

SEC Technical Report Summary Mineral Resources Charcas Mine San Luis Potosí, México

**Effective Date: December 31, 2021
Report Date: February 25, 2022**

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
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 ³	cubic centimeter
Co	cobalt
CoG	cut-off grade
Company	Industrial Minera México, S.A. de C.V
Cr	chromium
CIRSCO	Committee for Mineral Reserves International Reporting Standards
CSRM	certified standard reference materials
Cu	copper
CuFeS	chalcopyrite
Fe	iron
g	gram
G&A	general and administrative
g/t	grams per tonne
GW/h	gigawatt-hour
ha	hectare
HCl	hydrochloric acid
Hg	mercury
HNO ₃	nitric acid
I	Indicated
ICP	inductively coupled plasma
IMMSA	Industrial Minera México, S.A. de C.V
IP	induced polarization
K	potassium
km	kilometer
km ²	square kilometer
koz	thousand troy ounce
kt	thousand tonnes
kW	kilowatt
L	liter
La	lanthanum
lb	pound

Abbreviation	Unit or Term
Li	lithium
LoM	life-of-mine
M	Measured
m	meter
m ² /s	square meters per second
m ³	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 ₂ O ₂	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 description
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/m ³	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 88,643.2602 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 1,744.4 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 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 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 ore is transported to the surface for processing in the flotation plant.

Exploration at Charcas is ongoing with drills targeting economic extensions of the main deposit and new satellite orebodies. Drilling activities are conducted following industry best practices including quality assurance/quality control (QA/QC) protocols.

1.4 Mineral Resource Estimates

Historically, Charcas has collected samples from diamond core drilling (surface and underground) and channel samples from underground workings. This work was conducted by the mine geology department but is not supported by QA/QC protocols. The Qualified Person (QP) notes that the drillholes lack downhole surveys, which in the QP's opinion is not in-line with industry best practices.

Despite this, the variability of the mineralization characterized by the mantos and vein deposits at Charcas appears to be appropriately interpreted based on the available information. SRK reviewed the reconciliation of the planned versus actual grades and tonnages reported at Charcas and, based on the long mining history, considered the drilling and channel rock sampling grades reported to be representative of the mined material.

Most of the data is obtained for use in the current estimate is from historical paper copies, such as geological mapping within the mine workings and vertical section and plan view interpretations of the geology and mineralization. Very little information is available in digital format to facilitate the construction of both a three-dimensional (3D) geological and 3D resource block model as well as supporting typical statistical analyses used in resource estimation.

The current resource estimation used a combination of manual methods to define the areas/volumes and grades, supported by AutoCAD and Excel software. These estimates are updated periodically using historical and recent information.

The mineralized area is determined from maps, sections, and assay results. The volumes are calculated by the projecting these areas based on the true width of the mineralization. The grade of each mineralized area is based on average grades that are weighted by the area of influence of each sample or group of samples, which are determined from plan and/or vertical views of the geological interpretations and sampling.

A single density value of 3 tonnes per cubic meter (t/m^3) is used to obtain tonnages. The Charcas operation uses this density value for an extended period of time, and the density value is reportedly based on historical tests that have not been documented and are not available. 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 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. In the QP's opinion, other limitations are a lack of density measurements and insufficient QA/QC protocols in the mine samplings protocols.

1.4.2 Indicated

Indicated mineral resources are defined by material that is interpreted to be continuous in size, shape, and grade and must be located within 30 meters (m) of either underground development or surface/underground drilling results. Indicated mineral resources may be projected 30 m above or below levels or 30 m beyond the stope face; however, the projection distance is limited to 15 m below the last developed level. No Indicated mineral resources are permitted above the first level in the mine.

1.4.3 Inferred

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

1. The material not classified as Indicated located between two levels separated by a maximum of 120 m and if no diamond drilling is present
2. The material is within 60 m of multiple surface/underground drillholes or located within 15 m of a single drillhole.

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.

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.

SRK recommends the construction of a 3D geological model for the deposit of Charcas and the digitizing of all the supporting information, including geological/mineralization maps and sections, drilling, and rock sampling information. The new 3D geological model will be the base for the construction of a block model and future Mineral Resource Estimates using industry standard procedures.

Charcas's mineral resources are in compliance with the S-K 1300 resource definition requirement of reasonable prospects for economic extraction. Using the mining blocks (panels) defined by the geologist, the QP has reviewed each panel relative to the defined CoGs. Depletions have been accounted for within each panel using the latest survey information for most of the panels, and only a few panels that were exploited in the last two months of 2021 were adjusted according to the planned exploitation. It is SRK's opinion that the differences with the real exploited material are not material.

In the QP's opinion, the assumptions, parameters, and methodology used for the Charcas underground mineral resource estimates, while not optimized to 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 x 50 m
- Digitization of all geological information and storage of data into a commercial secure database
- Detailed geological modeling methods using the new digital database that integrates all relevant geological data into defining the model and achieving 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 3.0 t/m³ value
- Rigorous approach to classification that appropriately considers the noted detractors in confidence and utilizes criteria designed to address them

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 Resources¹ at End of Fiscal Year Ended December 31, 2021, SRK Consulting (U.S.), Inc.

IMMSA Underground - Charcas							Cut-Off ⁽²⁾		NSR ⁽³⁾ \$57.59	
Category	Tonnage Quantity (thousand tonnes (kt))	Grade					Metal			
		Ag (grams per tonne (g/t))	Zn (%)	Pb (%)	Cu (%)	Net Smelter Return (NSR) ⁽³⁾ (US\$)	Ag (thousand ounces (koz))	Zn (kt)	Pb (kt)	Cu (kt)
Measured (M)										
Indicated (I)	5,831	91	3.45	0.42	0.53	163.5	17,118	201.3	24.5	30.9
M+I	5,831	91	3.45	0.42	0.53	163.5	17,118	201.3	24.5	30.9
Inferred	14,206	98	2.76	0.36	0.57	153.0	44,583	392.1	50.9	81.4

(1) 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 company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.

(2) 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\$57.6/tonne (t).

*Metal price assumptions considered for the calculation of metal equivalent grades are gold (US\$/ounce (oz): 1,725.00), silver (US\$/oz: 23.0), lead (US\$/pound (lb): 1.04), 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 (82%), lead (47%), zinc (92%), and copper (79%), assuming recovery of payable metal in concentrate.

(3) 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: $NSR = Ag(g/t) \times 0.515 + Pb(\%) \times 10.215 + Cu(\%) \times 62.741 + Zn(\%) \times 22.890$. Note: The mineral resources were estimated by SRK Consulting (U.S.), Inc., a third-party QP under the definitions defined by S-K 1300.

Source: SRK, 2021

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. Geology information supporting mineral resources is available in paper documents and partially in digital format.

1.5.3 Status of Exploration, Development, and Operations

IMMSA continues the exploration of the extension of the main areas of the operation, including underground drilling in the areas of Moctezuma-Morelos, Veta Nueva, San Bartolo, San Fernando, Veta Leones, and El Rey 27-100W.

The exploration department through a contractor has been drilling from surface in the area of Las Eulalias and will continue the exploration in this zone and defining the continuity of the mineralization in the areas of Ben Suceso, the geophysical anomalies (Zonge), and Veta Leones towards the southeast.

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 x 50 m
- SRK recommends review of the procedures of drilling and sampling and design and implementation of a complete QA/QC protocol for the drilling and rock sampling activities performed by Charcas's mine geology department.
- Regarding the QA/QC protocol of the exploration department, SRK recommends including the second laboratory controls (Tercerías) periodically (quarterly) and the review of the acceptability ranges for fine duplicates (10% relative error).
- Digitization of all geological information and storage of data into a commercial secure database
- Detailed geological modeling methods using the new digital database that integrates all relevant geological data into defining the model and achieving 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/m³ 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, 2021.

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 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
- Paper documents supporting the reserve estimations by blocks, including interpretation sections, spreadsheets, and calculations (part of this information was provided in digital format (AutoCAD, Excel, and Word))

2.4 Details of Inspection

Table 2-1 summarizes the details of the personal inspections on the property by each QP or, if applicable, the reason why a personal inspection has not been completed.

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

Source: SRK, 2021

2.5 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.

2.6 Report Version Update

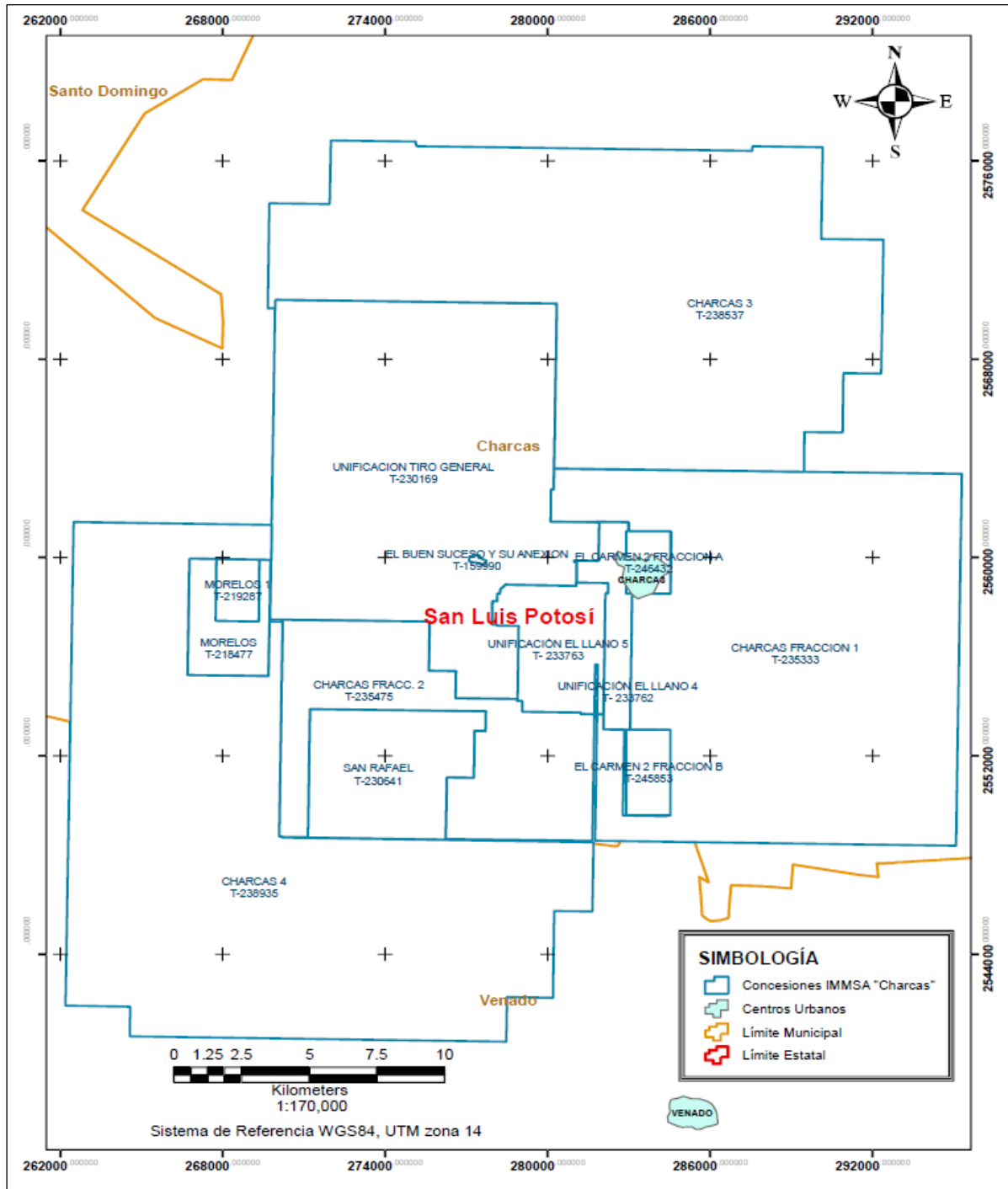
This technical report summary is not an update of a previously filed technical report summary and is the most recent report.

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 Land Tenure Table

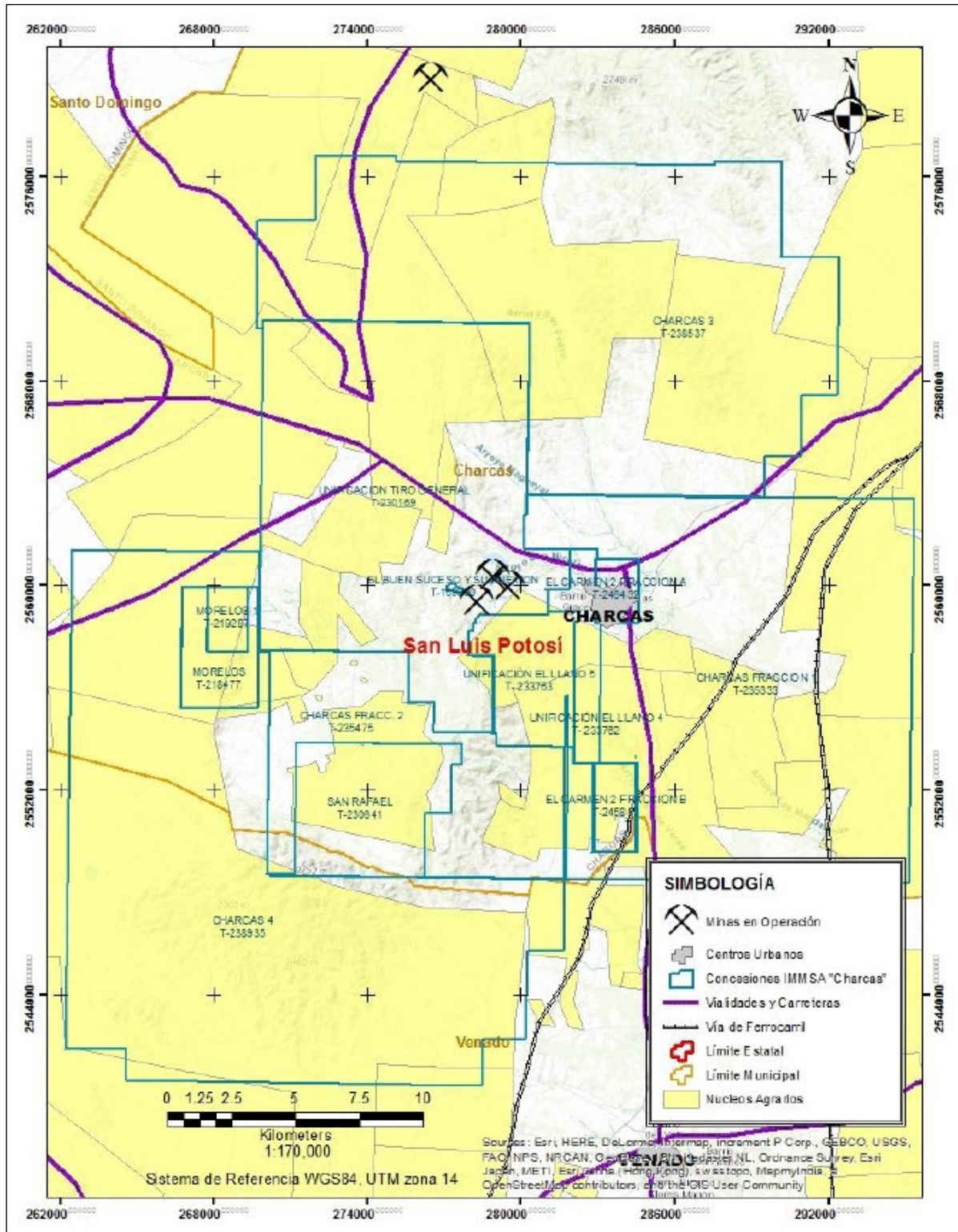
Number	Title Number	Concession Name	Holder	Awarded	Valid Until	Surface (ha)
1	159990	EL BUEN SUCESO Y SU ANEXION	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	18.04.1974	17.04.2024	14.7866
2	218477	MORELOS	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	05.11.2002	23.03.2052	1,010.00
3	219287	MORELOS 1	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	25.02.2003	24.02.2053	400
4	230169	UNIFICACIÓN TIRO GENERAL	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	27.07.2007	26.07.2057	14,327.00
5	230641	SAN RAFAEL	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	28.09.2007	27.09.2057	2,912.00
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	1,764.46
8	235333	CHARCAS FRACCION 1	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	12.11.2009	11.11.2059	18,457.35
9	235475	CHARCAS FRACCION 2	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	04.12.2009	03.12.2059	5,261.38
10	238537	CHARCAS 3	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	23.09.2011	22.09.2061	20,024.86
11	238935	CHARCAS 4	INDUSTRIAL MINERA MÉXICO, S.A. DE C.V.	11.11.2011	10.11.2061	22,592.72
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	406.169

Source: IMMSA, 2021



Source: IMMSA, 2021

Figure 3-2: Map Showing Concession Titles



Source: IMMSA, 2021

Figure 3-3: Map Showing Charcas's Concessions, Local Infrastructure, and Agricultural Areas

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 works and works involve more than nine workers in the case of coal mines and more than 49 workers in other cases.
- The mining law stipulates the 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:

1. Name of the holder of the mining concession or of the person who carries out the mining works and works by contract
2. Name of the lot or of the one that heads the grouping and title number
3. Period to review
4. 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
5. Surplus to be applied from previous verifications and their updating

6. Amount to be applied in subsequent checks
7. 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:

1. That the verification report contains false data or does not conform to what was done on the ground
2. 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 Secretaría 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 US\$1,105,306.73 in 2020 and US\$1,548,791.36 in 2021.

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 2022.

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. The 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: SRK, 2021

Figure 4-1: Photography of the Charcas Tailings Facility and Surrounding Area

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 (km²), 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 a water concession for the extraction of 1,113,850 cubic meters (m³) per year. The water consumption comes from three main sources:

- Recovery of the process water from the tailings dam, where an average of 3,107,337 m³ is recovered annually
- Recovery of the working water of the mine, which represents an annual average volume of 1,238,772 m³
- Fresh water from concession wells, which represents 543,409 m³ annually

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 annual average consumption is reported to be between 58 to 60.0 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 the Federal Electricity Commission (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 2,500,000 L/year. Fuel is stored in a series of tanks located on the surface. The diesel is sent through a sequence of pipes to the various deposits inside the mine, and from these it is fed to the equipment through dispatch guns.

The current diesel supplier is Combustibles Diésel del Centro, S.A. DE C.V., 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 43,000 L, with a supply frequency of one to two tanks per week. Diesel is supplied through scheduled supply orders.

An average of between 3,500 and 4,000 L of gasoline is consumed per month. 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 135 staff and 804 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).

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 the 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 since 2002.

Table 5-1: Recent Production Table Summary of Charcas

Concept	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Tonnes milled (x 1,000)	1,343	1,213	1,317	1,328	1,344	1,258	1,169	1,162	1,165	1,124	1,164	1,180	752	1,040	1,229	1,250	1,290	1,293	1,146
Grades (mill feed)																			
Gold (Au) (g/t)															0.11	0.12	0.14	0.15	0.06
Ag (g/t)	58	53	54	53	45	53	55	52	54	51	52	50	43	49	52	50	53	46	48
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
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
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
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
Assays																			
Au (g/t)															2.63	2.82	4.39	5.81	3.34
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
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
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
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
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
Assays																			
Au (g/t)															1.11	1.14	2.14	2.89	2.95
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
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
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
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
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
Assays																			
Au (g/t)															0.30	0.31	0.32	0.35	0.31
Ag (g/t)	126	122	148	129	116	129	117	124	127	146	158	152	147	128	142	148	172	141	151
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
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
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
Metal content in Pb concentrate																			
Au (kg)															4,034	5,092	6,231	6,050	6,758
Ag (kg)	28,780	30,067	29,339	28,256	20,442	28,256	31,537	30,056	32,132	24,069	19,810	10,604	6,080	13,928	14,236	15,065	14,529	12,035	15,061
Pb (t)	3,119	3,075	2,746	2,185	1,202	2,185	4,532	4,197	3,282	2,700	1,517	612	400	832	862	1,082	814	508	1,269
Cu (t)	527	624	577	529	404	529	518	553	567	414	364	194	48	69	77	85	63	72	86
Zn (t)	343	826	931	773	742	773	985	544	499	412	374	125	36	51	49	50	42	30	50
Metal content in Cu concentrate																			
Au (kg)															16	14	27	44	38
Ag (kg)	13,164	6,175	5,610	6,022	9,584	6,022	5,783	4,826	5,311	6,143	8,964	16,858	10,540	17,985	25,352	23,446	26,248	28,706	25,054
Pb (t)	613	352	252	307	404	307	323	283	251	327	520	621	186	366	446	510	397	363	623
Cu (t)	956	687	625	807	1,145	807	1,028	939	937	1,084	1,306	2,152	1,527	2,611	3,580	3,143	3,229	3,775	3,093
Zn (t)	415	122	215	155	300	155	116	96	83	123	199	881	984	1,792	1,591	1,426	1,388	1,387	1,377
Metal content in Zn concentrate																			
Au (kg)															16,063	16,840	17,371	17,640	15,226
Ag (kg)	14,792	14,172	18,350	15,918	13,710	15,918	12,832	13,483	12,948	13,630	14,706	12,766	6,266	6,343	7,582	8,074	9,273	7,117	7,401
Pb (t)	581	582	772	526	434	526	799	714	633	699	592	368	148	147	165	216	200	129	253
Cu (t)	908	927	963	822	800	822	732	833	726	695	762	892	472	537	631	663	639	530	552
Zn (t)	67,241	66,933	71,009	70,660	67,154	70,660	62,570	62,033	57,808	52,680	50,203	45,691	23,130	26,884	28,848	30,120	29,710	27,574	26,190
Total metal content																			
Au (kg)															36,371	36,379	50,858	67,382	59,988
Ag (kg)	56,738	50,414	53,299	50,195	43,737	50,195	50,152	48,365	50,391	43,842	43,480	40,228	22,886	38,256	47,170	46,584	50,049	47,858	47,516
Pb (t)	4,312	4,009	3,770	3,018	2,039	3,018	5,653	5,194	4,166	3,726	2,629	1,601	734	1,345	1,474	1,808	1,411	1,000	2,145
Cu (t)	2,392	2,238	2,165	2,158	2,349	2,158	2,279	2,325	2,230	2,193	2,433	3,239	2,047	3,216	4,288	3,890	3,931	4,377	3,730
Zn (t)	67,999	67,881	72,155	71,588	68,196	71,588	63,671	62,674	58,390	53,215	50,777	46,697	24,150	28,727	30,488	31,595	31,139	28,991	27,616

Concept	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Recoveries in Pb concentrate																			
Au (%)															2.93	3.28	3.57	3.18	9.83
Ag (%)	37.06	46.37	41.16	40.00	33.84	40.00	48.95	49.66	50.68	42.17	32.49	18.03	18.76	27.24	22.26	24.10	21.07	20.12	27.18
Pb (%)	60.53	66.89	63.51	56.08	44.12	56.08	73.05	77.02	70.52	65.16	50.56	31.54	39.75	52.55	47.63	48.03	41.14	33.13	52.69
Cu (%)	16.31	22.70	22.29	20.08	13.79	20.08	19.11	21.20	21.31	15.23	11.72	5.15	2.12	1.88	1.58	1.87	1.38	1.51	2.02
Zn (%)	0.47	1.16	1.23	1.03	1.03	1.03	1.48	0.85	0.84	0.76	0.73	0.27	0.15	0.17	0.15	0.15	0.14	0.10	0.18
Recoveries in Cu concentrate																			
Au (%)															11.83	9.30	15.60	22.99	55.28
Ag (%)	16.95	9.52	7.87	8.52	15.87	8.52	8.98	7.97	8.38	10.76	14.70	28.67	32.52	35.17	39.65	37.51	38.07	48.00	45.22
Pb (%)	11.90	7.65	5.83	7.89	14.83	7.89	5.20	5.19	5.39	7.89	17.34	31.99	18.48	23.12	24.67	22.63	20.05	23.67	25.84
Cu (%)	29.58	25.00	24.17	30.66	39.02	30.66	37.94	35.95	35.25	39.92	42.04	56.95	67.37	71.17	73.35	69.13	70.37	79.11	73.18
Zn (%)	0.57	0.17	0.28	0.21	0.42	0.21	0.17	0.15	0.14	0.23	0.39	1.87	4.07	6.13	5.03	4.37	4.46	4.88	4.88
Recoveries in Zn concentrate																			
Au (%)															11.68	10.84	9.95	9.28	22.15
Ag (%)	19.05	21.86	25.74	22.53	22.70	22.53	19.92	22.28	20.42	23.88	24.12	21.71	19.33	12.40	11.86	12.92	13.45	19.98	13.36
Pb (%)	11.27	12.65	17.86	13.50	15.93	13.50	12.87	13.11	13.60	16.87	19.74	18.94	14.71	9.29	9.13	9.57	10.10	34.81	10.50
Cu (%)	28.10	33.73	37.20	31.23	27.25	31.23	27.02	31.90	27.32	25.57	24.54	23.61	20.83	14.64	12.93	14.59	13.92	8.28	13.06
Zn (%)	92.12	94.32	93.56	93.73	93.06	93.73	93.98	97.13	97.19	97.02	97.57	96.82	95.70	91.98	91.29	92.27	95.42	95.01	92.78
Total recoveries																			
Au in concentrate of Pb, Cu, and Zn (%)															26.44	23.41	29.12	35.45	87.25
Ag in concentrate of Pb, Cu, and Zn (%)	73.06	77.75	74.77	71.05	72.40	71.05	77.84	79.91	79.48	76.81	71.31	68.42	70.62	74.81	73.76	74.53	72.60	88.10	85.75
Pb in concentrate of Pb and Cu (%)	72.43	74.54	69.33	63.97	58.95	63.97	78.25	82.21	75.91	73.05	67.91	63.54	58.24	75.68	47.63	48.03	41.14	33.13	89.03
Cu in concentrate of Cu and Pb (%)	45.89	47.70	46.46	50.74	52.80	50.74	57.05	57.14	56.56	55.14	53.77	62.10	69.49	73.05	73.35	69.13	70.37	79.11	88.27
Zn in concentrate of Zn (%)	92.12	94.32	93.56	93.73	93.06	93.73	93.98	97.13	97.19	97.02	97.57	96.82	95.70	91.98	91.29	92.27	95.42	95.01	97.84

Source: IMMSA, 2021

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.

