process, and as the density value is directly applied to the calculated volumes to determine the tonnage, the risk has a direct link to the total tonnage declared in the current mineral resource.

The density being used is consistent with the average density (which has been used by the mine through its operation), which provides a reasonable level of confidence that the value is not materially wrong; however, SRK recommends further testwork be completed to both confirm the current density values and to assess any potential variability. Different rock types and the characteristics of the mineralization have variable densities, which is an aspect to investigate to obtain a more-robust density calculation. Charcas's mine geology and exploration departments have completed specific gravity measurements using the methodology based on the Archimedes principle on core, but the quantity of measurements is limited and collected from some specific areas that are not representative of all the deposit and the different rock types and/or mineralization.

The tonnages used in the final estimate are calculated multiplying the obtained volumes by the density (3.0 t/ m<sup>3</sup>).

## 11.11 Model Validation

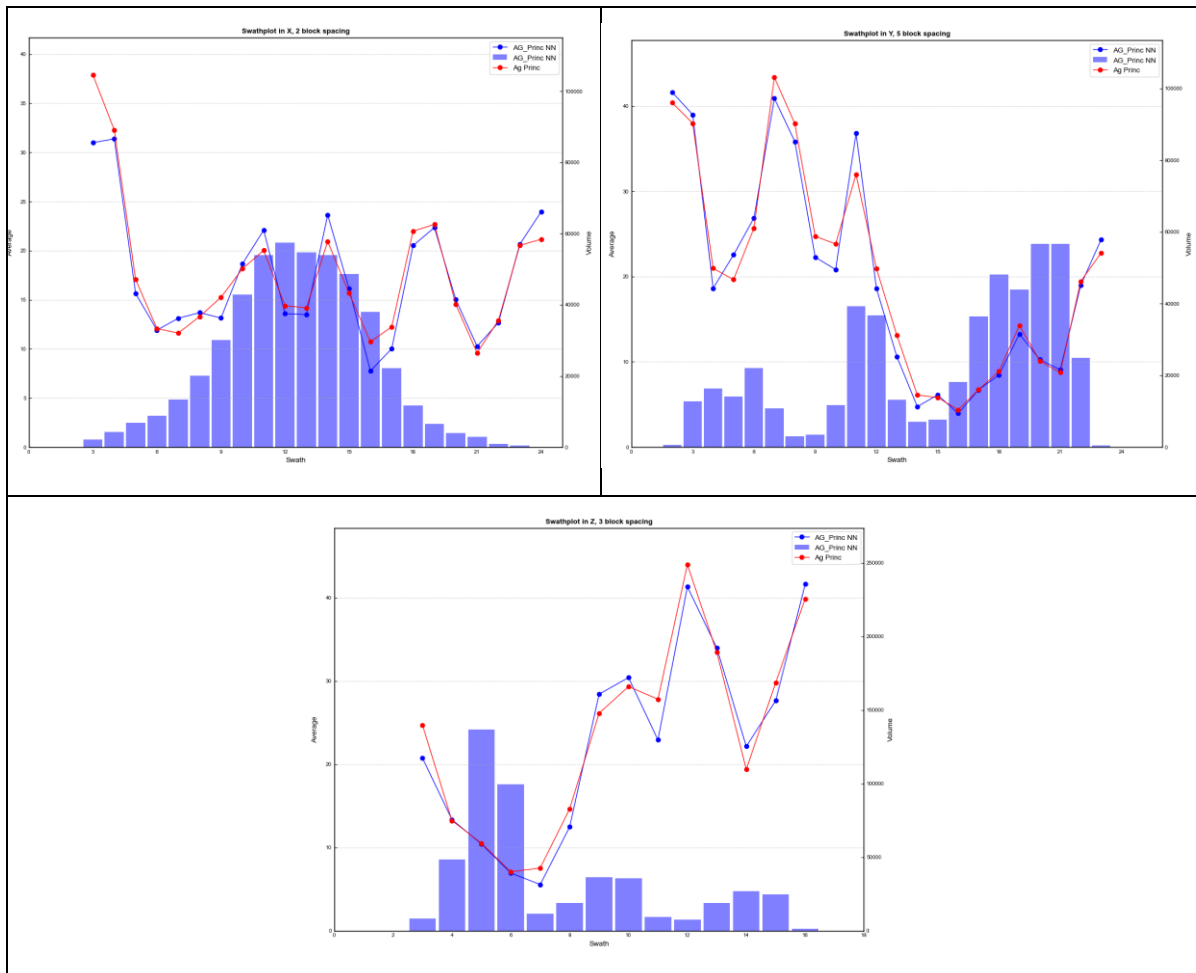
SRK completed the model validation using three methods: Visual validation, comparative statistics, and swath plots. The statistics of the estimated elements were compared using the results of Inverse Distance (ID3), and Nearest Neighbor (NN) algorithms. Figure 11-13 provides two examples that demonstrates the visual validation of estimated blocks against the composites, showing a good correlation between the two, for Zn in Rey A domain, and Ag in San Bartolo Sur 1 (SB\_70s\_1) domain.



