GOLDER
MEMBER OF WSP

REPORT

S-K 1300 Technical Report Summary

Southern Copper Corporation: Pilares

Submitted to:

Southern Copper Corporation

Submitted by:

Golder Associates USA Inc.

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Project No.

20442424-R-Rev0

Report Date: February 24, 2022

Effective Date: December 31, 2021

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TABLES

FIGURES

DATE AND SIGNATURE PAGE

The effective date of the Mineral Resource estimate was December 31, 2021.

Author	Section(s)	Signature
Ronald Turner (Golder)	1.2, 1.3, 1.5, 1.10, 2, 6, 7.1-7.2, 8, 9, 10, 11, 20, 21, 22, 23, 24, 25	
Dawn Garcia (Golder)	1.1, 1.4, 1.9, 3, 4, 5, 7.3, 17	
Michael Pegnam (Golder)	7.4	

The qualifications and relevant experience of each QP are shown below.

- Ronald Turner:
  - Education:
    - Geologist, Universidad de Concepción, Chile, 1993
    - Postgraduate Studies in Geostatistical Estimation, Universidad de Chile, Santiago, Chile, 2007
  - Years of Experience:
    - Has 29 years of experience in the mining industry with 13 years in geological and mineral resource and reserves reporting, 8 years in project development and mining and 8 years in exploration of base and precious metals.
  - Relevant Experience
    - Has been a Mineral Resource Group Leader with Golder Associates S.A. working on validation and construction of databases and QA/QC programs, interpretation and construction of 3D geological models, and resource estimation.
    - Has led and participated in Mineral Resources and Reserves audits and Due Diligence in mines and projects for a variety of commodities under different international codes.
      - Was a Mineral Resource Superintendent at Minera Escondida Ltda. responsible for the Resources, Geological and Geometallurgic models for Minera Escondida, including Escondida and Escondida Norte Deposits
  - Professional Registration:
    - Is in good standing as a Member of the Australian Institute of Mining and Metallurgy (MAusIMM, CP, Geo)

- Dawn Garcia
  - Education:
    - Is graduate of Bradley University with a bachelor's degree in Geological Sciences in 1982 and a graduate of California State University, Long Beach, with a master's degree in Geology in 1995
  - Years of Experience:
    - Practiced as an environmental geologist and hydrogeologist for over 35 years.
    - Over 20 years of experience in the mining industry.
  - Relevant Experience:
    - Acted as the Qualified Person for the Environmental, Permitting and Social section for 10 NI 43-101 technical reports and more than 20 detailed environmental and permitting reviews.
    - Conducted environmental, socio-economic, or water-related tasks for over 50 mineral development, mineral processing, and mining operations.
  - Professional Registration:
    - Licensed Professional Geologist (Arizona, License No. 26034)
    - Professional Geologist (CPG) with the American Institute of Professional Geologists (Membership Number 08313)
    - Registered member of the Society for Mining, Metallurgy & Exploration (Membership No. 4135993)
- Michael Pegnam:
  - Education:
    - Graduate of University of Arizona with a bachelor's degree in Geological Engineering

      Graduate of University of California Berkeley with a master's degree in Geotechnical Engineering
  - Years of Experience:
    - He has 28 years of experience in geotechnical engineering in the mining and civil engineering fields
  - Relevant Experience:
    - His relevant experience in slope engineering includes completing slope designs for open pit mines in North America, Mexico, and South America and highway cuts in rock in North America. He also has specialty expertise in rock and soil slope stability evaluation, installation of rock bolts, dowels, and pinned/draped mesh for rockfall mitigation
  - Professional Registration:
    - Registered Professional Engineer - Arizona, U.S. (Registration No. 33800)
    - Registered Professional Engineer – New Mexico, U.S. (Registration No. 16267)

- Registered Professional Engineer – California, U.S. (Registration No. C56831)
- Registered member of the American Society of Civil Engineers since 1995 (Membership I.D. #321277)

1.0 EXECUTIVE SUMMARY

1.1 Property Description and Ownership

The proposed Pilares mineral development project is under development and has been historically mined in the past with underground workings. Pilares is considered part of the La Caridad unit and ore from Pilares will be routed to the leach pads and processing facilities at the La Caridad operations. The Pilares mineral development project is located in northeastern Sonora, Mexico, about 266 km northeast of the city of Hermosillo and 125 km south of the city of Agua Prieta Sonora, Mexico, which is on the international US - Mexico border.

1.2 Geology and Mineralization

The La Caridad mining district, where the Pilares porphyry Cu deposit is located, lies within the eastern section of the Sonora Basin and Range Province of northern Mexico. Sustained magmatic activity along the North American Cordillera during the late Mesozoic through Paleogene resulted in the development of numerous porphyry Cu deposits.

The oldest rocks in the region correspond to the Pinal schist. Overlying this sequence, rocks were deposited in discordance Neoproterozoic and Paleozoic carbonate marine platform rocks, these rocks are characterized by thick sequences of limestones and quartzites exposed mainly in the north and center of the State of Sonora. Mesozoic rocks in the region are widely distributed, consisting primarily of sedimentary rocks, including the Cucurpe Formation, Cocóspera Formation and the fluvio- lacustrine rocks with associated volcanics of the Cabullona Group. These rocks are overlain by the volcanic rocks of andesitic and dacitic composition of the Tarahumara Formation. The Cenozoic is represented by the Sierra Madre Occidental, which is the result of different magmatic tectonic processes associated with the subduction of the Farallon plate beneath the North American plate and the opening of the Gulf of California.

The local geology of the Pilares area consists of two main lithological packages, a volcanic sequence and a set of hypabyssal bodies that intrude the volcanic sequence. The volcanic sequence is comprised from the base to the top by the following units; andesitic flows with intercalations of Crystal Tuff, Tobaceous Sandstone, tuff-breccia (ignimbrite), basalt-andesite flows and Lapilli Tuffs. The Lapilli Tuff is composed of lapilli-sized volcanic fragments outcropping in the topographic highs and distributed in the central, southeastern and northeastern portion of the Pilares area. The Lapilli Tuff hosts the mineralized structure of the Pilares Breccia.

1.3 Status of Exploration

The La Caridad mining district, where the Pilares Project is located, has been subject to several historical and recent exploration campaigns targeting Cu mineralization at the Project site. The Pilares Project has been subject to several historical drilling campaigns with the most recent one occurring in 2011. To date, 18,207 meters (m) of exploration drilling has been carried out, distributed in 65 drill holes, of which, 60 were drilled in support of Mineral Resource estimation and 5 for geotechnical purposes only.

1.4 Development and Operations

This is a historical mining area. The town of Pilares de Nacozari was founded in 1896. The Moctezuma Copper Company started mining operations in 1900, and in 1910 the Pilares mine was considered to be the second largest deposit in the world, according to an article in the Los Angeles Herald. The town had up to 8,000 inhabitants, and included a gymnasium, library, bull-fighting ring, theater, three cemeteries and a church. Moctezuma Copper Company operated an open-pit and underground mine until 1929, when operations ceased.

The Moctezuma Copper Company built a beneficiation plant and smelter in Nacozari to process ore from Pilares. The smelter operated from 1895 until 1949.

1.5 Mineral Resource Estimate

This sub-section contains forward-looking information related to Mineral Resource estimates for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including geological and grade interpretations and controls and assumptions and forecasts associated with establishing the prospects for economic extraction.

The Mineral Resource for Pilares is based on three drilling campaigns completed between 2009 and 2011. The drilling database used for the modeling was reviewed with the QP's internal software (DataCheck®), which allows the detection of inconsistencies such as: overlapping intervals, excessive path deviation between measurement intervals, duplication of collars, sample depth greater than the depth of the collar, among others. An oxidation model was created for Pilares, in addition to the existing lithology model consisting of a single breccia unit provided by Pilares. The oxidation model was limited to the extents of the breccia unit and used to constrain the grade estimation. An existing underground void model representing the historical mine workings for Pilares was reviewed and adjusted to ensure both a realistic and conservative representation of the mined-out areas, which were then excluded from the Mineral Resource Estimation. An exploratory data analysis and geostatistical analysis were completed on the raw and composite data sets to help define interpolation parameters and Mineral Resource classifications. The block model grades were interpolated using Ordinary Kriging. The Mineral Resources were restricted based on an optimized pit limit that took into account cut-off grade, price, mining costs, infrastructure limitations, the location of the historical Pilares townsite, and mineral licenses.

Mineral Resource estimates are summarized in Table 1.1 on a 100% ownership basis. No Mineral Reserves have been estimated for Pilares. Mineral Resources presented in the table are in accordance with the definitions presented in S-K 1300. The effective date of the Mineral Resource estimate is December 31, 2021.

Table 1.1: In-Situ Mineral Resource Estimate – 100% Ownership Basis

Process	Classification	Tonnes (Mt)(4)	Grade			Contained Metal
			Total Cu (%)(2)	CuO (%)(2)	Mo (%)(2)	Cu (kt)(5)
Leach(1)(3)	Inferred	4.8	0.44	0.22	0.002	20.7
Mill(1)(3)	Inferred	71.8	0.56	0.05	0.005	399.1

Notes:
1. Mineral Resources are reported on a 100% basis.
2. Mineral Resources are reported on a break-even leach and mill profit basis.
3. Mineral Resources Pits are based on Cu price of US$3.795/lb and a Mo price of US$11.50/lb.
4. Tonnes are reported on a dry basis.
5. Contained Metal (CM) is calculated as follows:
   CM = Tonnage (Mt) * Cu (%).
6. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not add exactly
7. The estimate was constrained to within the Resource pit.
8. The Mineral Resource estimates were prepared by Ronald Turner, CP (who is the independent Qualified Person for these Mineral Resource estimates)

SCC has a 98.14% ownership in Pilares through their main subsidiaries with the remainder being held through intermediate holding companies.

1.6 Mineral Reserve Estimate

Not applicable to this TRS.

1.7 Capital and Operating Costs

Not applicable to this TRS.

1.8 Economic Analysis

Not applicable to this TRS.

1.9 Permitting Requirements

Mexico has established environmental laws and regulations that apply to the development, construction, operation and closure of mining projects. The Pilares Project was included in the regional environmental permit obtained for the entire La Caridad Complex dated 10 September 2018 and valid for 60 years. An additional permit for land use was pending authorization based on information gathered in August 2021. The permit had been submitted a year earlier, and the review period established by Mexican regulation had been exceeded. Delays in permitting have been reported due to staffing and other issues within the Mexican environmental agency. The proposed mine access road had not been completed at the time of the QP's site visit and was pending authorization as part of the permit.

There are restricted areas within the Ejido Pilares due to historical conservation, and there are safety and social license concerns that have been raised by stakeholders. Concerns include water quality impacts from historic and any new operations.

1.10 Qualified Person's Conclusions and Recommendations

It is the QP's opinion that the Mineral Resource block model is representative of the informing data, and that the data is of sufficient quality to support the 2021 Mineral Resource Estimate to an Inferred confidence level. The QP notes that no Quality Assurance/Quality Control (QA/QC) programs were completed during any of the drilling campaigns, which does add a degree of uncertainty with all of the samples. Any future drilling and sampling programs should include a robust QA/QC program. Additionally, documentation of work done during the drilling programs is unavailable or not well understood by Pilares personnel, which also adds a degree of unreliability. The QP recommends that a program of twin drill holes to confirm the existing drill hole grades and determine the variability. Additionally, further infill filling campaigns should be undertaken to improve the Mineral Resource categorization.

The 2021 Mineral Resource Estimate may be materially impacted by any future changes in the break-even cut-off grade, potentially resulting from changes in mining costs, processing recoveries, or metal prices or from changes in geological knowledge as a result of new exploration data.

2.0 INTRODUCTION

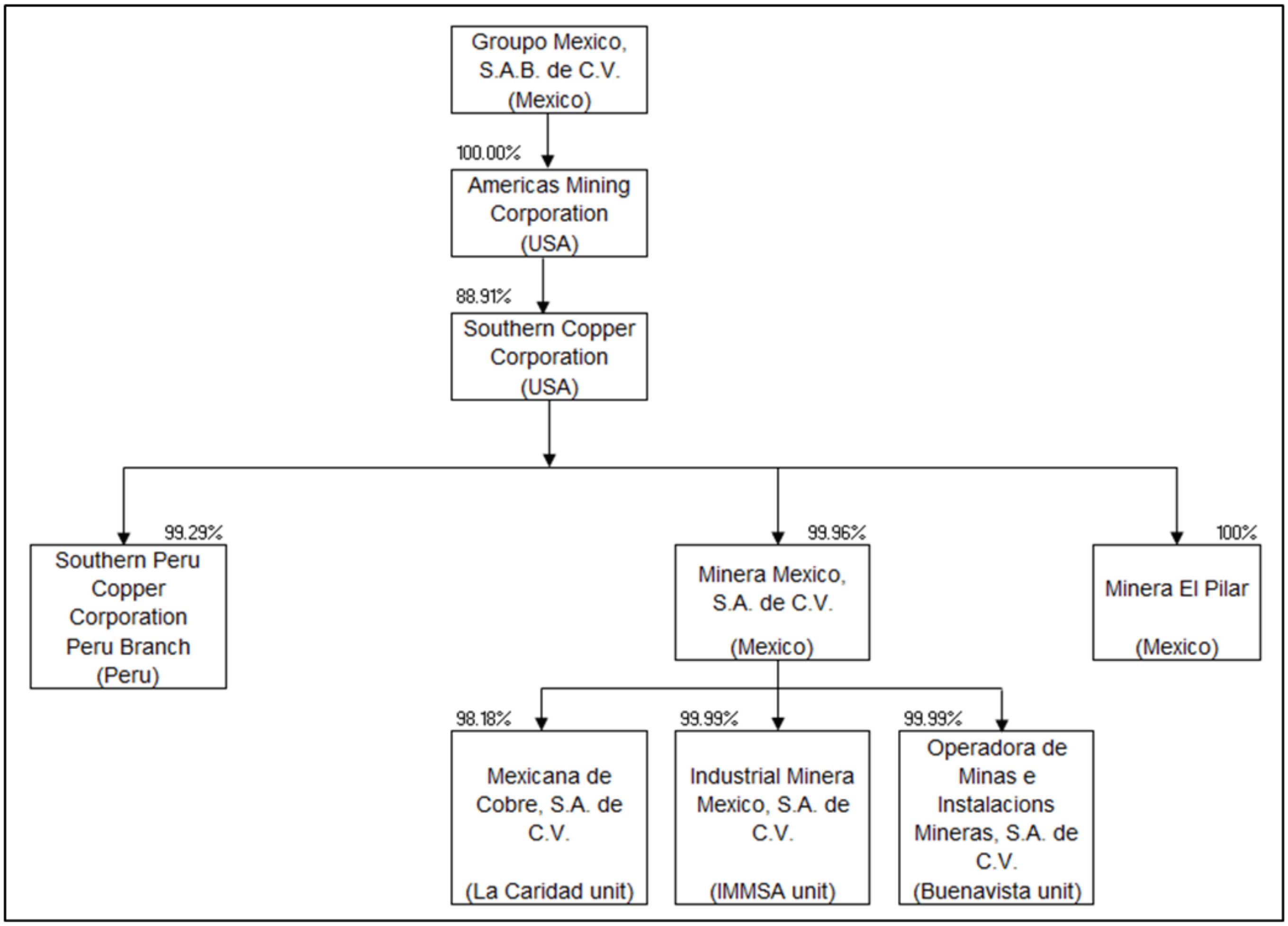
Southern Copper Corporation (SCC) is an indirect subsidiary of Grupo Mexico S.A.B. de C.V. (Grupo Mexico) which, as of December 31, 2021 owns 88.9% of SCC through its wholly-owned subsidiary Americas Mining Corporation (AMC). SCC's operations in Mexico are conducted through its subsidiary, Minera Mexico, S.A. de C.V. (Minera Mexico), which SCC acquired in 2005 from Americas Mining Corporation. SCC owns 99.6% of Minera Mexico.

Minera Mexico is a holding company and operates through three main subsidiary units namely, Operadora de Minas e Instalaciones Mineras, S.A. de C.V. (the Buenavista unit), Mexicana de Cobre, S.A de C.V. (the La Caridad unit) and Industrial Minera Mexico, S.A. de C.V. (the IMMSA unit). The corporate organization structure is shown in Figure 2.1.The proposed Pilares Project (Pilares) is under development and has been historically mined in the past with underground workings. Pilares is considered part of the La Caridad unit and ore from Pilares will be routed to the leach pads and processing facilities at the La Caridad operations.

2.1 Registrant Information

This Technical Report Summary (TRS) for the Pilares property located in the north-eastern part of the State of Sonora, Mexico, was prepared by Golder Associates USA Inc. (Golder), a member of WSP, for Southern Copper Corporation (SCC). As noted on the Date and Signature Page, several QPs were involved in the technical work summarized in this TRS.

Figure 2.1: Company Organization



Source: Grupo Mexico, 2021.

2.2 Terms of Reference and Purpose

The effective date of this TRS report was February 24, 2022, while the effective date of the Mineral Resource estimate was December 31, 2021. It is the Qualified Person's opinion that there are no known material changes impacting the Mineral Resource estimate between December 31, 2021, and February 24, 2022.

This TRS uses US English spelling and a combination of Metric and Imperial units of measure. Ore grades are presented in weight percent (wt.%), while metals quantities are stated in pounds. All other values are presented in Metric units of measure. Costs are presented in constant US Dollars, as of December 31, 2021.

Except where noted, coordinates in this TRS are presented in metric units using the World Geodetic System (WGS) 1984 Universal Transverse Mercator (UTM) ZONE 12 North (12N).

The purpose of this TRS is to report Mineral Resources for SCC's Pilares operation.

Key Acronyms and definitions for this Report include those items listed in Table 2.1.

Table 2.1: Key Acronyms and Definitions

Abbreviation/Acronym	Definition
%	percent
~	approximately
12N	Zone 12 North
AA	Atomic Absorption
Ag	silver
amsl	above mean sea level
As	arsenic
Atb	Tobaceous Sandstone
Bi	bismuth
Buenavista unit	Operadora de Minas e Instalaciones Mineras, S.A. de C.V.
BVC	Buenavista de Cobre
c	apparent cohesion
CFE	Comision Federal de Electricidad, or federal electricity commission
cm	centimeter
CNA	Comision Nacional del Agua or National Water Commission
COG	cut-off grade
CONAGUA	Mexican Water Commission
Cu	copper
CuO	copper oxide
CV	coefficient of variation
DC	Design Criteria
DDH	diamond drilling
DGM	Direccion General de Mina
dpy	days per year
DTH	Down the Hole
E	east
EGM	Earth Gravitational Model
EPCM	Engineering, Procurement, and Construction Management
Fand	Basalt-andesite flows
Fe	iron
FF/m	fracture frequency per meter
FS	Feasibility Study
g	gram
g/cm^3	grams per cubic meter
gCu/L	grams of copper per liter
Golder	Golder Associates USA Inc.
Gpa	gigapascals
GPS	global positioning system
Groupo Mexico	Grupo Mexico S.A.B. de C.V.
Ha	hectare
ID2	Inverse Distance Squared
ID3	Inverse Distance Cubed
IMMSA unit	Industrial Minera Mexico, S.A. de C.V.
IRS	intact rock strength
ISRM	International Society for Rock Mechanics
km	kilometer
kN/m^3	kilonewtons per cubic meter
kPa	kilopascal
kPa	kilopascal
La Caridad unit	Mexicana de Cobre, S.A de C.V.
LME	London Metal Exchange
LOM	life-of-mine
L-SX-EW	Leaching, Solvent Extraction, and Electrowinning
m	meter
Ma	Million years ago

Abbreviation/Acronym	Definition
MCSA	Mexicana de Cobre S. A.
Minera Mexico	Minera Mexico, S.A. de C.V.
mm	millimeter
Mo, or moly	molybdenum
MPa	megapascal
MS	Microsoft
Mt	Million tonnes
MXN	Mexican Peso
NE	northeast
NN	Nearest Neighbor
NW-SE	northwest-southeast
OK	Ordinary Kriging
OX	Oxide
Pb	lead
PEMEX	Petroleos Mexicanos
Pilares TRS	Pilares Project or mineral development area
PLS	Pregnant Leach Solution
PLT	point-load test
PVS	Pilares Volcanic Sequence
QA/QC	Quality Assurance/Quality Control
QP	Qualified Person
RMR	rock mass rating
ROM	run-of-mine
RQD	Rock Quality Designation
S	sulfur
Sb	antimony
SCC	Southern Copper Corporation
SG	Specific Gravity
S-K 1300	United States Security and Exchange Commission's regulation Subpart S K 1300
SMO	Sierra Madre Occidental
SP	Primary Sulphides
SS	Secondary Sulfides
SSDS	small scale direct shear
SSDS	small scale direct shear
SSSP	Secondary and Primary Sulfides
SX-EW	Solvent Extraction and Electrowinning
t	tonne
Tbci	Tuff-breccia ignimbrite
Tbl	Lapilli Tuffs
TCS	triaxial compressive strength
Tcu	Total Cu
tpd	tonnes per day
tpy	tonnes per year
TRS	Technical Report Summary
UCS	uniaxial compressive strength
UTM	Universal Transverse Mercator
W	tungsten
WGS	World Geodetic System
Zn	Zn
Φ	friction angle

2.3 Sources of Information

Much of the information and data used in the development of this TRS was provided by Pilares and SCC as well as sourced from publicly available information.

A detailed list of cited reports is noted in Section 24.0 of this TRS.

2.4 Personal Inspection Summary

A site visit and inspection of the Pilares mineral development area was completed on August 27, 2021, by Golder's QP responsible for the preparation of this TRS. The Golder QP present at the site visit was Mr. Ronald Turner. Mr. Turner was escorted by La Caridad and Pilares personnel.

2.4.1 Ronald Turner

The independent QP, as defined in S-K 1300, responsible for the preparation of the Mineral Resources for the Project is Mr. Ronald Turner (MAusIMM), Senior Geological Consultant at Golder. Mr. Turner visited Pilares on August 27, 2021.

During the site visit, Mr. Turner visited and inspected the project area, data capture facilities and the current conditions for sample storage. He inspected representative core of the deposit, sample cutting and logging areas. Mr. Turner together with project staff also conducted a site walk-through in the site verifying the materiality of the project by checking collars, reviewing outcrops, and discussing with site personnel the geology and mineralization and reviewing geological interpretation.

2.5 Previously Filed Technical Report Summary Reports

This is the first TRS filed for the Pilares Project.

3.0 PROPERTY DESCRIPTION

3.1 Property Location

The Pilares mineral development project is considered part of the La Caridad mining unit, which is located in northeastern Sonora, Mexico, about 266 km northeast of the city of Hermosillo and 125 km south of the city of Agua Prieta Sonora, Mexico, which is on the international US - Mexico border. The La Caridad mining unit is accessed from kilometer (km) 19 of the Nacozari-Agua Prieta highway. The mining unit is within the municipality of Nacozari de García, Sonora, next to the municipality of Villa Hidalgo. It is bordered to the north by the municipalities of Bacoachi, Fronteras and Agua Prieta, to the east by Bavispe, Bacerac and Huachinera; to the south by Bacadéhuachi, Huásabas and Cumpas; and to the west by Arizpe (source: SOJGA and SEGA, 2017). The closest town is Nacozari, which is about 23 km northwest of the mining unit.

The Pilares project is located between 30°19 and 30°20' N, and between 109°38’ and 109°37’47” W, at elevations ranging between 1,400 to 1,460 m above mean sea level (amsl). It is about 6 km from the La Caridad mining unit and 22 km from Nacozari. The town of Pilares is adjacent to the historical mineral processing area and open pit. The plaza in the town of Pilares is about 500 m from the historical open pit.

LEGEND

- Pilares
- Towns and Cities
- Highway
- Railway

0 5 10

1:200,000 Kilometers

NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 12N
2. IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY AIRBUS,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,GEODATASTYRELSEN,GSA,GSI AND THE GIS USER COMMUNITY

CLIENT

GrupoMéxico

PROJECT

PILARES

TITLE

PROPERTY LOCATION MAP

CONSULTANT

GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-22
DESIGNED	JW
PREPARED	JAM
REVIEWED	JS
APPROVED	MO

PROJECT NO.	CONTROL	REV.	FIGURE
20442424	-	-	3.1

3.2 Mineral Rights

Mining and exploration rights in Mexico are controlled by the federal government. Prior to 2006, exploration and mining rights were assigned to third parties by the granting of “exploration” and “exploitation” concessions, each with differing validity periods and tax and assessment obligations. Mining law reform in December 2005 simplified the concession regime, and all new concessions are “mining concessions,” which are valid for a 50-year period and are renewable. Upon enactment of the mining law reform, all previously issued “exploration” and “exploitation” concessions automatically converted to “mining concessions” with the effect date of title the same as that of the previously titled “exploration” or “exploitation” concession. The mining concessions are administered by the Direccion General de Mina (DGM), a subsecretariat of the cabinet-level Secretary of Economy.

The concession holder is required, among other things, to explore or exploit the relevant concession, to pay any relevant fees, to comply with all environmental and safety standards, to provide information to the Ministry of Economy and to allow inspections by the Ministry of Economy.

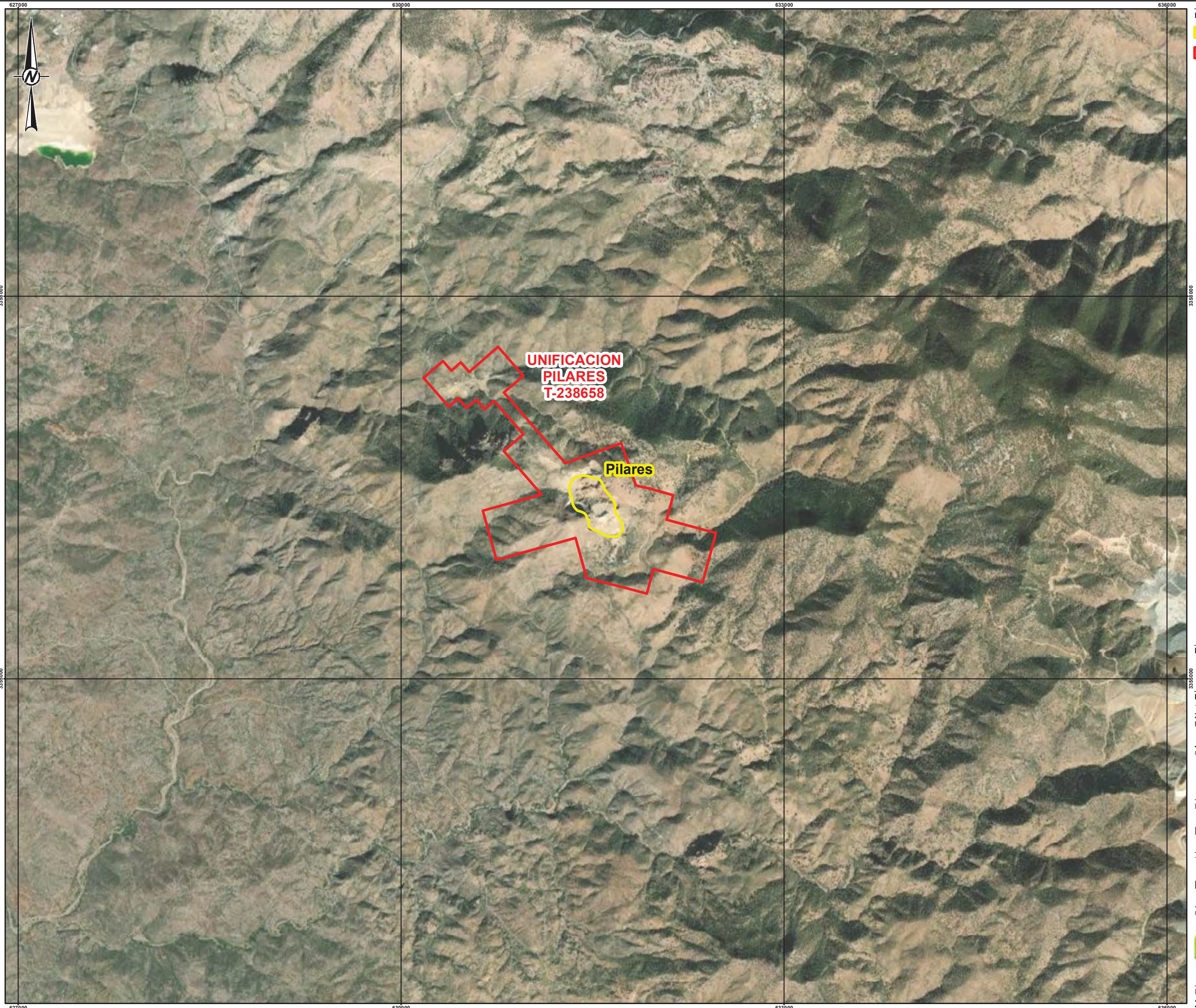
To maintain concessions in good legal standing, concession holders are obligated to pay semi-annual tax payments and to annually file documentation of exploration or development work at the concession.

The mining claims held by Pilares project cover an area of about 143.3 hectares (ha) for exploration and exploitation activities. The claim name and identification number are listed in Table 3.1 and the claim location is shown on Figure 3.2. The claim is dated October 11, 2011, and will expire August 04, 2032.

Table 3.1: Mineral Concessions

Concession Number	Concession Name	Municipality	Province	Date Granted	Expiry Date	Surface Area (ha)
238658	Unificacion Pilares	Nacozari de Garcia	Sonora	11-10-2011	04-08-2032	143.3

All of the concessions are in full force and in effect under applicable Mexican laws and the company is in compliance with all material terms and requirements applicable to these concessions.



LEGEND

- Pilares
- Tenement Boundary

0 1.5

1:30,000 Kilometers

NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 12N
2. IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

CLIENT

GrupoMéxico

PROJECT

PILARES

TITLE

MINERAL CONCESSION MAP

CONSULTANT

GOLDER MEMBER OF WSP

YYYY-MM-DD	2022-02-22
DESIGNED	JS
PREPARED	TBH
REVIEWED	JS
APPROVED	MO

PROJECT NO.	CONTROL	REV.	FIGURE
20442424	-	-	3.2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

3.3 Description of Property Rights

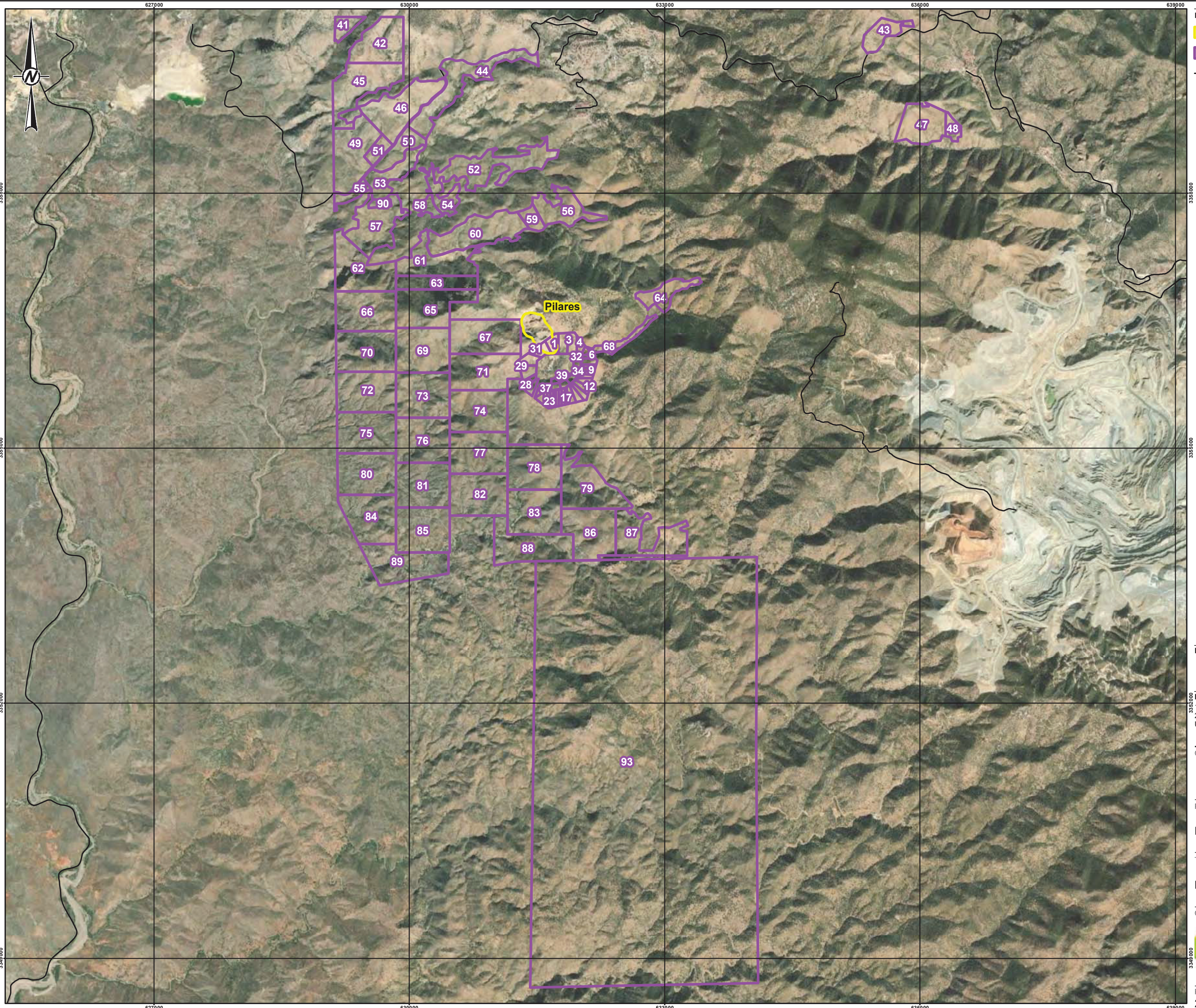
Surface rights are held by a combination of private ownership and agreements with the local ejido “Pilares”, which consists of about 40 members. Ejidos are agrarian land grants held by a group of people. The agreements allow for exploration and mining activities, plus conservation of the historical town of Pilares. The property lots are identified by name and document in Table 3.2. The majority of the property is under ownership of the mining unit. The locations of the lots are shown in Figure 3.3. There are five lots that are under lease agreements with the Ejido Pilares (Lots 90, 91, 92, 94, and 95, as listed in Table 3.2). Lots 90, 91, and 95 are each leased for mineral exploitation. Lots 92 and 94 are leased for conservation and protection of the historical town. Lost 90 was leased starting September 2015 for 30 years; Lots 91 and 92 were leased starting July 2016 for 30 years and Lots 94 and 95 were leased starting December 2019 for 30 years. According to information provided in the social baseline study, Grupo Mexico leases 2,600 ha from Ejido Pilares for $1,700,000 MXN annually, and has leased the historical town for $2,700,000 MXN for a 30-year period. At this time the designation of any buildings as cultural resources per the Mexican cultural institute (Instituto Nacional de Antropologia e Historia) is under review.