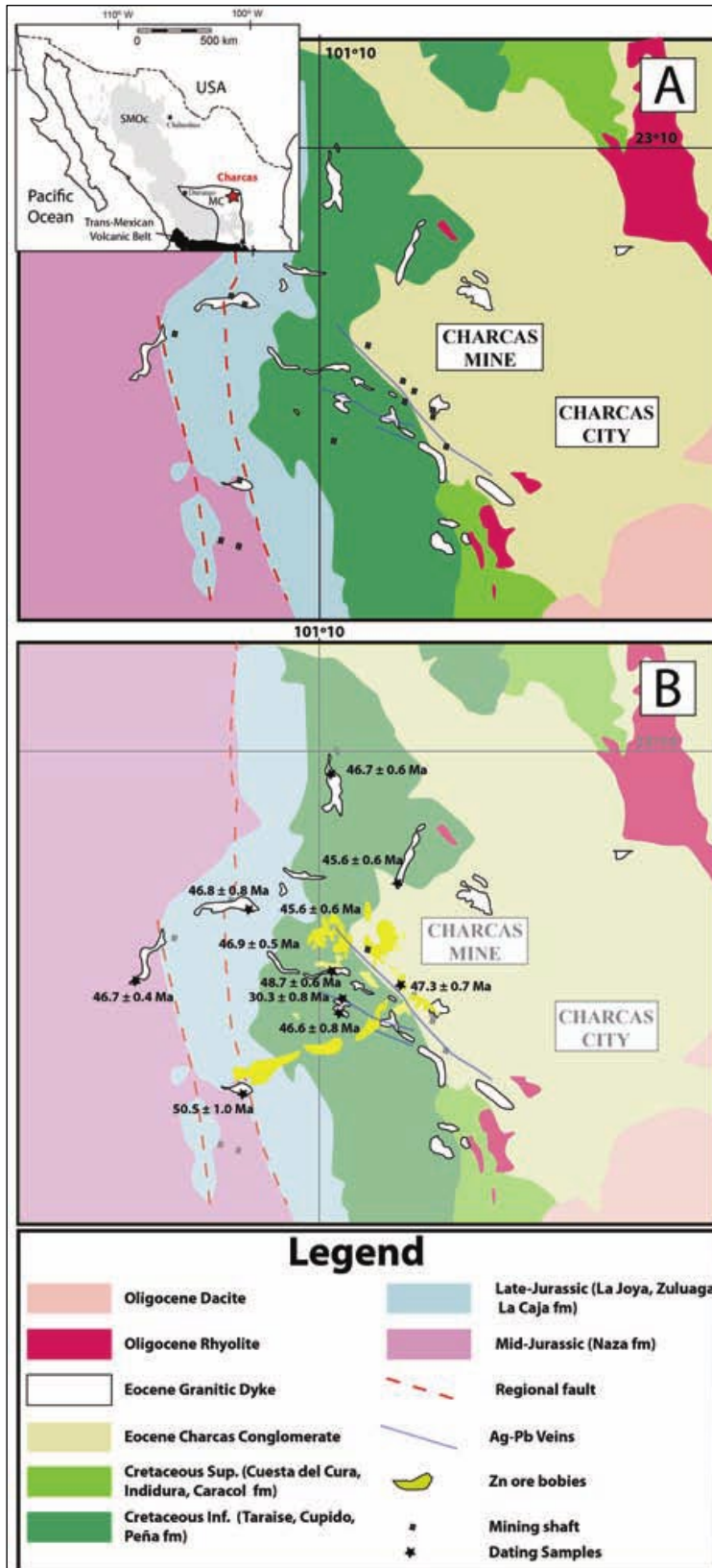
6 Geological Setting, Mineralization, and Deposit

6.1 Regional, Local, and Property Geology

6.1.1 Regional Geology

The Charcas mining district is located 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).



Source: Levresse et al., 2015

Figure 6-1: Regional Geology Map

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.

6.1.2 Local Geology

The Charcas district presents a complex magmatic history. The 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 located in this system.

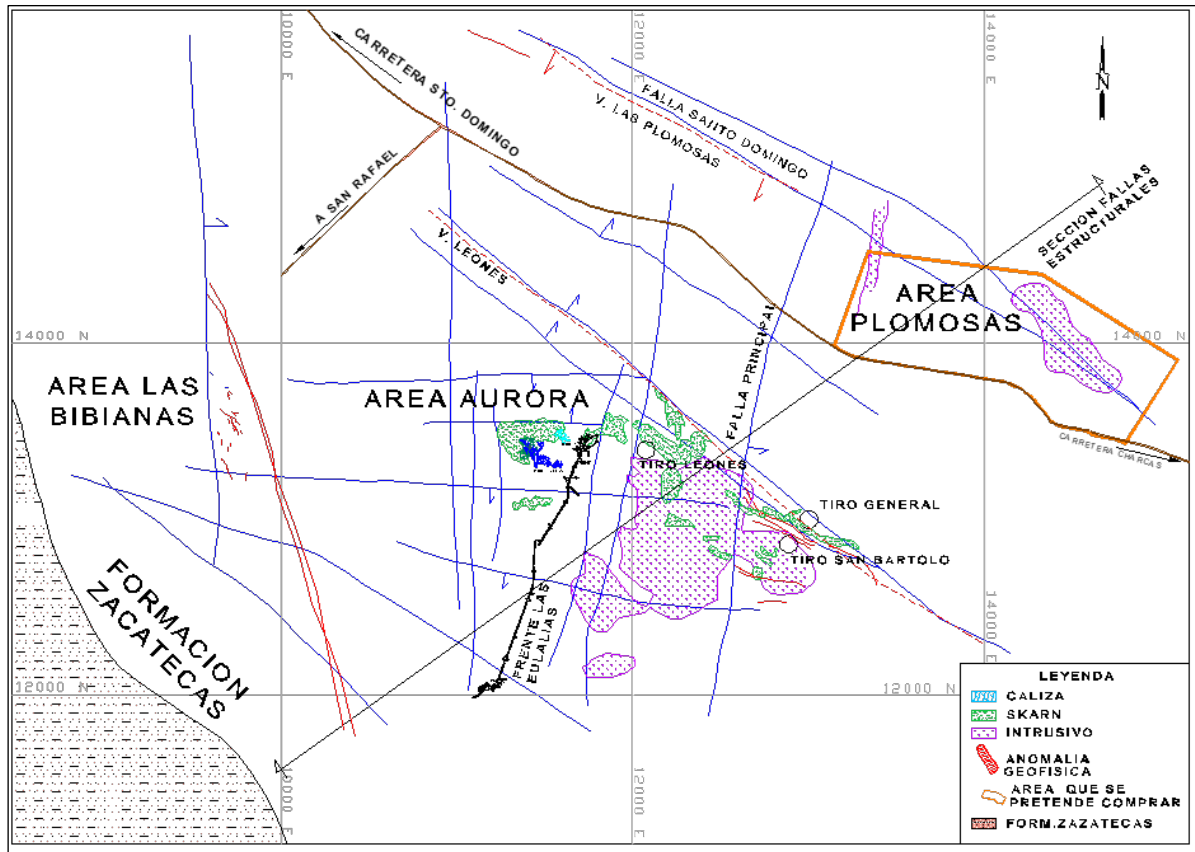
Sedimentary Rocks

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 conglomeratic 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

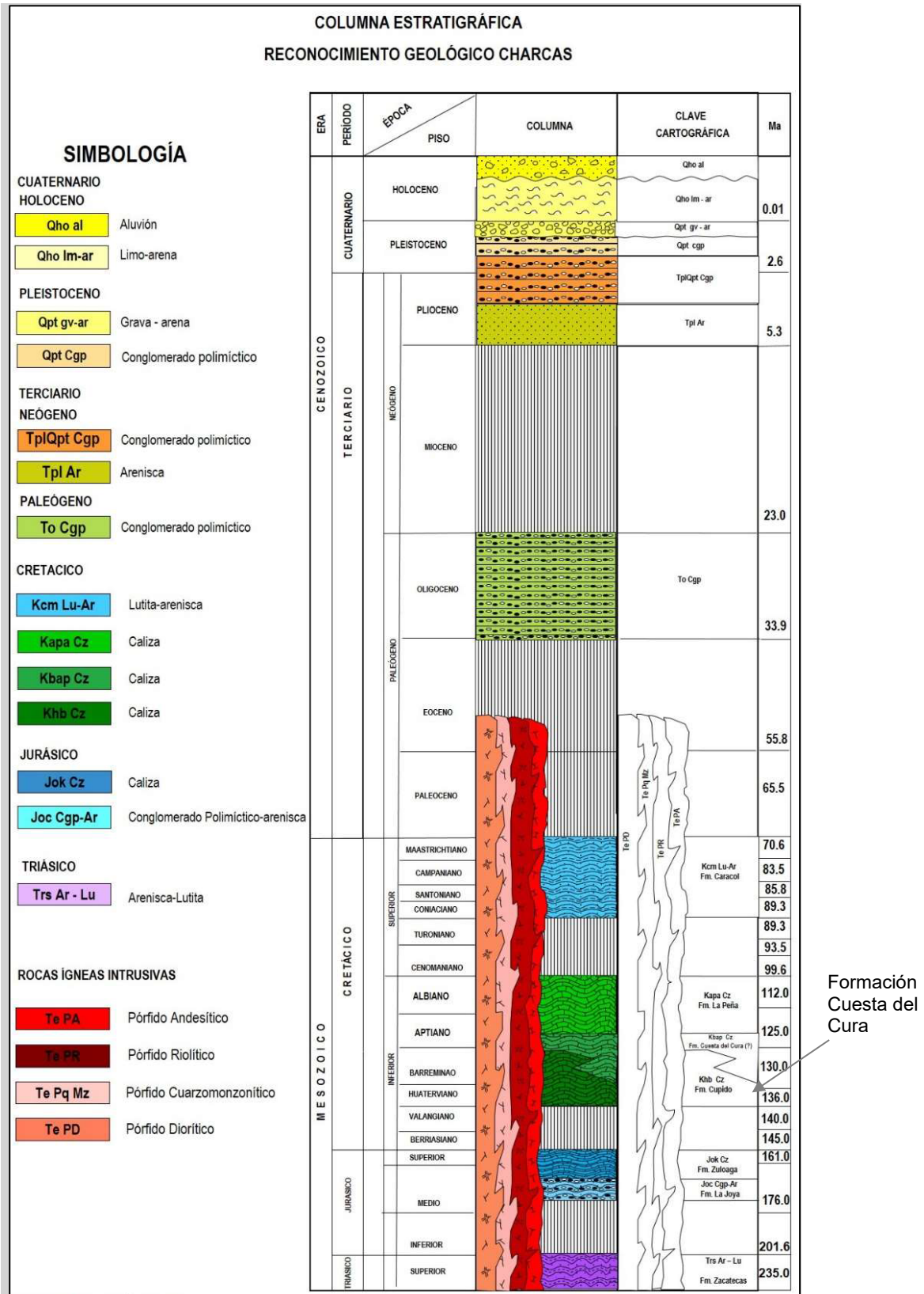
Figure 6-2: Charcas's Local Geology Map

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

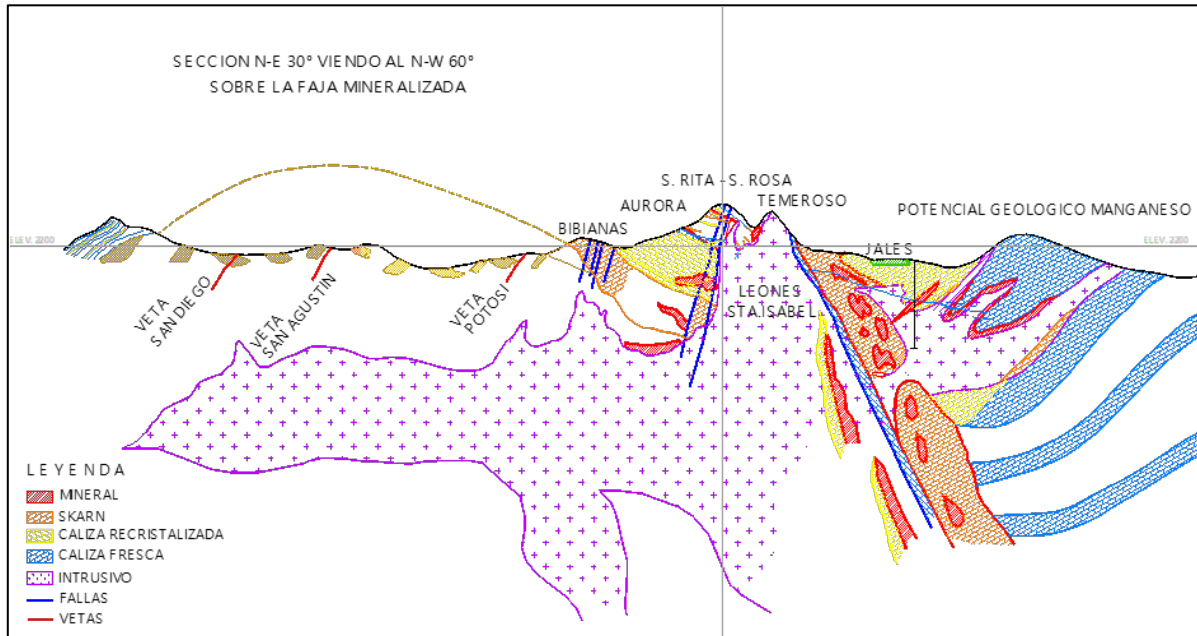
Volcanic rocks constitute isolated outcrops, forming plateaus with steep edges. Some of them are located to the east and south of the population of Charcas where they reach a thickness of between 150 and 200 m. They are made up of tuffs, lithic tuffs, rhyolitic tuffs, and a rhyolitic ignimbrite.

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: Vásquez et al., 2021

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. Vein Leones 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. 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.

Replacements occur as massive sulfide ore, breccia ore, 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 Charcas deposit, as currently known, extends 2.6 km west-northwest to east-southeast and 2.8 km north-northeast to south-southwest. Figure 6-5 and Figure 6-6 show the long sections of Cuerpo La Reina and Las Eulalias San Sebastian containing the mined zones and some resource blocks (2020), which provide an idea of the extension and irregularity of the mineralization in these two areas.

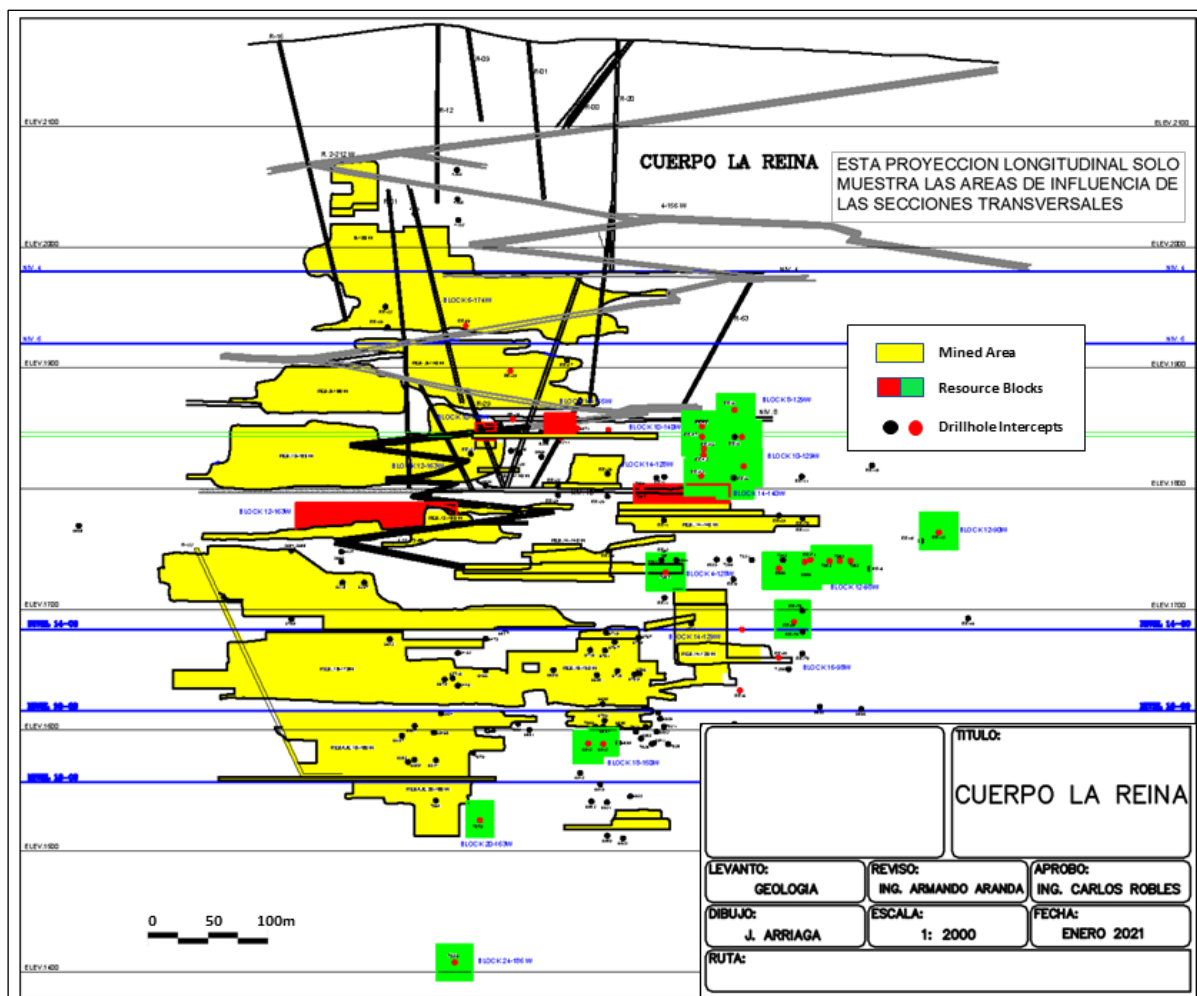
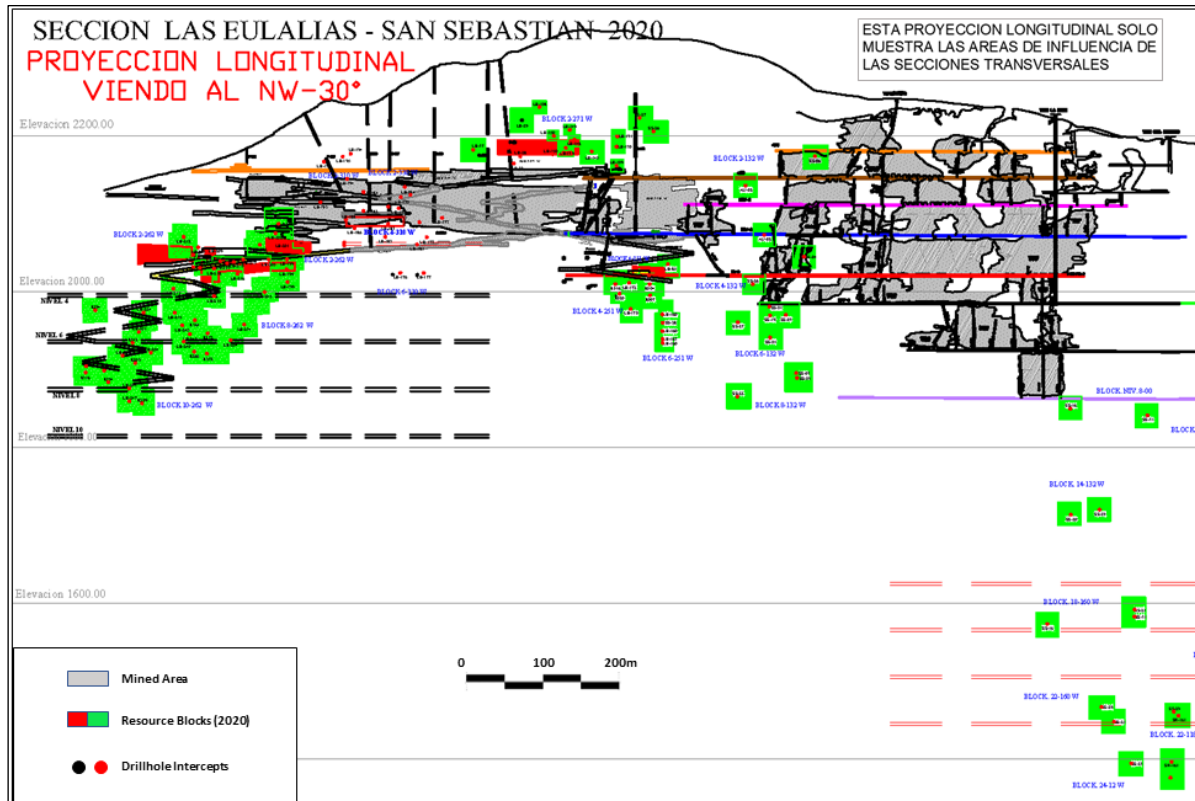


Figure 6-5: Long Section of Cuerpo La Reina



Source: IMMSA, 2021

Figure 6-6: Long Section of Las Eulalias – San Sebastian

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 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.

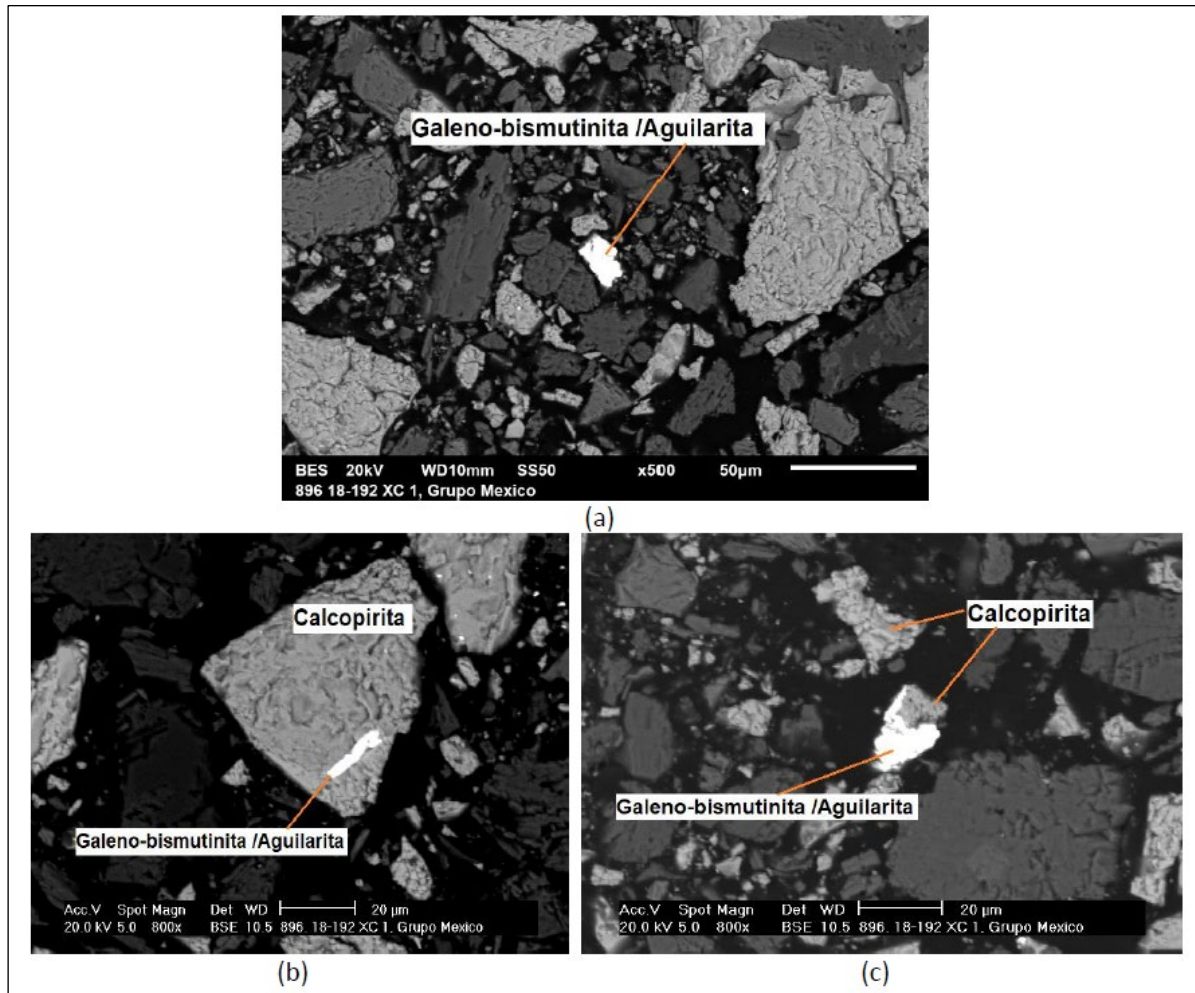
6.2.3 Paragenesis of Charcas

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

Figure 6-7 shows an image of electron microscope scan showing examples of minerals associated to the mineralization of lead, copper, and silver. Figure 6-8 shows the sphalerite/galena mineralization in a band found in a Charcas underground working.