Source: SRK, 2024

**Figure 11-13 Examples of visual validation (Blocks vs Data) – Rey A (Left), San Bartolo Sur 1 (Right)**

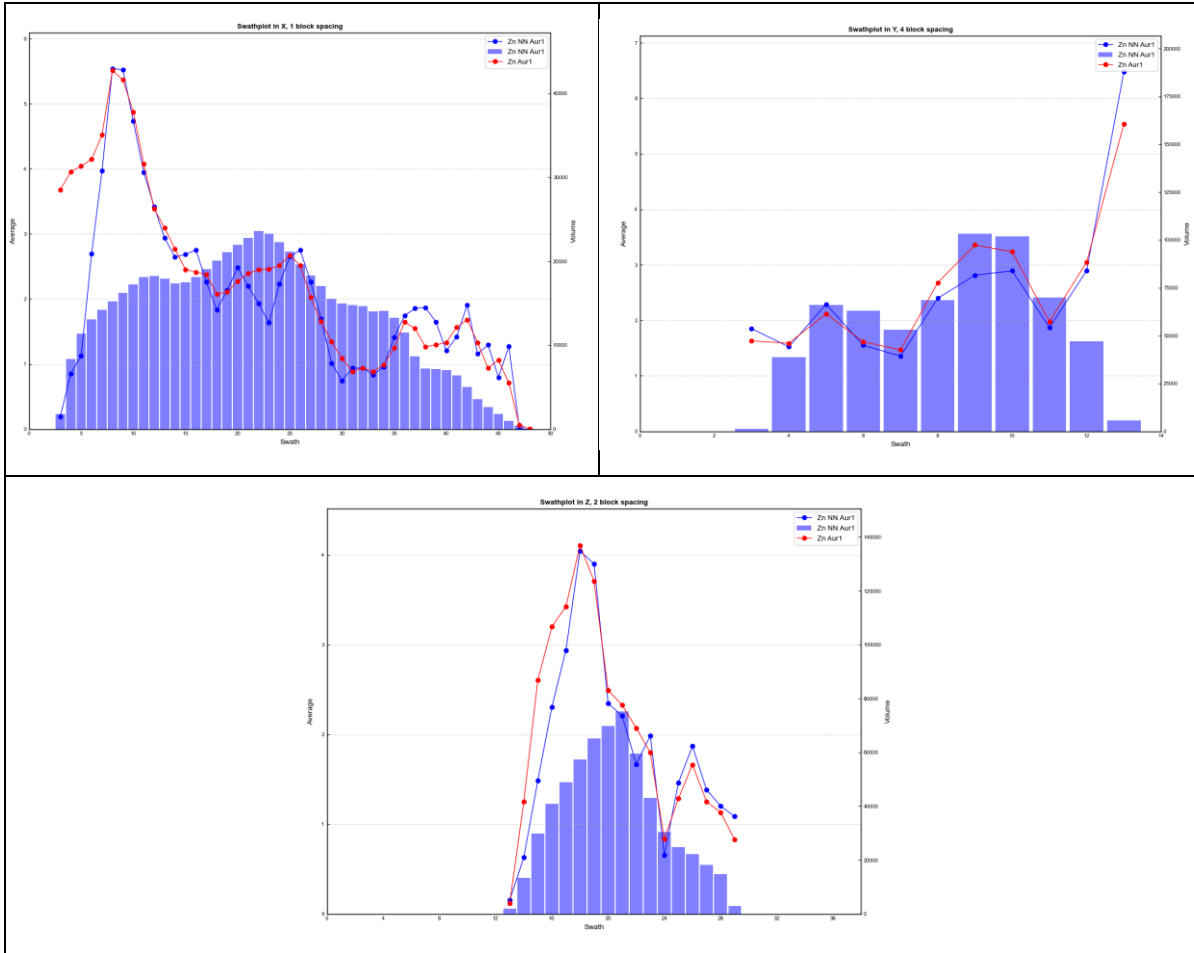
Figure 11-14 and Figure 11-15 show examples of swath plots prepared for the validation of the domains Principal domain in Las Eulalias and Aur-1 domain in Aurora. These plots display the curves of the estimated Ag and Zn grades using Inverse Distance (ID3) in comparison to the Nearest Neighbor (NN) estimates and the comparative statistics for all the variables. The curves exhibit strong correlation, and the mean grades are closely aligned, showing small differences in parts of the curves. The QP considers that the results of the validations completed by SRK are reasonable and the differences part of the domains with poor coverage of data.



Estimated Grade	Volume m <sup>3</sup> x 1000	Mean	SD	CoV	Variance	Min.	Max.
Ag NN g/t	484	16.2	21.6	1.33	466.3	0.001	177.5
Ag ID g/t	484	16.3	15.3	0.94	233.2	0.002	181.9
Cu NN %	484	0.14	0.24	1.67	0.06	0.001	1.43
Cu ID %	484	0.15	0.21	1.39	0.05	0.001	1.22
Pb NN %	484	0.07	0.17	2.64	0.03	0.001	1.50
Pb ID %	484	0.07	0.15	2.21	0.02	0.001	1.48
Zn NN %	484	2.53	2.30	0.91	5.31	0.001	10.00
Zn ID %	484	2.50	1.74	0.70	3.04	0.001	9.34

Source: SRK, 2024

**Figure 11-14 Ag Swath plots (X, Y and Z coordinate axes) and comparative statistics (Ag, Cu, Pb, Zn) – Principal domain in Las Eulaiias**