Table 3.2: Property Ownership

Polygon Number	Parcel Name	Owner/Deed Holder	Area (Ha)
1	Lote Urbano 01, Manzana 02	Mexicana de Cobre S.A. de C.V.	2.64
2	Lote Urbano 02, Manzana 02	Mexicana de Cobre S.A. de C.V.	2.64
3	Lote Urbano 03, Manzana 02	Mexicana de Cobre S.A. de C.V.	2.64
4	Lote Urbano 04, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
5	Lote Urbano 05, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.67
6	Lote Urbano 06, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.65
7	Lote Urbano 07, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
8	Lote Urbano 08, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.66
9	Lote Urbano 09, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.67
10	Lote Urbano 10, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.57
11	Lote Urbano 11, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.75
12	Lote Urbano 12, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
13	Lote Urbano 13, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
14	Lote Urbano 14, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
15	Lote Urbano 15, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
16	Lote Urbano 16, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
17	Lote Urbano 17, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.63
18	Lote Urbano 18, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.69
19	Lote Urbano 19, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.66
20	Lote Urbano 20, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.66
21	Lote Urbano 21, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.87
22	Lote Urbano 22, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.45
23	Lote Urbano 23, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.46
24	Lote Urbano 24, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.86
25	Lote Urbano 25, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.84
26	Lote Urbano 26, Manzana 02	Mexicana de Cobre S.A. de C.V.	0.52
27	Lote Urbano 29, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
28	Lote Urbano 30, Manzana 02	Mexicana de Cobre S.A. de C.V.	1.32
29	Lote Urbano 31, Manzana 02	Mexicana de Cobre S.A. de C.V.	2.64
30	Lote Urbano 32, Manzana 02	Mexicana de Cobre S.A. de C.V.	2.64

Polygon Number	Parcel Name	Owner/Deed Holder	Area (Ha)
31	Lote Urbano 33, Manzana 02	Mexicana de Cobre S.A. de C.V.	2.64
32	Lote Urbano 02, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.65
33	Lote Urbano 03, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.66
34	Lote Urbano 04, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.66
35	Lote Urbano 06, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.82
36	Lote Urbano 07, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.75
37	Lote Urbano 08, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.60
38	Lote Urbano 10, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.57
39	Lote Urbano 11, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.50
40	Lote Urbano 12, Manzana 03	Mexicana de Cobre S.A. de C.V.	0.42
41	Parcela 01 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	5.98
42	Parcela 02 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	27.42
43	Parcela 03 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	11.09
44	Parcela 04 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
45	Parcela 05 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
46	Parcela 06 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
47	Parcela 07 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	22.31
48	Parcela 08 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	4.24
49	Parcela 09 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
50	Parcela 10 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	12.39
51	Parcela 11 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	5.61
52	Parcela 12 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
53	Parcela 13 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	15.40
54	Parcela 14 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	9.86
55	Parcela 15 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	5.27
56	Parcela 16 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	18.96
57	Parcela 17 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	28.13
58	Parcela 18 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	4.58
59	Parcela 19 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	5.33
60	Parcela 20 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
61	Parcela 21 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	28.08
62	Parcela 22 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
63	Parcela 23 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	15.45
64	Parcela 24 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	11.99
65	Parcela 25 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
66	Parcela 26 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
67	Parcela 27 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
68	Parcela 28 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	5.96
69	Parcela 29 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
70	Parcela 30 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
71	Parcela 31 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
72	Parcela 32 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
73	Parcela 33 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
74	Parcela 34 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
75	Parcela 35 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41

Polygon Number	Parcel Name	Owner/Deed Holder	Area (Ha)
76	Parcela 36 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
77	Parcela 37 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
78	Parcela 38 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
79	Parcela 39 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
80	Parcela 40 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
81	Parcela 41 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
82	Parcela 42 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
83	Parcela 43 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
84	Parcela 44 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
85	Parcela 45 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
86	Parcela 46 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
87	Parcela 47 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	29.16
88	Parcela 49 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
89	Parcela 50 Z-1 P-1	Mexicana de Cobre S.A. de C.V.	33.41
90	Temporary mining usage 2015	Mexicana de Cobre S.A. de C.V.	2,572.00
91	Temporary mining usage 2016	Mexicana de Cobre S.A. de C.V.	16.73
92	Temporary agrarian usage	Mexicana de Cobre S.A. de C.V.	664.78
93	Fraccion "b" located inside of lot no. 12 or "santo domingo"	Mexicana de Cobre S.A. de C.V.	1,317.52
94	Historic town of Pilares	Mexicana de Cobre S.A. de C.V.	7.24
95	Temporary mining usage 2019 (shaft)	Mexicana de Cobre S.A. de C.V.	1.32
		Total	**5,868.34**



LEGEND

Pilares

Parcels

Highways

0 2

1:45,000 Kilometers

NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 12N
2. IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

CLIENT

GrupoMéxico

PROJECT

PILARES

TITLE

PROPERTY OWNERSHIP MAP

CONSULTANT

GOLDER MEMBER OF WSP

YYYY-MM-DD	2022-02-22
DESIGNED	JS
PREPARED	JAM
REVIEWED	JS
APPROVED	MO

PROJECT NO.	CONTROL	REV.	FIGURE
20442424	-	-	3.3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

3.3.1 Royalty Payments to Property Owners

There are no known requirements to pay royalties.

3.4 Royalty Payments

In December 2013, the Mexican government enacted a law that, among other things, established a mining royalty charge of 7.5% on earnings before taxes as defined by Mexican tax regulations and an additional royalty charge of 0.5% over gross income from sales of gold, silver and platinum. These charges were effective January 2014 and are deductible for income tax purposes.

3.5 Significant Encumbrances to the Property

As mentioned regarding the property ownership, there are two leases of properties with the Ejido Pilares that are restricted areas for conservation purposes. It is unknown if any buildings or areas within the town of Pilares will be designated as historical by the Mexican government. Typically, historical buildings are constructed prior to the 19th century, and none of the buildings in Pilares date to that time. Safety and social license concerns include the movements of people using and living in Pilares. There are two people reported to be living in the town and ejido meetings are held monthly in the town, plus the cemetery and the church are used by ejido members.

The social baseline study indicated that the highest social risks are the restriction of cattle grazing if the mine is operating and an increased probability of an environmental accident. The historical underground mine dewatering and proximity of the surface water drainages are a concern to the stakeholders. The environmental responsibility for the underground mine water drainage was acquired by Grupo Mexico with the purchase of Moctezuma Copper Company. The mine water draining from the underground mine contains metals and is treated with lime prior to discharging to the arroyos that lead to Nacozari. The mining union 298 has voiced opposition to the company, but no specific information was available.

3.6 Other Significant Factors and Risks Affecting Access

At the time of the site visit, the proposed mine access road from the La Caridad mining unit to Pilares could not be completed because the permit was pending authorization from the environmental agency. Continued delay or denial of the permit would be a risk for property access.

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Topography and Land Description

The project is located within the northern portion of the Sierra Madre Occidental Physiographic Province. It is within the Sierras y Valles del Norte (Basin and Range) subprovince, which is mainly formed by high mountain ranges between which wide, parallel valleys are formed with a preferential north-south orientation. The mountain ranges exhibit elevations varying from 300 to 2,600 m amsl. The Nacozari River receives intermittent flows from the mountain ranges, as well as wastewater discharges from the town Nacozari de García.

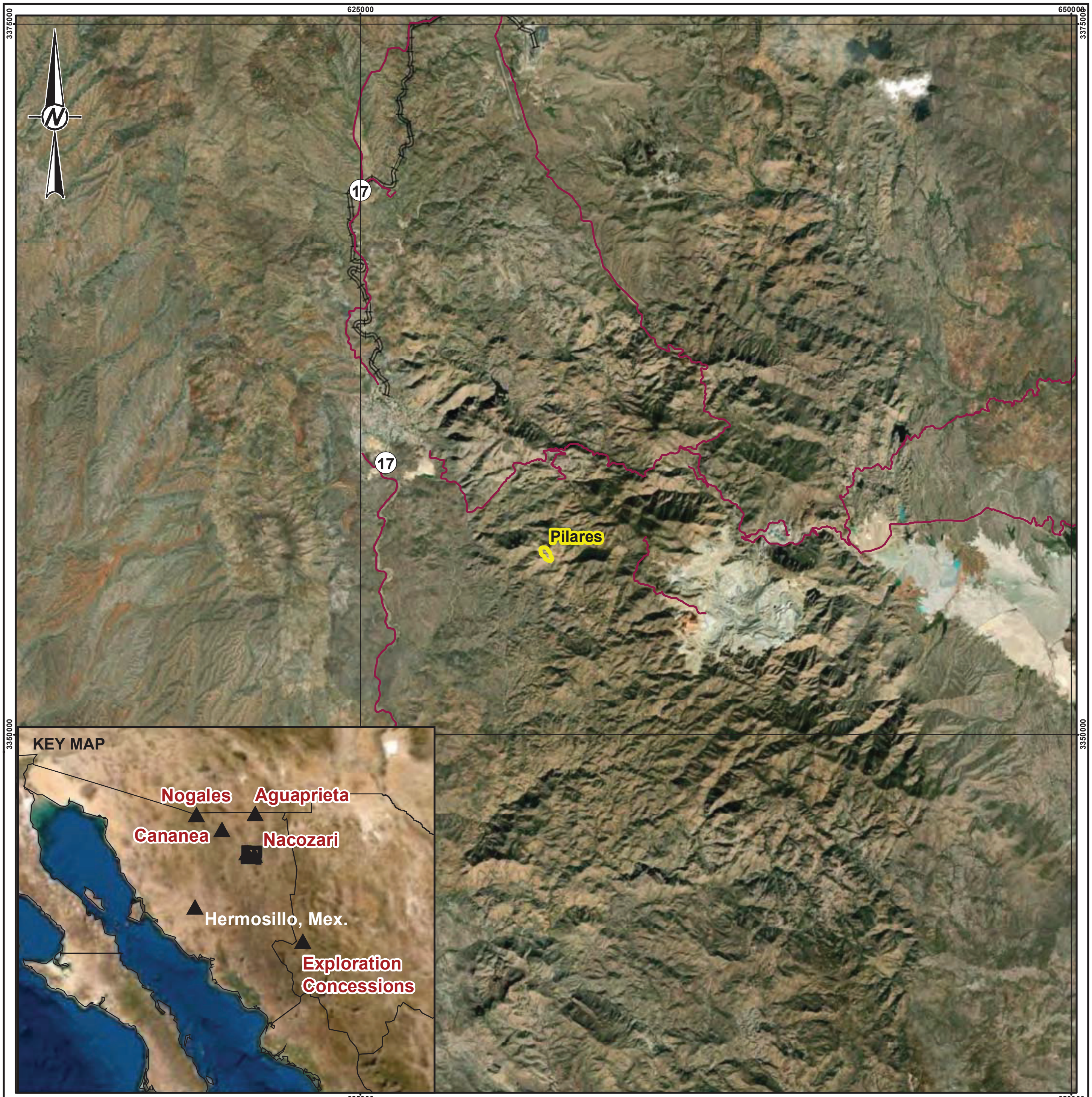
The Pilares project is in an area of steep topography.

4.2 Access to the Property

Nacozari is connected by paved highway with Hermosillo and Agua Prieta and by rail with the international port of Guaymas, and the Mexican and United States rail systems. An airstrip with a reported runway length of 2,500 m is located 36 km north of Nacozari.

Currently, the project can be accessed via an unpaved road that connects to the paved road at km 19 of the Nacozari-Agua Prieta highway and a second unpaved road. There is a newly built unpaved road connecting the project to the La Caridad mining unit has been partially constructed. The Pilares project is pending a permit approval for the change of land use. The application was submitted over a year ago and there has been no indication from the environmental agency regarding the status.

The property layout and access are shown in Figure 4.1.



LEGEND

- Pilares
- Highway
- Railway

0 5 10

Kilometers

1:200,000

NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 12N
2. IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

CLIENT

GrupoMéxico

PROJECT

PILARES

TITLE

SITE ACCESS MAP

CONSULTANT

GOLDER MEMBER OF WSP

YYYY-MM-DD	2022-02-22
DESIGNED	JW
PREPARED	JAM
REVIEWED	JS
APPROVED	MO

PROJECT NO.	CONTROL	REV.	FIGURE
20442424	-	-	4.1

4.3 Climate Description

Climate data was obtained from the National Meteorological Service, which is administered by the National Water Commission (CNA) (SEGA, 2017). The climate in the region varies between three types of climates per the Köeppen classification, namely, BS1k (x '), BS1h (x') and BSoh (x '), as described in Table 4.1.

Table 4.1: Project Area Climate Types

Climate Type	Code	Surface Area (ha)	Total Area (%)
Semi-arid, Semi-warm	BS1h(x')	18,519.48	48.38
Semi-arid, Temperate	BS1k(x')	14,362.27	37.52
Arid, Semi-warm	BSoh(x')	5,397.89	14.1
Total		**38,279.64**	**100**

The coldest months temperatures range between -3° to 18° Celsius (C) and the warmest months surpass 18° C. The rain regime is scarce all year round.

The mean average temperature of the region is 18.81°C. The mean annual rainfall within the region varies between 203 millimeters (mm) and 655 mm. The estimated average annual rainfall is 413.58 mm. The annual distribution of precipitation presents a very well-defined summer rainy season from July to September with daily rain events over 40 mm. The winter rainy season is expected from December to February with rain events of at least 25 mm. The dry season occurs from March to June, with rain events of less than 20 mm.

At the adjacent La Caridad mining unit activities are carried out 365 days a year, including holidays or non-working days, and it is anticipated that activities at the Pilares project would also be year-round.

4.4 Availability of Required Infrastructure

The Pilares project is located near the demarcation of two municipalities: the municipality of Nacozari de García (population 14,369) and the municipality of Villa Hidalgo (population 1,429). Other than these two municipalities, the area is rural with very few inhabitants. The town of Pilares de Nacozari contains only a few houses that are occupied. The houses are mostly unoccupied, and buildings have not been maintained.

It is anticipated that infrastructure at the La Caridad mining unit will be used to support mining at Pilares.

5.0 HISTORY

This is a historical mining area. The town of Pilares de Nacozari was founded in 1896. The Moctezuma Copper Company started mining operations in 1900, and in 1910 the Pilares mine was considered to be the second largest deposit in the world, according to an article in the Los Angeles Herald. The town had up to 8,000 inhabitants, and included a gymnasium, library, bull-fighting ring, theater, three cemeteries and a church. Moctezuma Copper Company operated an open-pit and underground mine until 1929, when operations ceased. By 2012 only three inhabitants remained in Pilares, and there are currently only two inhabitants living fulltime in the town. One of the cemeteries is still being used and about 500 head of cattle are grazed in the area.

The Moctezuma Copper Company built a beneficiation plant and smelter in Nacozari to process ore from Pilares. The smelter operated from 1895 until 1949. TSF 1, located in Nacozari, is associated with the Moctezuma Copper Company. A separate reclamation project is ongoing for TSF 1, which is not part of the current La Caridad operations. Stabilization of the slopes and revegetation was to be carried out in 2020 and 2021.

There is a historical waste rock storage facility (Tepetatera Poniente) at Pilares.

Figure 5.1 and Figure 5.2 show general views of the historical Pilares Mine as it looks presently.

Figure 5.1: Pilares Mine (looking NW)

Figure 5.2: Pilares Mine Cave-in

6.0 GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1 Regional Geology

Mexico has been subject to a continuous succession of tectono-magmatic events, particularly from the middle part of the Mesozoic until recent times. These events have left marked traces of their activity, and in some cases, have been associated with the generation of numerous mineralized centers, among which the Laramide Copper (Cu) Porphyry belt stands out (e.g., Staude and Barton, 2001). This belt extends in a NW-SE direction and is notably wider in the northern part, due to a greater effect of extensional tectonics associated with the Basin and Range system (Damon et al. 1983a). The regions of western Arizona, western New Mexico and northern Sonora contain the most attractive Cu deposits.

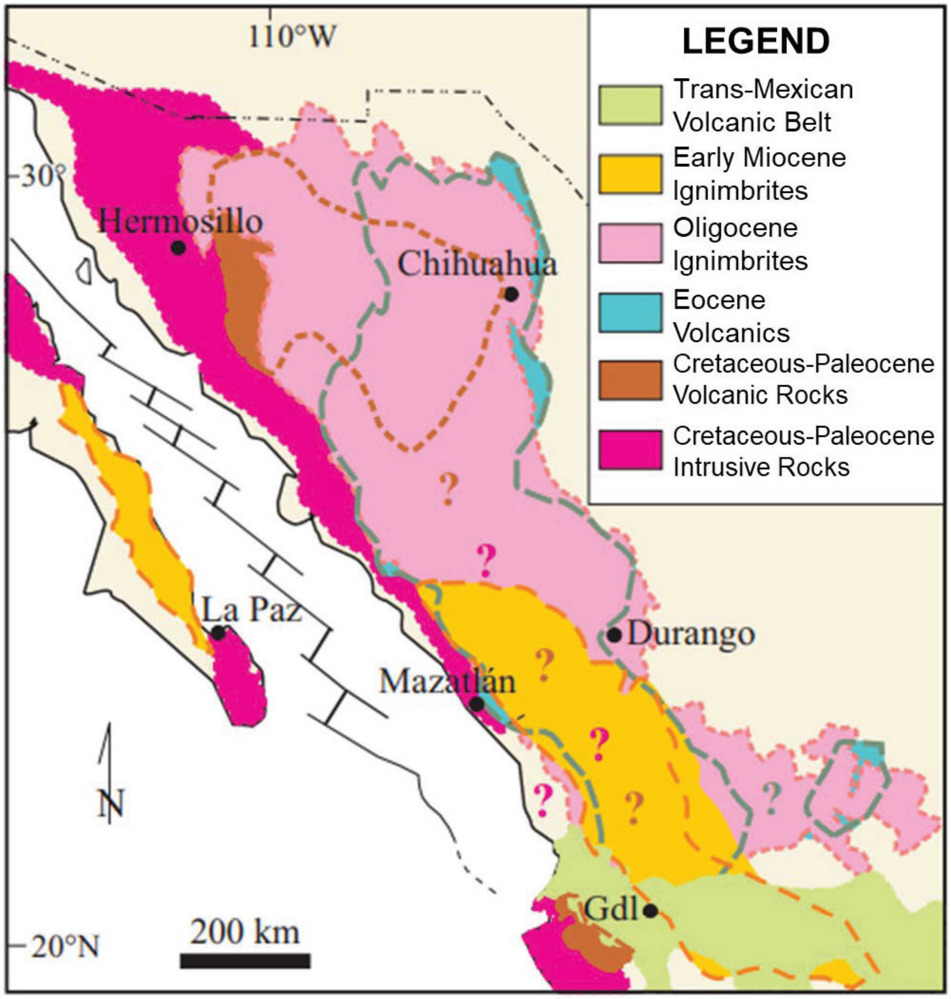
The Cu porphyry systems in this region are characterized by large zones with potassic, phyllic, propylitic, and argillic hydrothermal alteration, related to the presence of hypabyssal trunks, whose composition varies between monzonite and quartz-diorite. Mineralization occurs mainly as stockwork zones or in disseminated form, especially hosted in Laramide volcanic rocks of intermediate composition, as well as in the same sub-volcanic intrusives (Valencia -Moreno, et al, 2006).

The oldest rocks in the region correspond to the Pinal schist, considered to be the bedrock of the region. The Pinal schist consists of gneisses and schists that outcrop in southern Arizona, New Mexico and northeastern Sonora in the Cabullona and Cananea region. It is intruded by two events of anorogenic plutonism, the first consists of quartz-diorites and quartz monzonites and the second event consists of granites and granodiorites. Overlying this sequence, rocks were deposited in discordance Neoproterozoic and Paleozoic carbonate marine platform rocks, these rocks are characterized by thick sequences of limestones and quartzites exposed mainly in the north and center of the State of Sonora. The Paleozoic is represented by the El Tigre Formation, which is composed of thin and thick layers of limestones with zones of shales.

Mesozoic rocks in the region are widely distributed, consisting primarily of sedimentary rocks, including the marine Cucurpe Formation (Araujo and Estavillo, 1987), deformed polymict conglomerates of the Cocóspera Formation (Gilmont, 1978) and the fluvio- lacustrine rocks with associated volcanics of the Cabullona Group (González-León, 1994). These rocks are overlain by the volcanic rocks of andesitic and dacitic composition of the Tarahumara Formation (Wilson and Roche, 1994).

The Cenozoic is represented by the Sierra Madre Occidental (SMO). The SMO is the result of different magmatic tectonic processes associated with the subduction of the Farallon plate beneath the North American plate and the opening of the Gulf of California. The SMO is composed of five main igneous assemblages: (1) Upper Cretaceous-Paleocene volcanic and plutonic rocks and (2) andesitic and to a lesser extent, Eocene dacitic-riolitic volcanic rocks, traditionally grouped in the so-called "Lower Volcanic Complex"; (3) silicic ignimbrites emplaced in two pulses, in the early Oligocene (32-28 Ma) and early Miocene (24-20 Ma) and grouped in the Upper Volcanic Super Group; (4) transitional basaltic-andesitic flows extravasated after each ignimbritic pulse, correlated with the "Andesita-Basalticas del Sur de la Cordillera" (SCORBA); (5) post-subduction volcanism constituted by alkaline basaltic-andesitic flows and ignimbrites emplaced in different episodes of the late Miocene, Pliocene and Quaternary (Figure 6.1). The extent of the Cretaceous-Eocene assemblages is partly inferred by the extensive cover of ignimbrites.

Figure 6.1: Geographic Extent of the SMO Ignimbrite Assemblages



Source: Gómez, 2014

Magmatism and tectonics during the Cretaceous-Tertiary divided the SMO into three sectors: (1) northern (Sonora-Chihuahua), (2) central (Sinaloa-Durango) and (3) southern (Nayarit-Jalisco-Zacatecas). Pilares is hosted in the North sector, which consists of large granitic batholiths, ranging in composition from diorites and quartz-diorite to alkaline granite (Rodal-Quintana, 1991; Valencia-Moreno et al., 2001), and volcanic sequences of dominantly andesitic composition, known as the Tarahumara Formation (Wilson and Rocha, 1949). The volcanic sequence includes an upper member of tuffs of rhyolite and dacite flows, intercalated with horizons of sedimentary rocks with local contents of fossil.

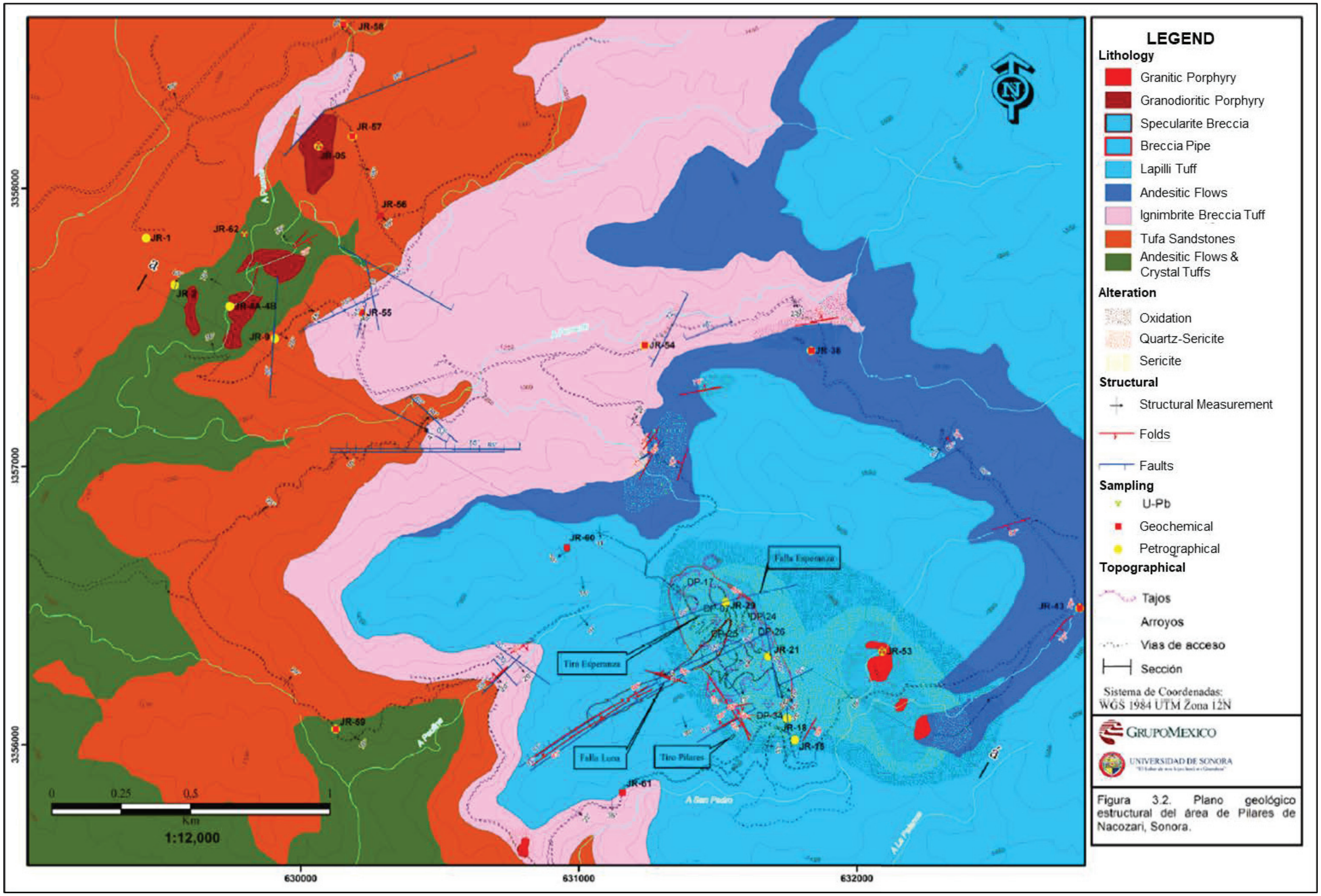
6.2 Local and Property Geology

The local geology of the Pilares area consists of two main lithological packages, a volcanic sequence denominated as the Pilares Volcanic Sequence (PVS) (Gomez, 2014) and a set of hypabyssal bodies that intrude the PVS. The PVS is comprised from the base to the top by the following clearly recognizable units (Figure 6.2 and Figure 6.3):

- Andesitic flows with intercalations of Crystal Tuff (Fand-Tbc); composed of flows and tuffs that outcrop in the topographic lows towards the eastern and southeastern part of the Pilares de Nacozari area. In the northwestern part of the study area, this unit is intruded by hypabyssal bodies (granodioritic porphyry). This unit is composed mostly of andesitic flows and tuffs (crystals).
- Tobaceous Sandstone (Atb): Pseudostratiform tuff outcropping in the middle-lower part topographically speaking, outcropping towards the central-west, northeast and southeast. This unit was observed overlying concordantly to the Crystal Tuffs and in discordance with the Granodioritic Porphyry. The measured thickness of the unit is ~150 m.
- Tuff-breccia ignimbrite (Tbci): Composed of volcanic breccias that outcrop in the middle part of the deposit and is widely distributed in the central, southern and northern part of the deposit. The unit is concordantly overlying the Tobaceous Sandstone and discordantly with the Granitic Porphyry in the southern portion of the area. This unit consists exclusively of volcanic breccias with a chaotic brecciated structure composed of subangular volcanic blocks of varied size, immersed in a very fine material (ash). The estimated thickness for this unit is ~220 m
- Basalt-andesite flows (Fand): Composed of basaltic andesites, which outcrop in the topographically mid-high parts, in the central, eastern and northern portion of the study area. The unit is concordantly overlying the tuff-breccia and discordantly with the granitic porphyry This unit is characterized by massive flows of strongly fractured basalt-andesite, its approximate thickness of ~90 m.
- Lapilli Tuffs (Tbl): Composed of lapilli-sized volcanic fragments outcropping in the topographic highs and distributed in the central, southeastern and northeastern portion of the Pillars area. It is observed overlying concordantly with the Andesitic Flows and discordantly with the Granitic Porphyry. It is very important to mention that the Lapilli Tuff hosts the mineralized structure of the Pillars Breccia, this relationship is very well observed on surface and in the gully cores. Its measured thickness is 220 m.
- Hypabyssal bodies: Eight isolated outcrops of hypabyssal bodies of porphyritic texture are recognized. According to their mineralogical composition, they are divided into two types, one of granodioritic composition and the other of granitic composition. Field observations indicate that these hypabyssal bodies are intruding the PVS.

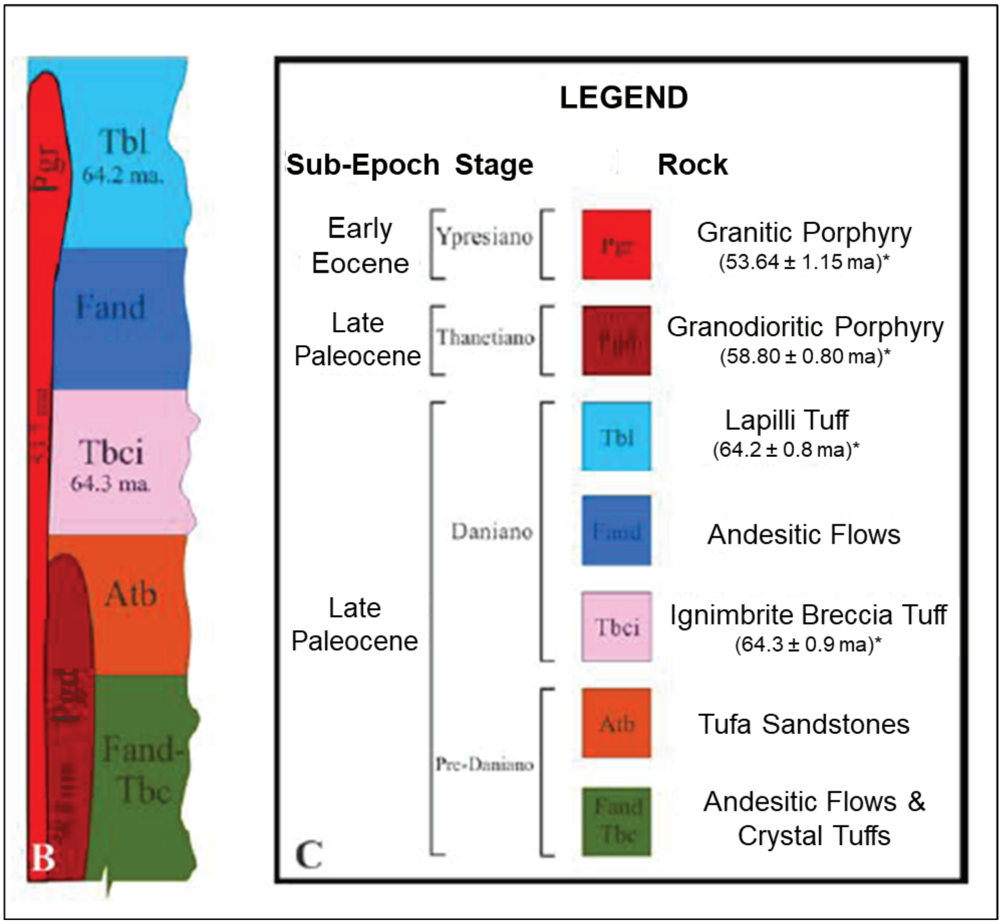
A geological cross-section is illustrated in Figure 6.4.