Source: IMMSA, 2021

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

Figure 6-7: Galeno-Bismutinita/Aguilarita



Source: SRK, 2021

Figure 6-8: Photography of Sphalerite/Galena Mineralization in Charcas

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

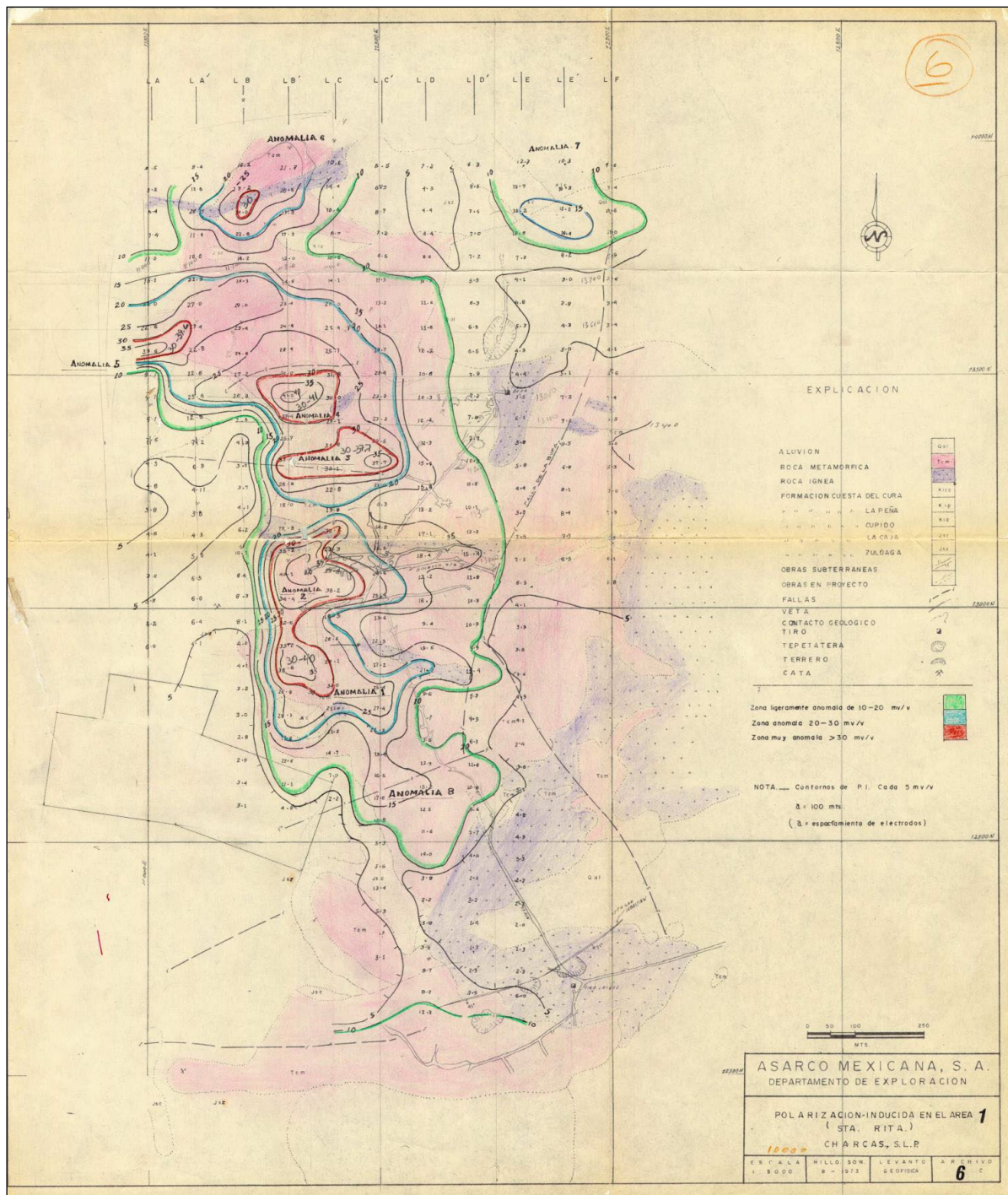
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Figure 7-1: Map Showing Location of Mineral Occurrences and Mineral Deposits Identified during the Geological Reconnaissance of Charcas

7.1 Exploration Work (Other Than Drilling)

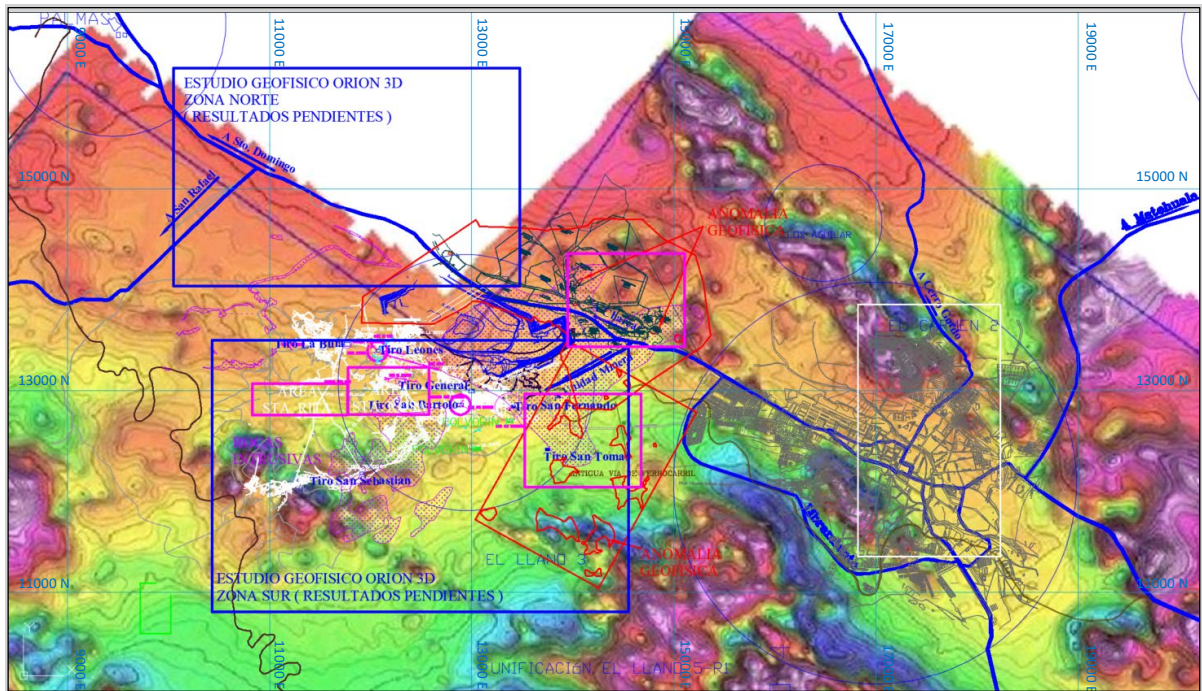
February 2022

Charcas's magnetic anomalies. 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.



Asarco, 1973

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



Source: IMMSA, 2016

Figure 7-3: Map Showing Magnetic Anomalies in the Charcas Deposit

7.1.1 Geological Reconnaissance (30,000 ha)

The study recognized a total of 56 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 tabular of hydrothermal range with mineralization of Pb-Zn-Cu-Au and Ag, 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. The study recommended additional 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 geo-reference (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 has not to date been stored in a single central database (which is considered best practice), which limits the current ability to integrate multiple sources of data into a geological model. The QP highlights that there is 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. New technologies provide more rapid methods to interpret and integrate data in 3D and have been recommended to IMMSA for integration into the mine systems. While these methods would 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

The rock samples from the underground workings are collected from the roof of drifts using long steel bars and hammer and chisel. Sample limits are defined by the geologists according to changes in mineralization and lithology and are collected approximately perpendicular to the mineralization controls (stratigraphy).

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

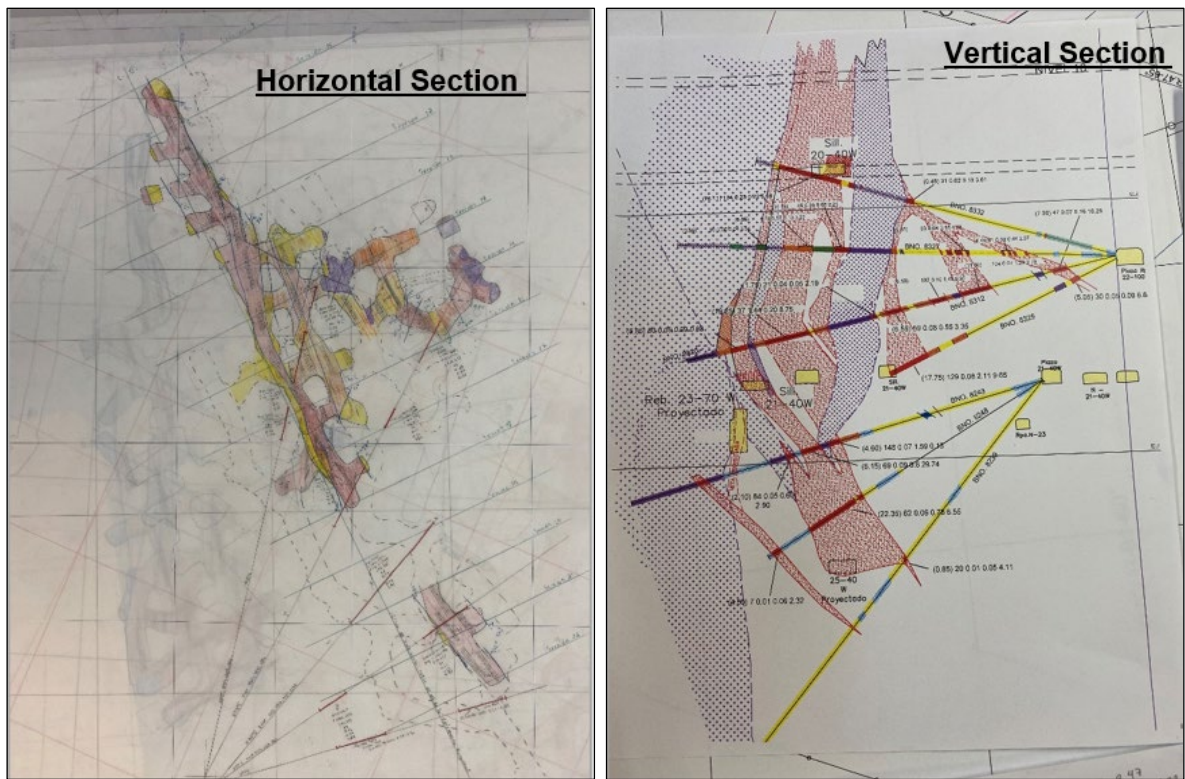
- Lithology
- Alteration (type, intensity, and mineralogy)
- Mineralization (styles, intensity, and mineralogy)
- Structures (description, aptitude, and mineralogy)

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. 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.

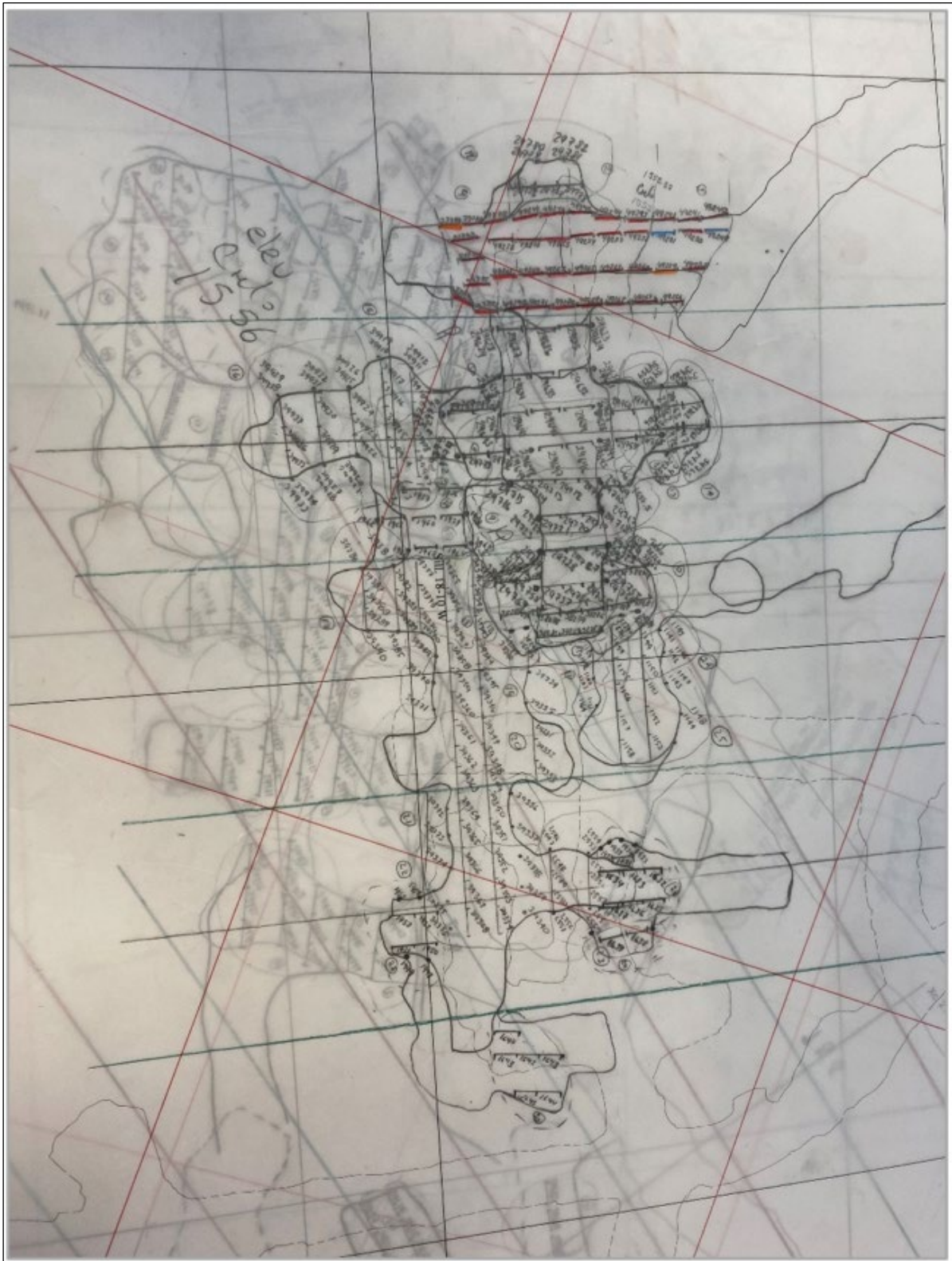
The sample channels are located using compass and tape from existing points located along the underground workings. The mine topography maps provided by the mine topography department are used to draw the geology interpretation (Figure 7-4), structure, and the horizontal projection of rock sampling lines (Figure 7-5). The complexity distribution of the mineralization is a distinctive feature of this deposit, and the integration of the interpretation sections and maps will be a challenge when

constructing a 3D geological model, despite the good quality and quantity of geological interpretation information.



Source: IMMSA, 2021

Figure 7-4: Example of Underground Geological Plan and Vertical Sections (Paper and Digital AutoCAD)



Source: IMMSA, 2021

Figure 7-5: Example of Channel Sampling Location Maps (Paper)

The QP considers that the procedures of rock sampling 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 uncertainty associated to the results.

The samples 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.

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 registered in Excel spreadsheets. For the historical sampling, the assays results were received in paper tables, and the geologists wrote by hand the results information directly into the maps and the resources/reserves supporting documents. The sample information in Excel contains information of the sample length and silver, copper, lead, and zinc grades. Lithology, alteration, and mineralization description are not included in the Excel spreadsheets, which are part of the data capture process 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 of the assays are appropriate for use in the estimation process.

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 2,000 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 in vertical, a new set of samples is collected from the roof of the stope, maintaining the density of the sampling, which are then used for the mineral resource updates.

7.1.5 Significant Results and Interpretation

Although the sampling methods and sample quality are not in-line with best practices, the results are 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.

The geological reconnaissance completed in 2021 identified 56 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.

7.2 Exploration Drilling

The 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 is in NQ and BQ core sizes but have not been downhole surveyed. 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. Figure 7-6 and Figure 7-7 show two underground drill rigs used by Charcas and the core boxes at a drill station.



Source: SRK, 2021

Figure 7-6: Drill Rigs Used by the Mine Geology Team in Underground Chambers



Source: SRK, 2021

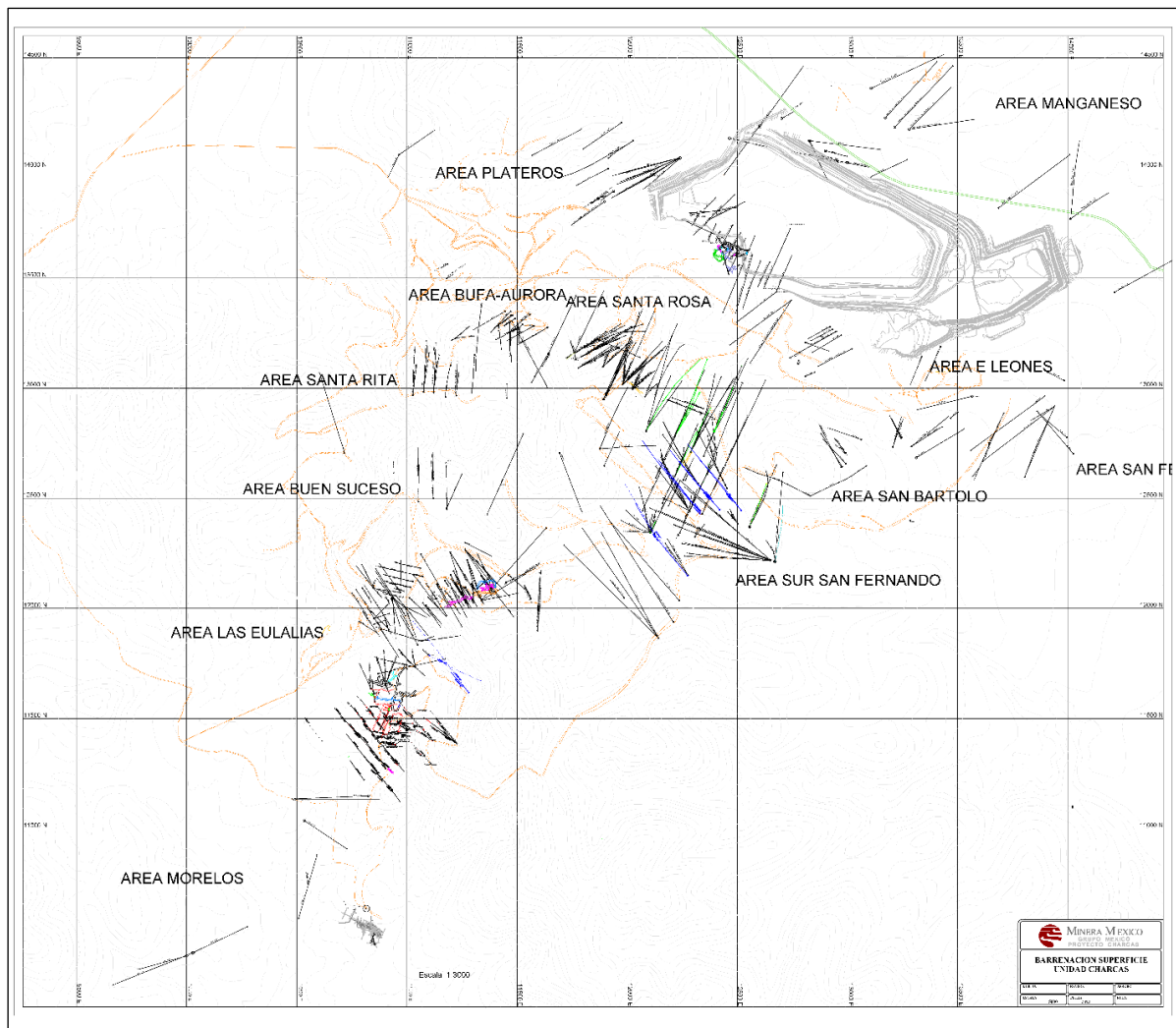
Figure 7-7: Drill Core Boxes Collected by the Mine Geology Drilling Department

All exploration and development have been completed by IMMSA under its current legal name or by the previous name, Asarco. The following is a brief summary for the past five 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 the area of las Eulalias. 21,200 m were completed by the operation from underground in Las Eulalias.

7.2.1 Drilling Type and Extent

Charcas has drilled at least 6,000 drillholes since the last century, but the real number is not clear due to lack of a historical drilling register stored in a central database. Figure 7-8 shows the location of a portion of the drillhole collars projected to the plan view. The database of drilling has not been completely digitized, and Charcas is in the process of creating a complete database with all the historical and recent drilling data. The current digitization is focused on information ahead of the current mining which will directly impact the mineral resource. At the time of reporting, the data capture is ongoing, and therefore the current estimates have relied on hard copies to validate the process and values in the estimates. To provide some context on the drilling coverage, the QP has shown the latest collar plots of the validated a captured data in Figure 7-8. The QP highlights to the reader that this is not the complete database but comments that it shows a reasonable level of coverage over the mine area. The data capture is due to be completed in 2022, with the fully integrated database to be used to generate future geological models and mineral resource estimates.



Source: SRK, 2021

Figure 7-8: Location of a Portion of the Drillhole Locations and Traces Completed at Charcas

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.

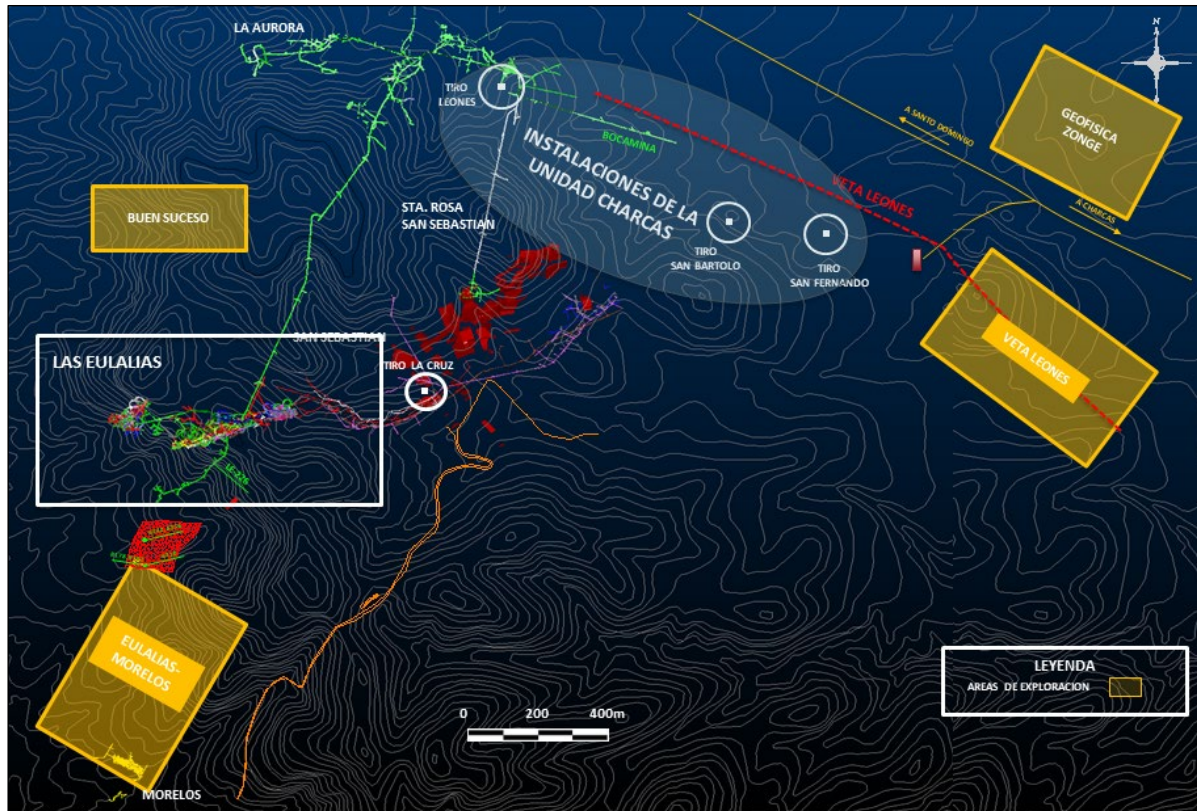
On completion of each drillhole, the collar location is surveyed and the downhole surveys are completed (recent drilling). The following information is recorded on paper drill log sheets:

- 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

During the 2021 review, there was no active complete digital database for Charcas. 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 historic mine geology drillholes are used in conjunction with the Tecmin (contractor) drillholes in the mineral resource estimation.