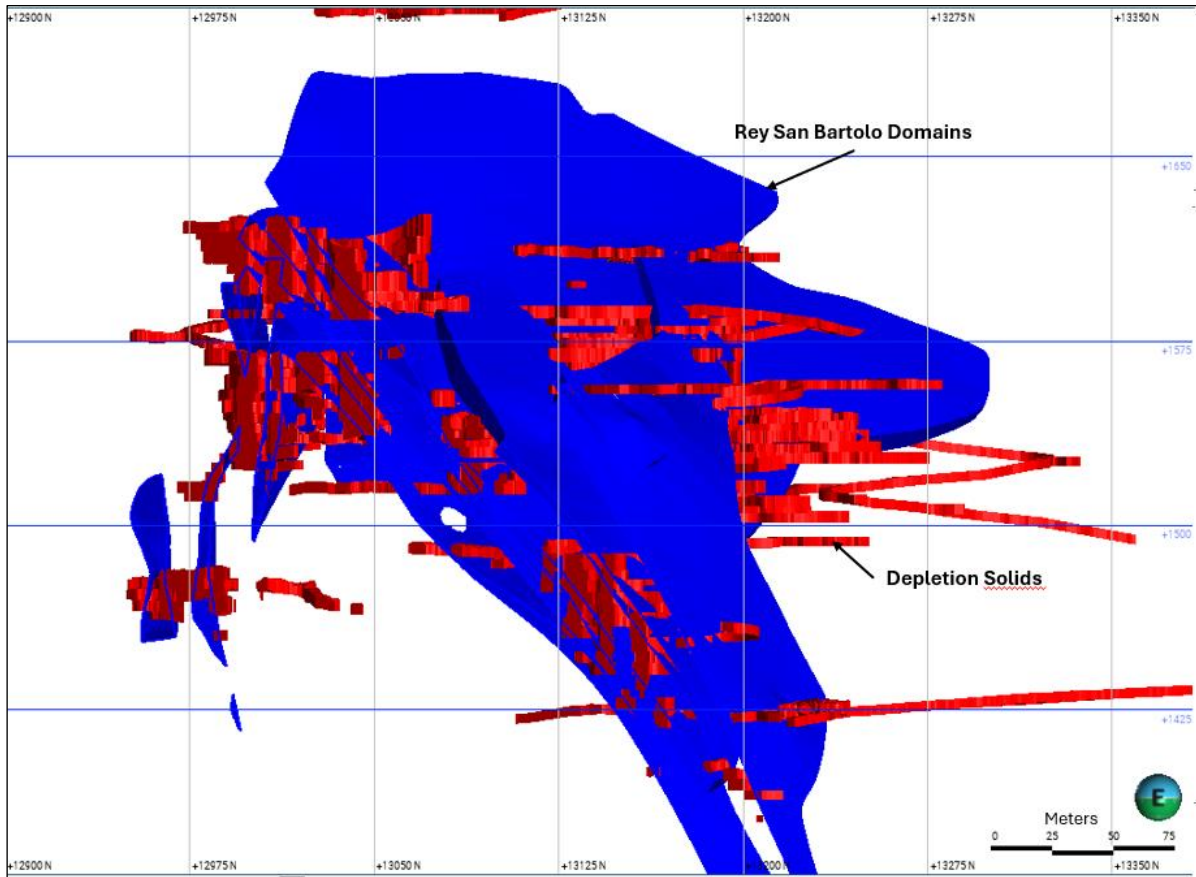
Estimated Grade	Volume m <sup>3</sup> x 1000	Mean	SD	CoV	Variance	Min.	Max.
Ag NN g/t	619	17.4	15.5	0.89	240.3	0.001	116.7
Ag ID g/t	619	18.5	10.8	0.58	116.4	0.001	136.5
Cu NN %	619	0.28	0.27	0.96	0.07	0.001	2.00
Cu ID %	619	0.29	0.19	0.64	0.04	0.001	1.35
Pb NN %	619	0.018	0.034	1.84	0.001	0.001	0.84
Pb ID %	619	0.019	0.022	1.18	0.001	0.001	0.64
Zn NN %	619	2.32	2.58	1.11	6.65	0.001	10.00
Zn ID %	619	2.52	1.95	0.77	3.81	0.001	9.27

Source: SRK, 2024

**Figure 11-15 Zn Swath plots (X, Y and Z coordinate axes) and comparative statistics (Ag, Cu, Pb, Zn) – Aur-1 domain in Aurora**

## 11.12 Depletion

IMMSA utilized updated underground surveying information provided by the Mine Department, which included solids previously validated by the mining team. These solids of the underground workings were employed in Leapfrog to flag the block model and identify the mined material from Charcas. As a result, the fraction of each block that lies within the depletion solid is stored in the block model. The QP comments that the final depletion shapes used were updated to December 31, 2024



Source: IMMSA, 2024

**Figure 11-16: Example of Current Mine Depletion Solids in Rey San Bartolo area**

## 11.13 Resource Classification and Criteria

SRK has classified the mineral resources in accordance with §229.1302(d)(1)(iii)(A) (Item 1302 (d)(1)(iii)(A) of Regulation S-K) and in a manner consistent with industry guidelines and definitions as defined by CRIRSCO. The mineral resources are classified as Indicated and Inferred according to the following definitions and criteria.

### 11.13.1 Measured Resources

No Measured resources are stated, as insufficient overall confidence exists to confirm geological and grade continuity between points of observation to the level needed to support detailed mine planning and final evaluation studies. In the QP's opinion, other limitations are a lack of density measurements and insufficient historical QA/QC protocols in the mine sampling protocols.

### 11.13.2 Indicated

Indicated mineral resources are defined by material that is interpreted to be continuous in size, shape and grade. The criteria to define the Indicated material is as follows:

- Blocks informed by at least two drillholes (rock and channel sampling)

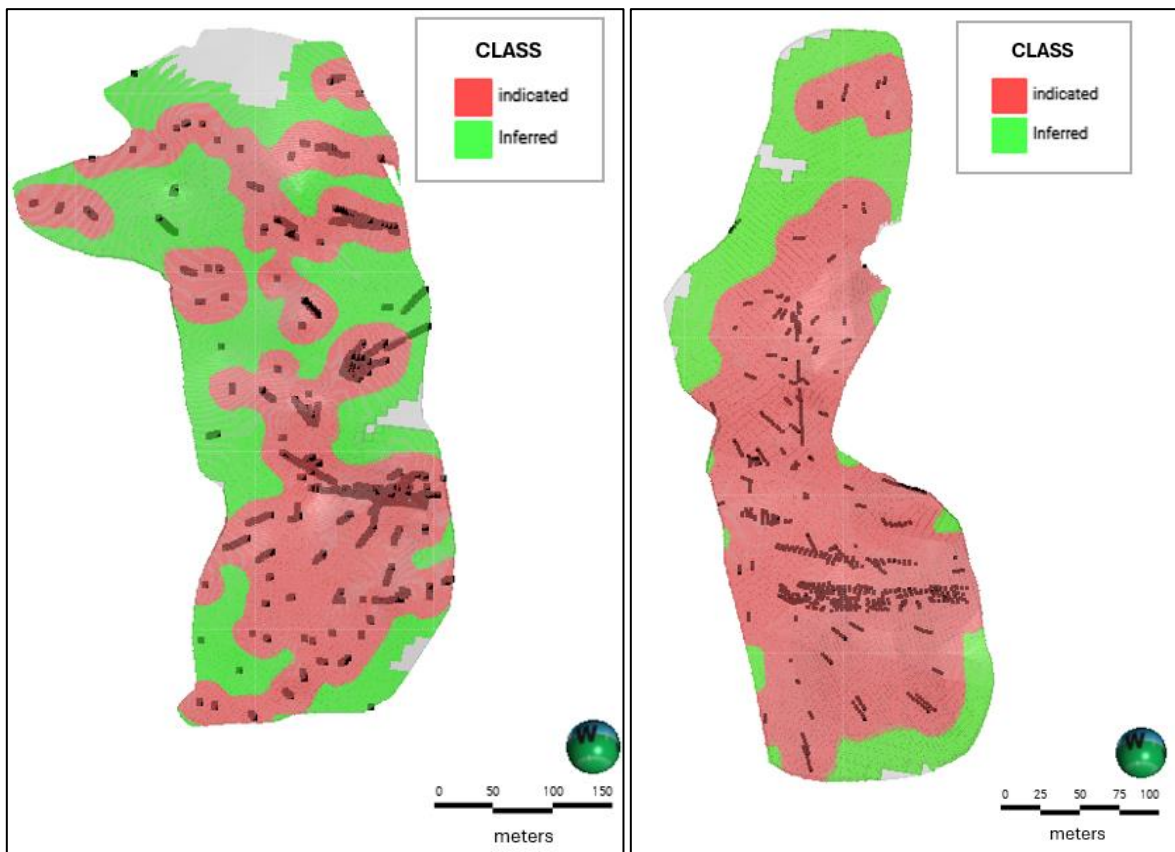
- Zones with a drill spacing of 40 m.
- Continuous delineated zones (defined by hand) that accomplish the previous conditions