Figure 6.2: Geological Map of the Pilares Area



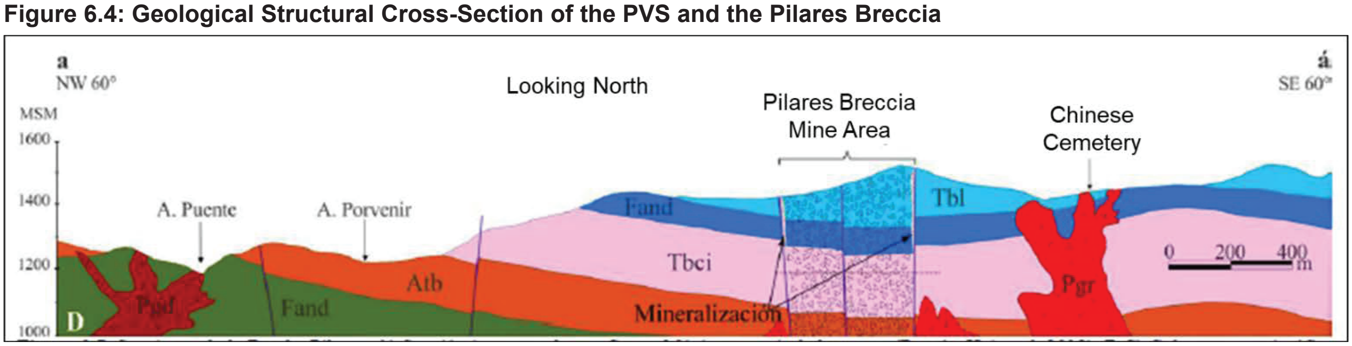
Source: Pilares

Figure 6.3: Local Stratigraphic Column



Source: Pilares

Figure 6.4: Geological Structural Cross-Section of the PVS and the Pilares Breccia

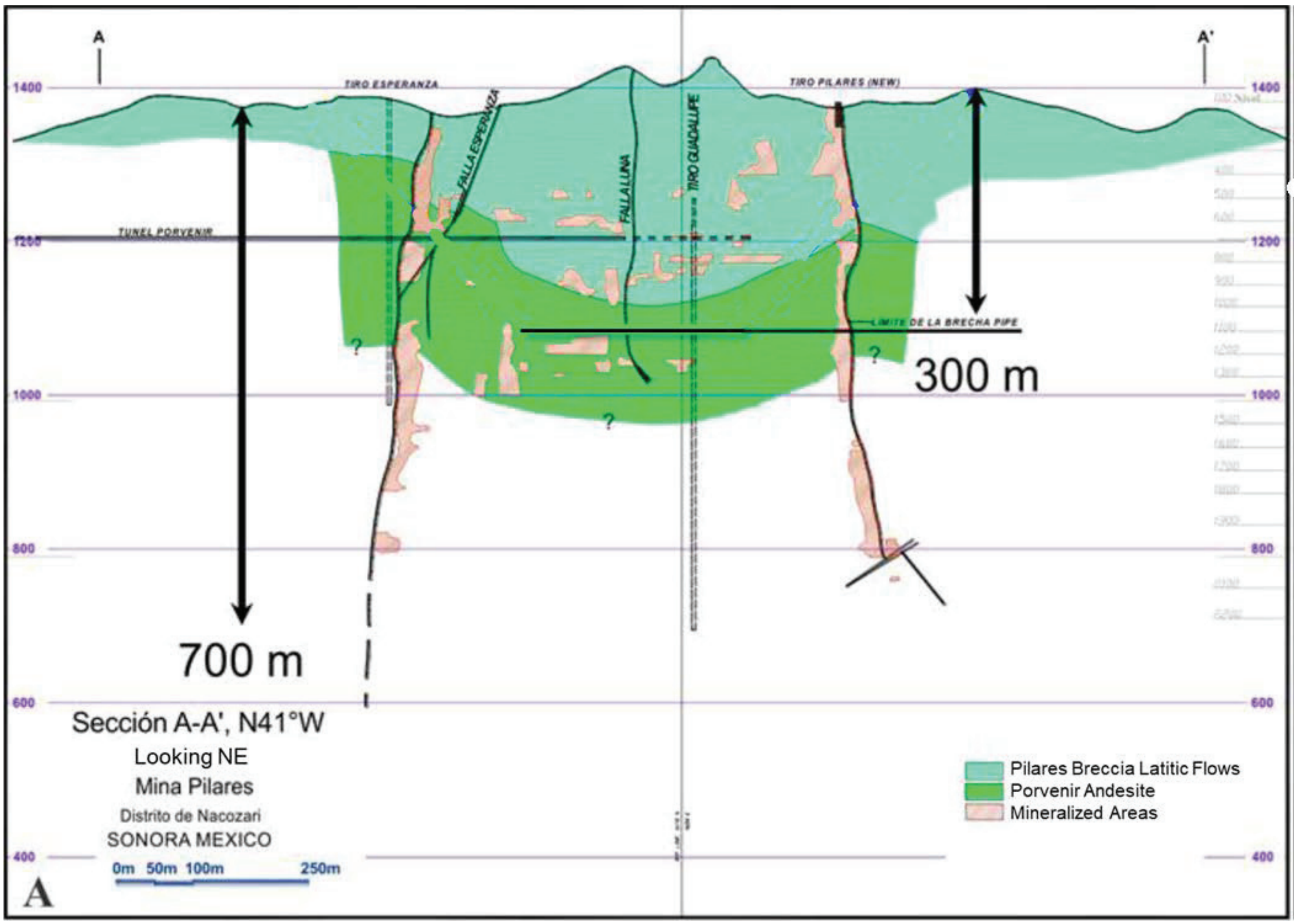


Source: Pilares

6.3 Mineralization

The Pilares Breccia is the most important mineralized structure in the area, outcropping in the south-central portion of the area. It corresponds to a Cu mineralized structure that developed in the Andesitic Flow unit and in the Lapilli Tuff unit belonging to the upper units of the PVS, and at depth to the other underlying units. The structure has an ellipsoidal shape in plan with the major axis in NW30°SE direction and a cylindrical shape in section, the latter interpreted from drilling and direct works. The structure has a major axis measuring 550 m, the minor axis measures 250 m. The breccia is approximately 600 m deep (Figure 6.5).

Figure 6.5: Pilares Breccia Cross-Section interpreted by Pilares from Drill Holes

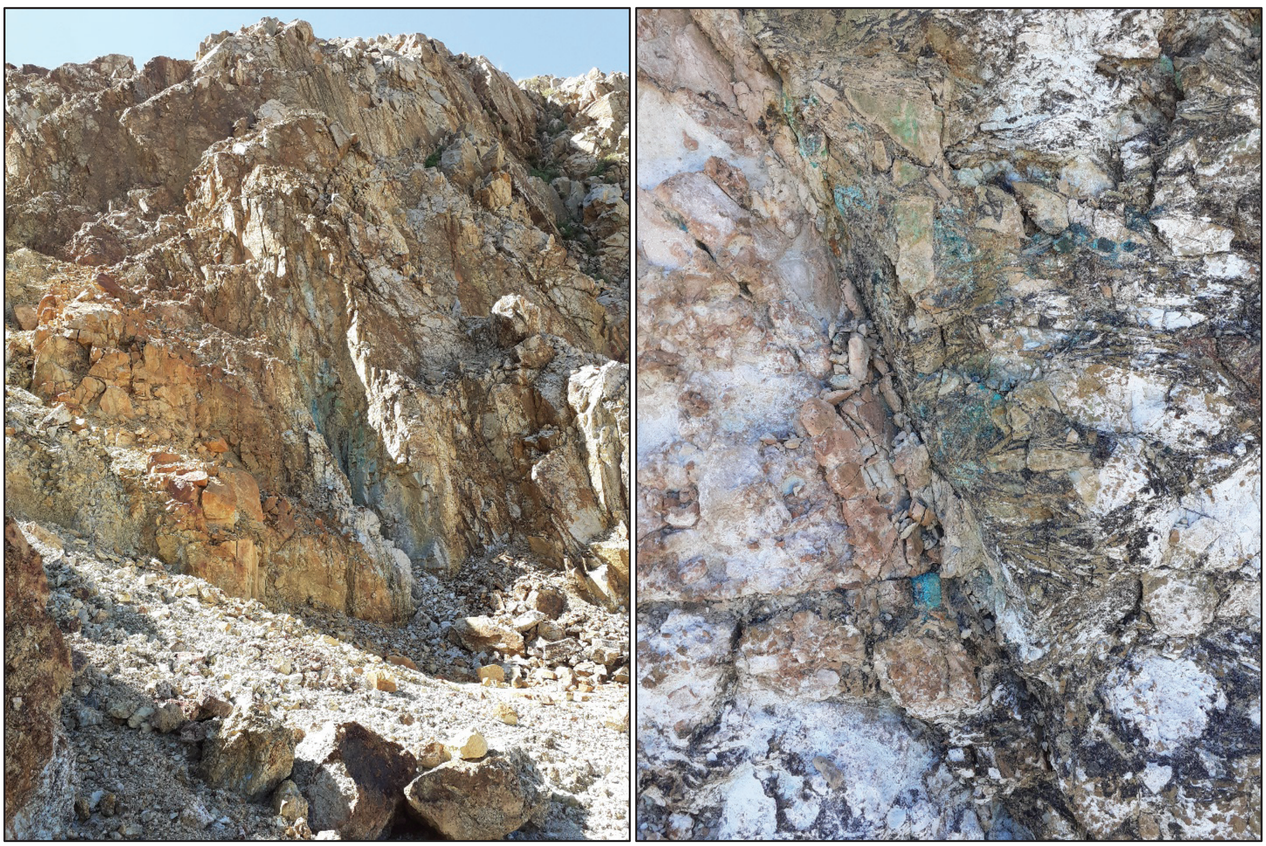


Source: Rascón-Heimpel, 2012

Three mineralization events are recognized in the deposit, including:

- Mineralization event hosted in the ellipsoidal monolithic breccia with a hypogene origin. The best sulfide concentrations are hosted in veins, veinlets and disseminated with an annular-elliptical distribution in plan and a NW30°SE orientation. The breccia geometry and veinlet distribution define a typical chimney structure. The veinlets are mainly composed of quartz + pyrite + chalcopyrite + chalcopyrite + bornite ± galena ±magnetite. (Figure 6.6).
- Mineralization event hosted in a tabular shaped breccia that overlies the ellipsoidal shaped breccia, this event has a hypogene origin: The tabular breccia has a NE60°SW orientation and is bounded by conjugate normal faults of the same orientation and is characterized by veins of specularite + quartz + chalcopyrite + chalcopyrite + pyrite + calcite. (Figure 6.7).
- Mineralization event hosted in fractures and of supergene origin. Fracturing hosts secondary mineralization defined by bornite + covellite + chalcocite.

Figure 6.6: Photograph of the Pilares Breccia



Source: Golder 2021

Figure 6.7: Photographs of the Specularite Breccia

Source: Golder 2021

6.4 Deposit Type

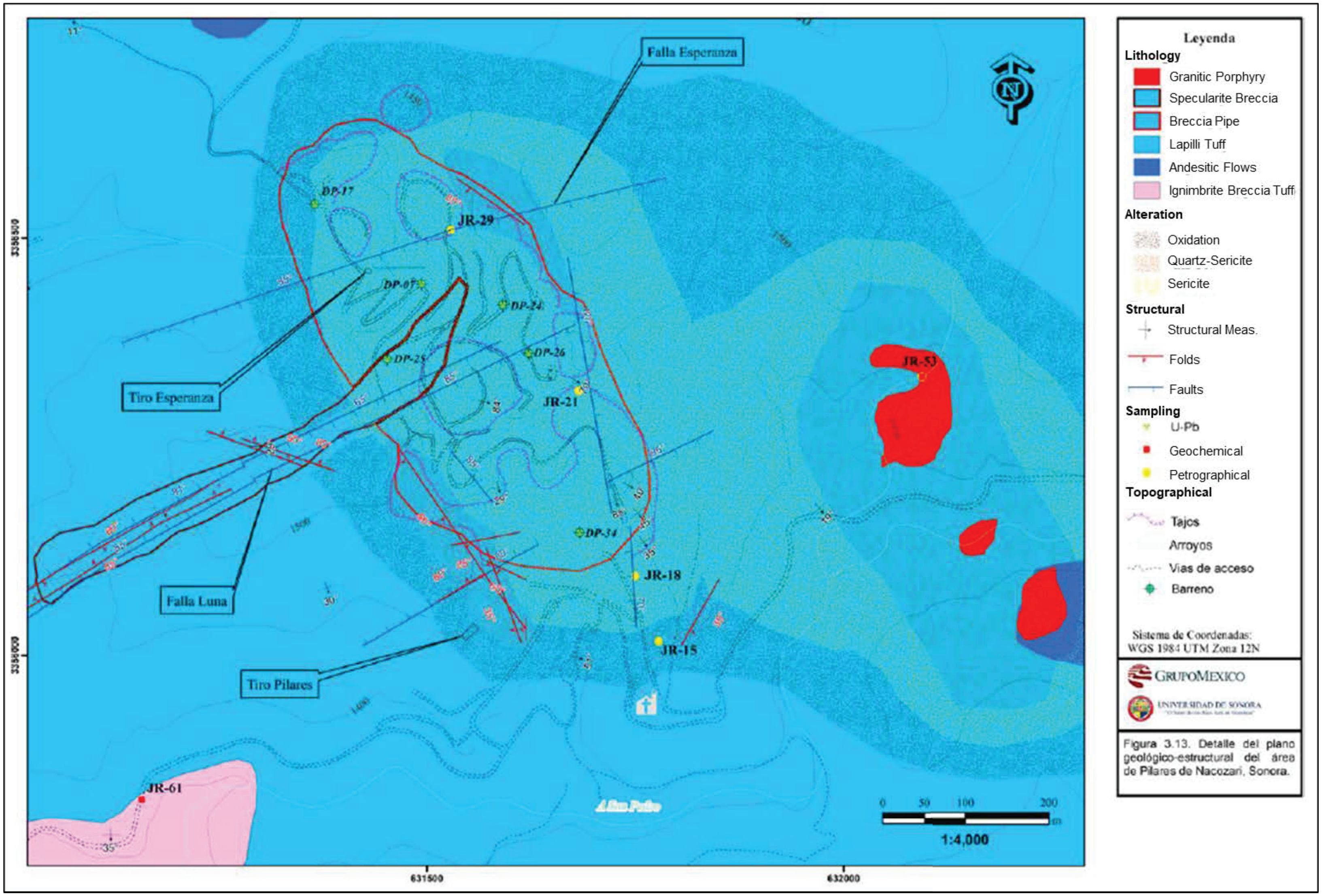
The Pilares deposit consists of a volcanic breccia of lattitic composition, whose fragments are cemented by specularite and the main Cu mineralization is concentrated in the ellipsoidal-cylindrical brecciated structure found in the F and Tbl units (Figure 6.8). The shape of the blocks is variable, ranging from equidimensional to tabular; however, the finest fragments present laminar forms and develop a flow structure bordering the blocks (fragments of the blocks (larger fragments). The fragments that make up the Pilares breccia are cemented by quartz, chalcopyrite, pyrite and locally by specularite.

Based on its characteristics, Sillitoe (1985) classified the Pilares breccia as a classic magmatic-hydrothermal breccia.

A characteristic of the breccia is the orderly spatial distribution of the blocks, this arrangement resembles a jigsaw puzzle or mosaic, which ensures that the stratigraphic coherence of the lithological units is not lost. Fragment size is variable within the Pilares breccia. In general, the largest fragments are found in the center of the elliptical structure, which are mostly blocks whose diameters vary from 1 to 4 m. Toward the periphery, the size of the fragments gradually decreases, becoming much smaller at the edge of the structure (0.5 cm to 1 m).

The shape of the blocks is variable, ranging from equidimensional to tabular; however, the finest fragments present laminar forms and develop a flow structure bordering the blocks (fragments of the blocks (larger fragments). The fragments that make up the Pilares breccia are cemented by quartz, chalcopyrite, pyrite, and locally, by specularite.

Figure 6.8: Structural Geology Map of Pilares de Nacozari Area.



Source: Pilares

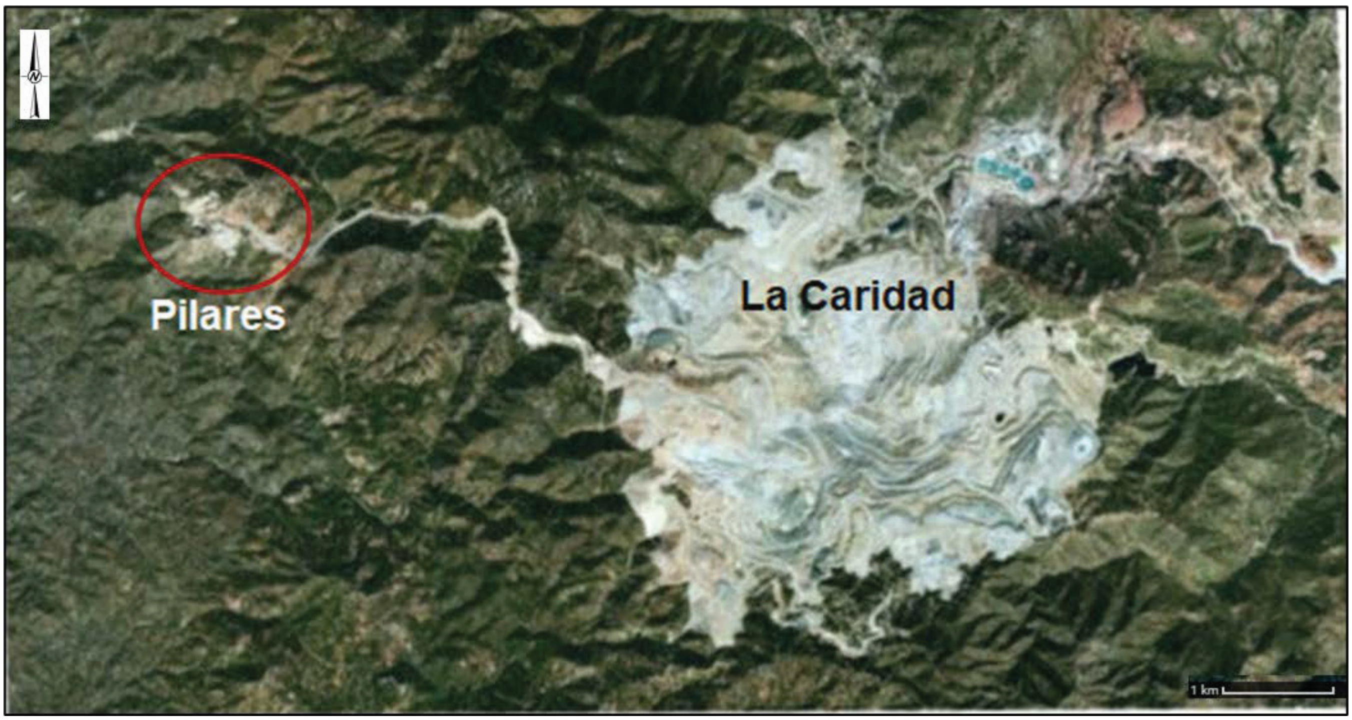
7.0 EXPLORATION

7.1 Exploration Work

7.1.1 Topographic Survey

Pilares provided topographic surfaces for 2011, 2017, and 2021. Supporting documentation for the methodology and accuracy of the 2011 and 2017 surveys was not available. Spacing of the contours used to create the surfaces for 2011 and 2017 was 10 m and 5 m, respectively. The most recent topographic survey was conducted by PhotoSat on October 9, 2021. The satellite survey covered 100 km^2 in La Caridad, Sonora. The project projection was in World Geodetic System (WGS) 84 Universal Transverse Mercator (UTM) Zone 12N, elevations in Earth Gravitational Model (EGM) 96. The La Caridad 1 m stereo satellite survey and 50 cm precision orthophoto (Figure 7.1) were produced from a 50-cm pixel resolution WorldView-2 satellite photos (PhotoSat, 2021).

Figure 7.1: October 9, 2021 WorldView-2 Orthophoto of La Caridad, Sonora



Source: PhotoSat, 2021

7.2 Geological Exploration Drilling

7.2.1 Exploration Drilling Methods and Results

There have been four drilling campaigns completed at Pilares since 2009. The drilling campaigns were designed with the objective of determining Mineral Resources for the deposit. The first drilling program in 2009 completed 18 drill holes totaling 5,133 m. With the information obtained, a Mineral Resource estimate was completed, and the results did not meet the expected confidence, so Pilares decided to conduct a second 18 drill hole campaign totaling 4,395 m in late 2009 to 2010, which reduced the mean drill spacing from 90 m to 60 m. Another Mineral Resource estimate was completed increasing the confidence level; however, it was determined that additional drilling was required to further increase the confidence in the deposit. A third drilling program was undertaken in late 2010 to 2011, completing 24 drill holes totaling 7,036 m and reducing the mean drill hole spacing to 50 m. A fourth and final 5 drill hole geotechnical drilling program was completed in 2011 totaling 1,662 m.

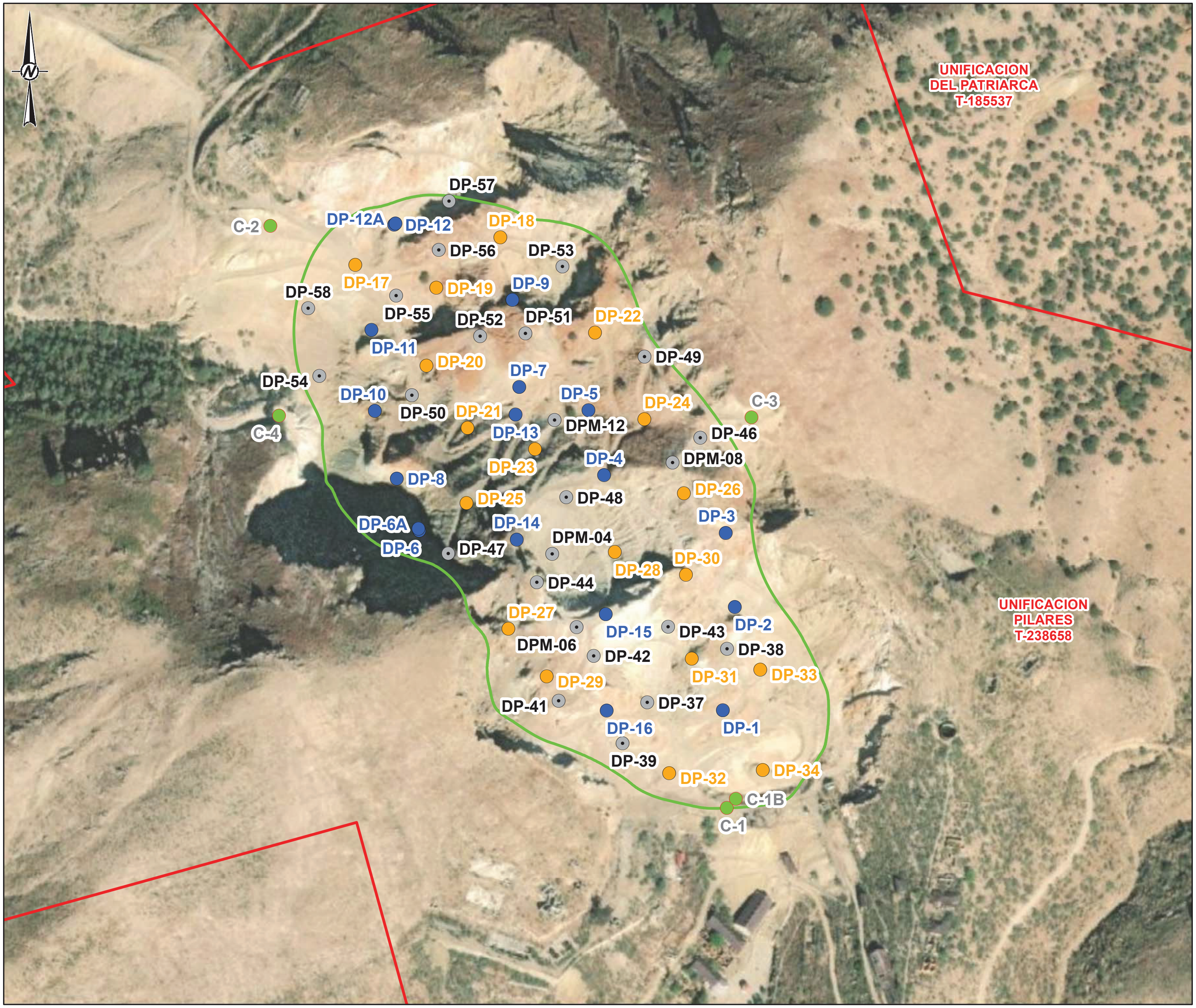
The first three phases were completed using diamond drilling (DDH) techniques to estimate the Mineral Resource of the brecciated structure. The fourth phase was completed by directional diamond drilling, using triple pipe for geotechnical data acquisition. Drill cores were HQ sized (63.5-mm core diameter). Up to two drill rigs operated simultaneously in the first three exploration stages, and one rig in the fourth geotechnical stage. Table 7.1 summarizes the different phases of drilling in the deposit.

Table 7.1: Summary of Exploration Drilling by Year

Year	Phase	Drill Hole Type	No. of Drill Holes	Total Meters Drilled (m)	Objective
2009	1	DDH	18	5,114	Definition of Mineral Resources
2009 - 2010	2	DDH	18	4,395	Definition of Mineral Resources
2010 - 2011	3	DDH	24	7,036	Definition of Mineral Resources
2011	4	DDH (Directional)	5	1,662	Geotechnical
Total			**65**	**18,207**	

Figure 7.2 shows the distribution of drill collar locations by exploration phase. Figure 7.3 illustrates a cross-section through the drill holes with the mineralogy and geological domains.

No downhole surveys were conducted on any of the drill holes drilled at Pilares.



LEGEND

Drilling Programs

- 2009
- 2009-2010
- 2010-2011
- 2011 (Geotechnical)
- Pilares Breccia Limit
- Tenement Boundary

0 0.1 0.2

1:3,000 Kilometers

NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 12N
2. IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

CLIENT

GrupoMéxico

PROJECT

PILARES

TITLE

EXPLORATION DRILL HOLE MAP

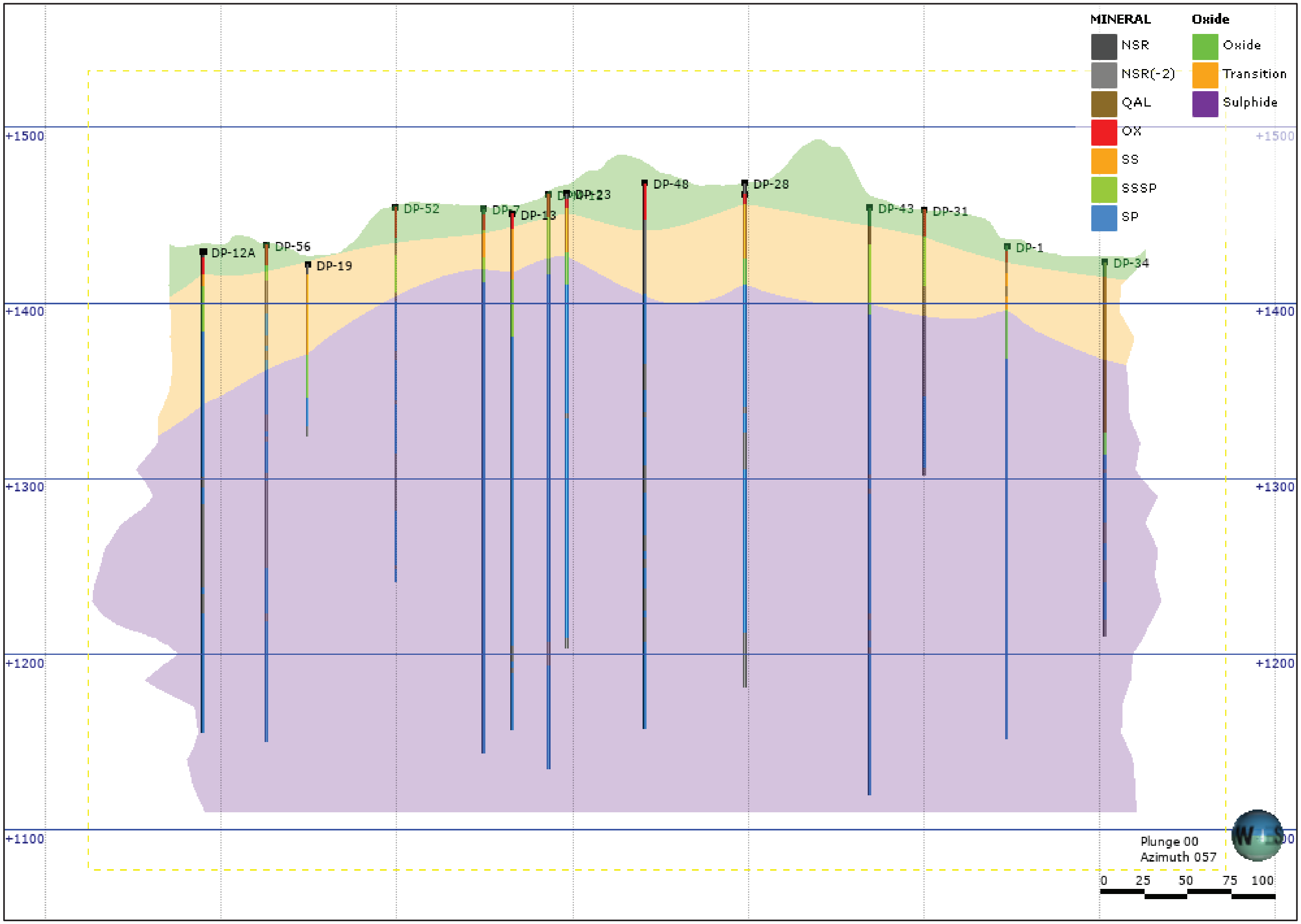
CONSULTANT

GOLDER MEMBER OF WSP

YYYY-MM-DD	2022-02-22
DESIGNED	JS
PREPARED	TBH
REVIEWED	JS
APPROVED	MO

PROJECT NO.	CONTROL	REV.	FIGURE
20442424	-	-	7.2

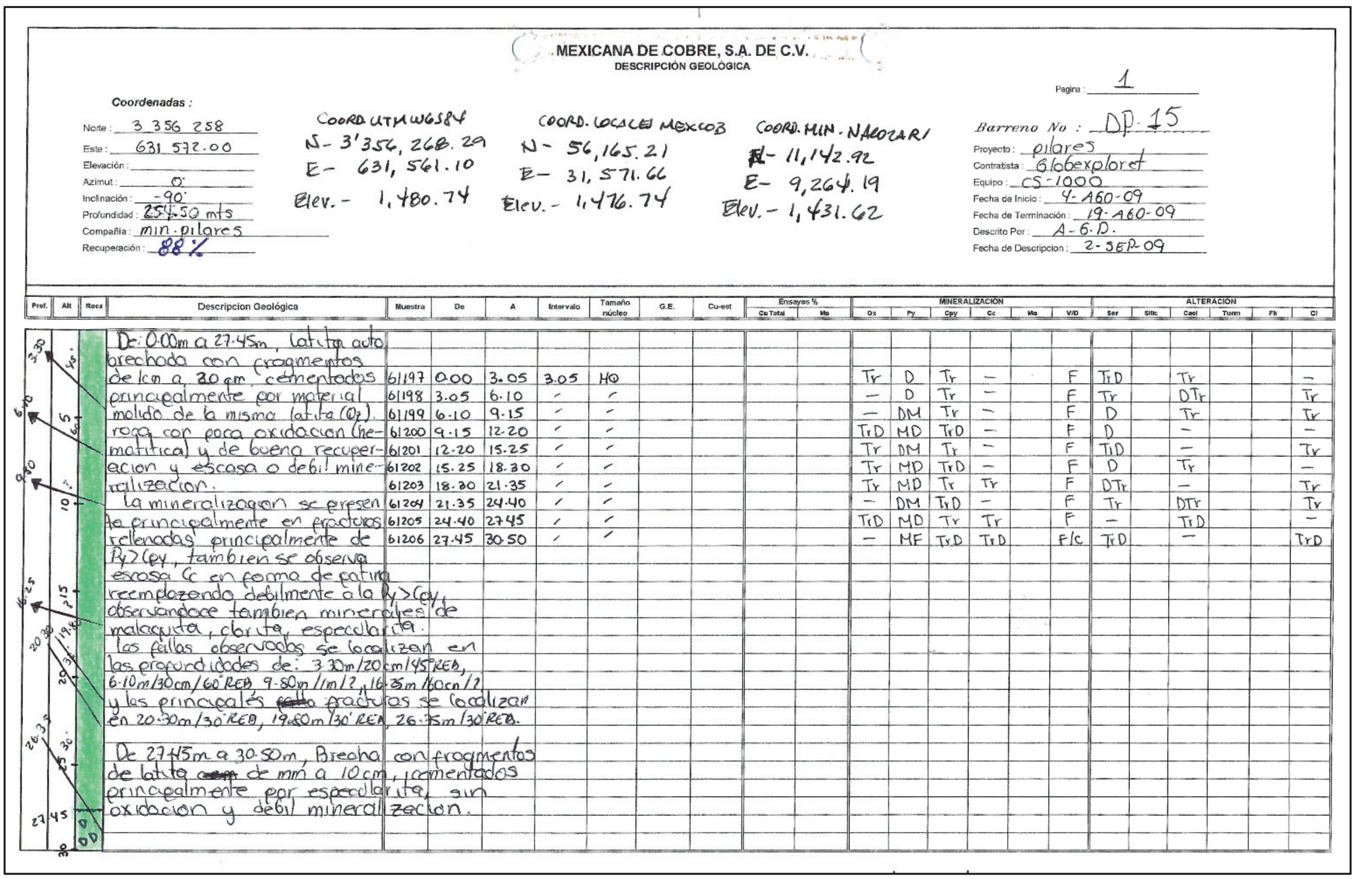
Figure 7.3: NW-SE Cross-Section Through of Oxidation Domains and Drill Holes Mineralogy



7.2.2 Exploration Drill Hole Logging

Drill hole logging for phases 1 through 3 was conducted by core logging geologists at the La Caridad core logging and storage facility and supervised by senior La Caridad geologists. The geological description of the drill core was completed manually using paper logging sheets established by La Caridad. These logging sheets documented data including drill hole coordinates, elevation, azimuth, inclination, depth, company, recovery, drill hole number, contractor, drilling equipment used, start and end dates of the drill hole, geologist in charge of the description and date of description. The log sheet contained the general geological description of the rock, as well as relevant information describing mineralization and alteration as outlined in Figure 7.4. The five geotechnical holes from Phase 4 were not drilled for Mineral Resource estimation purposes and therefore were not sent for geochemical analysis.

Figure 7.4: Pilares Logging Sheet



MEXICANA DE COBRE, S.A. DE C.V.
DESCRIPCIÓN GEOLÓGICA

Pagina: 1

Coordenadas:
Norte: 3 356 258
Este: 631 572.00
Elevación:
Azimut: 0°
Inclinación: -90°
Profundidad: 254.50 mts
Compañia: min. pilares
Recuperación: 88 %

COORD. UTM WGS84
N- 3'356, 268.29
E- 631, 561.10
Elev.- 1,480.74

COORD. LOCALES MEXCOB
N- 56,165.21
E- 31,571.66
Elev.- 1,476.74

COORD. MIN. NACOZARI
N- 11,142.92
E- 9,264.19
Elev.- 1,431.62

Barreno No: DP-15
Proyecto: pilares
Contratista: Globexplorer
Equipo: CS-1000
Fecha de Inicio: 4-AGO-09
Fecha de Terminación: 19-AGO-09
Descrito Por: A-G.D.
Fecha de Descripcion: 2-SEP-09

Descripcion Geológica:

De: 0.00m a 27.45m, latita auto brechada con fragmentos de 1cm a 30 cm, cementados principalmente por material molido de la misma latita (Oz). roca con poca oxidacion (hematitica) y de buena recuperacion y escasa o debil mineralizacion.

