Technical Report NI 43-101 – PEA Domeyko Sulfuros. Rev. D

Domeyko Sulfuros, Domeyko, Chile
Tintina Mines Limited

SRK Consulting (Chile) SpA. ▪ 05-2898-01 ▪ January 23, 2026

srk consulting

Technical Report NI 43-101 – PEA Domeyko Sulfuros. Rev. D

Domeyko Sulfuros, Domeyko, Chile

Prepared for:
Tintina Mines Limited
82 Richmond Street East, Suite 208
Toronto, Ontario, ON M5C 1P1
Canada

Telephone
Web Page

Prepared by:
SRK Consulting (Chile) SpA.
Av. Vitacura 2939, Piso 10
Las Condes
Santiago, Chile

T: +56 2 2489 0800
www.srk.com

Lead Author: Sophia Bascuñán; Martín Cares **Initials**: SB/MC
Reviewer: Patricio Martínez   **Initials**: PM

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Certificate of Author

I, Joled Nur Paredes, CCCRRM Chile (QP No. 181), do hereby certify that:

1) I am a Principal Mining Civil Engineer with the firm of SRK Consulting (Chile) SpA. ("SRK") with an office at Av Vitacura 2939, 10th Floor, Las Condes, Santiago, Chile.

2) This certificate applies to the report entitled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" (the "Technical Report") with an effective date of January 23rd, 2026 and a signature date of January 23rd, 2026. The Technical Report was prepared for Tintina Mines Limited ("the issuer").

3) I graduated from the Universidad de Santiago de Chile in 1995 with a Professional degree in Mining Civil Engineering. In 2006, I obtained a Diploma in Applied Geostatistics from the University of Alberta in Chile, and in 2010, I obtained a Diploma in Fundamentals for the Certification and Valuation of Mining Assets. Since 1995, I have continuously practiced my profession, working in various countries worldwide on the geostatistics of copper, gold, silver, and iron grades, among other minerals, as well as on the geostatistics of geotechnical variables for different mining companies. I have been with SRK since 2009, serving as a geostatistician, where I assess due diligence, report Independent Technical Reports, and generate block models.

4) I am a Professional Mining Civil Engineer registered as Member of Comisión Calificadora de Competencia en Recursos y Reservas Mineras of Chile, membership (No. 181).

5) I hold relevant work experience in Mineral Resources of Copper and Gold Porphyry deposits.

6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101.

7) I am the author of this report and accept professional responsibility for chapter Mineral Resource Estimates of this technical report.

8) I, as a qualified person, am an independent of the issuer and vendor as defined in Section 1.5 of National Instrument 43-101.

9) I have had no prior involvement with the subject property.

10) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.

11) As of the date of this technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading; and signed this 23rd day of January 2026 in Santiago, Chile.

Joled Nur Paredes, (CCCRRM No. 181)

January 23rd, 2026, Santiago, Chile.

Consent of Qualified Person

To: Securities Regulatory Authority, Toronto Stock Exchange.

I, Joled Nur Paredes, hereby consent to the public filing of the technical report titled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" dated January 23rd, 2026 (the "Technical Report"), by Tintina Mines Limited (the "Issuer"), with the TSX Venture Exchange under its applicable policies and forms in connection with Tintina Mines' (TTS) 73.75% equity ownership interest in Andean Belt Resources SpA (ABR), a mining exploration company incorporated under the laws of Chile, in accordance with Appendix 2. I acknowledge that the Technical Report will become part of the Issuer's public record.
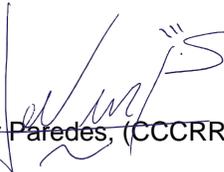
Joled Nur Paredes, (CCCRRM No. 181)

January 23rd, 2026, Santiago, Chile.

Certificate of Author

I, Sophia Bascuñán Moraga, CCCRRM Chile (QP No. 518), do hereby certify that:

1) I am a Senior Geologist with the firm of SRK Consulting (Chile) SpA. ("SRK") with an office at Av Vitacura 2939, 10th Floor, Las Condes, Santiago, Chile.

2) This certificate applies to the report entitled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" (the "Technical Report") with an effective date of January 23rd, 2026 and a signature date of January 23rd, 2026. The Technical Report was prepared for Tintina Mines Limited ("the issuer").

3) I graduated from Universidad de Concepcion in 2007 with a Professional degree in Geology. In 2009, I obtained a Diploma in Applied Geostatistics Citation of Alberta University in Chile, in 2022, I obtained a Diploma in Geo-Mining-Metallurgy, and in 2024, I obtained a Diploma in Climate Change. Since 2005, I have continuously practiced my profession in exploration and development geology for various mining companies. I have been with SRK since 2010, working as a geologist where I assess due diligence, report Independent Technical Reports, and generate geological models.

4) I am a Professional Geologist registered as Member of Comisión Calificadora de Competencia en Recursos y Reservas Mineras of Chile, membership (No. 518), and registered as Member of Australian Institute of Geoscientists, membership (No. 9289).

5) I hold relevant work experience in Mineral exploration of Copper Porphyry deposits.

6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101.

7) I am the author of this report and accept professional responsibility for chapters Geological Setting and Mineralization, Exploration, Drilling, Sample Preparation, Analyses, and Security, Data verification and Mineral Resource Estimates content of this technical report.

8) I visited the property between September 8th and 12th, 2025.

9) I, as a qualified person, am an independent of the issuer and vendor as defined in Section 1.5 of National Instrument 43-101.

10) I have had no prior involvement with the subject property.

11) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.

12) As of the date of this technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading; and Signed this 23rd day of January 2026 in Santiago, Chile.
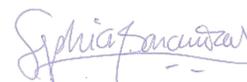
Sophia Bascuñán Moraga, (CCCRRM No. 518)

January 23rd, 2026, Santiago, Chile.

Consent of Qualified Person

To: Securities Regulatory Authority, Toronto Stock Exchange.

I, Sophia Bascuñán Moraga, hereby consent to the public filing of the technical report titled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" dated January 23rd, 2026 (the "Technical Report"), by Tintina Mines Limited (the "Issuer"), with the TSX Venture Exchange under its applicable policies and forms in connection with Tintina Mines' (TTS) 73.75% equity ownership interest in Andean Belt Resources SpA (ABR), a mining exploration company incorporated under the laws of Chile, in accordance with Appendix 2. I acknowledge that the Technical Report will become part of the Issuer's public record.

Sophia Bascuñán Moraga, (CCCRRM No. 518)

January 23rd, 2026, Santiago, Chile.

Certificate of Author

I, Esteban Hormazábal Zuñiga, CCCRRM Chile (QP No. 209) and FAusIMM (N° 304419), do hereby certify that:

1) I am a Corporate Consultant Mining Civil Engineer with the firm of SRK Consulting (Chile) SpA. ("SRK") with an office at Av Vitacura 2939, 10th Floor, Las Condes, Santiago, Chile.

2) This certificate applies to the report entitled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" (the "Technical Report") with an effective date of January 23rd, 2026 and a signature date of January 23rd, 2026. The Technical Report was prepared for Tintina Mines Limited ("the issuer").

3) I graduated from the Universidad de Santiago de Chile in 1995 with a Professional degree in Mining Civil Engineering. In 2005, I obtained a Master of Science degree in Geophysics from the Boston College University in Boston, Massachusetts, USA. I obtained the Fellowship of the Australian Institute of Mining and Metallurgy certification in 2019 (FAusIMM, N° 304419). Since 1995, I have continuously practiced my profession, working in more than 15 countries worldwide on rock engineering and leading projects of copper, gold, silver, and iron deposits, among other minerals, as well as on the analysis and geomechanical design of underground mining and surface excavations, stability analysis and slope design in open pits and waste dumps for different mining companies. I have been with SRK since 2006, serving as a rock mechanic engineer and lately as a Corporate Consultant and Managing Director, where I assess due diligence, report Independent Technical Reports, and generate the open pit, waste dump and tailings design.

4) I am a Professional Mining Civil Engineer registered as Member of Comisión Calificadora de Competencia en Recursos y Reservas Mineras of Chile, membership (No. 209) and Fellowship of the Australian Institute of Mining and Metallurgy certification in 2019 (FAusIMM, N° 304419).

5) I hold relevant work experience in Mineral Resources of Copper and Gold Porphyry deposits.

6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101.

7) I am the author of this report and accept professional responsibility for chapter Mining Methods of this technical report.

8) I, as a qualified person, am an independent of the issuer and vendor as defined in Section 1.5 of National Instrument 43-101.

9) I have had no prior involvement with the subject property.

10) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.

11) As of the date of this technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading; and signed this 23rd day of January 2026 in Santiago, Chile.

Esteban Hormazabal Zúñiga, (CCCRRM No. 209)

January 23rd, 2026, Santiago, Chile.

Consent of Qualified Person

To: Securities Regulatory Authority, Toronto Stock Exchange.

I, Esteban Hormazábal Zuñiga, hereby consent to the public filing of the technical report titled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" dated January 23rd, 2026 (the "Technical Report"), by Tintina Mines Limited (the "Issuer"), with the TSX Venture Exchange under its applicable policies and forms in connection with Tintina Mines' (TTS) 73.75% equity ownership interest in Andean Belt Resources SpA (ABR), a mining exploration company incorporated under the laws of Chile, in accordance with Appendix 2. I acknowledge that the Technical Report will become part of the Issuer's public record.

Esteban Hormazábal Zuñiga, (CCCRRM No. 209)

January 23rd, 2026, Santiago, Chile.

Certificate of Author

I, Patricio Martínez Fernández, CCCRRM Chile (QP No. 395), do hereby certify that:

1) I am a Head Mining, Resources and Reserves with the firm of SRK Consulting (Chile) SpA. ("SRK") with an office at Av Vitacura 2939, 10th Floor, Las Condes, Santiago, Chile.

2) This certificate applies to the report entitled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" (the "Technical Report") with an effective date of January 23rd, 2026, and a signature date of January 23rd, 2026. The Technical Report was prepared for Tintina Mines Limited ("the issuer").

3) I graduated from the University of Santiago de Chile in 1994 with a degree in Mining Civil Engineering. In 2001, I obtained a Diploma in Business Management from the University of Chile, and in 2018, a Diploma in Global Mining Management from the Pontifical Catholic University of Chile.

I have practiced my profession continuously since 1994, with professional experience mainly at CODELCO Chile and Metálica Consultores, and I have been with SRK since October 2025.

I have led and contributed to numerous mining project studies at the Conceptual (Scoping), Pre-Feasibility, and Feasibility levels, in accordance with international reporting and engineering standards.

I have prepared and signed Mineral Resources and Mineral Reserves reports for CODELCO's Ministro Hales and Gabriela Mistral Divisions.

4) I am a Professional Mining Civil Engineer registered as Member of Comisión Calificadora de Competencia en Recursos y Reservas Mineras of Chile, membership (No. 395).

5) I have significant experience in the mining industry, with specific expertise in mineral reserve estimation.

6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101.

7) I am the author of this report and accept professional responsibility for chapter Mineral Reserve Estimates, Project Infrastructure, Environmental Studies, Permitting and Social or Community Impact, Capital and Operating Costs and Economic Analysis of this technical report.

8) I, as a Qualified Person, am independent of the issuer and vendor, as defined in Section 1.5 of National Instrument 43-101.

9) I have had no prior involvement with the subject property.

10) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.

11) As of the date of this technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading; and signed this 23rd day of January 2026 in Santiago, Chile.

Patricio Martínez Fernández, (CCCRRM No. 395)

January 23rd, 2026, Santiago, Chile.

Consent of Qualified Person

To: Securities Regulatory Authority, Toronto Stock Exchange.

I, Patricio Martínez Fernández, hereby consent to the public filing of the technical report titled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" dated January 23rd, 2026 (the "Technical Report"), by Tintina Mines Limited (the "Issuer"), with the TSX Venture Exchange under its applicable policies and forms in connection with Tintina Mines' (TTS) 73.75% equity ownership interest in Andean Belt Resources SpA (ABR), a mining exploration company incorporated under the laws of Chile, in accordance with Appendix 2. I acknowledge that the Technical Report will become part of the Issuer's public record.

Patricio Martínez Fernández, (CCCRRM No. 395)

January 23rd, 2026, Santiago, Chile.

Certificate of Author

I, Luis Bernal Venegas, CCCRRM Chile (QP No. 0415), do hereby certify that:

1) I am a Mining Civil Engineer and Metallurgical Consultant, with the firm of SRK Consulting (Chile) SpA. ("SRK") with an office at Av Vitacura 2939, 10th Floor, Las Condes, Santiago, Chile.

2) This certificate applies to the report entitled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" (the "Technical Report") with an effective date of January 23rd, 2026 and a signature date of January 23rd, 2026. The Technical Report was prepared for Tintina Mines Limited ("the issuer").

3) I graduated from the Universidad de Chile in 1980 with a Professional degree in Mining Civil Engineering. With over 40 years of experience, working in northern Chile and the USA, in the operation and project design of Copper, Iron, Nickel, Cobalt, Gold, and Moly Plants. Professional activities developed both in Mineral Concentration and Hydrometallurgy Processes. Expert in grinding, flotation, tailings thickening, bioleaching, and heap leaching. Leading developer in the use of seawater and high-density and paste tailings in the Chilean copper industry.

I have been with SRK since 1995, serving as a senior process consultant, where I assess due diligence, report on Independent Technical Reports, and review metallurgical plant design.

4) I am a Professional Mining Civil Engineer registered as a Member of Comisión Calificadora de Competencia en Recursos y Reservas Mineras of Chile, membership (No. 0415).

5) I hold relevant work experience in Metallurgical Plant Design of Copper and Gold Porphyry deposits.

6) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of National Instrument 43-101.

7) I am the author of this report and accept professional responsibility for Chapters Mineral Processing and Metallurgical Testing, Recovery Methods and Capital and Operating Costs of this technical report.

8) I, as a qualified person, am independent of the issuer and vendor as defined in Section 1.5 of National Instrument 43-101.

9) I have had no prior involvement with the subject property.

10) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.

11) As of the date of this technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading; and signed this 23rd day of January 2026 in Santiago, Chile.

Luis Bernal Venegas, (CCCRRM No. 0415)

January 23rd, 2026, Santiago, Chile.

Consent of Qualified Person

To: Securities Regulatory Authority, Toronto Stock Exchange.

I, Luis Bernal Venegas, hereby consent to the public filing of the technical report titled "Technical Report NI 43-101 – PEA Domeyko Sulfuros" dated January 23rd, 2026(the "Technical Report"), by Tintina Mines Limited (the "Issuer"), with the TSX Venture Exchange under its applicable policies and forms in connection with Tintina Mines' (TTS) 73.75% equity ownership interest in Andean Belt Resources SpA (ABR), a mining exploration company incorporated under the laws of Chile, in accordance with Appendix 2. I acknowledge that the Technical Report will become part of the Issuer's public record.

Luis Bernal Venegas, (CCCRRM No. 415)

January 23rd, 2026, Santiago, Chile.

List of Abbreviations and Unit Measurements

Abbreviation	Description
hB	Bench height
2D	Two-dimensional
3D	Three-dimensional
4DX	Whittle optimization software
A, B, EB, M, and D	Type of veinlets
AA	Argillic alteration
AAS	Atomic absorption spectrometry
ABR	Andean Belt Resources
Ag	Silver
Ai	Abrasion index
Al	Aluminum
Alb	Albite
ALS	Australian Laboratory Services
AMERB	Benthic Resource Management and Exploitation Areas
AMSA	Antofagasta Minerals S.A.
AND	Andesitic volcanic lithologies
ANFO	Ammonium Nitrate Fuel Oil
Ao	Effective acceleration
ARG	Argillic alteration
As	Arsenic
ASY-4A02	HCl Leach
ASY-4ACID	Four Acid Leach
Au	Gold
Au Est	Gold estimation value
Au NN	Nearest neighbor value

Abbreviation	Description
Axb	Product of Comminution Index and Breakage Index
Ba	Barium
Be	Beryllium
BESS	Bench height
BHP	Battery Energy Storage Systems
Bi	Bismuth
BLK F	Fine blank
BLK G	Coarse blank
Bn	Bornite
BV	Best Value
BWI	Bond work index
BXH	Hydrothermal breccia
BXI	Igneous (magmatic) breccias
BXTUR	Tourmaline breccia
ºC	Degrees Celsius
C1	Cash cost
Ca	Calcium
CAEX	Haulage equipment
CAPEX,	Capital expenditures
CCCRRM	Qualifying Commission for Competencies in Mineral Resources and Reserves
Cd	Cadmium
CEMIN	Compañía Explotadora de Minas (Name of Company)
Chl	Chlorite
CIM	Canadian Institute of Mining Metallurgy and Petroleum
CLP	Chilean pesos
cm	Centimeters

Abbreviation	Description
cm^3	Cubic centimeters
CMC	Carboxymethyl cellulose
CMP	Compañía Minera del Pacífico (Pacific Mining Company)
Co	Cobalt
Codelco	Corporación Nacional del Cobre de Chile (National Copper Corporation of Chile)
CORFO	Corporación de Fomento de la Producción (Production Development Corporation)
Cp	Solid concentration
Cpy	Chalcopyrite
Cr	Chromium
Cu	Copper
Cu Est	Copper estimation value
CuF	Fine copper
Cu NN	Nearest neighbor value
d	Day
DCF	Discounted Cash Flow
DCS	Distributed Control System
DDIO	Dioritic dike
DGA	General Water Directorate
DIA	Declaración de Impacto Ambiental (Environmental Impact Statement)
dkt	Dry kilotonnes
dmt	Dry metric tonnes
DTH	Down-The-Hole
EB1- EB2	Pumping stations
ECMPO	Protected Coastal Marine Areas
EDA	Exploratory data analysis
EE	Electric energy

Abbreviation	Description
EIA	Evaluación de Impacto Ambiental (Environmental Impact Assessment)
EPVI	Excess Present Value Index).
EW	East-west
F80	Feed particle size at 80% passing sieve
FA-FUS01 & FA-FUS02	Fire Assay Fusion
FB	Spillage-free berm
Fe	Iron
FIELD DUP	Duplicate field samples
FS	Safety factor
FSS	Feasibility Study
ft	Feet
g	Gram
G&A	General and administrative expenses
Ga	Gallium
gl	Global
GLE	General Limit Equilibrium
GND	Granodiorite intrusive
GPa	Gigapascals
GSI	Geological Strength Index
GTM	Large Millimeter Telescope
gU o ug	Geometallurgical unit
H	Horizontal
h	Hour
HARD	Half Absolute Relative Difference
HDPE	High-Density Polyethylene
HG	High-grade

Abbreviation	Description
HGA	HidroGeoAmbiental (Name of Company)
HNO3-HClO4-HF-HCl	Four Acid
HPGR	High Pressure Grinding Rolls
HQ	Size in diamond core drilling around 63.5 mm (2.5 inches)
HSEC	Health, Safety, Environment, Community
ICE	Consolidated Evaluation Report
ICP-AES	Inductively Coupled Plasma - Atomic Emission Spectroscopy
ICSARA	Consolidated Report on Requests for Clarifications, Rectifications or Additions
ID PREP SAMPE	Identification of the sample
ID2	Inverse Distance estimator
IDT	Diorite intrusive
IEC	International Electrotechnical Commission
IRR	Internal Rate of Return
IRS	Intact Rock Strength
ISO	International Organization for Standardization
ISRM	International Society for Rock Mechanics
IZ	Elevation in Whittle software
K	Potassium
KB	Potassic-biotite alteration zone
KFELD	Potassic alteration zone
Kh	Horizontal seismic coefficient
km	Kilometers
kPa	Kilopascals
KPI	Practical productivity indicators
kt	Kilotonnes
kt dmt	Kilotonnes of dry metric tonnes

Abbreviation	Description
ktpy	Kilotonnes per year
ktpd	Kilotonnes per day
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt per hour
l	Liters
La	Lanthanum
lb	Pounds
LCT	Closed-circuit cleaning tests
LG	Low-Grade
LIMS	Laboratory Information Management System
LIX	Leached mineral zone
LLD.	Lower limit of detection
LOM	Life of mine
m	Meter
M	Wet mass of the sample
m	Meter
m a.s.l.	Meters above sea level
My	Millions of years
MCAF	Mining Cost Adjustment Factor
Mg	Magnesium
Mgt	Magnetite
MILP	Mixed Integer Linear Programming
min	Minutes
ML	Machine Learning
ml	Milliliters

Abbreviation	Description
Mm	Megameters
mm	Millimeters
MMA	Environment Ministry
Mn	Manganese
Mo	Molybdenum
Moz	Millions of ounces
MPa	Mega pascals
Mpc	Mass of the paraffin-coated sample
Ms	Dry sample mass
Mt,	Million of tonnages
MTFC	Metric tonnes of fine copper
Mtpy	Million tonnes per year
Mtpy	Millions of tons per year
MUSD	Millions of dollars
MVI	Magnetization Vector Inversion
MW	Mega watt
MWh	Mega watt per hour
Na	Sodium
NCRE	Non-Conventional Renewable Energy
NE	Northeast
Ni	Nickel
NPV	Net Present Value
NQ	Size in diamond core drilling around 47.6 mm (1.875 pulgadas)
NS	North-south
NW	Northwest
OEM	Original Equipment Manufacturer

Abbreviation	Description
OK	Ordinary Kriging
OP	Open Pit
OPEX	Operating expenditures
oz	Ounce
P	Phosphorus
P80	Product particle size at 80% passing sieve
PAS	Environmental Sectoral Permits
Pass	Estimation pass for Cu or Au
Pb	Lead
PEA	Preliminary Economic Assessment
PF	Probability of failure
PFS	Pre-Feasibility Study
PH	Phase
PM10	Respirable Particulate Matter (smaller than 10 microns)
PPA	Power
ppm	Parts per million
PQD	Quartz-diorite porphyry
PQDt	Late dioritic dike
PRI	Primary mineral zone
PROP	Propylitic alteration
PULP DUP	Pulp duplicate
Py	Pyrite
Q	Siliceous alteration
QA/QC	Quality control
QEMSCAN	Quantitative Evaluation of Minerals by Scanning Electron Microscopy
QP	Competent person

Abbreviation	Description
QS	Quartz-sericite alteration
Qz	Quartz
RC	Refining charges
RCA	Environmental Qualification Resolution
Res.	Resolution
RF	Revenue Factor
RIOMA	Adjusted Mining Operation Taxable Income
RMR	Rock Mass Rating
ROM	Run Of Mine
RPEEE	Reasonable Prospects of Eventual Economic Extraction
RQD	Rock Quality Designation
S	Sulfur
s	Second
SABC-A	Closed Circuit with Crusher
SAG	Semi-Autogenous Grinding
Sb	Antimony
Sc	Scandium
SCADA	Supervisory Control and Data Acquisition
SD	Standard Deviation
SEA	Environmental Evaluation Service
SEC	Secondary mineral zone
SEC	Superintendence of Electricity and Fuel
SEIA	Environmental Impact Evaluation System
SEN	Northern Interconnected Power System
Ser	Sericite
SERNAGEOMIN	Chilean National Mining and Geology Service,

Abbreviation	Description
SERPRAM	Servicios y Proyectos Ambientales S.A (Name of Company)
SII	Servicio de Impuestos Internos (Chilean Internal Revenue Service)
SMA	Superintendency of the Environment
SMAS	María Soledad Sur
SMC	SAG Mill Comminution Test
SO2	Sulfur dioxide
SP	Self-Potential
SpA	Sociedad por Acciones (Joint-Stock Company)
Sr	Strontium
SRK	SRK Consulting (Chile) SpA.
SS	Sensu Stricto
st	Short ton
STD	Standard
STK	Stock
SX/EW	Solvent extraction-electrowinning
t	Tonnes
TC	Treatment charges
Tcu	Total Copper
TDH	Total dynamic head
Th	Thorium
Ti	Titanium
Tl	Thallium
tpd	Tonnage per day
tph	Tonnage per hour
TR	Transition
TRC	Tricolor

Abbreviation	Description
TSF	Tailings Storage Facility
TSX	Toronto Stock Exchange
TSXV	TSX Venture Exchange
TTS	Symbol of Tintina in TSXV
TYPE_SAMPLE O	Original Sample
U	Uranium
UPS	Uninterruptible Power Supply
UTM	Universal Transverse Mercator
V	Vanadium
V	Vertical
W	Tungsten
W/A	Without alteration
WI	Work index
WMAS	María Soledad Oeste
WSF	Waste storage facility
wt	Wet tonnage
WWTP	Wastewater Treatment Plant
ZMIN	Mineral zone
Zn	Zinc
µg	Microgram
µm	Micrometers
B	Berm width
Q	Breakage
αB	Bench face angle
αIR	Interramp angle

1 Summary

1.1 Introduction and Terms of Reference

The Domeyko Sulfuros Project, also referred to as the "Project," "Property," or "Domeyko," is an exploration property located in the Atacama Region of northern Chile, spanning of 9,682 hectares.

The property experienced intermittent exploration campaigns by major and mid-size companies between 1962 and 1985. From 1996 to 2015, the focus of exploration and open-pit mining by Compañía Explotadora de Minas (CEMIN) was on the enrichment blanket at the Dos Amigos ore body. Following the closure of operations, limited exploration drilling was conducted to identify additional secondary copper resources."

In 2018, two specific holes, SDDK 18-034 and SDDK 18-039, were drilled at the Dos Amigos ore body, finding primary copper and gold mineralization to depths of 450.60 meters and 518.85 meters, respectively. Subsequently, in 2021, following the discoveries from the deep holes, the exploration program underwent a realignment, with a revised project scope that emphasizes the investigation of hypogene mineralization beneath the supergene blanket.

The relationship with the local community is positive and has been continuously maintained since the start of operations at the Dos Amigos Mine, owned by CEMIN Holding Minero, from 1996 to the present. The necessary permits are in place with the relevant authorities to carry out brownfield drilling, enabling the development of exploration campaigns within the Domeyko district. The Domeyko Sulfuros Project has significant logistical potential that supports its development.

Tintina Mines Limited is a Canadian-based company with over two decades of experience in the junior mining sector, focuses on the acquisition, exploration and development of base and precious metals properties. The common shares of Tintina are listed for trading on the TSXV under the symbol "TTS". In 2023, Tintina's management made the strategic decision to expand their areas of interest to include the Central Andes of South America and explore opportunities in this region, including Andean Belt properties in Chile. The main goal of Tintina Mines Limited at the Domeyko Sulfuros project was to assess the property's potential for primary Cu-Au resources.

In December 2023, Tintina Mines Limited (Tintina) obtained consent from the current owner, Andean Belt Resources (ABR), to commission SRK Consulting (Chile) SPA (SRK) to visit the property and prepare a Technical Report for the Domeyko Sulfuros Project. Tintina Mines Limited was in the process of acquiring a significant equity interest in Andean Belt Resources SpA ('ABR'), a mining exploration company incorporated under the laws of Chile, for a cash consideration of $4,000,000 (USD). The funds provided as consideration for the acquisition are expected to be used primarily to fund exploration and technical studies at the Domeyko Sulfuros property.

The acquisition described above was considered to be a 'related party transaction' under the policies of the TSX Venture Exchange and Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions ('MI 61-101') due to the involvement of Mr. Juan Enrique Rassmuss in the transaction. Mr. Rassmuss is the President, Chairman, and a director of TTS, and holds approximately 30% of the issued and outstanding common shares of TTS. Mr. Rassmuss is also the President and CEO of the Rassmuss Group, a diversified conglomerate that currently includes Andean Belt Resources SpA.

Andean Belt Resources has a specialized technical team in Chile, responsible for carrying out exploration activities and the studies associated with the development of the Domeyko Sulfuros Project.

The services by SRK Consulting Chile SpA were conducted between January and February 2024. The Technical Report prepared by SRK documents the geology and exploration status of the Domeyko Sulfuros Project and was prepared in accordance with the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1. The Technical Report was filed on SEDAR with effective date February 15, 2024.

On August 14, 2024, Tintina Mines Limited announced the completion of a $4,000,000 (USD) investment in Andean Belt Resources SpA ("ABR"), a mining exploration company incorporated under the laws of Chile. Following the acquisition, Tintina Mines Limited now holds a 73.75% equity ownership interest in ABR. The terms of the agreement between Tintina Mines Limited and ABR are detailed in the term sheet included in this report as Appendix 2.

In November 2024, Tintina engaged SRK Consulting (Chile) SpA to prepare an updated National Instrument 43-101 technical report for the Domeyko Sulfuros Project.

This technical report documents an updated National Instrument 43-101 Independent Technical Report, which includes the first Mineral Resource Statement for the Domeyko Sulfuros Project. The report has been prepared in accordance with the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource Statement presented herein has been prepared in compliance with the generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 2019).

The authors of this report, Mr. Joled Nur Paredes (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 181) and Sophia Bascuñán Moraga (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 518), meet the criteria to be considered "qualified persons" as defined by National Instrument 43-101.

In June 2025, Tintina engaged SRK Consulting Chile SpA to prepare a Preliminary Economic Assessment (PEA), Technical Report for the Domeyko Sulfuros Project in accordance with National Instrument 43-101.

The report has been prepared in accordance with the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource Statement presented herein has been prepared in compliance with the generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 2019).

The authors of this report, Mr. Patricio Martínez (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 395), Joled Nur Paredes (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 181), Sophia Bascuñán Moraga (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 518), Esteban Hormazábal (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 209), and Luis Bernal (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 415) meet the criteria to be considered "qualified persons" as defined by National Instrument 43-101.

1.2 Property Description and Location

The Domeyko Sulfuros Project is located in the commune of Vallenar within the Province of Huasco at the Atacama Region in northern Chile. It is approximately 150 kilometers north of the City of La Serena and 54 kilometers south of Vallenar.

The total mineral tenure for the Domeyko Sulfuros project consists of 75 mining concessions, covering a total area of 10,056 hectares (from which 9,682 are effective), located in the communes of Vallenar, province of Huasco, Atacama Region, Chile. There are 62 exploitation concessions, covering approximately 6,356 hectares, which will not expire as long as mining taxes are duly paid annually. The remaining 13 concessions are exploration concessions, covering an area of 3,700 hectares.

1.3 History

From 1962 to 1964, United Nations explored the area. The activities undertaken included a 1:10,000 scale reconnaissance mapping, along with SP and resistivity surveys and five shallow drillholes. The results indicated the presence of low-grade primary copper mineralization, with concentrations ranging from 0.13 to 0.32 percent within specific intervals.

Between 1968 and 1971 CORFO conducted an exploration campaign that involved geological studies and 47 drillholes. This program identified a supergene copper enrichment zone, for which a resource of 3.5 million metric tonnes averaging 1.18 percent copper was estimated.

During the period from 1976 to 1980, Noranda Inc. conducted a re-examination of core samples from prior exploration campaigns and the analysis of unsampled mineralized intervals within drillholes located in the Dos Amigos target. Noranda concluded that the property held the potential to develop reserves totaling 20 million tonnes at approximately 0.7% Cu.

Shell Chile Metals Division conducted a detailed geological and alteration mapping, geochemical sampling, geophysical studies, and the execution of 29 drillholes. The work done by Shell resulted in the expansion of the Dos Amigos supergene resources to 5 million tonnes at 1.75% copper and 0.25 grams per ton of gold. Furthermore, Shell reported hypogene resources totaling 36 million tonnes at 0.36% copper and 0.26 grams per tonne of gold, for the same area.

In 1985, the local venture 'Compañía Minera San Esteban' completed eight vertical exploratory holes, totaling 744.85 meters, conducted geotechnical studies, delineated mineral domains, and performed preliminary metallurgical studies with the aim of supporting the open-pit mining of the enrichment blanket.

Indicated and measured reserves were reported for a total of 5.2 million tonnes at 1.44% Cu and 0.31 grams per tonne of gold, considering a cutoff grade of 0.5% copper.

In 1986, CEMIN Holding Minero acquired the property and started on a small-scale operation, producing 5,000 tonnes of copper per year. Following a successful start-up, the plant underwent expansion, reaching a copper cathode production capacity of 10,000 tonnes per year. The heap leach mining operation at Dos Amigos was discontinued in 2015 due to the depletion of secondary sulfide reserves.

CEMIN currently operates a small-scale processing plant that produces copper sulfates through the reprocessing of heap leach residues, in Dos Amigos. From 1997 to 2016, CEMIN executed at the property, 107 holes (10,850.50 meters). During 2018 and 2019, CEMIN conducted additional geological mapping, geochemical rock sampling, and executed a drilling program consisting of 140 holes. Based on the results of the deep holes carried out in the Dos Amigos orebody, in 2021, the exploration program underwent a realignment, establishing a new project scope focused on investigating both the supergene target and, particularly, the hypogene mineralization beneath it. Between 2021 and 2023, the company conducted IP reconnaissance of the Dos Amigos – Tricolor corridor, performed spectrometry studies to enhance the Dos Amigos alteration map, and executed an airborne magnetic survey covering an area of 1,205 hectares centered at the Dos Amigos pit. Additionally, a diamond-drilling program, involving seven holes, was carried out.

Drilling results from 2018-2019 and 2021-2022 campaigns validated copper and gold grades within a quartz-diorite porphyry system, corroborating the continuity of hypogene sulfide mineralization to a depth of approximately 650 meters from drill collars.

In 2023, Andean Belt Resources acquired the mineral rights of the Domeyko Sulfuros project.

In 2023, a new campaign of 78 short reverse air drillholes was conducted, with lengths between 12 and 180 m, which in total correspond to 4,138 m. Five were drilled in the Marisol sector (680 m) and the remaining 73 holes were drilled in the Dos Amigos pit (3,432 m). A second reverse air drillhole campaign was conducted in 2024 in the northern sector and outside the model; this campaign consisted of 17 holes with a total of 668 m drilled.

Between May 8th and July 24th of 2025, a new campaign of diamond drillholes was conducted in the Dos Amigos pit. This campaign consisted of 12 holes with a total of 5,820 m drilled. Drilling results validated copper and gold grades within a quartz-diorite porphyry system, corroborating the continuity of hypogene sulfide mineralization.

1.4 Geological Setting and Mineralization

The regional context where the Domeyko Sulfuros project is located is characterized by the presence of elongated outcrops along a NNE direction, consisting of rocks dating back from the Paleozoic to the Quaternary. The western zone is characterized by Jurassic intrusions within Paleozoic rocks pertaining to the Canto del Agua Formation, the Bandurrias Formation, the Chañarcillo Group, and the Cerrillos Formation, which is unconformably overlain by lavas, ignimbrites associated with intrusives, and Paleocene - Eocene calderas outcrop to the east. The eastern margin is characterized by Paleozoic plutonic complexes and some minor stratigraphic units dating back to the Triassic and the Jurassic. Regional structural control predominantly follows a NNE to N15°E orientation.

The geology of the property comprises a central body denominated Quartz-Diorite Porphyry, which is emplaced within the Punta del Cobre Formation volcanic rocks (Tithonian – Early Albian) and represents the mineralizing intrusive with potassic alteration, characterized by a biotite – magnetite assemblage of M, EB, A, and B type tardi-magmatic veinlets. A granodiorite body corresponding to waste rock outcrops along the western flank in fault contact; this body shows no evidence of hydrothermal alteration, which would imply that the mineralized system has a hard boundary towards the west. Finally, minor late bodies of dioritic composition intersect the system. The eastern border is still controlled by the Cerrillos Formation volcanic sequences. In relation to structural control, the main orientation is N15°W, which controls the emplacement of the Tricolor, Dos Amigos, and Praga hydrothermal systems.

Potassic alteration predominates in the area, where a more intensive (KFELD) zone is recognized. This zone is characterized by a marked tardi-magmatic event with biotite and magnetite veinlets and disseminations, in addition to overprinting of M and EB type veinlets and early A and B type quartz veinlets. It is in this unit where chalcopyrite mineralization and occasional bornite mineralization attain their greatest development and copper and gold concentrations. This area is surrounded by a less intensive (KB) potassic alteration zone; however, this zone also shows the development of biotite and magnetite veinlets and disseminations, its intensity is somewhat lower, the occurrence of early quartz veinlets (A and B) is lower, and it already has an incipient to moderate destabilization of the existing ferromagnesian minerals, showing biotite and amphibole chloritization and partial hematitization above the magnetite. Sulfide mineralization consists of pyrite and low quantities of chalcopyrite, with lesser amounts of gold.

Surrounding the potassic alteration, the deposit presents the classic zonation associated with a hydrothermal porphyry system, grading to a hydrolytic assemblage denominated QS, phyllic alteration, where quartz-sericite predominates; finally, advanced argillic alteration is recognized in the upper parts of the system.

1.5 Deposit Types

Based on geological assessments and findings from several studies conducted at the Domeyko Sulfuros property, the main mineralization is classified as a copper-gold (Cu-Au) porphyry system, peripherally associated with skarns, mantos and breccia pipes deposits.

The porphyry copper deposits and prospects situated in the Coastal Range between latitudes 26° and 31°S, such as Domeyko Sulfuros, constitute another sub-belt of the Cretaceous copper belt of northern Chile with U-Pb ages ranging from 108 to 88 My (Maksaev et al., 2006b). The U-Pb zircon ages for the Dos Amigos porphyry are 106.1±3.5 and 104.0±3.5 Ma, while the nearby Tricolor porphyry has an age of 108.5±3.4 My (Maksaev, 2010), corresponding to the mid-late Cretaceous timeframe (Albian-Cenomanian).

An important characteristic of porphyry districts is that they do not form deposits in isolation but rather tend to occur in "clusters," as observed in the case of the Domeyko Sulfuros property. Various porphyry intrusions, including Dos Amigos, Maria Soledad, and Tricolor, are exposed along a ridge that rises to an elevation of approximately 1,250 meters at the Domeyko hill. The dimensions of this cluster span 6 kilometers in the NS direction and 1 to 1.5 kilometers in the EW direction.

In porphyry copper-gold (Cu-Au) deposits, secondary minerals may develop in supergene-enriched zones through the weathering of primary sulfides. These zones, characterized by significantly elevated copper grades, were observed at the Dos Amigos target and constituted the focal point of previous mining operation at the property.

1.6 Exploration

Neither Tintina Mines Limited nor Andean Belt Resources has conducted any exploration on the Domeyko Sulfuros property. The Qualified Person (QP) comments on all previous exploration carried out reported to the author at the property by previous operators in the history section (Chapter 6) of this report.

1.7 Drilling

Neither Tintina Mines Limited nor Andean Belt Resources has conducted any drilling at the Domeyko Sulfuros property. The Qualified Person (QP) comments on all previous drilling completed at the property by previous operators in the history section (Chapter 6) of this report.

1.8 Sample Preparation, Analyses, and Security

This section describes the processes, protocols, procedures, and controls implemented for the preparation, analyses, and security of the samples extracted during the period 2025 by Tintina.

The basic data for the characterization of the Domeyko Sulfuros deposit was obtained from diamond drillholes (DDH). Tintina has designed specific procedures for the drilling and processing of the diamond drillholes, describing the entire process, from sample extraction to storage.