### 11.13.3 Inferred

Inferred mineral resources can be established in areas with sufficient geological confidence and if the following requirement is met:

- The material not classified as Indicated located 40 m of the closest single hole in each domain or drill spacing of 80 m.

Figure 11-17 shows examples of the resource blocks in Rey A domain (Rey San Bartolo area) and San Bartolo Sur 8, with long sections.



Source: SRK, 2024

**Figure 11-17: Long Section Block Models of Rey A (Left) and San Bartolo Sur 8 (Right) Color-Coded by Classification**

### 11.14 Uncertainty

SRK has identified a number of factors which contribute to uncertainty in the estimates, which it has included in its classification of mineral resources. Detractors in confidence which may solely or collectively influence the result of the classification process include:

- There is no QA/QC protocol implemented for the drilling and sampling (core and channel sampling) completed by the mine geology department for the historical information that represents most of the data used for the mineral resource estimation. Those activities were not in-line with industry standards.
- Limited QA/QC has been completed on the most recent exploration. Charcas's Mine Department has implemented standard QA/QC protocols for drilling activities since 2023, but has not yet established protocols for rock sampling.
- Charcas's mine geology department started the collection of density tests on core in 2023, but the information is still insufficient to support its use, and further testwork is recommended. Charcas does not retain any historical density data or supporting documentation describing how density data were defined by the plant and the mine, which have been using a standard density value of 3.0 t/m<sup>3</sup> for decades.

The uncertainties are considered directly in the classification system applied by SRK and are summarized below.

#### **11.14.1 Indicated Resources**

It is the QP's opinion that the Indicated resources are estimated based on adequate geological evidence and sampling. The distances of influence from underground sampling and distances between drilling are the controlling aspects on the uncertainty. Charcas uses a drilling spacing of 40 m between drillholes or rock sampling using at least two drillholes. The criteria and uncertainty correspond to the Medium Degree of Uncertainty column in Table 11-6.

#### **11.14.2 Inferred Resources**

The Inferred category is limited to the resources that are in areas where the quantity and grade are estimated based on limited sampling and moderate to limited geological evidence. This category is considered to have the highest levels of uncertainty, which correspond to the High Degree of Uncertainty column in Table 11-6. These areas of the Charcas project represent the areas with lowest drilling density and influence distances to channel or core sampling of up to 40 m. SRK considers these areas of the mineral resource will need additional drilling and underground workings prior to mining.

**Table 11-6: Sources and Degree of Uncertainty**

Source	Degree of Uncertainty		
	Low	Medium	High
Drilling	Recent drilling completed by the exploration team is in-line with industry standards. This drilling is focused in new areas discovered as extensions of the main deposit. Since 2023 the mine geology department has implemented adequate QA/QC protocols for the core sampling and drilling.	Protocols of historical drilling data supporting mineral resources do not meet industry standards, including a lack of downhole surveys, which will have further risk for longer holes as they are deeper from the drillhole collar. Areas with wide-spaced drilling or long distance down the hole should be considered only to an Inferred level.	
Sampling		Protocols of rock sampling are not in-line with industry standards. Density of rock and core sampling supporting the mineral resources is adequate.	
Geological knowledge	There is an extensive knowledge of the geology and mineralization of the Charcas deposit. This aspect and the experience of the management team provides confidence to the geological assumptions during the geological interpretations. Local uncertainty in the orientation and thickness of veins/ replacement bodies could result in changes in tonnage.		
QA/QC	Sample preparation, chemical analysis, and the QA/QC procedures implemented by the exploration and mine geology teams in recent years meet current industry standards. These works are focused in new areas in exploration.	Lower precision of historical data has been recognized. Drilling and channel sampling completed historically by the mine geology department supporting the mineral resources have not been supported by adequate QA/QC protocols.	
Data verification	The extensive historical production information and knowledge of geology and mineralization provide support to the historical data collected since the last century.	The lack of core from historical drilling supporting the mineral resources limited the verification activities.	
Database	Original geology, structural and mineralization maps, drill core logging formats (including the assay results), interpretation plan, and vertical sections supporting the mineral resources are stored in the operation in paper format, with a small portion in digital format.	Most of the data supporting mineral resources is stored on paper, which may lead to local errors due to handwritten entries. However, the majority of this information has now been digitized into Excel files and uploaded to Leapfrog Software	
Bulk density		A unique value is used for all the rock types and does not consider the mineralization changes; this introduces local inaccuracies. Plant and mine have been using this value for decades, which provides confidence to the density value used but does not consider the changes in lithology and mineralization.	
Variography	The assumptions of spatial continuity of mineralization have been based on this analysis and the extensive geological knowledge of the deposit.		
Grade estimation		Grades and volume calculations are based on historical data, which provides some level of inaccuracy.	
Prices, NSR values	Prices and costs are based on Charcas mining and production information. Changes in pricing will potentially impact the NSR calculations.*		
Drill and sample spacing		Distances to underground workings and channel sampling are less than 20 m. There is a minimum of two drillholes within a drill spacing of 40 m	There is a minimum of one hole at a distance of <40 m (Drill spacing 80 m)
Depletion		The resource blocks are defined considering the updated topography of the mine. The adequacy and precision of the historical surveying information of the underground workings and exploited areas introduces some level of inaccuracy to the limits of the resource blocks.	
Criteria of classification	Distances of influence of samples are supported on the good knowledge of geology and mineralization. These distances are considered conservative, which mitigates in some extent the risk associated to over-estimation of the continuity of mineralization.		