La mineralizacion se presenta principalmente en fracturas rellenadas principalmente de Py>Cpy, tambien se observa escasa Cc en forma de patina reemplazando debilmente a la Py>Cpy, observandose tambien minerales de malaquita, clorita, especlarita.

las fallas observadas se localizan en las profundidades de: 3.30m/20cm/45°REB, 6.10m/30cm/60°REB, 9.80m/1m/?, 16.25m/60cm/? y las principales fracturas se localizan en 20.30m/30°REB, 19.80m/30°REB, 26.35m/30°REB.

De 27.45m a 30.50m, Brecha con fragmentos de latita de mm a 10cm, cementados principalmente por especlarita, sin oxidacion y debil mineralizacion.

Muestra	De	A	Intervalo	Tamaño núcleo	G.E.	Cu-est	Ensayes % Cu Total	Ensayes % Mo	Mineralización Ox	Py	Cpy	Cc	Mo	V/D	Alteración Ser	Silic	Caol	Turm	Fk	Cl
61197	0.00	3.05	3.05	HQ					Tr	D	Tr	–		F	TrD		Tr			–
61198	3.05	6.10	/	/					–	D	Tr	–		F	Tr		DTr			Tr
61199	6.10	9.15	/	/					–	DM	Tr	–		F	D		Tr			Tr
61200	9.15	12.20	/	/					TrD	MD	TrD	–		F	D		–			–
61201	12.20	15.25	/	/					Tr	DM	Tr	–		F	TrD		–			Tr
61202	15.25	18.30	/	/					Tr	MD	TrD	–		F	D		Tr			–
61203	18.30	21.35	/	/					Tr	MD	Tr	Tr		F	DTr		–			Tr
61204	21.35	24.40	/	/					–	DM	TrD	–		F	Tr		DTr			Tr
61205	24.40	27.45	/	/					TrD	MD	Tr	Tr		F	–		TrD			–
61206	27.45	30.50	/	/					–	MF	TrD	TrD		F/C	TrD		–			TrD

Source: Pilares 2021

The geological description was validated by the construction of maps and cross-sections in which geochemical, lithological and mineralization information were plotted and a comparison of the information was made to determine that the information was reasonably correct. Subsequently this information was reviewed with the exploration director before being finalized. The validated paper logging sheets were then input into a Microsoft (MS) Excel database and reviewed for any input errors. In addition, the interpretation of the maps and cross-sections were stored in digital and paper format at the Unidad Minera la Caridad core logging warehouse

7.2.3 Exploration Drill Sample Recovery

The drill hole sample recovery factor was determined according to the following formula:

$$\text{Recovery} = \frac{\text{Sample Mass (kg)}}{(\text{Interval Length (m)}) * (\text{SG}) * (\text{Core Diameter Constant})}$$

Diameter constant = HQ= 31.1669

In addition, to determining the core recoveries, all samples were weighed and compared against the theoretical recovery weight of 100%. The core recovery data from the exploration drilling campaigns is summarized in Table 7.2.

Table 7.2: Core Recovery Summary

Year	Phase	Drill Hole Type	No. of Drill Holes	Total Meterage (m)	Mean Core Recovery (%)
2009	1	Core	18	5,113.6	87.2
2009 - 2010	2	Core	18	4,395.1	84.6
2010 - 2011	3	Core	24	7,036.3	87.2
Total			**60**	**16,544.9**	**86.3**

Determination of Specific Gravity (SG) was part of the geological description of the core. The logging geologist measured the SG using a densimetric balance based on the Archimedes method, whereby a core sample was measured dry and submerged in water. The core sample selected for the density determination had a length of approximately 10 cm, ensuring that it was representative of the entire sampled interval.

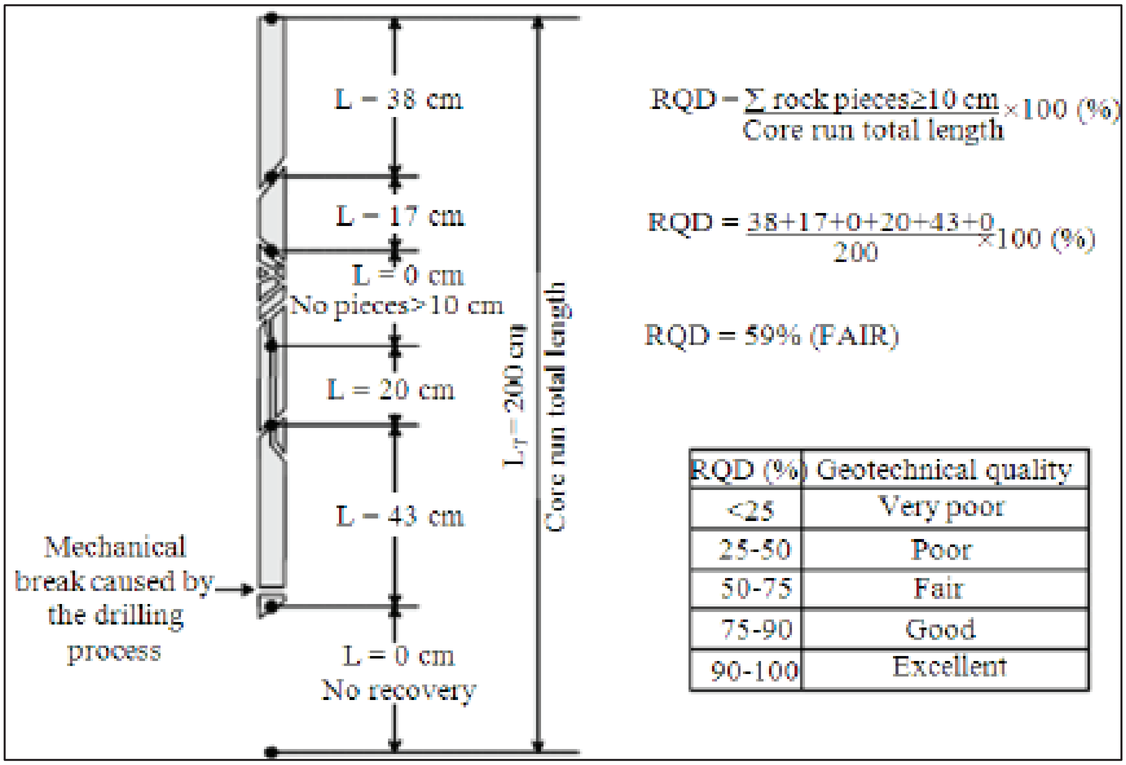
The information obtained was recorded in the core recovery folder for each drill hole, which included information on sample mass, SG, core recovery percentage, and daily drilling report.

In addition to the core recovery information, Rock Quality Designation (RQD) data was also recorded using a format derived from Cal Nicholas, Inc. The RQD logging included information on the drill hole, azimuth and dip, collar coordinates and elevation, core diameter, geologist who performed the RQD survey and the date of the survey, as well as the RQD data. The RQD data for each drill hole included the following:

- Interval start, end and length
- Number of complete core pieces over 10 cm and total length of longer core pieces
- Complete core pieces at different length specifications
- Length of broken core zones
- Hardness definitions

An example of RQD determination is illustrated in Figure 7.5.

Figure 7.5: RQD Determination from Core



Source: Deere and Deere, 1988

7.2.4 Exploration Drill Hole Location of Data Points

Drill hole collar locations were determined by the senior Pilares geologists. At the completion of drilling, the drill casing was removed, and the drill collars were marked with a permanent concrete monument with the drill hole name recorded on a metal tag on the monument. A length of pipe was cemented into the monument. All drill holes were surveyed by the Pilares personnel, in mine grid coordinates, using a using a Trimble Model R8 GPS.

7.2.5 Exploration Drill Hole Data Spacing and Distribution

Drilling at Pilares was intended to be on a regularized grid, however, due to the presence of historical mining sites, drill hole locations were altered to avoid the historical workings. Drill hole spacing was approximately 50 m by 50 m.

7.2.6 Qualified Persons Statement on Exploration Drilling

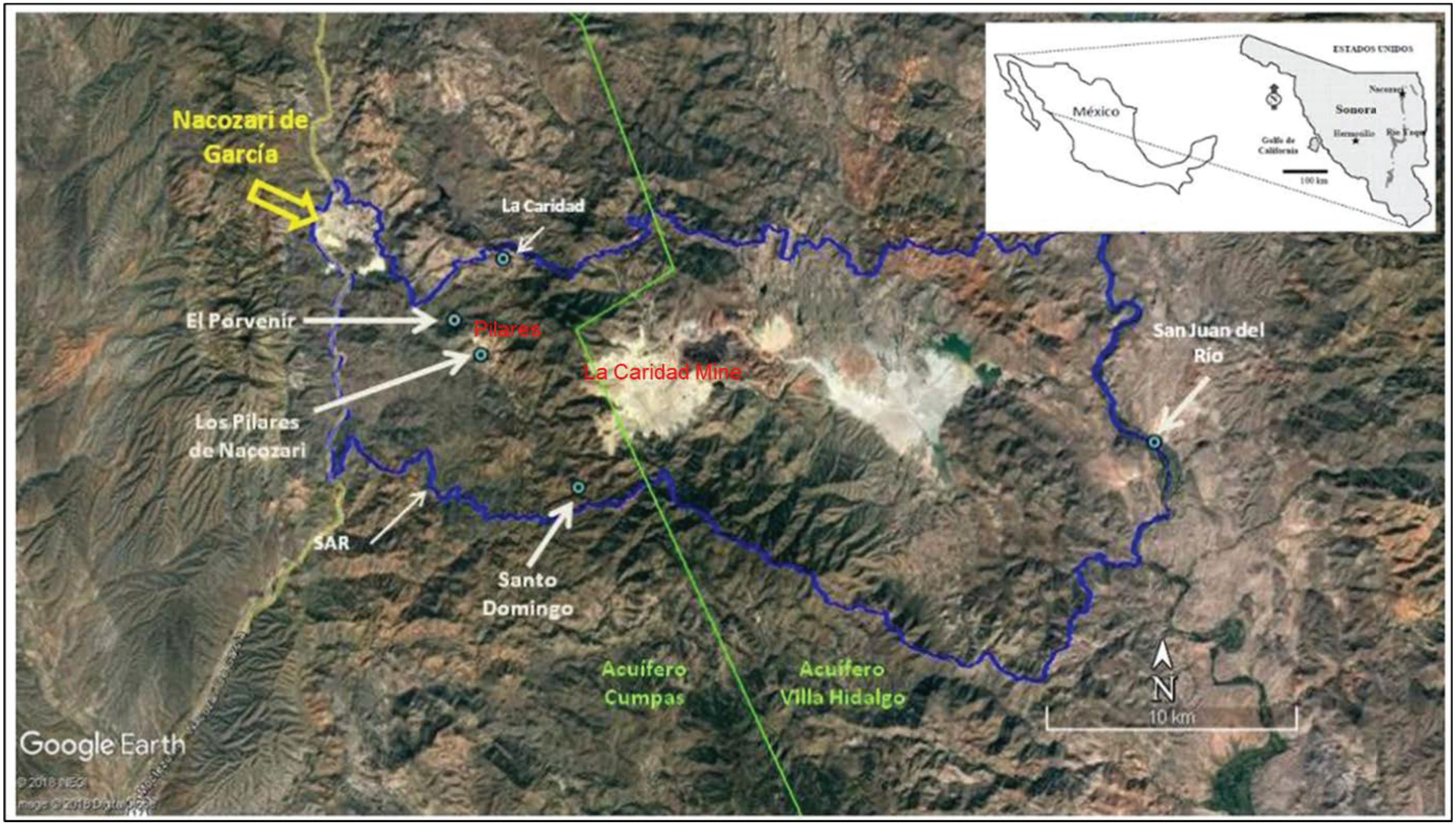
The QP is not aware of any drilling, sampling, or recovery factors that could materially affect the accuracy and reliability of the results of the historical or recent exploration drilling. However, the data collection procedures are poorly documented and not well understood by the Pilares personnel. The QP assumes that the information was collected using industry standard practice at the time; however, this cannot be verified. The data has been organized into a current and secure spatial relational database. The data has undergone thorough internal data verification reviews, as described in Section 9.0 of this TRS.

7.3 Hydrological Characterization

No hydrogeologic study has been carried out at the Pilares, and hydrogeologic characterization within the La Caridad mine complex has been very limited. No hydrogeologic model has been prepared and no site-specific water availability study was carried out for the Pilares project. There was an aquifer vulnerability study that was carried out in 2018 by TAAF for the La Caridad mine complex, located approximately 6 km to the west of the Pilares Project. This study relied on government publications, reports, and peer reviewed articles regarding water availability to prepare a description of the hydrogeologic setting. Information from available sources was verified through a field visit to verify the lithological units and corroborate information regarding the rock formation properties and geologic structures (that is, faults and fractures). The TAAF study included the area of the Pilares project, although no site-specific data was collected for Pilares. The regional hydrogeologic setting described below is based on the TAAF report (2018).

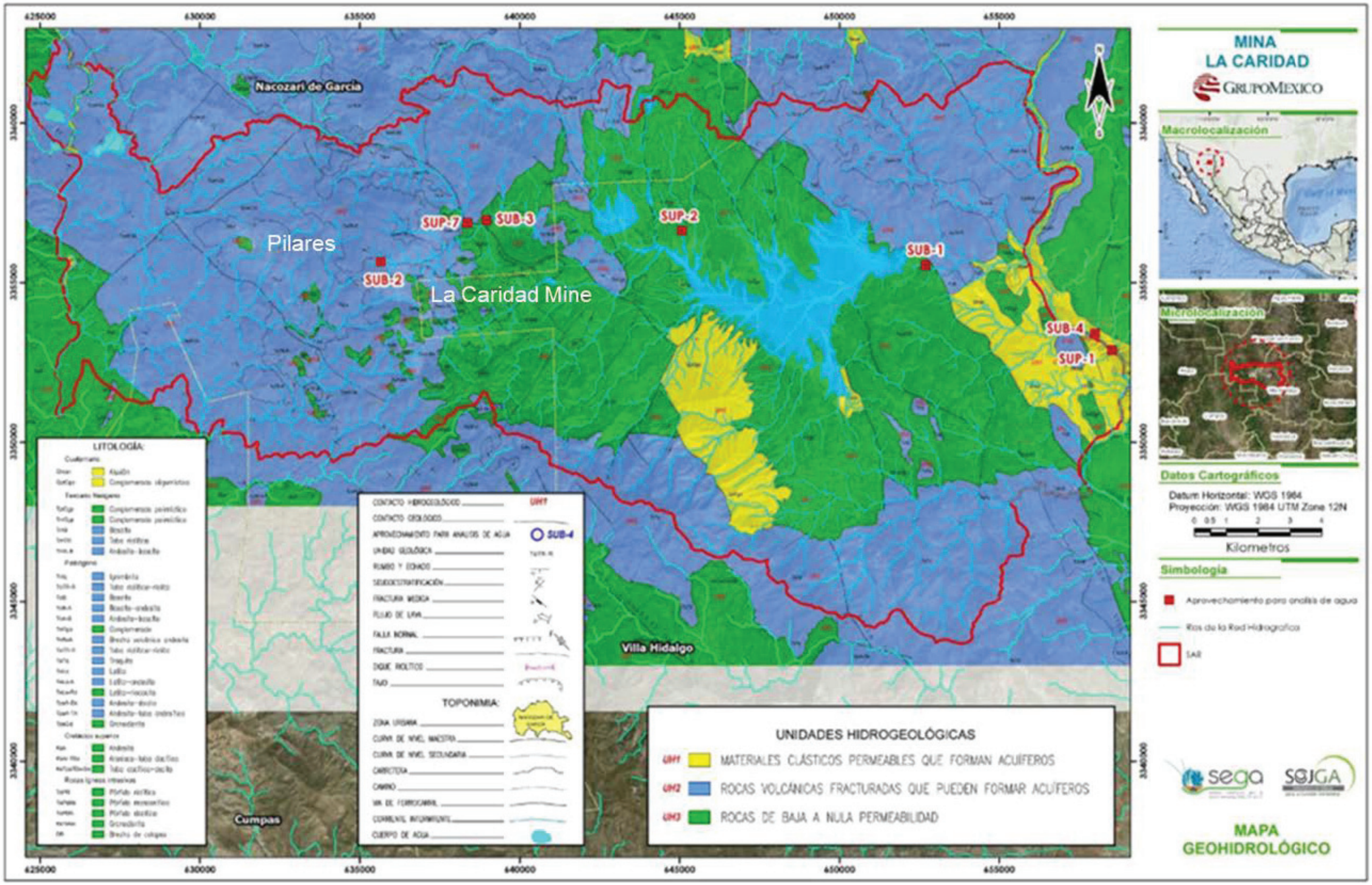
The Mexican government has designated two aquifers within the La Caridad mining complex, including, the Cumpas and Villa Hidalgo aquifers, as shown on Figure 7.6. These designations are administrative areas with a calculated water availability volume and have been identified by CONAGUA based on administrative boundaries, surface hydrologic basins, geologic setting, and limited aquifer testing data. Both aquifers are described as unconfined with an upper zone of unconsolidated materials (clastic deposits) and poorly consolidated conglomerates and a lower zone of volcanic and sedimentary rocks that exhibits secondary porosity related to fracturing. In some areas there is a third, deeper bedrock formation of low to very low permeability. All of these hydrogeologic units outcrop in different areas of the mining operations, as shown in Figure 7.7 The upper zone is considered to have high hydraulic conductivity and the lower zone has relatively low hydraulic conductivity.

Figure 7.6: Location of the Hydrogeologic Study Area and Environmental Area of Influence (within blue line)



Source: TAAF, 2018 (Figure 1.1).

Figure 7.7: Hydrogeological Units



Source: SOJGA and SEGA, 2017.

Hydrogeologic characterization within the mine complex has been very limited. The TAAF report (2018) relied on the water availability reports published by CONAGUA for any hydraulic parameter data. CONAGUA water balance models commonly used indirect methods to determine vertical recharge of aquifers and empirical equations to determine evapotranspiration rather than measured data. Groundwater pumping data was based on authorized concession volumes and do not take into account all extractions from the aquifer. Some hydraulic parameters from the CONAGUA reports were obtained from previous studies and by correlating information available from adjacent aquifers, however the method used to determine the hydraulic parameters is unknown.

7.3.1 Qualified Person's Statement on Hydrogeological Characterization

In the QP's opinion, the hydrogeologic setting at the current and planned operations has not been adequately characterized. It is unknown whether the Pilares development will need a dewatering system, and there could also be a risk associated with water supply should a groundwater concession be needed for a fresh water supply.

7.4 Geotechnical Drilling and Sampling

Geotechnical drilling was completed as part of a field data collection program completed by SRK in 2011. This program included geotechnical core logging, rock strength testing, and cell mapping. The results of this exploration program are summarized in Sections 7.4.1 through 7.4.6.

7.4.1 Geotechnical Drilling

Geotechnical logging, field point load testing and discontinuity orientation measurements were obtained from the core recovered from five geotechnical drill holes. The five drill hole locations and orientations were selected to provide the best coverage possible of rock likely to form final pit walls based on the understanding of the deposit and mine plan at the time the investigation was completed. Drill hole inclinations of approximately 60 to 65 degrees below horizontal were selected since they were judged more likely to intersect geologic structures such as joints and fracture systems, which will influence slope stability where they are present. Table 7.3 provides a summary of the geotechnical drill hole locations and orientations, and Figure 7.8 illustrated their location relative to the exploration drill holes. Drillhole C-1 was terminated early/shallow because it encountered historical underground workings. Drillhole C-1B was completed as its replacement. In addition to the four geotechnical drill holes, observations were also obtained from three resource drill holes (DP-38, DP-41, and DP-49) to provide general characteristics regarding the breccia material.

Table 7.3: Summary of Geotechnical Drill Holes

Hole ID	Collar Coordinates			Azimuth (deg)	Inclination (deg)	Length (m)
	Northing	Easting	Elevation			
C-1	3,356,013	631,664	1,426	168	-60	110
C-1B*	3,356,020	631,671	1,429	200	-65	385
C-2	3,356,471	631,314	1,423	328	-65	401
C-3	3,356,317	631,687	1,520	050	-65	444
C-4	3,356,323	631,319	1,423	270	-65	322

Note: *Drilled as replacement to drillhole C-1 which terminated early due intersection with underground workings.

LEGEND

Geotechnical Drill Holes

Drilling Programs

2009

2009-2010

2010-2011

Pilares Breccia Limit

Tenement Boundary

0 0.1 0.2

1:3,000 Kilometers

NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: WGS 1984 UTM ZONE 12N
2. IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

CLIENT

GrupoMéxico

PROJECT

PILARES

TITLE

GEOTECHNICAL DRILL HOLE MAP

CONSULTANT

GOLDER MEMBER OF WSP

YYYY-MM-DD	2022-02-22
DESIGNED	JS
PREPARED	TBH
REVIEWED	JS
APPROVED	MO

PROJECT NO.	CONTROL	REV.	FIGURE
20442424	-	-	7.8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

E:\SCCO\Pilares\99_PROJ\20442424_Pilares\0001_TRS\40_PROD\20442424-0001-HS-0004.mxd

The geotechnical core logging program was designed to provide information pertinent to pit slope stability evaluation. The specific parameters that were logged included:

- General lithology and structures
- Total core recovery
- RQD
- Rock weathering and intact strength indices
- Frequency of discontinuities
- Discontinuity characteristics (structure type, roughness, infilling type, and wall conditions)
- Discontinuity orientation, where measurable

During core logging, appropriate samples of the core were selected to provide specimens for laboratory strength testing. Samples were collected at approximately 30-m intervals, or when significant rock type or strength changes were apparent. Each sample was sealed and safely stored at the time of collection. Upon completion of the drilling, samples were shipped to SRK's office in Denver, Colorado, for test sample selection. Select samples were then repackaged and shipped to the University of Arizona Rock Mechanics Laboratory in Tucson, Arizona, for testing.

7.4.2 Oriented Core Data

Orientation of discontinuities in each run was accomplished using an A.C.T. core orientation system manufactured by Reflex Instruments. The depth, alpha angle and beta angle were measured for each discontinuity on all core runs that were successfully oriented. The beta angle, i.e., the angle from the lowest part of the ellipse formed by the intersection of each discontinuity with the core, was measured from the bottom of the core in a clockwise direction when looking down hole. The alpha angle was measured as the maximum angle made by the discontinuity with respect to the core axis.

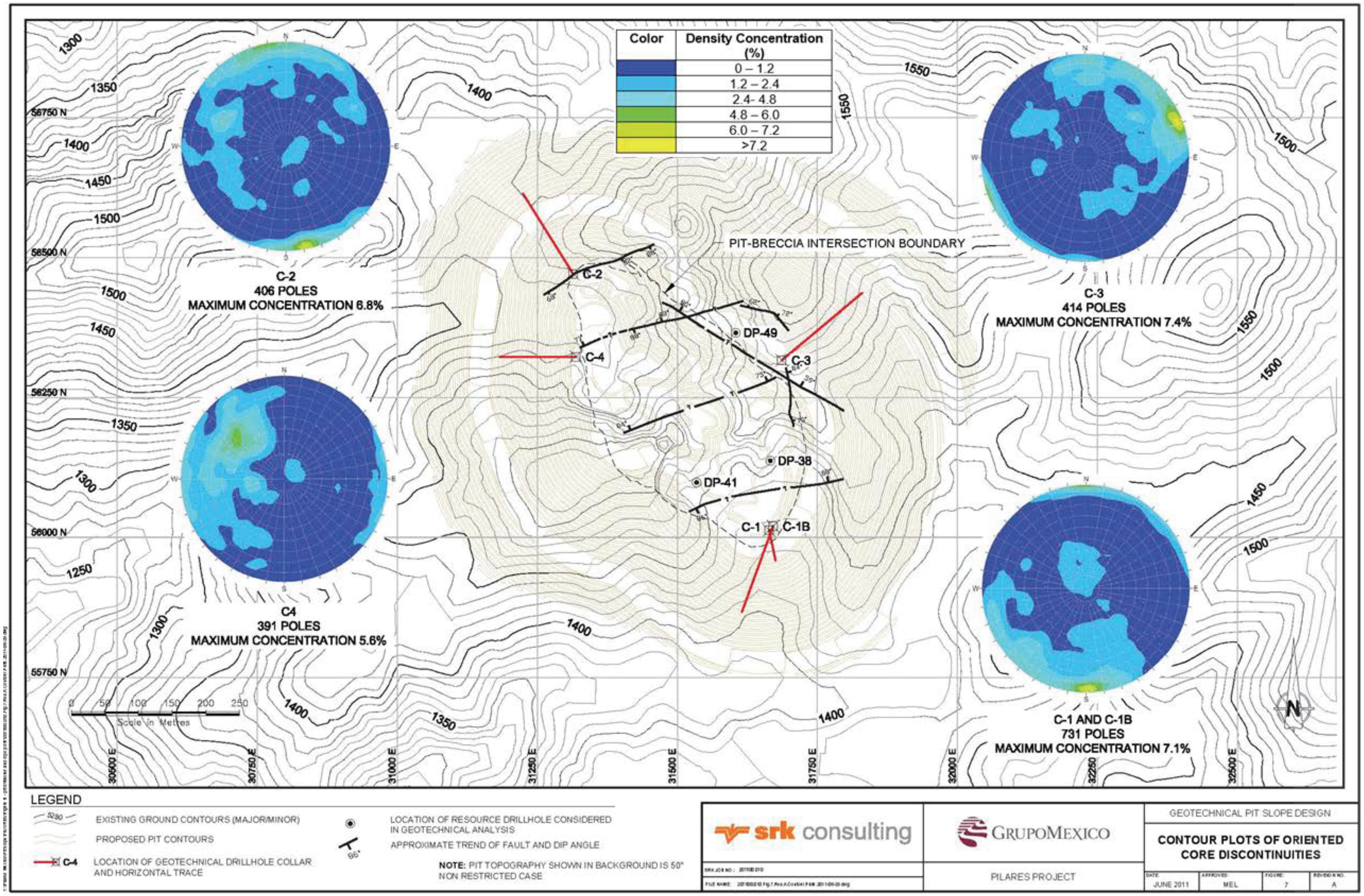
It was possible to orient a total of 1,942 discontinuities out of the total 3,166 discontinuities logged (61%) in the five geotechnical drill holes drilled during the field program. A summary of oriented core information by hole is presented in Table 7.4.

Table 7.4: Summary of Oriented Core Data

Hole ID	Drillhole Length (m)	Total Discontinuities Logged	Total Discontinuities Oriented	Percentage of Discontinuities Oriented
C-1	110	222	32	14
C-1B	385	763	699	92
C-2	401	611	406	66
C-3	444	625	414	66
C-4	322	945	391	41

The oriented core data plotted on lower hemisphere equal area stereonets is shown on Figure 7.9. These stereonets indicate the presence of two steep orthogonal sets of discontinuities. The first set dips approximately vertical to the northwest-southeast, and the second dips approximately vertical in an east-west direction. The first set is parallel to the small number of mapped faults in the project area. A third set dips approximately 40 degrees to the southeast. These sets were also detected in the cell mapping described in Section 7.4.3.

Figure 7.9: Oriented Core Data from Geotechnical Drill Holes



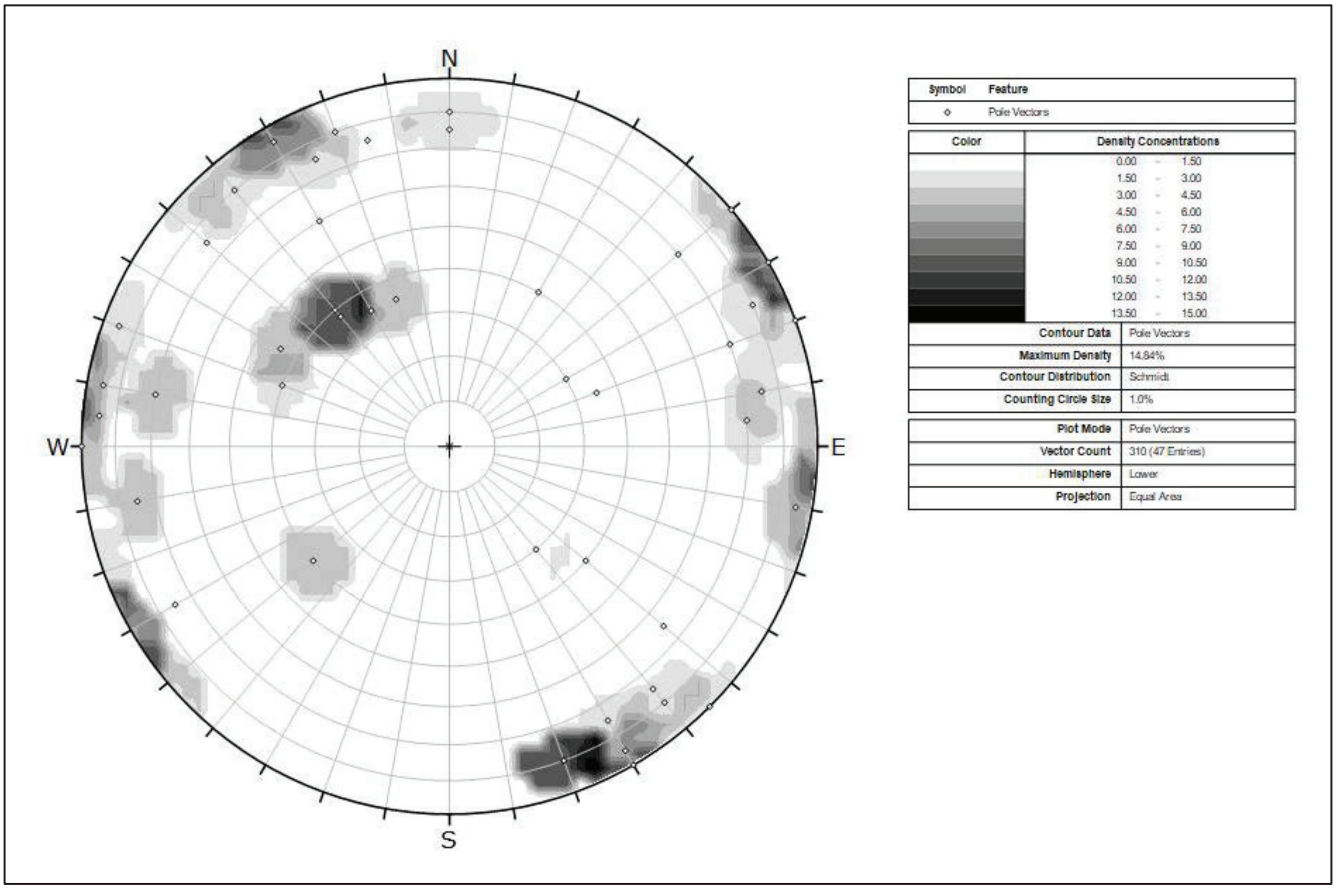
Source: Pilares

7.4.3 Cell Mapping

Exposed and accessible outcrops were mapped using the cell mapping technique. Cell mapping included mapping geologic structures including discontinuities and their properties. The term discontinuity is a general description of rock fractures that encompasses various types, including joints, bedding planes, faults, and foliations. Discontinuity sets denote groups of discontinuities that are expected to have similar impact upon the proposed design.

Discontinuity properties that were recorded during cell mapping included orientation, length, spacing, roughness, infillings, termination and other properties. A total of 16 cells were mapped at various exposures within the proposed open pit area. The joint set information was incorporated into the analysis of the rock structure. Cell mapping data is summarized in the equal area stereonet shown in Figure 7.10.

Figure 7.10: Lower Hemisphere Equal Area Stereonet of Cell Mapping Data



Source: Pilares

7.4.4 Point Load Testing

Point Load Tests (PLT) were performed during core logging at a frequency of approximately one test per every 2 m to 3 m using a Roctest Pil-7 test machine to provide detailed and nearly continuous profiles of relative rock strength. PLTs were conducted according to International Society for Rock Mechanics (ISRM, 1985) procedures.

A combined total of 850 diametrical (perpendicular to the long axis of the core), point load tests were conducted on core from the five (5) geotechnical drill holes; of those, 712 (84%) met test criteria for passing test results. Point load indices (Is(50)) were calculated from the field PLT data using the ISRM (1985) suggested method. Calculated point load index strengths (Is(50)) ranged between 1.0 and 15.8 MPa, with an average of 8.0 MPa for andesite; and between 0.3 and 12.7 MPa, with an average of 5.3 MPa for latite.

In addition to the tests routinely conducted at 2 m to -3 m intervals, at least one PLT was also performed adjacent to each uniaxial compressive strength (UCS) sample obtained for laboratory testing. The reason for the paired PLT and UCS samples was to permit estimation of a correlation factor for conversion of the field PLT tests to laboratory UCS values. The correlation factors (UCS:Is(50)) for the andesite and latite were determined to be 18.1 and 10.2, respectively. The andesite generally exhibited significantly higher correlated UCS values compared to the other rock types, with a mean of approximately 150 MPa. The latite and breccia each exhibit mean correlated UCS values of approximately 30 MPa. A summary of the PLT tests correlated to UCS is provided in Table 7.5.

Table 7.5: Summary Correlated UCS Data

Rock Type	Sample Count	Mean (MPa)	Std. Dev. (MPa)	Min. (MPa)	Max. (MPa)
Latite	155	54	30	3	129
Andesite	529	144	49	18	286
Breccia	13	59	41	27	151

7.4.5 Laboratory Testing

A total of 53 laboratory tests were conducted on samples selected to represent the range of the rock conditions observed in the five geotechnical borings and three resource holes. The overall laboratory program consisted of UCS tests, triaxial compressive strength (TCS) tests, direct shear strength tests of rock fractures, and saw cut joints, as well as measurements of unit weight and elastic properties.

7.4.5.1 Unconfined Compressive Strength

UCS testing was conducted on 29 samples, according to ASTM D7012 Method C. Elastic properties (Young's Modulus and Poisson's Ratio) were measured for three of the 29 UCS samples in accordance with ASTM D7012 Method D. Results of the UCS and elastic properties testing program are summarized in Table 7.6.