The samples are extracted, and then the recovered percentage is calculated, assuming the drilled length as 100%. The tray must be labelled with the well name, the initial meters, the final meters, and the tray number. Once the samples are in the drill core library, photographs are taken, geotechnical and geological mapping are undertaken. After core cutting, control samples are inserted (field, coarse, and pulp duplicates, fine and coarse blanks, and standards). The samples are subsequently taken to ALS laboratory, where mechanical preparation followed by chemical analysis of the samples is carried out: for copper the sample decomposition was HNO3-HClO4-HF-HCl digestion and the analytical method was atomic absorption spectrometry and for gold the sample decomposition was Fire Assay Fusion and the analytical method was atomic absorption spectrometry. For density determination the apparent density test was performed with the sample covered in paraffin. At the Domeyko drill core library, pulps are stored in transparent polypropylene boxes containing approximately 150 pulps. The coarse reject bags received from the chemical Laboratory are stored in 900-liter plastic bins with a cap to protect them from exposure to the sun, any suspended particles in the environment, or any other foreign agent that may affect the integrity of the samples. The diamond drill core sections, considering both HQ And NQ diameters, are stored in cardboard boxes in consecutive order.

Based on QP's criteria for QA/QC review, the following observations are provided:

It is QP's opinion that the procedures adopted by Tintina have resulted in a reliable database and QP is confident that the quality of the data is sufficient in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines.

SRK has reviewed the Certified Reference Material and the key analyses of Cu, and Au presented for Domeyko Sulfuros project. SRK is satisfied in each case that results have been returned within 3 standard deviations of the mean with no discernible bias or drift. SRK has confirmed the Certified Reference Material selected represented of both the grade, material type/mineralogy, and oxidation state of the live samples submitted and as such are suitable for use on projects.

SRK has considered bias of each sample based on the HARD plot and a rule of laboratory duplicates should have 90% less than 10% difference, coarse preparation duplicates should have 90% less than 20% difference and field duplicates should have 90% less than 30% difference. Based on these criteria copper performs within acceptable limits, however, Au has higher percentages than expected, probably due to the variability of this element. Analysis of the coarse and fine blank material indicates that this has performed well within the limit for acceptable performance with respect to copper and gold.

1.9   Data Verification

The Geology Staff (Data Base) is responsible for collecting and storing all information. The database is routinely updated by a geologist, with the support of a trained technician for this purpose.

QP performed assay data verification and validation through a review of the database submitted by the project geologists. In addition, SRK reviewed the QAQC of the samples drilled between 2021 and 2025.

QP Sophia Bascuñán visited the Domeyko Sulfuros Project in May 2022 and 2025, and spent four days reviewing the area. The area was also visited by SRK's Fernando Saez (QP) in 2024, where he visited the chemical laboratory.

In the last visit to the core shack, Sophia Bascuñán reviewed mineralized intervals of witness half-core from seven (7) drillholes: SDDK25-03, SDK25-04, SDDK25-05, SDDK25-06, SDDK25-07, SDDK25-08 and SDDK25-09. All core boxed were properly stored and labelled, it was possible to validate sample numbers, confirm the presence of copper mineralization (chalcopyrite) in potassic alteration (magnetite, secondary biotite) by comparing the intervals against the assay results, and by verifying the geological logs against the core witness.

The QP validated and used core samples taken from the 2021 to 2025 drilling campaign by Analytical Mineral Service, which were assayed in ALS laboratory with adequate QAQC and correct support.

It is the QP's opinion that all stated objectives of the site visit were satisfactory, and the database is considered to be valid and verified, and is adequate to be used in a mineral resource calculation.

1.10   Mineral Processing and Testing

A comprehensive mineral processing and metallurgical testing program was conducted to support the Domeyko Project Preliminary Economic Assessment (PEA). The program utilized nine drill core samples representing the three principal geological units (UG1, UG2, and UG3), which together account for 100% of the current mineral resources. This sampling strategy ensured appropriate representation of the deposit's lithological and metallurgical variability.

The comminution test work included SMC, SPI, Bond Ball Mill Work Index, and abrasion index testing. Results indicate that UG1, representing approximately 60% of the resources, exhibits medium hardness (Axb 42.1; SPI <100 minutes), supporting the selection of SAG milling as the primary grinding technology. UG2 and UG3 showed higher hardness and variability, suggesting that HPGR technology could be evaluated at the PFS stage. The ore demonstrated a medium Bond Work Index (11.6 kWh/st) and low abrasiveness (Ai 0.27), both favorable for energy efficiency and grinding media consumption.

Mineralogical analysis confirmed that copper mineralization is predominantly chalcopyrite (>98% in most samples), with minor chalcocite and covellite. At a P80 of 106 µm, chalcopyrite exhibits a high proportion of free and liberated particles (>80%), with a significant fraction classified as recoverable copper.

Gold mineralization occurs as native gold and electrum. Particle size distribution indicates that approximately 80% of gold particles are finer than 20 µm. Gold shows a strong association with pyrite, with approximately 57% of the gold occurring with pyrite, which represents a key metallurgical challenge for the project.

 Rougher flotation tests conducted in both seawater and potable water showed comparable copper recoveries, validating seawater use. Flotation performance improved significantly at finer grind sizes, with an optimized P80 of 150 µm recommended to balance recovery, energy consumption, and tailings management. Estimated overall recoveries at this grind size are 87.4% for copper and 65.4% for gold.

Thickening tests produced conventional tailings with underflow solids between 50% and 65%, using relatively low flocculant dosages. Overall, the test program provides a robust and defensible metallurgical basis for the PEA, with additional cleaning and closed-cycle flotation tests recommended for future project stages.

Notwithstanding the metallurgical studies completed to date, two critical technical challenges have been identified that cannot be fully resolved at the PEA level of definition and must be explicitly addressed during the Prefeasibility Study (PFS). These challenges are: (i) the required final copper concentrate grade in a flotation circuit operating under seawater conditions, and (ii) gold recovery as a function of its particle size distribution and its association with pyrite.

To address these challenges at the PFS stage, a metallurgical and geometallurgical strategy is proposed based on two complementary workstreams: (i) the development of additional metallurgical testwork and trade-off studies identified during the PEA, and (ii) the implementation of metallurgical variability and geometallurgical studies supported by a representative metallurgical drilling program across the different geological units, with a metallurgical drilling density designed to support composite samples representing on the order of one million tonnes of in-situ material per sample.

1.11 Mineral Resource Estimates

SRK visited the Domeyko Sulfuros core shack in Domeyko where Sophía Bascuñán reviewed seven drill cores and compared the logged features (lithology, alteration, and mineralogy) with the actual core. No discrepancies were observed during the checks. SRK reviewed the logic of the geological interpretation of lithological, alteration and mineralization models, and found that it was broadly sound and followed accepted industry-standard rules.

The assessment of the Domeyko Sulfuros project resources involved estimating the copper and gold grades associated with the Domeyko deposit, with a primary focus on the sulfide mineral zones. The estimation was conducted in-situ at the deposit.

The database for each one of the deposits used for the estimation was delivered by Tintina. SRK only reviewed potential data inconsistencies, such as scattered grades or erroneous intervals. This database was frozen as of September 29, 2025. The geological model was constructed on a 3D basis by Tintina and SRK personnel. The estimates were based on the current topography including the Dos Amigos mine operation, i.e., considering material exploitation and/or movement. Densities were delivered by Tintina, they were assigned with average values by lithology and mineral zone.

For the Domeyko Sulfuros deposit, the database was used to model eight lithological units, three mineral zone units, and seven alteration units. The Cu and Au estimation unit concept for the Domeyko deposit was based on an estimation within the modelled geological units, whether in terms of mineral zone, alteration, and lithology. Consequently, combinations among these geological units were carried out to find common grade and geology sectors.

Each grade has its own units of estimation. Each estimation unit has variography, outlier calculations, and estimation plans. The purpose of this is for the grade estimation to be controlled by zoning based on a similar statistical behavior (similar populations, with common grades and geology).

When reporting the mineral resources for the Domeyko deposits, SRK stated the following:

- The mineral resources identified in the block model are classified in accordance with CIM definitions for the Measured, Indicated, and Inferred categories.

- Volume determinations were carried out below the topography provided by Tintina as of November 01, 2024.

- Mineral resources were assessed in terms of volume using block models.

- Mineral resource statement was calculated with envelopes based on economic technical parameters focused on:

    - Open pit for Cu/Au in sulfide zone.

Volume determinations have been prepared by separating secondary and primary mineral zones for open pit. The Table 1.1 shows volume determinations with a cut-off grade of 0.2% TCu (Cu for primary sulfides).

Table 1.1: Ton-grade Report by primary zone for resource pit with a cut-off grade of 0.2% TCu

Classification	Total Copper (%)	Tonnage	Gold (ppm)
Measured	0.355	15,390,011	0.319
Indicated	0.344	85,425,928	0.277
Measured + Indicated	0.346	100,815,939	0.284
Inferred	0.339	256,327,624	0.239
Total Mea+Ind+Inf	0.341	357,143,563	0.252

1.12   Mineable Resources Estimates

Mineable Resources for the Domeyko Sulfuros Project were defined through a strategic open pit optimization and mine planning process conducted at a Preliminary Economic Assessment (PEA) level. The optimization was performed using Whittle™ 4DX software and the Lerchs–Grossmann algorithm, incorporating reasonable technical and economic assumptions, including metal prices, operating and processing costs, metallurgical recoveries, geotechnical parameters, and a minimum copper grade of 0.20% TCu to feed the concentrator plant. All Mineral Resource categories (Measured, Indicated, and Inferred) were included for strategic evaluation purposes; however, Inferred Resources are considered conceptual and cannot be converted to Mineral Reserves.

The resulting mine plan considers the extraction and processing of approximately 310 Mt of sulfide material at an average plant feed grade of 0.35% total copper (TCu) and 0.25 ppm gold. The selected Base Case mine plan assumes a nominal mining rate of approximately 164 ktpd and a processing rate of 35 ktpd, resulting in an estimated 26-year life of mine. Ore supply to the concentrator comprises approximately 244 Mt from direct mine feed and 66 Mt from stockpiled material, for a total of 310 Mt processed. The average life-of-mine strip ratio is approximately 2.84, with total material movement of approximately 1,256 Mt, including ore and waste.

Based on the metallurgical recoveries applied in the PEA (88.2% for copper and 64.6% for gold), the Base Case mine plan is expected to produce approximately 945 kt of recovered copper and 50 t of recovered gold over the life of the mine. These production estimates are derived from conceptual mine planning and metallurgical assumptions appropriate for a PEA-level study. No dilution or mining recovery factors have been applied. The mineable resources and associated production figures reported herein do not constitute Mineral Reserves and are subject to significant uncertainty.

1.13   Mining Method

1.13.1   Mining Method

The Domeyko Project is planned as a conventional open-pit mining operation designed to supply a concentrator plant at a nominal processing rate of 35,000 tonnes per day. Mining activities will comprise standard unit operations, including drilling, blasting, loading, hauling, and the provision of auxiliary services. The preliminary mine design is based on 15 m bench heights and mining phases with widths ranging from approximately 100 to 150 m, with a minimum operational width of 60 m. Ramp geometries and detailed haul road designs have not been finalized at this stage and will be optimized during the Pre-Feasibility Study.

The current mine plan incorporates Measured, Indicated, and Inferred Mineral Resources for strategic planning purposes; however, Inferred Resources are considered too speculative to support Mineral Reserve estimation and will be treated as waste for Reserve reporting. At this PEA level, no dilution or mining recovery factors have been applied, and all mining and design parameters remain preliminary and subject to refinement in subsequent project stages.

1.13.2 Geotechnical Considerations

Geotechnical conditions at the Domeyko Sulfuros Project have been evaluated at a Preliminary Economic Assessment (PEA) level to support the conceptual open pit design. The assessment integrates geological and structural interpretation, historical and recent geotechnical drillhole data, laboratory testing, and field observations from site visits to the Dos Amigos pit, which provides a relevant analogue for slope performance under comparable geological conditions.

The geotechnical database comprises approximately 21,800 m of drillhole information, including both partial and detailed geotechnical logging, allowing the definition of three geotechnical zones based on lithology, alteration, and rock mass quality. Rock mass and intact rock strength parameters were established using drillhole data, laboratory test results, field observations, published references, and experience from similar large-scale open pit operations.

Preliminary slope and bench berm designs were developed in accordance with international acceptability criteria, adopting 15 m bench heights, bench face angles of approximately 75°–80°, and interramp angles of approximately 43°–55°. Slope stability was assessed through 2D limit-equilibrium analyses on representative sections, incorporating major structural features and groundwater conditions inferred from field observations. Overall, the slope stability analyses support the conceptual pit design at a PEA level, indicating acceptable stability and low probabilities of failure under the assumed conditions. These designs remain preliminary, and further refinement of the geotechnical, structural, and hydrogeological models—particularly with respect to pressurized groundwater conditions—will be required in subsequent project stages.

1.13.3 Mine Schedule and Plan

The mine schedule and plan for the Domeyko Project have been developed at a Preliminary Economic Assessment (PEA) level to support the extraction of sulfide mineralization classified as Measured, Indicated, and Inferred Resources. The mine plan assumes a nominal processing rate of 35,000 tonnes per day, resulting in an estimated 26-year life of mine. Scheduling and sequencing were developed using Minemax Scheduler, applying a Mixed Integer Linear Programming (MILP) optimization model to maximize Net Present Value (NPV) under defined technical and economic constraints. The schedule establishes phase sequencing, bench limits by period, and prioritizes early access to higher-grade material.

Production parameters assume a maximum mining rate of approximately 70 million tonnes per year, with processing decisions based on a minimum cut-off grade of 0.20% TCu, while gold credits are incorporated in the NPV calculations. Material below the cut-off grade is directed to waste dumps at this stage due to the absence of metallurgical recovery data for such material. The schedule is designed to maintain consistent plant feed and operational flexibility over the life of the mine.

1.13.4 Waste Storage Facilities

Waste storage facilities for the Domeyko Project have been conceptually designed to accommodate all life-of-mine waste rock generated by the open pit operation. The facilities are strategically located to minimize haulage distances and are sized with sufficient capacity to support the planned mine schedule, including allowances for operational contingencies.

The conceptual design is based on conventional waste rock dump configurations, developed using established industry practices and representative material properties. Conservative geotechnical design criteria have been applied, and preliminary stability assessments indicate that the proposed dump geometries meet accepted factors of safety for both static and pseudo-static conditions at a PEA level.

The waste storage facilities will be developed in phases aligned with mine production, providing operational flexibility throughout the life of the project. As with all PEA-level designs, further geotechnical investigations and detailed engineering will be required in subsequent project stages to confirm and refine the final design parameters.

1.13.5 Mine Fleet

The mining operation contemplated for the Domeyko Project is based on a conventional open pit mining method, employing a truck and shovel fleet sized to meet the production rates defined in this Preliminary Economic Assessment. The equipment fleet has been selected considering the scale of the operation, the material movement requirements, and the operating conditions of the project, with an emphasis on proven, widely used equipment technologies.

The proposed fleet includes a combination of large hydraulic shovels for primary loading, supported by a fleet of ultra-class haul trucks for the transportation of ore and waste, as well as auxiliary equipment such as dozers, graders, and water trucks to ensure efficient mine operations and road maintenance. Equipment sizing and quantities were estimated using benchmark productivity parameters, industry-standard utilization and availability factors, and experience from comparable large-scale open pit operations.

At the PEA level, the fleet configuration represents a balanced approach between capital efficiency and operational flexibility. No allowance has been made for optimization of dispatch systems, automation, or alternative haulage technologies, which could be evaluated in future study phases.

1.14 Recovery Methods

Section 17 describes the recovery methods and concentrator plant configuration evaluated for the Domeyko Project as part of the PEA. The selected process scenario is based on a SAG milling circuit with a target P80 grind size of 150 µm, achieving high copper and gold recoveries while maintaining reasonable energy consumption and compatibility with high-density tailings disposal. Given regional water scarcity, untreated seawater was adopted as the primary water source, supported by its proximity to the coast, extensive Chilean operating experience, and metallurgical test work demonstrating no significant differences in rougher Cu and Au recoveries relative to freshwater.

The concentrator is designed to process 35,000 tpd (12.8 Mtpy) of sulfide ore, with average life-of-mine grades of 0.35% Cu and 0.25 ppm Au, and higher grades during the initial five years. The flowsheet comprises primary crushing, SABC-A grinding, rougher–cleaner–scavenger flotation, concentrate thickening and filtration, and high-density tailings thickening. Crushing is performed with a 42"×55" gyratory crusher feeding a 35,000-t stockpile. Grinding comprises a 36'×19' SAG mill and a 26'×44' ball mill, operating in closed circuit to achieve the design grind size.

Flotation in seawater includes a rougher stage with six 300 m^3 tank cells for 92% Cu recovery, regrinding with a Vertimill, and two cleaning stages with Jameson cells to achieve concentrate grades exceeding 26.5% Cu, despite challenges associated with pyrite depression and phyllosilicates. Concentrates are thickened, filtered to 9% moisture, washed with desalinated water, and stored for export through regional ports.

Tailings are thickened to 65% solids using high-density thickeners, maximizing water recovery and supporting sustainable tailings management. Overall, the proposed recovery strategy reflects proven Chilean practice, balances metallurgical performance with water efficiency, and provides a technically robust basis for advancing the project.

1.15 Project Infrastructure

The Domeyko Sulfuros Project is strategically located in the Atacama Region of northern Chile, immediately adjacent to Route 5, approximately 2.4 km from the town of Domeyko and 52.5 km from the city of Vallenar, which represents the main regional logistics and supply center for the Project. The Project is also located approximately 147 km south of La Serena and 207 km north of Copiapó, both cities hosting the nearest commercial airports and complementary services.

For concentrate shipment, the Port of Las Losas, located in Huasco approximately 104 km from the Project site, is considered the primary export alternative, accessed via Route 5, Route C-46 and Route C-468. As an alternative to truck haulage, the potential use of an existing, currently non-operational railway line may be evaluated for concentrate transport. The Project is located approximately 63 km from the coastline, from where seawater will be sourced for process requirements.

Project infrastructure has been conceptually designed to minimize freshwater consumption, reduce environmental impacts, improve energy efficiency, and control dust emissions. The plant layout takes advantage of site topography to reduce earthworks and maximize gravity-assisted flow of process fluids.

Process water requirements will be met using seawater supplied via a dedicated 63 km pipeline originating at Quebrada Honda Bay, with a design capacity of approximately 280 L/s. The system includes a seawater intake structure and pumping facilities with an installed power demand of approximately 8 MW.

The Project's electrical power demand is estimated at approximately 70 MW. For the purposes of this Preliminary Economic Assessment (PEA), the Project Base Case assumes a power supply sourced 100% from renewable energy, supported by Battery Energy Storage Systems (BESS), to ensure reliable 24-hour operation. Existing 110 kV and 220 kV transmission lines associated with nearby solar and wind power facilities pass adjacent to the proposed concentrator plant site, providing a strong technical basis for the renewable energy supply strategy.

Supporting infrastructure includes a gatehouse, offices, workshops, supply warehouse, crushing facilities, dining areas, water treatment plant, fire protection systems, laboratory facilities, and other auxiliary installations required to support Project operations.

1.16   Environmental, Social, Community and Closure

The Domeyko Sulfuros Project will require a new environmental permitting process under the Chilean Environmental Impact Assessment System, as it represents a significant expansion relative to the existing Dos Amigos operation, including larger mining facilities and infrastructure extending to the coastal sector. While the current operation is covered by RCA No. 137/2019 and remains permitted for processing third-party material, the sulfide project must be submitted as a new project and is expected to require approval through an Environmental Impact Study (EIA). The scope and final configuration of the project will determine the specific sectoral permits required, including those associated with mining facilities, waste storage, tailings management, and water and energy infrastructure.

The project contemplates the use of seawater supplied from the coastal area, which will require the corresponding maritime concession and associated permits. The selected corridor and infrastructure alignments are intended to avoid environmentally sensitive areas and minimize potential impacts. Environmental baseline studies will be required to address key issues relevant to the EIA, including biodiversity, water resources, air quality—given the proximity to the town of Domeyko and nearby astronomical observatories—and potential interactions with sensitive coastal environments.

The maritime concession and environmental permits constitute the critical path of the project execution plan; therefore, it is recommended that these matters receive special attention and be initiated as a priority.

From a social and community perspective, early engagement with local stakeholders and indigenous communities is considered critical for the project's development. Particular attention will be required in the coastal area, where there is potential presence of sites of cultural significance associated with Diaguita Tierra y Mar and Changos communities, as well as evidence of artisanal mining and traditional land uses in areas considered for tailings and infrastructure alternatives. These aspects will need to be addressed through early territorial, social, and cultural baseline studies as part of the EIA process. Mine closure planning will continue to follow Chilean regulatory requirements, building upon the existing closure plan approved by SERNAGEOMIN for the Dos Amigos facilities, with preliminary closure cost estimates developed for the expanded project footprint at a PEA level.

1.17 Capital and Operating Cost

The Domeyko Project Preliminary Economic Assessment (PEA) includes a comprehensive evaluation of capital and operating costs for a large-scale open pit mining operation with a conventional concentrator-based processing plant and a downstream Tailings Storage Facility.

Total Project capital expenditures amount to approximately USD 2,188 million, comprising USD 1,283 million of initial capital and USD 905 million of deferred capital over the life of the Project. Mining capital expenditures total approximately USD 539 million, including USD 506 million associated with open pit mine development and mobile equipment, and USD 33 million related to mine pre-stripping activities classified as capital expenditures. Processing plant and associated infrastructure capital expenditures total approximately USD 448 million, while Tailings Storage Facility capital expenditures amount to approximately USD 270 million, including initial construction and staged embankment raises. Pre-development and project definition costs of approximately USD 30 million have been incorporated as owner's costs.

Life-of-mine Project operating costs total approximately USD 5,466 million. Mining operations represent the largest contributor to operating costs, with life-of-mine mining operating expenditures of approximately USD 2,701 million, driven primarily by total material movement and haulage requirements. Processing plant operating costs total approximately USD 2,341 million over the life of the Project, equivalent to an average processing cost of approximately USD 8.6 per tonne of ore processed, with grinding, energy consumption, and consumables representing the dominant cost components.

Operating costs associated with the Tailings Storage Facility are estimated separately from processing costs and amount to approximately USD 98 million on a life-of-mine basis, equivalent to approximately USD 3.9 million per year over the operational life of the Project.

Overall, the capital and operating cost estimates are internally consistent, aligned with a conventional Project development strategy, and appropriately integrated into the economic evaluation. The cost framework developed for the Domeyko Project provides a solid basis for assessing Project viability at the PEA level and supports advancement to subsequent stages of study.

1.18 Economic Analysis

The Preliminary Economic Assessment demonstrates that the Domeyko Project presents positive economic indicators under the assumptions and methodologies recommended by SRK and agreed with the Client. The evaluation is based on a Base Case scenario that assumes a long-term copper price of USD 4.3/lb, a gold price of USD 2,500/oz, and the supply of renewable energy at a cost of USD 70/MWh.

Under this Base Case, the Project achieves a pre-tax Net Present Value (NPV) of USD 560 million at an 8% discount rate, a pre-tax Internal Rate of Return (IRR) of 15%, and an estimated payback period of approximately eight years. On an after-tax basis, incorporating Chilean corporate income tax and the applicable mining royalty regime, the Project generates an NPV of USD 328 million.

These economic results are based on a mine plan that contains a high percentage of inferred resources, so improved resource information is needed to validate these results.

Operating unit costs per tonne processed are within a competitive range relative to comparable mining operations in Chile. However, the estimated C1 cash cost of 262 US¢/lb of copper is above the industry average (because gold production, which represents approximately 30% of revenue, was not included in this calculation). This outcome identifies a key opportunity to enhance Project value through potential production optimization and scale efficiencies as the Project advances to subsequent study stages.

The estimated initial capital investment required for Project development amounts to USD 1,283 million. Overall, the economic results support the Project's potential to generate value at a PEA level and provide a sound basis for further technical and economic refinement through pre-feasibility and feasibility studies.

1.19   Interpretations and Conclusions

The Preliminary Economic Assessment (PEA) confirms that the Domeyko Sulfuros Project represents a technically viable large-scale open pit Cu–Au porphyry development opportunity, supported by a robust geological model, conventional mining and processing methods, and favorable infrastructure conditions.

Geological interpretation validates that the Domeyko deposit corresponds to a copper–gold porphyry system, with mineralization remaining open laterally and at depth, providing meaningful potential for future resource expansion. The geological, drilling, sampling, and QA/QC databases are considered reliable and adequate for PEA-level evaluation and mineral resource estimation.

Mineral Resources have been estimated in accordance with CIM definitions and NI 43-101 guidelines, demonstrating a large-tonnage sulfide resource with moderate copper grades and significant gold credits. Mineable Resource optimization indicates that a configuration of 164 ktpd mining capacity and 35 ktpd plant throughput provides a balanced and economically attractive development scenario at this stage, although these results remain conceptual and do not constitute Mineral Reserves.

The proposed conventional open pit mining method is considered appropriate for the Project's geological and geotechnical conditions. Preliminary slope designs and stability analyses indicate acceptable factors of safety for a PEA-level study, while recognizing that additional geotechnical and hydrogeological investigations will be required in subsequent project stages to reduce uncertainty.

Metallurgical test work confirms that Domeyko ores are of medium hardness and amenable to conventional SAG-based comminution and flotation processing. The selected process flowsheet achieves competitive copper and gold recoveries and supports the use of untreated seawater, consistent with regional operating practice and water scarcity conditions.

Project infrastructure benefits from excellent regional access and proximity to existing logistics, ports, and power infrastructure. For the purposes of the PEA Base Case, the Project assumes a power supply sourced 100% from renewable energy, supported by Battery Energy Storage Systems (BESS), leveraging nearby solar and wind transmission infrastructure. The National Electrical System is considered a viable alternative for future evaluation. Seawater supply via a dedicated pipeline avoids the use of continental water resources and aligns with sustainable development objectives.

Environmental, social, and closure considerations indicate that the Project will require development through a full Environmental Impact Study (EIA). Key sensitivities related to biodiversity, water resources, air quality, and local communities have been identified early and can be managed through appropriate baseline studies and engagement strategies. Preliminary closure cost estimates are consistent with Chilean regulatory requirements.

The economic analysis demonstrates positive Project economics at a PEA level, with a positive NPV and IRR under the Base Case assumptions. While unit operating costs are competitive, overall Project economics are sensitive to metal prices, capital intensity, and throughput assumptions, highlighting opportunities for value enhancement through optimization in future study stages.

Overall, the Domeyko Sulfuros Project is considered technically sound and economically attractive at a Preliminary Economic Assessment level and merits advancement to a Pre-Feasibility Study to further refine technical definition, reduce key risks, and enhance Project value.

1.20   Recommendations

Based on the results of this Preliminary Economic Assessment, it is recommended that the Domeyko Sulfuros Project proceed to a Feasibility Study (FSS) to further reduce technical, environmental, and economic uncertainties and strengthen the basis for future development decisions.

Key recommendations include conducting additional drilling to improve geological confidence and upgrade the Mineral Resources from Inferred to higher confidence categories, refining the geological, geotechnical, hydrogeological, and metallurgical models, and updating recovery assumptions through comprehensive testing at the FSS level. These activities will support more robust mine planning, cut-off grade optimization, and production scheduling.

Mine planning and scheduling should be refined through detailed trade-off studies that address performance scenarios, equipment selection, dilution and recovery assumptions, waste and tailings management strategies, and the overall balance between capital and operating costs. Special emphasis should be placed on confirming the optimal processing capacity and sequencing strategy to maximize project value while managing risk.

The process design should be further optimized through additional comminution, flotation, and tailings testing, including the evaluation of alternative milling technologies, improvements in gold recovery, and a benchmarking of conventional versus high-density tailings configurations.

Infrastructure recommendations focus on confirming and optimizing the 100% renewable energy supply defined for the Project Base Case, supported by Battery Energy Storage Systems (BESS), while maintaining the flexibility to evaluate integration with the National Electric System as a technical alternative in later stages. Logistics compensation studies, including concentrate transportation options, should also be advanced. Environmental, social, and permitting activities should prioritize the development of detailed baseline studies to support the preparation and submission of a comprehensive Environmental Impact Assessment (EIA), early stakeholder engagement, and the refinement of closure strategies in accordance with Chilean regulations. The maritime concession should be managed early on.

Capital and operating cost estimates should be refined through greater engineering definition, improved cost traceability, and enhanced sensitivity and risk analysis, particularly with respect to metal prices, capital expenditures (CAPEX), operating expenditures (OPEX), and scheduling assumptions. Finally, it is recommended that the Project Master Schedule be further refined and developed in subsequent study stages, maintaining the Environmental Qualification Resolution (RCA) as the primary driver of the schedule and strengthening the integration between permitting, engineering, procurement, and construction planning.

2 Introduction and Terms of References

The Domeyko Sulfuros Project, also referred to as the "Project," "Property," or "Domeyko," is an exploration property located in the Atacama Region of northern Chile, covering an area of 10,056 hectares.

The property experienced intermittent exploration campaigns by major and mid-size companies between 1962 and 1985. From 1996 to 2015, the focus of exploration and open-pit mining by Compañía Explotadora de Minas (CEMIN) was on the enrichment blanket at the Dos Amigos ore body. Following the closure of operations, limited exploration drilling was conducted to identify additional secondary copper resources.

In 2018, two specific holes, SDDK 18-034 and SDDK 18-039, were drilled at the Dos Amigos ore body, finding primary copper and gold mineralization to depths of 450.60 meters and 518.85 meters, respectively. Subsequently, in 2021, following the discoveries from the deep holes, the exploration program underwent a realignment, with a revised project scope that emphasizes the investigation of hypogene mineralization beneath the supergene blanket.

The relationship with the local community is positive and has been continuously maintained since the start of operations at the Dos Amigos Mine, owned by CEMIN Holding Minero, from 1996 to the present. The necessary permits are in place with the relevant authorities to carry out brownfield drilling, enabling the development of exploration campaigns within the Domeyko district. The Domeyko Sulfuros Project has significant logistical potential that supports its development.

Tintina Mines Limited is a Canadian-based company with over two decades of experience in the junior mining sector, focuses on the acquisition, exploration and development of base and precious metals properties. The common shares of Tintina are listed for trading on the TSXV under the symbol "TTS". In 2023, Tintina's management made the strategic decision to expand their areas of interest to include the Central Andes of South America and explore opportunities in this region, including Andean Belt properties in Chile. The main goal of Tintina Mines Limited at the Domeyko Sulfuros project was to assess the property's potential for primary Cu-Au resources.

In December 2023, Tintina Mines Limited (Tintina) obtained consent from the current owner, Andean Belt Resources (ABR), to commission SRK Consulting (Chile) SpA (SRK) to visit the property and prepare a Technical Report for the Domeyko Sulfuros Project. Tintina Mines Limited was in the process of acquiring a significant equity interest in Andean Belt Resources SpA ('ABR'), a mining exploration company incorporated under the laws of Chile, for a cash consideration of $4,000,000 (USD). The funds provided as consideration for the acquisition are expected to be used primarily to fund exploration and technical studies at the Domeyko Sulfuros property.

The acquisition described above was considered to be a 'related party transaction' under the policies of the TSX Venture Exchange and Multilateral Instrument 61-101 Protection of Minority Security Holders in Special Transactions ('MI 61-101') due to the involvement of Mr. Juan Enrique Rassmuss in the transaction. Mr. Rassmuss is the President, Chairman, and a director of TTS, and holds approximately 30% of the issued and outstanding common shares of TTS. Mr. Rassmuss is also the President and CEO of the Rassmuss Group, a diversified conglomerate that currently includes Andean Belt Resources SpA.

Andean Belt Resources has a specialized technical team in Chile, responsible for carrying out exploration activities and the studies associated with the development of the Domeyko Sulfuros Project.

The services by SRK Consulting (Chile) SpA. were conducted between January and February 2024. The Technical Report prepared by SRK documents the geology and exploration status of the Domeyko Sulfuros Project and was prepared in accordance with the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1. The Technical Report was filed on SEDAR with effective date February 15, 2024.

On August 14, 2024, Tintina Mines Limited announced the completion of a $4,000,000 (USD) investment in Andean Belt Resources SpA ("ABR"), a mining exploration company incorporated under the laws of Chile. Following the acquisition, Tintina Mines Limited now holds a 73.75% equity ownership interest in ABR. The terms of the agreement between Tintina Mines Limited and ABR are detailed in the term sheet included in this report as Appendix 2.

In November 2024, Tintina engaged SRK Consulting Chile SpA to prepare an updated National Instrument 43-101 technical report for the Domeyko Sulfuros Project.

This technical report documents an updated National Instrument 43-101 Independent Technical Report, which includes the first Mineral Resource Statement for the Domeyko Sulfuros Project. The report has been prepared in accordance with the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource Statement presented herein has been prepared in compliance with the generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 2019).

The authors of this report, Mr. Joled Nur Paredes (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 181) and Ms. Sophia Bascuñán Moraga (Australian Institute of Geoscientists, membership No. 9289), meet the criteria to be considered "qualified persons" as defined by National Instrument 43-101.

In June 2025, Tintina engaged SRK Consulting (Chile) SpA. to prepare a Preliminary Economic Assesment (PEA), Technical Report for the Domeyko Sulfuros Project in accordance with National Instrument 43-101.

The report has been prepared in accordance with the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F. The Mineral Resource Statement presented herein has been prepared in compliance with the generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 2019).

The authors of this report, Mr. Patricio Martínez (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 395), Joled Nur Paredes (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 181), Sophia Bascuñán Moraga (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 518), Esteban Hormazábal (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 209), and Luis Bernal (Comisión Calificadora de Competencia en Recursos y Reservas Mineras de Chile, membership No. 415) meet the criteria to be considered "qualified persons" as defined by National Instrument 43-101.

2.1 Scope of Work

The scope of work, as defined in a letter of engagement executed on July 22, 2025, between Tintina Mines Limited and SRK includes the generation of a Preliminary Economic Assessment, an Independent Technical Report on the Domeyko Sulfuros Project and the preparation of an independent technical report in compliance with National Instrument 43-101 and Form 43-101F1 guidelines. This work typically involves the assessment of the following aspects of this project:

- Topography, landscape, access
- Regional and local geology
- Exploration history
- Audit of exploration work carried out on the project
- Recommendations for additional work
- Quality control review of drilling
- Interpretation and creation of solids for mineral zones
- Validation of the 3D model visually and by the back flagging technique
- Geostatistical estimation of copper and gold grades focused on sulfides
- Assignment of density for different materials
- Creation of a resource pit with the new resource model and commercial parameters
- Grade-ton report
- Pit Optimization
- Mine Plan Scheduling
- Mining and Plant Infrastructure Layout
- Economic Assessment
- Preliminary Geomechanics Assessment
- Preliminary review of environmental permitting considerations and potential timelines
- Tailings Storage Facility

- Hidrogeology and Hydrology review

2.2   Work Program

The Geological Technical Report reported herein is a collaborative effort between Tintina Mines Limited and SRK personnel. The exploration database was compiled and maintained by Tintina Mines Limited and was audited by SRK.

The Technical Report Mineral Resource Estimate reported herein was prepared in conformity with generally accepted CIM "Exploration Best Practices" and "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. This technical report was prepared following the guidelines of the Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1.

The technical report was assembled in SRK Consulting (Chile) SpA. office during the months of June and December 2025.

2.3   Basis of Technical Report

This report is based on information collected by SRK during a site visit performed between September 8th and 12th; and October 27th and 29th, 2025, and on additional information provided by Tintina Mines Limited throughout the course of SRK's investigations. Other information was obtained from the public domain. SRK has no reason to doubt the reliability of the information provided by Tintina Mines Limited. This technical report is based on the following sources of information:

- Discussions with CEMIN Holding Minero, Andean Belt Resources SpA and Tintina Mines Limited personnel.
- Inspection of the Domeyko Sulfuros Project area, including outcrop and drill core
- Review of project exploration data
- Analytical sample laboratory review
- Additional information from public domain sources
- Information provided by CEMIN Holding Minero, Andean Belt Resources SpA and Tintina Mines Limited
- Benchmarking

2.4 Qualifications of SRK and SRK Team

The SRK Group comprises over 1,900 professionals, offering expertise in a wide range of resource engineering disciplines. The SRK Group's independence is ensured by the fact that it holds no equity in any project and that its ownership rests solely with its staff. This fact permits SRK to provide its clients with conflict-free and objective recommendations on crucial judgment issues. SRK has a demonstrated track record in undertaking independent assessments of Mineral Resources and Mineral Reserves, project evaluations and audits, technical reports, and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs.

The compilation of this technical report was completed by Patricio Martínez (CCCRRM N° 395), Esteban Hormazabal (CCCRRM N° 209), Joled Nur (CCCRRM N° 181), Luis Bernal (CCCRRM N° 415) and Sophia Bascuñán (CCCRRM N° 518). By virtue of their education, membership to a recognized professional association and relevant work experience, Patricio Martínez, Esteban Hormazabal, Joled Nur, Luis Bernal and Sophia Bascuñán are independent Qualified Persons as this term is defined by National Instrument 43-101.

2.5 Site Visit

In accordance with National Instrument 43-101 guidelines, the SRK geologist Sophia Bascuñán visited the Domeyko Sulfuros Project on September 8th and 12th.The purpose of the site visit was to review the digitalization of the exploration database and validation procedures, review exploration procedures, define geological modelling procedures, examine drill core, interview project personnel and to collect all relevant information for the compilation of a technical report. During the visit, a particular attention was given to the treatment and validation of historical drilling data.

The SRK professionals: Patricio Martínez (Mining), María Inés Vidal (Environmental), José Luis Quiroga (Tailings), Carolina Palma (Waste storage facility and Geotechnical), Mauricio Romero (Infrastructure y Process) and Beatriz Labarca (Hidrogeology and Hidrology), visited the Domeyko Sulfuros Project on November 27th and 29th. Among others zones, the site visit included:

- Coastal area, including the seawater intake location and water conveyance lines
- Alternative tailings storage areas
- Mine site
- Waste rock dumps
- Project infrastructure

SRK was given full access to relevant project data and conducted interviews to Andean Belt Resources SpA, CEMIN Holding Minero and Tintina Mines Limited and Andean Belt Resources SpA personnel to obtain information on the past exploration work, to understand procedures used to collect, record, store and analyze historical and current exploration data.

2.6 Acknowledgement

SRK would like to acknowledge the support and collaboration provided by Andean Belt Resources SpA, CEMIN Holding Minero and Tintina Mines Limited personnel for this assignment. Their collaboration was greatly appreciated and instrumental to the success of this project.

2.7 Declaration

SRK's opinion contained herein and effective December 22th, 2025, is based on information collected by SRK throughout the course of SRK's investigations, which in turn reflect various technical and economic conditions at the time of writing. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

This report may include technical information that requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

SRK is not an insider, associate or an affiliate of Tintina Mines Limited, and neither SRK nor any affiliate has acted as advisor to Tintina Mines Limited, its subsidiaries or its affiliates in connection with this project. The results of the technical review by SRK are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

3 Reliance on Other Experts

SRK has not performed an independent verification of land title and tenure information as summarized in Section 4 of this report. SRK did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties but have relied on Eugenio Ramirez Cifuentes as expressed in a legal opinion provided to Tintina Mines Limited on November 28, 2025. A copy of the title opinions is provided in Appendix 1. The reliance applies solely to the legal status of the rights disclosed in Sections 4.1 and 4.2 below.