Since 2019, Tecmin 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 2021, the exploration department completed 39 drillholes totaling 14,673 m in Las Eulalias area (Figure 7-9) as part of the program to evaluate the mineralization structures and resources/reserves evaluation. This program included the collection of 3,673 core samples.



Source: IMMSA, 2021

Figure 7-9: Location of Las Eulalias Zone

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 will be needed. Assessment of the data gaps will be completed in 2022 on completion of the data capture to a digital database. 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 have been used to cut the core, and half of the core is collected in plastic bags and sent to the internal laboratory for chemical analysis (silver, copper, lead, and zinc). The remaining core of the sampled zones is stored at the operation complex. Small core pieces (10 to 20 cm) from the drillhole intervals that have been described as non-mineralized rock are stored.

For all the drilling completed by the operation, there is not an established internal QA/QC protocol.

Exploration Drilling

In addition to the drilling completed by the operation, the contractor (Tecmin) drilling is managed by the IMMSA exploration department for the last 3 years, totaling more than 10,000 m. This drilling includes downhole surveying every 50 and 20 m. For these activities, IMMSA's 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 Tecmin 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 7-10 presents the core logging area of the Charcas exploration department.



Source: SRK, 2021

Figure 7-10: Core Logging Room of the Exploration Department in Charcas

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 description (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, core logging, and sampling are registered in paper formats for all the historical information. Logging includes both descriptive information and a graphical log, with assay information updated once received (Figure 7-11). The hard copies of the drilling logs are physically stored in the Charcas mine geology office, and the digital information has to be compiled and organized according to a data capturing protocol that defines the data codification and formatting. The QP conducted a site inspection to review the hard copies of the logging and completed sufficient levels of checks to consider the data sources to be reasonable to form the basis for use in the mineral resource estimate.

INDUSTRIAL MINERA MEXICO, S.A. UNIDAD CHARCAS BARRENO No. 8413 HOJA 1

MINA SAN BARTOLO ELEV. 1,340.52 DIAMETRO 80 GEOLOGIA MAPA A 1:5000 BUREAU
UGAR Y. 35-70 W RUMBO S 5° 18' 45.96" W INICIADO 24 - AGOSTO - 2021 OPERACION DE MINA 262 MAG. 112764
COORD. N. 12, 888.02 INCL. - 56° 37' 11" TERMINADO 18 - MAYO - 2021 TOPOGRAFIA J. CORREA CORTISET
COORD. E. 12, 864.36 LONG. 209.00 W PLANO 1:1000 SECCION 1:1500

ENSAYES DE LODOS						LITOLOGIA	RECUPERACION		DESCRIPCION GRAFICA	MINERALIZACION	ENSAYE MUESTRAS					
INTERVALO	PESO	Ag.	Pb.	Cu.	Zn.		INTERVALO	%			INTERVALO	% REC	Ag.	Pb.	Cu.	Zn.
0.00											42	0.26	0.33	0.64		
1.00											25	0.14	0.14	1.40		
3.00											46	0.17	0.22	1.82		
5.00											16.8	0.80	0.36	1.05		
7.00											8.7	0.22	0.41	1.09		
9.00											20.0	0.72	0.17	1.00		
11.00											13.4	0.02	0.21	0.48		
13.00											15.4	2.40	0.08	1.14		
15.00											16.15	0.75	0.01	0.85		
17.00											18.0	6.85	10.3	0.06		
19.00											19.4	1.40	0.87	0.02		
21.00											20.35	1.35	5.1	0.00		
23.00											23.0	2.75	6.8	0.14		
25.00											24.55	1.55	11.0	0.01		
27.00											25.1	0.55	4.1	0.46		
29.00											29.0	1.90	8.4	0.01		
31.00											29.0	2.00	11.4	3.14		
33.00											31.0	2.00	4.8	0.01		
35.00											33.0	2.00	3.8	0.08		
37.00											35.0	2.10	13.8	0.17		
39.00											37.0	3.0	0.00	0.43		
41.00											39.0	4.8	0.21	0.53		
43.00											41.0	15	0.04	0.06		
45.00											43.0	2.7	0.12	0.11		
47.00											45.2	2.9	0.00	0.40		

Source: IMMSA, 2021

Figure 7-11: Diamond Drilling Core Logging Sheets as Used by Charcas Exploration Department

The logging formats include the zinc, lead, copper, and silver grades. Part of this information is in digital format, and Charcas personnel estimated that there are approximately 500 drillholes that have not been digitized, including the digitizing and creation of their collar, survey, assays, and lithology tables.

Specific gravity measurements are taken every 50 m according to changes of lithology, and mineralization characteristics are being taken by the exploration team using the Archimedes principle. The specific measurement results have not been used for the current resource estimation because these measurements are collected in areas surrounding the main part of the deposit. It is the QP's opinion that the use of a single density value for the Charcas project represents a moderate risk to the estimation of the total tonnage, and local fluctuations are likely expected. The risk is only considered moderate, as the current assigned density of 3 t/m³ is based on the mining production which has been established over a long period of time.

7.2.3 Drilling Results and Interpretation

The historical drilling information, which supports most of Charcas's mineral resources, have been completed without the inclusion of QA/QC controls. There is no complete database, which would facilitate quantifying the number of drillholes and evaluate core recovery and downhole surveying of drillholes. According to databases of some locations, part of the drilling completed by the Charcas operation included downhole survey measurements using the Reflex multi-shot equipment at variable intervals of 30, 50, and 100 m. The Giro equipment has been used since 2016. Historical drilling (before 2000) was completed without downhole surveys. The lack of a QA/QC protocol and the existence of drillholes without downhole surveys 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 the partial underground drilling completed by operations have downhole surveys.

Core recovery is not an issue according to the information provided by Charcas, and recent drilling has shown core recoveries above 90%. Old drilling technology used for part of the historical drilling could have been an issue during the previous century.

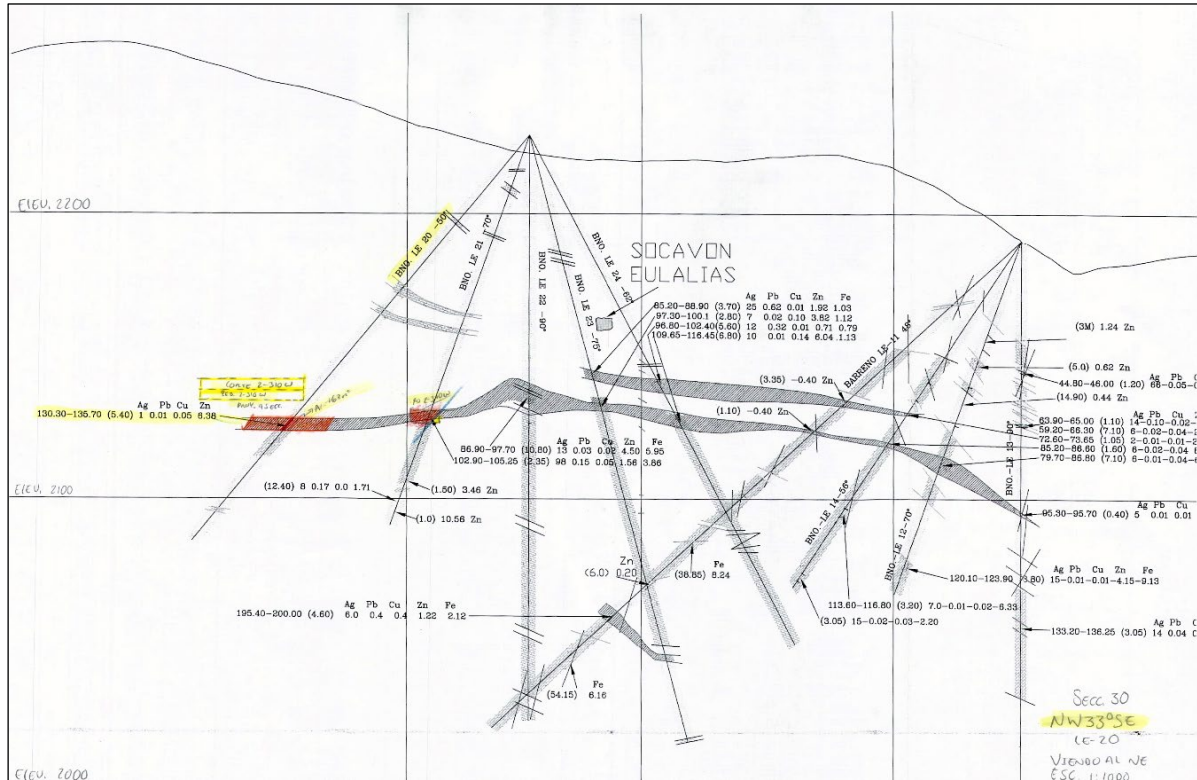
The drilling campaigns have been carried out by the operation using TT46 (historical drilling), NQ to BQ size core, which are considered reasonable. However, it is recommended to implement the use of HQ to obtain a bigger core sample. HQ and NQ drilling diameters are more specifically related to exploration drillholes completed by Tecmin in the recent years.

The operation 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.

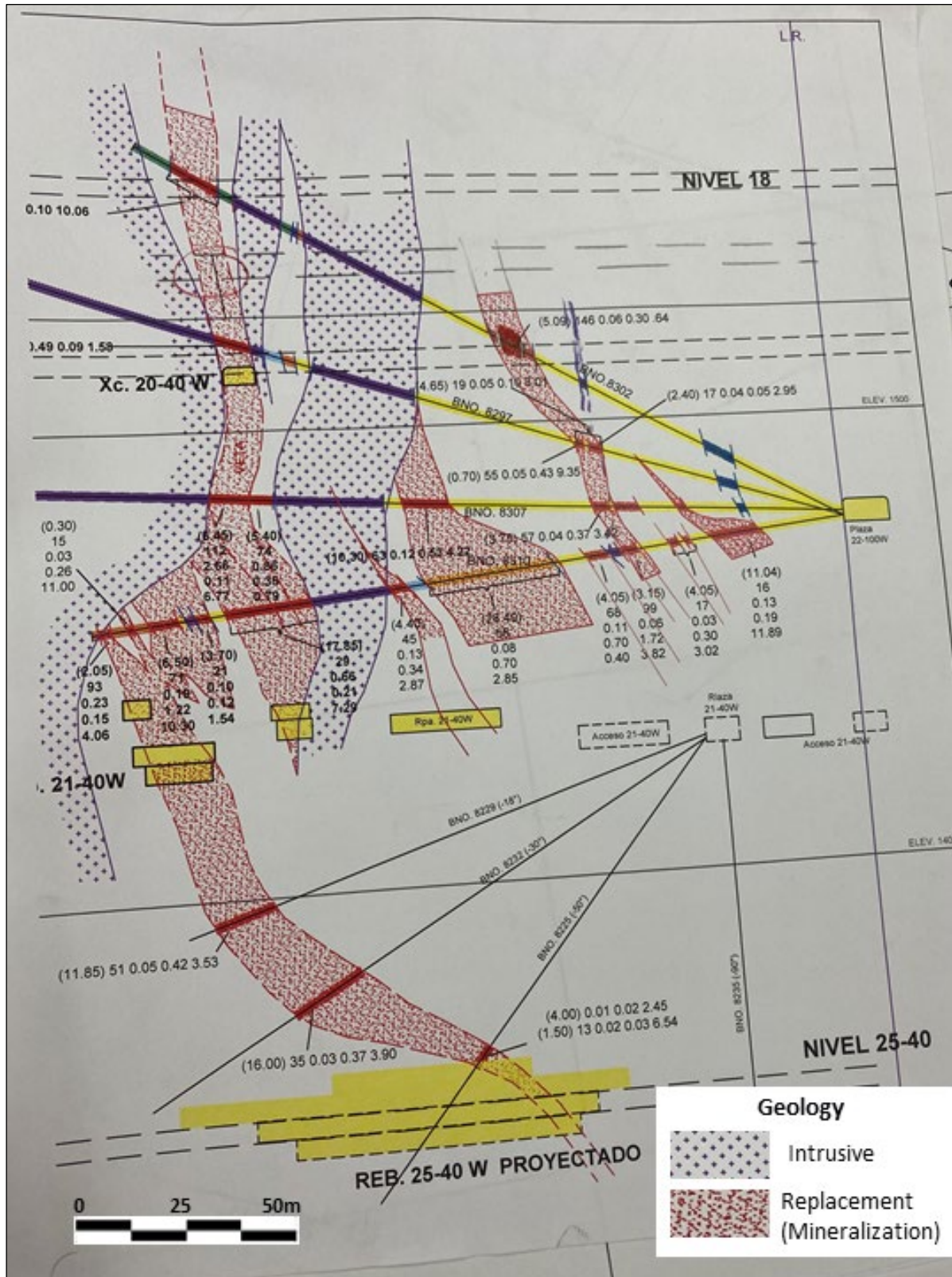
Drillholes are orientated as perpendicular as possible to the mineralization controls (stratigraphy and veins). The mineralization is irregular and variable; thus, variable dipping drilling is required (Figure 7-12). In extreme cases, the angle of the intersection to the mineralization can be shallow, but Charcas attempts to minimize the number of instances. Figure 7-13 shows the intersection angles

relative to the interpreted geology in a vertical section, including the completed and programmed drilling. 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. The variable drilling inclination is acceptable considering the geology of the deposit.



Source: IMMSA, 2021

Figure 7-12: Example of a Mineralization Interpretation in a Vertical Section, Including the Core Sample Results



Source: IMMSA, 2021

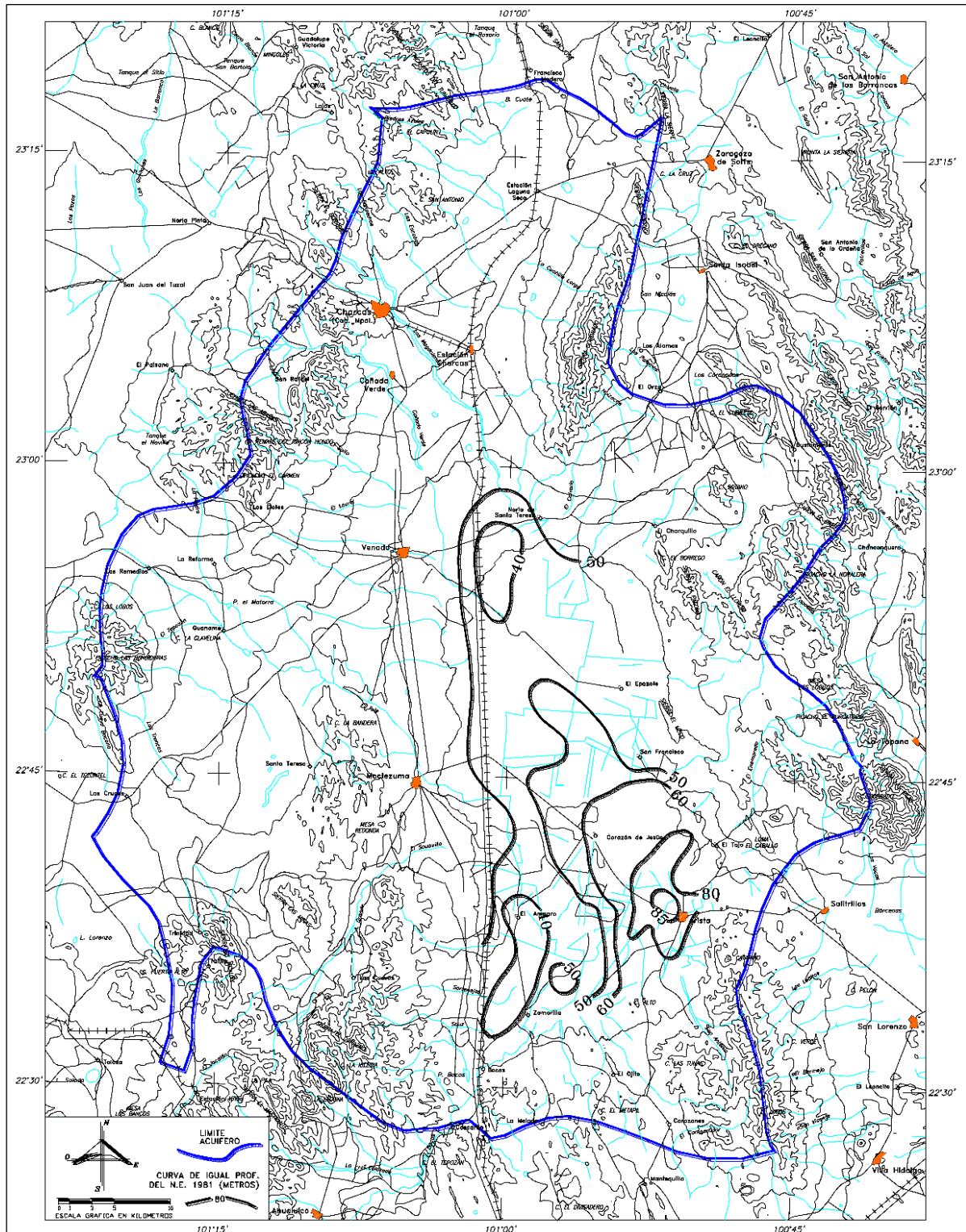
Figure 7-13: Example of a Geology Interpretation in a Vertical Section, Including Completed and Programmed Fan Drilling

The information of drilling in conjunction with channel sampling and geological interpretations from underground workings mapping is consolidated in plan and vertical sections. 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 7-14 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 7-14: 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 0.36×10^{-3} to 5×10^{-3} square meters per second (m^2/s), with the majority of values between 2.5 and 4×10^{-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 considered to be 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 $102,445,448 \text{ m}^3$ 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 $-54,245,448 \text{ m}^3$ 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

A geotechnical logging/testing program is conducted by IMMSA at the operation. The methodology used in Charcas to classify the competence of rock masses was published in 1974 by Barton, Lien, and Lunde of the Norwegian Institute of Geotechnics. Q is defined by the following equation:

$$Q = \frac{RQD}{J_n} \times \frac{J_r}{J_a} \times \frac{J_w}{SRF}$$

RQD,	Modified Recovery index
J_n ,	# of set of fractures
J_r ,	Roughness degree of the fracture surfaces
J_a ,	Alteration degree of the fracture surfaces
J_w ,	Reduction factor due to presence of underground water
SRF,	Reduction factor due to existing stress types

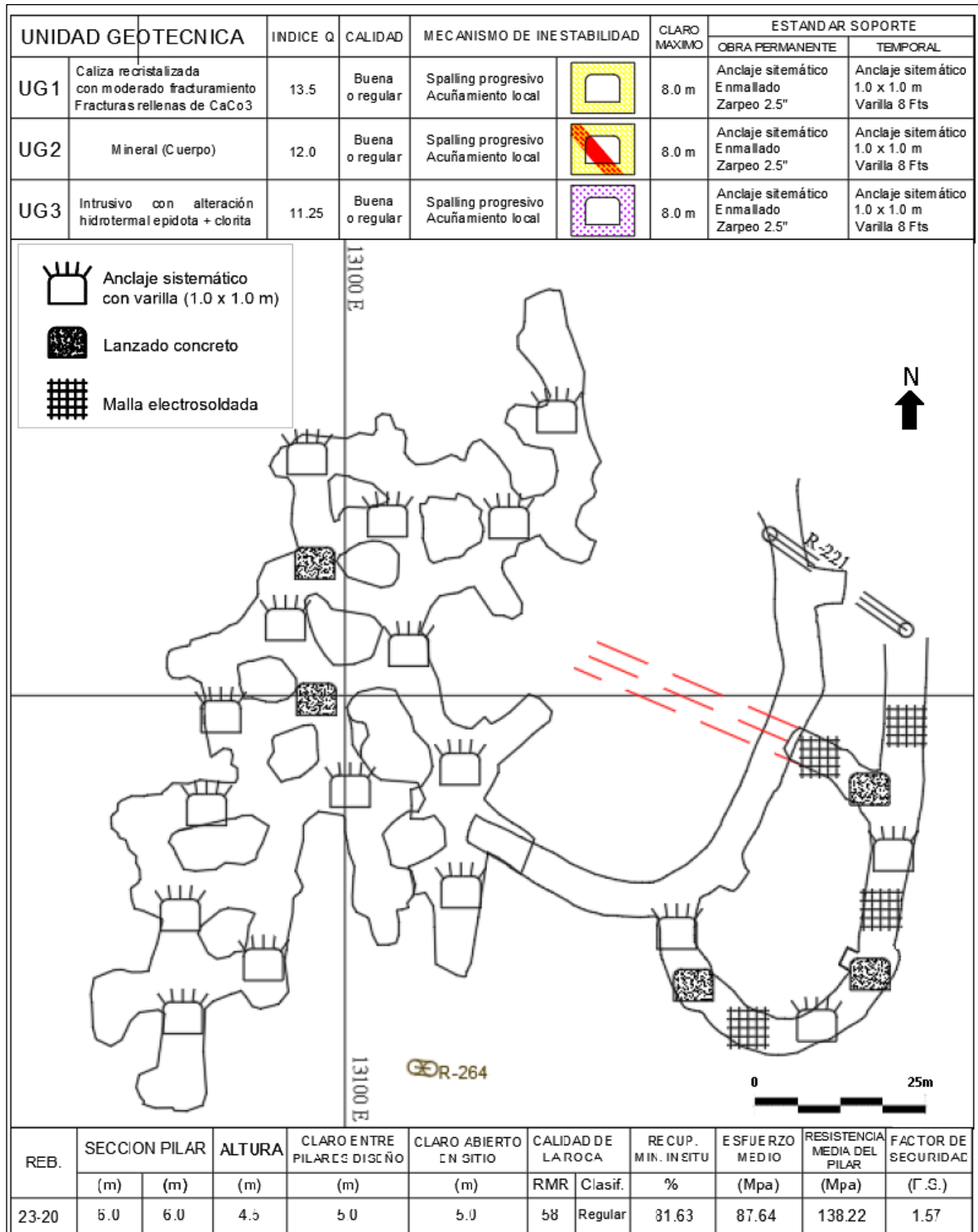
The geomechanical classifications are made by the windows method, performing these within the mining works, ramps, recesses, fronts, canyons, etc. Within these the RQD is evaluated. These windows are completed every 20.0 m and also when the rock characteristic changes in order to also be able to carry out the geotechnical units.

In addition, rock samples are taken from the different places or from the drilling core. Rock resistance tests are carried out with a PILT – 7 punctual tester (Figure 7-15), which can be compressive or punctual. Figure 7-16 presents the results of the geotechnical evaluation and the definition of the geotechnical management for an underground location.