Source: SRK, 2024

\*Changes in metal prices will likely result in significant changes in the values derived from the NSR equation.

Considering the uncertainty noted above and the means designed to either address uncertainty in the modeling and estimation process, SRK is of the opinion that the stated mineral resources are appropriate and consistent with industry best practice.

In addition, there is potential for some of these uncertainties or risks to be mitigated or reduced through additional study. Section 23 of this report summarizes recommendations for these studies. It is the QP's opinion that the measures to be taken to mitigate the uncertainty include but are not limited to:

- Continual drilling in the most critical areas of the deposit, locally to spacing of less than 50 x 50 m
- Storage of all geological information into a commercial secure database
- Update the geological models and resource estimates periodically with the new exploration data
- Extensive QA/QC analysis and monitoring to understand relative impacts to local inherent variability within resource domains
- Introduction of more-routine density sampling within the mineralization to confirm level of fluctuation from the current uniform assignment of a single 3 t/m<sup>3</sup> value
- Rigorous approach to classification which appropriately considers the noted detractors in confidence and utilizes criteria designed to address them

## 11.15 Cut-Off Grades Estimates

Definitions for mineral resource categories used in this technical report summary are those defined by the SEC in S-K 1300. Mineral resources are classified into Indicated and Inferred categories. Mineral resources are reported in total, as currently no mineral reserves are reported in accordance with S-K 1300 requirements.

Geologists used diamond drilling information, channel sampling, and development information to identify mineralized areas. IMMSA and SRK constructed a geological model by generating solids for each mineralized structure using Leapfrog software. Statistical analysis was performed to define capping and compositing of the raw data. Based on the spatial analysis, the geologists defined the estimation parameters and the search strategy to interpolate Ag, Cu, Pb, and Zn into the block model. Mineral resources were classified in accordance with industry standards.

The mineral resources for Charcas are reported in situ and are considered to be amenable to underground mining methodologies as have been established at the mine to date. Mining is completed using a mechanized cut-and-fill mining method with rockfill. Ramps and levels are developed to provide access to mineralization. Attack ramps are then driven to access each cut. The ramps and level development are performed using jumbos. Processing is completed at the current operating plant using a floatation flowsheet into three separate concentrates (Zn Concentrate, Cu Concentrate, and Pb Concentrate).

Given that process recoveries and costs in the resource model are grade- and/or domain-dependent, the resources are reported with respect to a block NSR value which is calculated on a stope block (panel) basis. The cut-off value used for the resource estimate is based on an NSR value, in units of US\$/t, which can be directly compared to operating unit costs. The NSR formula is:

$$\text{NSR} = \frac{\text{Gross Revenue} - \text{Off-Site Charges}}{\text{Tonnes Processed}}$$

The calculation of the NSR is effectively a calculation of unit values for the individual metals, which results in a value for a block based on the contained metal.

IMMSA reviewed supply and demand projections for zinc, lead, and copper, as well as consensus long-term (10-year) metal price forecasts. IMMSA supplied the QP with internal selected metal prices for mine planning for the Santa Bárbara project. The QP reviewed these prices against independent forecasts from banks and other lenders, and in the QP’s opinion the proposed prices are considered appropriate.

NSR cut-off values for the mineral resources were established using the prices presented in Table 11-7. These values represent minor increases from the 2023 price assumptions. While minor amounts of gold exist at the Charcas project (0.1 g/t head grade), gold has not been used as a revenue driver within the NSR calculation.

**Table 11-7: Price Assumptions**

Factors	Value	Unit
<b>Metal prices</b>		
<b>Ag</b>	23.00	USD/oz
<b>Pb</b>	1.09	USD/lb
<b>Cu</b>	3.80	USD/lb
<b>Zn</b>	1.32	USD/lb
<b>Exchange Rate (MXN:USD)</b>	18.3023	

Source: SRK, 2024

It is the QP’s opinion that the metal prices used for mineral resources are reasonable based on independent checks using consensus, long-term forecasts from banks, financial institutions, and other sources.

The metallurgical recovery factors assumed for Charcas are based on historic performance of the processing plants and are shown in Table 11-8. The basis for these factors is discussed in Section 10.4 of this report. The QP has elected to use the average January 2022 to December 2024 recoveries for the basis for the year end mineral resources.

**Table 11-8: Metallurgical Recovery Assumptions**

Element	Value	Unit
<b>Ag</b>	75.74	%
<b>Pb</b>	39.14	%
<b>Cu</b>	62.89	%
<b>Zn</b>	87.18	%

Source: SRK, 2024

In addition to the price and metallurgical recovery, IMMSA has applied additional NSR factors in the metal equivalency calculation to account for other aspects of the mineralization. These additional factors include but are not limited to:

- Smelter recoveries
- Smelter penalties (arsenic and bismuth)
- Fleet/transport costs

The NSR factors can be expressed as a further percentage and are averaged out over the annual production. Table 11-9 shows the additional percentages applied to the recoverable metal (in situ metal times recovery).

**Table 11-9: NSR Adjustment Factors**

Element	2022 Factor	2023 Factor	2024 Factor	Unit
<b>Ag</b>	84.8	85.5	86.0	%
<b>Pb</b>	95.0	95.0	95.0	%
<b>Cu</b>	95.0	97.8	97.6	%
<b>Zn</b>	84.5	84.7	84.6	%

Source: SRK, 2024

In summary, using the above prices, recovery, and NSR adjustments for the smelter terms, the QP has applied the following equation to define the stope values on a stope-by-stope basis. The following criteria should be considered inclusive of the average metallurgical recovery.

$$\text{NSR Value} = [\text{Ag}_{\text{gt}}] * 0.48139 + [\text{Pb}_{\%}] * 8.9546 + [\text{Cu}_{\%}] * 51.36337 + [\text{Zn}_{\%}] * 21.51111$$

The operating unit cost used to determine the reasonable prospects for economic extraction has been determined by reviewing the costs over the past 3 years. Based on current market conditions, the QP has elected to use the 2024 costs as the basis for the assessment, which in their opinion is a reasonable basis for the declaration of mineral resources (Table 11-10). The economic value of each stope is then calculated in an Excel spreadsheet using the NSR equation above, and the QP has assigned a flag for all stopes based on an assessment of their economic value where the NSR values is above/below a CoG of the operating unit cost of US\$69.84/t.