SRK was informed by Tintina Mines Limited that there are no known litigations potentially affecting the Domeyko Sulfuros Project.

Table 3.1: Authors of the chapters in this report

Chapter	Responsible
Property Description and Location	Alex Belmar Eugenio Ramirez
Accessibility, Climate, Local Resources, Infrastructure and Physiography	Alex Belmar
History	Alex Belmar
Geological Setting and Mineralization	Alex Belmar Sophia Bascuñan
Deposit Types	Alex Belmar
Exploration	Sophia Bascuñan
Drilling	Sophia Bascuñan
Sample Preparation, Analyses, and Security	Sophia Bascuñan
Data verification	Sophia Bascuñan Carolina Filio Alex Belmar
Mineral Processing and Metallurgical Testing	Luis Bernal
Mineral Resource Estimates	Sophia Bascuñan Joled Nur
Mineral Reserve Estimates	Patricio Martínez
Mining Methods	Esteban Hormazábal
Recovery Methods	Luis Bernal
Project Infrastructure	Raul Romero Patricio Martínez
Environmental Studies, Permitting and Social or Community Impact	María Inés Vidal
Capital and Operating Costs	Patricio Martínez Luis Bernal Raúl Romero
Economic Analysis	Patricio Martínez
Adjacent Properties	Alex Belmar

Chapter	Responsible
Other Relevant Data and Information	Alex Belmar
Interpretation and Conclusions	Patricio Martínez Sophia Bascuñán Joled Nur Luis Bernal Esteban Hormazabal Raul Romero María Inés Vidal
Recommendations	Patricio Martínez Sophia Bascuñán Joled Nur Luis Bernal Esteban Hormazabal Raul Romero María Inés Vidal

4 Property Description and Location

4.1 Mineral Tenure

The mineral rights of the Domeyko Sulfuros Project have been under the ownership of Andean Belt Resources SpA (ABR), a Chilean entity, since 2023. A legal opinion that validates the legal standing of the asset ownership is provided in Appendix 1 of this report (Eugenio Ramirez, 2025).

As indicated in Chapter 6 of this report, which is dedicated to the historical background, the owner of the mining properties during the specified period was CEMIN Holding Minero (CEMIN). This entity held ownership responsibilities since its acquisition in 1986 until 2023.

The total mineral tenure for the Domeyko Sulfuros project consists of seventy-five mining concessions, covering a total area of 10,056 hectares (from which 9,682 are effective), located in the communes of Vallenar, province of Huasco, Atacama Region, Chile. There are sixty-two exploitation concessions, covering approximately 6,356 hectares, which will not expire as long as mining taxes are duly paid annually (Table 4.1). The remaining thirteen concessions are exploration concessions, covering an area of 3,700 hectares, with the expiration date for each one provided in Table 4.2.

Table 4.1:   List of the exploitation concessions for the Domeyko Sulfuros Project

Order	ID Number (ROL)	Name	Holder	Area (ha)	Expiration Date	Concession Type
1	03301-0306-K	MARIA SOLEDAD 1/372 (1)	Andean Belt Resources SpA	865	na	Exploitation
2	03301-0336-1	ALASKA 1/5 (1)	Andean Belt Resources SpA	25	na	Exploitation
3	03301-0831-2	TRICOLOR 1/2 (1)	Andean Belt Resources SpA	10	na	Exploitation
4	03301-0842-8	WILLIE 1 (1)	Andean Belt Resources SpA	2	na	Exploitation
5	03301-1196-8	MARIA SOLEDAD 401/411 (1)	Andean Belt Resources SpA	28	na	Exploitation
6	03301-1615-3	GEMINIS 1/100 (1)	Andean Belt Resources SpA	154	na	Exploitation
7	03301-1757-5	URZUA UNA (1)	Andean Belt Resources SpA	5	na	Exploitation
8	03301-2329-K	LABRADOR 1/15 (1)	Andean Belt Resources SpA	20	na	Exploitation
9	03301-2543-4	VENUS 1/120 (1)	Andean Belt Resources SpA	120	na	Exploitation
10	03301-2543-8	FRANCISCO 1/79 (1)	Andean Belt Resources SpA	79	na	Exploitation
11	03301-2640-K	CALU 1/20 (1)	Andean Belt Resources SpA	100	na	Exploitation
12	03301-2765-1	LEO 1/16 (1)	Andean Belt Resources SpA	16	na	Exploitation
13	03301-2766-K	TAURO 1/3 (1)	Andean Belt Resources SpA	3	na	Exploitation
14	03301-2790-2	PELICANO 1/149 (1)	Andean Belt Resources SpA	149	na	Exploitation
15	03301-2763-5	VIRGO 1/4 (1)	Andean Belt Resources SpA	4	na	Exploitation
16	03301-2764-3	ARIES 1/6 (1)	Andean Belt Resources SpA	6	na	Exploitation
17	03301-3128-4	ACUARIO 1 (1)	Andean Belt Resources SpA	1	na	Exploitation
18	03301-3127-6	LIBRA 1/3 (1)	Andean Belt Resources SpA	3	na	Exploitation
19	03301-3414-3	ALBATRO 1/36 (1)	Andean Belt Resources SpA	178	na	Exploitation
20	03301-3413-5	PEQUEN 1/40 (1)	Andean Belt Resources SpA	196	na	Exploitation
21	03301-3411-9	TENCA 1/60 (1)	Andean Belt Resources SpA	300	na	Exploitation
22	03301-3410-0	JOTE 1/47 (1)	Andean Belt Resources SpA	85	na	Exploitation
23	03301-3412-7	CHERCAN 1/113 (1)	Andean Belt Resources SpA	113	na	Exploitation
24	03301-3488-7	MATO PRIMERA 1/20 (1)	Andean Belt Resources SpA	200	na	Exploitation
25	03301-3489-5	MATO SEGUNDA 1/56 (1)	Andean Belt Resources SpA	56	na	Exploitation
26	03301-3571-9	KENA 1/10 (1)	Andean Belt Resources SpA	100	na	Exploitation
27	03301-3637-5	MAYO 1/20 (1)	Andean Belt Resources SpA	20	na	Exploitation
28	03301-3938-2	COIPO 1/87 (1)	Andean Belt Resources SpA	87	na	Exploitation
29	03301-5439-K	DIUCA 1/60 (1)	Andean Belt Resources SpA	300	na	Exploitation
30	03301-5729-1	CHINCOL 1/38 (1)	Andean Belt Resources SpA	69	na	Exploitation
31	03301-5795-K	ESPA-A (1)	Andean Belt Resources SpA	5	na	Exploitation
32	03301-5796-8	ESPA-B 1/2 (1)	Andean Belt Resources SpA	20	na	Exploitation
33	03301-5797-6	ESPA-C 1/2 (1)	Andean Belt Resources SpA	20	na	Exploitation
34	03301-5798-4	ESPA-D 1/2 (1)	Andean Belt Resources SpA	16	na	Exploitation
35	03301-5793-3	TORDO 1 1/13 (1)	Andean Belt Resources SpA	128	na	Exploitation
36	03301-5794-1	TORDO 2 1/20 (1)	Andean Belt Resources SpA	166	na	Exploitation
37	03301-5810-7	CANARIO 1 1/20 (1)	Andean Belt Resources SpA	200	na	Exploitation
38	03301-5811-5	CANARIO 2 1/30 (1)	Andean Belt Resources SpA	262	na	Exploitation
39	03301-0850-9	PLANTA 1/3 (1)	Andean Belt Resources SpA	15	na	Exploitation
40	03301-5921-9	ARES 1 1/3 (1)	Andean Belt Resources SpA	6	na	Exploitation
41	03301-5922-7	ARES 2 1/2 (1)	Andean Belt Resources SpA	2	na	Exploitation
42	03301-5931-6	LINA 3 1/17 (1)	Andean Belt Resources SpA	126	na	Exploitation
43	03301-5929-4	LINA 1 1/20 (1)	Andean Belt Resources SpA	146	na	Exploitation
44	03301-5930-8	LINA 2 1/28 (1)	Andean Belt Resources SpA	231	na	Exploitation
45	03301-6018-7	ARES 3 1/2 (1)	Andean Belt Resources SpA	2	na	Exploitation
46	03301-6069-1	ZEUS 3 (1)	Andean Belt Resources SpA	1	na	Exploitation
47	03301-6070-5	ZEUS 4 1/2 (1)	Andean Belt Resources SpA	2	na	Exploitation
48	03301-6131-0	GEA 1 1/10 (1)	Andean Belt Resources SpA	100	na	Exploitation
49	03301-6132-9	GEA 2 1/20 (1)	Andean Belt Resources SpA	100	na	Exploitation
50	03301-6133-7	GEA 3 1/14 (1)	Andean Belt Resources SpA	30	na	Exploitation
51	03301-6168-K	GEA 4 1/10 (1)	Andean Belt Resources SpA	100	na	Exploitation
52	03301-6169-8	GEA 5 1/20 (1)	Andean Belt Resources SpA	200	na	Exploitation
53	03301-3959-5	ANTONIO 4 1/37 (2)	Andean Belt Resources SpA	180	na	Exploitation
54	03301-4926-4	MAYA XVIII 1/36 (2)	Andean Belt Resources SpA	176	na	Exploitation
55	03301-4927-2	MAYA XIX 1/38 (2)	Andean Belt Resources SpA	187	na	Exploitation
56	03301-4509-9	TERESA 53 1/18 (2)	Andean Belt Resources SpA	180	na	Exploitation
57	03301-4510-2	TERESA 54 1/30 (2)	Andean Belt Resources SpA	295	na	Exploitation
58	03301-4511-0	TERESA 55 1/10 (2)	Andean Belt Resources SpA	100	na	Exploitation
59	03301-0832-0	TOPAZE 1/4 (2)	Andean Belt Resources SpA	20	na	Exploitation
60	03301-4310-K	EMILIO 4 1/5 (2)	Andean Belt Resources SpA	17	na	Exploitation
61	03301-5181-1	LA CULEBRA 1/4 (2)	Andean Belt Resources SpA	4	na	Exploitation
62	03301-5555-8	SAN GUILERMO 1/5 (2)	Andean Belt Resources SpA	25	na	Exploitation

1. Concession transferred by previous owner to Andean Belt Resources is valid and in good standing.

2. Concessions registered under the name of Andean Belt Resources SpA on November 20, 2025, in the Mining Registry of the city of Vallenar, Atacama Region.

Table 4.2:   List of the exploration concessions for the Domeyko Sulfuros Project

ID Number (ROL)	Name	Holder	Area (ha)	Expiration Date	Concession Type
03301-B212-8	CRONOS A 9	Andean Belt Resources SpA	300	11.29.2026	Exploration
03301-B215-2	CRONOS A 12	Andean Belt Resources SpA	300	12.12.2026	Exploration
03301-B245-4	CRONOS C 1	Andean Belt Resources SpA	300	12.12.2026	Exploration
03301-B246-2	CRONOS C 2	Andean Belt Resources SpA	300	12.07.2026	Exploration
03301-B247-0	CRONOS C 3	Andean Belt Resources SpA	300	12.29.2026	Exploration
03301-B248-9	CRONOS C 4	Andean Belt Resources SpA	200	01.11.2027	Exploration
03301-B251-9	CRONOS C 7	Andean Belt Resources SpA	200	12.30.2026	Exploration
03301-B277-2	DIUCA 1	Andean Belt Resources SpA	300	06.08.2027	Exploration
03301-B278-0	CRONOS G 1	Andean Belt Resources SpA	300	04.05.2027	Exploration
03301-B279-9	CRONOS G 2	Andean Belt Resources SpA	300	03.28.2027	Exploration
03301-B622-0	APOLO 8	Andean Belt Resources SpA	300	01.05.2028	Exploration
03301-B623-9	APOLO 9	Andean Belt Resources SpA	300	01.19.2028	Exploration
03301-B624-7	APOLO 10	Andean Belt Resources SpA	300	12.15.2027	Exploration
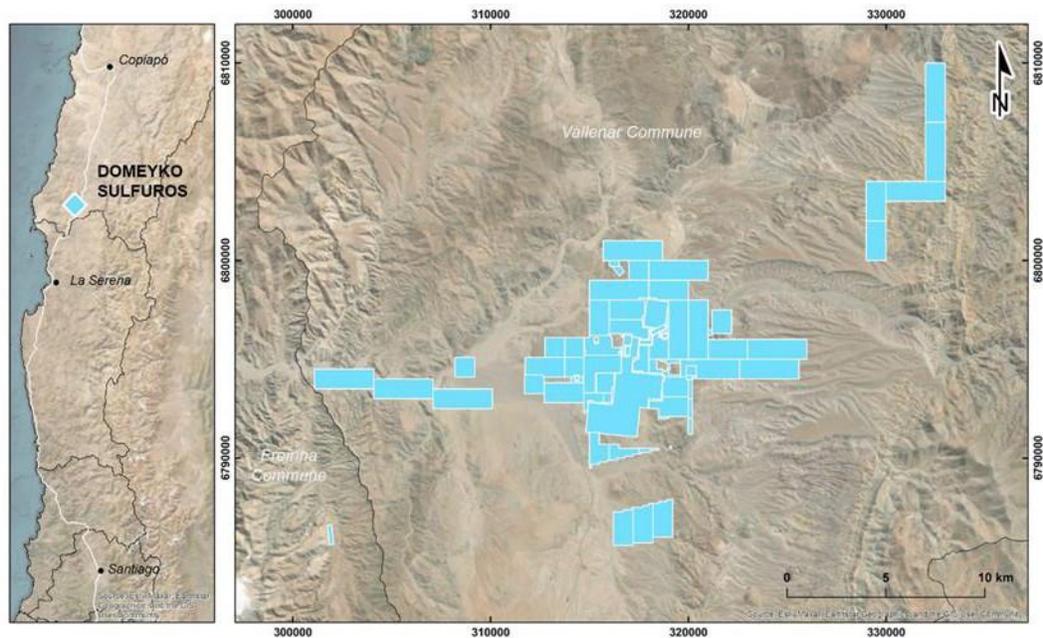
Figure 4.1:   Domeyko Sulfuros project mining rights location map under PSAD56
Source: ABR, 2025.
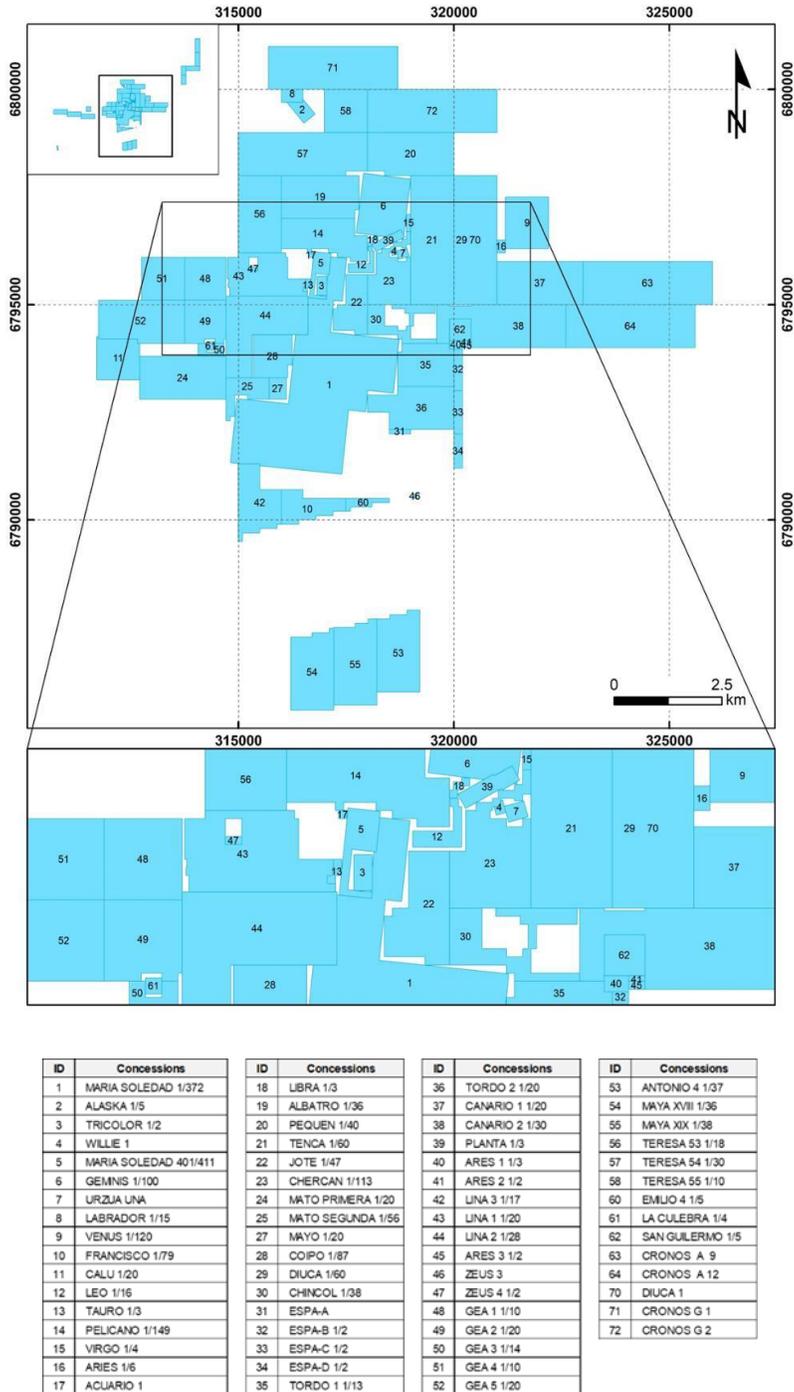
Figure 4.2: **Location of mining concessions at the Domeyko Sulfuros project, central area under PSAD56**

Source: ABR, 2025.

ID	Concessions	ID	Concessions	ID	Concessions	ID	Concessions
1	MARIA SOLEDAD 1/372	18	LIBRA 1/3	36	TORDO 2 1/20	53	ANTONIO 4 1/37
2	ALASKA 1/5	19	ALBATRO 1/36	37	CANARIO 1 1/20	54	MAYA XVIII 1/36
3	TRICOLOR 1/2	20	PEQUEN 1/40	38	CANARIO 2 1/30	55	MAYA XIX 1/38
4	WILLIE 1	21	TENCA 1/60	39	PLANTA 1/3	56	TERESA 53 1/18
5	MARIA SOLEDAD 401/411	22	JOTE 1/47	40	ARES 1 1/3	57	TERESA 54 1/30
6	GEMNIS 1/100	23	CHERCAN 1/113	41	ARES 2 1/2	58	TERESA 55 1/10
7	URZUA UNA	24	MATO PRIMERA 1/20	42	LINA 3 1/17	60	EMILIO 4 1/5
8	LABRADOR 1/15	25	MATO SEGUNDA 1/56	43	LINA 1 1/20	61	LA CULEBRA 1/4
9	VENUS 1/120	27	MAYO 1/20	44	LINA 2 1/28	62	SAN GUILERMO 1/5
10	FRANCISCO 1/79	28	COIPO 1/87	45	ARES 3 1/2	63	CRONOS A 9
11	CALU 1/20	29	DIUCA 1/60	46	ZEUS 3	64	CRONOS A 12
12	LEO 1/16	30	CHINCOL 1/38	47	ZEUS 4 1/2	70	DIUCA 1
13	TAURO 1/3	31	ESPA-A	48	GEA 1 1/10	71	CRONOS G 1
14	PELICANO 1/149	32	ESPA-B 1/2	49	GEA 2 1/20	72	CRONOS G 2
15	VIRGO 1/4	33	ESPA-C 1/2	50	GEA 3 1/14		
16	ARIES 1/6	34	ESPA-D 1/2	51	GEA 4 1/10		
17	ACUARIO 1	35	TORDO 1 1/13	52	GEA 5 1/20		

ID	Name
26	KENA 1/10
59	TOPAZE 1/4
73	APOLO 8
74	APOLO 9
75	APOLO 10

Figure 4.3: **Location of mining concessions at the Domeyko Sulfuros project, western area under PSAD56**

Source: ABR, 2025.

ID	Name
65	CRONOS C 1
66	CRONOS C 2
67	CRONOS C 3
68	CRONOS C 4
69	CRONOS C 7
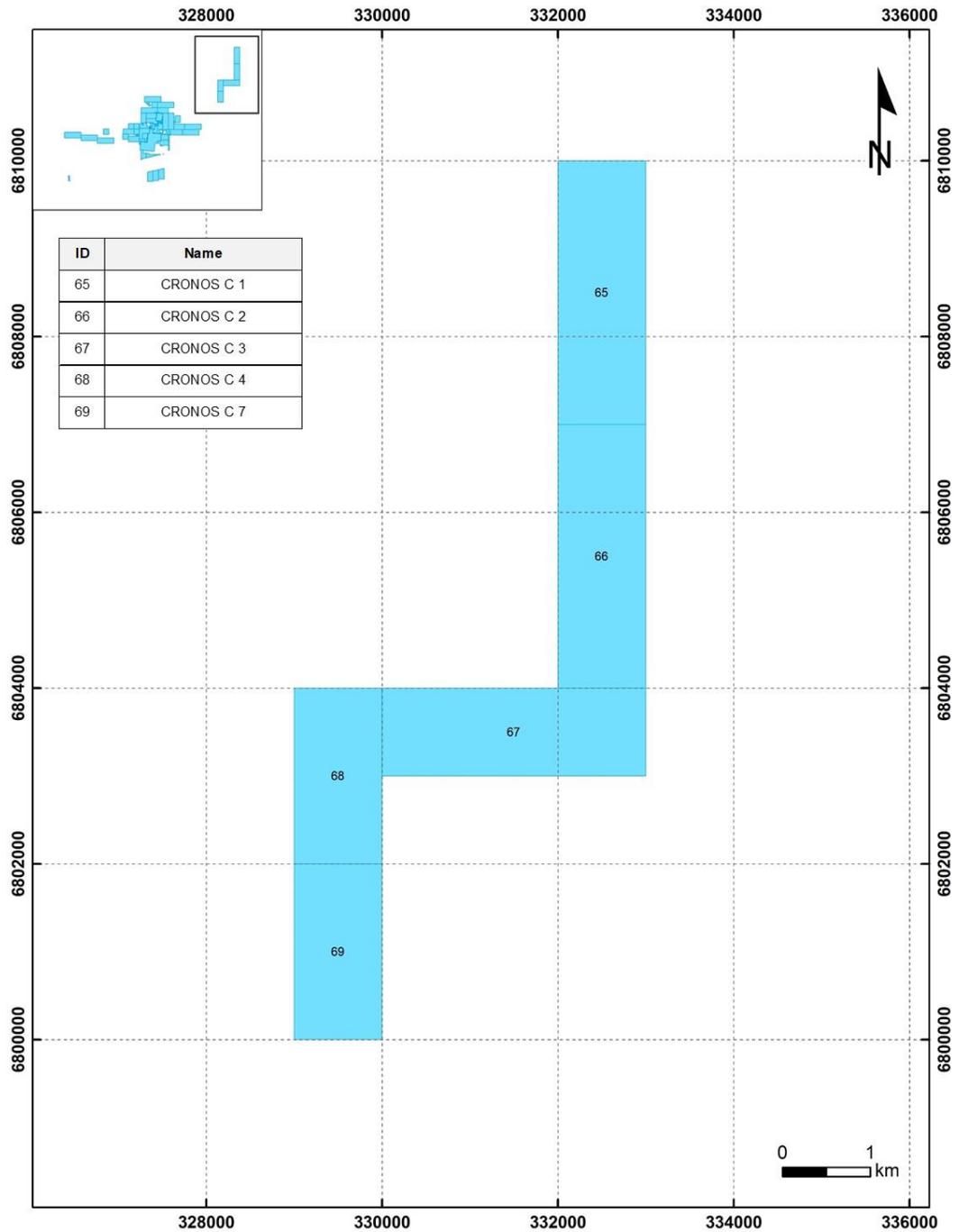
Figure 4.4: Location of mining concessions at the Domeyko Sulfuros project, eastern area under PSAD56

Source: ABR, 2025.

The current mineral and land tenure policies in Chile were instituted as laws in 1982 and subsequently amended in 1983. These laws were formulated to protect the property rights of both domestic and foreign investors, with the aim of fostering mining development in Chile.

While the state retains absolute, exclusive, inalienable, and imprescriptible ownership of all mineral resources in Chile, every person has the right to establish a mining concession. The acquisition of mining concessions is authorized by the Courts, in accordance with mining regulations. Two categories of concessions exist: exploration and exploitation.

Exploration concessions, granted for two years but extendable, are intended to provide the holder with access to specified lands for conducting baseline mineral exploration activities, including rock or soil sampling, geophysics, mechanical trenching, and drilling. An exploration concession is secured through a claim filing and encompasses all minerals potentially present within its designated area.

Exploitation concessions, granted for the duration of the mining license as long as the holder continues payment every year, are designed for advanced projects and when mining operations are under consideration.

Concessions are defined by UTM coordinates representing the center-point of the concession and dimensions (in meters) in north-south and east-west directions. The corners of exploitation concessions are marked in the field by cement monuments surveyed and erected by an authorized surveyor and appropriately inscribed.

The only obligation under the Chilean Mining Code to maintain ownership of the concessions is to pay annual a "mining license."

These payments are to be submitted to the Chilean Treasury each year in March.

As of the current date, property payments will maintain the Domeyko Sulfuros exploitation concessions in good standing until March 2026. The total annual cost to maintain the exploitation and exploration concessions in 2025, to be paid in March 2026, is CLP 167.104.000 (approximately USD 180,000).

Payments are calculated using local tax (UTM) which contains the variation of the consumer price index that is determined monthly. Values are updated monthly on the Chilean Revenue Service website (www.sii.cl).

The legal opinion confirmed that exploitation concessions were correctly constituted and duly granted, were in full force and effect, were correctly registered in the corresponding Mine Registrar of Vallenar to ABR, and the annual mining license fees had been paid.

There was no litigation involving the exploitation concessions at the opinion date.

4.2   Permits and Water Rights

Permits for initial exploration and prospecting are not required in Chile. As for early field exploration works, there is no requirement to hold an exploration permit. When more advanced work is undertaken, such as surface trenching or drilling, an exploration permit will be required.

In Chile, projects entailing forty or more drill platforms require an environmental declaration or assessment. The determination is contingent upon the specific environmental impacts and/or location of the project, as outlined below.

A platform is characterized as a clean and raised up surface where drilling equipment is positioned for boring one or more holes.

Environmental assessments for exploration projects are not mandatory for less than 40 drill platforms unless located in protected or sensitive areas. The determination of whether the project requires an Environmental Assessment Study (Estudio de Impacto Ambiental – EIA) or an Environmental Assessment Statement (Declaración de Impacto Ambiental – DIA) is contingent upon the project's specific location and environmental attributes.

To date, no environmental permits have been applied for or issued for the Domeyko Sulfuros Project in connection with any exploration activities conducted to date.

The proposed exploration programs outlined in this report are anticipated to forego the necessity for a formal permitting process. However, due to the incremental complexity of subsequent programs, it may become necessary to submit Environmental Assessment Studies or an Environmental Assessment Statement in the future.

Property owner is obligated to submit an "initiation of activities form" to SERNAGEOMIN, the Chilean National Mining and Geology Service, to start exploration activities at the project site, including earthmoving and drilling operations (Activity Initiation Form or 'Iniciación de Actividades'). This form is a requisite step to be completed before the initiation of said activities and is considered a standard procedure for permitting drilling activities in Chile, with no significant delays anticipated.

Permits for water extraction are not deemed necessary when procuring water from third-party entities possessing lawful title and rights for water sale.

Notwithstanding the foregoing, it is hereby stated that Andean Belt Resources SpA was granted the bare legal title of two groundwater use rights, of seven and twelve point six liters per second, respectively, with the contributor retaining the usufruct of these rights for a period of eight years. The foregoing is recorded in a public deed dated December 5, 2023, before the notary public of Santiago, Mr. Wladimir Alejandro Schramm López, whose registration in the corresponding Water Registers of the Real Estate Registrar of the City of Vallenar is currently in process.

4.3 Surface Rights and Legal Access

Surface Rights in Chile, ownership of mining concessions is distinct from ownership over the surface land on which a concession is located.

According to Chilean law, a mining concession does not confer rights to access and occupy the surface land; such rights are necessary to build infrastructure and conduct mining activities.
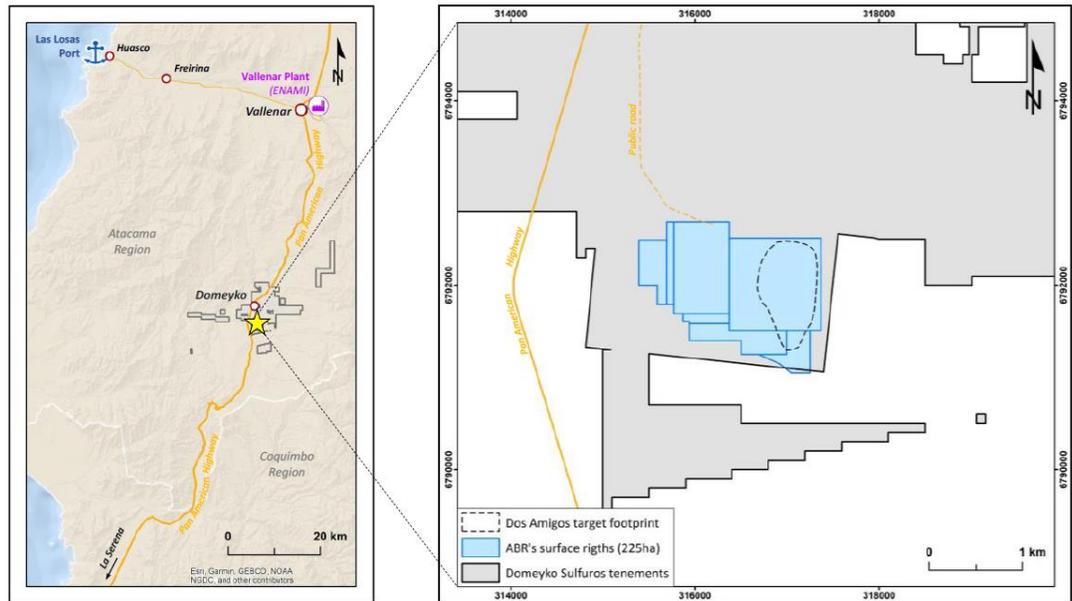
Figure 4.5: Location of ABR´s surface rights at the Domeyko Sulfuros Project

ABR holds seven surface rights, situated in the commune of Vallenar within the Province of Huasco in the Atacama Region. The property rights cover 225 hectares, granting authorization for exploration and mining activities on the surface land. The proposed upcoming exploration phase is primarily focused on the Dos Amigos deposit, which is entirely located within the ABR land.

In order to keep the property rights in good standing, Chilean legislation requires a quarterly payment called real estate taxes ("contribuciones"), which consists of a tax that is applied on the tax appraisal of the properties and is made in annual instalments.

Annual taxes are payable on the surface rights, and all payments were current as at the Report effective date.

Therefore, there are no litigations, administrative procedures, trials, or similar pending, by maintaining the ABR, the ownership of the surface lands to conduct mining activities.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Domeyko Project consists of seventy-five mining concessions, covering a total area of 10,056 hectares (9,682 effective), sixty-two of which are exploitation concessions and thirteen which are exploration concessions.

Domeyko Sulfuros benefits from outstanding accessibility due to its strategic location near the Pacific coast, low-altitude setting, and easily accessible logistical infrastructure. The previously mentioned positive features allow for year-round exploration activities to be carried out.

5.1 Accessibility

The Domeyko Sulfuros project is strategically located at approximately 150 kilometers north of the port of Coquimbo and the city of La Serena in Chile, within the commune of Vallenar, Province of Huasco, Atacama Region.

Accessibility to the project site is facilitated by daily flights from Santiago, the capital of Chile, to La Serena, which takes approximately one hour. From La Serena, the Pan-American Highway leads to the town of Domeyko, where a year-round local road connects to the drill core processing and logistics facilities on the property. Driving time from La Serena to the project area is approximately two hours, highlighting reasonable accessibility for project personnel, services, and equipment

Table 5.1:   Access roads to the Domeyko Sulfuros project

Route	Status	Distance
Coquimbo Port - La Serena - Domeyko	Paved highway	151 km
La Serena - Domeyko	Paved highway	146 km
Vallenar - Domeyko	Paved highway	50 km
Huasco Port - Vallenar - Domeyko	Paved highway	95 km
Domeyko - Domeyko Sulfuros Project	Unpaved local road	4 km

5.2 Local Resources and Infrastructure

The Chilean mining industry is extremely well developed, positioning the country as a major global producer of copper, iron ore, and various other metals. Mining supplies, equipment, international exploration consultants, mining service companies, and a highly trained technical and professional workforce are readily available in the country, with minimal demand for expatriate specialists and contractors.

The town of Domeyko is located within the immediate vicinity of the project and is adjacent to the Pan-American Highway, connecting it to La Serena and the Coquimbo port to the south, and to Vallenar in the north. A police station, basic medical facilities, food services and limited accommodation can be found in Domeyko. A power substation at Domeyko is connected to the national grid and provides electricity to the project.

La Serena and the Coquimbo port area are located by the Pacific Ocean and are the main metropolitan districts of the semi-desert Region of Coquimbo, with a population exceeding 510,000 inhabitants as of the 2024 Census, according to the Chilean government website. Both are located about 150 kilometers south of the project area and serve as the main hub for supplies, airport, deep seaport facilities, specialized exploration services, mining equipment, and highly trained personnel.

The city of Vallenar, with a population of 54,000, according to the 2024 Census, is located approximately fifty-four kilometers north of the project area and serves as a significant hub for most supplies and logistics. The port of Huasco, located at approximately ninety-five kilometers from the project, is connected to Vallenar through a highway, which is open all year round.

5.3 Climate

The property is within the coastal belt of the Atacama region and is characterized by a mid-latitude desert climate. The yearly temperature averages range between 18 and 19ºC, which is 4.0% higher than the national averages in Chile. Precipitation is minimal, with an annual average of about 0.64 millimeters (0.03 inches) and only 1.0 rainy day per year, accounting for a mere 0.27% of the time.

Given its excellent accessibility and low altitude, all types of exploration activities can be performed year-round.

5.4 Physiography

The Dos Amigos mining district is located within a depression known as the Domeyko Graben, positioned between two primary mountain systems, the Coastal Cordillera and the Andean Range. This depression is filled with sediments, forming various terraces and recent alluvial deposits, constituting extensive plains.

The topography around the project area is predominantly flat and low-lying, with rolling hills surrounding wide valleys. Vegetation is sparse or virtually non-existent.

The project area is arid and spans an altitude range from 775 meters (at Domeyko city) to 1,243 meters above sea level, located within a highland range that measures approximately seven kilometers in length and three kilometers in width.

There is no year-round surface water available, therefore the property's drainage system features intermittently flowing streams forming an ephemeral fluvial network. These dry creeks, oriented in northeast-southwest and southeast-northeast directions, are controlled by structures intersecting the primary topographic feature. From north to south, the system comprises the Pastos Largos, Arenosa, Algarrobal, Barracones, San Antonio, Macaya, and Cachiyuyo creeks. The topography gradually slopes westward, extending towards the Bandurrias alluvial fan at the property's southwestern boundary, contributing to the overall definition of the stream arrangement.
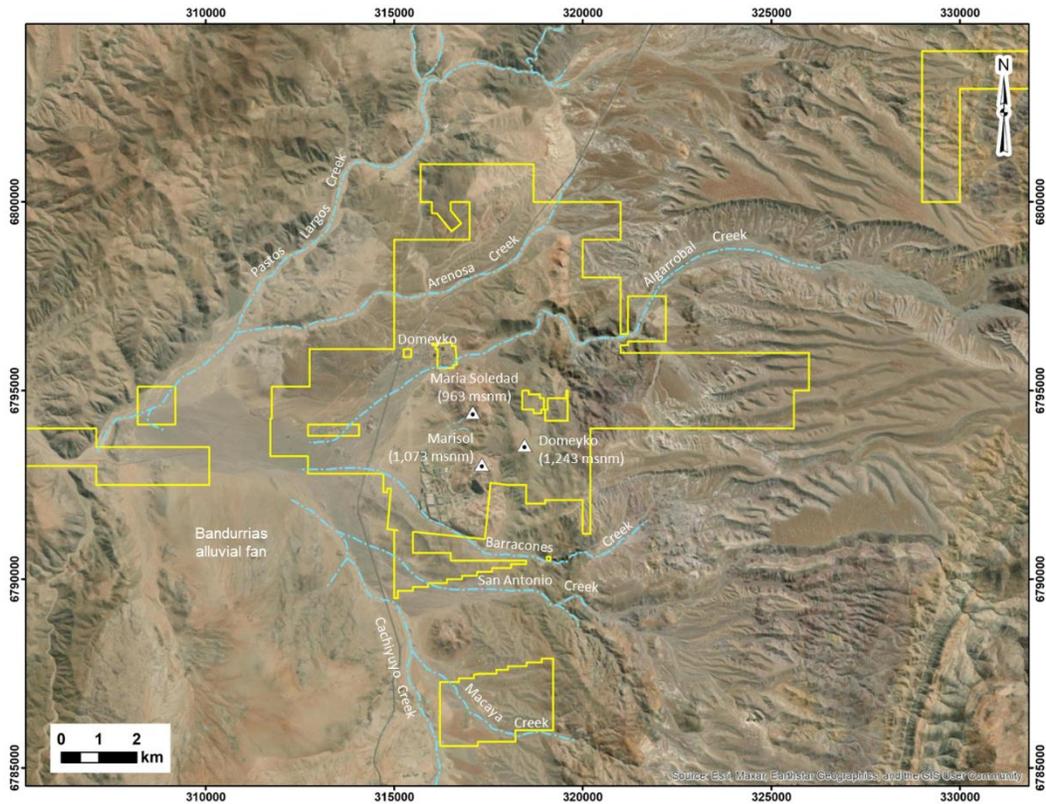
Figure 5.1:   Drainage system at the Domeyko Sulfuros project area
Source: Ferrari, 2024.

6 History

This chapter has been prepared using existing reports, some of which are incomplete, along with maps, geological datasets, and publications. It provides a concise overview of our current understanding of the project's history.