Source: IMMSA, 2021

Figure 7-15: Punctual Tester PILT – 7 used at Charcas



Source: IMMSA, 2021

Figure 7-16: Example of the Geotechnical Evaluation of an Underground Location at Charcas

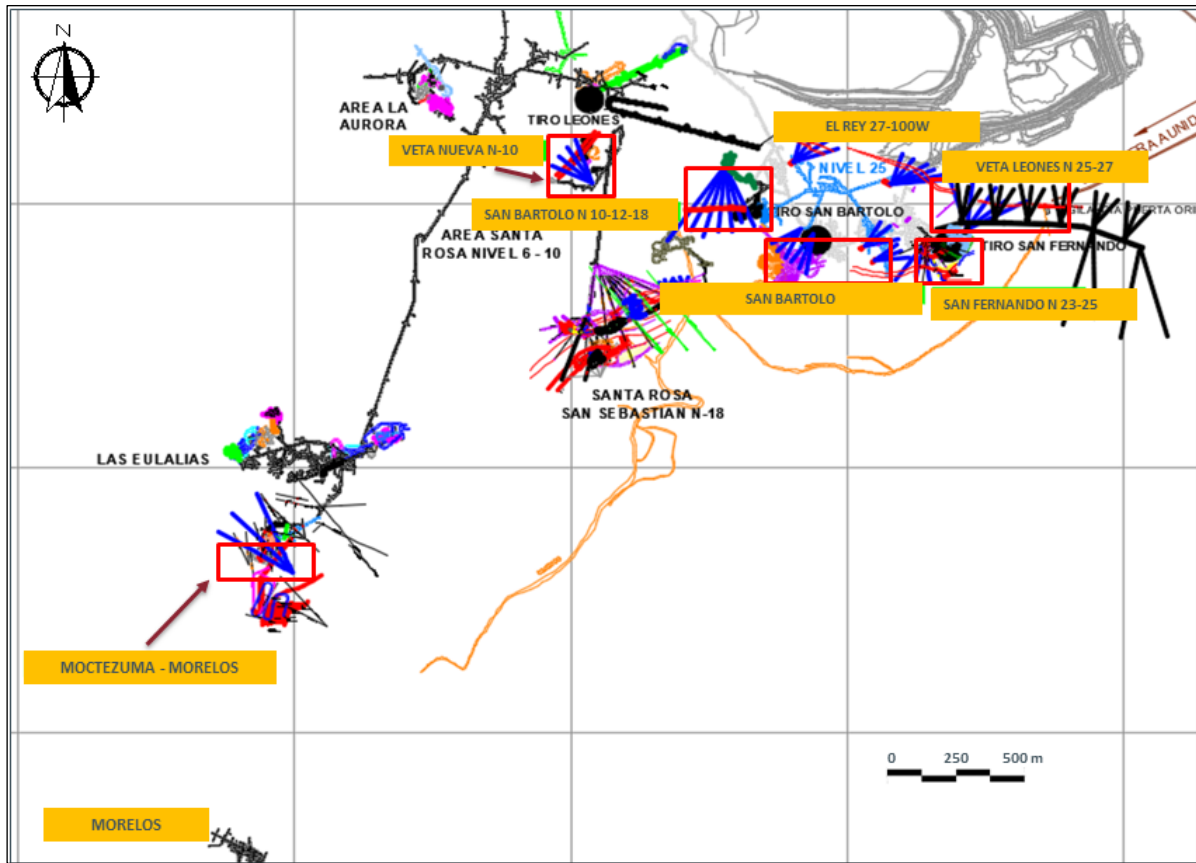
7.5 Exploration Target

Charcas's exploration team is working in the definition of extensions of the main deposit.

Charcas is planning (in the short to medium term) exploration with surface drilling of the continuity of the mineralization replacements in the Las Eulalias – Morelos zone, the continuity of the mineralization associated to intrusives in Buen Suceso zone located to the southeast of the operation, exploration of the geophysical anomalies (Zonge) found to the east of the operation, and exploration of the Veta Leones located to the southeast of the operation (Figure 7-9).

Charcas's 2022 drilling program from underground chambers (Figure 7-17) includes the following objectives:

- MOCTEZUMA – MORELOS: Explore the continuity of the of Las Eulalias in Levels 4 and 6.
- VETA NUEVA Level 10: Explore the continuity of the of Veta Nueva in Levels 10, 8, and 6.
- SAN BARTOLO Level 12: Explore the continuity of the orebodies associated to the intrusive in Level 12 towards Veta Bruno.
- SAN BARTOLO Level 18: Explore the continuity of the 18-40W body between Levels 18 and 16.
- SAN FERNANDO Levels 23-25: Explore the possible existence of the replacement bodies associated to Veta San Fernando in Levels 23 and 25.
- VETA LEONES Levels 25-27: Explore the continuity of the Veta Leones between Levels 25 and 27.
- EL REY 27-100W: Explore the continuity of the El Rey replacement close to Level 27.



Source: IMMSA, 2021


Figure 7-17: Location of Zones to Explore with Drilling from Underground Chambers

8 Sample Preparation, Analysis, and Security

8.1 Sample Preparation Methods and Quality Control Measures

Trained staff were involved at all stages of the sampling, sample packaging, and sample transportation process. After geological logging and sample selection, the core was split in half longitudinally using an electric core cutter. Core pieces were placed in the cutter machine and cut following the cut line marked by the geologist. The core splitter was used historically. Half of the core was assayed, and the other half was stored in the core box to be available for future assaying or relogging of core.

The sample was 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. 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 Igual que datos del reporte <input type="checkbox"/>	
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	País: MEXICO Código Postal: 11000		
Reportar a: Edgard Iván Rodríguez Hernandez	Email 1: _____		
Nombre de la compañía: INDUSTRIAL MINERA MEXICO	Email 2: _____		
Teléfono: (486) 85 2 14 03	Destino de la muestra <small>(a menos que otra cosa se indique, el almacenamiento será cobrado)</small>		
Dirección: Primer de Mayo N°137	Rechazos Pulpas		
Ciudad: Charcas Provincia/Estado: S.L.P.	<input checked="" type="checkbox"/> Regresar después 30 días <input checked="" type="checkbox"/> Regresar después 30 días		
País: MEXICO Código Postal: 78590	<input type="checkbox"/> Disponer después 30 días <input type="checkbox"/> Disponer 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"/> Pagar después de 30 días <input type="checkbox"/> Pagar después de 30 días		
Email 2: arcadio.marin@mm.gmexico.com PDF <input checked="" type="checkbox"/> XLS <input checked="" type="checkbox"/> CSV <input checked="" type="checkbox"/>	Regresar con atención a: _____		
Email 3: romeya_38@hotmail.com PDF <input checked="" type="checkbox"/> XLS <input checked="" type="checkbox"/> CSV <input checked="" type="checkbox"/>	Dirección de regreso: _____		
Email 4: _____ PDF <input type="checkbox"/> XLS <input type="checkbox"/> CSV <input type="checkbox"/>	Paquetería: _____		
El reporte final y la factura serán enviados en PDF por email. Para términos y condiciones de SGS consulte: http://www.sgs.com/en/Terms-and-Conditions.aspx .			
Núm. de cuenta: _____			

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.	Preparación	Análisis (Códigos analíticos de SGS o elementos)	Elementos de interés
324357	324434 (LE-280)	78	ARCHIVO ADJUNTO	GE_FAA313	ORO
			ARCHIVO ADJUNTO	GE_ICP14B	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

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Source: IMMSA, 2021

Figure 8-1: Laboratory Submission Sheet Example

8.2 Sample Preparation, Assaying, and Analytical Procedures

8.2.1 Density Analysis

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/m³ for decades.

The exploration department (Tecmin) has been collecting density measurements; however, these data are collected outside of the mining area and are therefore not representative. The exploration department has the following process for density analysis:

1. Sample location and cut:
 - Draw hole trajectory.
 - Write down 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.
2. Wash the sample with water to remove residues.
3. Dry the sample in an electric oven or in sunlight if an oven is not available.
4. 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).
5. Weigh the dry sample (P).
6. Waterproof seal the sample with an appropriate material (take into account 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.
7. Weigh the sample in purified water (preferably), and take the data (P_Agua).
8. Wash the sample and reincorporate it into the core from where it was collected.
9. 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 was recorded in the Tecmin 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. Increasing the size of the density database to confirm the current density values used should be considered a priority for 2022 by the Company.

8.2.2 Sample Preparation, Internal Laboratory

The internal laboratory prepares the core and the channel samples and assays all of the samples collected by the mine geology. 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

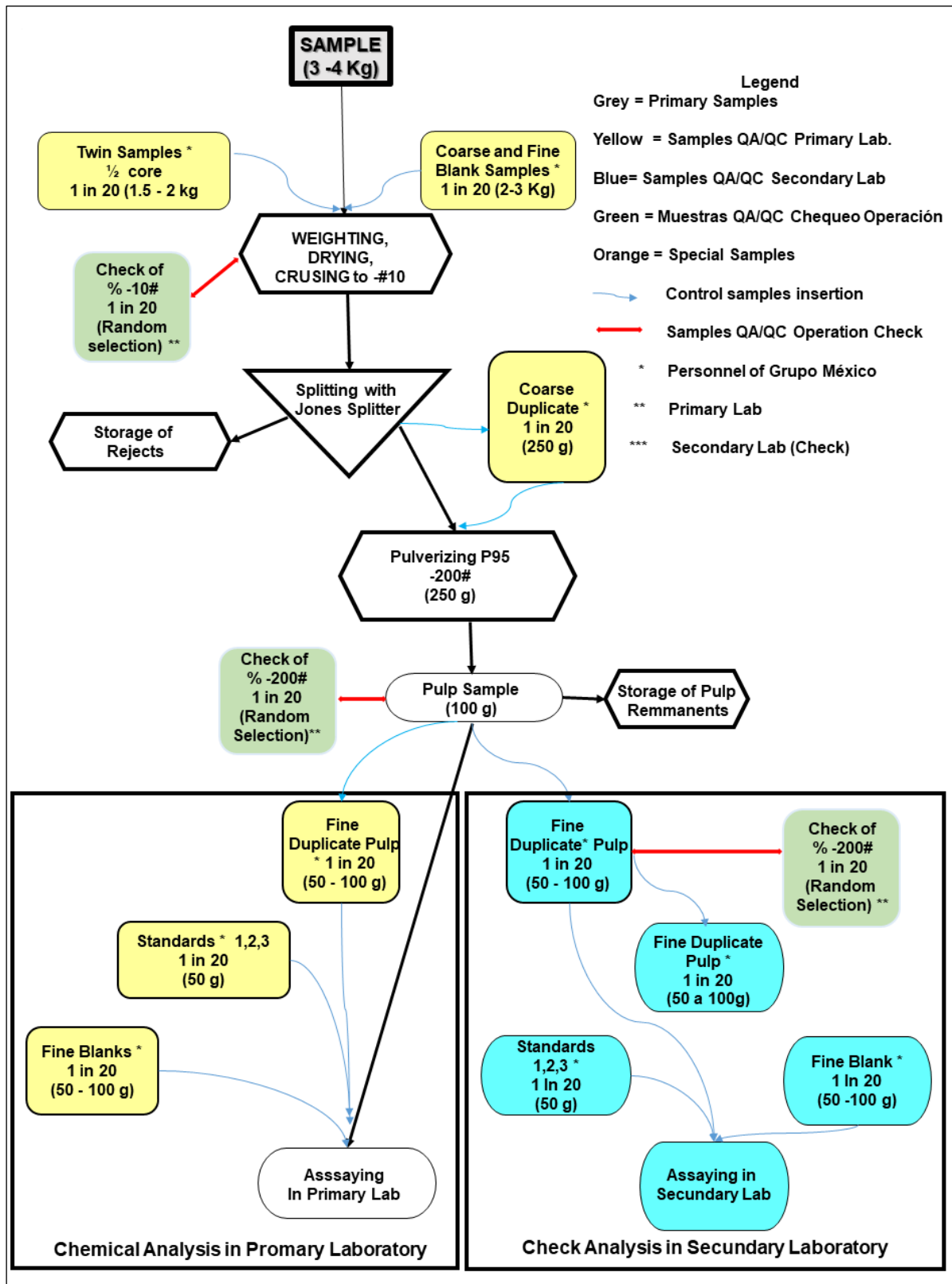
out of date, this represents a minimal risk as the procedures used in the latter half of 2021 will follow the same procedures. SRK recommends that IMMSA obtain an updated certification for 2022.

The laboratory follows 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

Figure 8-2 shows the flow chart of the preparation process and QA/QC controls using during the process in the internal laboratory. The internal laboratory uses fine duplicates, certified reference materials, and blanks during the preparation process and sends pulps to a secondary laboratory as part of the quality control procedure.



Source: IMMSA, 2021

Figure 8-2: Flow Chart of Sample Preparation (Internal Laboratory)

8.2.3 Chemical Analysis, Internal Laboratory

The following chemical analyses are used at Charcas's internal laboratory, 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.

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. 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 (cm³) 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_ICP14B:** 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 (HNO₃), and hydrochloric acid (HCl)

- **GE_FAA515 Au:** Au analysis by 50-g fire assay with atomic absorption spectrometry (AAS) finish (Au: 30 g, 50 g; HNO₃; HCl) (Detection limits 5 to 10,000 parts per billion Au)
- **GO_FAG515 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_ICP90Q:** 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 (Na₂O₂)) (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 insolubles.

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 (internal 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

Historically and recently, the mine geology department has not implemented QA/QC protocols for its drilling and rock sampling activities, which is not in-line with the best industry practices and represents a potential source of uncertainty in the estimates. Given the lack of QA/QC information, the QP has relied on reconciliation data to assess the level of confidence in the database. Section 9.1 of this report discusses this process in more detail.

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

Figure 8-3 shows the core storage facility. The condition of the core boxes is not adequate and should be improved.



Source: SRK, 2021

Figure 8-3: Core Storage at Charcas (Mine Geology Department)

Exploration Department

The exploration department in charge of exploration of the surrounding areas of Charcas and satellite deposits has a QA/QC protocol, which includes the following controls:

- Core duplicates to control systematic errors of sampling
- Coarse and fine blank controls to detect possible contamination during crushing and pulverization. This material should be barren of the elements of economic interest. In this case, a silica sand was used for pulp blanks, and volcanic gravel material (1/4 inch) silica was used for the coarse blanks.
- Coarse and fine duplicate controls to evaluate precision of the procedure (subsampling)
- Certified standard reference materials (CSRM) (low, medium, and high grade) to measure accuracy

Control samples were inserted under the following criteria:

- Before and after each mineralized zone or with high mineralization in either Zn, Pb, Cu, or Ag, control samples of the fine and coarse blanks type are inserted.
- Inside or outside mineralized zones and in areas with or without economic values, CSRM controls were inserted with high, medium, and low values based mainly on expected Zn grades.
- Fine and coarse duplicate samples were used in mineralized areas and in zones with or without economic values at the discretion of the geologist.
- Twin samples (core duplicates) were used in mineralized zones and in zones with or without economic values at the discretion of the geologist.

The results of the different controls are in tables and evaluated using scatter plots for the duplicates and charts produced by IMMSA to show the performance of the blanks and standards. Table 8-1 presents the quantity of primary samples and controls used in 2021.

Table 8-1: Control Samples, Exploration Department Drilling 2021

Type of Sample/Control	Number of Samples	Percentage of Total (%)
Fine blank	126	4
Coarse blank	127	4
CDN-ME 1410	35	1
CDN-ME 1414	50	1
CDN-ME 1606	39	1
Fine duplicate	27	1
Coarse duplicate	30	1
Core duplicate	36	1
Primary sample	3,061	87
Total	3,531	100

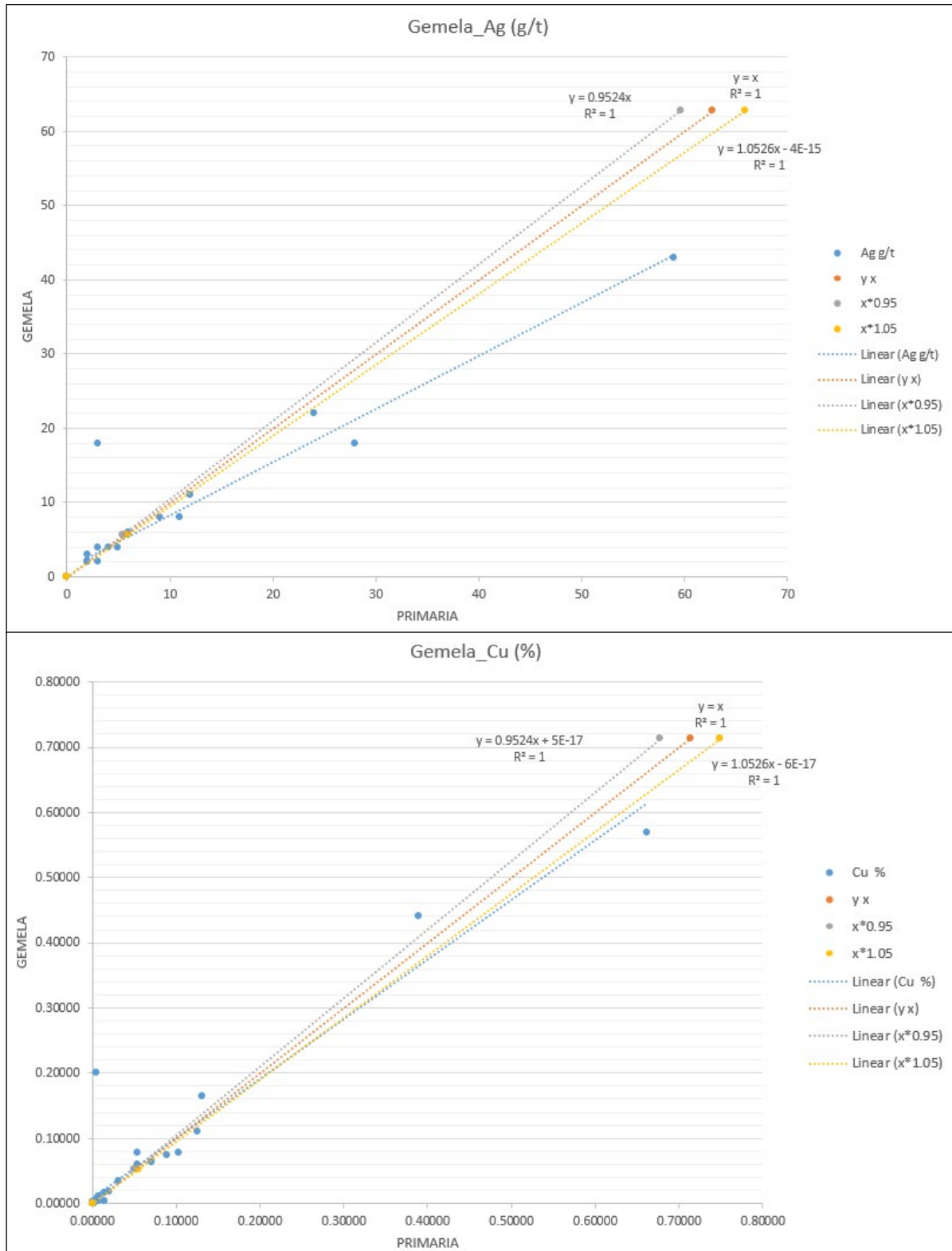
Source: IMMSA, 2021

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

- **Duplicates:** Duplicates use an acceptability level of $\pm 5\%$ relative error range from the 45-degree line (scatter plot) for core, coarse, and fine duplicates. Checks outside of these acceptability ranges are considered failures, and if 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. SRK recommends using an acceptability range of $\pm 10\%$, $\pm 20\%$, and $\pm 30\%$ relative error for the fine, coarse, and core duplicates, respectively. Figure 8-4,

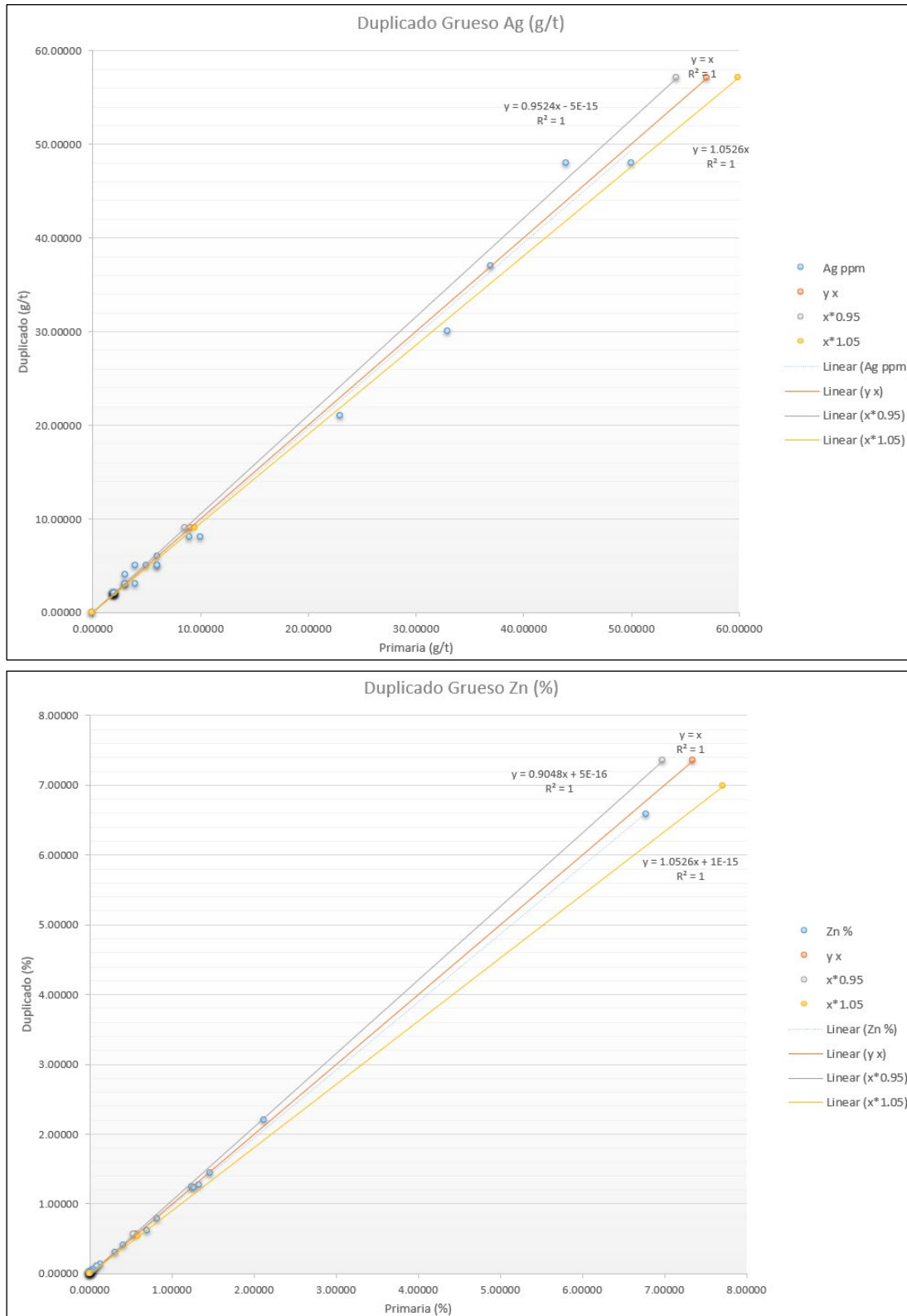
Figure 8-5, and Figure 8-6 show the scatter plots of the results of the core, fine, and coarse duplicates sent by IMMSA in 2021. In general, the results are reasonable.

- **Blanks:** There is contamination when the assay results are above five 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 8-7 and Figure 8-8 show the graphs of evaluation of results of the fine and coarse blanks. There is variability in the results, showing failures in some elements. This failure may be due to the use of a siliceous sand material, which is not completely barren. This is an aspect Charcas's exploration team should review and take the appropriate measurements.
- **Second laboratory checks:** Charcas's exploration team is not using second laboratory checks (Tercerías). SRK recommends sending pulps of part of the assayed samples to a third commercial laboratory as part of the QA/QC protocol. The internal laboratory sends these types of controls as part of its internal protocol.
- **CRSM:** The CRSM 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 8-9 presents the graphs showing the results of the CRSM control (CDN-ME-1606), which indicate that all the elements are inside the acceptability range (mean ± 3 SD).