**Table 11-10: Operating Unit Cost**

Factor	Value	Unit
<b>Mine</b>	26.55	USD/t
<b>Mill</b>	10.48	USD/t
<b>Indirect (mine and mill)</b>	20.75	USD/t
<b>Subtotal</b>	<b>57.78</b>	<b>USD/t</b>
<b>Smelting, refining, and transportation</b>	10.75	USD/t
<b>Administrative</b>	1.32	USD/t
<b>Total operating</b>	<b>69.84</b>	<b>USD/t</b>

Source: IMMSA, 2024

## 11.16 Summary Mineral Resources

Charcas’s mineral resources are in compliance with the S-K 1300 resource definition requirement of reasonable prospects for economic extraction. Mineral resources have been reported on an in-situ basis. Depletions have been accounted for up to December 31, 2024.

In the QP’s opinion, the assumptions, parameters, and methodology used for the Charcas underground mineral resource estimates, are appropriate for the style of mineralization and mining methods.

Table 11-11 summarizes Charcas’s mineral resources for the underground operation as of December 31, 2024. Mineral resources have been reported in total, as currently no mineral reserves are declared for the Charcas project in compliance with the new S-K 1300 standards.

**Table 11-11: Charcas Summary Mineral Resources at End of Fiscal Year Ended December 31, 2024, SRK Consulting (U.S.), Inc.<sup>(1)</sup>**

IMMSA Underground - Charcas							Cut-Off <sup>(2)</sup>		NSR <sup>(3)</sup> \$69.84	
Category	Tonnage Quantity (kt)	Grade					Metal			
		Ag (g/t)	Zn (%)	Pb (%)	Cu (%)	NSR <sup>(3)</sup> (US\$)	Ag (koz)	Zn (kt)	Pb (kt)	Cu (kt)
Measured										
Indicated	18,085	57	3.74	0.24	0.35	128	33,198	677.1	44.0	63.0
M+I	18,085	57	3.74	0.24	0.35	128	33,198	677.1	44.0	63.0
Inferred	15,752	63	3.32	0.35	0.32	121	31,776	522.8	55.8	49.8

Source: SRK, 2024

<sup>(1)</sup>Mineral resources are reported exclusive of mineral reserves on a 100% basis. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimates. Gold, silver, lead, zinc, and copper assays were capped where appropriate. Given historical production, it is the QP's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.

<sup>(2)</sup>Mineral resources are reported at metal equivalent CoGs based on metal price assumptions, \* variable metallurgical recovery assumptions,\*\* mining costs, processing costs, general and administrative (G&A) costs, and variable NSR factors.\*\*\* Mining, processing, and G&A costs total US\$69.84/tonne (t).

\*Metal price assumptions considered for the calculation of metal equivalent grades are Silver (US\$/oz 23.0), Lead (US\$/lb1.09), Zinc (US\$/lb 1.32) and Copper (US\$/lb 3.80).

\*\*CoG calculations and NSR values assume variable metallurgical recoveries as a function of grade and relative metal distribution. For the purpose of this mineral resource declaration, average metallurgical recoveries are silver (76%), lead (39%), zinc (87%), and copper (63%), assuming recovery of payable metal in concentrate.

<sup>(3)</sup>CoG calculations assume variable NSR factors as a function of smelting and transportation costs. The NSR Values (inclusive of recovery) are calculated using the following calculation  $NSR = [Ag\_gt]*0.48139 + [Pb\_%]*8.9546 + [Cu\_%]*51.36337 + [Zn\_%]*21.51111$ .

Note: The mineral resources were estimated by SRK Consulting (U.S.), Inc., a third-party QP under the definitions defined by S-K 1300.

## 11.17 Comparison to Previous Estimates

As part of the annual year-end reporting requirements, SRK completed a comparison of the mineral resources between December 31, 2023, and December 31, 2024, for the Project. Table 11-12 shows the results of the comparison.

**Table 11-12: Comparison to Previous Estimates**

IMMSA Underground - Charcas						NSR 2024 \$ 69.84 NSR 2023 \$ 67.33			
Category	Quantity	Grade				Contained Metal			
	Tonnes (kt)	Ag (g/t)	Zn (%)	Pb (%)	Cu (%)	Ag (koz)	Zn (t)	Pb (t)	Cu (t)
Indicated 2024	18,085	57	3.74	0.24	0.35	33,198	677,138	43,992	62,957
Indicated 2023	6,410	84	3.06	0.39	0.52	17,297	195,856	24,936	33,480
Difference (%)	11,675	(27)	0.69	(0.15)	(0.17)	15,901	481,282	19,056	29,477
Difference (%)	182%	-32%	23%	-37%	-33%	92%	246%	76%	88%
Inferred 2024	15,752	63	3.32	0.35	0.32	31,776	522,844	55,849	49,789
Inferred 2023	15,162	98	2.78	0.39	0.55	48,005	420,952	58,722	82,788
Difference (%)	590	(36)	0.54	(0.03)	(0.23)	\(16,229)	101,892	(2,873)	(32,999)
Difference (%)	4%	-36%	20%	-8%	-42%	-34%	24%	-5%	-40%

Source: SRK, 2024

SRK reviewed the changes and considers there to be material change in the estimates between the two time periods. Where differences exist, they can be attributed to the following factors:

- As a result of these methodological advancements, there has been an increase in Indicated resources and variable changes in inferred resources.
- The methodology for geological modeling and mineral resource estimation has evolved from traditional 2D paper-based methods to advanced 3D implicit geological modeling,

geostatistical analysis, block model construction, and mineral resource estimation using Leapfrog Geo software.