6.1 Exploration Conducted from 1962 to 1985

The earliest exploration efforts at the district, conducted at assessing the porphyry copper potential within the Domeyko alteration cluster, are traceable to the timeframe spanning from 1962 to 1964. These field campaigns were part of a 'Program for Development' financially supported by the United Nations, as documented by Kents in 1962 (as cited in Sutcliffe, 1981). The activities undertaken included a 1:10,000 scale reconnaissance mapping of the Dos Amigos and Tricolor areas, along with SP and resistivity surveys. Subsequently, five shallow drillholes, totaling 626 meters, were executed at Tricolor anomaly. The results of these drillings indicated the presence of low-grade primary copper mineralization, with concentrations ranging from 0.13 to 0.32 percent within specific intervals (Sutcliffe, 1981).
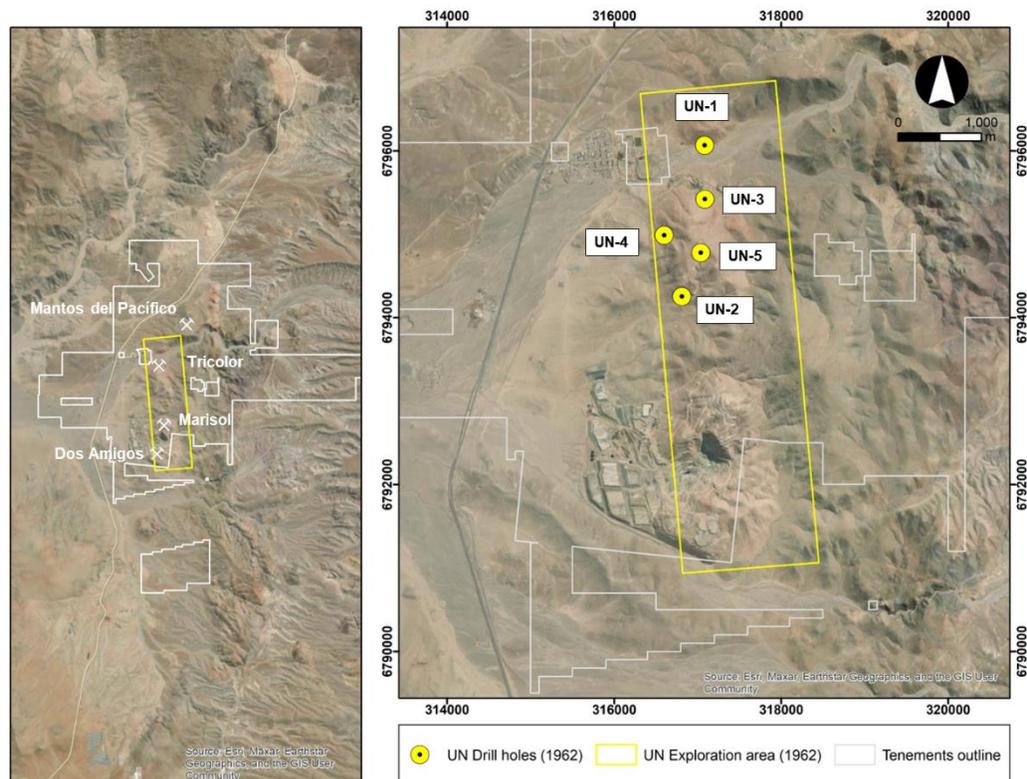
Figure 6.1:   Exploration area and drillholes executed from 1962 to 1964
Source: Ferrari, 2022.

Between 1968 and 1971, the governmental institution 'Corporación Nacional de Fomento' (CORFO) conducted a comprehensive exploration campaign in the Dos Amigos area. This initiative involved geological studies, 43 diamond drillholes totaling 5,361 meters, and 4 percussion drillholes spanning 236 meters. This program identified a supergene copper enrichment zone, for which a resource of 3.5 million metric tons averaging 1.18 percent copper (Table 6.1), was estimated (Palafox, 1975, as cited in Maksaev, 2010).
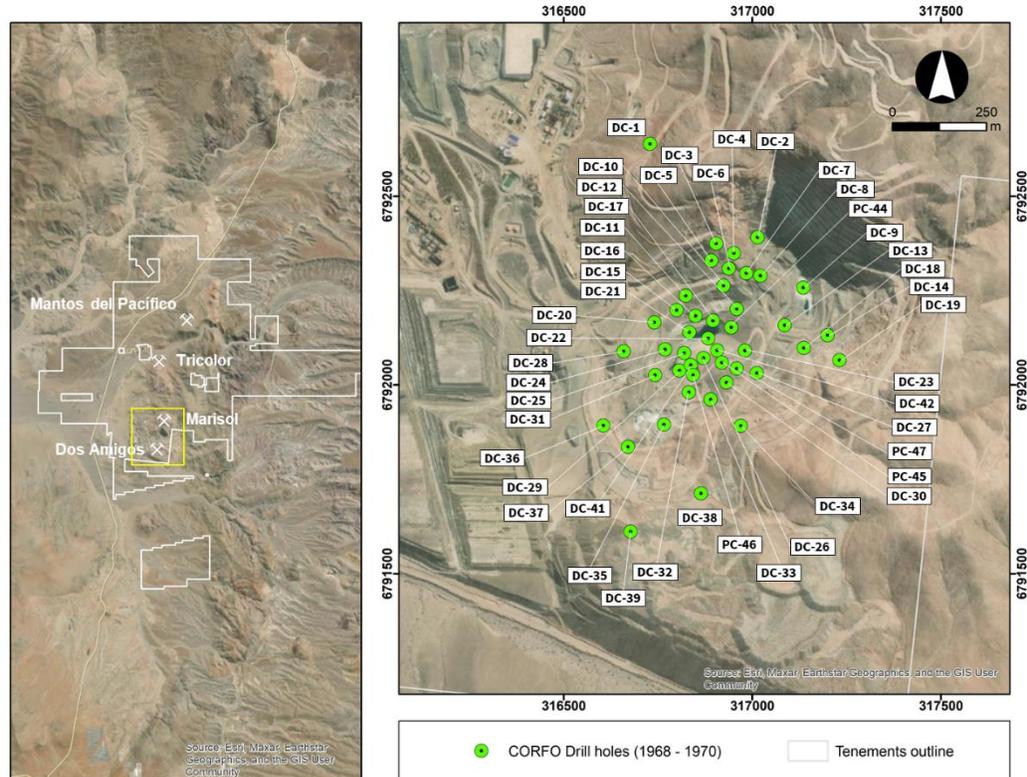
Figure 6.2:   CORFO drillholes location map
Source: Ferrari, 2022.

During the period from 1976 to 1980, Noranda Inc. conducted a re-examination of core samples from prior exploration campaigns and the analysis of unsampled mineralized intervals within drillholes located in the Dos Amigos target. Noranda's findings indicated that the supergene mineralization corresponds to an elliptical body measuring 500 meters in length and 300 meters in width, with an average grade of approximately 1% Cu. The underlying hypogene mineralization was associated with a biotite-rich diorite porphyry, exhibiting grades of about 0.40% Cu. Noranda (as cited in Sutcliffe, 1981) concluded that the property held the potential to develop reserves totaling 20 million tonnes at approximately 0.7% Cu. No observations were made regarding the gold (Au) potential of the project (Sutcliffe, 1981).

Shell Chile Metals Division conducted further exploration activities at Domeyko between 1981 and 1983. These efforts comprised detailed geological and alteration mapping, geochemical sampling, geophysical studies, and the execution of 5,772.50 meters of exploratory drilling (Sutcliffe, 1981; Shell Chile Metals Division, 1982; Shell Chile Metals Division, 1983; Compañía Minera San Esteban, 1985 (1-3)). The work done by Shell resulted in the expansion of the Dos Amigos supergene resources to 5 million tonnes at 1.75% copper and 0.25 grams per tonne of gold. Furthermore, Shell reported hypogene resources totaling 36 million tonnes at 0.36% copper and 0.26 grams per tonne of gold, for the same area (Table 6.2).
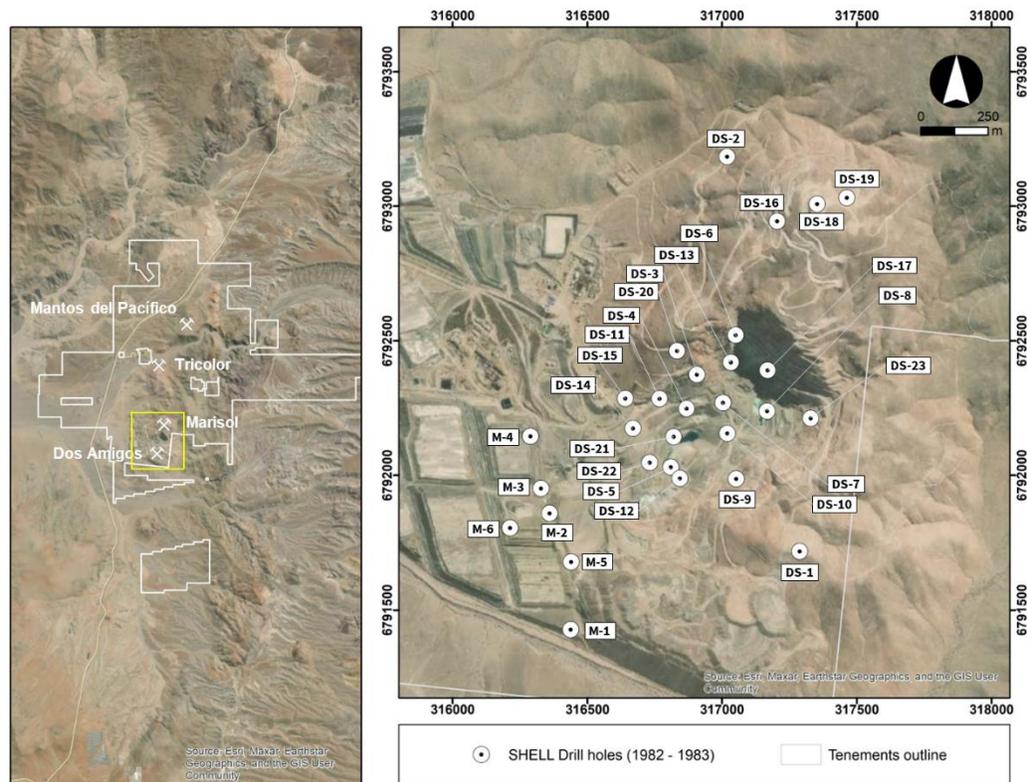
Figure 6.3:   Shell drillholes location map
Source: Ferrari, 2022.

In 1985, the local venture 'Compañía Minera San Esteban' performed a comprehensive evaluation of existing data for the Dos Amigos target with the objective of generating a re-interpretation of the supergene blanket. The company also completed eight vertical exploratory holes, totaling 744.85 meters, primarily for validating the grade of the secondary mineralization zone. Additionally, San Esteban conducted geotechnical studies, delineated mineral domains, and performed preliminary metallurgical studies with the aim of supporting the open-pit mining of the enrichment blanket. Indicated and measured reserves were reported for a total of 5.2 million tonnes at 1.44% Cu and 0.31 grams per tonne of gold, considering a cutoff grade of 0.5% copper.
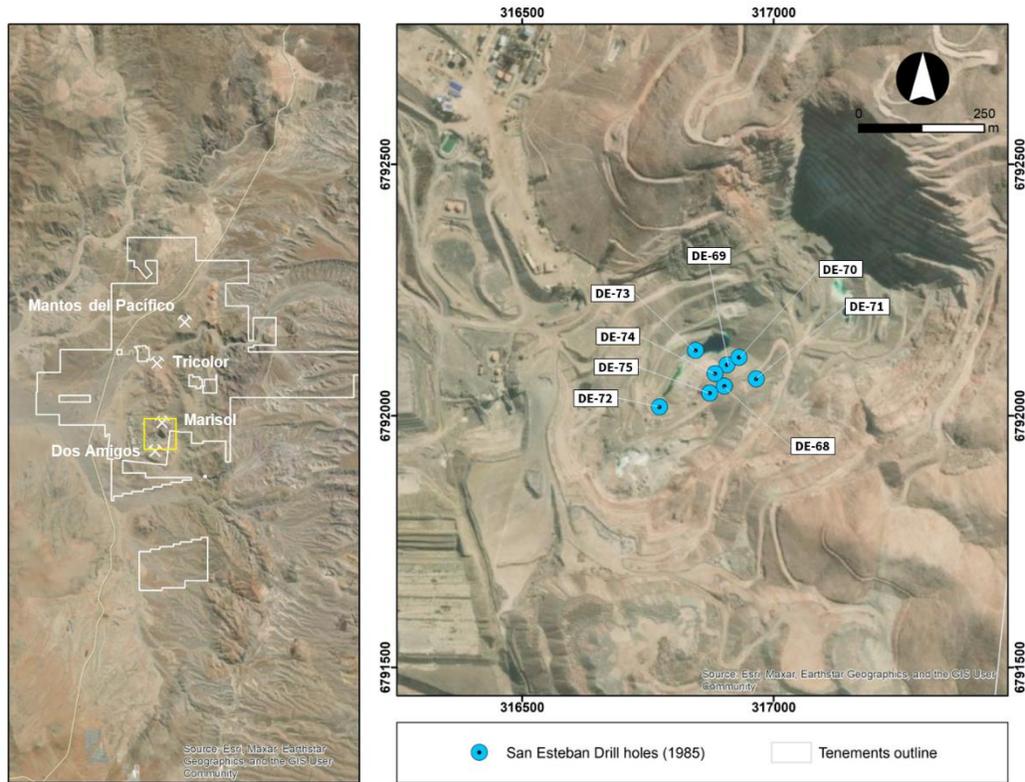
Figure 6.4: **Drillholes location map for the holes executed by Compañía Minera San Esteban in the Dos Amigos target**

Source: Ferrari, 2022.

Table 6.1:   Summary of significant drill intercepts for the historical drilling campaigns by CORFO between 1968 and 1971

Hole	Mineralization	Lithology	Interval (meters)	Cu (%)	Au (gpt)
DC-10	Hypogene	Feldspar porphyry	5.00	0.75	no data
DC-11	Supergene	Feldspar porphyry	10.00	0.47	no data
	Hypogene	Feldspar porphyry	71.00	0.57	0.23
DC-12	Supergene	Undifferentiated	33.00	0.75	no data
DC-15	Supergene	Feldspar porphyry	20.00	0.63	no data
DC-16	Supergene	Feldspar porphyry	20.00	0.86	no data
	Hypogene	Feldspar porphyry	30.00	0.53	no data
DC-17	Supergene	Feldspar porphyry	25.00	0.81	no data
	Hypogene	Andesite	33.00	0.48	no data
DC-20	Supergene	Andesite	11.00	1.07	no data
DC-22	Supergene	Feldspar porphyry	25.00	1.32	0.70
	Hypogene	Feldspar porphyry	116.00	0.50	no data
DC-23	Supergene	Feldspar porphyry	22.00	2.22	no data
	Hypogene	Feld. porphyry + volcanics	78.00	0.33	no data
DC-24	Supergene	Feldspar porphyry	17.00	1.32	no data
	Hypogene	Feldspar porphyry	13.00	0.37	no data
DC-25	Supergene	Feldspar porphyry	40.00	1.34	no data
DC-26	Supergene	Feldspar porphyry	5.00	0.96	no data
	Supergene	Andesite	33.00	2.36	0.22
DC-30	Supergene	Andesite	35.00	0.76	no data
DC-33	Supergene	Andesite	25.00	0.34	no data
DC-41	Supergene	Feldspar porphyry	20.00	1.48	no data
	Supergene	Feldspar porphyry	1.00	1.22	no data
	Supergene	Feldspar porphyry	19.00	1.02	no data
PC-44	Supergene	Feldspar porphyry	6.00	1.27	no data
PC-46	Supergene	Andesite	11.00	1.23	no data
PC-47	Supergene	Andesite	14.00	0.98	no data

Table 6.2: **Summary of relevant drill intercepts for the Shell drilling campaigns completed during the period 1981 – 1983 at Dos Amigos**

Hole	Mineralization	Lithology	Interval (meters)	Cu (%)	Au (gpt)
DS-4	Supergene	Feldspar porphyry	5.00	0.75	no data
	Hypogene	Feldspar porphyry	10.00	0.47	no data
DS-5	Supergene	Feldspar porphyry	71.00	0.57	0.23
	Hypogene	Undifferentiated	33.00	0.75	no data
DS-10	Supergene	Feldspar porphyry	20.00	0.63	no data
	Hypogene	Feldspar porphyry	20.00	0.86	no data
	Hypogene	Feldspar porphyry	30.00	0.53	no data
	Hypogene	Feldspar porphyry	25.00	0.81	no data
DS-12	Supergene	Andesite	33.00	0.48	no data
	Hypogene	Andesite	11.00	1.07	no data
DS-21	Supergene	Feldspar porphyry	25.00	1.32	0.70
	Hypogene	Feldspar porphyry	116.00	0.50	no data
DS-22	Supergene	Feldspar porphyry	22.00	2.22	no data
	Hypogene	Feld. porphyry + volcanics	78.00	0.33	no data

Table 6.3: **Summary of drilling completed at the Domeyko Sulfuros project as reported by companies, for the period from 1962 to 1985**

Company	Target	Start (year)	End (year)	Drill holes (number)	Drilled (meters)
United Nations	Exploration and definition	1962	1964	5.00	626.00
CORFO	Secondary sulfide definition	1968	1971	47.00	5,597.00
Shell Chile Metals Division	Secondary sulfide definition and primary mineralization exploration	1981	1983	29.00	5,772.50
Cia. Minera San Esteban	Definition of enrichment blanket	1985	1985	8.00	744.85
				89.00	**12,740.35**

6.2 Dos Amigos Operation (1996 – 2016)

In 1986, CEMIN Holding Minero acquired the property.

Since 1996, the enrichment blanket at Dos Amigos has been the focal point of exploration and open-pit mining by Compañía Explotadora de Minas (CEMIN). The extracted ore (mostly secondary sulfides) was processed using heap leaching and solvent extraction-electrowinning (SX/EW) methods in a plant located at the project site.

The operation started on a small scale, producing 5,000 tonnes of copper per year. Following a successful start-up, the plant underwent expansion, reaching a copper cathode production capacity of 10,000 tonnes per year. In accordance with Alvarez (2015), more than 12 million tonnes with copper grades over 0.85% were mined at Dos Amigos between 1997 and 2015.

Additionally, during the periods 2007-2010 and 2014-2015, 103,895 tonnes at 0.85% copper were extracted from the Marisol Breccia, situated immediately to the northeast of the Dos Amigos ore body.

The heap leach mining operation at Dos Amigos was discontinued in 2015 due to the depletion of secondary sulfide reserves. CEMIN currently operates in Dos Amigos a small-scale processing plant that produces copper sulfates through the reprocessing of heap leach residues.

From 1997 to 2016, CEMIN executed at the property, 107 holes, totaling 10,850.50 meters. Within this scope, 38 utilized diamond drilling; totaling 5,334.25 meters, while 47 employed reverse circulation techniques. Additionally, six DTH holes were executed to provide a first pass drill test of geochemical anomalies. Sixteen drillings, totaling 1,472.35 meters, lacked identification regarding the employed drilling method.

In the Dos Amigos target, 42 drillholes were executed, amounting to 2,611.00 meters.

Table 6.4: **Summary of drilling campaigns conducted by CEMIN in the Dos Amigos target, Domeyko Sulfuros project, and other targets, from 1997 to 2015**

Company	Target	Start (year)	End (year)	Drill holes (number)	Drilled (meters)
CEMIN	Secondary sulfate definition and infill drilling at Dos Amigos.	1997	2016	107.00	10,850.50
	Dos Amigos : infill drilling (32) and geotechnical studies (10).	_1997_	_2015_	_42.00_	_2,611.00_
	Marisol : secondary sulfides definition.	_2015_	_2016_	_41.00_	_6,175.00_
	Tricolor : secondary sulfides exploration.	_1998_	_2015_	_15.00_	_1,133.00_
	Mantos del Pacífico : copper oxides exploration.	_2015_	_2015_	_4.00_	_378.00_
	Other targets : first pass exploration.	_1998_	_2016_	_5.00_	_553.50_

6.3 CEMIN Exploration (2018 – 2019)

During 2018 and 2019, CEMIN conducted additional geological mapping, geochemical rock sampling, and executed a drilling program consisting of 140 holes, totaling 11,018.10 meters. The primary aim was to identify new oxide and secondary sulfide copper resources at the Marisol and Tricolor targets to support the reopening of the Dos Amigos plant.

Only two holes, SDDK 18-034 and SDDK 18-039, were drilled at the Dos Amigos orebody to assess the continuity of copper and gold mineralization at depth, reaching depths of 450.60 meters and 518.85 meters, respectively.

Both drillholes intersected quartz diorite porphyry, exhibiting argillic and potassic alteration, hydrothermal breccias, and diorite dikes. The intersected sulfide zone reveals the presence of both disseminated and fracture-filling mineralization, including chalcopyrite, bornite, pyrite, and magnetite. Given that the holes were collared at the bottom of the pit where supergene mineralization was previously extracted, no significant secondary mineralization was reported.

SDDK 18-034 intersected two mineralized intervals: the first, reporting 50.00 meters (from 0.00 to 50.00 meters) at 0.48 percent copper and 0.53 grams per tonne of gold, and the second, reporting 362 meters (from 84 meters to 446 meters), with grades of 0.54 percent copper and 0.48 grams per tonne of gold.

In the case of SDDK 18-039, two distinct mineralized intervals were reported: 136.00 meters (from 0.00 to 136.00 meters) at 0.50 percent copper and 0.50 grams per tonne of gold, as well as 178.00 meters (from 226.00 to 404.00 meters) at 0.48 percent copper and 0.39 grams per tonne of gold.
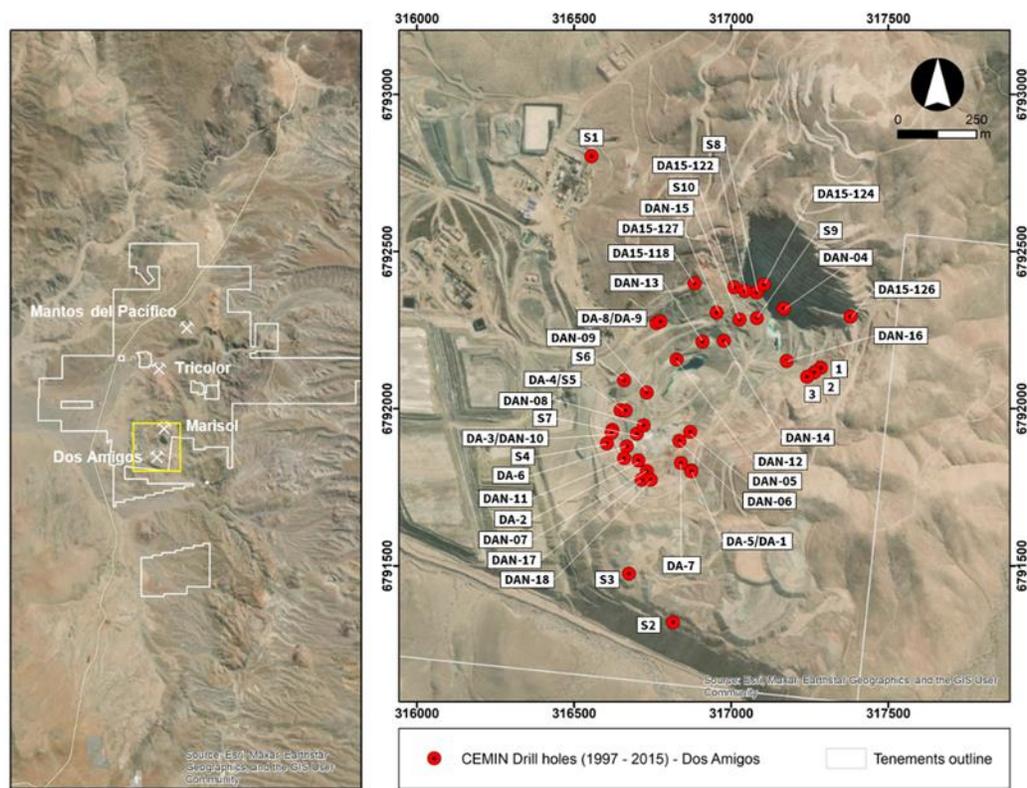
Figure 6.5: **Drillholes completed by CEMIN location map at the Dos Amigos target**
Source: Ferrari, 2022.

6.4 Exploration Carried out by CEMIN from 2021 to 2023

Based on the interpretation of findings from the deep holes conducted in the Dos Amigos orebody (SDDK 18-034 and SDDK 18-039), the exploration program underwent a realignment in 2021. This restructuring established a new project scope with a specific focus on investigating not only the supergene target but also the hypogene mineralization beneath it.

Between 2021 and 2023, the company conducted IP reconnaissance of the Dos Amigos – Tricolor corridor, performed spectrometry studies to enhance the Dos Amigos alteration map, and executed an airborne magnetic survey covering an area of 1205 hectares centered at the Dos Amigos pit.

In 2021, a reflectance spectroscopy analysis over a 350-2,500 infrared range was conducted for 238 samples collected in the Dos Amigos area (in Figure 6.6) with the purpose of performing a characterization of the mineralogical assemblages in the area (GROND, 2021). This study recognized 4 mineral assemblages, one overlying the other: biotitic, fengitic/chloritic, and sericitic assemblages, and the alunite+-diaspore lithocap, all affected by kaolinite+-montmorillonite+-smectite, interpreted as having a mainly supergene origin (Figure 6.7).
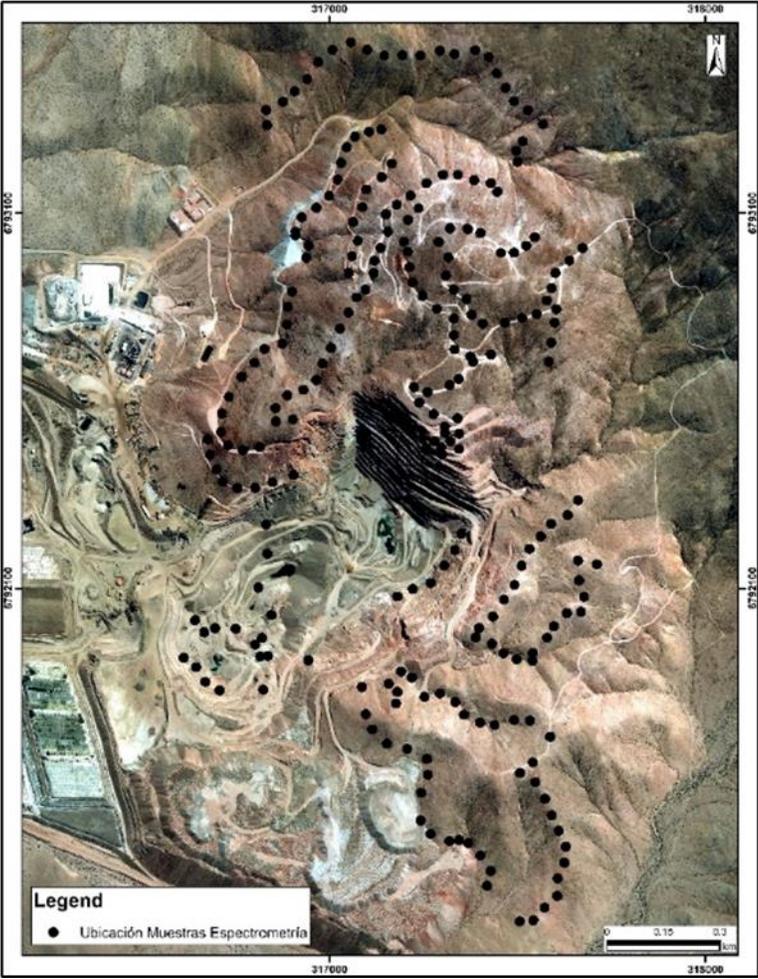
Figure 6.6: **Location of spectroscopy samples**
Source: Grond, 2021.
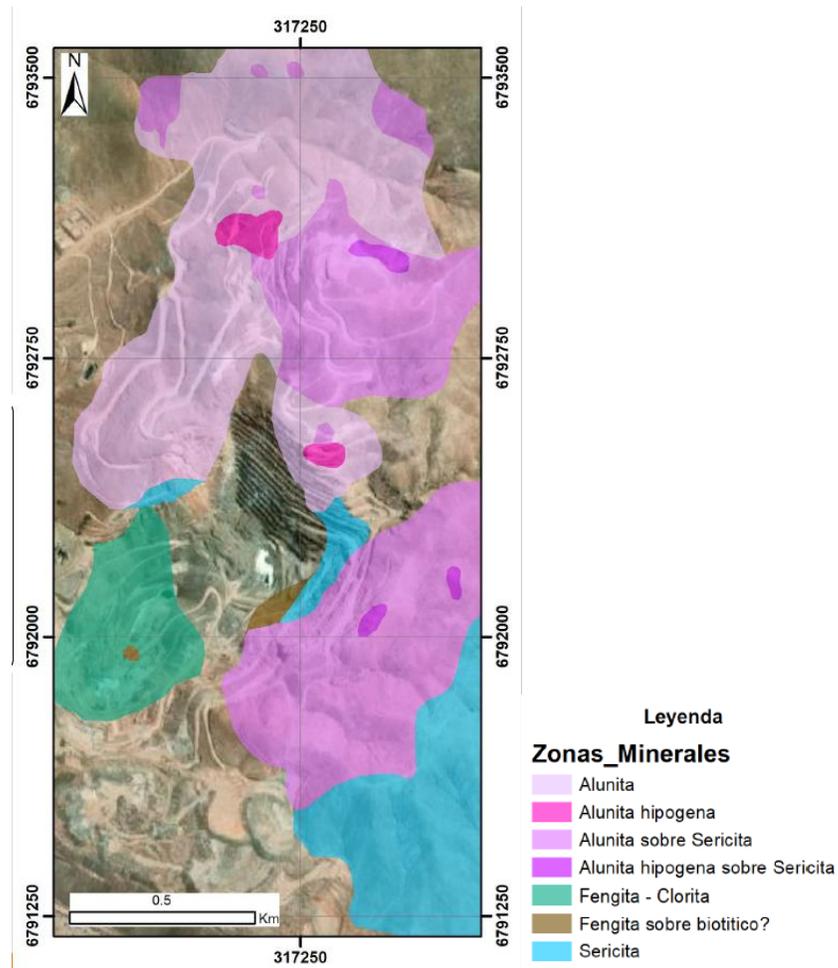
Figure 6.7:   Mineralogical assemblage map
Source: Grond, 2021.

In July of the same year, a GeoMagDrone study was carried out at the Dos Amigos mine, consisting of aerial magnetometry logging using unmanned drones. The survey area covered 10.5 km^2, with EW flight lines every 100 m and NS control lines every 500 m. Based on the results obtained, it is possible to interpret magnetic alignments associated with geological faults, high-frequency magnetic anomalies associated with shallow bodies, and longer wavelength magnetic anomalies that may be correlated to larger and deeper bodies or lithologies (GFDAS, 2021).
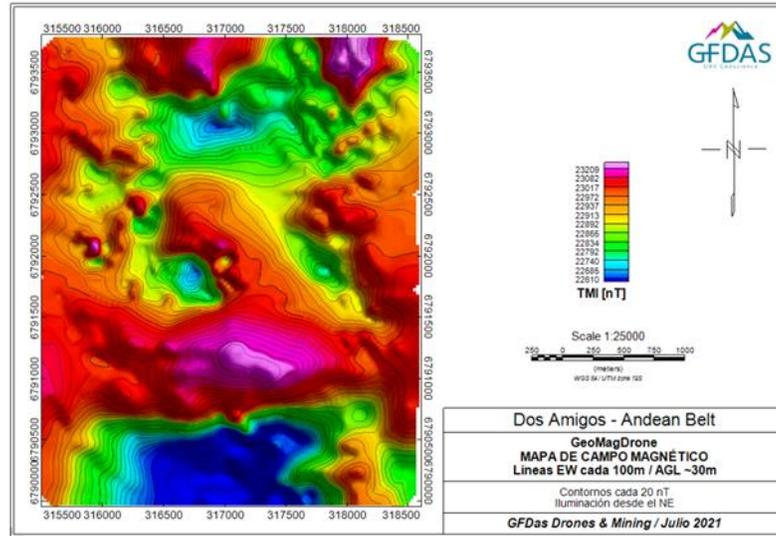
Figure 6.8: **Integrated geomagnetic field. Total magnetic intensity TMI. Illumination from the NW. Contours every 20 nT**
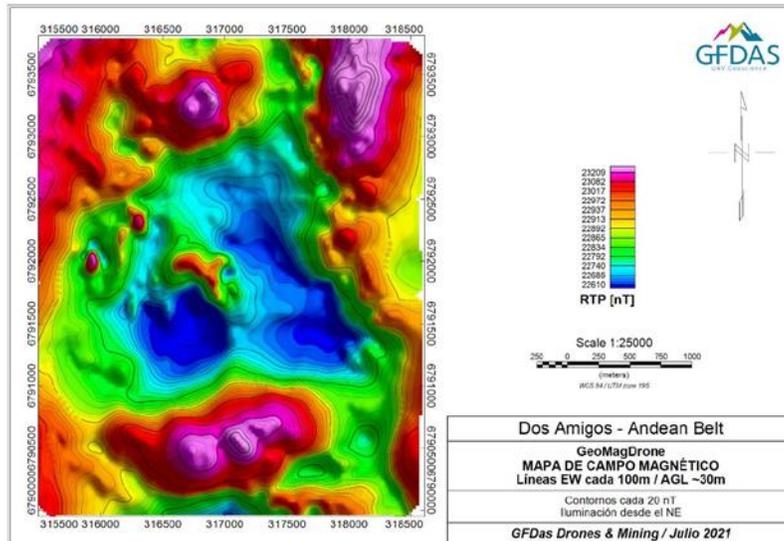
Source: GFDAS, 2021.

Figure 6.9: **Integrated geomagnetic field. Reduction to the pole (RTP). Illumination from the NW. Contours every 20 nT**
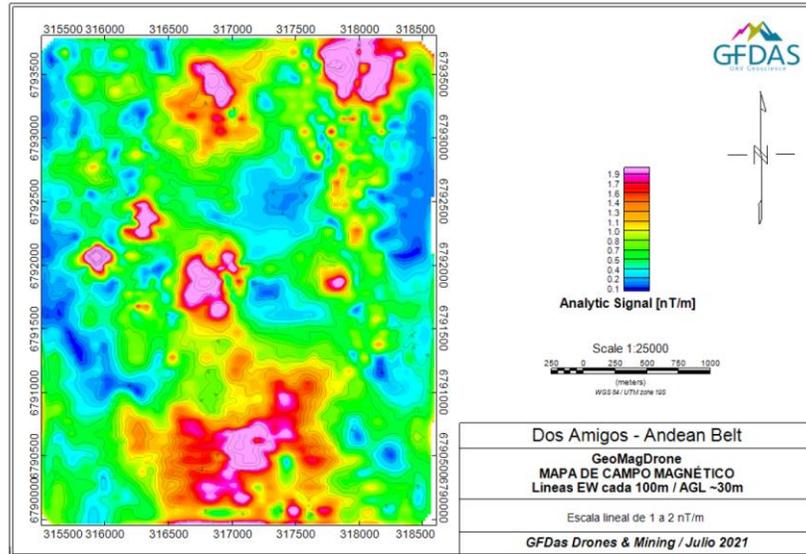
Source: GFDAS, 2021.

Figure 6.10:   Integrated geomagnetic field. Analytic signal. Linear palette between 0 and 2 nT/m
Source: GFDAS, 2021.

Subsequently, in October 2021, SouthernRock Geophysics conducted an induced polarization, dipole-dipole resistivity, and magneto-telluric study. A total of 18 linear km of induced polarization/dipole-dipole resistivity, and magneto-telluric surveys were acquired, using 100 m long dipoles distributed among three lines, two with an east-west orientation and a 500 m spacing between them and one line with a north-south orientation (Figure 6.11). In all, these add up to a total of 17.8 km and reach an average depth of 750 m (SouthernRock Geophysics, 2021).
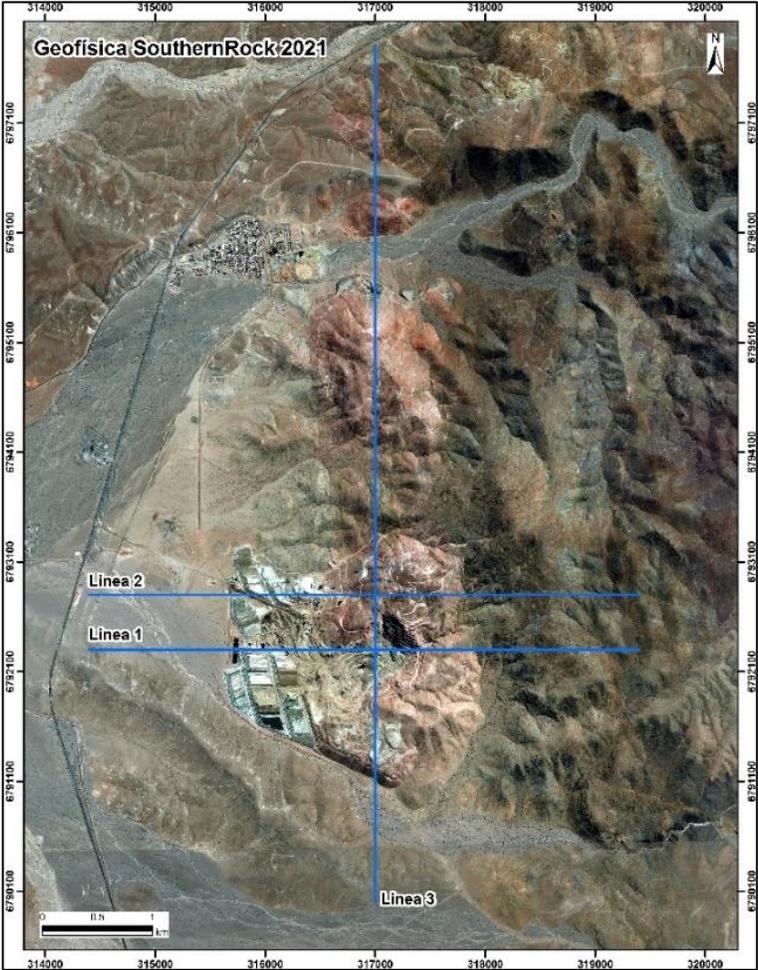
Figure 6.11: SouthernRock IP lines

Source: SouthernRock Geophysics, 2021.
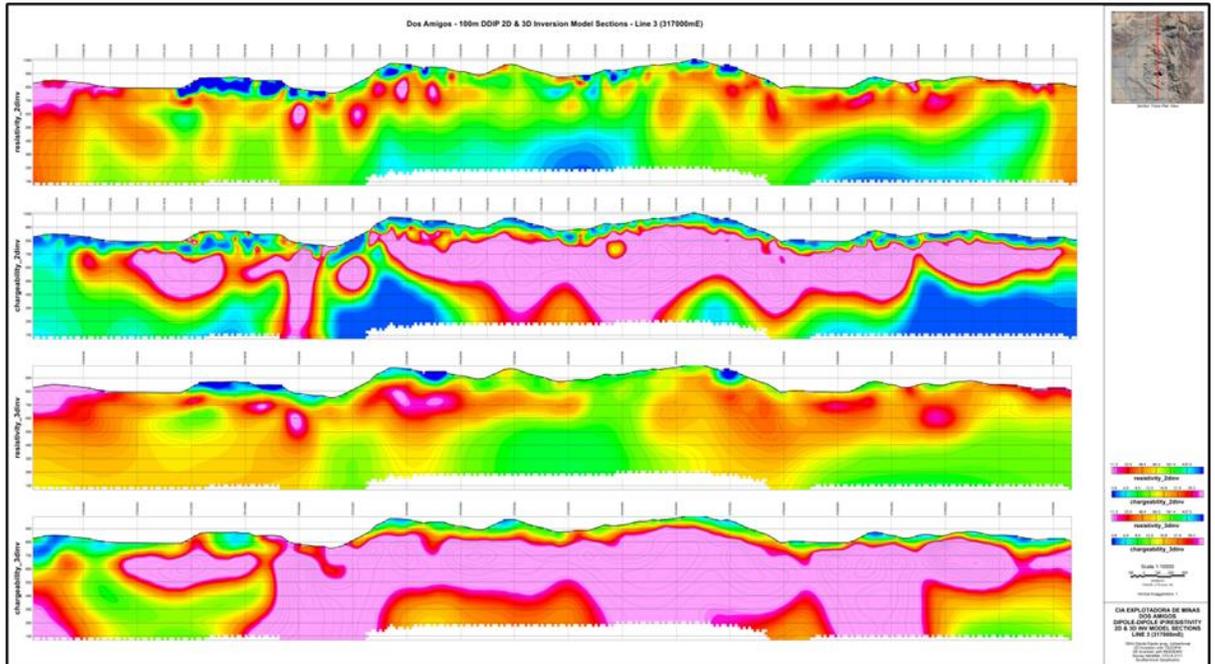
Figure 6.12: DDIP 2D & 3D inversion model section line 3

Source: 31700E; SouthernRock Geophysics, 2021.