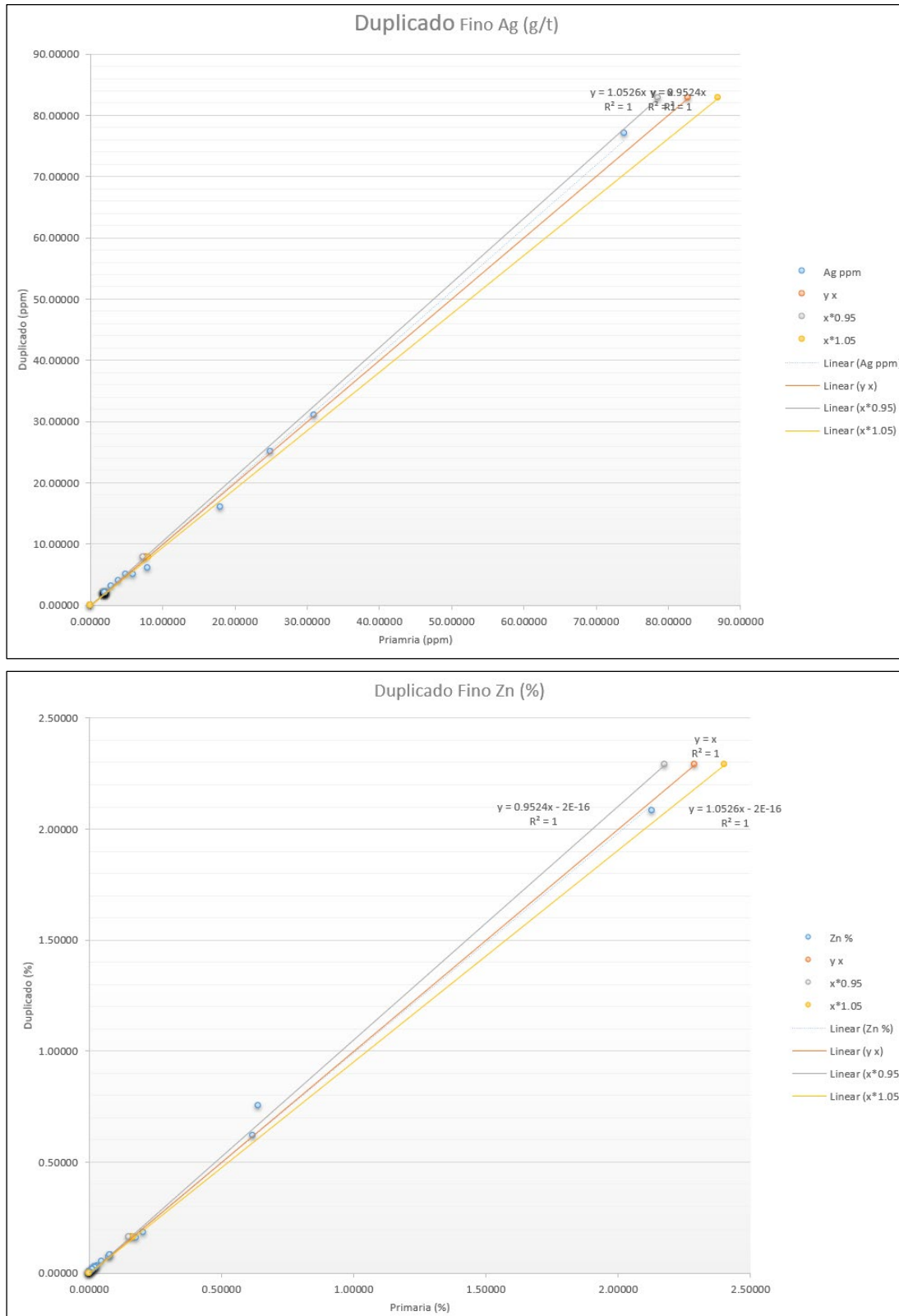
Source: IMMSA, 2021

Figure 8-4: Graphs showing the Results of the Core Duplicate Controls (Ag and Cu)



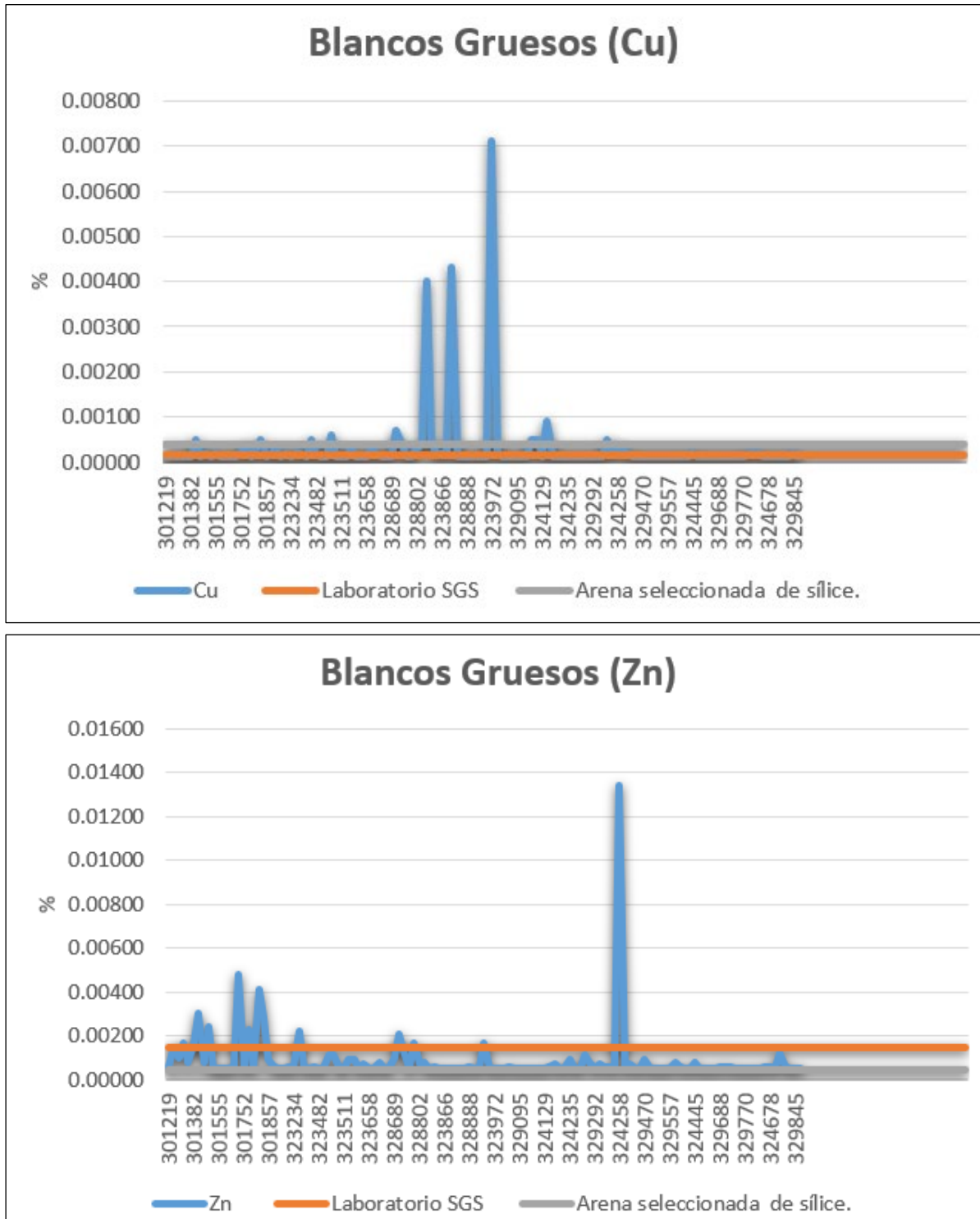
Source: IMMSA, 2021

Figure 8-5: Graphs showing the Results in Scatterplots for Coarse Duplicate Controls (Ag and Zn)



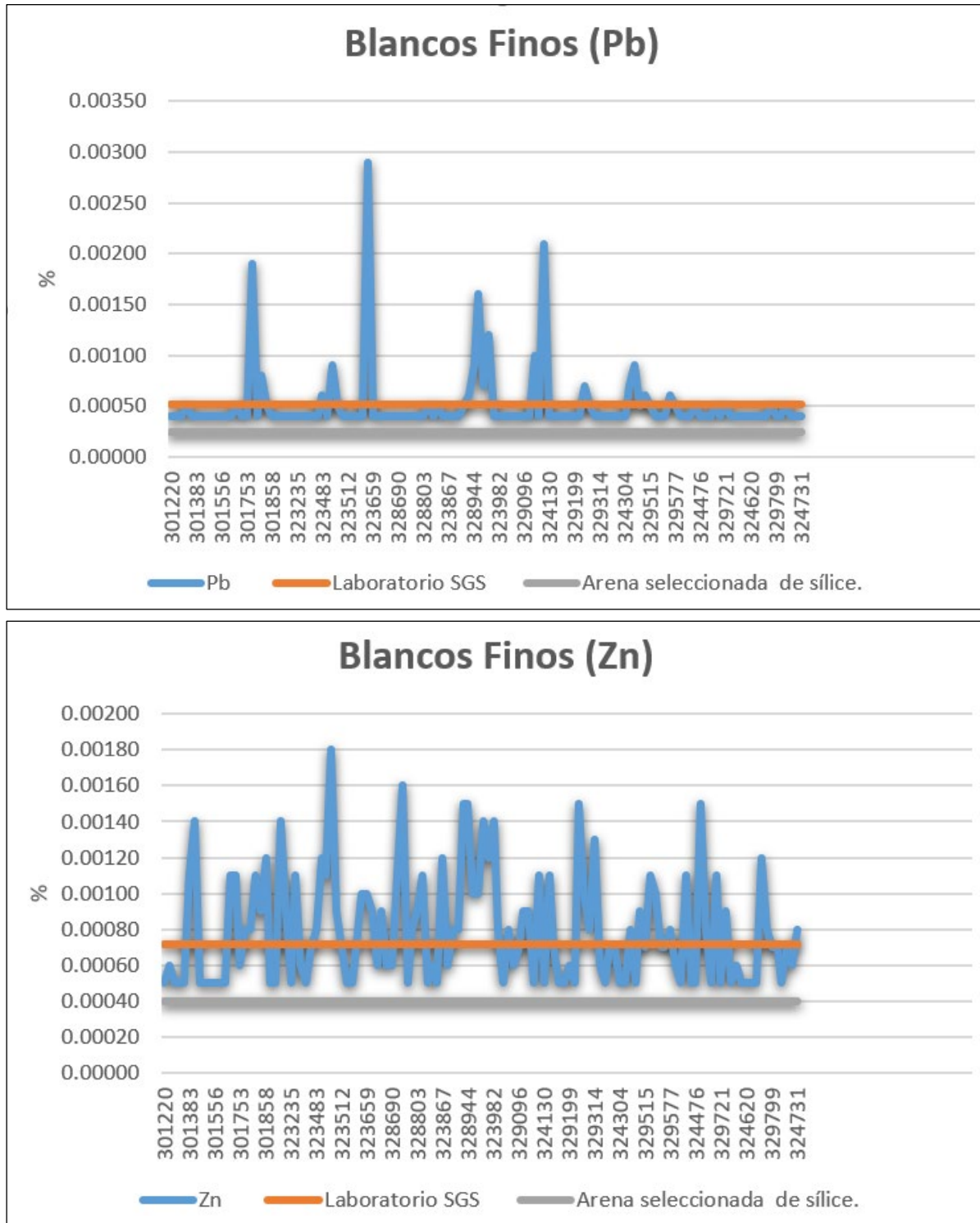
Source: IMMSA, 2021

Figure 8-6: Graphs showing the Results in Scatterplots for Fine Duplicate Controls (Ag and Zn)



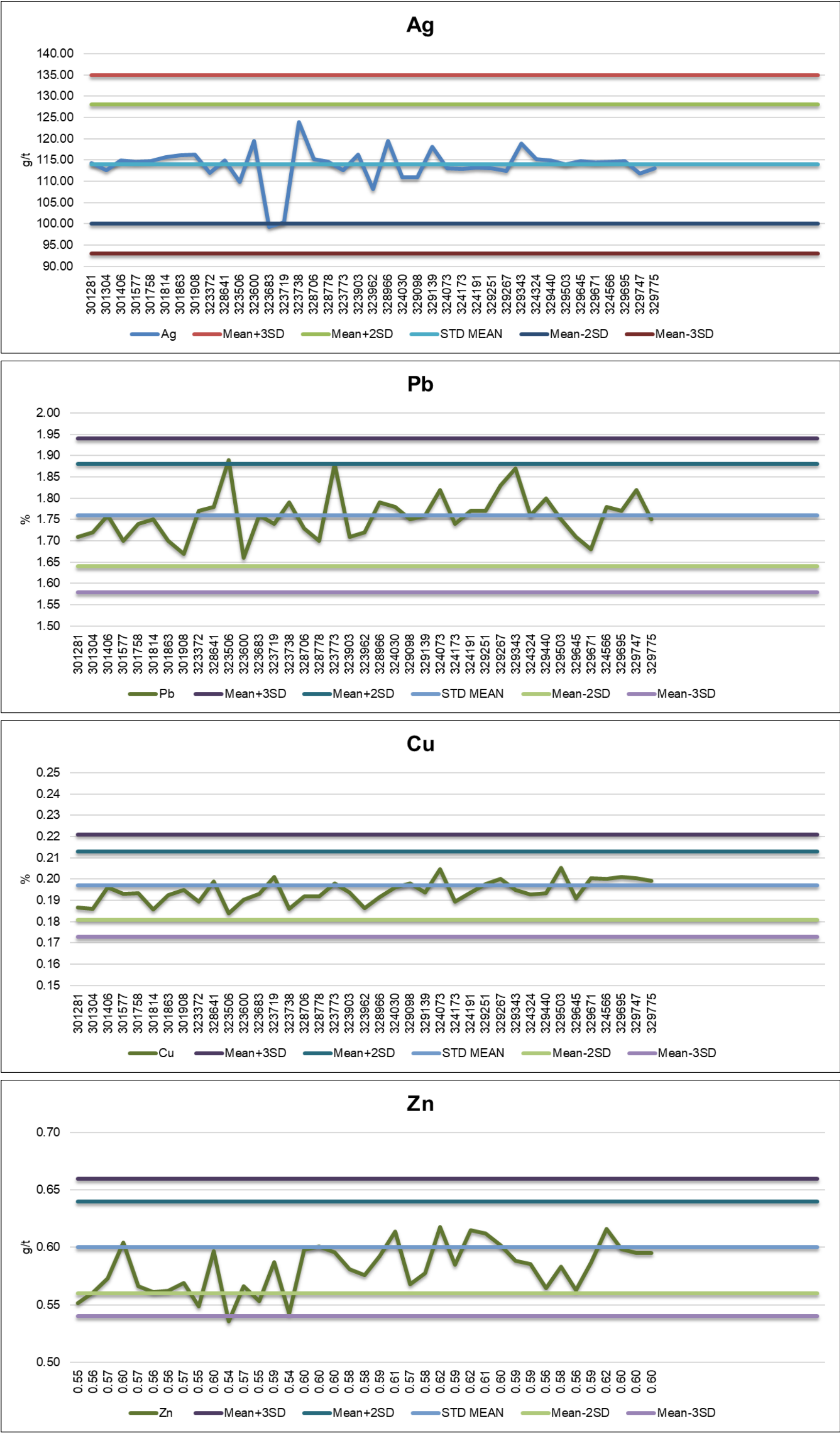
Source: IMMSA, 2021

Figure 8-7: Graphs showing the Results of the Coarse Blank Controls (Pb and Zn)



Source: IMMSA, 2021

Figure 8-8: Graphs showing the Results of the Fine Blank Controls (Pb and Zn)



Source: IMMSA, 2021

Figure 8-9: Graphs showing the Results of CDN-ME-1606 (Ag, Pb, Cu, and Zn)

8.4 Opinion on Adequacy

Charcas's mine geology and exploration departments' security of the drilling and channel sampling is considered adequate.

The mine geology department has not implemented quality controls for the samples collected from drilling and rock sampling from underground workings, which SRK considers out of line with industry best practices and represents a source of uncertainty for the data collected by the mine geology department.

The exploration department has procedures for drilling and core sampling, which SRK considers in-line with industry best practices. SRK recommends the inclusion of second laboratory controls (Tercerías) periodically (every 3 months) and the review of the acceptability ranges for fine duplicates (10%, 20%, and 30% relative error for fine, coarse, and core duplicates). The results of the blanks show many failures, and it is recommended to review the materials used as blanks and work with the laboratory to manage this aspect.

The procedures of chemical analysis and protocols of Charcas's internal laboratory and SGS are broadly 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 current procedures of sampling and QA/QC of Charcas's mine geology department are 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.

In order to get to a level of confidence in the sampling information, SRK has relied on information presented from the mining operation to determine potential risk. The current mineral resource of the Charcas project relies on the quantity of data (drilling and rock channel sampling) collected during the history of the operation. The long history of the mining operations, which started during the first part of the last century, provides support to the historical data based on the recognized performance of the Charcas operation for 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 a number of data verification processes during the course of 2021. The verification process included the following activities:

- SRK QPs visited the Charcas project three times between June and December 2021. The purpose of the site visits was to:
 - Complete an underground site inspection and to recognize the geology and the mineralization controls
 - Review geological plans and sections to validate information used by IMMSA to generate grade estimates
 - 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 in hard format to the Excel files used to generate the grade estimate
 - Review of historical data supporting the reserve calculations
 - Collection of core samples and chemical analysis of available stored core. The validation sampling included 81 samples collected from 18 drillholes.

9.1.1 Results of the Validation Samples

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 core remains available at the mine. The selection of the drillholes was limited to the core available and does not provide a spatial coverage of the entire operation supporting the current mineral resources. It is the QP's opinion that this process provides a validation on the protocols being used.

SRK's QP completed a review of the available core and notes that IMMSA should review the current practices to improve the core storage facility. Issues noted by SRK are not limited to but include a lack of organization of box storage and poor stacking of core boxes.

Upon completing the review, 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.

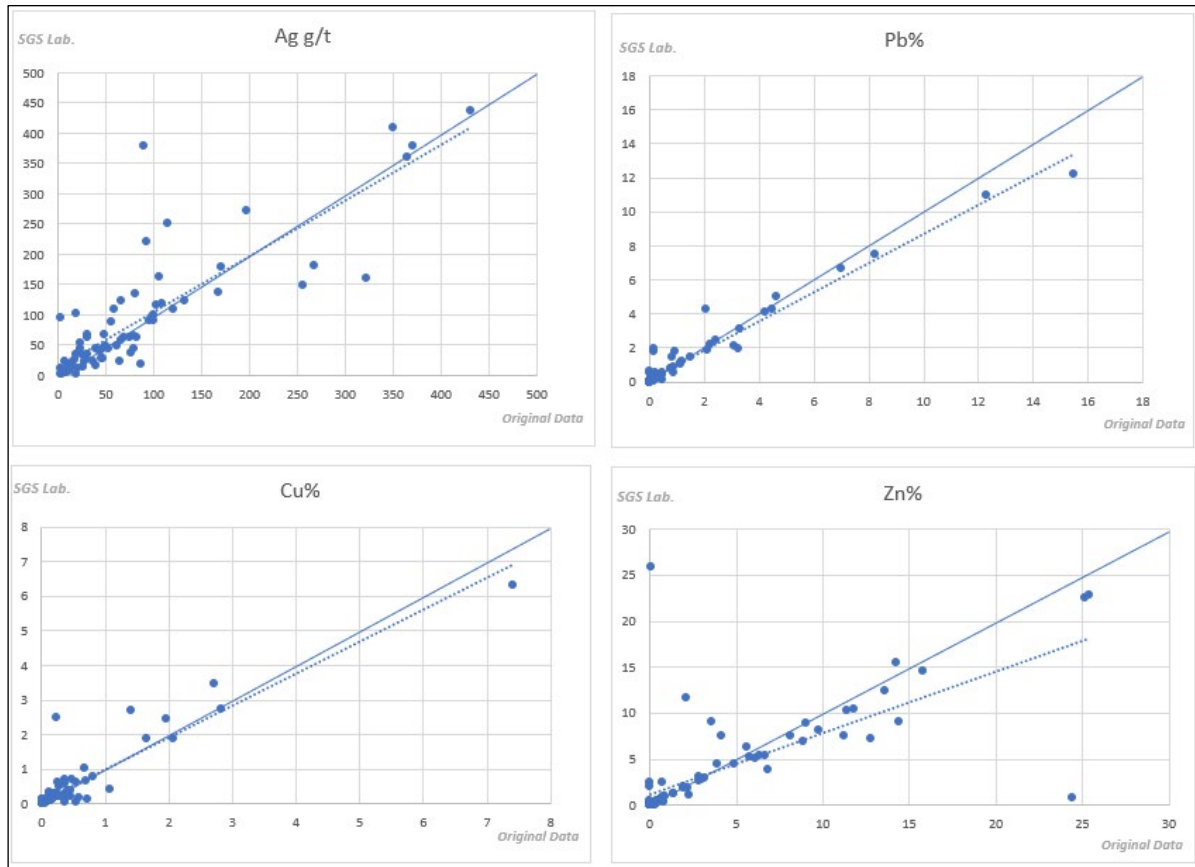
Table 9-1: Table of Validation Samples, SGS and Charcas's Original Data

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
LE-150	142.40	145.40	3.00	7.00	0.16	0.01	0.17	7.00	1.81	0.01	0.15
	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
LE-172	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
	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
LE-177	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
	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
SR-161	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
	478.20	479.85	1.65	255.39	0.11	2.06	1.34	149.00	0.16	1.89	1.28
SS-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
	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
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 compares 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.

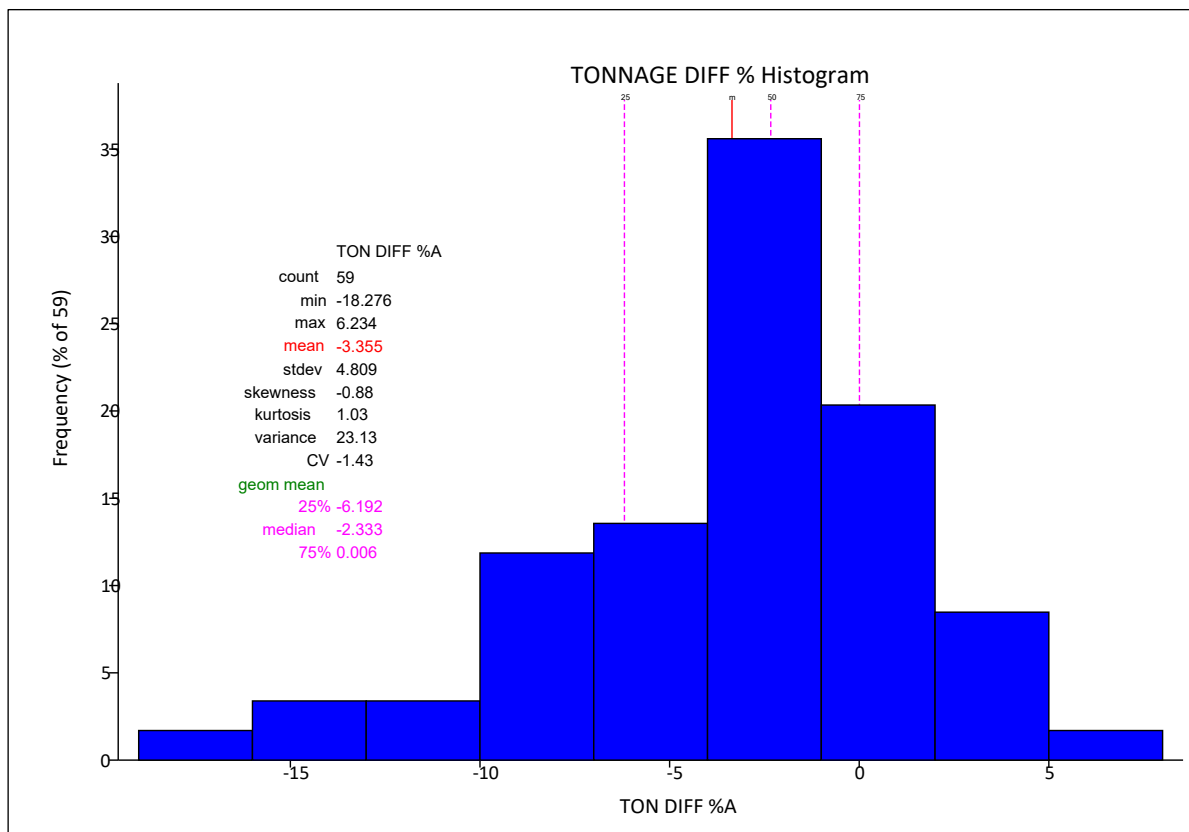


Source: SRK, 2021

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

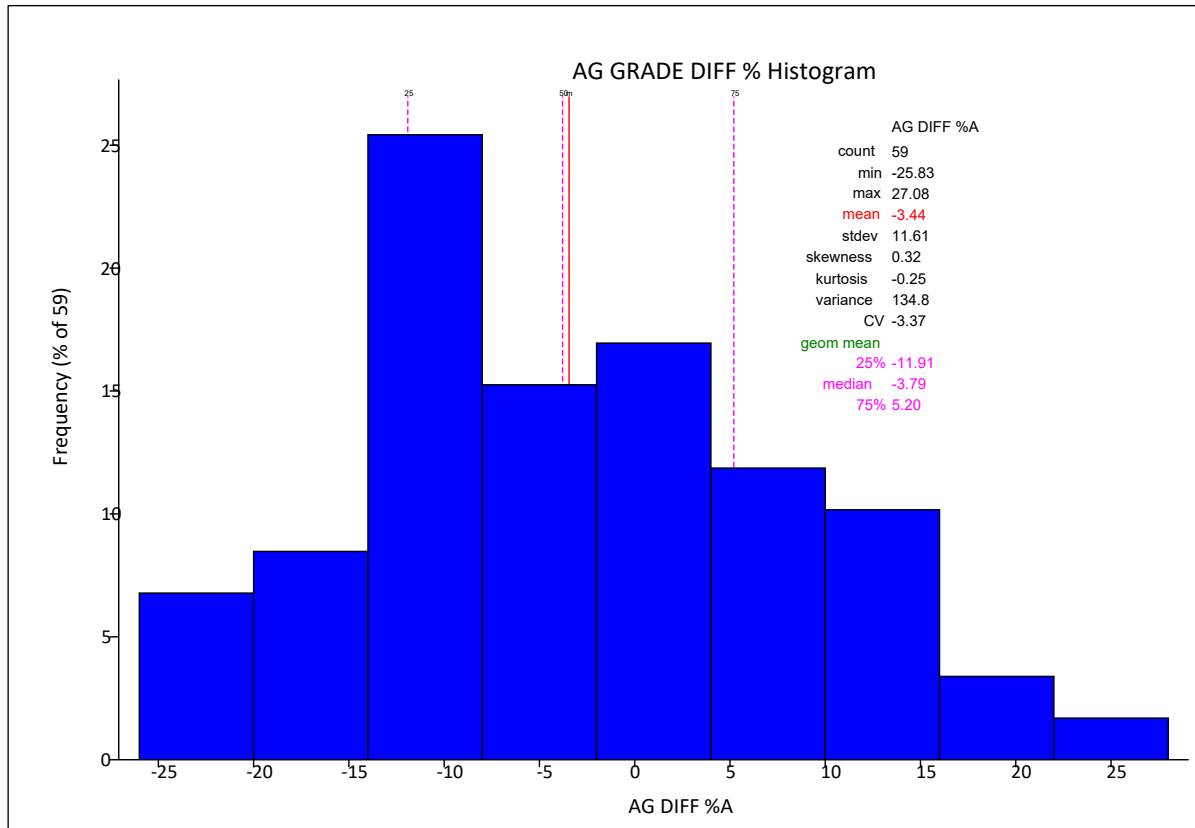
9.1.2 Review of Reconciliation Information Planned versus Real Grades

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. Figure 9-2 through Figure 9-6 present the monthly differences (%) between planned versus real tonnages and silver, copper, lead, and zinc grades between 2016 and 2020. The total averages are at reasonable levels, varying from 3.4% to 13.3%. Higher differences observed in a monthly basis and lead grade differences shows that there are aspects to review in the process of sampling and mineral resource/reserve estimations. The general results show slightly higher real tons compared to the planned. The real average grades of silver, copper, and zinc are 3%, 6%, and 6% lower than the planned ones, respectively. The real grades of lead are 13% higher than the planned values, and the monthly differences range from -45% to 163%, which displays greater variability compared to the other elements. The differences in the lead data should be reviewed further, including the sampling protocols, which may over- or under-sample the lead mineralization. No factors have been applied to the grades recorded to account for these differentials, but the QP notes that the relative grades and contributions from the lead mineralization to the overall project value is relatively low (less than (<) 5%); therefore, these differences have limited impact.