- The change to a 3D geological model allows greater continuity between the geological domains and previously defined stopes using the 2D method. This results in a significant increase in the global tonnage at Charcas.
- It is SRK view that the previous method did not fully account for portions of internal waste which in the latest model have been assigned grades below the detection limit and therefore result in higher tonnages and lower grades overall.
- This new approach includes changes in evaluating capping, utilizing statistical tools to assess each element by domain or group of domains, and evaluating grade continuity through variography analysis.
- The inferred continuity of the mineralized structures, based on variography analysis and geological evidence, has led to a variable changes in inferred resources. Previously, inferred resources were defined solely based on fixed distances to data.
- Additional exploration and mine sampling to increase confidence in the mineral resources prior to mining
- Minor change in the CoG on a NSR basis of +\$2.5/t or (+3.7%)
- No changes were made to the price assumptions during the time period for the purpose of declaration of Mineral Resources.

## 11.18 Opinion on Influence for Economic Extraction

It is SRK's opinion that the geology and mineralization controls of the Charcas deposit are very well understood based on the extensive knowledge of the deposit from decades of exploitation.

The mineral resources stated herein are appropriate for public disclosure and meet the definitions of Indicated and Inferred resources established by SEC guidelines and industry standards. Based on the analysis described in this report, SRK's understanding of resources, and that production has occurred at the mine since the Charcas project's status of operating since 1925, in the QP's opinion, there is reasonable potential for economic extraction of the resource.

SRK is of the opinion that with consideration of the recommendations summarized in Section 1 and Section 23 of this report, any issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

## **12 Mineral Reserve Estimates**

Section 12 Mineral Reserve Estimates is not applicable for the current level of study and has not been included in this report. IMMSA plans to produce mineral reserves estimates in the future.

## 13 Mining Methods

Section 13 Mining Methods is not applicable for the current level of study and has not been included in this report. Charcas’s mineral resources are considered to be amenable to underground mining methodologies as has been established at the mine to date. Mining is completed using a mechanized cut-and-fill mining method with rockfill. Ramps and levels are developed to provide access to the ore. Attack ramps are then driven to access each cut. The ramps and level development are performed using jumbos.

## 14 Processing and Recovery Methods

Section 14 Processing and Recovery Methods is not applicable for the current level of study and has not been included in this report.

Mineral processing is completed via conventional flotation processes with three concentrates being produced (in order of scale):

- Zinc Concentrate
- Copper Concentrate
- Lead Concentrate

The mine is not currently conducting any specific metallurgical testwork to support the current disclosure. The QP has therefore relied on the production data from the three concentrates to determine the recoveries to support the declaration of the mineral resources.

The mineral benefit plant was built with the purpose of concentrating the metallic minerals of interest (zinc, copper, and lead) and has a nominal capacity to process 4,100 tons/day. Figure 10-1 presents the flow chart of Charcas's process plant.

## 15 Infrastructure

The Charcas project does have some existing infrastructure that supports the current operation. However, the QP has not inspected the infrastructure to sufficient levels to support the declaration of mineral reserves at this stage.

## 16 Market Studies

Section 16 Market Studies is not applicable for the current level of study and has not been included in this report. SRK has used costs, pricing, and criteria as supplied by the operation, which were reviewed and considered to be reasonable to support the current level of studies. To support the declaration of mineral resources, at a minimum a pre-market study of the various concentrates will need to be completed.

## **17 Environmental Studies, Permitting and Plans, Negotiations, or Agreements with Local Individuals or Groups**

Section 17 Environmental Studies, Permitting and Plans, Negotiations, or Agreements with Local Individuals or Groups is not applicable for the current level of study and has not been included in this report.

## **18 Capital and Operating Costs**

Section 18 Capital and Operating Costs is not applicable for the current level of study and has not been included in this report.

## **19 Economic Analysis**

Section 19 Economic Analysis is not applicable for the current level of study and has not been included in this report.

## **20 Adjacent Properties**

While the Charcas deposit sits within a larger metalliferous province, the QP is not aware of any significant deposits or properties adjacent to the Charcas operation.

## 21 Other Relevant Data and Information

The Charcas mine is currently in production and has previously disclosed mineral reserves under Guide 7. During the initial review of the underlying technical studies, it was determined that not all studies are at a sufficient level of detail to comply with the new S-K 1300 levels. The Company has successfully completed the technical work required for the 2024 Mineral Resource estimate. This includes the development of a 3D geological model, conducting statistical and geostatistical analysis, and constructing a 3D block model. All of this work was carried out using Leapfrog Geo software.

## 22 Interpretation and Conclusions

SRK is of the opinion that the data and analysis presented herein are of sufficient quality and completeness to support the estimation of mineral resources. The skarn and vein deposits at Charcas have been mined historically and are currently in production, processing three concentrates (zinc, copper, and lead) via underground mining operations.

The drilling and analytical work is supported by surveys and limited quality control measures to support confidence in the accuracy and precision of the data. The mine geology department has implemented adequate QA/QC protocols for drilling and core sampling, but not for the samples collected from rock sampling from underground workings, which SRK considers not to be in-line with industry best practices and represents a source of uncertainty for the data collected by the mine geology department.

The exploration department and recently the mine geology department has procedures for drilling and core sampling which the QP considers in-line with industry best practices.