Finally, surface sampling was carried out in 2023 from Dos Amigos to Tricolor, adding up to a total of 307 samples, which were analyzed at ALS laboratory based on a battery of ICP analyses of 48 elements. Figure 6.13 shows the location of the samples, and the following figures show the Cu and Mo anomalies recognized in this study (Swaneck, 2023).

Figure 6.13: Location of surface geochemical samples
Source: Swaneck, 2023.
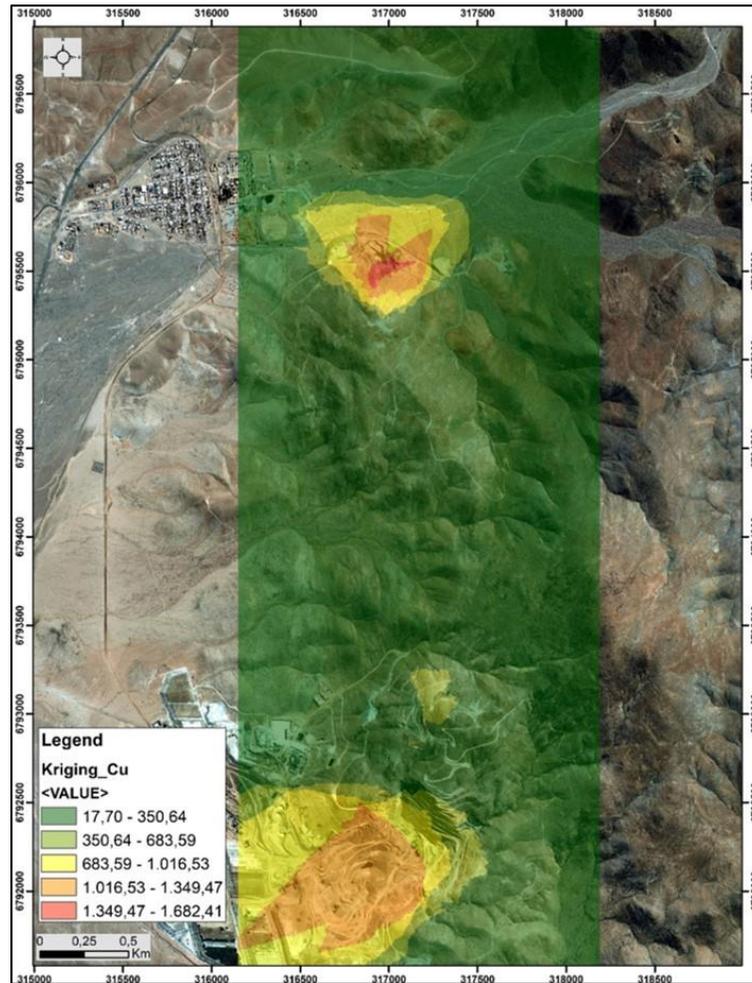
Figure 6.14: Cu grades from geochemical samples

Source: Swaneck, 2023.
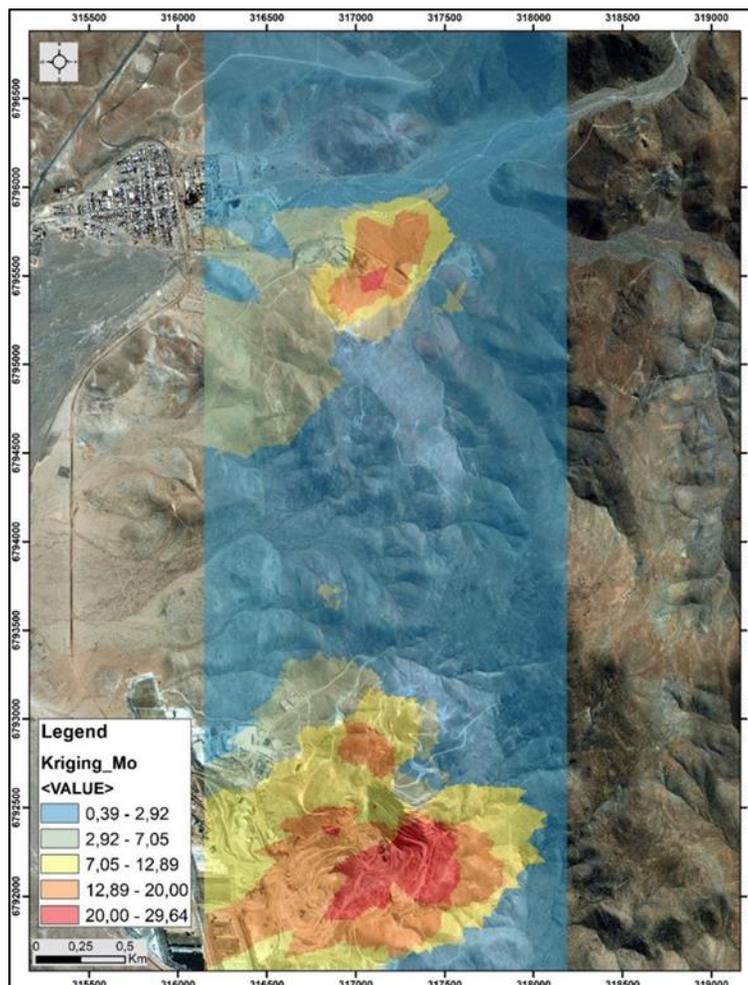
Figure 6.15:   Mo grades from geochemical samples
Source: Swaneck, 2023.

6.5   Drilling done by CEMIN from 2021 to 2023

Between 2021 and 2023, the company completed a diamond-drilling program, involving seven holes, totaling 4,412.95 meters (Table 6.5).

Six holes were collared in the Dos Amigos pit and one hole was drilled in the Marisol breccia, located adjacent to the north of Dos Amigos (Figure 6.16).

Drilling results from 2018-2019 and 2021-2022 campaigns validated copper and gold grades within a quartz-diorite porphyry system, corroborating the continuity of hypogene sulfide mineralization to a depth of approximately 650 meters from drill collars.

Table 6.5: **Summary of the most relevant drill intercept from both, the 2018-2019 and 2021-2022 drilling campaign**

Hole	From	To	Interval (meters)	Cu (%)	Au (gpt)
SDDK18-034	0.00	50.00	50.00	0.48	0.53
SDDK18-034	84.00	446.00	362.00	0.54	0.48
SDDK18-039	0.00	136.00	136.00	0.50	0.50
SDDK18-039	226.00	404.00	178.00	0.48	0.39
SDDK21-01	118.00	612.00	496.00	0.41	0.26
SDDK21-02	0.00	174.00	174.00	0.44	0.38
SDDK21-03	24.00	184.00	160.00	0.40	0.30
SDDK22-02	254.00	617.25	363.25	0.49	0.31
SDDK22-03A	312.00	470.00	158.00	0.44	0.27
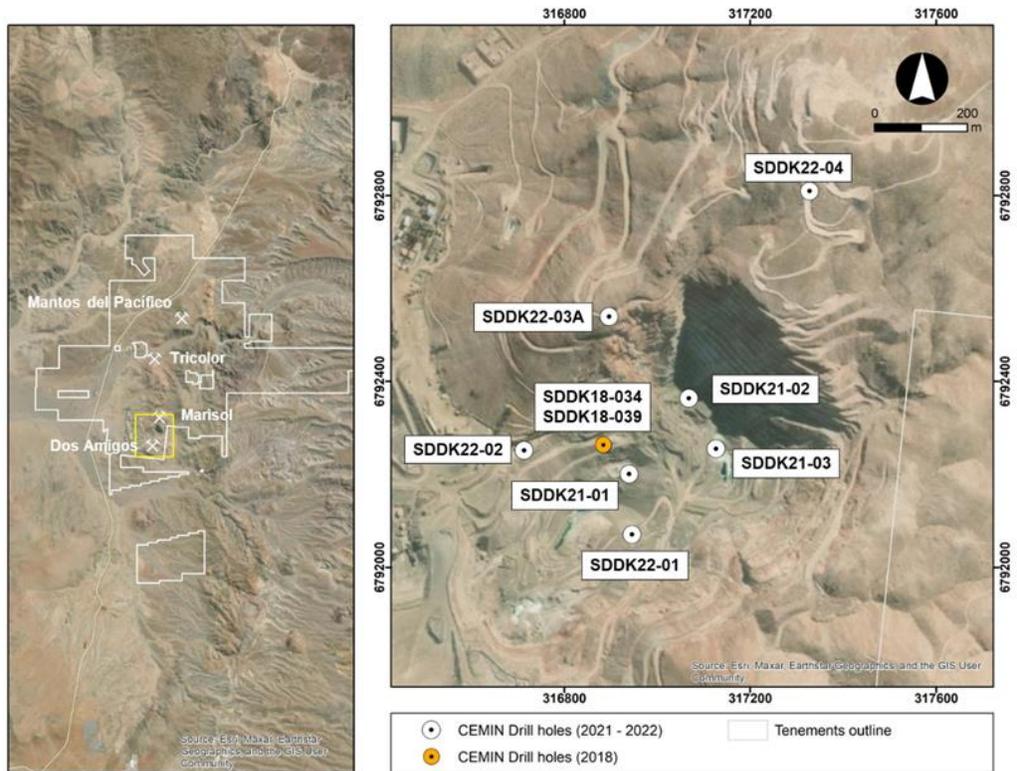
Figure 6.16: **Drillholes location map for the drilling done in 2018 (SDDK 18-034 and SDDK 18-039) and the holes completed during the 2021-2022 campaign at the Dos Amigos target**

Source: Ferrari, 2022.

6.6 Drilling done by CEMIN from 2023 to 2024

In 2023, a new campaign of 78 short reverse air drillholes was conducted, with lengths between 12 and 180 m, which in total correspond to 4,138 m. Five were drilled in the Marisol sector (680 m; Figure 6.17) and the remaining 73 holes were drilled in the Dos Amigos pit (3,432 m; Figure 6.18). A second reverse air drillhole campaign was conducted in 2024 in the northern sector and outside the model; this campaign consisted of 17 holes with a total of 668 m drilled (Figure 6.19).
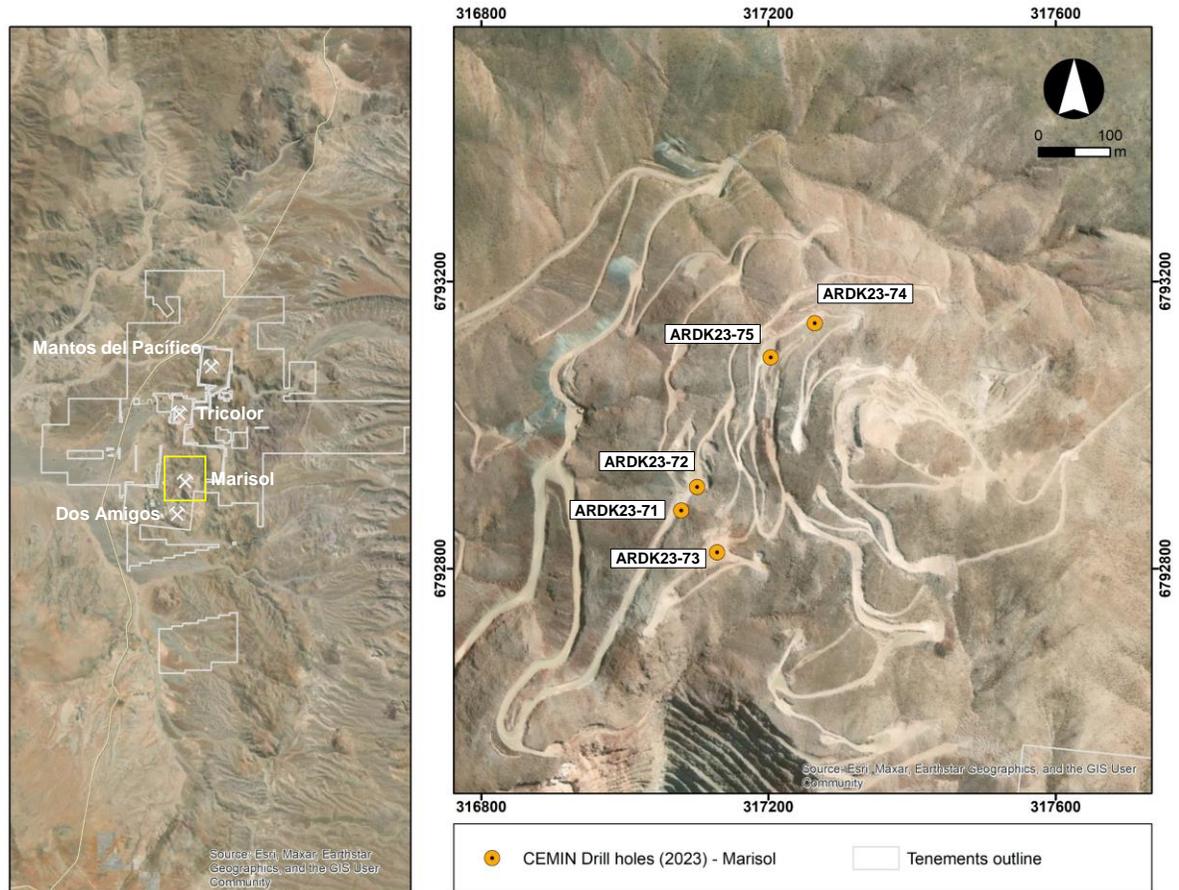
Figure 6.17:   Drillholes drilled in 2023 in the Marisol Sector
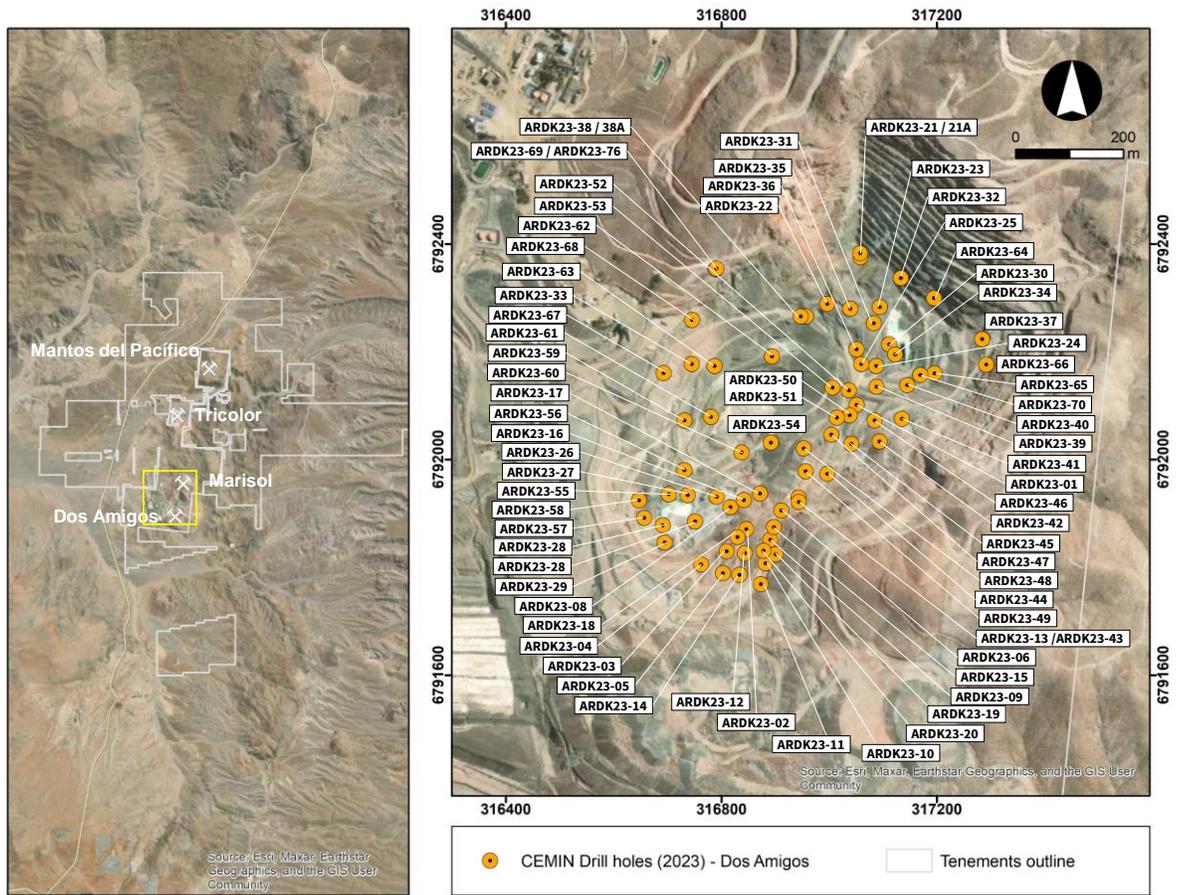
Figure 6.18:   Drillholes drilled in 2023 in the Dos Amigos Sector
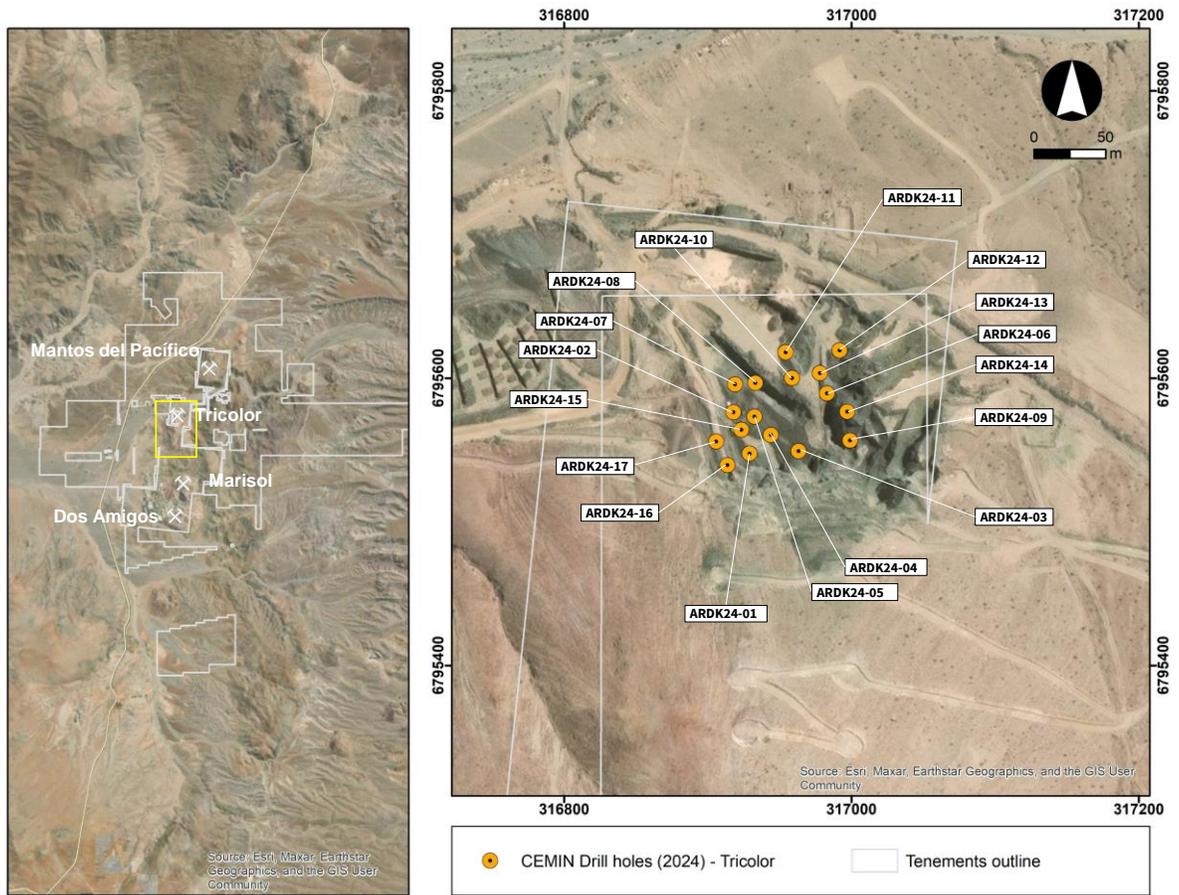
Figure 6.19: Drillholes drilled in 2024

6.7 Drilling done by Tintina 2025

Between May 8th and July 24th of 2025, a new campaign of diamond drillholes was conducted in the Dos Amigos pit. This campaign consisted of 12 holes with a total of 5,820 m drilled (Figure 6.20).

Drilling results from 2025 campaign validated copper and gold grades within a quartz-diorite porphyry system, corroborating the continuity of hypogene sulfide mineralization (Table 6.6).
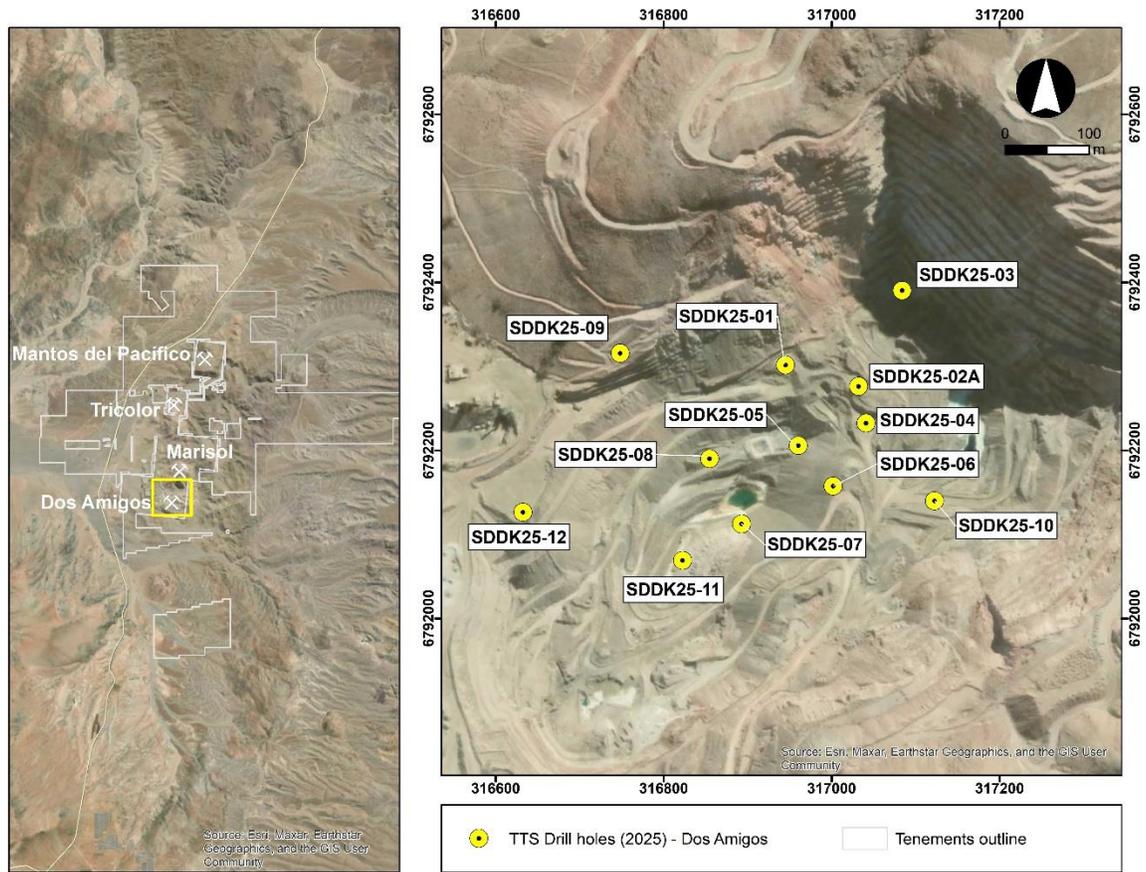
Figure 6.20:   Drillholes drilled in 2025

Table 6.6:   Summary of the most relevant drill intercept from 2025 drilling campaign

Hole (ID)	From (meters)	To (meters)	Interval (meters)	Cu (%)	Au (ppm)
SDDK25-01	430.00	530.00	100.00	**0.50**	**0.54**
SDDK25-02A	174.00	210.00	36.00	**0.53**	**0.57**
SDDK25-02A	238.00	268.00	30.00	0.62	0.41
SDDK25-03	0.00	250.00	250.00	0.49	**0.36**
SDDK25-03	382.00	488.00	106.00	0.27	0.47
SDDK25-04	88.00	124.00	36.00	**0.66**	**1.14**
SDDK25-05	136.00	350.00	214.00	0.34	0.30
SDDK25-06	34.95	178.00	173.05	0.36	0.37
SDDK25-06	238.00	384.00	146.00	0.31	0.14
SDDK25-07	1.50	84.00	82.50	**0.55**	**0.37**
SDDK25-08	0.00	232.00	232.00	0.44	0.29
SDDK25-09	300.00	600.00	300.00	**0.50**	**0.36**
SDDK25-10	1.55	100.00	98.00	0.34	0.30
SDDK25-11	0.00	220.00	220.00	0.32	0.22
SDDK25-12	418.00	542.00	124.00	**0.43**	**0.35**

6.8 SRK Comments

It is the QP's opinion that the procedures and standards adopted by CEMIN and Tintina during their exploration activities of the porphyry deposit are adequate to be used in a mineral resource calculation.

In general, drillhole orientations are suitable for the mineralization style and adequate.

No other significant factors were identified by the QP in the drilling campaign data collection, which could significantly affect a future mineral resource estimate.

6.9   Andean Belt Resources

To maintain CEMIN's primary effort on production, in 2023, Domeyko Project claims were transferred to Andean Belt Resources, an affiliated company specifically dedicated to exploration.

7 Geological Setting and Mineralization

7.1 Regional Geology

The regional context where the Domeyko Sulfuros project is located is characterized by the presence of elongated outcrops of Paleozoic to Quaternary rocks, aligned in a NNE orientation. The western margin is characterized by Jurassic intrusive rocks intruding Paleozoic rocks pertaining to the Canto del Agua Formation and representing the magmatic arc for that period. Transarc basins start to develop almost concurrently, accompanying subduction and containing an accumulation of andesitic-basaltic lavas in response to the volcanism occurring during the Late Jurassic – Early Cretaceous, associated with marine and continental sediments, including the Bandurrias Formation (Segerstrom, 1960 (1-2)), the Chañarcillo Group (Segerstrom, 1968), and the Cerrillos Formation (Segerstrom and Parker, 1959), which is unconformably overlain by lavas, ignimbrites associated with intrusives, and Paleocene - Eocene calderas (Sillitoe et al, 1968; Rivera and Mpodozis, 1991). The eastern margin is characterized by Paleozoic plutonic complexes and some minor stratigraphic units dating back to the Triassic (San Félix Formation) and the Jurassic (Algarrobal Formation) periods.

Regional structural control predominantly follows a NNE to N15°E orientation. These regional structural systems are related to the emplacement ages of intrusive bodies, which could be interpreted as Cretaceous Belt sub-bands, starting at 125-115 Ma, associated with the Nono – Cordón de Véliz Fault, where the Productora, Alice, Totoral, and Pajonales projects are located, followed by the 108-104 My interval, associated with the Tricolor, Dos Amigos, and Praga projects, and ending with the 90 My segment, controlled by the Agua de Los Burros Fault and represented by the Cortadera, Domino Cero, La Verde, and Las Campanas hydrothermal systems.
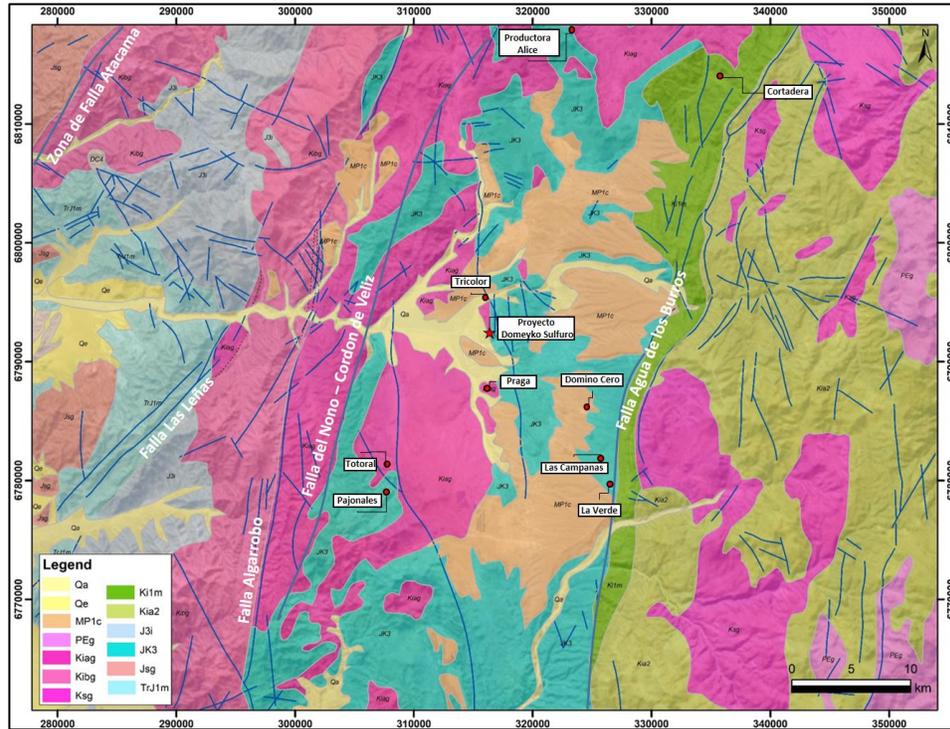
Figure 7.1: **Regional geological context**
Source: SERNAGEOMIN, 2002.

7.2 Local Geology

The Domeyko Sulfuros project is hosted by rocks pertaining to the Punta del Cobre Formation (Tithonian – Early Albian). Within the deposit, these rocks correspond to poorly stratified volcanic agglomerates and a set of lavas and volcanic breccias. The breccias have angular to subrounded fragments of up to 20 cm within a porphyritic andesite matrix. The andesites are dark gray in color and, when altered, they are white to light gray. This sequence is intruded by bodies of quartz-diorite composition which are regionally part of the so-called Cordón Las Bandurrias Batholith (Almonacid, 2007), following a N15W orientation and defining the alteration zones comprising the Domeyko Sulfuros project. The western margin delimits the Domeyko plutonic complex, of granodioritic composition, establishing a barrier that restricts hydrothermal alteration and consequently mineralization. For its part, the eastern border is still controlled by the Cerrillos Formation volcanic sequences, characterized by grayish pyroclastic breccias, andesites, and tuffs. In relation to structural control, the main orientation is N15°W, which controls the emplacement of the Tricolor, Dos Amigos, and Praga hydrothermal systems.
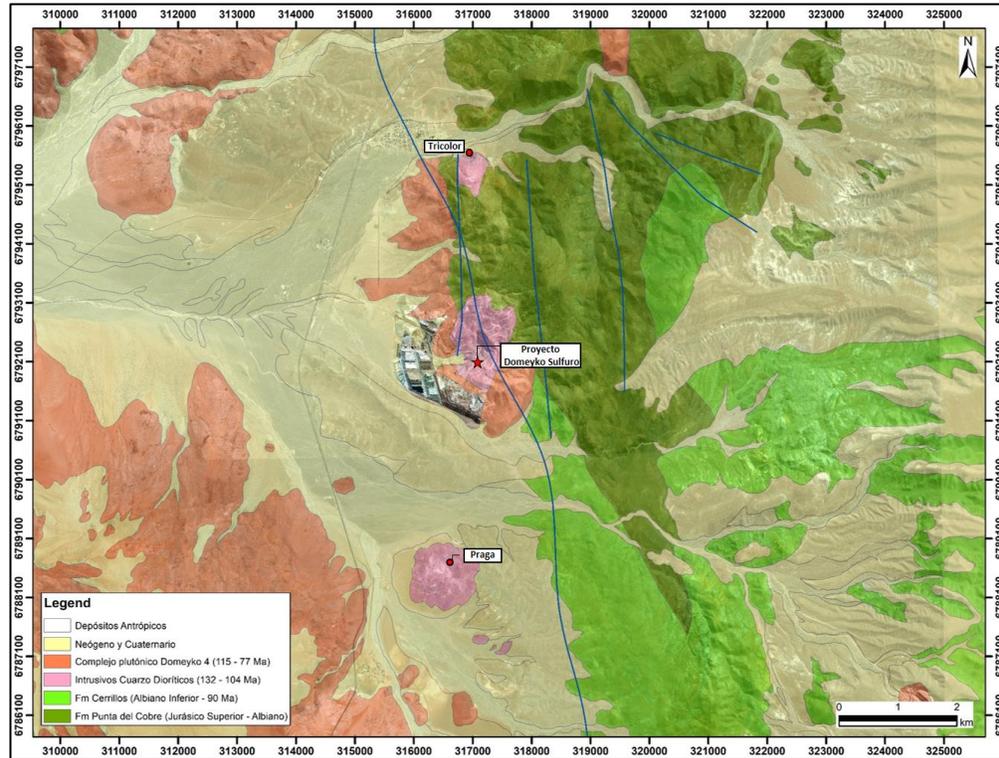
Figure 7.2:   Local geological setting

7.3 Property Geology

7.3.1 Geology

The geology of the property is shown in Figure 7.3, corresponding to a map on a 1:2,000 scale, constructed in 2021 (Navarrete, 2022). This map contains a central body denominated quartz-diorite porphyry 1 (PQD1), which is emplaced within the Punta del Cobre Formation volcanic rocks and represents the mineralizing intrusive with potassic alteration, characterized by a biotite – magnetite assemblage of M, EB, A, and B type tardi-magmatic veinlets (Figure 7.4 and Figure 7.5).
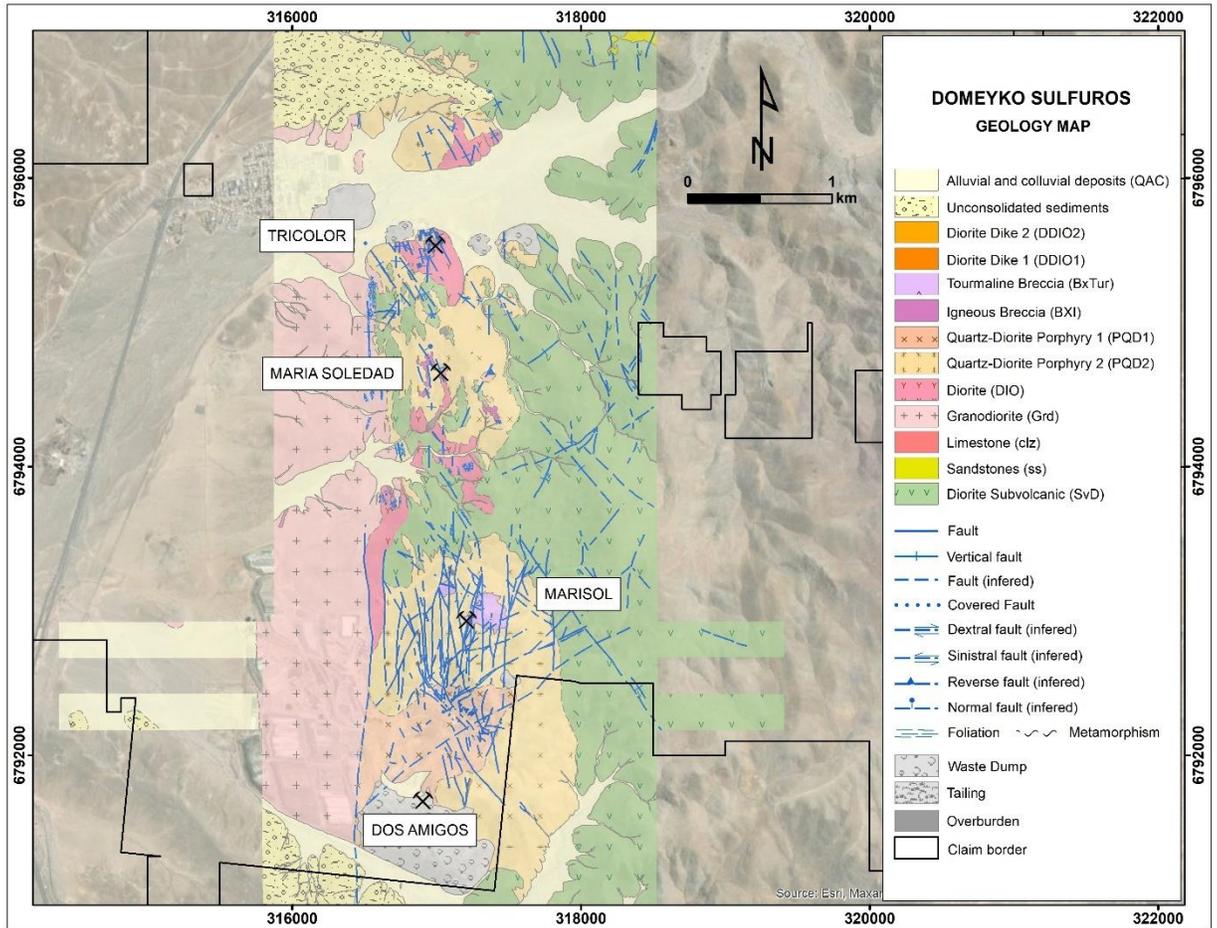
Figure 7.3:   Geological map of the Dos Amigos Deposit

Figure 7.4:   Photographs of quartz-diorite porphyry 1

Quartz-diorite porphyry 2 (PQD2), which is strongly overprinted by advanced argillic alteration and leaching with occurrences of hematite, jarosite, and goethite, was defined to surround PQD1. A granodiorite body corresponding to waste rock outcrops along the western flank in fault contact; this body shows no evidence of hydrothermal alteration, which would imply that the mineralized system has a hard boundary towards the west. Finally, minor late bodies of dioritic composition intersect the system.

Igneous breccia zones occur along the PQD1 contact. Quartz-diorite porphyry 1 is also intersected by small generally mineralized hydrothermal breccia bodies and a late quartz-diorite porphyry. Another intrusive body, prior to PQD1, denominated early dioritic Intrusive occurs at depth.

Figure 7.5:   Rocks mineralized with chalcopyrite

Note: Top: igneous breccias. Bottom: hydrothermal breccia

Source: SRK, 2020.