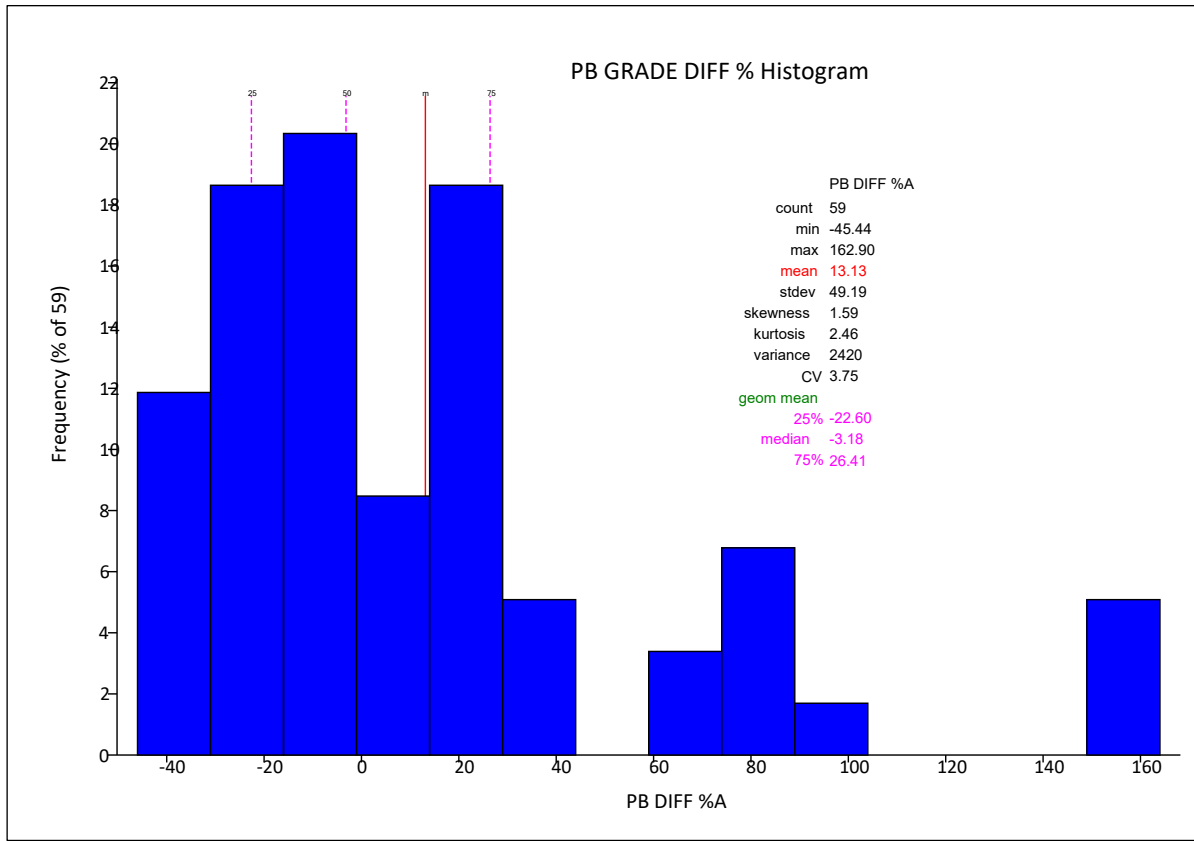
Source: IMMSA, 2021

Figure 9-2: Histogram of Planned versus Real Tonnage Difference (%) by Month, 2016 to 2020



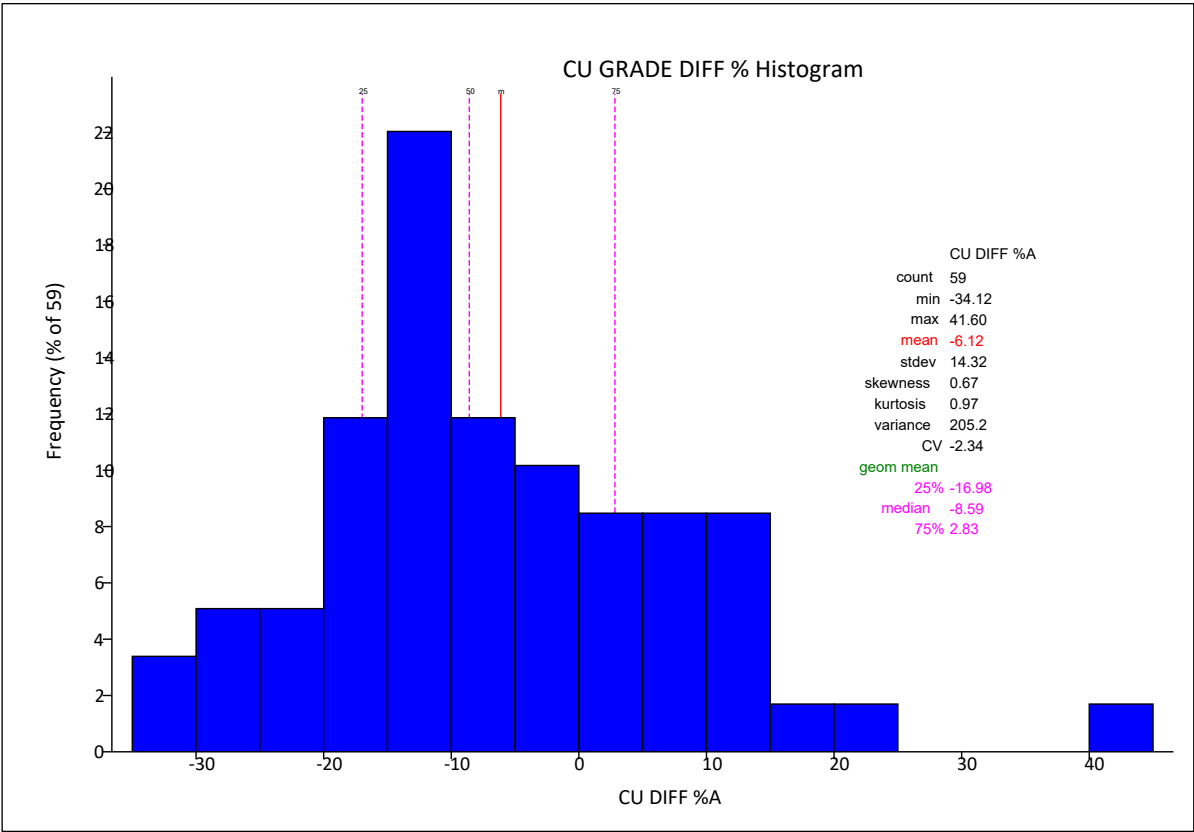
Source: IMMSA, 2021

Figure 9-3: Histogram of Planned versus Real Ag Grade Difference (%) by Month, 2016 to 2020



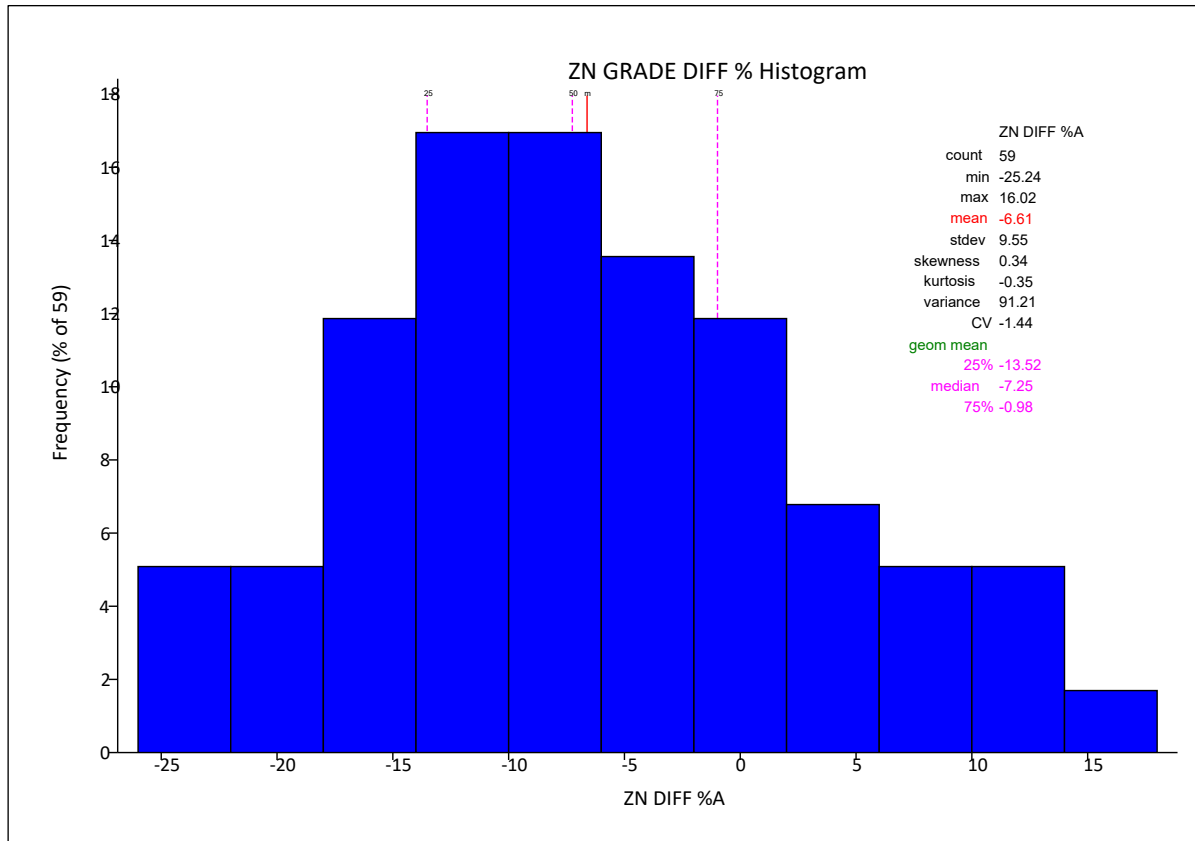
Source: IMMSA, 2021

Figure 9-4: Histogram of Planned versus Real Pb Grade Difference (%) by Month, 2016 to 2020



Source: IMMSA, 2021

Figure 9-5: Histogram of Planned versus Real Cu Grade Difference (%) by Month, 2016 to 2020



Source: IMMSA, 2021

Figure 9-6: Histogram of Planned versus Real Zn Grade Difference (%) by Month, 2016 to 2020

9.2 Limitations

Charcas stores the core of recent drilling completed by the mine geology team, and after some years, the core is discarded. The samples 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 these information have 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 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. 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 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 QP has recommended revised procedures which should include a robust QA/QC program for both mine and external laboratories and third-party checks on a routine basis.

10 Mineral Processing and Metallurgical Testing

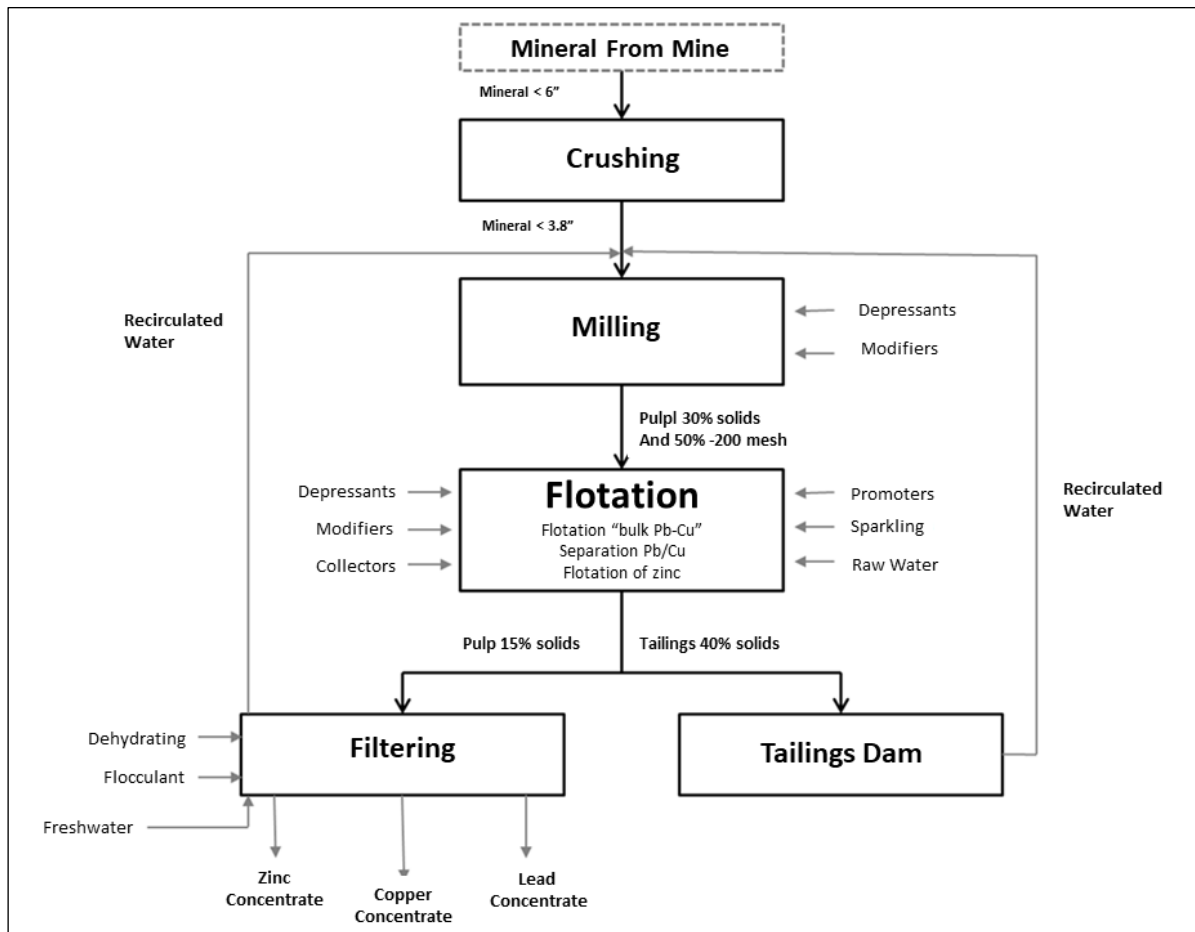
10.1 Testing and Procedures

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 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.

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 2020 within the lead concentrate and a reduction in the tails for lead from 2019 to 2020. It is also noted that the recoveries within the zinc concentrate for 2019 were approximately 6% above 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 2021

Component	Year	Tonnes (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	46.2	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	48.4	0.2	0.4	2.5	4.1	100.0	100.0	100.0	100.0	100.0	100.0
	2021	811,047	0.1	52.2	0.2	0.4	2.4	4.2	100.0	100.0	100.0	100.0	100.0	100.0
		3,250,081	0.1	48.5	0.2	0.4	2.3	4.3	100.0	100.0	100.0	100.0	100.0	100.0
Concentrate Lead (Pb%)	2019	1,041	5.8	11,557.2	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	7,443.6	62.7	4.2	2.5	4.1	6.7	27.2	52.7	2.0	0.2	0.2
	2021	1,152	6.9	8,260.5	59.5	6.1	2.5	5.4	9.5	22.5	47.1	2.3	0.2	0.2
Subtotal		4,216	5.3	8,682.7	58.4	5.4	2.6	5.1	6.6	24.2	46.3	2.0	0.2	0.2
Concentrate Copper (Cu%)	2019	15,102	2.9	1,900.9	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	1,944.8	4.8	24.0	10.7	22.9	30.9	45.2	25.8	73.2	4.9	6.2
	2021	10,052	4.1	1,952.0	4.7	23.9	11.6	20.0	49.4	46.4	32.7	76.7	6.1	6.0
Subtotal		38,037	3.2	1,929.3	3.8	24.4	10.3	22.5	32.7	46.6	26.8	76.5	5.2	6.1
Concentrate Zinc (Zn%)	2019	50,627	0.3	140.6	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	150.7	0.5	1.1	53.3	6.7	14.3	13.4	10.5	13.1	92.8	6.9
	2021	32,942	0.5	169.6	0.6	1.3	53.6	6.2	19.2	13.2	12.8	13.7	92.4	6.1
Subtotal		132,686	0.4	151.5	0.4	1.1	53.8	6.4	13.6	12.8	10.3	12.5	94.8	6.1
Tails	2019	1,226,367	0.1	9.7	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	7.3	0.0	0.0	0.1	3.8	48.1	14.2	11.0	11.7	2.2	86.6
	2021	766,901	0.0	9.9	0.0	0.0	0.0	3.9	21.8	17.9	7.3	7.4	1.4	87.8
		3,075,142	0.1	8.9	0.0	0.0	0.0	4.0	48.1	17.4	19.6	9.3	-0.3	87.7

Source: IMMSA, 2021

It is the QP's opinion that using a 3-year trailing average for the recoveries would therefore not be appropriate and would likely result in over-stating the recovery of zinc and lower recoveries for lead in the system.

The QP has therefore elected to use the 2021 production information and recoveries for the assessment of the CoG, as disclosed 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	Recovery (%)
Au	58.9
Ag	82.1
Pb	47.2
Cu	78.9
Zn	92.4

Source: SRK, 2021

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, 2021.

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 is currently in the process of digitizing the historical database for the Charcas project, which is projected to be completed in 2022. The lack of a digital database has required more-detailed and manual validation by the QP to validate the current mineral resources. In the QP's opinion, the distribution of this drilling and sampling used to inform the mining blocks is representative of the known deposit to date. The QP considers the procedures used by IMMSA to be reasonable and in-line with industry standards with the exception of the data storage.

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 will result in improvements in the ability to develop a robust geological model supporting the MRE, which in turn can be used for more-detailed mine planning.

11.1.3 Geological Model

There is extensive knowledge of the geological, structural, and mineralization controls of the Charcas deposit, which has been established over the mine life to date; however, a 3D geological model has not been created. The historical information is stored on maps which include the underground workings, lithology, structure, and mineralization. Geological interpretation and estimation are focused on relatively local areas to the sampling information.

Currently, the geological interpretations are in a combination of paper format and in AutoCAD vertical and plan sections. The mine geologists map the underground workings and define the channels and the sample limits. Location of sampling points are noted on the geological maps and transferred into AutoCAD format. The mapping includes description of the rock type and the mineralization characteristics, which is then transcribed into the topographic maps and used in conjunction with the assay results.

Once the maps are generated, IMMSA geologists delineate the mineralized zones and the geological interpretation in the plan views, as shown in Figure 7-3. This information is then used to define the areas of economic interest, which are used to calculate the mineralized potential. The volumetric measurement of the area of any given mining block is first determined by measuring the perimeters of the defined blocks on plan or section, which is then recorded. The volume is then calculated for the mineral resource estimation by using a vertical projection of the areas based on estimated heights using sectional interpretations (Figure 7-11). The final volumes are then determined by accounting for the existence of the mined zones.

Geological interpretations of some new mineralization zones of the deposit have been constructed in Leapfrog Geo software (as part of a test process). Integrating the mine maps, horizontal and section interpretations, and the existing geological models into a single model will present some challenges due to the quantity data and the complexity of the deposit.

To generate a consolidated 3D geological model, the following activities are required:

- Conduct a 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. A 3D modeling software (i.e., Leapfrog Geo) can be used for this activity.
- Convert all the information to a unique coordinate system.
- Consolidate the rock and drill core sampling database (collar, survey, assay, lithology, alteration, vein codes, etc.) currently in Excel and paper formats. This activity will require digitizing additional information from the maps and drill logs on paper that have not been digitized.
- Digitize sections and maps with lithology information that is not in digital format. This consolidated information will be the basis for the 3D geological interpretation.
- Digitize and construct depletion solids.

11.2 Mineral Resources Estimates

Charcas has not previously produced mineral resources estimates under Guide 7. The mineral resource statement presented herein represents the maiden mineral resource evaluation prepared for Charcas.

The mineral resource estimation for Charcas was completed using all the available data based on handmade documentation and calculations, including, in part, information in AutoCAD and Excel formats. Due to the characteristics of Charcas's available information, the 3D geological model, geostatistical analysis, block model construction, and geostatistical estimation using specialized software are not included as part of this report.

This mineral resource estimation is based on the stope calculations completed by Charcas as part of the operation's mine planning process and includes the following aspects:

- Data compilation and verification, channel, and core sampling
- Calculation of areas of blocks in vertical or horizontal sections
- Volume calculations from areas and influence distances
- Calculation of grade-weighted averages
- Tonnage calculations
- Classification

11.2.1 Data Compilation and Verification

The geological information and the sampling of the underground workings have been historically collected in paper, with some information transferred to maps and digital formats, including the geological interpretations, lithology, mineralization type, and alteration, among other characteristics.

The information that is registered in maps and digital formats is combined with the assay results obtained from the internal laboratory and transferred to the maps and formats by hand. At the time of reporting, only a small part of the data was digitized in Excel spreadsheets, but it is not an established procedure.

Part of the historical and the more recent information (geology, mineralization, structural, sampling, etc.) collected in maps have been transferred to a digital format using AutoCAD software, using the mine topography information provided by the surveyors (Figure 11-1). This information is then used to generate maps and sections, which in turn are used to complete the geological interpretations. Using the latest interpretation, IMMSA geologists produce sections and plan views from where the mineralized zone areas are delimited using the lithology, mineralization, and the sample results. The QP has reviewed this process and, following some initial feedback from the IMMSA geologist (which resulted in some minor changes to the procedure), has deemed the final interpretations used in the current estimate as appropriate. Figure 11-1 shows the delineated mineralized area of a replacement body which is irregular.



Source: SRK, 2021

Figure 11-1: Example of Plan View of Underground Workings and Channel Sample Lines

The following is the process to define the block shapes:

- Based on the geological underground mapping and channel sampling, the geologists define the extension of the mineralization in plan views and outline the mineralized areas in paper maps or in AutoCAD. Figure 11-1 and Figure 11-2 show the mineralization associated to replacement is irregular. When veins are interpreted, these are drawn as semi-tabular shapes in vertical sections perpendicular to the general direction of the vein, as shown in Figure 11-3.
- Vertical sections are used to interpret the vertical extension of the mineralization, and in the case of veins, their tabular shapes are delineated using the drilling intercepts. The interpretations are performed using vertical sections separated 10 to 20 m.
- The blocks can have information from channel samples and/or drilling, and in some cases, from both sources.
- The areas of the interpreted mineralized shapes in plan views are measured using AutoCAD. Historically, Charcas used manual methodologies to obtain these areas.