Table 7.6: Summary of UCS Test Results

Drill Hole	Depth (m)	Rock Type	UCS (MPa)	Young's Modulus (GPa)	Poisson's Ratio	Unit Wt. kN/m^3
C1	58.15	Latite	76.94*			24.9
C1B	57.25	Latite	56.7	40.5	0.209	25.2
C1B	149.77	Latite	101.71			25.8
C1B	241.72	Andesite	201.48			26.2
C1B	308.45	Andesite	105.84			27.5
C2	61.45	Latite	97.25			25.7
C2	148.80	Andesite	57.83			25.7
C2	303.20	Andesite	126.81			27.7
C3	23.25	Latite	19.84*			23.3
C3	236.40	Andesite	77.75**			26.2
C3	342.65	Andesite	198.23			27.4
C3	420.80	Andesite	187.3			26.8
C4	34.21	Latite	57.52			24.9
C4	155.30	Andesite	139.15	39.7	0.316	25.7
C4	234.50	Andesite	55.99			26.6
C4	275.80	Andesite	19.76**			26.5
DP38	77.40	Latite Breccia	35.92			25.2
DP38	97.85	Latite Breccia	30.14*			25.3
DP38	132.70	Latite Breccia	53.07			24.2
DP38	211.55	Latite Breccia	134.99			25.3
DP38	314.60	Andesite Breccia	41.8			25.6
DP41	27.50	Latite Breccia	26.94			23.1
DP41	50.5	Latite Breccia	79.08			24.4
DP41	125.00	Latite Breccia	66.29			25.9
DP41	203.70	Latite Breccia	32.28	15.4	0.220	23.6
DP41	234.70	Andesite Breccia	55.06			24.2
DP41	271.50	Andesite Breccia	16.14			23.7
DP49	125.3	Latite Breccia	150.99			25
DP49	189.2	Andesite Breccia	41.6			25.9

Notes
*Correction factor applied to account sample L/D ratio of less than 2.0.
**UCS test results considered invalid and excluded from further analysis.

7.4.5.2 Triaxial Compressive Strength

TCS tests were conducted on 17 samples in accordance with the procedures of ASTM D7012 Method A. The samples were tested at confining pressures selected to range from zero to approximately one-half of the UCS values. The results of the TCS testing are summarized in Table 7.7.

Table 7.7: Summary of TCS Test Results

Drill Hole	Sample Depth	Rock Type	□1 (MPa)	□3 (MPa)	Unit Wt. (kN/m^3)
C1	91.92	Latite	80.6	3.45	26.1
C1B	110.25	Latite	131.8	10.34	25.8
C1B	189.90	Latite	262.7	20.69	26.4
C1B	261.04	Andesite	231.9	10.34	26.1
C2	31.4	Latite	216.4	13.79	24.4
C2	41.4	Latite	157.3	17.24	25.2
C2	101.40	Andesite	147.1	3.45	27.2
C2	248.85	Andesite	142.1	6.9	27.6
C4	20.20	Latite	98.9	6.9	24.6
C4	129.27	Andesite	297.3	13.79	26.8
C4	296.15	Andesite	377.3	17.24	27.7
DP38	154.75	Latite Breccia	92.2	3.45	24.7
DP38	239.55	Andesite Breccia	129.6	20.69	25.4
DP41	85.20	Latite Breccia	60.7	6.9	24.0
DP41	97.40	Latite Breccia	143.2	17.24	27.1
DP41	259.50	Andesite Breccia	100.2	13.79	24.3
DP49	136.8	Latite Breccia	219.3	20.69	24.6

7.4.5.3 Direct Shear Testing

Direct shear testing is commonly used for estimating the expected shear strength along natural rock discontinuities such as joints, fractures and faults. Since displacements that affect bench-scale failures frequently occurs along pre-existing geologic discontinuities under low stress conditions, estimation of discontinuity shear strength within this stress range may be used to evaluate kinematic failure modes at the bench scale.

Seven core samples were selected for three-point, small scale direct shear (SSDS) tests (completed in accordance with the procedures of ASTM Method D5607) to obtain discontinuity shear strength data. Natural core discontinuities preserved in the field were used for two of the direct shear tests. Direct shear tests on saw-cut discontinuities were also performed to facilitate the estimation of a lower bound residual shear strength for smooth discontinuities.

The range of normal stresses applied during testing was selected to span estimated ranges of in-situ stresses that are expected to develop within the slopes and to reasonably define the characteristics of the shear strength envelopes. The selected normal loads ranged from approximately 368 kPa to 1,944 kPa.

Linear and curvilinear regression analysis was conducted to fit a shear strength envelope to the laboratory data points. For the linear fit, the envelope is presented according to the Mohr-Coulomb shear strength criterion, i.e., in the form of a friction angle (Φ), which corresponds to the inverse tangent of the slope of the least-squares regression line, and apparent cohesion (c), which corresponds to the shear strength intercept at zero normal stress. The curvilinear strength envelope is presented in terms of a power curve with k and m values as described by Jeager (1971). The results of the direct shear tests are summarized in Table 7.8.

Table 7.8: Summary of Direct Shear Test Results

Drill Hole	Depth (m)	Linear Regression		Power Regression		Discontinuity Type
		ϕ (°)	C (kPa)	k	m	
C1	38.72	29.4	0	0.34	1.095	Latite – saw cut
C1B	355.90	32.1	43.7	1.01	0.913	Andesite – natural joint
C2	55.50	31.3	52.3	1.12	0.897	Latite – natural joint
C3	77.47	27.6	0	0.55	0.990	Latite – saw cut
C3	179.00	27.5	0	0.30	1.103	Andesite – saw cut
DP41	66.70	29.7	0	0.52	1.018	Latite Breccia – saw cut
DP41	319.25	30.6	0.7	0.60	0.998	Andesite Breccia – saw cut

7.4.6 Rock Mass Classification

Rock mass characterization is a largely empirical process of classification based on information obtained primarily from field data and enhanced with further data analysis and laboratory testing. The basic geotechnical parameters recorded for each core run are commonly combined to form a Rock Mass Rating (RMR) system, thereby creating a profile of RMR with depth for each of the geotechnical holes drilled. Bieniawski's (1989) RMR system consists of a rating scale accounting for intact rock strength (IRS), fracture frequency per meter (FF/m), joint conditions, and groundwater. A summary of RMR values per lithology is presented in Table 7.9 based on ratings recorded for each geotechnical drill hole.

Table 7.9: Summary of RMR Values by Lithology

Rock Type	No. of Values	Mean RMR	Std. Dev.	Min.	Max.
Latite	327	55	11	30	82
Andesite	737	72	49	11	67
Breccia	110	42	9	27	63

7.4.7 Qualified Person's Opinion

The QP is not aware of any drilling, sampling, or recovery factors that could materially affect the accuracy and reliability of the results of the historical geotechnical drilling and sampling, with respect to definition of geological units, and laboratory characterization of rock strength. This data is documented via original digital and hard copy records and were collected using industry standard practices in place at the time, and these data haves been organized into a current and secure spatial relational database. In the opinion of the QP, the geotechnical model is not adequately characterized. Additional geotechnical programs will be necessary to further define the 3D geological model and map the location of major structure as well as the mined out voids and backfill areas. Oriented core data was not available for review. New geotechnical drill holes should be used to collect oriented core data to complete structural characterization, define structural domains, and to improve the geomechanical database with additional laboratory testing. Additional assessment of the interaction between the open pit and underground workings should be completed following updates to the geotechnical model.

8.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

8.1 Site Sample Preparation Methods and Security

8.1.1 Sampling Techniques and Preparation

All sampling was completed by geologists employed by La Caridad and Pilares. The QP was not directly involved during the exploration drilling programs or sample selection. Based on review of the procedures during the site visit and subsequent review of the data, it is the opinion of the QP that the measures taken to ensure sample representativeness were reasonable for the purpose of estimating Mineral Resources.

Only core drilling techniques have been utilized at Pilares in the four drilling campaigns completed between 2009 and 2011. The nature and quality of the sampling from the sampling programs is summarized in the following sections.

8.1.1.1 Core Sampling

Drill cores were carefully handled from the time they were obtained from the drill site. Cores were retrieved from the core barrel, washed, and then packed sequentially in plastic core boxes. For each core run a wooden block was placed where the driller noted the depth of the hole which indicated the interval drilled. The standard core run was 3.05 m in competent rock and variable in zones of fracturing or poor recovery. The geologist or their assistant measured the actual length of the core recovered in the run to calculate the core recovery. The core boxes were then transferred to the logging facility in a vehicle under Pilares supervision, where the geological and geotechnical logging was completed.

Core photography was not performed for any of the Pilares drilling.

The drill hole was cut by dividing the core into two equal halves with a manual core splitter, following two lines (green and red, which indicate the right and left halves respectively). One half of the core was retained in a core box and the other half was divided into two; one quarter was retained for reference purposes and the remaining quarter was used in the preparation of samples for geochemical analysis.

All drill hole information in Pilares's sampling database was generated from diamond core drilling using HQ size drill core.

8.1.1.2 Sample Preparation

The following sample preparation techniques were used for all samples processed at the internal SCC Laboratorio de Unidad La Caridad in Nacozari, Sonora. Therefore, the QP has assumed that the same sample preparation processes used at La Caridad has been followed for Pilares.

The mechanical sample preparation generated one (1) set of three (3) pulps per sample weighing approximately 100 g. Each pulp was identified with the drill hole number, bench, and sample number and are used as follows:

- 1 pulp sent to the Geochemical Laboratory.
- 2 pulps were stored for reference.

The procedure at the laboratory for both DDH samples was as follows:

- Samples were received at the laboratory and catalogued.
- Samples were weighed.
- Samples were crushed to ½ inch, and placed in a labeled bucket (drill hole, bench, sample number).
- The sample was reduced by a Cone Crusher Nº 6 and homogenized 10 times with the Jones Medium cutter, reducing the sample to 100 g.
- Samples were dried for 2 hours.
- Sieved and pulverized to -100 mesh (0.147 mm).
- Samples were then homogenized, split, and distributed into three labeled envelopes.

The leftover samples were organized and stored for future reference or assay verification.

An electronic scale was used for SG determinations on small core samples (less than 3 m). Core samples were dried and weighed in air as well as submerged in water. the mass measurements were entered into an MS Excel spreadsheet and the SG was then calculated.

8.1.2 Sample Results

To date, there has been a total of 5,707 core samples collected from 60 drill holes on the Pilares Project, totaling 14,856.85 m. The fourth drilling program in 2011 was completed for geotechnical purposes only, and no samples were submitted for analytical testing. A summary of the sampling is presented in Table 8.1. These tables include all available assay data, including drill holes and samples that were excluded in the modeling process, as discussed in Section 11.1

Table 8.1: Summary of Assay Samples by Year Drilled

Year	Phase	Sample Count	Mean Thickness (m)	Mean Cu (wt.%)	Mean CuO (wt.%)
2009	1	2,100	2.42	0.502	0.053
2009 - 2010	2	1,570	2.66	0.516	0.066
2010 - 2011	3	2,037	2.74	0.560	0.055
Total		**5,707**	**2.60**	**0.528**	**0.058**

8.1.3 Verification of Sampling and Assaying

SCC periodically performs verification assaying at third-party laboratories. The QP was unable to determine if any verification was completed on the Pilares project during the three phases of drilling.

8.1.4 Sample Security

For the Pilares drilling, the core was collected at the drilling rig by La Caridad and Pilares exploration team and transported to the core logging facility at La Caridad Mine, a locked and fenced facility. The core was carefully placed in boxes labelled on the lid with the drill hole number, run number and start and end depths. This information was also captured on the drillers report, then was cross-referenced for verification.

Once the core was logged, using the standardized paper logging sheets, this information was input electronically to MS Excel and securely stored at the at the La Caridad mine core logging warehouse, along with the original paper copy. The core to be sampled was then sent to be cut.

Each selected sample interval was cut in half using a manual core splitter. The cut samples were placed in a clear plastic bag, and the bag was marked on both sides with the name of the drill hole and the sample number. A sample tag was attached to the bag with corresponding drill hole and sample information. The bag was then sealed to prevent contamination and delivered to the preparation laboratory, Laboratorio de Unidad La Caridad, by SCC personnel. All remaining core was stored at the Colonia El Ranchito, Sonora core storage warehouses.

At the laboratory, the chain of custody of the sample preparation was well established, although records pertaining to the Pilares drilling have been misplaced. Once the laboratory finished the preparation, two (2) pulps of each sample were returned to the Geology Department as control samples (one remained as a control sample and the other was used for certification purposes). The pulp samples were stored in the geology warehouses located in Colonia El Ranchito.

Once the samples were analyzed, the results were sent electronically to the Pilares Project geologist in charge as well the senior Pilares geologist in charge. The results were verified as complete and included all requested geochemical elements.

All of the exploration data was recorded manually on paper logging sheets and was input digitally using MS Excel. The final files were printed and verified by Pilares personnel. All errors were corrected. After this procedure, the database was exported to an ASCII file and imported into a Hexagon Mine Sight project.

8.2 Laboratory Sample Preparation Methods and Analytical Procedures

Due to internal company policies, the laboratories owned by SCC were always used for the mechanical preparation and chemical analysis of the samples, including the following:

- Laboratorio de Unidad La Caridad, in Nacozari de García, Sonora. The laboratory did not have any type of certification during the period that the work was carried out at Pilares.
- Estación Santiago Laboratorio Geoquimico, in, San Luis Potosí, which was ISO 9001:2008 certified during the 2010-2011 period when the samples were analyzed.

Samples were delivered to the Laboratorio de Unidad La Caridad, due to its proximity to the Pilares project, where they were prepared as described in Section 8.1.1.2 and then analyzed. Samples were also analyzed at Estación Santiago Laboratorio Geoquimico.

All samples were analysed for SG, silver (Ag), arsenic (As), bismuth (Bi), Cu, CuO, iron (Fe), molybdenum (Mo), lead (Pb), antimony (Sb), tungsten (W), and zinc (Zn). Analyses were completed by a three-acid digestion with hydrochloric (50%), nitric and perchloric acids of 0.5-g sample, followed by analysis with by ICP and Atomic Absorption (AA) Spectroscopy.

8.3 Quality Control and Quality Assurance Programs

QA/QC programs help to ensure the reliability of assay results from both internal and commercial laboratories and are considered to be essential industry standard practice. The QP was unable to verify if there were any formal QA/QC programs completed on the Pilares Project. Given the lack of documentation and QA/QC procedures at the time on other sites, the QP assumes there were no formal QA/QC protocols in place at Pilares during the four drilling campaigns.

8.4 Qualified Person's Opinion

It is the QP's opinion that the sample preparation, security, and analytical procedures applied by SCC were appropriate and fit for the purpose of establishing an analytical database for use in grade modeling and preparation of Mineral Resource estimates, as summarized in this TRS. The QP notes that no QA/QC programs were completed during any of the drilling campaigns, which does add a degree of uncertainty with all of the samples. Any future drilling and sampling programs should include a robust QA/QC program failing which Mineral Resources will likely continue to be classified as Inferred Mineral Resource category. Additionally, documentation of work done during the drilling programs is unavailable or not well understood by Pilares personnel, which also adds a degree of unreliability.

The QP reviewed the core and sampling techniques in place at neighboring La Caridad during a site visit on August 26, 2021, to August 27, 2021. The QP found that the sampling techniques were appropriate for collecting data for the purpose of preparing geological models and Mineral Resource estimates. As all drilling at Pilares is historical, the QP was unable to verify current drilling practices.

9.0 DATA VERIFICATION

9.1 Mineral Resources

9.1.1 Exploration Data Compilation

The QP was provided with the compiled Pilares database, in MS Excel file format, which included collar survey information, downhole geological units, sample intervals and analytical results.

The provided drill hole data for Pilares comprised 60 exploration drill holes, totaling 16,544.90 m and containing 5,617 analytical samples amounting to 14,347.05 m. Compiled supporting documentation for the Pilares drilling data included descriptive logs, with collar survey, and assay information.

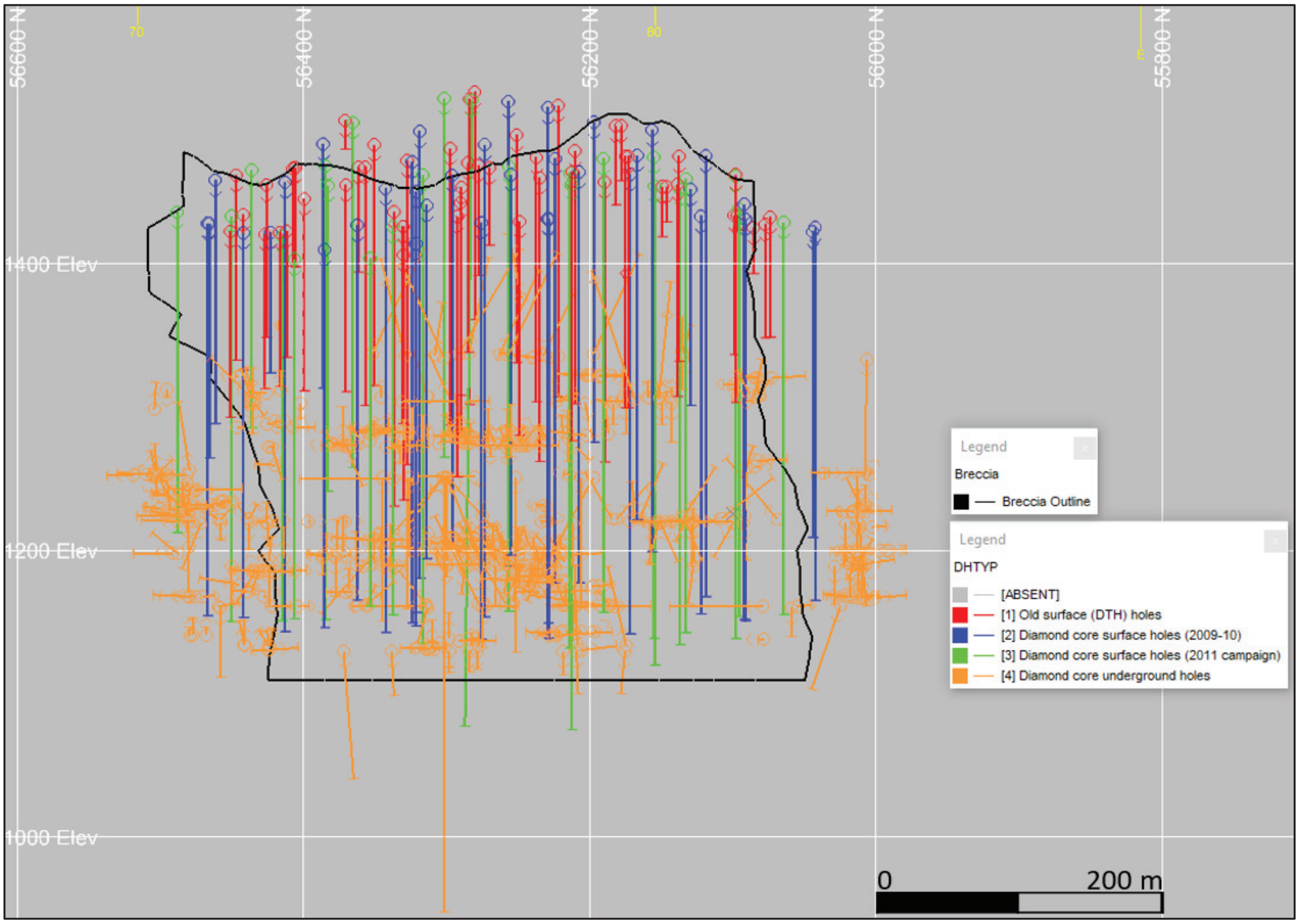
Pilares also have analytical results for an additional 619 drill holes, summarized in Table 9.1. A previous study (Mintec, 2011) indicated that the 51 type 1 Down the Hole (DTH) holes were on average 20% higher in grade relative to the DDH drill holes and were therefore excluded from the Mineral Resource estimation. The 568 type 4 underground drill holes did not have a QA/QC program, and the location and sample procedure could not be verified, therefore they were also excluded from the Mineral Resource estimation. Figure 9.1 and Figure 9.2 illustrate all drilling with analytical data that has occurred in the Pilares deposit.

Table 9.1: Pilares Drill Hole Types

Drill Hole Type	No. of Holes	Metres Assayed	Description
1	51	6,161.60	Old surface (DTH) holes
2	36	8,756.50	Diamond core surface holes (2009-10 campaign)
3	24	5,590.10	Diamond core surface holes (2011 campaign)
4	568	12,795.70	Diamond core underground holes
Total	679	33,303.90	

Figure 9.1: Pilares Drill Hole Types (Plan View)

Figure 9.2: Pilares Drill Hole Types (Cross-Section View Looking E)



9.1.2 Exploration Data Validation

All drill hole logs were recorded by logging geologists on formatted paper sheets, then transcribed into MS Excel for eventual upload into the Minesight project database. Data and observations recorded into the digital logging files were reviewed for transcription or keying errors or omissions by senior Pilares geologists. The data provided by Pilares was evaluated for errors, or omissions, as part of the data validation procedures.

The review of the database used for the modeling was performed with Golder's internal software (DataCheck®), which allows the detection of inconsistencies such as: overlapping intervals, excessive path deviation between measurement intervals, duplication of collars, sample depth greater than the depth of the collar, among others.

No major inconsistencies were detected in the databases submitted; however, the following data error was noted:

- 1 drill hole with 1 overlapping interval in the geology table (DP-6, 0.0 to 6.1 m).

Assay data for each drill hole were provided in the form of unsecured Excel spreadsheets from Estación Santiago Laboratorio Geoquimico. The Cu assay results for each drill hole were checked against the Excel spreadsheets and no errors were found. Original records of SG measurements were not provided and could not be verified.

The QP also reviewed the drill hole data during the August 26-27, 2021, site visit. The purpose of the site visit was to review the project site, geology, current, and previous exploration methods, and results and identify any concerns and provide recommendations for consideration by Pilares. The QP reviewed the logging and sampling process, and visually inspected drill cores as well as the storage conditions of the core. Several drill collars were visited during the site visit. The site visit was completed in fulfilment of the requirement that the Mineral Resource QP perform a current site visit to the project in support of preparation of any S-K 1300 Mineral Resource statements, or TRS.

9.1.3 Validated Drill Hole Information

The QP validated the collar locations for the 60 exploration holes against the 2021 topography surface (see Section 7.1.1) in Maptek Vulcan software. The Z coordinate of the collars were compared to the Z coordinate of the surface at the same X-Y coordinates. All drill hole collars were below the surface with a minimum difference of 3.35 m, a maximum difference of 48.64 m, and a mean difference of 5.97 m. Seventeen (17) collars had a difference between 5 m and 10 m, and 4 collars had a difference greater than 10 m, as illustrated in Figure 9.3. Due to lack of supporting documentation, the original surveyed collar measurements could not be verified. During the site visit, the QP noted several collar locations were in the area of the historical pit where material slumping has occurred since drilling took place, potentially accounting for some of the discrepancies between the collar and surface elevations. All drill hole collars with a difference of 5 m or greater were individually assessed in cross-section to determine if they should be adjusted for the purposes of geological modeling and block estimation. For each hole being assessed, the elevation of the lithology intervals was compared to the elevation of the lithology in the other holes in the same cross-section. If the lithology in the questionable hole was observed to not realistically align, the collar elevation was adjusted. The location of the logged mining void intervals was also compared to the location of the mining void wireframe. A summary of the elevation differences greater than 5 m and the modifications that were made are summarized in Table 9.2. An example cross-section showing collar location relative to the topography surface is shown in Figure 9.4.

Figure 9.3: Histogram of Difference between Drill Hole Collar and Topography Elevation

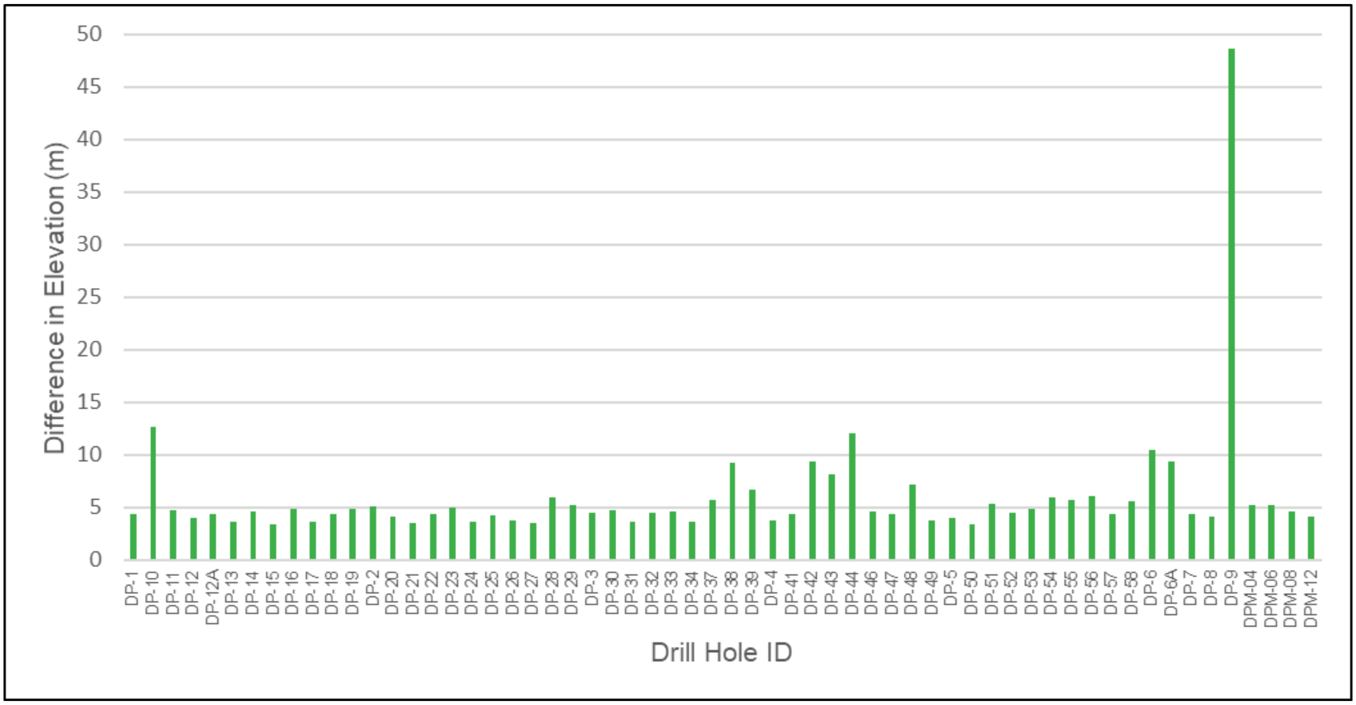
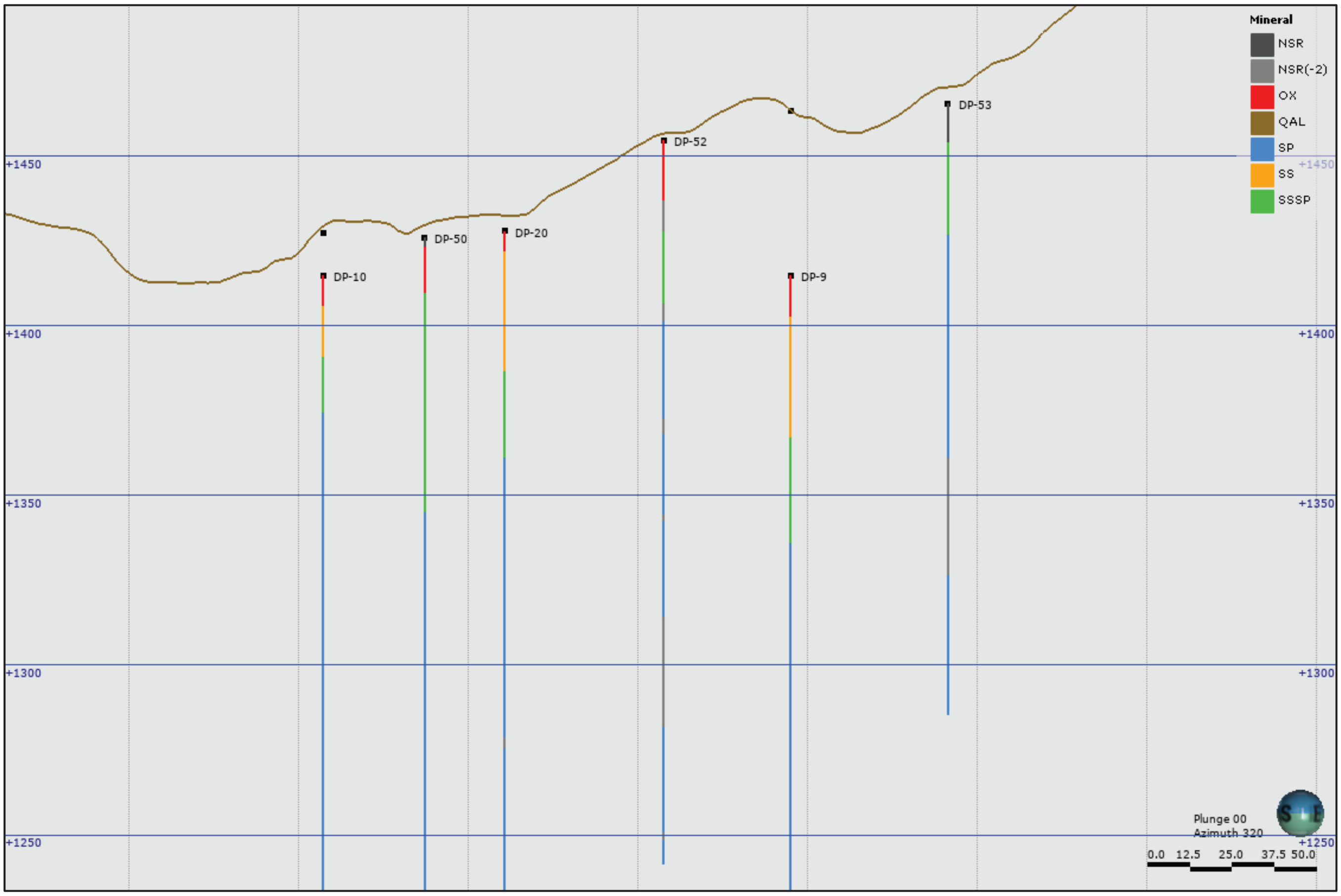


Table 9.2: Collar Elevation Relative to Topography Surface for Drill Holes with a Difference Greater than 5 m

Drill Hole ID	Collar Z (m)	Surface Z (m)	Difference (m)	Modification Comments
DP-10	1414.77	1427.47	12.70	Changed to 1427.466 to align with 2021 topo
DP-2	1463.50	1468.60	5.10	Changed to 1468.602 to align with 2021 topo
DP-28	1462.26	1468.20	5.94	Changed to 1468.199 to align with 2021 topo and other holes on section
DP-29	1476.39	1481.59	5.20	No change, geology aligns with other holes
DP-37	1438.68	1444.37	5.69	No change, geology aligns with other holes
DP-38	1451.96	1461.21	9.25	Changed to 1461.212 to align with 2021 topo and other holes on section
DP-39	1429.08	1435.76	6.68	No change, geology aligns with other holes
DP-42	1459.50	1468.89	9.39	No change, geology aligns with other holes
DP-43	1454.41	1462.57	8.16	No change, aligns with void solid
DP-44	1473.60	1485.69	12.09	Changed to 1485.693 to align with 2021 topo
DP-48	1468.37	1475.50	7.13	No change, aligns with void solid
DP-51	1468.36	1473.64	5.28	No change
DP-54	1404.05	1410.00	5.95	No change
DP-55	1419.28	1425.00	5.72	No change
DP-56	1433.37	1439.47	6.10	No change
DP-58	1403.38	1409.00	5.62	No change, aligns with void solid
DP-6	1432.53	1442.97	10.43	No change
DP-6A	1432.29	1441.61	9.32	Changed to 1441.606 to align with 2021 topo and other holes on section
DP-9	1414.77	1463.41	48.64	Changed to 1463.414 to align with 2021 topo
DPM-04	1455.59	1460.81	5.22	Changed to 1460.811 to align with 2021 topo
DPM-06	1474.49	1479.74	5.25	Changed to 1479.741 to align with 2021 topo and other holes on section

Figure 9.4: Southwest-Northeast Cross-Section Example of Collar Elevation Relative to Topography Surface



The 5 geotechnical drill holes drilled in 2011 were excluded from the Mineral Resources estimation database because the geological logging and analytical data had not been provided at the time of estimation.

9.1.4 Limitations on Data Verification

The QP was not directly involved in the exploration drilling and sampling programs that formed the basis for collecting the data used in the geological modeling and Mineral Resource estimates for the Project; however, the QP was able to observe the drilling, sampling, and sample preparation methods at the nearby La Caridad mine while in progress during the 2021 drilling campaign site visit. The QP has had to rely upon a detailed review of the 2009 to 2011 exploration program data, documentation and standard database validation checks to ensure the resultant geological database is representative and reliable for use in geological modeling and Mineral Resource estimation.

The Golder QP is not aware of any other limitations on nor failure to conduct appropriate data verification.

9.1.5 Qualified Person’s Statement Adequacy of Data Validation

The QP has validated the data disclosed, including collar survey, down hole geological data and observations, sampling, analytical, and other test data underlying the information or opinions contained in the written disclosure presented in this TRS. The QP considers that there is risk associated with the difference between the topography and the collar surveys, which was included during the classification of the resources. Due to the lack of documentation from the Pilares exploration drilling programs, the QP was unable to verify that paper logs were accurately transcribed into the digital database. Analytical samples were reviewed against the laboratory MS Excel files. The QP, by way of the data verification process described in this Section of the TRS, has used only that data, which were deemed by the QP to have been generated with proper industry standard procedures, were accurately transcribed from the original source and were suitable to be used for the purpose of preparing geological models and Mineral Resource estimates.

10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Ore from the Pilares project is proposed to be transported to the La Caridad processing facilities and heap leach pads. No studies related to testing of Pilares ore at the La Caridad processing facilities was available at the time of this Study.