Potassic alteration predominates in the area, where a more intensive (K+) zone is recognized. This zone is characterized by a marked tardi-magmatic event with biotite and magnetite veinlets and disseminations, in addition to overprinting of M and EB type veinlets and early A and B type quartz veinlets. It is in this unit where chalcopyrite mineralization and occasional bornite mineralization attain their greatest development and copper and gold concentrations. This area is surrounded by a less intensive (K-) potassic alteration zone; however, this zone also shows the development of biotite and magnetite veinlets and disseminations, its intensity is somewhat lower, the occurrence of early quartz veinlets (A and B) is lower, and it already has an incipient to moderate destabilization of the existing ferromagnesian minerals, showing biotite and amphibole chloritization and partial hematitization above the magnetite. Sulfide mineralization consists of pyrite>chalcopyrite, with lesser amounts of gold.

Surrounding the potassic alteration, the deposit presents the classic zonation associated with a hydrothermal porphyry system, grading to a hydrolytic assemblage denominated QS, phyllic alteration, where quartz-sericite predominates; finally, advanced argillic alteration is recognized in the upper parts of the system. Figure 7.6 shows the Alteration map of the central area of Domeyko Sulfuros Project.
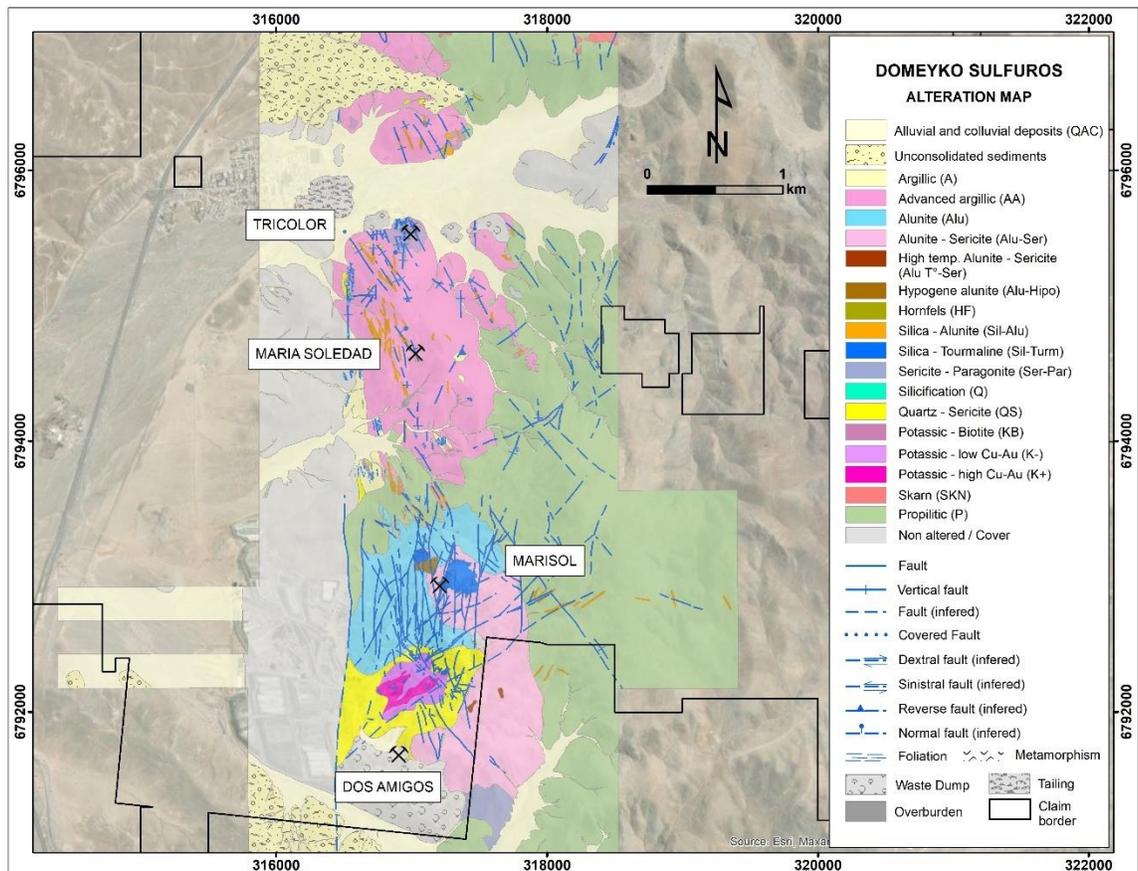
Figure 7.6:   Alteration map of the Dos Amigos Deposit

7.3.2 Mineralization

Concerning the project's mineralization, this is hosted by potassic alteration characterized by biotite-magnetite dissemination and the presence of early EB, M, A, and B type veinlets. The main ore corresponds to chalcopyrite with a (49/51) pyrite/chalcopyrite ratio in the potassic zone and an early veinlet frequency of 20 per m. The mineralization is mainly hosted by veinlets, with a 55/45 ratio with respect to the disseminated mineralization. There are some sporadic sectors where bornite is present, but these are isolated cases. Figure 7.7 shows the mineralization and alteration styles in the Dos Amigos porphyry.
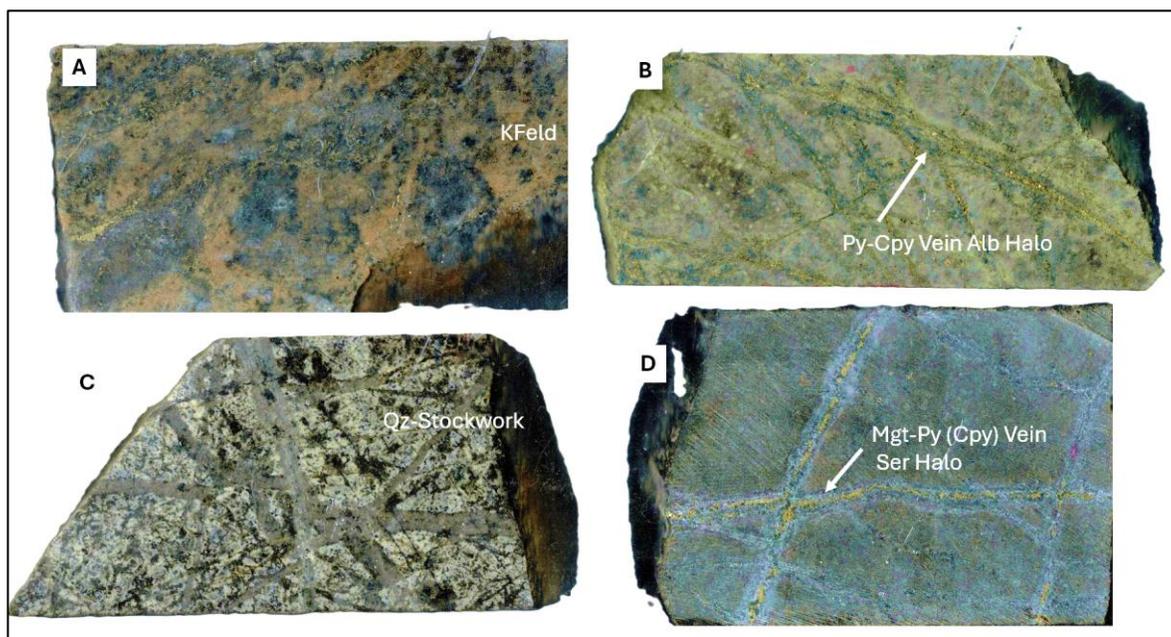
Figure 7.7:   Mineralization and alteration styles in the Dos Amigos porphyry

a) Pervasive Kfelds alteration and primary Cpy (Py) mineralization. b). Obliterated host rock with Py-Cpy veinlets and Alb halos. c). Dos Amigos porphyry with a quartz-diorite (PQD) composition and medium-grained porphyritic texture, with A-type vein stockwork and Cpy (Py) mineralization in veinlets and disseminated. d). Veins with a Mgt-Py-Cpy suture and Ser (Chl) halos.

Figure 7.8 shows the occurrence of chalcopyrite in some drillholes with Hypogene Cu minerals mainly chalcopyrite and minor bornite in quartz-dioritic porphyry (PQD), exhibiting two main mineralization modes: disseminated mineralization associated with potassic alteration (KB and K-Feld), and a mineralization associated with Type A veinlets (Qz-Cpy-Py ± Bn) forming stockworks or massive Py-Cpy veinlets with Chl halos. Figure 7.9 shows an E-W section as well as the drill core sections with the highest copper and gold contents.

Figure 7.8:   Hypogene Cu minerals

a) disseminated mineralization associated with potassic alteration SDDK25-08 @68m: PQD with KB alteration, Cpy disseminated with Bt. 0.54% Cu; 0.37 ppm Au. b) mineralization associated with Type A veinlets. SDDK25-08 @226m: Massive Bn-Cpy-Py vein. 1.09% Cu; 0.10 ppm Au.
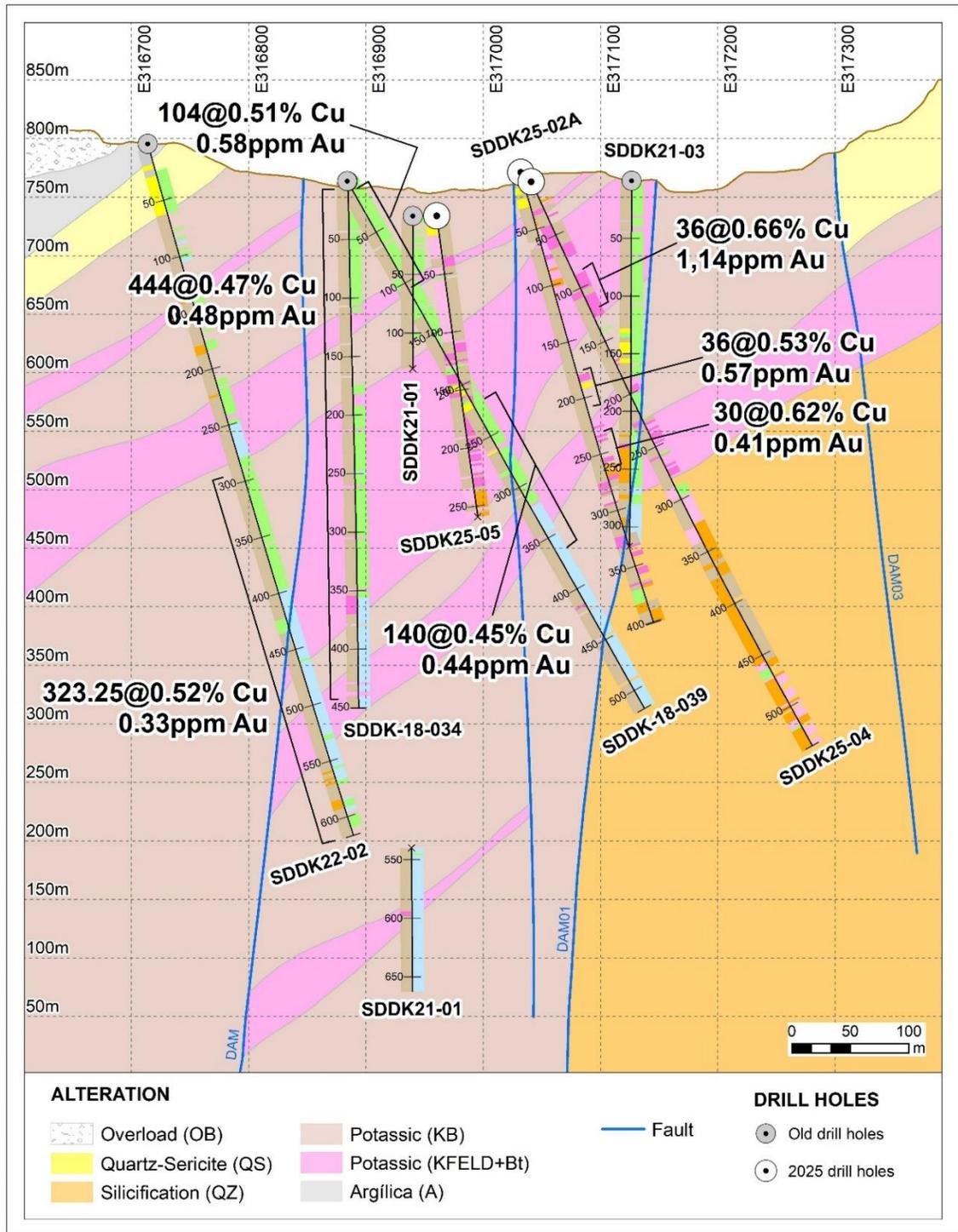
Figure 7.9:   Section 6,792,245N with Cu values

8 Deposit Types

Based on geological assessments and findings from several studies conducted at the Domeyko Sulfuros property, the main mineralization is classified as a copper-gold (Cu-Au) porphyry system, peripherally associated with skarns, mantos and breccia pipes deposits. This type of porphyry systems is well documented along the Andean range of South America and represents a widespread type of deposit in Chile (Figure 8.1).
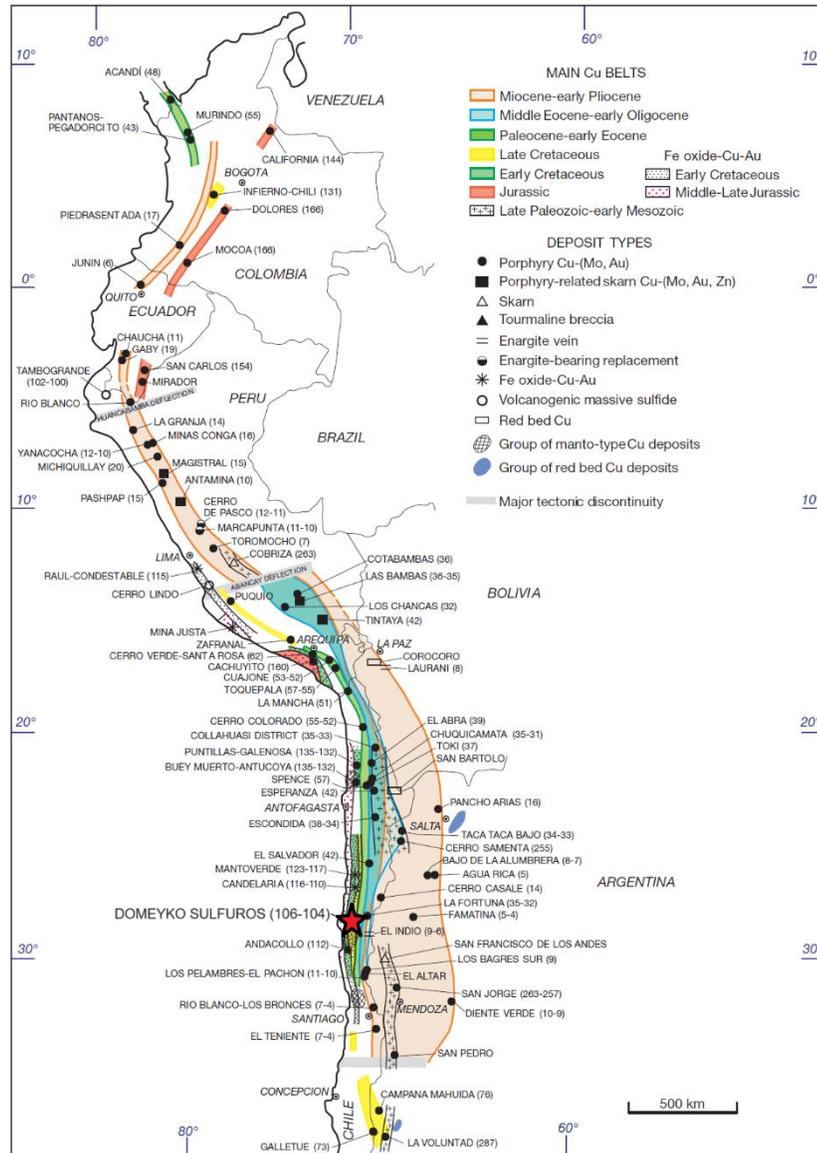
Figure 8.1: **Porphyry copper belts and major porphyry deposits in the Andes**
Source: Modified from Sillitoe and Perelló (2005).

The Domeyko Sulfuros Project is located within the Cretaceous Copper Belt of Northern Chile, which extends along the eastern flank of the Coastal Cordillera (Llaumett, 1975) and contains several alteration zones hosting Cu-Au (+/- Mo) porphyry systems (Figure 8.2). Geochronological data has indicated that the porphyry copper systems located between latitudes 21° and 23°S have ages ranging from 142 to 132 My (Munizaga et al., 1985; Reyes, 1991; Boric et al., 1990; Perelló et al., 2003; Sillitoe and Perelló, 2005; Maksaev et al., 2006a).As depicted in Figure 8.2, the porphyry copper deposits and prospects situated in the Coastal Cordillera between latitudes 26° and 31°S, such as Domeyko Sulfuros, constitute another sub-belt with U-Pb ages ranging from 108 to 88 My (Maksaev et al., 2006b).

The U-Pb zircon ages for the Dos Amigos porphyry are 106.1±3.5 and 104.0±3.5 My, while the nearby Tricolor porphyry has an age of 108.5±3.4 My (Maksaev, 2010), corresponding to the mid-late Cretaceous timeframe (Albian-Cenomanian).

Porphyry deposits are, in general, associated with large magmatic-hydrothermal systems that extensively alter and mineralize intrusions and country rocks. Low-to-medium grade primary (hypogene) sulfide mineralization occurs as both disseminated sulfides and various veinlet and stockwork systems which also host sulfides within extensive volumes of altered rock. These mineralized zones are spatially and genetically related to felsic to intermediate porphyritic intrusions (Seedorf et al., 2005).
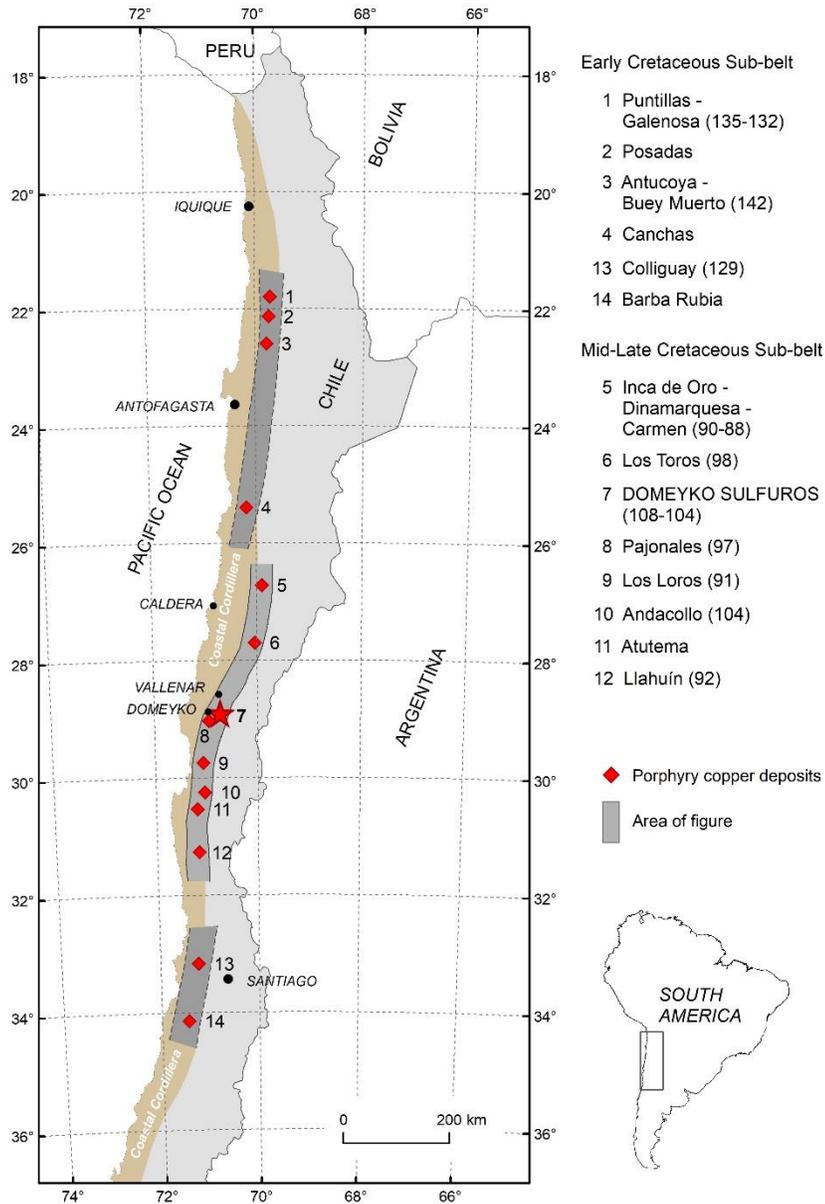
Figure 8.2:   Mid-late Cretaceous porphyry copper belt of northern Chile with location of main deposits (modified from Maksaev et al., 2010)

The system's large-size, district and local structural controls, porphyritic textures and diverse mineralization styles, such as veins, vein sets, stockworks, fractures, and breccia pipes, along with their correlation with intrusive formations, serve as distinguishing characteristics of porphyry deposits.

The porphyry stocks that intrude the volcanic rocks at Dos Amigos, Maria Soledad, and Tricolor are of dioritic to granodioritic composition, with plagioclase and quartz phenocrysts in a microcrystalline groundmass composed of an aggregate of plagioclase and quartz.

The Domeyko alteration zone encompasses potassic, sericitic, and propylitic alteration assemblages. Potassic alteration is evident in both Dos Amigos and Tricolor porphyries, featuring fine-grained hydrothermal biotite and magnetite in veins and disseminated. This alteration is associated with early veins of the A and B type. Mineralization in this area is represented by the presence of chalcopyrite and pyrite, with a minor occurrence of bornite. Quartz-sericitic alteration surrounds the potassic alteration centers, characterized by the bleaching of rocks, almost complete destruction of the original rock texture, and an assemblage of quartz, fine-grained white mica, pyrite, and minor chalcopyrite. Propylitic alteration characterizes the surrounding volcanic rocks.

An important characteristic of porphyry districts is that they do not form deposits in isolation but rather tend to occur in "clusters," as observed in the case of the Domeyko Sulfuros property. Various porphyry intrusions, including Dos Amigos, Maria Soledad, and Tricolor, are exposed along a ridge that rises to an elevation of approximately 1,250 meters at the Domeyko hill. The dimensions of this cluster span 6 kilometers in the NS direction and 1 to 1.5 kilometers in the EW direction.

In porphyry copper-gold (Cu-Au) deposits, secondary minerals may develop in supergene-enriched zones through the weathering of primary sulfides (Sillitoe, 2005 and Sinclair, 2007). These zones, characterized by significantly elevated copper grades, were observed at the Dos Amigos target and constituted the focal point of previous mining operation at the property (Maksaev et al., 2010).

A conceptual model for a porphyry system developed in an arc setting is shown in the Figure 8.3 and the hydrothermal alteration of a similar system (Figure 8.4).
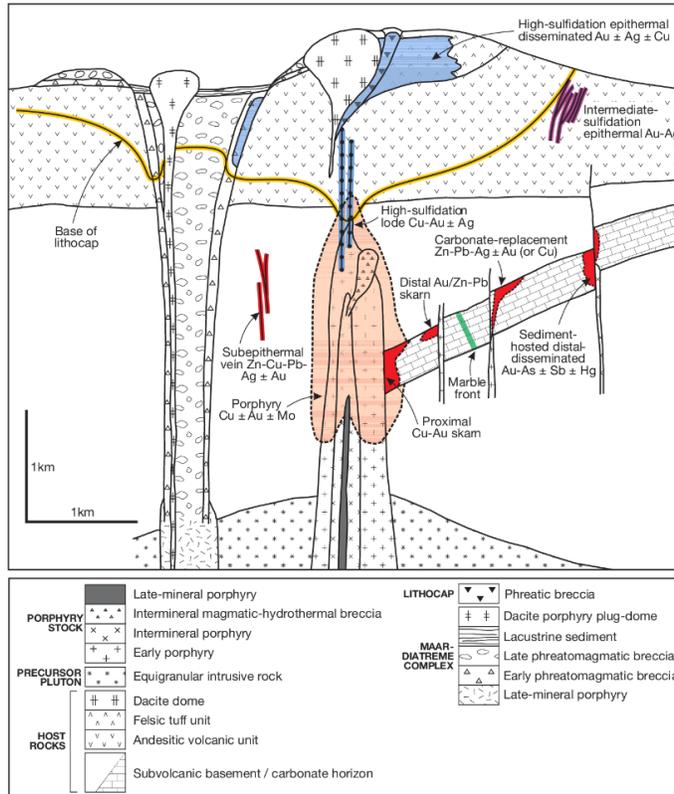
Figure 8.3: **Schematic model for an arc related porphyry system, including mineralization styles**

Source: Sillitoe, 2010.
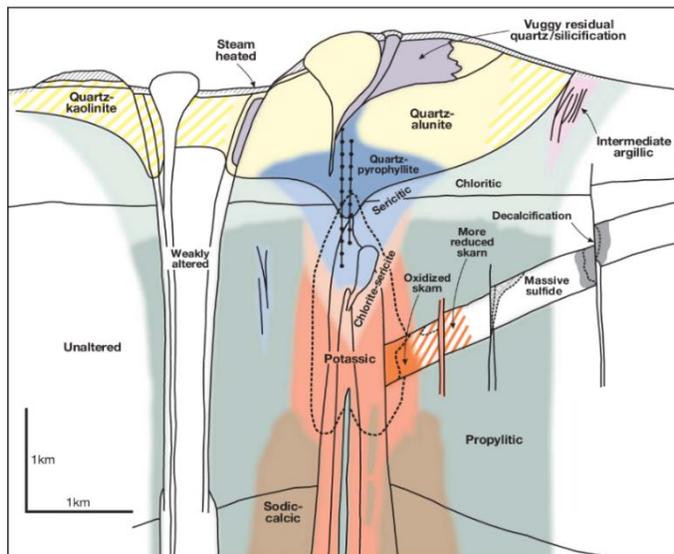
Figure 8.4: **Schematic model for an arc related porphyry Cu-Au system, including the zoned hydrothermal alteration**

Source: Sillitoe, 2010.

9 Exploration

The Qualified Person (QP) comments on all previous exploration carried out reported to the author at the property by previous operators in the history section (Chapter 6) of this report.

10 Drilling

The Qualified Person (QP) comments on all previous drilling completed at the property by previous operators in the history section (Chapter 6) of this report.

11   Sample Preparation, Analyses, and Security

Andean Belt Resources has undertaken all sampling activities at the Domeyko Sulfuros property. It is pertinent to clarify that, from 2021 to 2023, CEMIN's exploration focus underwent a reorientation, with a renewed emphasis on investigating hypogene mineralization. Considering this shift and to maintain its primary effort on production, in 2023, CEMIN transferred the claims to Andean Belt Resources, an affiliated company specifically dedicated to exploration.

Due to the relevance of the primary objective of the Domeyko Sulfuros Project: the exploration of hypogene Cu-Au mineralization beneath the supergene capping, in this section, the Qualified Person, describes the processes, protocols, procedures, and controls implemented for the preparation, analyses, and safety of the samples extracted during the period 2025 by Tintina. The description of campaign 2021-2024 by CEMIN, is detailed in "NI 43-101 Independent Technical Report Mineral Resource Estimate for the Domeyko Sulfuros Project, Atacama Region, Chile" (SRK, 2025).

11.1   Sample Preparation and Analyses

The basic data for the characterization of the Domeyko Sulfuros deposit was obtained from diamond drillholes (DDH). The methodology for the processing of these samples is summarized in Figure 11.1 and described in a document denominated "2025_ABR_DS_PROC PERF_MUESTREO_DIAMANTINA_PRO003_rev01" (Tintina, 2025). Tintina has designed specific procedures for the drilling and processing of the diamond drillholes, describing the entire process, from sample extraction to storage.
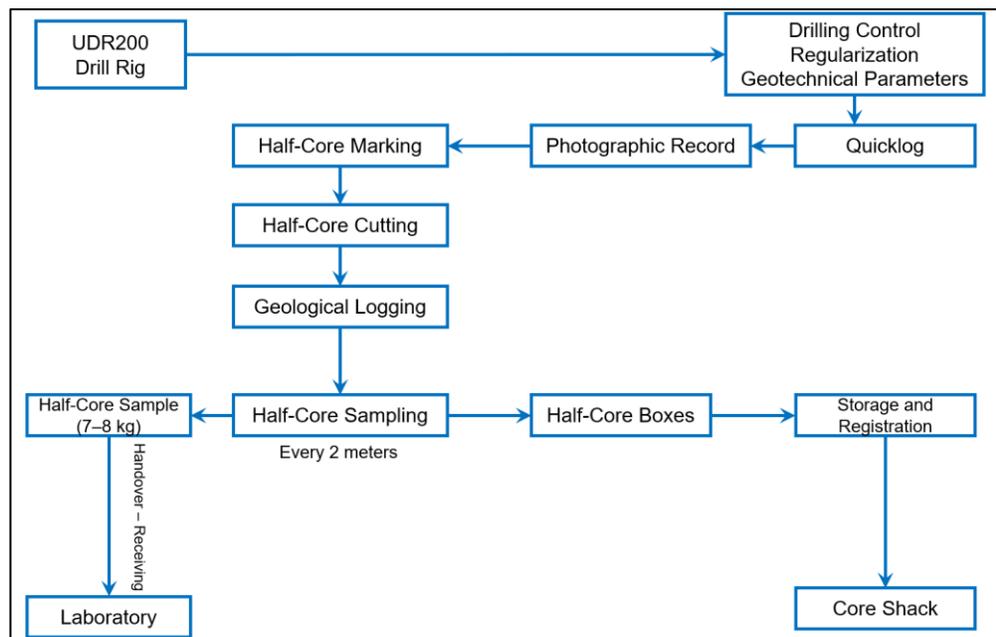
Figure 11.1:   Diamond drillhole sampling flow
Source: Tintina, 2025.

11.1.1 Drill Core Sampling

The drilling was carried out using two UDR200 machines, the first with tracks and the second mounted on a truck. Once the drilling was completed, the cores were placed in boxes by the drilling supervisor, maintaining the order in which they were drilled. These boxes were identified by placing the name of the project, initial depth and final depth, drilling number, and box number on them. The boxes are subdivided into channels, with each drilled section separated by wooden blocks. Finally, the controller must regularize the drillholes and take the RQD geotechnical data. The removal of samples from the drilling platform must be carried out by the contractor's supervisor. Finally, the samples are transferred to the logger sector where they are placed on tables.

Figure 11.2: Drillhole Sampling
a) Removal of the sample from the inner tube; b) Controller positions the samples in order inside the sample boxes

11.1.2 Collection of Geological Data from the Samples

Quicklog, geological mapping, advanced geotechnical studies, and the cut line are carried out on the sample (Table 11.3). The collection of geological information consists of observing the rock and identifying it based on its geological properties. This must record the drilling data, lithology, alteration (of primary minerals, predominant type and intensity of alteration minerals), mineral zone, structures, and veins (with the angle relative to the drilling axis). For the mineralization field, the percentage proportions of the occurrence of mineralization for disseminated and veins are considered, and there is also a field for the percentage of vein type and volume. All these characteristics are detailed in the mapping chart (Table 11.4). This entire procedure is detailed in the document "TTS_Geological Mapping Procedure.pdf" (Tintina b, 2025).

In addition to geological mapping, the 2025 campaign included geotechnical mapping, which included some old drillholes. This mapping records the recovery, RQD, recording and description of fractures (joints, open cemented joints, and closed cemented joints), the roughness of the structures, the thickness, quality, type, and granulometry of the fill, the alteration of the walls, and the faults. This is described in detail in the document "Geotechnical Characterization Procedure.pdf" (Derk, 2025).

Figure 11.3: Drillhole logging

a) Geologist performs Quicklog and visual Cu grades; b) Geotechnical geologist performs geotechnical mapping (GSI, RMR, Barton's Q, IRS); c) Geologist or geotechnical engineer performs the cut line; d) The cut line is drawn along the axis of the veins or veinlets, ensuring that both samples are representative; e) Photographs

Before cutting the samples in half, a photographic record must be made of each box containing the original sample. Photographs must be in digital format, and their names must contain information on the name of the drillhole, the interval from-to, and the assigned code (Tintina, 2025).

Figure 11.3:   Logging spreadsheet
Source: Tintina, 2025.

11.1.3   Sample Cutting

The preparation of the samples for chemical analysis consists primarily of a cutting process. The geologist must identify any veinlets or other mineralization occurrences and must trace the cutting guiding line on the drill core ensuring equivalence for sample splitting (the drill core portions that will be used as samples must be indicated). Once marked, they must be delivered to the personnel in charge of the cutting process The cut will be made with a Husqvarna circular saw. When there are sections of fragile, fractured, or crushed rock, or other conditions that make it impossible to cut with the saw, a metal ruler should be used to divide the material in half within the groove of the core box. Then, using a spoon or similar tool, half of the material should be removed and placed in the sample bag, and the remaining material should be left in the box. The latter is described in detail in document "2025_ABR_DS_PROC PERF_MUESTREO_DIAMANTINA_PRO003_rev01" (Tintina, 2025).

11.1.4   Control Sample Insertion

The insertion of control samples is divided into three stages: after cutting, after initial mechanical preparation (#10), and after crushing (#150). Document "2025_ABR_DS_PROC PERF_MUESTREO_DIAMANTINA_PRO003_rev01" (Tintina, 2025).

During the cutting stage, a list of the samples to be cut is generated and distributed to the supervisor, sampler, and cutter. This list includes duplicate field samples (FIELD DUP) and coarse targets (BLK G) for laboratory preparation control. The duplicate field sample is cut in half and then cut again, leaving ¼ of the sample in each bag.

The correctly identified and sequenced bagged and boxed samples are wrapped in plastic film in a bin with a lid and coded seals to ensure they remain sealed for transport by van or truck to the designated laboratory (ALS Copiapó), with their respective dispatch note.

After mechanical preparation, the Coarse Duplicates are inserted. These are obtained from the sample preparation laboratory and are generated when the original sample is reduced in size to better than 10#; they are inserted immediately below the original sample. To maintain the anonymity of the samples, geology personnel take the standard and fine blank inserts to the laboratory to generate a new scheme that includes the reference material inserts and designates the pulp duplicates. The controls are inserted where favorable grades can be obtained to control the precision and accuracy of the laboratory chemical tests (Table 11.1).

Table 11.1:   Final QAQC sample outline

ID_ANALISIS	ID_HOLE	Talonario	ID_PREP_SAMPLE	desde	hasta	TYPE_SAMPLE
DS2500001	SDDK25-01	100	3010959	10	12	O
DS2500002	SDDK25-01	100	3010960	12	14	O
DS2500003	SDDK25-01	100	3010961	14	16	O
DS2500004	SDDK25-01	100	3010962	16	18	O
DS2500005	SDDK25-01	100	3010963	18	20	O
DS2500006	SDDK25-01	100	3010964	20	22	O
DS2500007	SDDK25-01	100	3010965	22	24	O
DS2500008	SDDK25-01	100	3010966	24	26	O
DS2500009	SDDK25-01	100	3010967	26	28	O
DS2500010	SDDK25-01	100	3010968	28	30	O
DS2500011	SDDK25-01	100	3010969	30	32	O
DS2500012	SDDK25-01	100	3010970	32	34	O
DS2500013	SDDK25-01	100	3010971	34	36	O
DS2500014	SDDK25-01	100	3010972	36	38	O
DS2500015	SDDK25-01	100	3010973	38	40	O
DS2500016	SDDK25-01	100	3010974	40	42	FIELD DUP
DS2500017						PULP_DUP
DS2500018	SDDK25-01	100	3010975			BLK G
DS2500019						STD
DS2500020						BLK F
DS2500021	SDDK25-01	100	3010976	42	44	O
DS2500022	SDDK25-01	100	3010977	44	46	O

ANALYSIS ID: corresponds to the identification of the sample that will undergo chemical analysis, IDHOLE: Identification of the drillhole, ID PREP SAMPE: corresponds to the identification of the sample sent for mechanical preparation, FROM-TO: sampling interval in meters, TYPE_SAMPLE, O: Original Sample; FIELD DUP: Field duplicate; PULP DUP: Pulp duplicate; STD: Standard OREAS; BLK F: Fine blank; BLK G: Coarse blank.

It is important to state that all control samples must be clearly indicated on the internal control spreadsheet.

11.1.5   Mechanical Preparation

The description of the entire sample preparation process is detailed on the procedure designed by ALS (PREP-31BH en ALS, 2023 (1)). This document indicates that the samples are bar-coded and logged into the Laboratory Information Management System (LIMS), weighed, dried, and finely crushed to better than 90% passing 2 millimeters screen. A sub-sample of up to 500 g is taken and pulverized to better than 85% passing a 75 microns screen. Figure 11.4 shows the sample preparation flow.
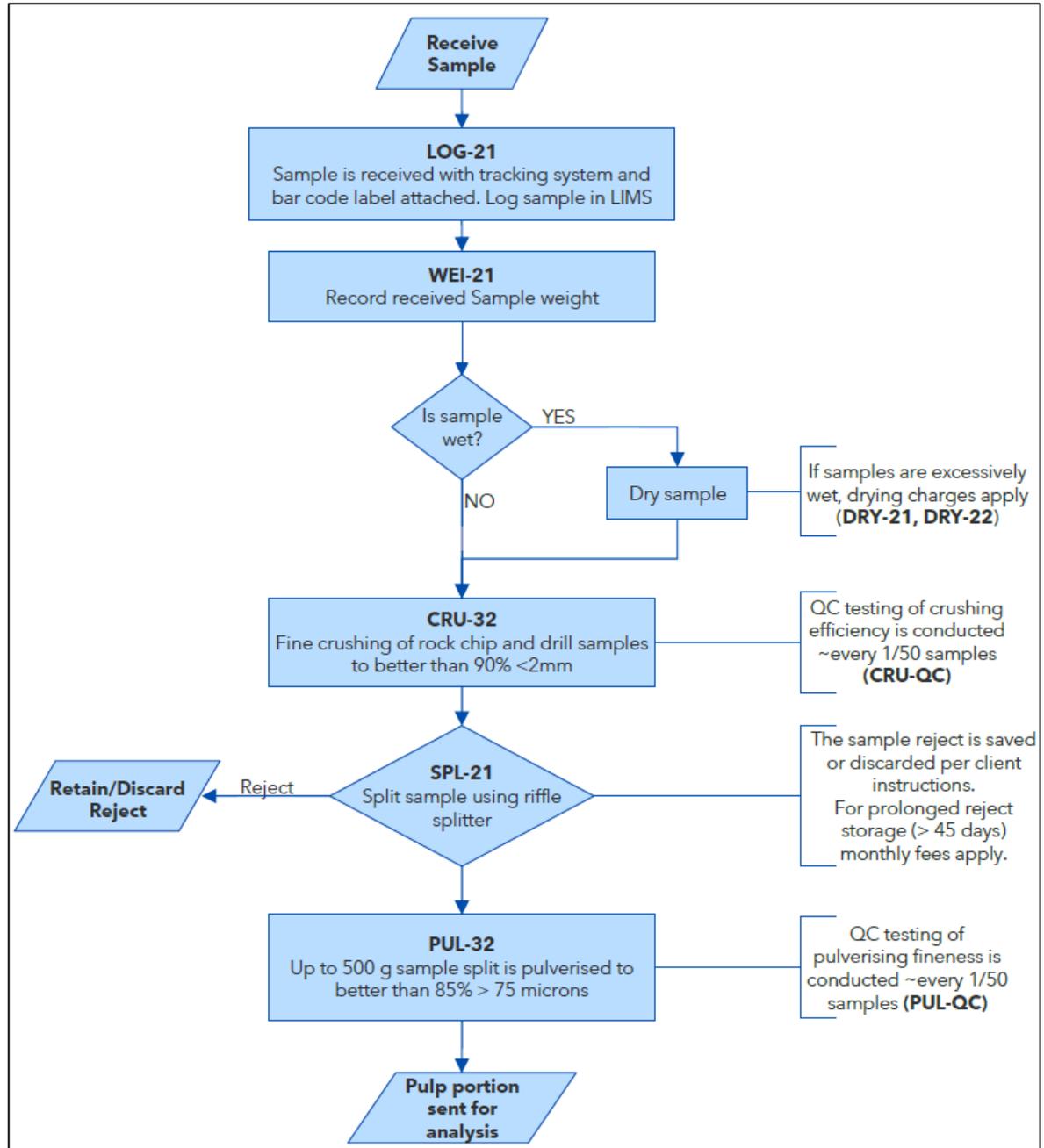
Figure 11.4: Flow chart
Source: ALS, 2023 (1).