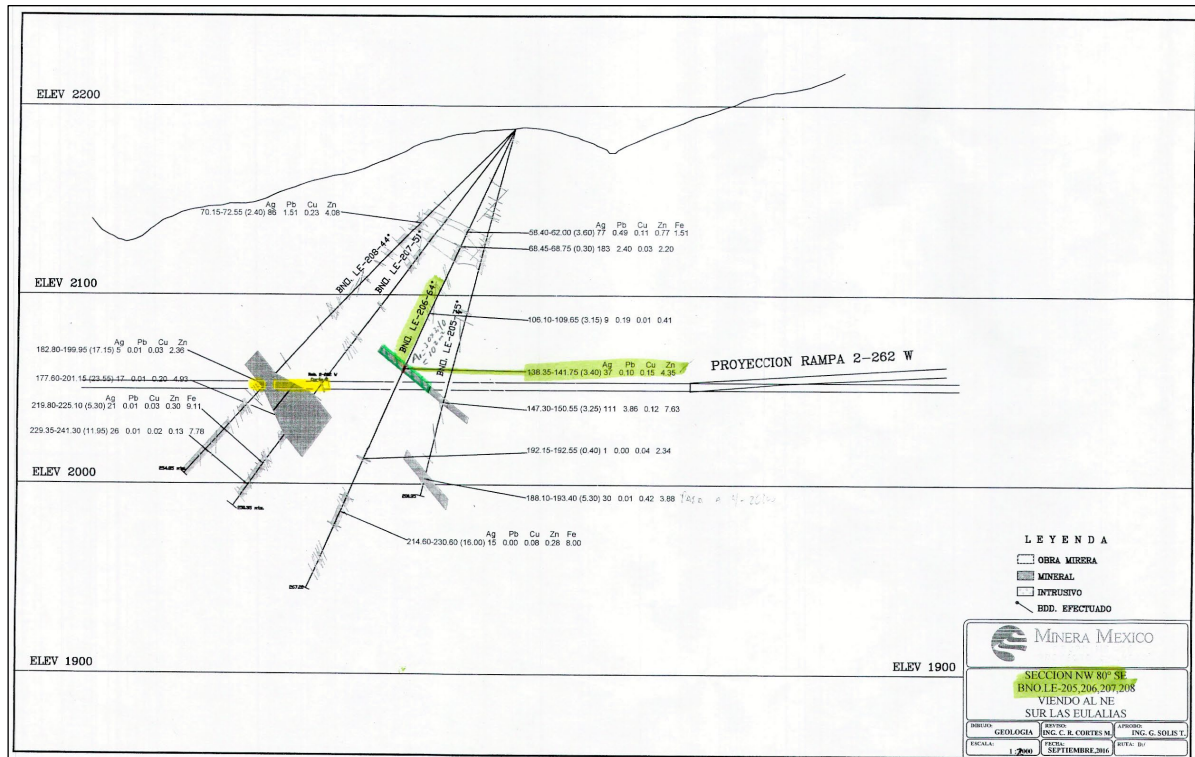
- Each resource block is defined by section according to the continuity of the mineralization and the location in the deposit and uses the data of channels and drilling inside the block to determine the grades.
- Once the geologists have defined the block areas from plan or vertical sections, the volume of the block is defined by extending the areas in the direction of the mineralization. The maximum distance of extension is established by the manual of resources/reserves of IMMSA and, if necessary, limited by existing underground workings or mined areas.

Figure 11-2 shows an example of the areas defined in plan view and the vertical section lines that limit the areas.



Source: IMMSA, 2021

Figure 11-2: Example of Plan View Including the Calculated Areas of Mineralized Zones



Source: SRK, 2021

Figure 11-3: Example of Vertical Section Including the Drilling, Interpretation, and Calculated Areas

In the QP's opinion, this is a time-consuming process that is labor intensive and requires constant review and updating of the maps to ensure accurate volumes. The process is considered to be static with potential mining areas defined as blocked. This process, while still remaining valid, is considered outdated in terms of modern mining processes that rely on interactive models using a digital model, which can be adjusted as new information becomes available. The QP comments that Charcas is in the process of moving to more-modern methodologies but that the models will rely on the transfer of the geological information to a digital database, as previously discussed. Once this process is completed, additional work and training of staff will be required to adjust to the new procedures. Given the size of the Charcas project and the historical database, this is a considerable undertaking and, in the QP's opinion, should be considered the key focus area for 2022, including sufficient validation checks to provide confidence in the data capture process.

11.2.2 Calculation of Weighted Averages Grades and Volume Calculation

The way available samples are considered depends on the shapes of the mineralized bodies and the type of other information available. In replacement mineralization bodies, the samples are collected from fronts and roofs perpendicular to the mineralization controls (stratigraphy) in sampling lines separated 5 m. In tabular bodies, there are usually fronts that follow the body longitudinally, as well as underground workings within the body, which must have been sampled throughout its length, with sample lines separated 5 m.

When using more than one drillhole or a combination of drillholes and channel sampling, the weighted averages are calculated based on the areas of polygons constructed to define the area of influence of each sample or set of samples. When there are sections with more than one drillhole, the area is based on halfway to the next drillhole (Figure 11-3). The average grades of a set of channel samples are weighted by the length of each sample and then by the influence area, if necessary.

11.2.3 Capping

Before the final calculation of weighted average grades, the geologists review the assays and apply capping, if required, using the following values:

- Ag = 200 g/t
- Pb = 2%
- Cu = 2%
- Zn = 10%

Charcas does not have a statistical analysis or any specific documentation to support the values used for capping and has historically used different approaches. The current methodology and values are a result of the experience and knowledge of the operation, which is an aspect that SRK considers reasonable and appropriate. The use of the capped values is supported to some degree by the reconciliation processes discussed in Section 9.1 of this report.

Review of the capping levels will be advised once the digitized database is established to understand the relative percentiles used in capping and if the capping should be completed across the deposit or per structure.

Averages of widths and grades are obtained for sample, and each sample is assigned its area of influence. The areas are added to obtain the total area, and the weighted averages of width and grades are obtained. Volumes and tonnages are then calculated using the areas that are projected perpendicular to the sections based on the established projection distances and the resource classification criteria.

11.2.4 Density

The density used by Charcas is 3.0 t/m³. This number was provided by the mine. The plant and the mine have been using this density value for decades, 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.

11.2.5 Documentation

Plans and calculations for the resource estimates are made in a sufficiently detailed manner, with information stored for each mining block at the mine. The calculation for each block is carried out in the standard sheets (Figure 11-4). In the spreadsheets, the final data of the ore in situ should appear as a total in situ followed by the tonnage and grades of the ore. The calculations for each block must be accompanied by drawings and sections as necessary. All spreadsheets, drawings, and other documents are stored in paper folders and maintained in a safe place.

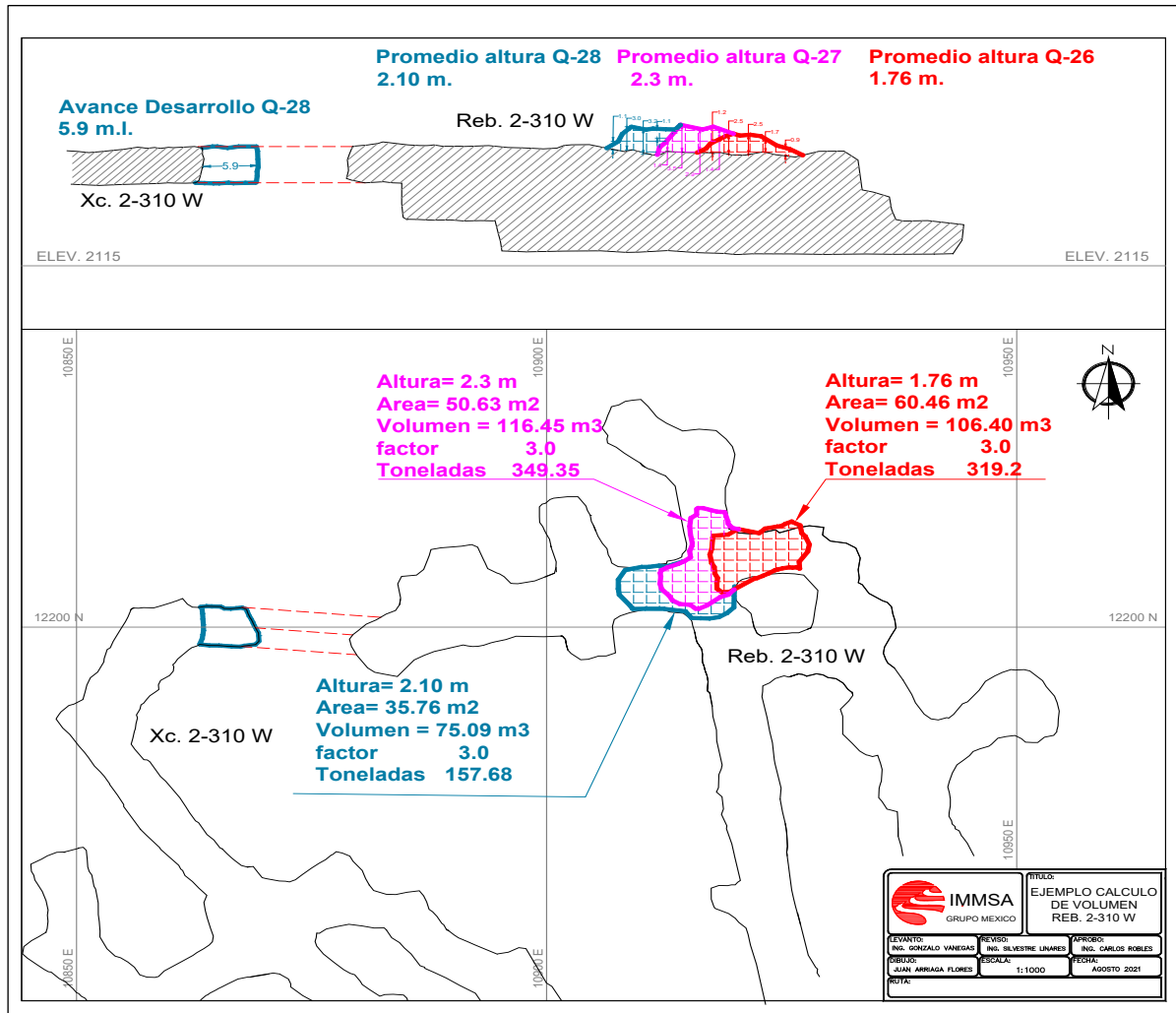
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Figure 11-4: Example of Table used for Calculation of Resources/Reserves in Charcas

Depletion

The shape of the blocks and their extension is defined by using the updated underground surveying information produced by the IMMSA survey department. The mined areas and underground workings are mapped in the plan, vertical, and long sections that the geologists use to outline the resource blocks. This methodology makes it possible to discount the mined areas since the resource blocks do not include the underground workings and exploited stopes which act as limits during the blocks outlining. The historical surveying of underground workings and exploited zones is an aspect that introduces some level of inaccuracy when establishing the volumes exploited and the extension of some blocks.

At the operation, the engineering department is responsible for keeping the topography of the mining works (digitally and physically in plans) updated. The current system involves capture of survey points directly into a digital copy of the underground workings, which is validated in the field by the survey. The survey data points are used to update the AutoCAD definition of the depleted areas (Figure 11-5), which is completed in both plan and in section by recording the top and base of the mine opening. The updated depletion shapes are then reviewed and plotted at a 1:250 scale, which is used for weekly planning.



Source: IMMSA, 2021

Figure 11-5: Example of Current Mine Depletion Format showing Production Advance

11.3 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.

11.3.1 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 QA/QC protocols in the mine sampling protocols.

11.3.2 Indicated

Indicated mineral resources are defined by material that is interpreted to be continuous in size, shape and grade and must be located within 30 m of either underground development or surface/underground drilling results. Indicated mineral resources may be projected 30 m above or below levels or 30 m beyond the stope face; however, the projection distance is limited to 15 m below the last developed level. No Indicated mineral resources are permitted above the first level in the mine.

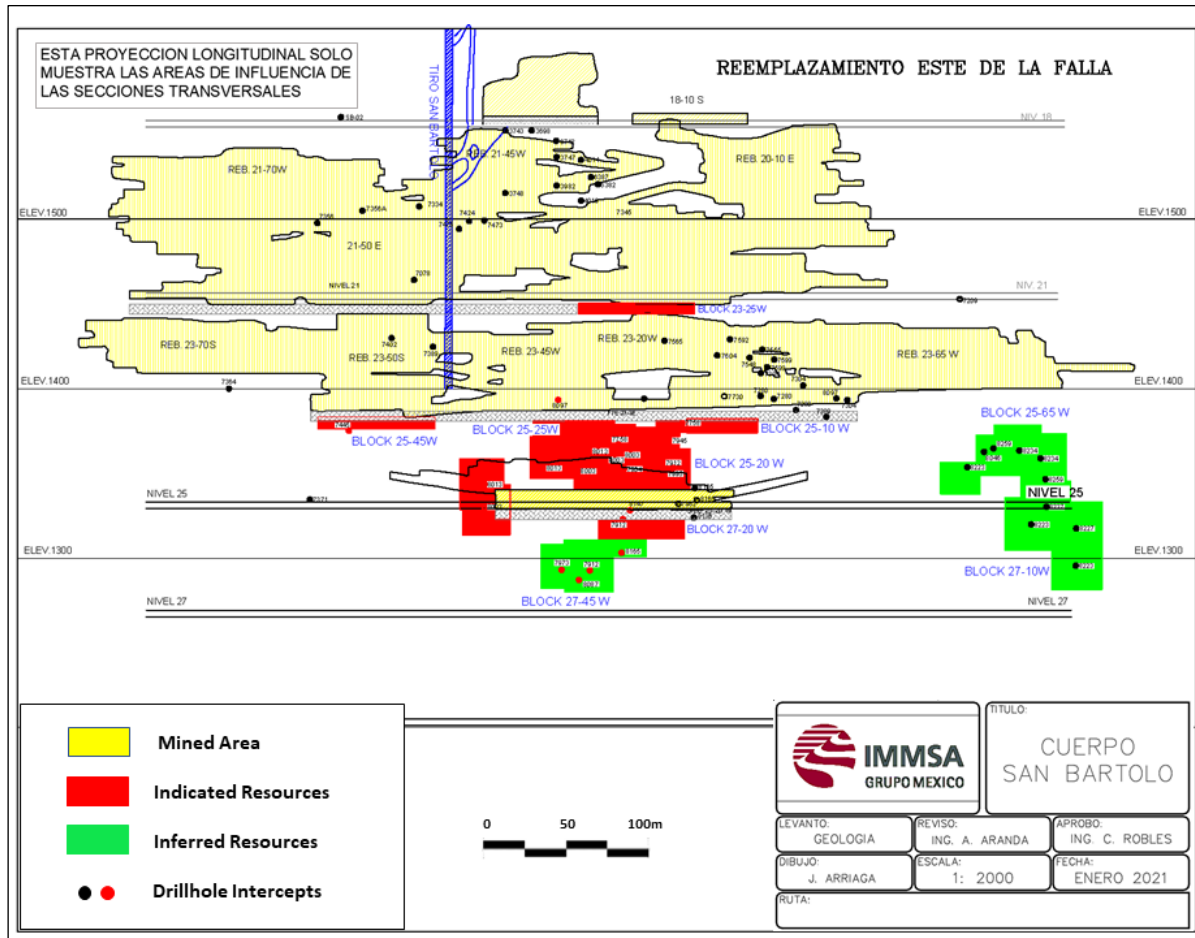
11.3.3 Inferred

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

1. The material not classified as Indicated located between two levels separated by a maximum of 120 m and if no diamond drilling is present
2. The material is within 60 m of multiple surface/underground drillholes or located within 15 m of a single drillhole.

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.

Figure 11-6 shows an example of the resource blocks in Cuerpo San Bartolo (Long Section).



Source: IMMSA, 2021

Figure 11-6: Long Section of Cuerpo San Bartolo Including the Mineral Resource Blocks

11.4 Uncertainty

SRK has identified a number of factors which contribute to uncertainty in the estimates, which it has included in its classification of the 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 drilling and sampling (core and channel sampling) completed by the mine geology department for the historical and recent information, and those activities are not in-line with industry standards. Limited QA/QC has been completed on the most recent exploration.
- 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/m³ for decades. Insufficient documentation to support this density has been presented, and further testwork is recommended.
- The resource has been estimated by defining static mining blocks based on section and plan interpretations by using a weighted-average approach to defining the average grades for silver, zinc, copper, and lead.

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

11.4.1 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 maximum of 30 m from channel sampling and 30 m between drillholes. The criteria and uncertainty correspond to the Medium Degree of Uncertainty column in Table 11-1.

11.4.2 Inferred Resources

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 11-1. These areas of the Charcas project represent the areas with lowest drilling density and influence distances to channel sampling of up to 60 m. SRK considers these areas of the mineral resource will need additional drilling and underground workings prior to mining.

Table 11-1: 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.	Protocols of historical drilling data supporting the 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 team in the 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 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 the geology and mineralization provides 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 the mineral resources is stored on paper. Local errors related to handwritten supporting data are expected. These are expected to have local impacts on individual stopes and limited impact on the global estimates of tonnage and grade.	
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		All the data of the Charcas project is not in digital format for an adequate continuity analysis. Continuity assumptions of mineralization have been based on the extensive geological knowledge of the deposit.	
Grade estimation		Grades and volume calculations are based on historical data, which provides some level of inaccuracy. Part of the calculations were completed using handmade drawings, which introduces inaccuracies.	
Prices, NSR values	Prices and costs are based on Charcas mining and production information with 15% as a premium applied to prices for mineral resources.*		
Drill and sample spacing		Distances to underground workings and channel sampling are <30 m. There are a minimum of two drillholes within a drill spacing of 30 m.	There is a minimum of one hole at a distance of <15 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.	
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 the 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, 2021

*Changes in metal prices will likely result in significant changes in the values derived from the NSR equation. Currently, only limited stopes fall below the operating costs of US\$57.56/t.

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
- Digitization of all geological information and storage of data into a commercial secure database
- 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
- 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/m³ value
- Rigorous approach to classification which appropriately considers the noted detractors in confidence and utilizes criteria designed to address them

11.5 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. The mineralized areas are then divided into smaller blocks based on the vein. Information on each block, such as classification, dimensions, thickness, and sampled grades, are entered into an Excel spreadsheet to compile the final mineral resources.

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 the 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 flotation 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. The QP has been supplied with IMMSA's internal selected metal prices for mine planning for the Charcas project. The prices are considered in-line with independent forecasts from banks and other lenders. The IMMSA-selected metal has been adjusted by the QP to the selected mineral resource estimation prices using a factor of 15% higher, which is in-line with typical industry practice.

NSR cut-off values for the mineral resources were established using a zinc price of US\$1.32/lb Zn, a lead price of US\$1.04/lb Pb, a silver price of US\$23.0/oz Ag, and a copper price of US\$3.80/lb Cu (Table 11-2). 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 11-2: Price Assumptions

Factors	Value	Unit
Metal prices		
Ag	23.00	USD/oz
Pb	1.04	USD/lb
Cu	3.80	USD/lb
Zn	1.32	USD/lb
Exchange Rate (MXN:USD)	20.1418	

Source: SRK, 2021

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 11-3. The basis for these factors is discussed in Section 10.4 of this report. The QP has elected to use the 2021 recoveries for the basis for the year end mineral resources.

Table 11-3: Metallurgical Recovery Assumptions

Element	Value	Unit
Ag	82.1	%
Pb	47.2	%
Cu	78.9	%
Zn	92.4	%

Source: SRK, 2021

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 11-4 shows the additional percentages applied to the recoverable metal (in situ metal times recovery).

Table 11-4: NSR Adjustment Factors

Element	Percentage (%)
Ag	84.8
Pb	94.9
Cu	95.0
Zn	85.0

Source: SRK, 2021

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.

$$\text{NSR Value} = \text{Ag (g/t)} \times 0.515 + \text{Pb (\%)} \times 10.215 + \text{Cu (\%)} \times 62.741 + \text{Zn (\%)} \times 22.890$$

The operating unit cost used to determine the potential for economic extraction has been taken by reviewing the costs over the past 3 years. Based on current market conditions, the QP has elected to use the 2021 costs as the basis for the assessment, which in their opinion is a reasonable basis for the declaration of mineral resources (Table 11-5). 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\$57.59/t.

Table 11-5: Operating Unit Cost

Factor	Value	Unit
Mine	21.56	USD/t
Mill	8.95	USD/t
Indirect (mine)	11.79	USD/t
Indirect (mill)	2.29	USD/t
Subtotal	44.59	USD/t
Smelting, refining, and transportation	11.85	USD/t
Administrative	1.16	USD/t
Total operating	57.59	USD/t

Source: IMMSA, 2021

11.6 Summary Mineral Resources

Charcas's mineral resources are in compliance with the S-K 1300 resource definition requirement of reasonable prospects for economic extraction. Using the mining blocks (panels) defined by the geologist, the QP has reviewed each panel relative to the defined CoGs. Depletions have been accounted for within each panel using the latest survey information for most of the panels, and only a few panels that were exploited in the last 2 months of 2021 were adjusted according to the planned exploitation. It is SRK's opinion that the differences with the real exploited material are not material.

In the QP's opinion, the assumptions, parameters, and methodology used for the Charcas underground mineral resource estimates, while not optimized to provide flexibility in the planning processes, are appropriate for the style of mineralization and mining methods.

Table 11-6 summarizes Charcas's mineral resources for the underground operation as of December 31, 2021. 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 11-6: Charcas Summary Mineral Resources at End of Fiscal Year Ended December 31, 2021, SRK Consulting (U.S.), Inc.⁽¹⁾

IMMSA Underground - Charcas							Cut-Off ⁽²⁾	NSR ⁽³⁾ \$57.59		
Category	Tonnage Quantity (kt)	Grade					Metal			
		Ag (g/t)	Zn (%)	Pb (%)	Cu (%)	NSR ⁽³⁾ (US\$)	Ag (koz)	Zn (kt)	Pb (kt)	Cu (kt)
Measured										
Indicated	5,831	91	3.45	0.42	0.53	163.5	17,118	201.3	24.5	30.9
M+I	5,831	91	3.45	0.42	0.53	163.5	17,118	201.3	24.5	30.9
Inferred	14,206	98	2.76	0.36	0.57	153.0	44,583	392.1	50.9	81.4

(1) Mineral resources are reported exclusive of mineral reserves. 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 company's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold.

(2) Mineral resources are reported at metal equivalent CoGs based on metal price assumptions,* variable metallurgical recovery assumptions,** mining costs, processing costs, G&A costs, and variable NSR factors.*** Mining, processing, and G&A costs total US\$57.6/t.

*Metal price assumptions considered for the calculation of metal equivalent grades are: gold (US\$/oz 1,725.00), silver (US\$/oz 23.0), lead (US\$/lb1.04), 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 (82%), lead (47%), zinc (92%), and copper (79%), assuming recovery of payable metal in concentrate.

(3) 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 (g/t)*0.515+Pb (%)*10.215+Cu (%)*62.741+Zn (%)*22.890.

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

11.7 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 using a revised block model once the model has been generated.

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 is currently in the process of updating the required technical work which will be based on a revised 3D block model of the mineral resources in 2022, which would be used as the basis to define mineral reserves.

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 not implemented quality controls for the samples collected from drilling and 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 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. Geology information supporting mineral resources is available in paper documents and partially in digital format.
- There is no QA/QC protocol implemented for drilling and sampling (core and channel sampling) completed by the mine geology department for the historical and recent information, and those activities are not in-line with industry standards. Limited QA/QC has been completed on the most recent exploration.
- The drilling and core sampling activities performed by Charcas's exploration department 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/m³ for decades. Insufficient documentation to support this density has been presented, and further testwork is recommended.
- The resource has been estimated by defining static mining blocks based on section and plan interpretations by using a weighted-average approach to defining the average grades for silver, zinc, copper, and lead.
- 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 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 of drilling, sampling, and design and implementing a complete QA/QC protocol for the drilling and rock sampling activities performed by Charcas's mine geology department.
- Regarding the QA/QC protocol of the exploration department, SRK recommends including the second laboratory controls (Tercerías) periodically (quarterly) and the review of the acceptability ranges for fine duplicates (10% relative error).
- Digitization of all geological information and storage of data into a commercial secure database
- 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
- 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/m³ value
- Rigorous approach to classification which appropriately considers the noted detractors in confidence and utilizes criteria designed to address them

23.1 Mineral Resource and Mineral Reserve Estimates

- SRK recommends the construction of a 3D geological model for the Charcas deposit and the digitizing of all the supporting information, including geological/mineralization maps and sections, drilling, and rock sampling information. The new 3D geological model will be the basis for the construction of a block model and future mineral resource estimates using standard industry procedures.
- SRK recommends designing and implementing a complete QA/QC protocol for the drilling and rock sampling activities performed by Charcas's mine geology department.

23.2 Recommended Work Programs

The recommended work program includes the following activities:

- Drilling in to define horizontal and vertical extension of mineralization and exploration in identified targets
- Database capture of all historical data, including drilling, historical mapping, channel sampling, and geological interpretations to support the construction of a 3D geological model and future mineral resource estimates using a block model
- Construction of a 3D geological model and updated mineral resource and reserve estimates

23.3 Recommended Work Program Costs

Table 23-1 provides an approximate budget of the work program for 2022.

Table 23-1: Recommended Work Program Costs

Discipline	Program Description	Cost (US\$ million)
Geology and exploration	Ongoing exploration and grade-control drilling	2.3
Data capture of geological database	Digitization and capture of key historical database information and geological data (mapping)	0.8
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	0.4
Total		3.7

Source: SRK/IMMSA, 2021

24 References

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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.