10.1 Qualified Person's Opinion

Test work performed to date was focused on La Caridad mineralization, and while there is a reasonable expectation that Pilares mineralization will behave similarly, part of the consideration for future upgrading of Mineral Resources beyond Inferred category will include a requirement to perform metallurgical test work on Pilares samples.

Mill recoveries for Pilares are based on the La Caridad historical 3-year average of 84% for Cu and 83% for Mo. Heap leach recoveries for Pilares are based on the La Caridad historical 3-year average of 40% for Cu. Mo is not recovered in the leach.

11.0 MINERAL RESOURCE ESTIMATES

11.1 Key Assumptions, Parameters, and Methods

This sub-section contains forward-looking information related to density and grade for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including actual in-situ characteristics that are different from the samples collected and tested to date, equipment and operational performance that yield different results from current test work results.

11.1.1 Introduction

The Pilares Mineral Resource estimate included the estimation of Cu, CuO, Mo, Zn, and SG. The estimate was determined using a block model methodology based on Inverse Distance Squared (ID^2), Inverse Distance Cubed (ID^3), and Ordinary Kriging (OK) interpolation methods. Drill hole sample data was capped to control outlier values and composited for equal sample weighting. Mineral Resource categories were assigned to the block model based on the uncertainty in the confidence of the data (refer to Section 11.6). Mineral Resource estimates were constrained by an open pit shell based on economic criteria outlined in Section 11.3.

11.1.2 Available Data

The drill hole database provided by Pilares consisted of 60 exploration drill holes, including 5,617 Cu, CuO, Mo, and Zn assay results and 5,708 SG measurements for a combined total of 15,372.65 m of analytical drill hole data. The drill hole data was collected between 2009 and 2011, as described in Section 7.1 of this TRS. As discussed in Section 9.1.1, 51 DTH holes, 568 underground holes, and the 5 geotechnical drill holes completed in 2011 were excluded from the modeling.

The data was reviewed for interval errors and out of range assays values prior to import into Datamine RM software. Additional data validation is discussed in Section 9.1. No material issues were identified during this process.

The assay data was modified to account for zero grade values and unsampled intervals. All zero-grade Cu, CuO, Zn, and Mo data were set to a minimum value of 0.001% and all unsampled intervals were set to absent due to intersections with mining voids and were therefore not to set to a minimum value.

The SG data was modified to remove invalid measurement values that were entered as 0 and to limit the dataset to within the expected range of values determined from analysis of the raw data probability plot (refer to Section 11.1.4). Eleven (11) values less than 1.8 grams per cubic centimeter (g/cm^3) were set to absent data.

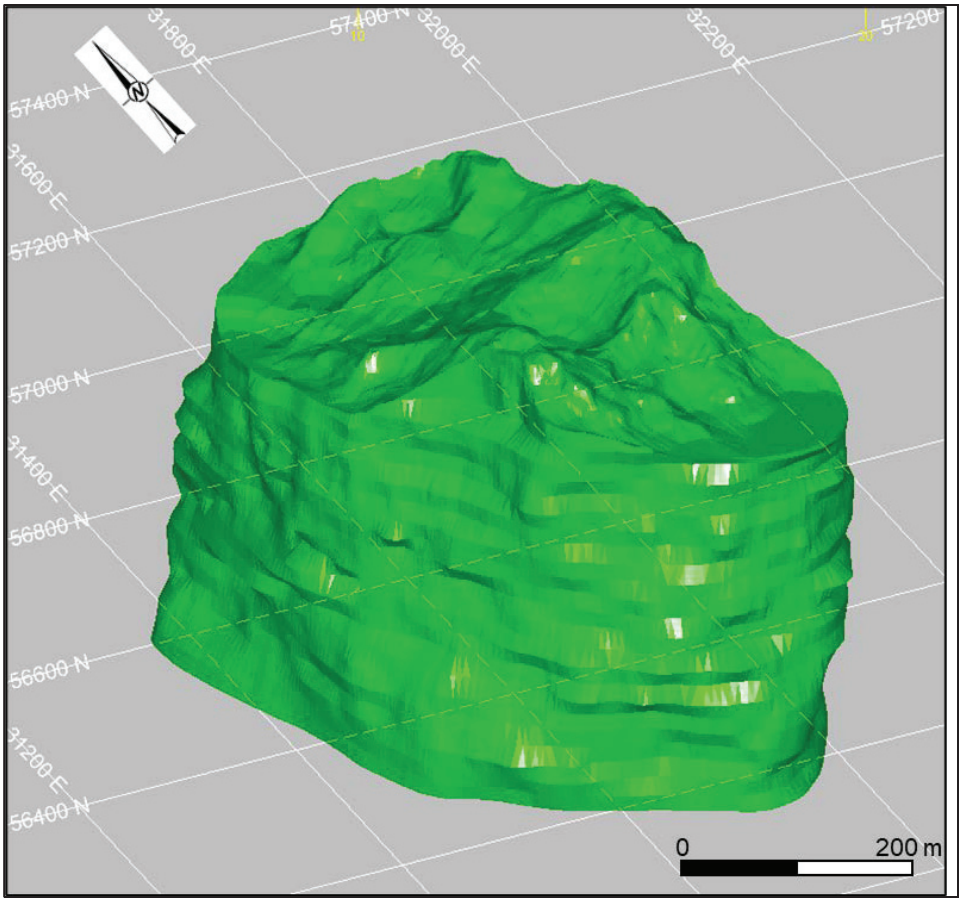
An October 2021 topographic surface was provided by La Caridad for the Pilares deposit area. Validation of the surface relative to the drill hole collars is described in Section 9.1.3 of this TRS.

Pilares personnel provided an underground mining void wireframe, along with accompanying historical mining maps and digitized linework for mine development and stopes.

11.1.3 Geological Domains and Modelling

A lithological domain model consisting of a single breccia unit was provided for the Pilares deposit, as shown in Figure 11.1. The model was imported into Datamine RM software and compared against the drill hole data. The upper portion of the breccia wireframe had been clipped by the 2017 topographic surface, which was determined to be outdated. Therefore, the wireframe was extended vertically and clipped by the 2021 topographic surface for the purposes of Mineral Resource Estimation.

Figure 11.1: Pilares Breccia Model (Oblique View Looking NE)



11.1.3.1 Oxidation Model

An oxide domain model was created in Leapfrog Geo to constrain the grade estimation. Oxidation domain units included in the model are summarized in Table 11.1 and shown in Figure 11.2.

Table 11.1: Pilares Oxidation Units

Zone	Unit
1	Oxide
2	Transition
3	Sulphide

Table 11.2: Logged Mineralogy Types

Mineralogy	Description
QAL	Alluvium
NSR	Backfill
NSR(-2)	Mining Workings
OX	Oxides
SS	Secondary Sulphides
SSSP	Mixture of Secondary Sulphides with Primary Sulphides
SP	Primary Sulphides

The oxide domain model was developed using both the logged mineralogy (Table 11.2) and CuO:Cu ratio of assayed intervals. The following CuO:Cu ratio parameters were used for each zone:

- Zone 1 (Oxide): CuO:Cu ratio greater than or equal to 0.5 and Cu greater than 0.5%.
- Zone 2 (Transition): CuO:Cu ratio greater than or equal to 0.2 and less than 0.5 and Cu greater than 0.5%.
- Zone 3 (Sulfide): CuO:Cu ratio less than 0.2 and Cu greater than 0.5%.

The following methodology was used to determine the final zone:

- All intervals logged as Oxide (OX) were assigned to Oxide, regardless of ratio.
- All intervals logged as Secondary Sulfides (SS) were assigned as either Oxide or Transition, even if ratio indicated Sulfide.
- Intervals logged as Secondary and Primary Sulfides (SSSP) or Primary Sulfides (SP) were assigned to Oxide, Transition or Sulfide based on CuO:Cu ratio of intervals where Cu was greater than 0.5%.

The domains were constrained by the breccia wireframe that was modified by the 2021 topography surface.

Figure 11.2: Pilares Oxidation Model Section (Looking E)

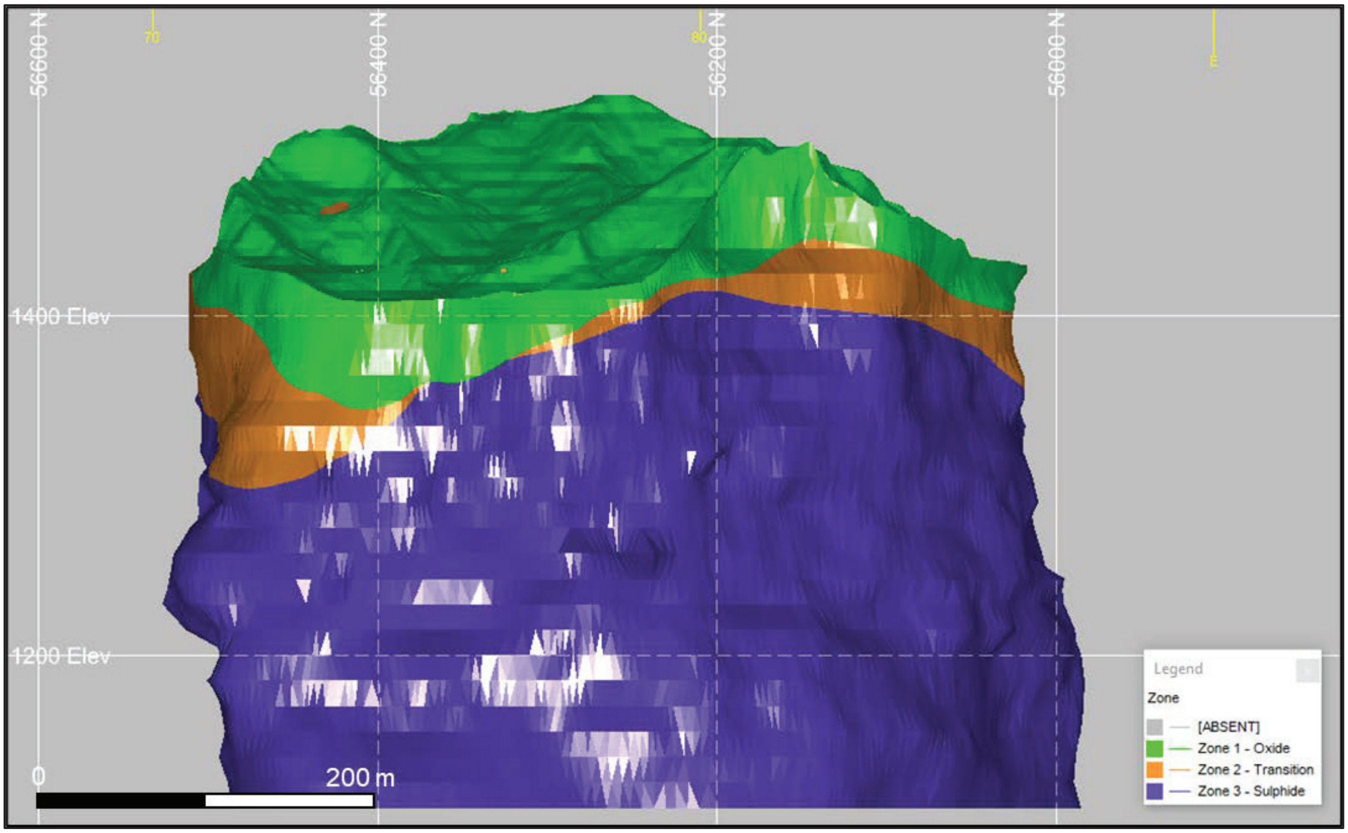
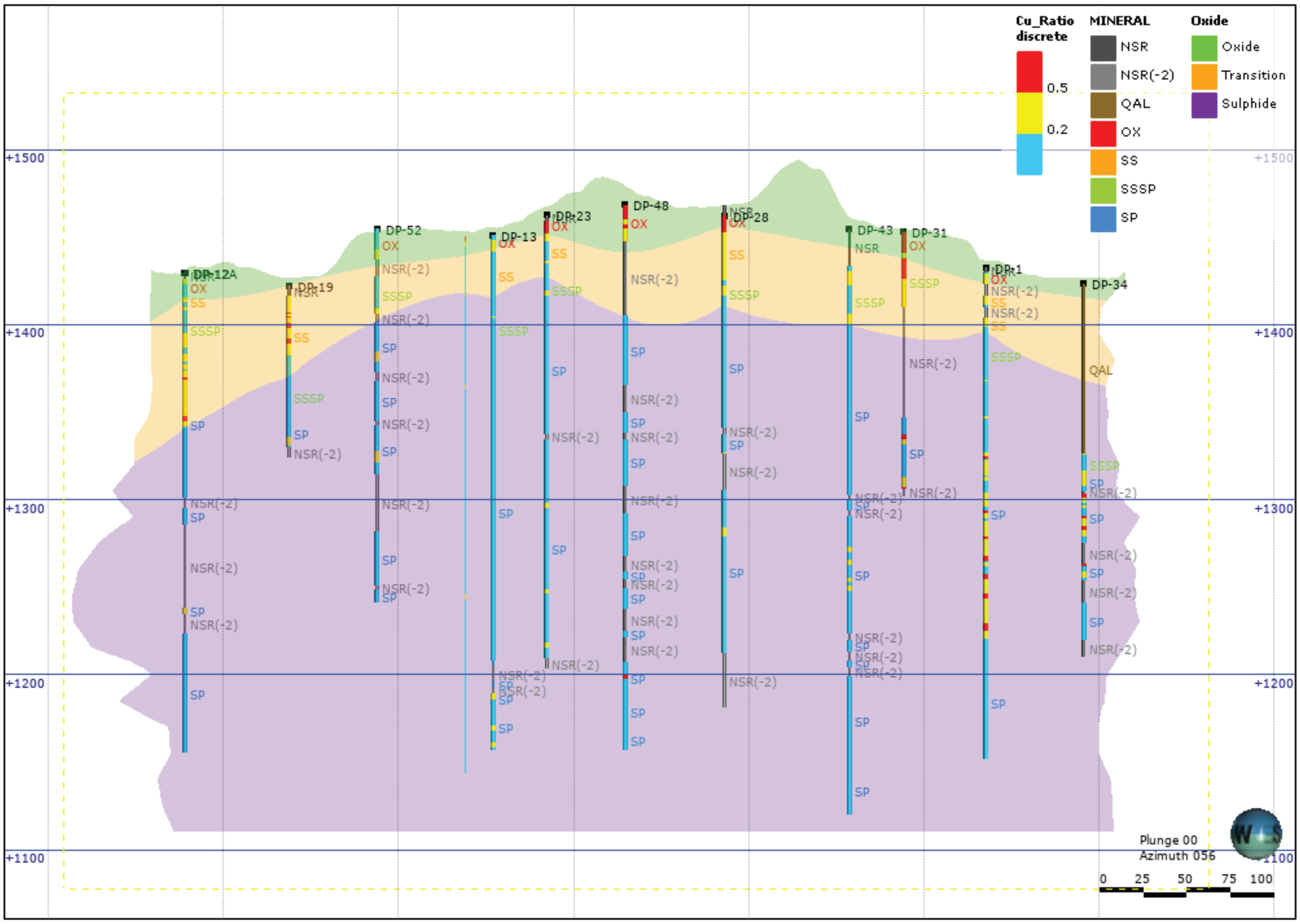


Figure 11.3: NW-SE Cross-Section of Oxidation Domains, Drill Holes Colored by CuO:Cu Ratio and Labeled with Mineralogy



11.1.3.2 Underground Void Model

Historical level maps of previous underground mining areas were provided by Pilares personnel, as well as CAD linework and a void wireframe that had been developed based on the maps. A total of 23 level maps, as well as the CAD linework, were imported into Leapfrog Geo. Ten (10) of the 23 maps had the location of both development and mining stopes, the remaining maps only had the location of mining stopes. Maps with a level number and development (i.e., Banco 1110 shown in Figure 11.4) were georeferenced to the development linework using 3 points. Maps in between development levels that only had stope contours (i.e., Banco 1125) were georeferenced to the grid of the nearest map with development. For example, the Banco 1125 map was georeferenced to the mine grid in the Banco 1110 map.

After georeferencing the maps, it was noted that the development CAD linework lined up reasonably well with the map linework, but there was an inconsistent offset for most of the stope contours.

The georeferenced maps and linework were imported into Maptek Vulcan, where the stope contours were translated to align with the georeferenced maps and development.

Each map had stope contours for up to 5 different elevations, with the lines colored accordingly (Table 11.3). To simplify creation of the new void wireframe as well as ensure both a realistic and conservative representation of the mined-out areas, the contours for each map were merged into one contour set to the lowest elevation of the plan/bank and representing the furthest outward extents of all the contours (Figure 11.5). The final void wireframe is shown in Figure 11.6.

Table 11.3: Contours of Mined Areas by Elevation for Banco 1110

Name	Plan (Bank)	Elevation (m)	Level	Line Color
Banco	1110	1168.62		yellow/brown
Banco	1110	1165.62		orange
Banco	1110	1162.62		green
Banco	1110	1159.62	1000	red
Banco	1110	1156.82		blue

Figure 11.4: Example of Historical Mining Level Map (Banco 1110)

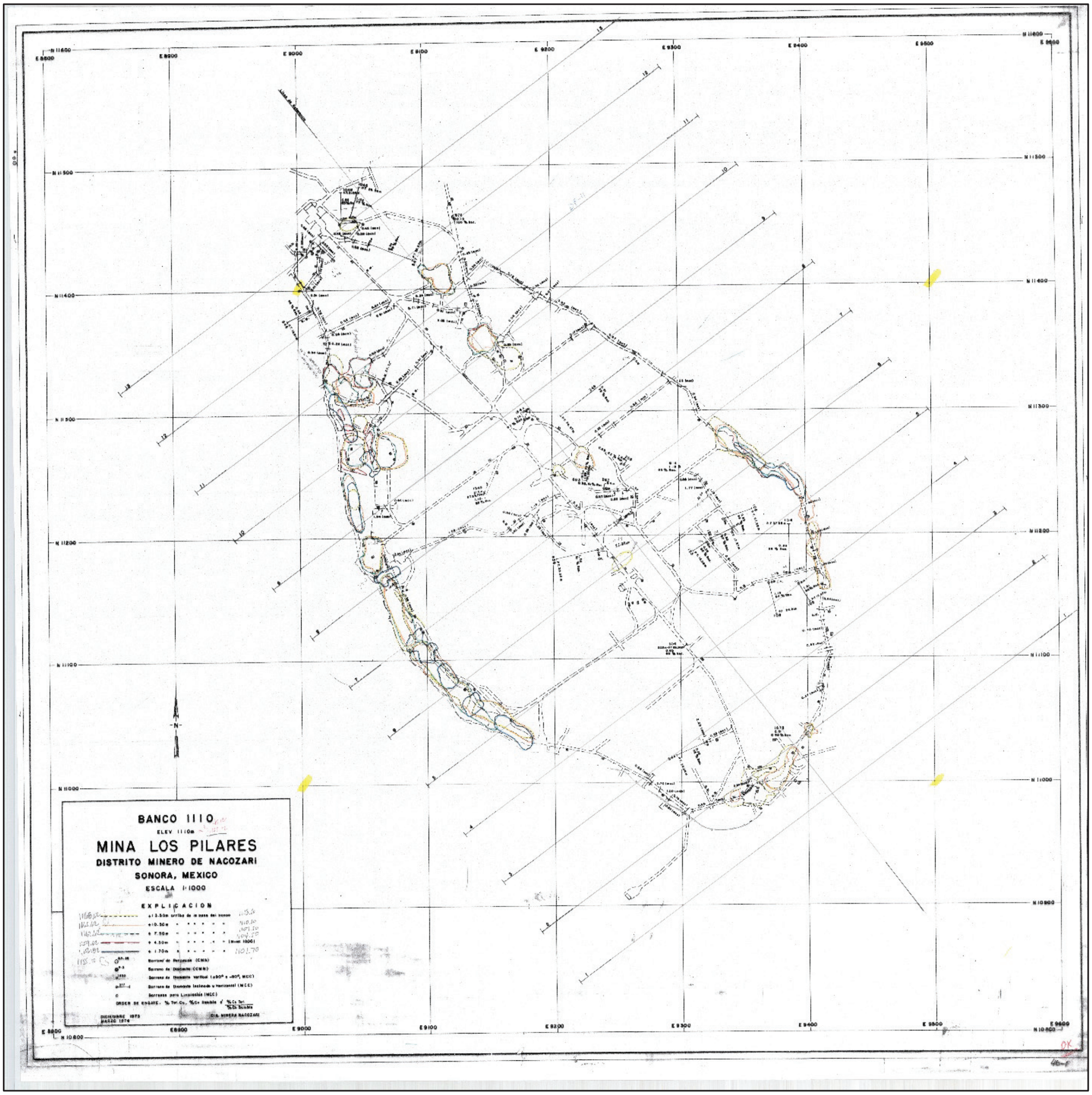


Figure 11.5: Example of Original (left) and Modified (right) Stope Contours

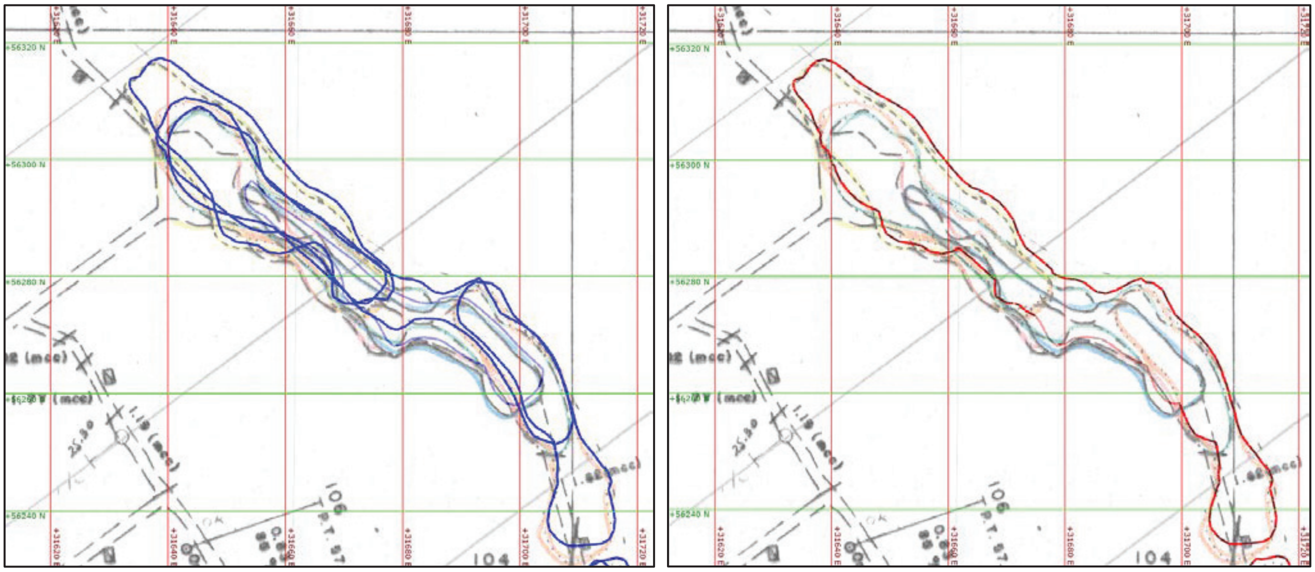
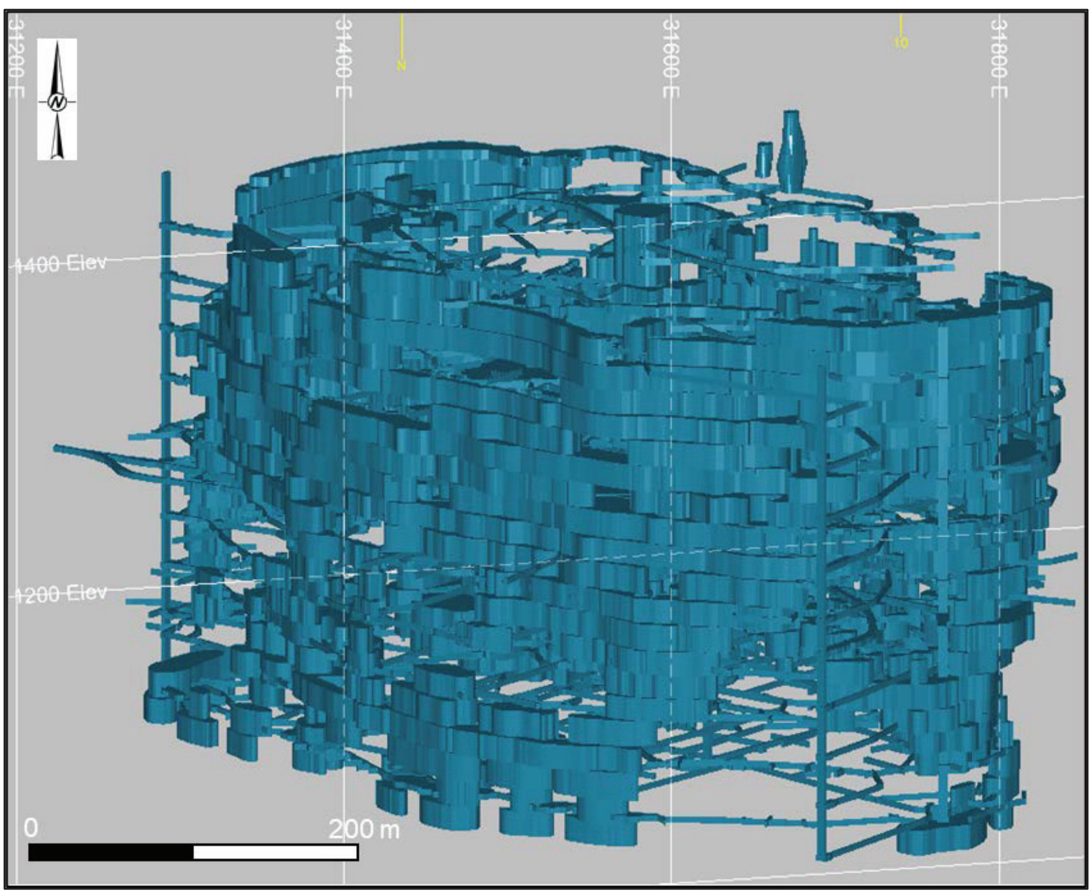


Figure 11.6: Updated Pilares Underground Void Wireframe (Oblique View Looking NE)



11.1.4 Exploratory Data Analysis

The sample data, selected within the limits of the breccia model, was analyzed for Cu, CuO, Zn, Mo and SG within each oxidation zone using descriptive statistics as well as a series of graphs including histograms, probability plots, X-Y scatter plots and box plots for the purpose of describing the sample population and identifying outlier assay values. Cu, CuO, Zn, and Mo populations were found to have a positively skewed distribution with the presence of some outlier grade values. Probability plots and histograms for Cu demonstrate that the majority of the mineralization is hosted within Zone 3 (sulfide), as shown in Figure 11.7.

Figure 11.7: Histogram of Cu by Zone

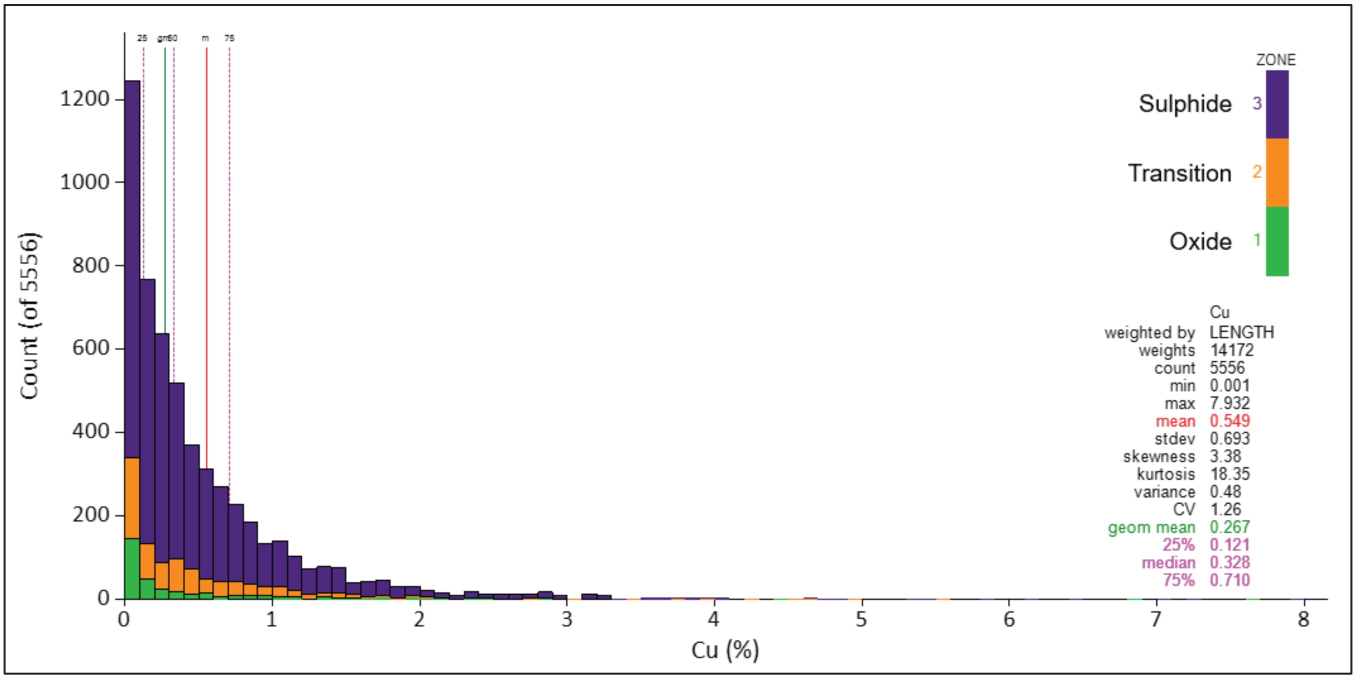


Table 11.4 summarizes the statistics by zone for Cu and Figure 11.8 illustrates the probability plot by zone for Cu.

Table 11.4: Summary Cu Statistics by Zone

Metal	Domain	Count	Min	Max	Mean	Variance	StDev	CV
Cu	All	5,556	0.001	7.93	0.55	0.48	0.69	1.26
Cu	ZONE 1	338	0.001	7.60	0.40	0.51	0.71	1.76
Cu	ZONE 2	766	0.001	5.52	0.55	0.42	0.65	1.19
Cu	ZONE 3	4,452	0.001	7.93	0.56	0.49	0.70	1.24

Notes: StDev = standard deviation and CV = coefficient of variation

Figure 11.8: Probability Plot of Cu by Zone

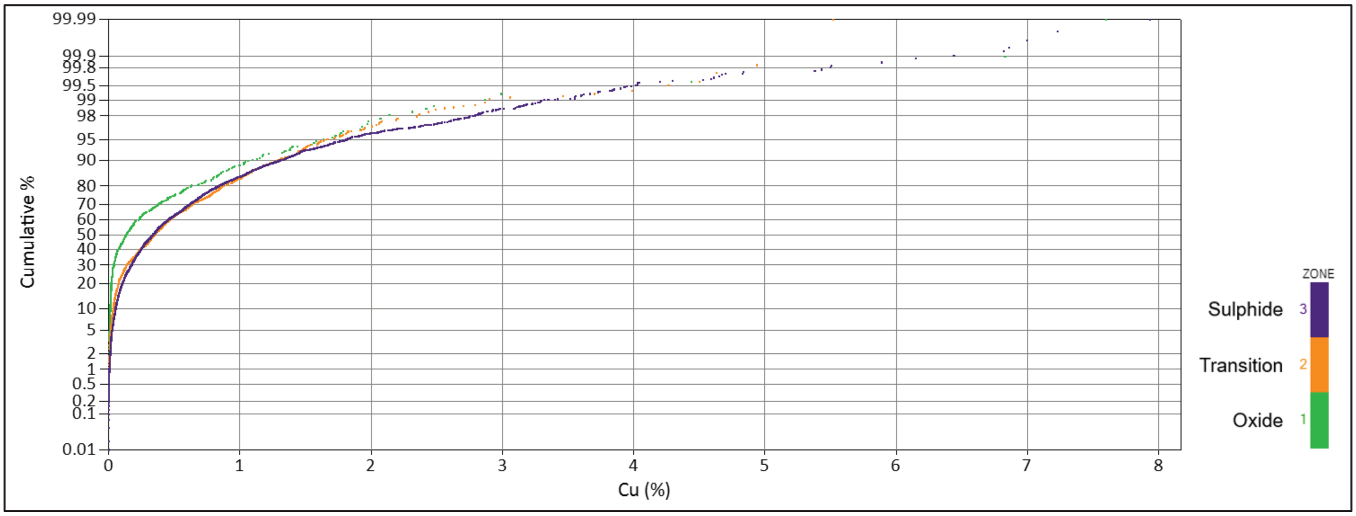


Table 11.5 summarizes the statistics by zone for CuO and Figure 11.9 illustrates the probability plot by zone for CuO.