11.1.6 Sample Analysis

The chemical analysis of the samples is carried out at ALS laboratory, which has obtained ISO/IEC 17025:2017 certifications. ALS has designed specific procedures detailing the entire sample preparation and analysis process.

The methodologies used for the main types of analyses are:

For Copper the sample decomposition was HNO3-HClO4-HF-HCl digestion (ASY-4ACID) and the analytical method was atomic absorption spectrometry (AAS). A prepared sample (0.4) g is digested with nitric, perchloric, and hydrofluoric acids, and then evaporated to dryness. Hydrochloric acid is added for further digestion. The residue is dissolved in acids and transferred to 100 ml a volumetric flask. The resulting solution is diluted to volume with de-mineralized water, mixed and then analyzed by atomic absorption spectrometry against matrix-matched standards (ALS, 2022).

For Gold the sample decomposition was Fire Assay Fusion (FA-FUS01 & FA-FUS02) and the analytical method was atomic absorption spectrometry (AAS). A prepared sample (30g or 50g) is fused with a mixture of lead oxide, sodium carbonate, borax, silica, and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal doré bead. Dilute nitric acid is added to the doré bead to remove Ag, then hydrochloric acid is utilized to decompose the Au, with each step including heating via microwave oven. The digested solution is cooled, diluted to a final volume of 4 ml with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards (ALS, 2023 (2)).

For the thirty-three elements indicated in Table 11.1 the sample decomposition was HNO3-HClO4-HF-HCl digestion, HCl Leach (ASY-4A02), and analytical method was Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP-AES). A prepared sample (0.4 g) is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids in a graphite heating block. The residue is leached with dilute hydrochloric acid and diluted to volume. The resulting solution is analyzed by inductively coupled plasma-atomic emission spectrometry (ICP-AES) with results corrected for spectral interferences (ALS, 2025).

Analytes and Ranges (ppm)			
Ag	1-200	Mo	10-50000
Al	0.05-30%	Na	0.05-30%
As	50-100000	Ni	10-100000
Ba	50-50000	P	50-100000
Be	10-10000	Pb	20-100000
Bi	20-50000	S	0.05-10%
Ca	0.05-50%	Sb	50-50000
Cd	10-10000	Sc	10-50000
Co	10-50000	Sr	10-100000
Cr	10-100000	Th	50-50000
Cu	10-100000	Ti	0.05-30%
Fe	0.05-50%	Tl	50-50000
Ga	50-50000	U	50-50000
K	0.1-30%	V	10-100000
La	50-50000	W	50-50000
Mg	0.05-50%	Zn	20-100000
Mn	10-100000		

Table 11.2: Analytes and ranges (ppm) commeasured with ICP
Source: ALS, 2025.

11.1.7 Specific Gravity Data

The apparent density test was performed with the sample covered in paraffin. To do this, the sample is weighed and the wet mass (M) is recorded. It is then immersed in molten paraffin at a temperature between 60 and 70 °C. The immersion and drying process is repeated until a continuous coating is formed. The mass of the paraffin-coated sample (Mpc) is then recorded.

The coated sample is immersed in water in a graduated cylinder and the volume of the paraffin-coated sample (Vpc) is determined. The paraffin coating is removed from the sample with a spatula and the wet mass of the sample (M') is recorded. It is then dried in an oven at 105 ± 5 °C and the dry sample mass (Ms) is recorded (ISRM, 1981).

To determine the apparent density of the rock (Derk, 2025):

$$\gamma = \frac{M_{muestra}}{V_{muestra}} = \frac{\rho_{agua} \cdot M_{muestra}}{M_{Saturada} - M_{suspendida}}$$

Where:

y:	Sample density (g/cm^3)
$M_{muestra}$:	Sample mass (g)
$V_{muestra}$:	Sample volume (cm^3) = ($M_{saturated}$ – $M_{suspended}$) (g)/ ρwater (g/cm^3)
ρ_{agua}:	Density of distilled water 1 (g/cm^3)
$M_{saturada}$:	Saturated mass (immersion process approximately 24 hours) (g)
$M_{suspendida}$:	Suspended mass (g)

11.2 Sample Safety

11.2.1 Pulps

At the Domeyko drill core library, pulps are stored in transparent polypropylene boxes with the following dimensions: 42 cm wide, 17 cm high, and 60 cm deep. Each box contains approximately 150 pulps. They are labelled on the main face and at the top, providing a precise identification of the pulps. The boxes are stored in piles containing three boxes, as this weight presents no risk of overloading, thereby providing optimum protection of the pulps (Figure 11.5). The document presenting a detail of pulp storage is "08-Rotulación y Almacenamiento de Pulpas" (CEMIN. 2024 (1)).

Figure 11.5: Pulp storage in shelves and envelopes

11.2.2 Coarse Laboratory Rejects

The coarse reject bags received from the chemical Laboratory are stored in 900-liter plastic bins with a cap to protect them from exposure to the sun, any suspended particles in the environment, or any other foreign agent that may affect the integrity of the samples.

These bins are subsequently arranged in an orderly manner on a terrace located in the geology sector, denominated yard #3.

Each bin has the respective information, including:

- Bin number

- Drill core contained in the bin

- The meters of each drill core (from – to)

- Label number corresponding to the stored bags (from – to)

- The document presenting a detail of pulp storage is "09-Rotulación y Almacenamiento de Rechazos Gruesos de Laboratorio" (CEMIN. 2024 (2)).

11.2.3 Drill Core

The diamond drill core sections, considering both HQ and NQ diameters, are stored in cardboard boxes in consecutive order from box #1 to the end of the well (Figure 11.6). Each box is identified with:

- Project

- Drill core name

- Initial meters (from)

- Final meters (to)

- Labelling is carried out with an oil-based marker, preferentially blue or black.

Each time a new box is prepared, the meters corresponding to the end of the previous box must be indicated and a blocking dowel must be placed, with the corresponding meter, as drilling progresses. Once drilling of each drillhole is completed and the drill core is stored in the cardboard boxes, these are placed on racks especially designed for this, with different fronts being designated and labelled for each drill core. The boxes are distributed in four levels of seven boxes each, with a fifth level having six boxes.

The document presenting a detail of pulp storage is "10-Almacenamiento de Testigos de Sondaje" (CEMIN. 2024 (3)).

Figure 11.6: Diamond drill core storage

11.3 Quality Assurance and Quality Control Programs

▪ Two deep drilling campaigns have been carried out at Domeyko Sulfuros, both with complete quality controls. SRK reviewed the quality control for both campaigns; the criteria used for this review are detailed below. To evaluate contamination (blank samples), SRK considers the existence or evidence of contamination when the blank value exceeds at least 10 times the element's lower limit of detection (10 x LLD). The acceptance limit for SRK is 90% of samples under 10 x LLD.

▪ To evaluate accuracy (standards), SRK uses the limit conventionally accepted by the industry which is, all standard control samples outside the range of Best Value (BV) ± 3 Standard Deviation (SD), or between BV±3SD and BV±2SD, are considered as samples outside the acceptable limits. For SRK, 90% of samples must be within the acceptance limits; and

▪ To evaluate precision (duplicates), SRK compares and applies the HARD index (half of the absolute relative difference) to each original-duplicate sample pair. SRK considers acceptable the precision evaluation, as follows:

– For twin core samples, the acceptable HARD value is < 30%.

– For coarse duplicate samples the acceptable HARD value is < 20%.

– For duplicate pulp or check assay samples the acceptable HARD value is < 10%.

– Quality control campaign and results are described bellow.

11.3.1 Campaign 2021-2024

Document "Reporte-QAQC_2021-2022_v2" (CEMIN, 2021) presents a summary of the results of the analysis of the quality control samples of drillholes SDDK21-01 – SDDK22-04. CEMIN's quality control program considers 3,200 samples, of which 995 are control samples, representing a total insertion rate of 31.09% of the sample total.

Table 11.3: **Summary of control samples 2021-2022 Campaign with their respective amounts and insertion rates (%)**

Control	Amount	Insertion Rate (%)
Pulp Duplicates	109	3.41%
Coarse Duplicates	111	3.47%
Twin Duplicates	111	3.47%
Standard IN-M543-253	100	3.13%
Standard IN-M473-211	99	3.09%
Standard IN-M304-141	55	1.72%
Standard IN-M518-229	51	1.59%
Standard IN-M291-138	50	1.56%
Standard IN-M414-183	32	1%
Standard IN-M178-95	32	1%
Standard IN-M431-198	21	0.66%
Fine Blanks	113	3.5%
Coarse Blanks	112	3.5%
Total	996	31.1%

The following table summarizes the findings of the 2021-2022 Campaign Quality Control

Table 11.4:   Summary of 2021-2022 QAQC review

Laboratory	Period	Sample Type	QC Type	Findings
ALS	2021-2022	Drillhole	Blanks	The samples are within the limits accepted by SRK
			Standard	SRK is satisfied in each case that results have been returned within 3 standard deviations of the mean with no discernible bias or drift. Although it should be noted that there are some samples that are between 2 and 3 standard deviations.
			Duplicates	Coarse, fine, and field Cu duplicate results are within the acceptance limits for SRK. In the case Au duplicates, the percentages are above the acceptability limits, so a check in an external laboratory (check assay) and a heterogeneity test for Au are recommended.

The drillholes in 2023 and 2024 underwent Quality Control and show acceptable results in Blanks, Duplicates and Standards for total Copper. The only exception is that the deviation of these was not measured, however, it is not believed to be a limitation since they are shallow vertical holes.

11.3.2   Campaign 2025

Tintina quality control program considers 3,694 samples, of which 828 are control samples, representing a total insertion rate of 22.41% of the sample total.

Table 11.5: Summary of control samples 2025 Campaign with their respective amounts and insertion rates (%)

Control	Amount	Insertion Rate (%)
Pulp Duplicates	138	3.74%
Coarse Duplicates	138	3.74%
Twin Duplicates	138	3.74%
Standard 501D	41	1.11%
Standard 502C	11	0.30%
Standard 503D	19	0.51%
Standard 505	38	1.03%
Standard 506	18	0.49%
Standard 507	11	0.30%
Fine Blanks	138	3.74%
Coarse Blanks	138	3.74%
Total	828	22.41%

The following table summarizes the findings of the 2025 Campaign Quality Control.

Table 11.6: 2025 Campaign Quality Control

Laboratory	Period	Sample Type	QC Type	Findings
ALS	2025	Drillhole	Blanks	The samples are within the limits accepted by SRK
			Standard	SRK is satisfied in Cu case that results have been returned within 2 standard deviations of the mean with no discernible bias or drift. In the case of Au, some samples are outside the permitted limits, especially in STD505. In addition, some slightly negative biases are observed in Au. However, in general, the standards perform well.
			Duplicates	Coarse, fine, and field Cu duplicate results are within the acceptance limits for SRK. In the case Au duplicates, the percentages are above the acceptability limits, as was already detected in the previous campaign, so a check in an external laboratory (check assay) and a heterogeneity test for Au are recommended.

11.4 Opinion on Adequacy

SRK has conducted a comprehensive review of the available QA/QC data as part of the sample preparation, analysis, and security review. QP believes that the QA/QC protocols are currently consistent with the best practices accepted in the industry.

The insertion of control samples to validate contamination, precision, and accuracy of the database is being performed regularly and satisfactorily since 2021. SRK has observed that the insertion rate of control samples in channels and drillholes is adequate according to "07-Procedimiento de Inserción de muestras de control" protocol (CEMIN. 2021 (2)) and "2025_ABR_DS_PROC PERF_MUESTREO_DIAMANTINA_PRO003_rev01" (Tintina, 2025).

Based on SRK's criteria for QA/QC review, the following observations are provided:

It is QP's opinion that the procedures adopted by the operators CEMIN and Tintina have resulted in a reliable database and QP is confident that the quality of the data is sufficient in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines.

SRK has reviewed the Certified Reference Material and the key analyses of Cu, and Au presented for Domeyko Sulfuros project. SRK is satisfied in each case that results have been returned within 3 standard deviations of the mean with no discernible bias or drift. SRK has confirmed the Certified Reference Material selected are represented of both the grade, material type/mineralogy, and oxidation state of the live samples submitted and as such are suitable for use on projects.

SRK has considered bias of each sample based on the HARD plot and a rule of laboratory duplicates should have 90% less than 10% difference, coarse preparation duplicates should have 90% less than 20% difference and field duplicates should have 90% less than 30% difference. Based on these criteria, the copper consistently performs within acceptable limits, Au exceeds some limits, probably due to the greater variability of the element. Analysis of the coarse and fine blank material indicates that this has performed well within the x10 defined limit for acceptable performance with respect to copper and gold.

Based on a review of QA/QC data and the results of check programs, the copper and gold data from drill core are considered acceptable to be used in a mineral resource calculation.

12 Data Verification

The Geology Staff (Data Base) is responsible for collecting and storing all information. Since April 2023 onwards, the project implemented the Micromine Geobank platform to store field information and manage geochemical data.

SRK performed assay data verification and validation through a review of the database submitted by the project geologists.

In addition, SRK reviewed the QAQC of the samples drilled between 2021 and 2025.

12.1 Comments

QP Sophia Bascuñán visited the Domeyko Sulfuros Project in May 2022 and September 2025 and in both opportunities spent four days reviewing the area.

During the 2025 visit, the QP performed a visual check of the project, and visited eight active drill rigs. Data verification included field validation of previously drilled collar locations.

In the last visit in the coreshed, the QP reviewed mineralized intervals of witness half-core from seven (7) drillhole: SDDK25-03, SDK25-04, SDDK25-05, SDDK25-06, SDDK25-07, SDDK25-08 and SDDK25-09. All core boxed were properly stored and labelled, it was possible to validate sample numbers, confirm the presence of copper mineralization (chalcopyrite) in potassic alteration (magnetite, secondary biotite) by comparing the intervals against the assay results, and verified the geological logs against the core witness.

The QP validated and used core samples taken from the 2021 to 2025 drilling campaign by Analytical Mineral Service, which were assayed in ALS laboratory with adequate QAQC and correct support.

QP suggests updating protocols for all databases (with correct register data as collar, survey, density, samples, assay, other), which should be implemented in the future drilling programs.

It is the QP opinion that all stated objectives of the site visit were satisfied, and the database is considered valid and verified and is adequate to be used in a mineral resource calculation.

13 Mineral Processing and Metallurgical Testing

13.1 Overview

13.1.1 Sample Selection

The testing program developed by Andean Belt Resources, as a support for the Domeyko project, used nine drillhole samples distributed across the main Geological Units (UGs):

- UG1: Samples M1-M2, M3, correspond to PQD1 lithology, representing 60% of resources

- UG2: Samples M4-M5, M6, correspond to IDT lithology, representing 20% of resources

- UG3: Samples M5-M6, M7, correspond to BXI lithology, representing 20% of resources

Figure 13.1 schematically presents the origin of the samples used, from the different exploitation phases of F01 to F08, UG1 is represented in red, UG2 in green, and UG3 with blue.
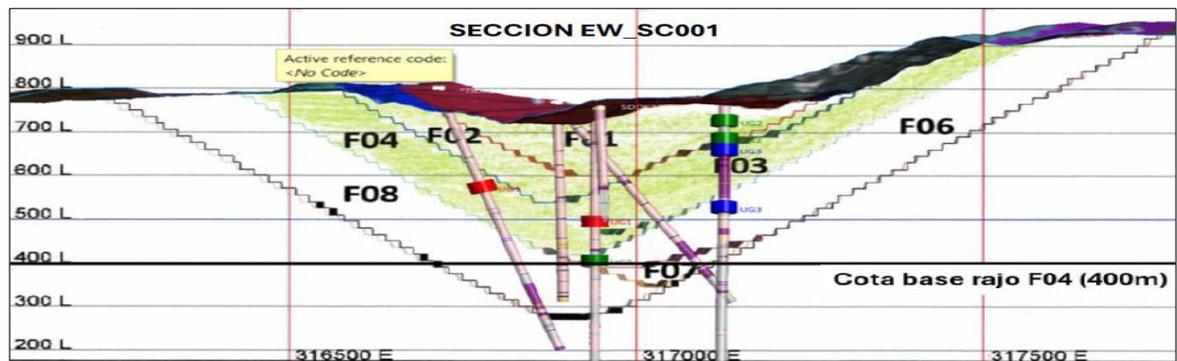
Figure 13.1:   Origin of the samples used

13.1.2 Tests Performed

The program executed includes the following tests:

- Chemical and mineralogical analyses

- SMC tests of SAG milling to define the grinding kinetics parameters Axb and ta

- SPI tests of SAG milling to define SAG milling time

- Bond WI test (kWh/st) to define ball milling energy consumption

- Abrasion index, Ai

This testing program, carried out between March and August 2025, aimed to increase the quantity and quality of supporting data for the Domeyko PEA study.

Additionally, exploratory cleaning-flotation tests are underway.

13.2 Mineral Processing and Metallurgical Testing

13.2.1 Communition

Table 13.1 and Table 13.2 present the results of the SMC and SPI tests of Sag milling parameters. In particular, the weighted average of the kinetic parameter Axb is presented.

Table 13.1: SMC Test of Sag Milling

Sample	DWi kWh/m³	DWi %	M_{ia} kWh/t	M_{ih} kWh/t	M_{ic} kWh/t	A	b	Axb	sg	ta	SCSE* kWh/t
M1	5.75	38	18.8	13.5	7.0	71.9	0.60	43.14	2.47	0.45	9.33
M2	6.64	50	20.2	14.9	7.7	68.5	0.57	39.05	2.59	0.39	9.81
M3	4.85	27	16.0	11.1	5.7	60.4	0.86	51.94	2.53	0.53	8.65
M4	9.93	86	26.1	20.9	10.8	82.7	0.34	28.12	2.76	0.26	11.88
M5	6.79	52	20.5	15.2	7.9	63.4	0.60	38.04	2.59	0.38	9.93
M6	4.42	22	15.4	10.5	5.4	57.5	0.97	55.78	2.45	0.59	8.42
M7	5.54	35	17.3	12.3	6.4	60.5	0.78	47.19	2.61	0.47	9.05
M8	9.83	86	27.1	21.6	11.2	78.4	0.34	26.66	2.64	0.26	11.86
M9	8.13	69	22.7	17.5	9.0	70.3	0.47	33.04	2.70	0.32	10.80
Weighted average								42.1			

Table 13.2: SPI test of Sag milling

SGS ID	Sample ID	CRUSHER INDEX	SPI (Minutos)	p64 (um)
SPI 2-19984	M1	21.5	71.0	135.9
SPI 2-19985	M2	25.3	75.2	123.8
SPI 2-19986	M3	25.3	66.2	150.4
SPI 2-19987	M4	15.0	127.7	98.5
SPI 2-19988	M5	20.3	115.4	95.9
SPI 2-19989	M6	33.5	60.1	116.5
SPI 2-19990	M7	24.6	83.1	100.4
SPI 2-19991	M8	17.4	160.2	92.9
SPI 2-19992	M9	25.0	103.0	129.9
Weighted average		23.5	85.8	124

The main conclusions of these SAG tests are:

- UG1, which preliminarily has 60% of its resources, has a weighted average hardness (Axb) of 42.1, supporting SAG milling. Minerals with an Axb value less than 40 are considered harder.

- Similarly, the SPI parameter for milling times less than 100 minutes is considered medium hardness, supporting the use of SAG milling.

- However, since UG2 and UG3 presented samples with higher hardness in both Axb and SPI, there is an opportunity to evaluate the use of HPGR milling in the PFS stage, which offers several operational benefits for harder minerals or those with high variability.

- The complementary parameters of the SMC test, such as DWi kWh/m³, Mi kWh/t, ta, and SCSE kWh/t, were used as data to evaluate two Sag grinding circuits, with and without pebble crushing.

Table 13.3 presents the WI results for ball milling, and Table 13.4 presents the results of the Ai abrasion test. The Bond test was performed with a reference mesh size of 140.

Table 13.3:   Work index test W (Mesh 140)

ID. Sample	SGS Sequential	Date	% under mesch cut in feed	P1, um	F80, um	P80, um	Gbp (gr/rev)	BWI (kWh/st)	BWI (kWh/mt)
M-1	30774	14/05/2025	12.69	106	2585	82	1.68	10.97	**12.1**
M-2	30775	14/05/2025	12.72	106	2697	88	1.68	11.43	**12.6**
M-3	30776	14/05/2025	11.79	106	2637	84	1.44	12.63	**13.9**
M-4	30777	15/05/2025	12.56	106	2709	80	1.33	13.05	**14.4**
M-5	30778	15/05/2025	13.85	106	2418	81	1.54	11.78	**13.0**
M-6	30779	15/05/2025	22.42	106	2213	81	2.39	8.28	**9.1**
M-7	30780	16/5/2025	13.83	106	2582	81	2.02	9.32	**10.3**
M-8	30781	16/5/2025	11.99	106	2571	80	1.26	13.67	**15.1**
M-9	30782	16/5/2025	11.18	106	2590	80	1.29	13.39	**14.8**
							Weighted average		12.83

Table 13.4:   Abrasion Index Test Ai

Sequential SGS N°	ID Sample	Date	Initial Plate Weight, g	Final Plate Weight, g	Abrasion Index
14893	M-1	5/9/2025	94.4324	94.0669	0.3655
14894	M-2	5/9/2025	94.0669	93.8399	0.2270
14895	M-3	5/9/2025	94.5011	94.2526	0.2485
14896	M-4	5/9/2025	94.2526	93.9613	0.2913
14897	M-5	5/9/2025	94.3360	94.1143	0.2217
14898	M-6	5/12/2025	94.1143	93.9959	0.1184
14899	M-7	5/9/2025	94.1372	93.8715	0.2657
14900	M-8	5/9/2025	94.4609	94.1372	0.3237
14901	M-9	5/12/2025	94.3538	94.1185	0.2353
				Weighted Average	**0.27**

The conclusions of these ball milling and abrasion tests are:

▪ The ore is medium-hard with a BWI of 12.8 kWh/t, equivalent to 11.6 kWh/st. According to the WI statistics for ball milling, ores with a WI less than 13 kWh/st are considered to be of medium hardness.

▪ The weighted average abrasion index (Ai) is 0.27, indicating a low-abrasive ore.

▪ Both indicators are positive for the circuit design with respect to energy consumption and grinding media requirements, enabling the production of a finely ground product suitable for flotation.

13.2.2   Mineralogy and Flotation

The nine comminution samples were used in the flotation process to estimate primary (rougher) recovery. A preliminary chemical and mineralogical analysis was performed to determine the main copper species and gangue elements that present flotation difficulties.

13.2.2.1   Copper Mineralogical Analysis

Copper mineralogy was characterized through advanced analyticals (TIMA and electron microscopy) on the nine metallurgical samples, evaluated at two grind sizes: P80 of 106 µm and P80 of 212 µm. The objective of the analyses was to quantify the following aspects: copper mineral species, degree of liberation as a function of grind size, association of chalcopyrite with gangue and iron sulfides, and the direct implications for recovery and cleaning performance.

The results indicate that copper occurs predominantly as chalcopyrite, which was identified as the only relevant copper sulfide present. The total copper sulfide content is on the order of approximately 1%, within a matrix dominated by siliceous gangue and pyrite.

At a P80 of 106 µm, chalcopyrite exhibits a high proportion of free and liberated particles (>80%), with a significant fraction classified as recoverable copper. In contrast, at a P80 of 212 µm, a marked reduction in liberated chalcopyrite is observed, accompanied by an increase in composite particles (chalcopyrite–pyrite–gangue) and a higher proportion of copper with low or negligible probability of recovery. Direct comparison between both grind sizes confirms that grind size is the primary control on chalcopyrite liberation, explaining the metallurgical sensitivity observed in the flotation testwork.

Of key importance to the project is that the metallurgical performance observed at the PEA level is directly supported by the mineralogical characteristics of the Domeyko deposit. Accordingly, a clear trade-off exists between copper recovery and concentrate grade on one hand, and the selected P80 grind size on the other, together with CAPEX and OPEX related to energy consumption.

The mineralogical findings confirm that, in the next stage of the project, a dedicated trade-off study will be required to define the optimal P80 grind size through an expanded program of metallurgical testing.

13.2.2.2 Mineralogical Analysis

Table 13.5 presents the copper-bearing species in the 9 analyzed samples. QEMSCAN analysis indicates that most samples contain over 98% chalcopyrite, with chalcocite and covellite present to a lesser extent. Only sample M-9 contains 80% chalcopyrite, making it a strictly primary mineral suitable for flotation.

Table 13.5:   Copper species present in Domeyko minerals

Copper species present in Domeyko minerals

Cu List	M-1 212um	M-2 212um	M-3 212um	M-4 212um	M-5 212um	M-6 212um	M-7 212um	M-8 212um	M-9 212um
Chalcopyrite	0.40	0.43	0.28	0.33	0.30	0.38	0.55	0.31	0.32
Bornite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Chalcocite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
Covellite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00
Total	**0.40**	**0.43**	**0.29**	**0.33**	**0.32**	**0.38**	**0.55**	**0.31**	**0.44**
Cu List	M-1 212um	M-2 212um	M-3 212um	M-4 212um	M-5 212um	M-6 212um	M-7 212um	M-8 212um	M-9 212um
Chalcopyrite	99.83	99.55	94.68	99.59	93.66	99.28	99.11	99.80	73.80
Bornite	0.01	0.08	0.00	0.01	0.00	0.03	0.11	0.00	3.50
Chalcocite	0.00	0.00	0.00	0.00	0.68	0.12	0.02	0.05	22.46
Covellite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Others	0.16	0.37	5.32	0.39	5.65	0.57	0.77	0.14	0.24
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

13.2.2.3   Gold Mineralogical Analysis

Given the low head grade of gold (~0.3 ppm), gold mineralogy was approached using a dedicated "Dense Liquid Preconcentration" methodology, aimed at enriching the gold-bearing fraction. Subsequently, TMS microscopy analyses were conducted to identify the mode of occurrence of gold, determine particle size distribution, and define its mineralogical associations.

The results indicate that gold occurs primarily as native gold and electrum. In terms of particle size, approximately 90% of the gold occurs as particles less than 20 µm. With respect to mineralogical association, gold is predominantly associated with pyrite, with chalcopyrite identified as a secondary association. On average, the results indicate that approximately 57% of the gold is associated with pyrite in the samples analyzed.

The metallurgical implications arising from the fine particle size of gold, explain the sensitivity of gold recovery to grind size and highlight the potential requirement for regrinding to improve liberation. As a technological option for the recovery of ultrafine gold. High-acceleration (G) gravitational concentration equipment, such as the Knelson and Falcon concentrators, is available.

In addition, the predominant association of gold with pyrite implies that gold recovery is not directly aligned with copper recovery. An explicit gold recovery strategy is therefore required and should be integrated into the cleaner circuit design. It is recommended that this behavior be further evaluated using a larger number of representative samples in order to optimize gold recovery at the PFS stage.

13.2.2.4 Theoretical Recovery Curves vs. Concentrate Grade

Figure 13.2 and Figure 13.3 present these curves for two P80 particle sizes of 106 μm and 212 μm, which were used in the flotation tests:

- It can be observed that, for a grinding size of 106 μm, rougher concentrate grades of 10% would be obtained at recoveries of 95% to 99%.

- Whereas, for a grinding size of 212 μm, rougher concentrate grades of 6% would be achieved at recoveries of 95%-97%.

Considering this preliminary analysis, as well as the considerations regarding energy consumption and tailings processing, a P80 particle size of 150 μm was recommended for the PEA study, an intermediate point between the cases analyzed.
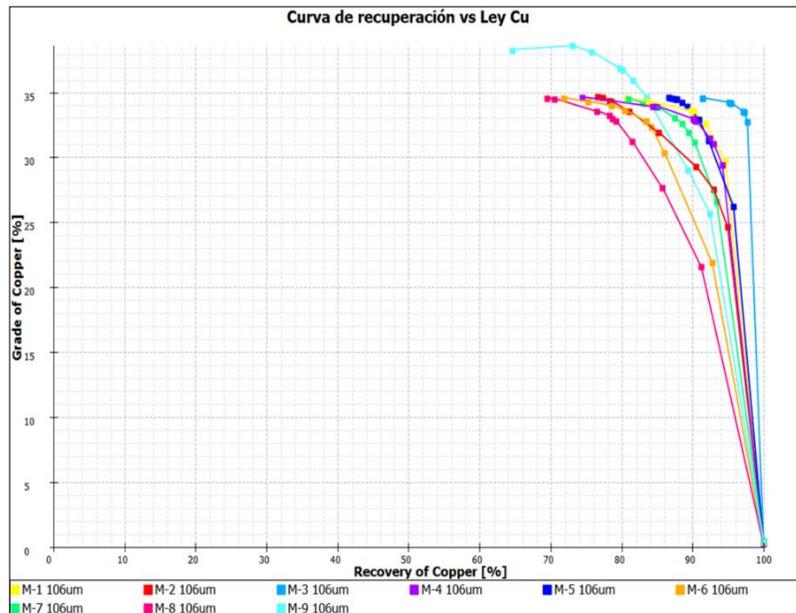
Figure 13.2: Recovery vs grade for size P80m106 μm
Source: SGS, 2025.
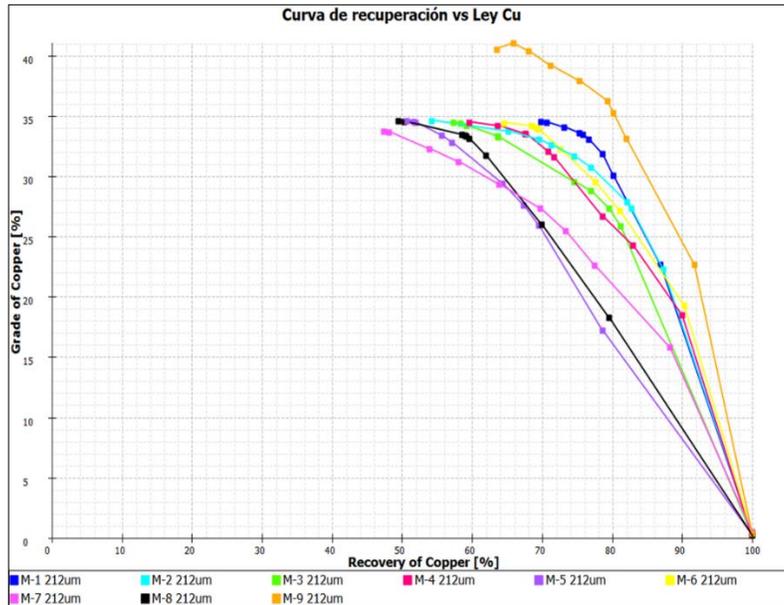
Figure 13.3:   Recovery vs grade for size P80m 212 µm
Source: SGS, 2025.

13.2.2.5   Presence of Clays and Phyllosilicates

These compounds cause flotation problems because they are hydrophobic, leading to lower-grade concentrates. Furthermore, their high specific surface area (m²/g) increases reagent consumption or reduces the effective reagent dose, thereby affecting copper recovery.

Among the compounds present in Domeyko are muscovite, biotite, chlorite, kaolinite, and Fe-Mg clays. Table 13.6 presents the average cumulative phyllosilicate content in the nine samples.

According to benchmarking, the presence of these compounds at levels above 30% is detrimental to flotation, and gangue dispersants such as sodium silicate or CMC (carboxymethyl cellulose) are required to mitigate their adverse effects.

Samples M6, M8, and M9 are found to contain around 30% of these phyllosilicates, so their flotation behavior should be evaluated in more detail.

Table 13.6: Analysis of phyllosilicates and clays

Full List	M-1 106um	M-2 106um	M-3 106um	M-4 106um	M-5 106um	M-6 106um	M-7 106um	M-8 106um	M-9 106um
Chalcopyrite	1.39	1.20	0.93	1.12	1.11	1.03	1.50	0.84	0.98
Bornite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Chalcocite	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.08
Covellite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pyrite	0.52	0.81	0.76	1.17	2.11	1.69	1.90	4.25	6.87
Molybdenite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04
Quartz	29.32	34.03	30.74	23.61	22.31	26.38	18.29	33.02	28.34
Plagioclases	7.45	24.39	24.60	26.89	2.13	11.43	7.80	6.64	8.48
Albite	29.18	6.13	23.63	13.33	44.28	20.64	33.50	19.86	10.25
K-Feldspar	17.92	3.00	2.34	1.98	1.42	0.78	2.36	2.20	4.35
Andalusite	0.04	0.02	0.00	0.00	0.02	0.00	0.03	0.04	0.10
Biotite	6.54	12.59	9.70	12.48	14.77	25.44	15.57	7.23	12.08
Muscovite	3.34	3.85	1.74	3.88	5.51	2.42	4.90	15.10	12.95
Chlorite	1.51	4.28	2.04	4.41	2.73	2.48	1.95	6.55	9.78
Kaolinite	0.04	0.96	0.03	0.02	0.06	0.12	0.28	0.19	0.71
Fe-Mg Clays	0.17	1.13	0.20	0.05	0.23	2.17	1.17	0.22	0.65
Tourmaline	0.02	0.03	0.15	0.14	0.01	0.04	0.05	0.13	0.08
phyllosilicates	**11.61**	**22.83**	**13.86**	**20.98**	**23.31**	**32.66**	**23.92**	**29.42**	**36.24**
Epidote	0.03	0.05	0.21	0.34	0.01	0.01	0.02	0.20	0.10
Pyroxenes	0.00	0.64	0.00	0.02	0.00	0.02	0.01	0.02	0.01
Actinolite	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.43	0.00
Fe-Ti Oxide	1.93	5.52	2.62	3.17	2.63	4.23	9.63	2.22	3.07
Rutile	0.17	0.07	0.05	0.25	0.24	0.03	0.18	0.41	0.31
Ilmenite	0.19	0.38	0.05	0.22	0.09	0.15	0.17	0.09	0.05
Calcite	0.04	0.01	0.01	0.48	0.02	0.02	0.01	0.11	0.02
Anhydrite-Gypsum	0.04	0.02	0.01	6.18	0.05	0.04	0.02	0.01	0.05
Apatite	0.10	0.59	0.05	0.15	0.19	0.52	0.46	0.14	0.50
Others	0.07	0.27	0.13	0.12	0.09	0.36	0.19	0.08	0.13
Total	**111.61**	**122.83**	**113.86**	**120.98**	**123.31**	**132.66**	**123.92**	**129.42**	**136.24**

13.2.2.6 Seawater vs. Freshwater Flotation Results

Flotation tests were performed with P80 values of 106 μm and 212 μm. First, rougher flotation in seawater was compared to that in freshwater water.

Figure 13.4 shows the results for the UG1 samples. No significant differences were observed in copper recovery; however, greater variability was observed for gold, which is inherent to gold's behavior at low grades. For units UG2 and UG3, the behavior is similar to that of UG1, as shown in Figure 13.5 and Figure 13.6.
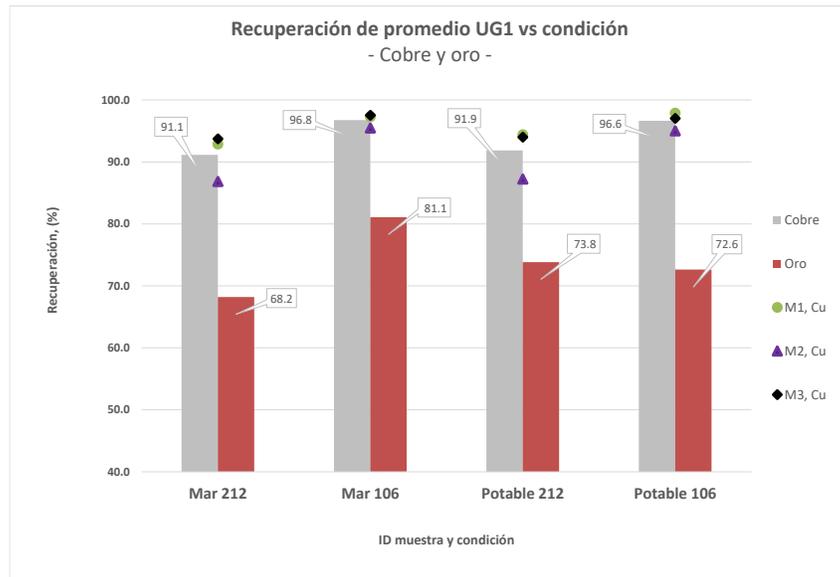
Figure 13.4: Rougher flotation comparison: seawater vs freshwater UG1
Source: SGS, 2025.
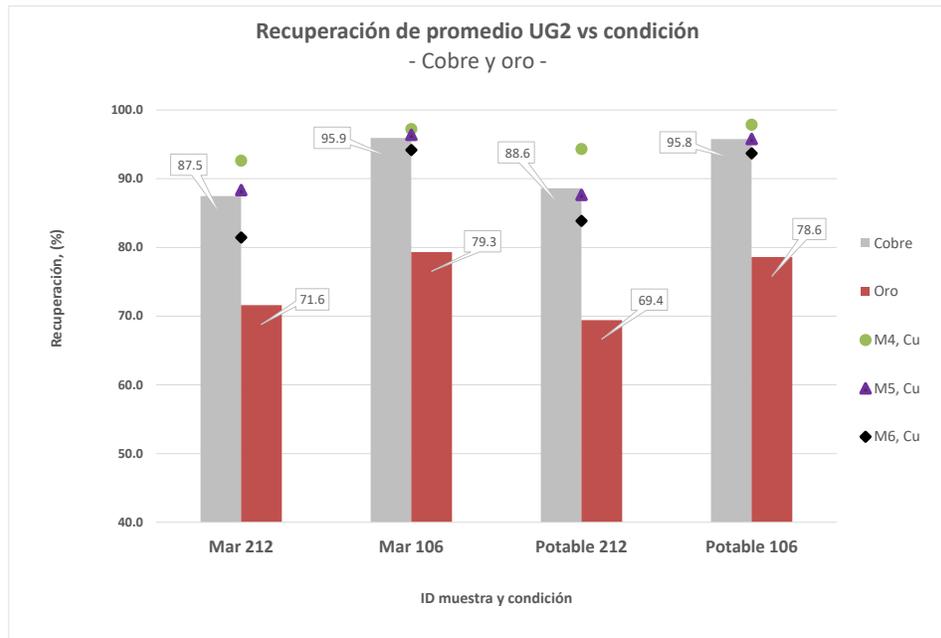
Figure 13.5: Rougher flotation comparison: seawater vs. freshwater UG2
Source: SGS, 2025.
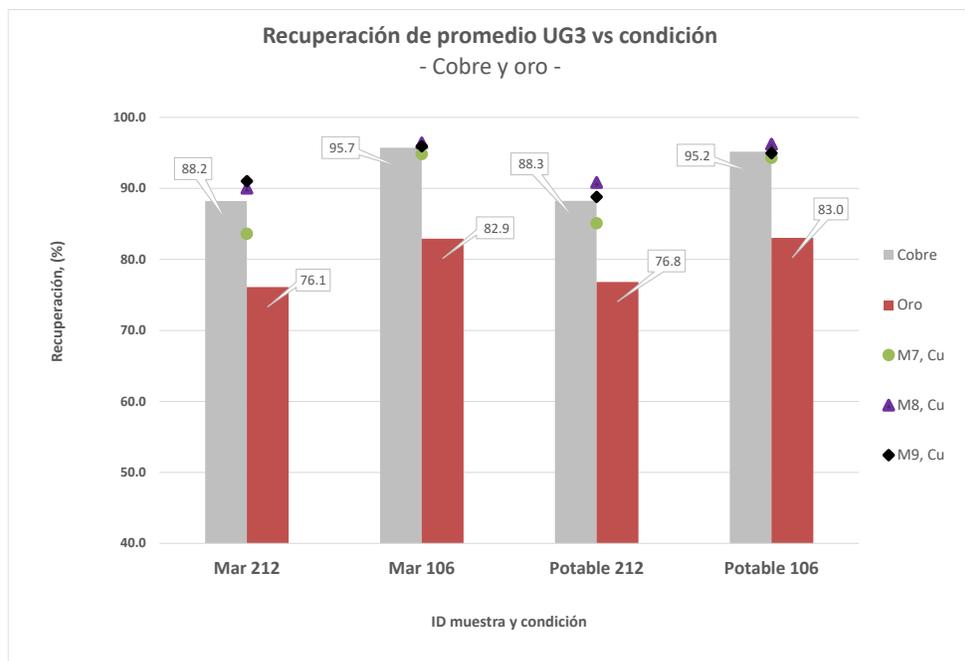
Figure 13.6: Rougher flotation comparison: seawater vs. freshwater UG3
Source: SGS, 2025.