The QP notes the following key conclusions:

- The geology and mineralization controls are very well known, supported by the many years of the mining operation. Geological information supporting mineral resources is available in paper documents and in digital format.
- There is no QA/QC protocol implemented rock channel sampling completed by the mine geology department for the historical and recent information, and those activities are not in-line with industry standards.
- The drilling and core sampling activities performed by Charcas's exploration and mine geology departments are in-line with industry standards.
- Charcas's mine geology department does not retain any density data or supporting documentation describing how density data was collected. The plant and the mine have been using a standard density value of 3.0 t/m<sup>3</sup> for decades. Insufficient documentation to support this density has been presented, and further testwork is recommended.
- A portion of historical data lacks chemical analysis for specific elements. Furthermore, certain intercepts within mineralized zones have not been sampled and assayed. Consequently, minimum values were assigned to all unsampled and unanalyzed drilling intercepts, directly affecting the grade estimation
- The methodology for geological modeling and mineral resource estimation has transitioned from traditional 2D paper-based methods to advanced 3D implicit geological modeling, geostatistical analysis, block model construction, and mineral resource estimation using Leapfrog Geo software. This modern approach has introduced significant changes in evaluating capping, employing statistical tools to assess each element by domain or group of domains, and evaluating grade continuity through variography analysis. Consequently, there has been an increase in indicated resources and variable changes in inferred resources, as the inferred continuity of the mineralized structures is now based on variography analysis rather than fixed distances to data.
- One aspect impacting in the increase in tonnage is the use of 3D visualization and modeling software. This software allowed for the generation of a geological model that considers various sources of information at the same time, including geological interpretations in sections and

plans, and core and rock descriptions from drill holes, and channels. This was difficult to achieve with the previous 2D methodology, as it enables better observation and modeling of the continuity of each zone, which typically contains several “Mantos”, adding more complexity to the process.

- The estimate was categorized in a manner consistent with industry standards. Mineral resources have been categorized based on relative confidence in the modeling, estimation, or reporting of the tonnage and grades from the model. There are no Measured mineral resources, primarily due to a lack of density measurements and insufficient QA/QC protocols in the mine geology department sampling protocols. The Indicated mineral resources disclosed herein have significant evidence in the QP’s opinion to support the interpolation of both the geological and grade continuity in these areas.
- Mineral resources have been reported using economic and mining assumptions to support the reasonable potential for eventual economic extraction of the resource. A CoG has been derived from these economic parameters, and the resource has been reported above this cut-off. As currently no mineral reserves are reported in accordance with the S-K 1300 definition, the mineral resource has been reported as mineral resource only, depleted for mining, which in effect is the same as an exclusive mineral resource.
- In SRK’s opinion, the mineral resources stated herein are appropriate for public disclosure and meet the definitions of Indicated and Inferred resources established by SEC guidelines and industry standards.

## 23 Recommendations

It is the QP's opinion that measures should be taken to mitigate the uncertainty, including but not limited to:

- Continual drilling in the most critical areas of the deposit, locally to spacing of less than 50 x 50 m.
- SRK recommends reviewing the procedures rock sampling, and design and implementing a complete QA/QC protocol for the rock sampling activities performed by Charcas's mine geology department.
- Regarding the exploration and mine geology departments QA/QC protocol, SRK recommends continuing the periodic check assays (second laboratory controls) and maintain the implementation of QA/QC protocol in a consistent and systematic manner.
- Review the protocols in the sample preparation laboratory and implement the necessary measurements to guarantee an appropriate sub-sampling procedure and avoid contamination. Maintain communication with the laboratories and monitor their performance.

### 23.1 Mineral Resource and Mineral Reserve Estimates

- SRK recommends maintaining a continuous update of the geological model to ensure accurate future mineral resource assessments.
- Continue implementation of DHLogger for capture, storage and management of database.
- Extensive QA/QC analysis and monitoring to understand relative impacts to local inherent variability within resource domains.
- Introduction of more-routine density sampling within the mineralization to confirm level of fluctuation from the current uniform assignment of a single 3 t/m<sup>3</sup> value.
- Complete the variography analysis in each zone, considering the use of transformed data, other types of variograms, use individual or grouped domains, to implement the use of ordinary kriging for grade interpolation.
- Rigorous approach to classification which appropriately considers the noted detractors in confidence and utilizes criteria designed to address them.
- Implement a grade control and an adequate model-mine-mill reconciliation procedure to evaluate resource model performance for the long and short term.

### 23.2 Recommended Work Programs

The recommended work program includes the following activities:

- Drill in to define horizontal and vertical extension of mineralization and exploration in identified targets.
- Continue updating the database with new exploration data. Update periodically the 3D geological model and the mineral resource estimates.
- Complete the detailed geological modeling methods using the new digital database which integrates all relevant geological data into defining the model and achieving the most accurate model possible at the current level of study
- Implement a grade control protocol and reconciliation procedure.

### 23.3 Recommended Work Program Costs

Table 23-1 provides an approximate budget of the work program for 2025.

**Table 23-1: Recommended Work Program Costs**

<b>Discipline</b>	<b>Program Description</b>	<b>Cost (US\$ million)</b>
Geology and exploration	Ongoing exploration and grade-control drilling	2.2
Updated mineral resource estimates	Generation of geological model and mineral resource estimates	0.2
Mining methods/mineral reserve estimates	Development of mine plan and optimization of mining methodology	0.5
<b>Total</b>		<b>2.9</b>

Source: SRK/IMMSA, 2024

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## 25 Reliance on Information Provided by the Registrant

The Consultant’s opinion contained herein is based on information provided to the Consultants by IMMSA throughout the course of the investigations. Table 25-1 of this section of the technical report summary will:

Identify the categories of information provided by the registrant

Identify the particular portions of the technical report summary that were prepared in reliance on information provided by the registrant pursuant to Subpart 1302 (f)(1), and the extent of that reliance

Disclose why the QP considers it reasonable to rely upon the registrant for any of the information specified in Subpart 1302 (f)(1)

**Table 25-1: Reliance on Information Provided by the Registrant**

Category	Report Item/ Portion	Portion of Technical Report Summary	Disclose Why the QP Considers it Reasonable to Rely Upon the Registrant
Legal Opinion	Sub-sections 3.3, 3.4, 3.5, 3.6, and 3.7	Section 3	IMMSA has provided a document summarizing the legal access and rights associated with leased surface and mineral rights. This documentation was reviewed by IMMSA’s legal representatives. The QP is not qualified to offer a legal perspective on IMMSA’s surface and title rights but has summarized this document and had IMMSA personnel review and confirm statements contained therein.

## Signature Page

This report titled “SEC Technical Report Summary, Initial Assessment on Mineral Resources, Charcas Mine, San Luis Potosí, México” with an effective date of December 31, 2024, was prepared and signed by:

**SRK Consulting (U.S.) Inc.**

Dated at Denver, Colorado  
February 19, 2024

***(Signed)* SRK Consulting (U.S.) Inc.**