Table 11.5: Summary CuO Statistics by Zone

Metal	Domain	Count	Min	Max	Mean	Variance	StDev	CV
CuO	All	5,556	0.001	3.50	0.06	0.02	0.13	2.22
CuO	ZONE 1	338	0.001	3.50	0.21	0.15	0.38	1.81
CuO	ZONE 2	766	0.001	1.24	0.12	0.02	0.15	1.26
CuO	ZONE 3	4,452	0.001	1.43	0.04	0.00	0.06	1.60

Figure 11.9: Probability Plot of CuO by Zone

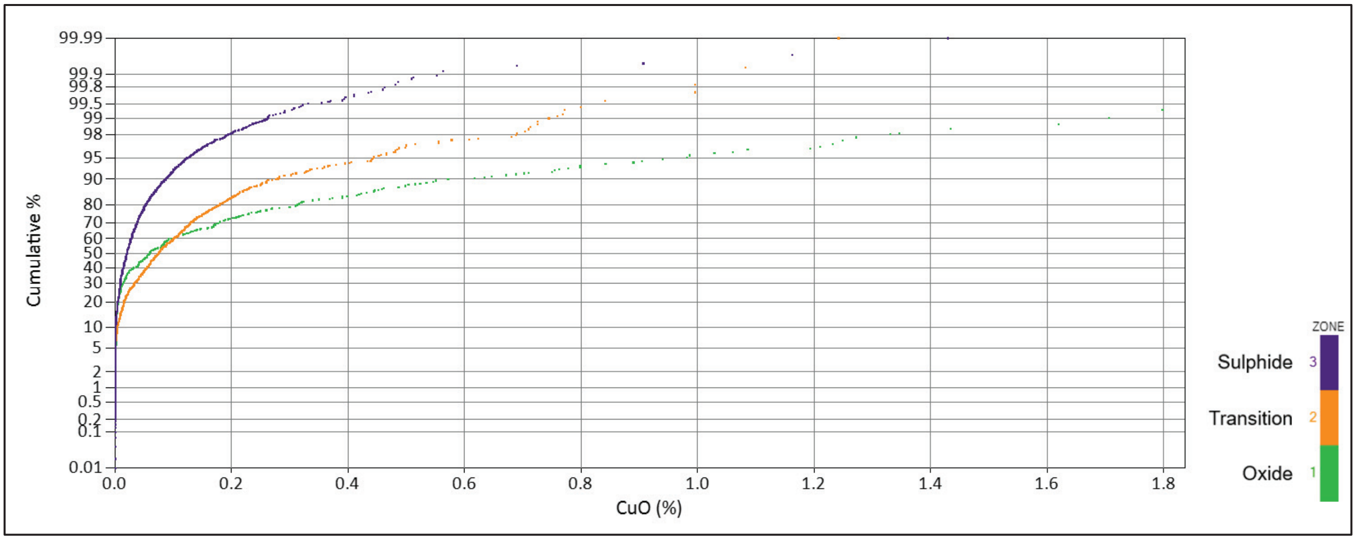


Table 11.6 summarizes the statistics by zone for Mo and Figure 11.10 illustrates the probability plot by zone for Mo.

Table 11.6: Summary Mo Statistics by Zone

Metal	Domain	Count	Min	Max	Mean	Variance	StDev	CV
Mo	All	5,556	0.0001	0.078	0.005	0.000	0.006	1.36
Mo	ZONE 1	338	0.0001	0.016	0.002	0.000	0.002	1.10
Mo	ZONE 2	766	0.0001	0.072	0.003	0.000	0.004	1.47
Mo	ZONE 3	4,452	0.0001	0.078	0.005	0.000	0.007	1.30

Figure 11.10: Probability Plot of Mo by Zone

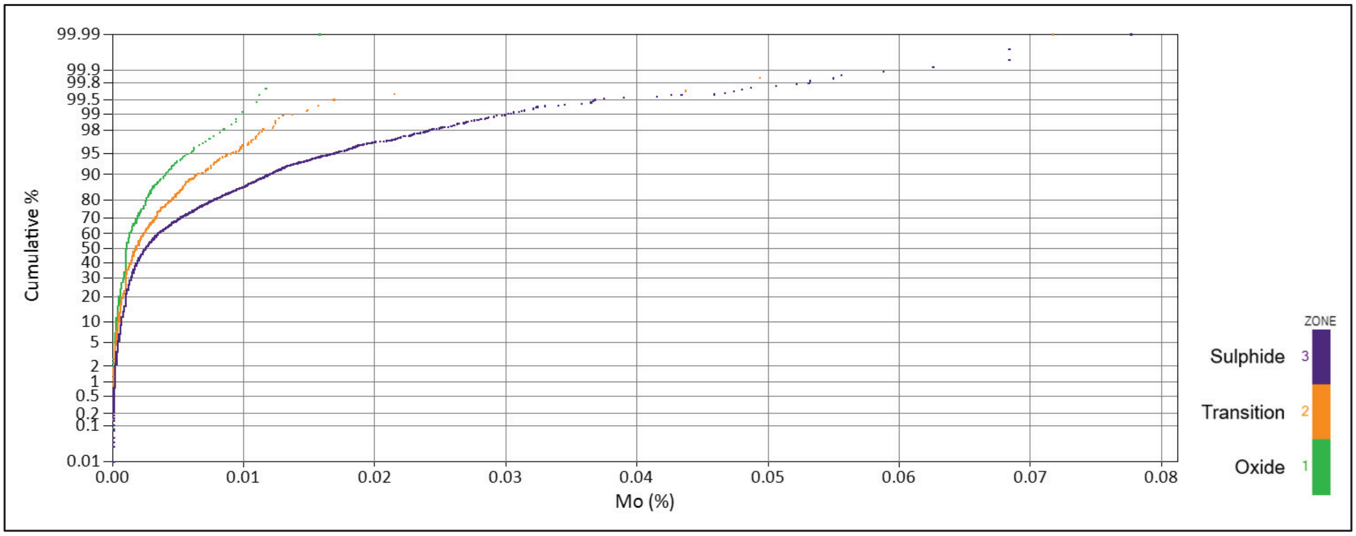
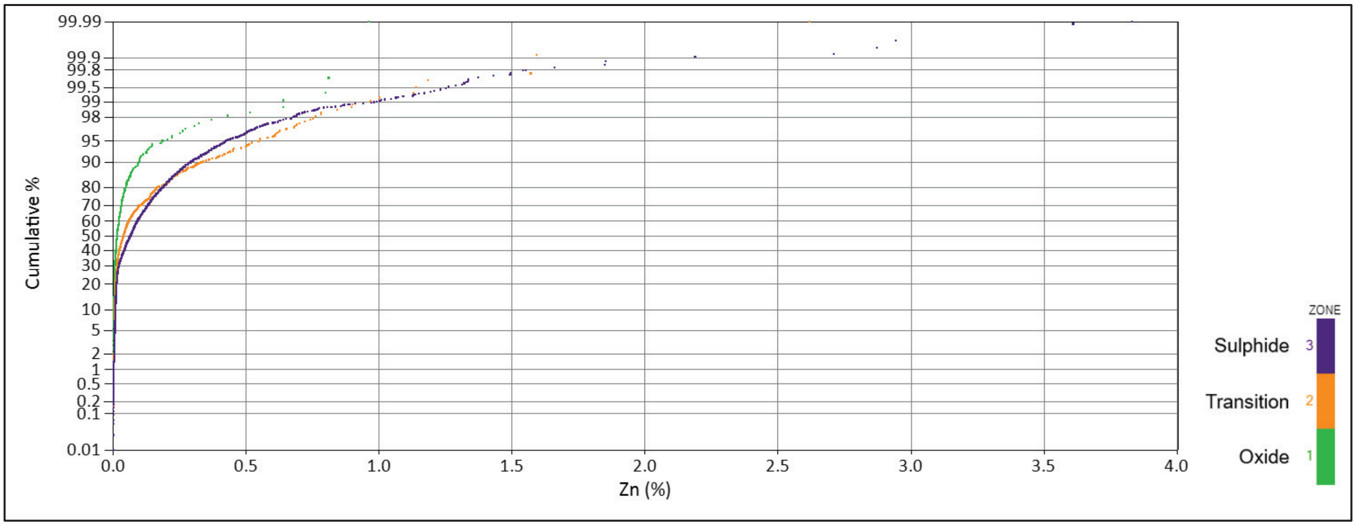


Table 11.7 summarizes the statistics by zone for Zn and Figure 11.11 illustrates the probability plot for Zn by zone.

Table 11.7: Summary Zn Statistics by Zone

Metal	Domain	Count	Min	Max	Mean	Variance	StDev	CV
Zn	All	5,556	0.001	3.83	0.12	0.04	0.20	1.68
Zn	ZONE 1	338	0.001	0.96	0.05	0.01	0.11	2.43
Zn	ZONE 2	766	0.001	2.62	0.12	0.04	0.21	1.76
Zn	ZONE 3	4,452	0.001	3.83	0.12	0.04	0.20	1.63

Figure 11.11: Probability Plot of Zn by Zone



Assay grade data was evaluated for outlier values using probability plots and scatter plots for each unit. Outlier values were identified and capped (top-cut) for the purposes of grade estimation. Capping values were defined for each variable as presented in Table 11.8. The number of values for each variable affected by the capping process are outlined in Table 11.9.

Table 11.8: Capping Limits for Cu, CuO, Mo, Zn, and SG

Domain	Cu (wt. %)	CuO (wt. %)	Mo (wt. %)	Zn (wt. %)	SG (g/cm^3)
ZONE 1	2.0	1.3	0.01	0.3	2.70
ZONE 2	3.0	0.8	0.02	1.0	N/A
ZONE 3	5.0	0.6	0.05	1.5	3.20

Table 11.9: Number of Samples Capped for Cu, CuO, Mo, Zn, and SG

	No. of Samples Capped				
Domain	Cu	CuO	Mo	Zn	SG
ZONE 1	10	9	4	10	3
ZONE 2	9	6	6	7	N/A
ZONE 3	12	4	11	11	9
Total	**31**	**19**	**21**	**28**	**12**

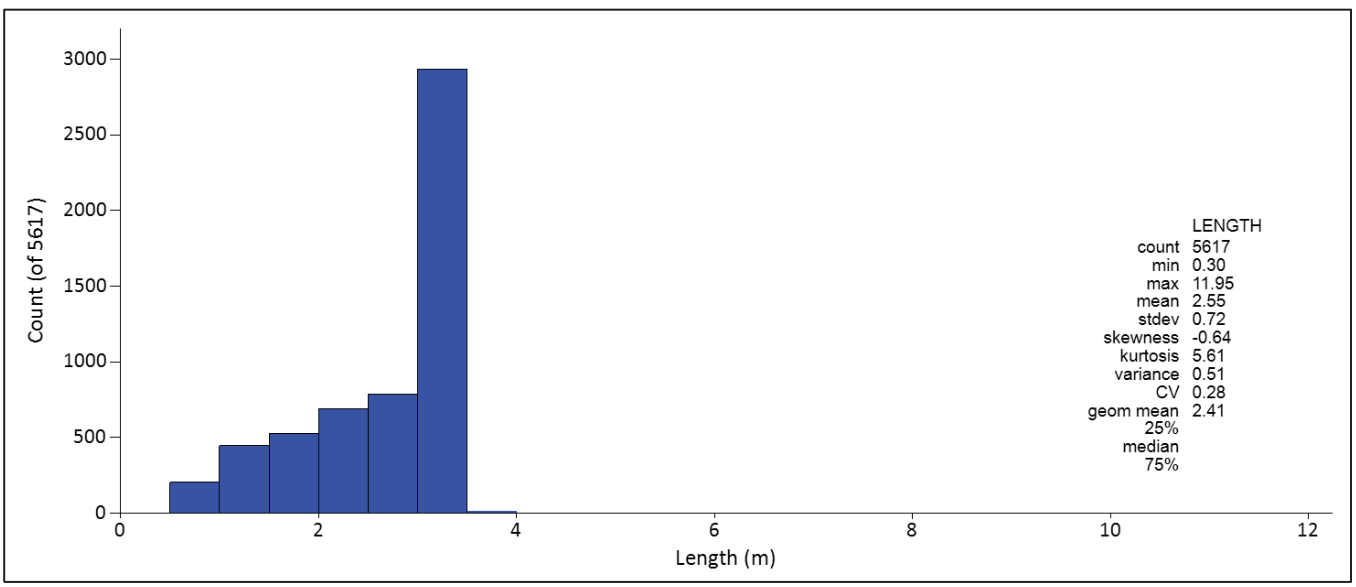
Capped sample statistics were generated and indicate a minor reduction in mean grades and coefficient of variation (CV) values for some zones, but overall reductions were found to be insignificant as outlined in Table 11.10.

Table 11.10: Summary Comparison of Capped vs Uncapped Statistics

Variable	Domain	No. of Samples Capped	Uncapped Mean	Capped Mean	Uncapped CV	Capped CV
Cu	ZONE 1	10	0.40	0.37	1.76	1.38
	ZONE 2	9	0.55	0.53	1.19	1.08
	ZONE 3	12	0.56	0.56	1.24	1.20
CuO	ZONE 1	9	0.21	0.20	1.81	1.56
	ZONE 2	6	0.12	0.12	1.26	1.22
	ZONE 3	4	0.04	0.04	1.60	1.44
Mo	ZONE 1	4	0.002	0.002	1.10	1.05
	ZONE 2	6	0.003	0.003	1.47	1.01
	ZONE 3	11	0.005	0.005	1.30	1.26
Zn	ZONE 1	10	0.05	0.04	2.42	1.70
	ZONE 2	7	0.12	0.12	1.75	1.60
	ZONE 3	11	0.12	0.12	1.63	1.47
SG	ZONE 1	3	2.48	2.48	0.05	0.04
	ZONE 2	0	2.51	2.51	0.05	0.05
	ZONE 3	9	2.56	2.56	0.05	0.05

Raw sample interval lengths were analyzed for the purpose of selecting a mean composite length for block model grade estimation. The modal sample length was found to be 2.55 m (see Figure 11.12); therefore, 3 m was selected as the length used for compositing the sample data into relatively equal lengths.

Figure 11.12: Length Histogram



11.1.5 Spatial Continuity

The spatial continuity of Cu, CuO, Mo, and Zn grades were evaluated for the breccia unit through the use of variogram analysis. Experimental variogram data was generated using the parameters presented in Table 11.11.

Table 11.11: Experimental Variogram Parameters

Variogram Parameter	Value
Lag	20 m
No. of Lags	25
Horizontal Angle	22°
Vertical Angle	22°
Cylinder Radius	30 m
Bearing (Strike Direction)	120°
Plunge (Rot. of X' around Y')	0°
Dip (Rot. of Y' around X')	-5°

Two-structure spherical variograms were then modeled based on the experimental variogram data as shown in the Cu example in Figure 11.13, Figure 11.14, and Figure 11.15. These models were then used to define the sample search ellipse dimensions and for the assignment of OK weight values to the samples for the purpose of grade estimation using OK as further discussed in Section 11.2.

Figure 11.13: Major Axis Variogram Model for Cu

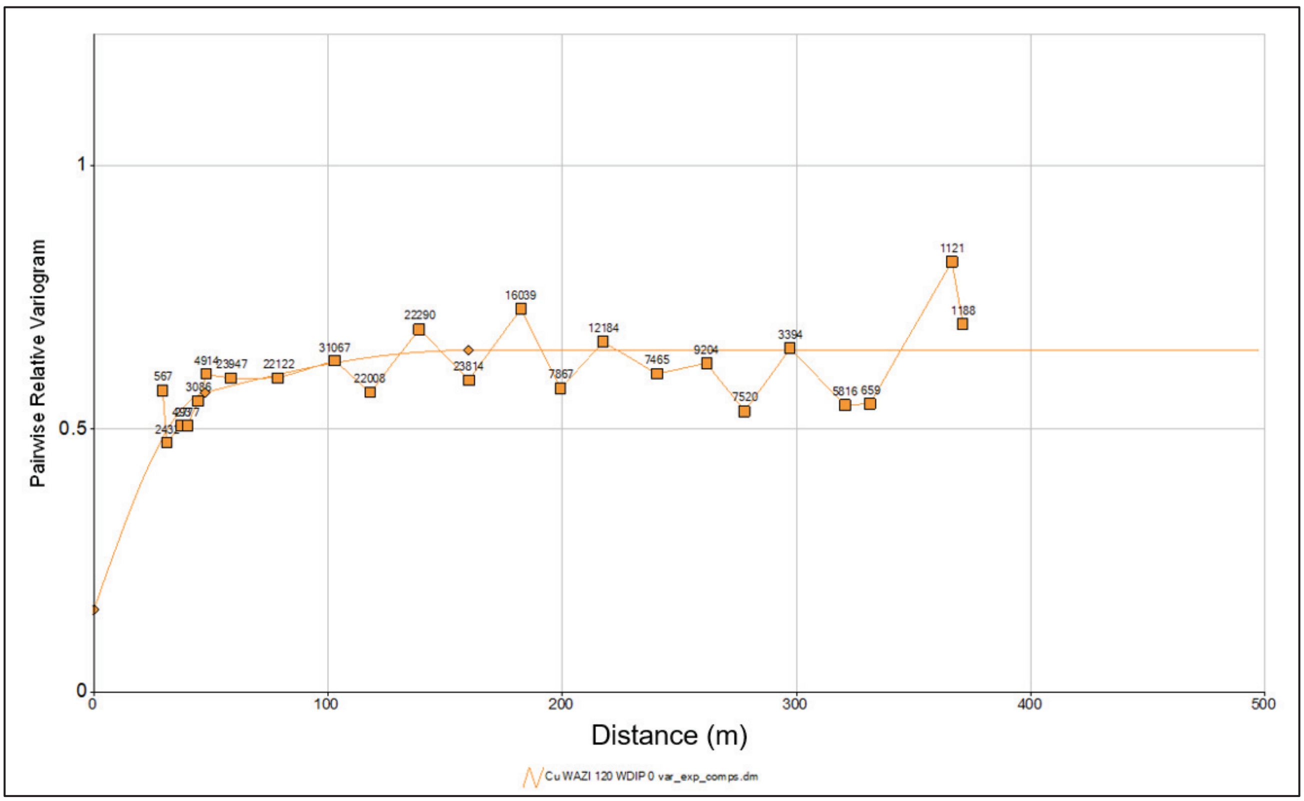


Figure 11.14: Semi-Major Variogram Model for Cu

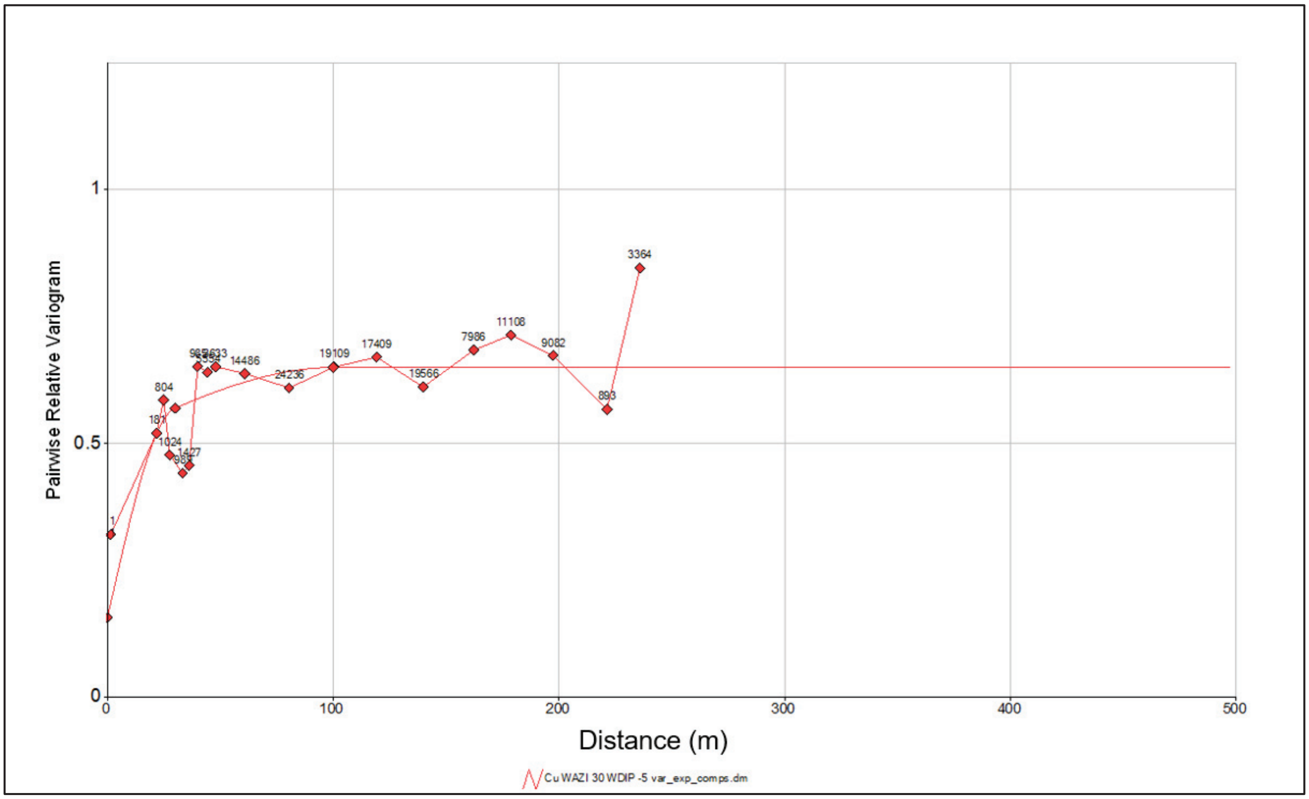
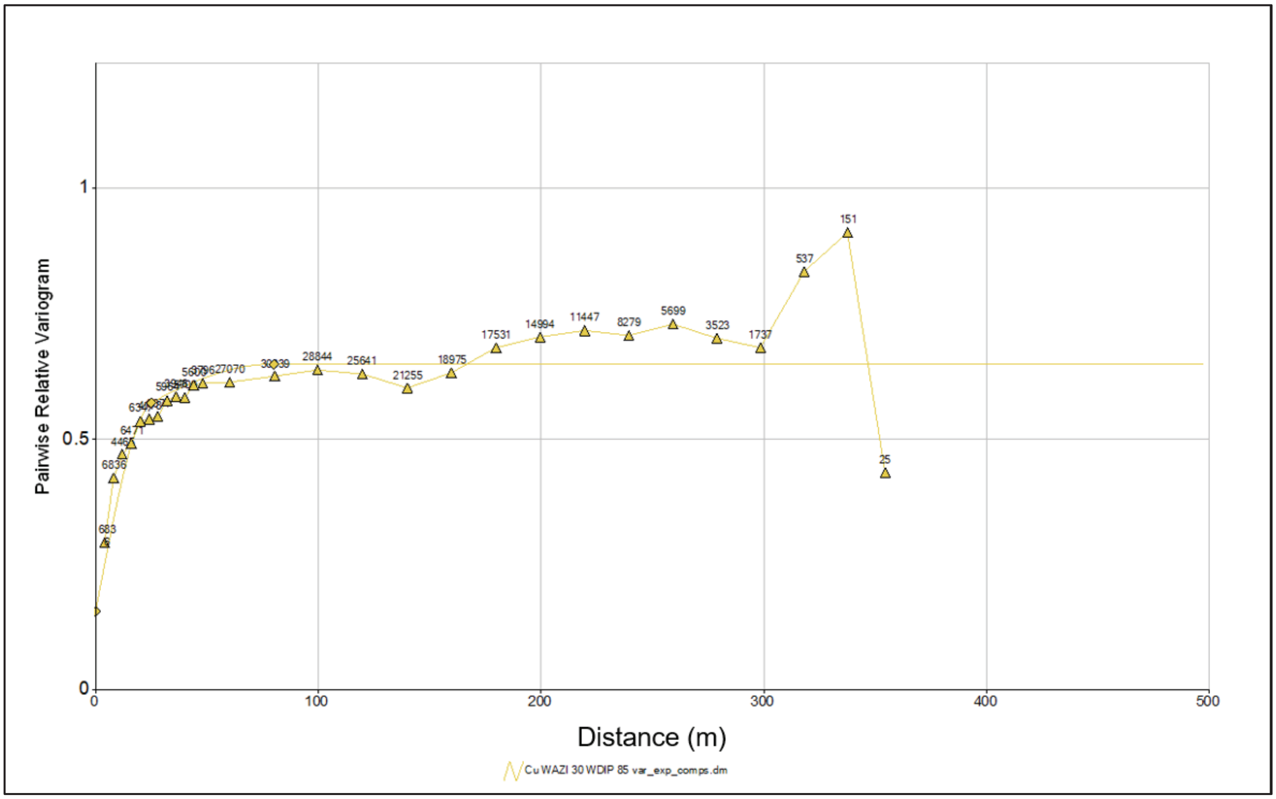


Figure 11.15: Minor Variogram Model for Cu



A summary of all variogram model parameters is presented in Table 11.12.

Table 11.12: Summary of Variogram Parameters

Domain	Variable	Vangle 1	Vangle 2	Nugget	Range 1 X	Range 1 Y	Range 1 Z	Sill 1	Range 2 X	Range 2 Y	Range 2 Z	Sill 2
All	Cu	30	-5.0	0.16	46.50	29.60	25.10	0.35	160.10	100.30	79.10	0.14
All	CuO	30	-5.0	0.13	40.50	38.90	35.10	0.43	160.10	98.60	140.20	0.19
All	Mo	30	-5.0	0.07	48.70	39.60	21.90	0.21	159.80	99.80	100.10	0.28
All	Zn	30	-5.0	0.10	39.90	39.60	33.50	0.35	160.10	120.00	100.60	0.30
All	SG	30	-5.0	0.00	45.70	46.80	7.10	0.00	160.20	99.60	160.60	0.00

11.1.6 Grade Modeling

This sub-section contains forward-looking information related to grade for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section, including actual in-situ characteristics that are different from the samples collected and tested to date, equipment and operational performance that yield different results from current test work results.

A 3D grade block model was generated using Datamine RM software. Block model parameters, including origin and parent block size, are summarized in Table 11.13. Block splitting was used along domain and void boundaries to a maximum of one split in each direction resulting in blocks no smaller than 5 m x 5 m x 5 m. All blocks with majority volume within the void wireframe were given the flag mined = 1.

Table 11.13: Summary of Block Model Details

Direction (Axis)	Model Origin (m)	No. of Blocks	Block Size (m)	Sub-block Size (m)
X	55,500	160	10	5
Y	30,800	150	10	5
Z	925	70	10	5

Interpolation methods for all variables included Nearest Neighbor (NN), ID^2, ID^3, and OK.

The sample search strategy consisted of a 3-pass elliptical search where the 1st pass search radius was equal to approximately half the second structure variogram range, the 2nd pass search equal to the full variogram range and the 3rd pass search distance equal to twice the full variogram range. Estimates required a minimum of 8 samples in the 1st and 2nd passes and 4 in the 3rd pass with maximums of 12 samples for each pass having a maximum of 4 samples per drillhole. Search strategy parameters are summarized in Table 11.14

Table 11.14: Summary of Search Strategy Parameters

Domain	1st Search					2nd Search			3rd Search			All
	X-Range	Y-Range	Z-Range	Min. Samples	Max. Samples	SVOL Factor 2	Min. Samples	Max. Samples	SVOL Factor 3	Min. Samples	Max. Samples	Max. per hole
ZONE 1	80	50	40	8	12	2	8	12	4	4	12	4
ZONE 2	80	50	40	8	12	2	8	12	4	4	12	4
ZONE 3	80	50	40	8	12	2	8	12	4	4	12	4

OK estimates were chosen as the final estimated grades for all variables. The soluble Cu ratio variable was calculated based on the model grades by dividing CuO/Cu for each block.

11.1.7 Specific Gravity

This sub-section contains forward-looking information related to density for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including actual in situ characteristics that are different from the samples collected and tested to date, equipment and operational performance that yield different results from current test work results.

Specific Gravity (SG) data was analyzed using a cumulative probability plot (Figure 11.16) and descriptive statistics (Table 11.15). Based on the analysis of the data, SG values in the oxide zone (Zone 1) greater than 2.7 g/cm^3 were capped at a value of 2.7 g/cm^3, and SG values in the sulfide zone (Zone 3) greater than 3.2 g/cm^3 were capped at a value of 3.2 g/cm^3, as discussed in 11.1.4 and shown in Table 11.8. The number of samples impacted by the capping process are shown in Table 11.9.

Figure 11.16: Probability Plot of SG by Zone

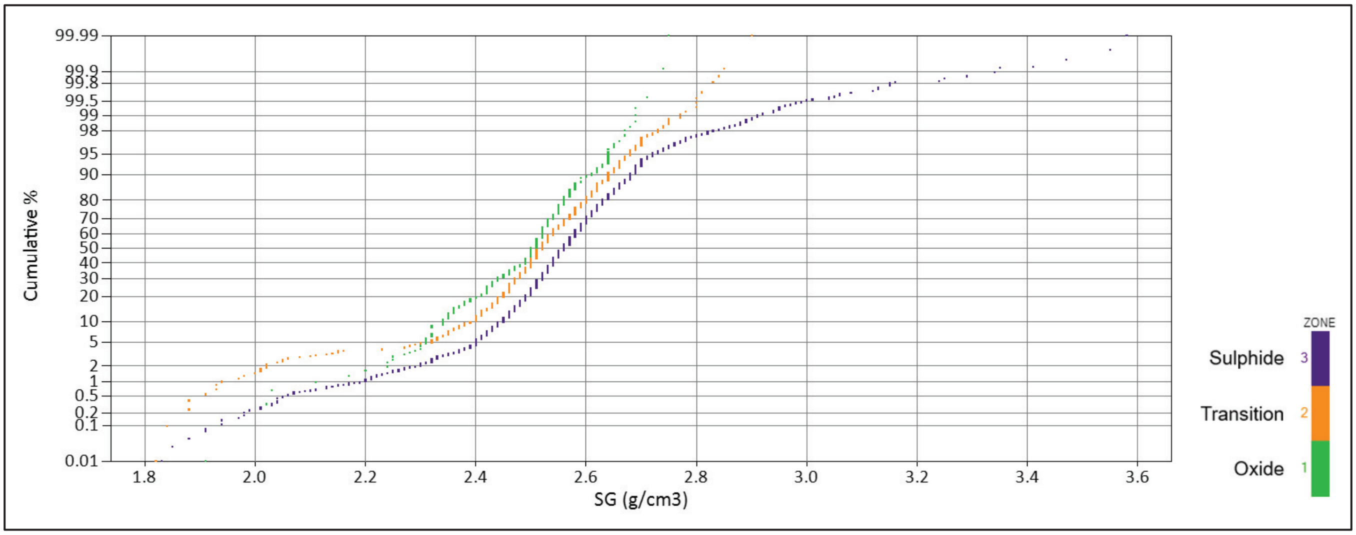


Table 11.15: Summary Statistics of Raw SG Data by Zone

Metal	Domain	Count	Min	Max	Mean	Variance	StDev	CV
SG	All	5,636	1.82	3.58	2.55	0.02	0.13	0.05
SG	ZONE 1	342	1.91	2.75	2.48	0.01	0.11	0.05
SG	ZONE 2	783	1.82	2.90	2.51	0.02	0.14	0.05
SG	ZONE 3	4,511	1.83	3.58	2.56	0.01	0.12	0.05

SG was estimated using NN, ID^2, ID^3, and OK interpolation methods, OK estimates were chosen as the final estimated values.

11.1.8 Model Validation

The model validation process included a visual comparison of block model and composite grades in plan and section, along with a global comparison of mean grades, and evaluation of smoothing ratios and swath plots. Block grades were visually compared to the drill hole composite data in all domains to ensure agreement and no material grade bias issues were identified, as demonstrated in Figure 11.17 and Figure 11.18.

Figure 11.17: N-S Cross-section at 31,500 E of Composite Samples and Block Grades

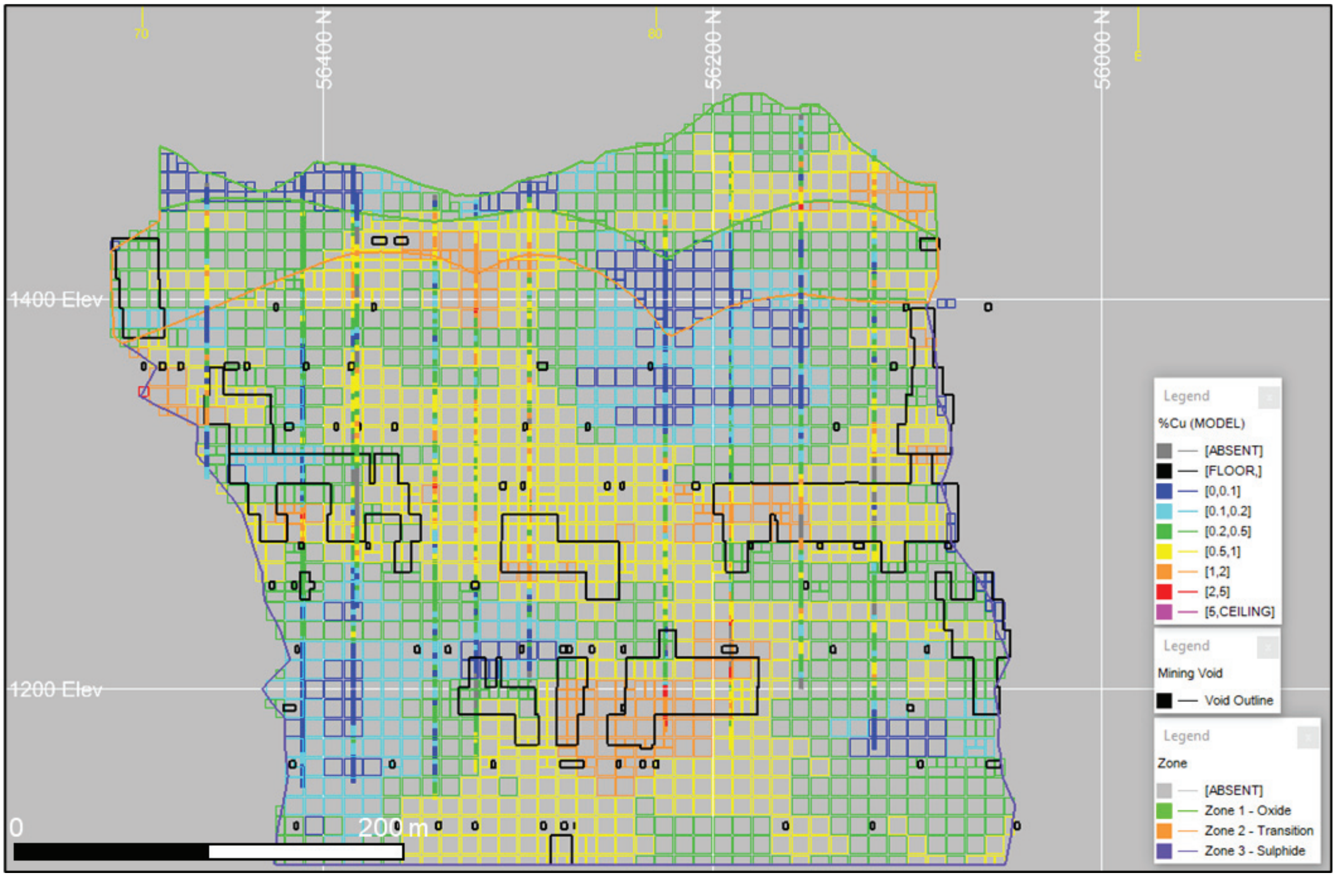
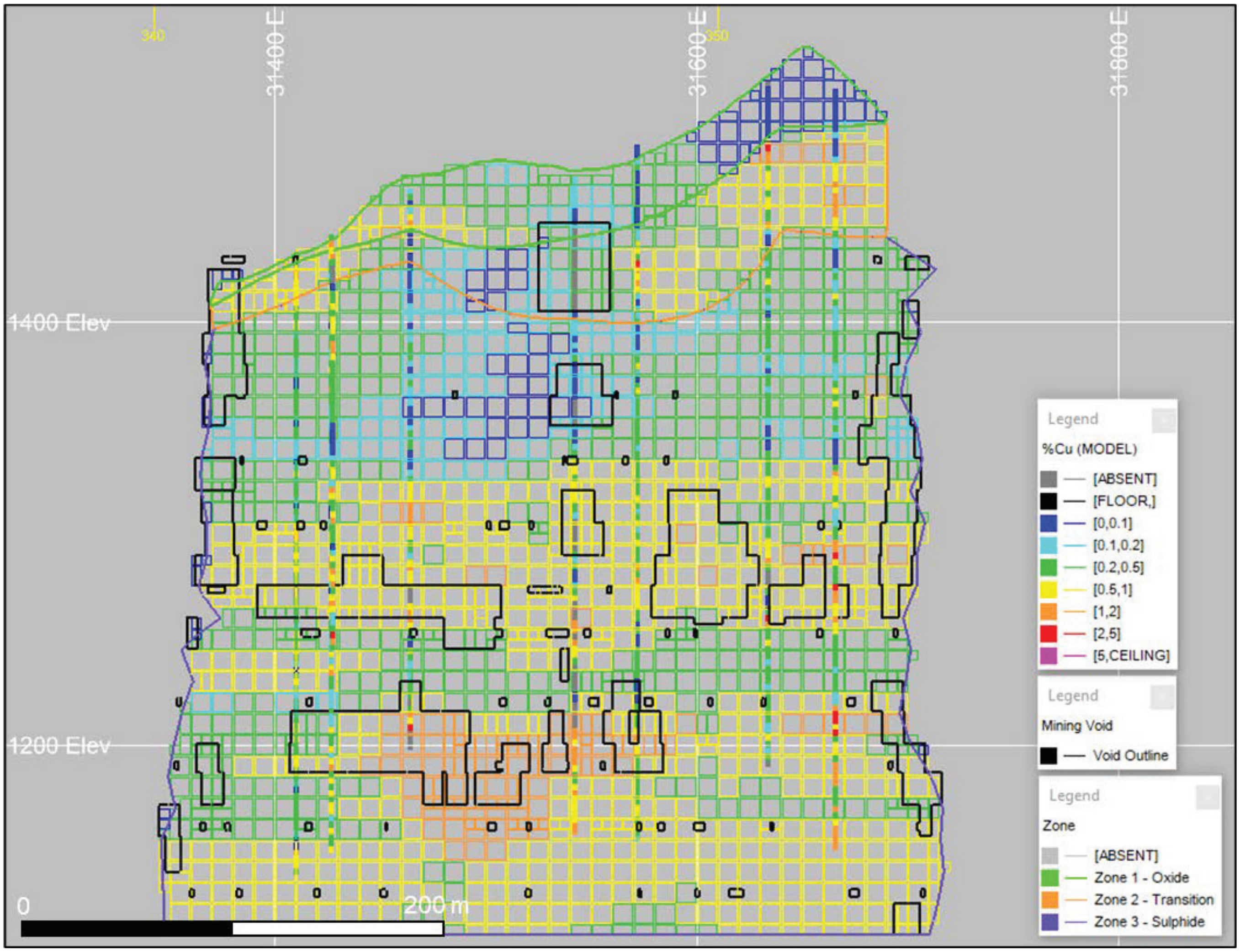


Figure 11.18: E-W Cross-section at 56,250 N of Composite Samples and Block Grades



Global mean grades for all variables were compared between declustered composite grades from the NN estimates and the ID^2, ID^3, and OK estimates to determine if there was and significant global bias. No significant global bias was identified in the grade estimates, as shown in Table 11.16.

Table 11.16: Comparison of Global Mean Estimates

Domain	Variable	NN Mean (%)	ID^2 Mean (%)	ID^3 Mean (%)	OK Mean (%)
ZONE 1	Cu	0.37	0.34	0.34	0.35
ZONE 2		0.55	0.56	0.56	0.58
ZONE 3		0.58	0.57	0.57	0.57
ZONE 1	CuO	0.18	0.17	0.17	0.17
ZONE 2		0.12	0.12	0.12	0.13
ZONE 3		0.04	0.04	0.04	0.04
ZONE 1	Mo	0.002	0.002	0.002	0.002
ZONE 2		0.003	0.003	0.003	0.003
ZONE 3		0.006	0.006	0.006	0.006
ZONE 1	Zn	0.03	0.03	0.03	0.03
ZONE 2		0.12	0.12	0.12	0.11
ZONE 3		0.10	0.10	0.10	0.10
ZONE 1	SG	2.48	2.48	2.48	2.48
ZONE 2		2.51	2.51	2.51	2.51
ZONE 3		2.57	2.57	2.57	2.57

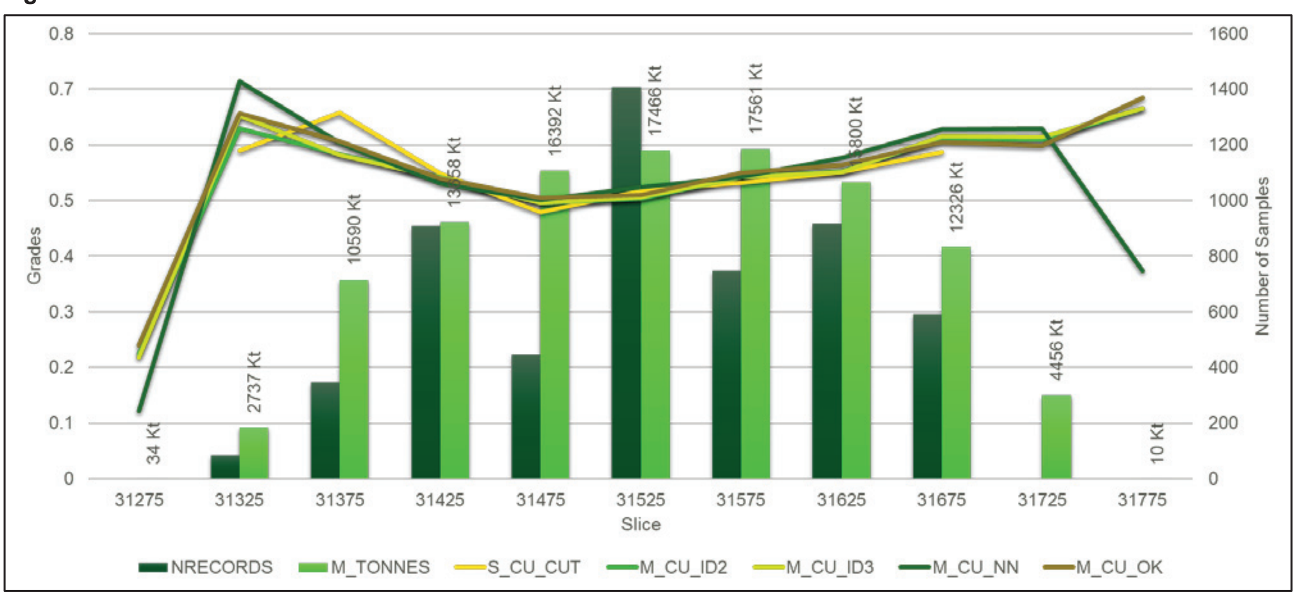
Grade estimates for all domains were evaluated for smoothing by calculating smoothing ratios which are based on the ratio between the theoretical model variance and actual model variance, where the theoretical variance is calculated based on the sum of the variance inside the block and variance between blocks using parameters, including the variogram model sill, block size, and F Function. A certain degree of smoothing is expected due to the change of support size from core sized samples to large mining blocks, ex., 1,000 m^3. It is common when using OK to see higher smoothing than expected, which can be an issue when reporting resources above a mining cut-off, as the overly smoothed distribution results in resource tonnages being overestimated and grades being underestimated. The smoothing ratios were reviewed and are summarized in Table 11.17. Although the ratios are closer to 1 in the ID^3 estimate, OK was chosen as the final interpolation method to maintain consistency with the methodology applied to the other SCC properties being evaluated.

Table 11.17: Summary of Smoothing Ratios

Domain	Grade Variable	Smoothing Ratio ID^2	Smoothing Ratio ID^3	Smoothing Ratio OK
ZONE 1		1.35	1.17	1.49
ZONE 2	Cu	1.88	1.53	2.00
ZONE 3		1.74	1.50	1.93
ZONE 1		1.43	1.28	1.63
ZONE 2	CuO	1.97	1.70	2.05
ZONE 3		1.63	1.43	1.72
ZONE 1		1.99	1.75	1.96
ZONE 2	Mo	1.54	1.38	1.49
ZONE 3		1.34	1.23	1.41
ZONE 1		1.49	1.34	1.62
ZONE 2	Zn	1.54	1.34	1.74
ZONE 3		1.40	1.29	1.37

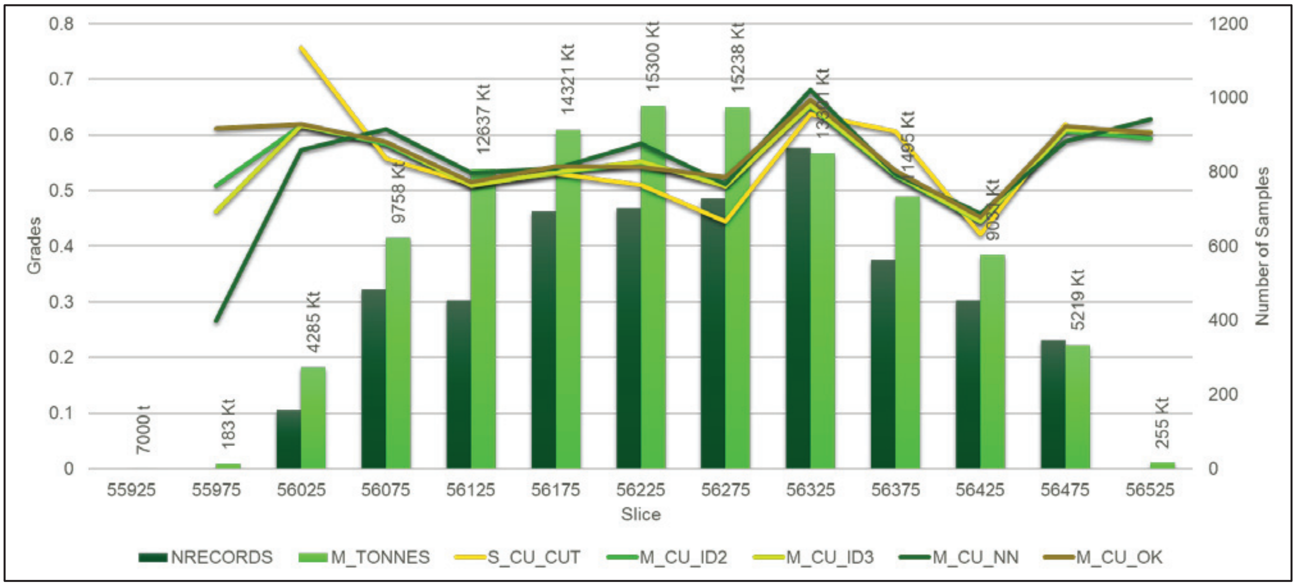
Swath plots were generated for all variables within all domains to evaluate local grade comparisons between NN, ID^2, ID^3, and OK estimates. Example swath plots for Cu are presented in Figure 11.19, Figure 11.20, and Figure 11.21. In general, there was reasonable correlation between all estimates. Some divergence between swath lines were observed around the margins of the model, due to a lower number of samples, but no material issues were identified.

Figure 11.19: X-Direction Cu Swath Plot for All Zones



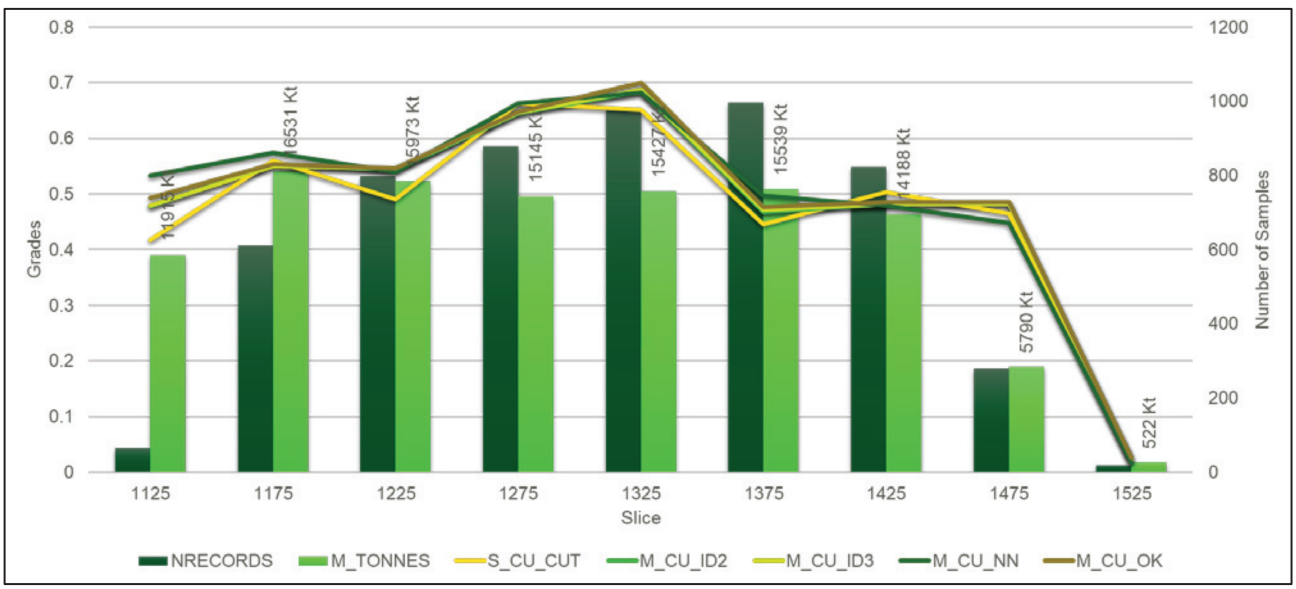
Note: NRECORDS: Number of model records; M_TONNES: Model tonnes; S_CU_CUT: Capped copper in sample composite database; M_CU_ID2: Model copper inverse distance squared estimate; M_CU_ID3: Model copper inverse distance cubed estimate; M_CU_NN: Model copper nearest neighbor estimate; M_CU_OK: Model copper Ordinary Kriging estimate. Secondary Y-axis applies to number of model records.

Figure 11.20: Y-Direction Cu Swath Plot for All Zones



Note: NRECORDS: Number of model records; M_TONNES: Model tonnes; S_CU_CUT: Capped copper in sample composite database; M_CU_ID2: Model copper inverse distance squared estimate; M_CU_ID3: Model copper inverse distance cubed estimate; M_CU_NN: Model copper nearest neighbor estimate; M_CU_OK: Model copper Ordinary Kriging estimate. Secondary Y-axis applies to number of model records.

Figure 11.21: Z-Direction Cu Swath Plot for All Zones



Note: NRECORDS: Number of model records; M_TONNES: Model tonnes; S_CU_CUT: Capped copper in sample composite database; M_CU_ID2: Model copper inverse distance squared estimate; M_CU_ID3: Model copper inverse distance cubed estimate; M_CU_NN: Model copper nearest neighbor estimate; M_CU_OK: Model copper Ordinary Kriging estimate.

11.2 Mineral Resource Estimate

This sub-section contains forward-looking information related to Mineral Resource estimates for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including geological and grade interpretations and controls and assumptions and forecasts associated with establishing the prospects for economic extraction.

The Mineral Resource estimate for the project is reported here in accordance with the SEC S-K 1300 regulations. For estimating the Mineral Resources of Pilares, the following definition as set forth in the S-K 1300 Definition Standards adopted December 26, 2018 was applied.

Under S-K 1300, a Mineral Resource is defined as:

> "…is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled."

Note to readers: The Mineral Resources presented in this section are not Mineral Reserves and do not reflect demonstrated economic viability. The reported Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that all or any part of this Mineral Resource will be converted into Mineral Reserve. All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

The in-situ Mineral Resource Estimate is summarized in Table 11.18 on 100% ownership basis. No Mineral Reserves were estimated for Pilares. The Mineral Resource estimate was constrained based on an optimized pit limit that took into account cut-off grade, price, mining costs, infrastructure limitations, the location of the historical Pilares townsite area, and mineral licenses (as discussed in Section 11.3). Mineral Resources presented in the table are in accordance with the definitions presented in S-K 1300. The effective date of the Mineral Resource estimate is December 31, 2021.

Table 11.18: In-Situ Mineral Resource Estimate – 100% Ownership Basis

Process	Classification	Tonnes (Mt)(4)	Grade			Contained Metal
			Total Cu (%)(2)	CuO (%)(2)	Mo (%)(2)	Cu (kt)(5)
Leach(1)(3)	Inferred	4.8	0.44	0.22	0.002	20.7
Mill(1)(3)	Inferred	71.8	0.56	0.05	0.005	399.1

Notes:

1. Mineral Resources are reported on a 100% basis.
2. Mineral Resources are reported on a break-even leach and mill profit basis.
3. Mineral Resources Pits are based on Cu price of US$3.795/lb and a Mo price of US$11.50/lb.
4. Tonnes are reported on a dry basis.
5. Contained Metal (CM) is calculated as follows:
   CM = Tonnage (Mt) * Cu (%).
6. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not add exactly.
7. The estimate was constrained to within the Resource pit.
8. The Mineral Resource estimates were prepared by Ronald Turner, P.Geo. (who is the independent Qualified Person for these Mineral Resource estimates), reported using the S-K 1300 Definition Standards adopted December 26, 2018.

SCC has a 98.14% ownership in Pilares through their main subsidiaries with the remainder being held through intermediate holding companies.

11.3 Basis for Establishing the Prospects of Economic Extraction for Mineral Resources

This sub-section contains forward-looking information related to establishing the prospects of economic extraction for Mineral Resources for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including cutoff grade assumptions, costing forecasts and product pricing forecasts.

As described earlier in Section 10, test work performed to date was focused on LC mineralization, and while there is a reasonable expectation that Pilares mineralization will behave similarly, part of the consideration for future upgrading of Mineral Resources beyond the Inferred Mineral Resource category will include a requirement to perform metallurgical test work on Pilares samples.

The Mineral Resources assumed all material in Zone 1 (Oxide) would be sent to the leach pad. For Zone 2 (Transition) material with a solubility index less than 0.8, destination would be determined by leach and mill profit equations (whichever had greater profit). For Zone 2 (Transition), material with a solubility index greater than 0.8 would not be sent to the concentrators and instead would be sent to the leach pad. The Mineral Resources assumed all material in Zone 3 (Sulfide) would be sent to the mill for processing.

The following formulas were used to calculate the Leach and Mill profits:

$$Leach\ Profit = \frac{\$28.58 * Cu\ Grade}{t} - \frac{\$1.91}{t}$$

$$Mill\ Profit = \left(\frac{\$70.28 * Cu\ Grade}{t} + \frac{\$210.43 * \ Mo\ Grade}{t}\right) - \left(\frac{\$4.98 * Cu\ Grade}{t} + \frac{\$32.02 * Mo\ Grade}{t}\right) - \left(\frac{\$6.408}{t} + \frac{\$0.249}{t}\right)$$

A Cu price of US$3.795/lb was used for estimating Mineral Resource. This price for Mineral Resource estimation is consistent with the long-term price estimates provided by SCC.

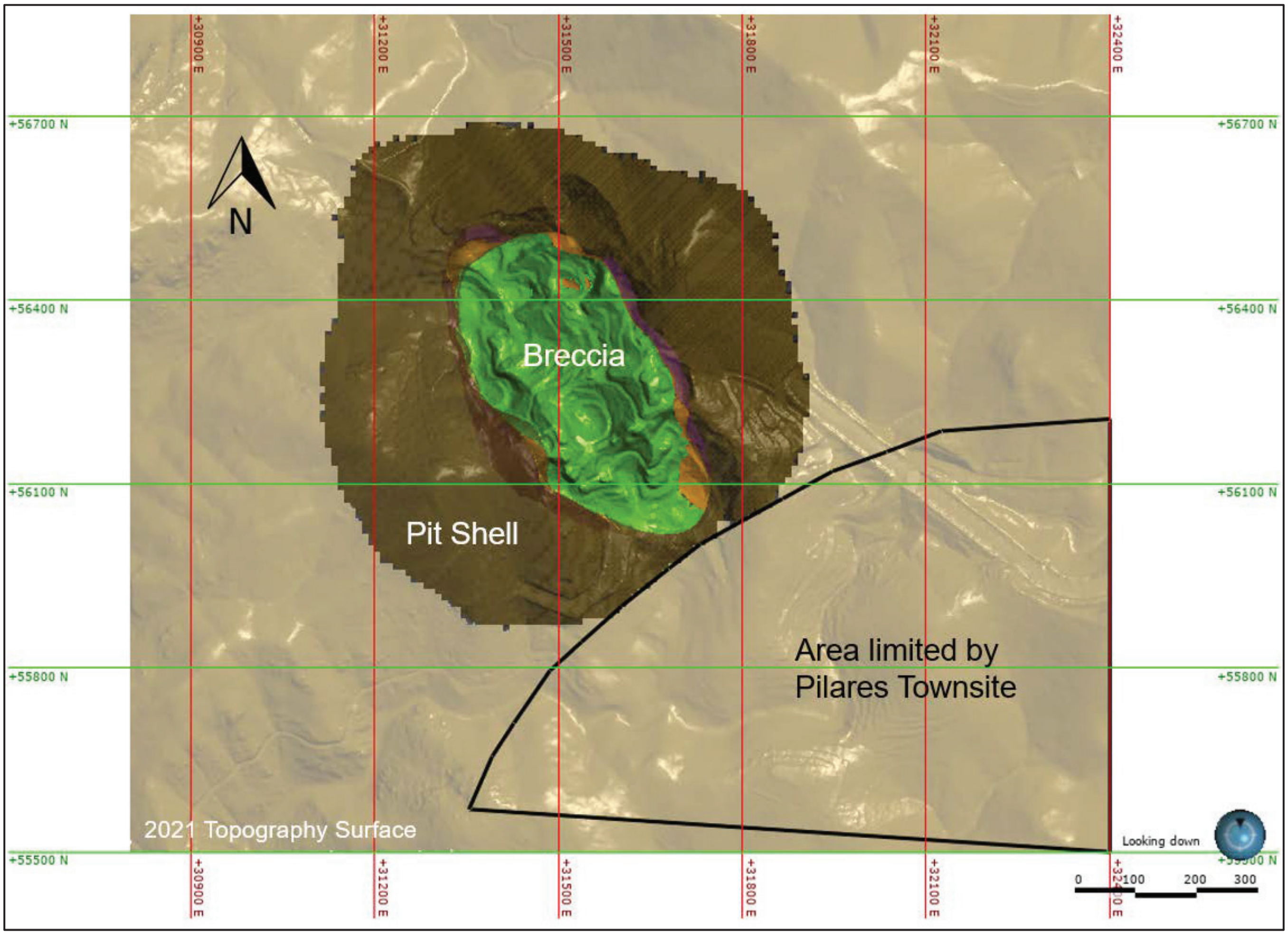
The Mineral Resource estimate was reported from within a constrained pit shell developed using the following criteria to establish reasonable prospects for economic extraction:

- Cu price assumption = US$3.795/lb
- Mo price assumption = US$11.50/lb
- Mining cost (Mill, Leach, Waste) = US$1.06/t (base cost, excluding haulage)
- Processing cost (Mill) = US$6.41/t
- Processing cost (Leach) = US$1.91/t
- Cu Selling Cost (Mill) = US$0.269/lb
- Cu Selling Cost (Leach) = US$0.554/lb
- Mo Selling Cost (Mill) = US$1.75/lb
- Recovery assumed based on 3-year historical averages of La Caridad.

Commodity price assumptions were provided by SCC and it is the QP's opinion that the prices are reasonable and consistent with the market studies provided by SCC. Mining and selling costs were based on historical operational data from La Caridad and were deemed to be reasonable based on general experience with other operations. The selling cost includes estimates for the SX-EW, cathode transport, general administration, and royalty costs.

The extents of the pit shell were further constrained by the presence of the historical Pilares townsite, which reduced the amount of sulfide material included within the pit shell in the southeast corner of the breccia unit, illustrated in Figure 11.22.

Figure 11.22: Plan View of Pilares Townsite Relative to Constrained Pit Shell



11.4 Mineral Resource Classification

This sub-section contains forward-looking information related to Mineral Resource classification for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including geological and grade continuity analysis and assumptions.

According to the S-K 1300 regulations, to reflect geological confidence, Mineral Resources are subdivided into the following categories based on increased geological confidence: Inferred, Indicated, and Measured, which are defined under S-K 1300 as:

> "Inferred Mineral Resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a mineral reserve."

> "Indicated Mineral Resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve."

> "Measured Mineral Resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve."

Based on the drill hole data quality concerns detailed in section 11.6, only Inferred Mineral Resources were defined. The Inferred Mineral Resources were constrained by the breccia unit and the estimation search parameters defined in Table 11.14. The Inferred Mineral Resources were further constrained by the resource pit shell discussed in Section 11.3. The drill hole spacing of approximately 50 m was adequate to support the Inferred Mineral Resource category.

11.5 Assumptions for Multiple Commodity Mineral Resource Estimate

Not applicable to this TRS, as no metal/mineral equivalents are being used, or reported.

11.6 Mineral Resource Uncertainty Discussion

Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability. There is no certainty that all or any part of this Mineral Resource will be converted into Mineral Reserve.

Inferred Mineral Resources are too speculative geologically to have economic considerations applied to them to enable them to be categorized as mineral reserves.

Mineral Resource estimates may be materially affected by the quality of data, natural geological variability of mineralization and / or metallurgical recovery and the accuracy of the economic assumptions supporting reasonable prospects for economic extraction including metal prices, and mining and processing costs.

The quality of some of the data could not be independently verified and was found to not be supported using current best practice guidelines for QA/QC. This does not necessarily mean that the data is inaccurate, however, it does increase the level of uncertainty regarding the quality of the data.

The following risks were identified:

- No QA/QC program was in place for any of the drilling programs.
- No core photos are available.
- Original records of the drill hole collar and survey measurements were not available.
- Discrepancies between the topography and drill hole collar locations.
- Original records for geological logging were not provided for 59 of the 60 drill holes and therefore could not be verified.
- Secured and signed certificates were not available for the analytical measurements.
- No tests to predict geometallurgical behavior.
- There is uncertainty around the exact location of the underground mining workings and the material used to backfill open voids is unknown.

Once a plan is defined and implemented to address the aforementioned points, it will be possible to evaluate the recategorization of part of the Mineral Resources from Inferred to Indicated.

Mineral Resources may also be affected by the estimation methodology and parameters and assumptions used in the grade estimation process including top-cutting (capping) of data or search and estimation strategies although it is the QP’s opinion that there is a low likelihood of this having a material impact on the Mineral Resource estimate.

11.7 Qualified Person’s Opinion on Factors that are Likely to Influence the Prospect of Economic Extraction

It is the QP’s opinion that the Mineral Resource block model is representative of the informing data and that the data is of sufficient quality to support the 2021 Mineral Resource Estimate to an Inferred confidence level.

The 2021 Mineral Resource Estimate may be materially impacted by any future changes in the break-even cut-off grade, potentially resulting from changes in mining costs, processing recoveries, or metal prices or from changes in geological knowledge as a result of new exploration data.

12.0 MINERAL RESERVE ESTIMATES

This section is not applicable to this TRS.

13.0 MINING METHODS

This section is not applicable to this TRS.

14.0 PROCESSING AND RECOVERY METHODS

This section is not applicable to this TRS.

15.0 INFRASTRUCTURE

This section is not applicable to this TRS.

16.0 MARKET STUDIES

This section is not applicable to this TRS.

17.0 ENVIRONMENTAL STUDIES, PERMITTING, AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

Mexico has established environmental laws and regulations that apply to the development, construction, operation and closure of mining projects. The Pilares Project was included in the regional environmental permit obtained for the entire La Caridad Complex dated 10 September 2018 and valid for 60 years. An additional permit for land use was pending authorization based on information gathered in August 2021. The permit had been submitted a year earlier, and the review period established by Mexican regulation had been exceeded. Delays in permitting have been reported due to staffing and other issues within the Mexican environmental agency. The proposed mine access road had not been completed at the time of the QP's site visit and was pending authorization as part of the permit.

There are restricted areas within the Ejido Pilares due to historical conservation, and there are safety and social license concerns that have been raised by stakeholders. Concerns include water quality impacts from historic and any new operations.

18.0 CAPITAL AND OPERATING COSTS

This section is not applicable to this TRS.

19.0 ECONOMIC ANALYSIS

This section is not applicable to this TRS.

20.0 ADJACENT PROPERTIES

The La Caridad mine is located approximately 6 km away from the Pilares mineral development area, which is a SCC operating mine.

21.0 OTHER RELEVANT DATA AND INFORMATION

It is the opinion of the QPs that all material information has been stated in the above sections of this TRS.

22.0 INTERPRETATION AND CONCLUSIONS

This section contains forward-looking information related to Mineral Resources and the LOM plan for the Project. The material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were forth in this sub-section including geological and grade interpretations and controls and assumptions and forecasts associated with establishing the prospects for economic extraction; grade continuity analysis and assumptions; Mineral Resource model tonnes and grade and mine design parameters; actual plant feed characteristics that are different from the historical operations or from samples tested to date; equipment and operational performance that yield different results from the historical operations and historical and current test work results; prevailing economic conditions, commodity markets and prices; regulatory framework is unchanged during the Study period and no unforeseen environmental, social or community events disrupt timely approvals.

22.1 Mineral Resources

Mineral Resource estimates were prepared in accordance with industry best practices, including SME Guide for Reporting Exploration Information, Mineral Resources and Mineral Reserves (July 2017) and CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 2019).

- The geological and deposit related knowledge has been appropriately used to develop and guide the exploration, modeling and estimation processes used by the Pilares geology team.
- The resultant validated geological database is considered reasonably reliable, representative and it is the QPs view that it is fit for purpose in developing a geological model and for the preparation of Mineral Resource estimates.
- The geological interpretation and modeling methodology is appropriate for the style of mineralization and data available for Pilares. The modeling methodology followed current industry standard practices.
- The project has concerns about confidence in the location of old underground workings, inconsistencies between collars and topography, lack of QA/QC program that limit the confidence of the estimation result and that have been considered during the classification of the mineral resources as Inferred.
- The classification of Mineral Resources only considered Inferred resources, which is based on the limited confidence associated with items such as location of historical underground workings, understanding of geological controls on mineralization, support and backup data used in grade estimation, among others.
- Disciplines such as geotechnics, geometallurgy and hydrogeology must develop detailed studies before the project can move to more advanced stages. These studies should address that the mining will consider an open pit above old underground workings,

The Inferred Resource category assigned to the Mineral Resource estimate reflects the QP’s confidence of the estimate as described in Sections 11.4 and 11.6. Inferred resources have a high level of geological uncertainty and therefore cannot support the use of modifying factors required to convert Mineral Resources into Mineral Reserves.

23.0 RECOMMENDATIONS

23.1 Mineral Resources

- Construct updated procedures that describe in sufficient detail the activities of capture, administration, and backup of the data.
- Improve the geological knowledge of the deposit to better understand the geological controls on mineralization and include them in future updates of the geological models. This information should be included in future updates of the geological model as well in grade estimation.
- Geological model should be further refined by interpreting lithological units.
- Design and implement a samples (pulps) reanalysis campaign with an appropriate QA/QC program, and based on the results obtained, see the possibility of improving the Mineral Resource categorization.
- Maintain a drill core photo library for all drilling campaigns going forward.
- Maintain original and/or digitized records of collar surveys, geological, and geochemical data in a secure database.
- Analysis and testing of samples should be completed by a reputable, and preferably ISO-accredited laboratory, qualified for the particular element or material to be analyzed or tested. All analytical or other test results should be supported by duly signed certificates or reports issued by the laboratory or testing facility and should be accompanied by a statement of the methods used.
- Conduct a twin hole drilling campaign, to confirm the existing drill hole grades, and determine their variability.
- Continue with the infill drilling campaigns to improve the Mineral Resource categorization.
- Complete a survey of drill hole collars to verify inconsistencies with respect to topography.
- Design and complete a metallurgical test work.
- Design and complete hydrological studies.
- Complete additional geotechnical programs to further define the 3D geological model and map the location of major structure. This program should include oriented core that allow to complete structural characterization, define structural domains, and improve the geomechanical database with additional laboratory testing.
- Since the open pit mining will be developed above historical underground works it is necessary to complete additional assessment of the interaction between the open pit and underground works.
- Complete a program to review historical data and eventually on-site review of the historical underground workings to improve confidence in their locations.

24.0 REFERENCES

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25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

If relying on information provided by the registrant for matters discussed in the TRS, as permitted under § 229.1302(f), provide the disclosure required pursuant to § 229.1302(f)(2).

- Section 3.0 – Description of mineral and property rights
- Section 11.3 – Resource pit shell costs and pricing for Mineral Resources

For the information relating to mineral and property rights in Section 3.0, Golder relied on La Caridad and Pilares permitting and environmental team. Golder has not researched property or mineral rights for La Caridad and Pilares as we consider it to be reasonable to rely on their permitting and environmental team responsible for maintaining this information.

GOLDER
MEMBER OF WSP