13.2.2.7   Flotation Results: 106 µm vs. 212 µm

The flotation conditions used were as follows:

Table 13.7:   Flotation Results

Parameter	Value	Observations
pH	9	Minimum lime dosage
Collector Matcol 700	20 g/t	Carbamate type
Collector Matcol 663	15 g/t	Phosphate type
PAX	10 g/t	Xanthate type
Diesel	10 g/t	Promoter
Flotation time	30 min	—
Solids content (Cp)	30%	—

Figure 13.7, Figure 13.8, and Figure 13.9 show the Cu and Au recoveries for the different samples:
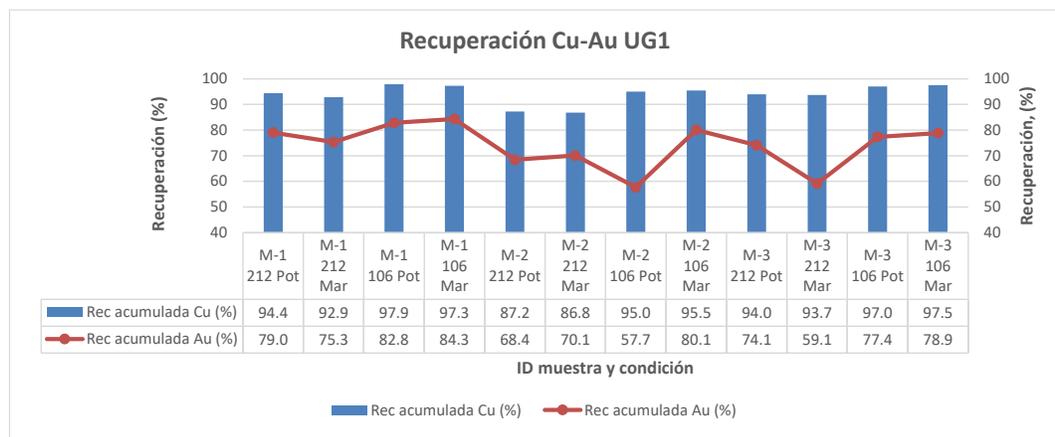
Figure 13.7:   Cu-Au Recovery UG1
Source: SGS, 2025.
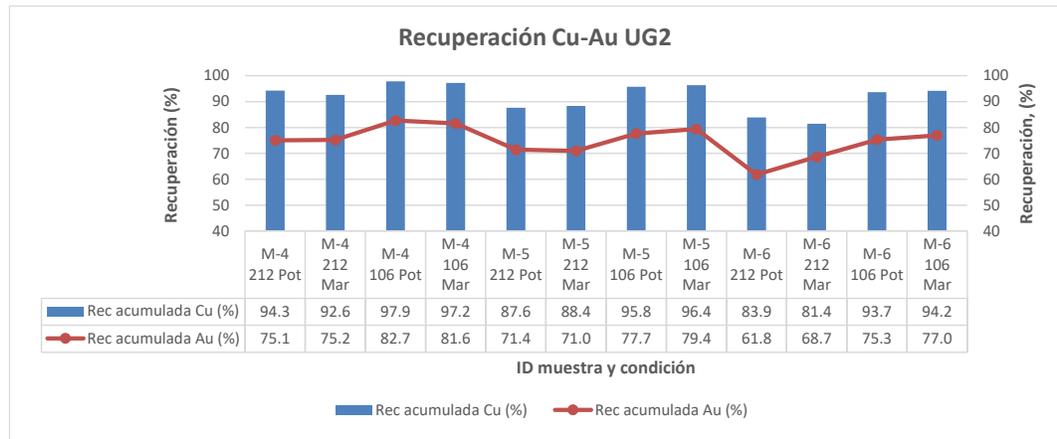
Figure 13.8: Cu-Au Recovery UG2
Source: SGS, 2025.
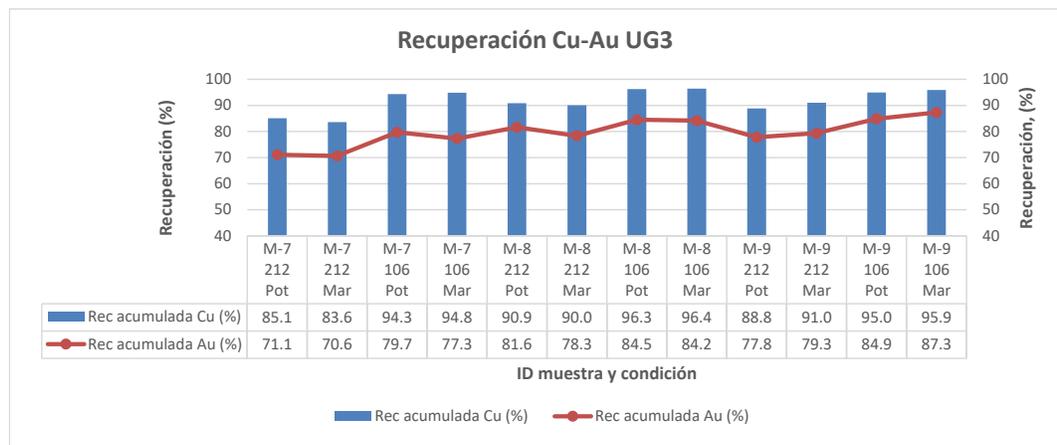
Figure 13.9: Cu-Au Recovery UG3
Source: SGS, 2025.

13.2.2.8 Flotation Test Conclusions

- The average rougher copper recovery for 106 µm per UG ranged from 94.7% to 96.0%, while for 212 µm it ranged from 84.9% to 89.4%.

- The average rougher gold recovery for 106 µm per UG ranged from 76.6% to 81.4%, while for 212 µm it ranged from 66.1% to 72.3%

13.2.2.9 Recovery Estimate for Flotation at 150 µm

- To estimate rougher recovery at 150 µm, the weighted-average recovery value was used across the different UG at 106 µm and 212 µm.

- Subsequently, tests performed at a particle size of 150 µm confirmed this criterion.

- The recovery values obtained using this criterion for the project evaluation are as follows:
  - Cu rougher recovery: 92.0%
  - Au rougher recovery: 72.7%

- To calculate the overall Cu and Au recoveries, benchmark values were assumed for cleaner recovery. Using rougher and cleaner recovery, the overall project recovery was calculated and is presented below:
  - Cu cleaner recovery: 95% (estimated by benchmarking)
  - Au cleaner recovery: 90% (estimated by benchmarking)
  - Global Cu Recovery: 87.4%
  - Global Recovery Au: 65.4%

13.2.3 Thickening Tests

Thickening tests were performed on preliminary rougher-stage tailings with P80 inlet particle sizes of 106 µm and 212 µm. The following conditions were used:

- Tests performed with 10 g/t of flocculant
- Test processing rate of 0.40 t/h/m²
- Initial Cp solids 8%

The thickening range obtained varied between 50% and 65% solids, depending on the UG lithology and the sample's feed particle size; in practice, conventional tailings were obtained. Table 13.8 presents the thickening results obtained with rougher tailings processed with seawater.

Table 13.8:   Thickening Results

				SETTLING TESTS RESULTS			
ID	ID Sample	Flocculant reagent	Initial Solids %	Velocity[m/h]	Solids at 30 min	Final Solids %	Unitary area [m²h/t]
4	M-1 T-2A	RH-1050 - 10 g/t	8	27.48	60.91	63	0.39
8	M-1 T-4A	RH-1050 - 10 g/t	8	25.68	56.32	59	0.41
12	M-2 T-6A	RH-1050 - 10 g/t	8	12.42	50.85	52	0.83
16	M-2 T-8A	RH-1050 - 10 g/t	8	10.86	49.26	53	0.95
20	M-3 T-10A	RH-1050 - 10 g/t	8	26.04	47.74	49	0.39
24	M-3 T-12A	RH-1050 - 10 g/t	8	12.54	44.77	49	0.81
28	M-4 T-14	RH-1050 - 10 g/t	8	27.60	60.16	62	0.39
32	M-4 T-16	RH-1050 - 10 g/t	8	12.72	60.59	64	0.84
38	M-5 T-19	RH-1050 - 10 g/t	8	11.82	49.71	51	0.90
44	M-6 T-22	RH-1050 - 10 g/t	8	2.42	43.15	47	4.18
48	M-6 T-24	RH-1050 - 10 g/t	8	2.39	39.39	49	4.27
50	M-7 T-25	RH-1050 - 10 g/t	8	12.24	54.30	54	0.87
54	M-7 T-28A	RH-1050 - 10 g/t	8	12.36	52.10	52	0.84
56	M-8 T-29	RH-1050 - 10 g/t	8	26.40	57.83	58	0.41
60	M-8 T-31	RH-1050 - 10 g/t	8	24.48	54.91	56	0.44
66	M-9 T-34	RH-1050 - 10 g/t	8	16.20	53.29	55	0.64
70	M-9 T-36	RH-1050 - 10 g/t	8	18.12	51.77	54	0.57

Conclusions of the overall testing program:

▪ The backup database was expanded with nine samples representing the primary lithologies of the deposit: UG1, UG2, and UG3.

▪ The mineral testing and analysis database was expanded to include: mineralogy, comminution tests, rougher flotation, and thickening tests.

▪ Open- and closed-circuit cleaning tests (LCT) are still pending to forecast cleaning recovery and final concentrate grade.

13.3 Chlorinated Leaching Process for Sulfide Mineral

This option was not analyzed within the scope of the PEA study. However, it is currently a technology under development whose objective is to achieve extraction rates near 90% to be competitive with flotation. Companies such as BHP with its full-salt process, AMSA with Cuproclor-Temperature and Codelco with Salt-leaching-temperature are achieving copper extractions of 70% through heap leaching. The technology company Novamineralis also has a salt-leaching process using particle-layer extraction, based on blowing and resting cycles, with similar copper-extraction performance.

13.4 QP Comments on Section 13 "Mineral Processing and Metallurgical Testing"

As the Metallurgy Qualified Person (QP), I confirm that the test program and selected samples provide a sound and defensible basis for the PEA. The sampling strategy effectively captures the deposit's primary lithological domains, ensuring that the metallurgical variability relevant to the project is represented. The test program comprises a comprehensive suite of comminution tests with emphasis on SAG milling performance, complemented by rougher flotation tests conducted under seawater conditions to evaluate metallurgical response in a saline environment. In addition, the supporting mineralogical analyses offer critical insight into copper-bearing mineral species and the presence of phyllosilicate gangue, informing appropriate reagent selection and flotation operating parameters. Collectively, these components provide robust technical support for the metallurgical assumptions used in the PEA.

13.4.1 Key Metallurgical Challenges and Considerations for the PFS

The PEA for the Domeyko Sulfides Project established a suitable metallurgical basis for a preliminary economic evaluation, primarily supported by rougher flotation testwork that delivered consistent results aligned with expectations for a Cu–Au porphyry-type deposit. However, two critical technical challenges have been identified that cannot be resolved at the PEA level of definition and must be explicitly addressed during the Prefeasibility Study (PFS):

13.4.1.1 Final Copper Concentrate Grade in a Seawater Flotation Circuit

This definition is required in order to freeze key design parameters related to the cleaner circuit configuration, reagent scheme, and the balance between copper recovery and concentrate grade.

The final copper concentrate grade has a direct impact on:

- Project Revenue
- Commercial penalties
- Cleaner circuit design
- Equipment selection and the associated CAPEX/OPEX

13.4.1.2 Gold Recovery as a Function of Particle Size and Association with Pyrite

A key consideration for the PFS is to determine whether this metallurgical behavior is representative across the entire deposit and to develop technical solutions to address this challenge. These solutions may include the incorporation of gravity separation and finer regrinding stages into the process flowsheet.

Addressing this challenge is critical to ensure a realistic projection of gold recovery and to avoid both overestimation and underestimation in the PFS economic evaluation.

13.4.2 Strategy to Address Key Metallurgical and Geometallurgical Challenges at the PFS Stage

To address these issues at the PFS stage, the following metallurgical and geometallurgical strategy is proposed, based on two complementary workstreams:

13.4.2.1 Development of Metallurgical Testwork and Identified Trade-off Studies

For the metallurgical testwork, the following sampling strategy is recommended:

- Five (5) metallurgical-dedicated drillholes, designed to intersect the three main lithologies (PDQ, IDT, and BXI) and the two dominant alteration types (Biotitic and Quartz–Sericite), in accordance with the logic presented in the accompanying scheme.
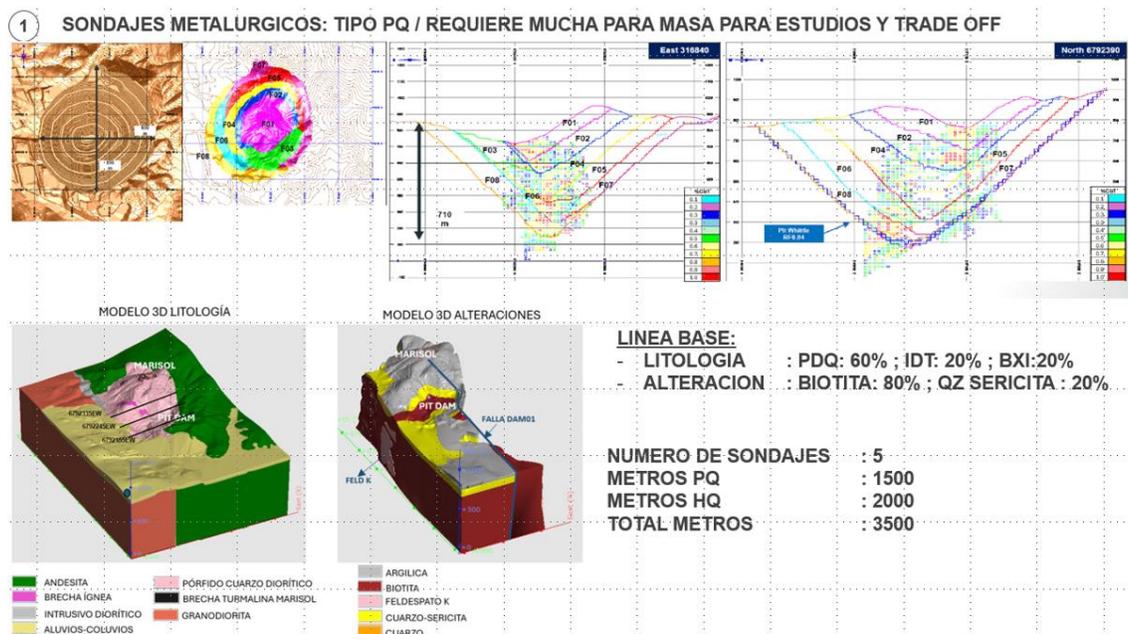
Figure 13.10: Scheme of metallurgical drilling

- An approximate total drilled length of 3,500 m, combining PQ intervals near surface and HQ intervals at depth, subject to operational feasibility
- Use of full core (entire core diameter) to ensure sufficient sample mass and representativeness

The testwork will be oriented toward the following objectives:

- Freezing the reagent scheme for both rougher flotation and cleaner flotation
- Freezing the primary grind P80 and regrinding parameters
- Defining the final marketable copper concentrate grade
- Defining the final metallurgical recoveries for copper and gold

On the basis of the metallurgical definition established, the following trade-off studies are proposed:

- Evaluation of SAG milling versus HPGR grinding
- Evaluation of Optimal P80 grind size versus recovery, CAPEX, and OPEX
- Evaluation of copper recovery versus concentrate grade
- Conventional cleaner cells versus Jameson pneumatic cells
- Conventional tailings thickening versus high-density thickening
- Vacuum concentrate filtration versus Larox pressure

13.4.2.2 Metallurgical and Geometallurgical Variability Studies (Focus on the Deposit)

In parallel, a metallurgical variability testing program will be executed with the objective of characterizing metallurgical response at the deposit scale and integrating the results into the PFS geometallurgical model.

This program will include:

- Use of 1/4 core samples derived from HQ geological drillholes
- Approximately 300 samples in total, equivalent to one sample per one million tonnes of ore
- Increased sampling density within the first ten years of mine life

The results of this program will allow:

- Quantification of spatial metallurgical variability.
- Definition of geometallurgical domains.
- Reduction of metallurgical uncertainty in mine planning and in the PFS economic evaluation.

Through these initiatives, a comprehensive strategy is defined for implementation during the PFS stage, encompassing the required PQ drilling, sample selection, metallurgical testwork, and trade-off evaluation studies needed to freeze the process design based on an improved understanding of the orebody.

13.5   References (SGS report folders)

1. Geomet.pptx designs testing
2. Advanced Mineralogy
3. QAQC
4. Conminution
   a. 01Grinding kinetics
   b. 02 SMC
   c. 03 SPI
   d. 04 Abrasion
   e. 05 Bond Test
5. Feed Chemical Analysis
6. Seawater-Freshwater Water Chemical Analysis
7. Flotation
8. 01. Domeyko Sulfide Flotation_ESTIM REC CU-AU Sedimentation

14 Mineral Resource Estimates

The Mineral Resource estimate outlined in this report represents the Mineral Resource estimation for the Domeyko Sulfuros Project. The estimate was performed using a three-dimensional block model and adheres to the CIM Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines (November 2019). Also, it was carried out in accordance with the requirements of the Canadian Securities Administrators' National Instrument 43-101 (NI 43-101).

SRK Consulting (Chile) SpA. prepared in 2024, NI 43-101 Independent Technical Report for the Domeyko Sulfuros Project, however, that report includes Chapters 1 through 12 and 24 through 27 and does not include a Mineral Resource estimate. This report is filed on SEDAR with effective date February 15, 2024.

SRK Consulting (Chile) SpA. also prepared the preceding "NI 43-101 Independent Technical Report Mineral Resource Estimate for the Domeyko Sulfuros Project, Atacama Region, Chile", that report includes Chapters 1 through 14 and 22 through 27 and does include a Mineral Resource estimate. This report is filed on SEDAR with effective date January 15, 2025.

Mr. Joled Nur (CCCRRM#181, Chile) completed the resource estimation work, while Ms. Sophía Bascuñán, Geologist (CCCRRM#518, Chile), peer-reviewed the Mineral Resource model developed by the Domeyko Sulfuros exploration team. Mr. Joled Nur is a Principal Consultant with SRK Consulting (Chile) SpA, and Ms. Bascuñán is a Senior Consultant with the same firm.

The Reasonable Prospects of Eventual Economic Extraction (RPEEE) analysis was conducted by Mr. Claudio Guzmán under the supervision of Mr. Patricio Martínez (CCCRRM#395, Chile). Mr. Guzmán and Mr. Martínez hold the positions of Senior Mining Consultant and Head of Mining, respectively, at SRK Consulting (Chile) SpA.

The Qualified Person (QP) for the Mineral Resource estimates is Mr. Joled Nur, an independent QP as defined under NI 43-101. The Mineral Resource estimate is dated October 05, 2025.

The assessment of the Domeyko project resources consisted of an estimation of the Total Copper and Gold, grades associated with the Domeyko deposits and is mainly focused on sulfide mineral zones, lithology and alteration geology. This was carried out in-situ at the deposit.

14.1 Key Assumptions, Parameters and Method

The database used for the estimation of the deposits was delivered by Andes Belt. SRK only reviewed potential data inconsistencies, such as scattered grades or erroneous intervals. This database was frozen as of September 08, 2025, for the Domeyko deposit.

The geological model was constructed on a 3D basis by Andes Belt personnel and was reviewed by SRK. The estimates were carried out based on the original topography, i.e., not considering material exploitation and/or movement. Densities were delivered by Andes Belt they were assigned with average values by Lithology and Mineral Zone.

14.2   Resource Estimation Procedures

Vulcan™ was used for the estimation, which consisted of 3D block modelling and grade interpolation. The main steps in the methodology were as follows:

- Compile and validate the database for the drillholes used in the mineral resource estimate.

- 3D modelling of the mineralized zones, lithology and alteration were used.

- An envelope of 0.1% total copper t was generated and is used for the estimation of copper and gold.

- Generation of composites every 2 meters.

- Basic statistics, outliers.

- Geostatistical analysis including variography.

- Block modelling and grade interpolation.

- Block model validation.

- Assess the "reasonable prospect for economic extraction" and select the appropriate cut-off grades; and

- Generate a mineral resource statement.

14.3   Database

The drillhole database was provided by Andes Belt and consisted of the following information:

- Collars: easting and northing coordinates, drillhole elevation and length

- Deviations: intercept, azimuth, and dip of each drillhole

- Grades: total copper and gold

- Density: excel file with:

    – DS_BD_2021-2022_densidad.xlsx;

    – RODA_BD_2018-2019_densidad.xlsx;

    – and BD_Lab_Dom_2025v0.xlsx

The drillhole databases used for the resource estimation by means of Vulcan™ software.

14.4 Geological Domains

The first lithological and alteration models for the deposit were developed in 2022 by the project geologist, with support from an SRK specialist. These models were based on the interpretation of geological maps, cross-sections, and a 290-drilling database. In 2025, ABR project geologist and SRK geologists updated the Lithological Model, Alteration Model and Mineral Zone 3D model by integrating the previously mentioned datasets with the results of a last drilling campaign conducted during 2025.

14.4.1 Lithological Model

Lithology modeling was developed through an integrated approach combining surface mapping, drill log data, and manually interpreted cross-sections constructed by project geologists. The study area is characterized by an early diorite intrusive (IDT) and a quartz-diorite porphyry intrusive (PQD), the latter interpreted as the primary driver of the alteration and copper-gold mineralization at the Dos Amigos target. Igneous (magmatic) breccias (BXI) developed along the contact between these units. Tourmaline breccias (BXTUR) outcrops in the deposit north area.

The host rocks consist predominantly of andesitic volcanic lithologies (AND) belonging to the Tithonian–Early Albian Punta del Cobre Formation (Segerstrom & Ruiz, 1962). This volcanic assemblage is distinguished by poorly stratified volcanic agglomerates interbedded with lava flows and volcanic breccias. The western margin of the hydrothermal system is clearly defined by an unaltered granodiorite body, delineated by a north-south fault. Unconsolidated sediments cover the southern boundary of the study area (GRAVEL). In the western sector the model is limited by a granodiorite intrusive (GND).
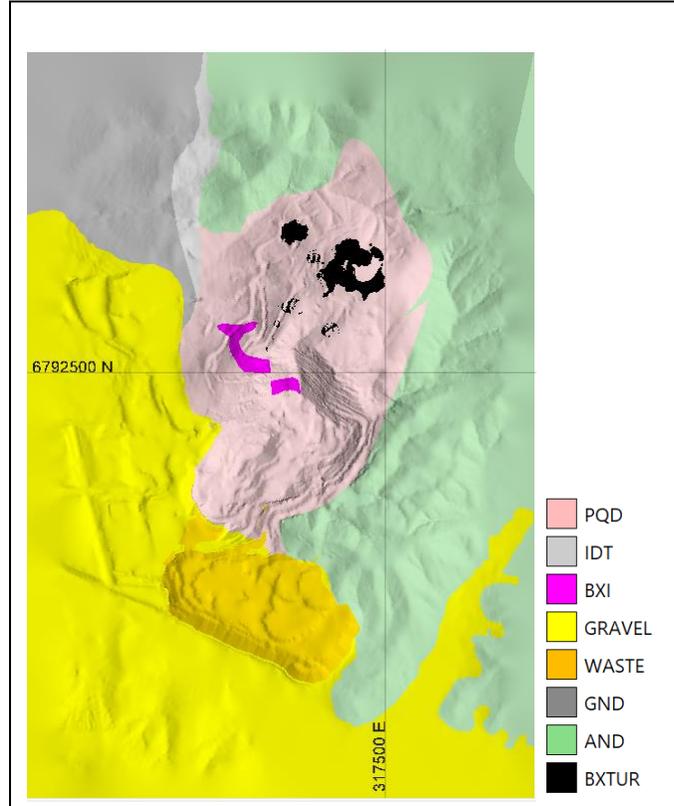
Figure 14.1:   Plan View of the Lithological Model

14.4.2   Alteration Model

Along with diamond drill core, the Dos Amigos open pit provides an outstanding opportunity to describe the hydrothermal alteration assemblages.

Potassic alteration characterizes the core of the quartz-diorite porphyry at the Dos Amigos zone. Based on field observations and portable spectrometer data, it was subdivided into two types:

- KFELD: Late-magmatic alteration with early veinlets of biotite, magnetite, and quartz. Mineralization occurs in both veinlet and disseminated forms where chalcopyrite is more prevalent than pyrite. Absence of phyllic alteration overprint is observed.

- KB: Late-magmatic alteration characterized by early veinlets of biotite, magnetite, and quartz. Mineralization is present in both veinlet and disseminated forms, with pyrite being more abundant than chalcopyrite. A weak phyllic overprint was identified with chloritization and partial hematitization of magnetite.

Quartz-sericite (QS) and argillic alteration (AA) were identified surrounding the potassic alteration zone. Siliceous alteration (Q) is confined to structural features and dikes. The distal zones are predominantly characterized by propylitic alteration.

The Marisol breccia pipe represents the most significant hydrothermal brecciation event on the property. It is located on a topographic high immediately north of the Dos Amigos target and spans an area of approximately 350 meters east-west and 500 meters north-south.
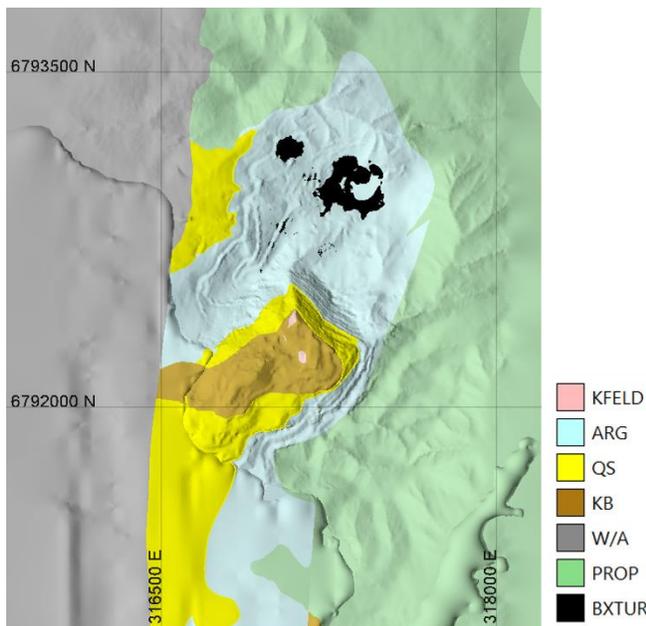
Figure 14.2: Plan View of the Alteration Model

14.4.3 Mineral domains modelling

The modeling of mineral domains was carried out using an integrated approach that combined surface mapping, drill core logging, and manually interpreted cross-sections created by project geologists. In cases where geological data were unavailable, the contacts between the leached zone and hypogene mineralization were inferred using solubility ratios.

The methodology employed in developing the Mineral Zones Model involved defining the leached basal surface and the upper boundary of the hypogene mineralization. The secondary mineralization zone, located between these two domains, was delineated and is characterized by small, isolated mineralized bodies, mainly located in the Dos Amigos pit.

Oxides mineralization consists of Fe-oxides and Cu-oxides, including jarosite, goethite, hematite, malachite, atacamite and azurite, along with Cu-silicates. Secondary sulfides include chalcocite and covellite. The hypogene mineralization predominantly consists of chalcopyrite, pyrite and, to a lesser extent, bornite, which are associated with A, B, EB, M, and D-type veinlets. This mineralization is commonly accompanied by magnetite and molybdenite. The gangue mineral assemblage includes quartz, anhydrite, albite, gypsum, chlorite, and calcite.
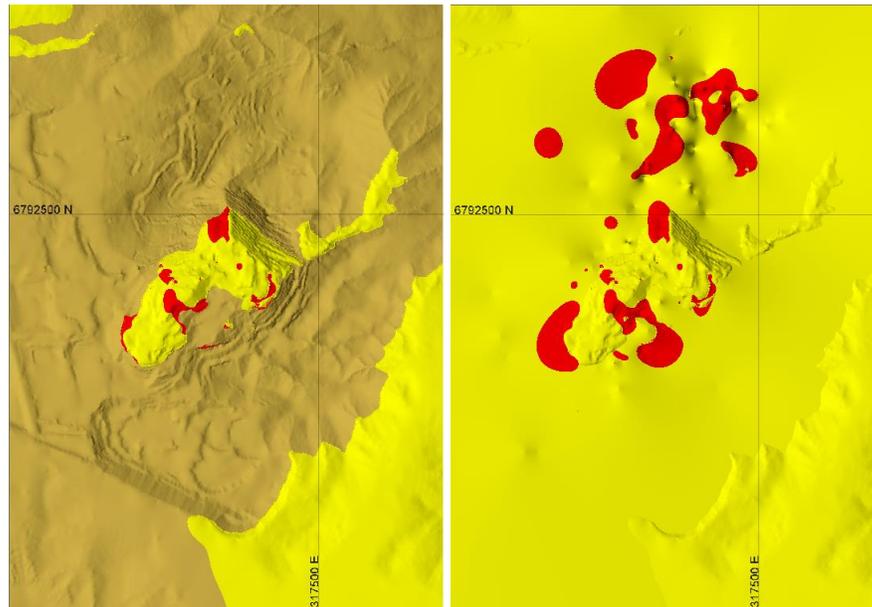
Figure 14.3: Plan View of the Mineral Domains model

The model delineates three key zones of mineralization: the primary mineralization (depicted in yellow), the secondary mineralization (depicted in red), and the leach zone (depicted in brown). Image A illustrates all three mineralization units, while Image B excludes the leach zone, offering a focused view of the primary and secondary mineralization areas.

The 0.1% CuT grade shell was defined as a way to outline the continuity of mineralization and to separate ore from waste. As can be seen in the figure, there is a break around 0.15% CuT, but 0.1% CuT was selected, using similar deposits as a reference.
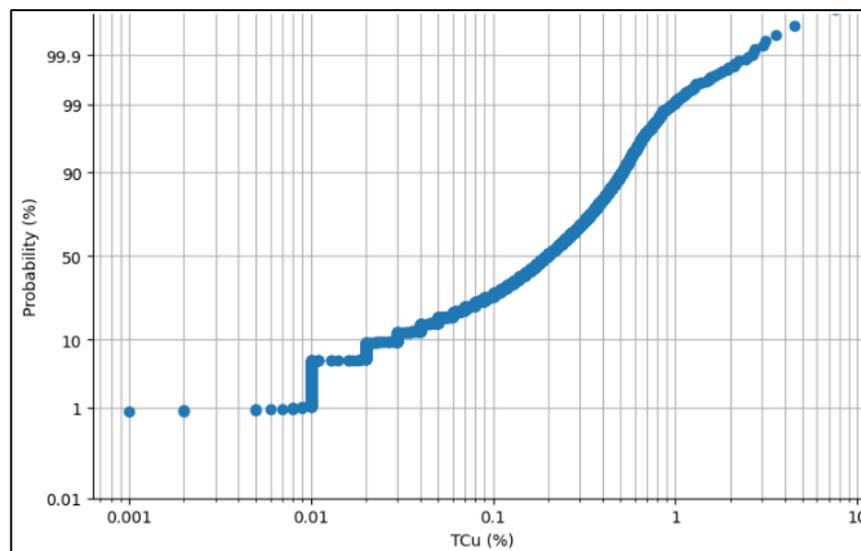
Figure 14.4: Log Probability Plot of TCu grades

14.5   Composites

Most of the drillhole samples have a length of 2 meter. Consequently, the samples were composited every 2 meters. These composites were created from the beginning of the drillhole without discriminating by geology. This was done because the size of the composite has the same size of the samples, and the contacts must be similar to the geological sections. To carry out the work, two databases were used:

The database of composites containing all the surveys that have Quality Control, were used to:

- Carry out an exploratory data analysis (EDA).

- Carry out the variographies.

- Estimate TCu and Au resources.

- Analyze the resource estimates through validations.

- Carry out a resource categorization.

In general terms, 2-meter composite databases with all the project drillholes are used for statistical analysis, exploratory data, domain estimation and variography. Only drillholes that passed the QAQC were used for resource estimation: estimation and ton-grade report were performed using Vulcan™ software.

14.6   Estimation Domain Definition

The Cu and Au estimation unit concept for the Domeyko deposit was based on an estimation within the modelled geological units, whether in terms of mineral zone, alteration, lithology, and isograde. Consequently, combinations among these geological units were carried out to find common grade and geology sectors. The purpose of this is for the grade estimation to be controlled by zoning based on a similar statistical behavior (similar populations, with common grades and geology).

During the exploratory phase of the data analysis, the basic statistics for each estimation unit were completed, obtaining the mean value, the standard deviation, and the number of statistics. Log-probability histograms were also carried out to verify the separation of the units.

The Table 14.1 shows the estimation units for total copper with the combination of each geology.

The

Table 14.2 shows the estimation units for gold with the combination of each geology.

Table 14.1:   Geology Combination for total copper grade

UE_CUT	Isograde	Mineral Zone	Alteration	Lithology
1			ARG	PQD/BXI
2	Outside	PRI	KB/QS	PQD/BXI
3			Q/KFELD	PQD/BXI
4			Q/QS/ARG	PQD/BXI/IDT
5	Inside	PRI	KB	PQD/BXI/IDT
6			KFELD	PQD/BXI/IDT
7	All	LIX	All	Except BXTUR
8	All	SEC	All	Except BXTUR
9	Outside	PRI	All	IDT
91	All	All	BXTUR	BXTUR
92	All	PRI	PROP/W/A	AND/GND/IDT1/IDT2
93	All	PRI	W/A	GRAVEL/ Landfill Removal

Table 14.2:   Geology Combination for gold grade

UE_AU	Isograde	Mineral Zone	Alteration	Lithology
1			ARG	PQD/BXI/IDT
2	Outside	PRI/SEC	KB/QS	PQD/BXI/IDT
3			Q/KFELD	PQD/BXI/IDT
4			Q/QS/ARG	PQD/BXI/IDT
5	Inside	PRI/SEC	KB	PQD/BXI/IDT
6			KFELD	PQD/BXI/IDT
7	All	LIX	All	Except BXTUR
91	All	All	BXTUR	BXTUR
92	All	PRI	PROP/W/A	AND/GND/IDT1/IDT2
93	All	PRI	W/A	GRAVEL/Landfill Removal

Figure 14.5and Figure 14.6 show the grade statistics for each estimation unit for composite for copper grade.

Figure 14.7 and Figure 14.8 show the grade statistics for each estimation unit for composite for gold grade.
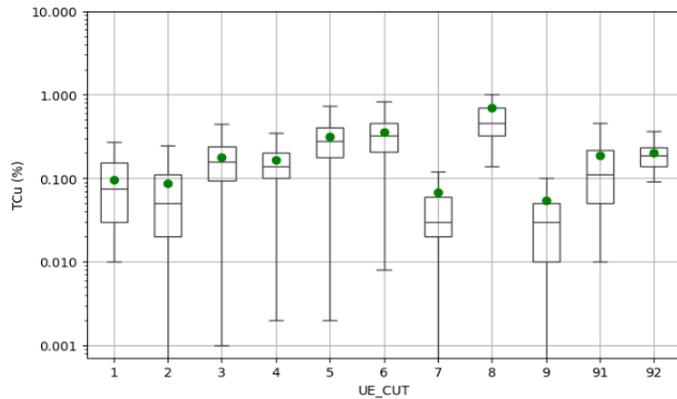
	N° samples	Mean	Std	Min	25%	50%	75%	Max
UE_CUT								
1	46.0	0.095	0.077	0.010	0.030	0.075	0.155	0.270
2	1171.0	0.088	0.118	0.000	0.020	0.050	0.110	1.230
3	259.0	0.178	0.122	0.001	0.094	0.158	0.242	1.245
4	833.0	0.165	0.100	0.002	0.100	0.140	0.200	0.804
5	2616.0	0.315	0.223	0.002	0.176	0.280	0.403	3.020
6	1906.0	0.356	0.233	0.008	0.208	0.320	0.461	4.540
7	543.0	0.067	0.123	0.000	0.020	0.030	0.060	1.150
8	80.0	0.705	0.957	0.138	0.324	0.462	0.692	7.590
9	150.0	0.054	0.141	0.000	0.010	0.030	0.050	1.630
91	198.0	0.190	0.247	0.010	0.050	0.110	0.218	1.800
92	27.0	0.202	0.085	0.091	0.139	0.188	0.232	0.449

Figure 14.5: Statistics for TCu by Estimation Unit
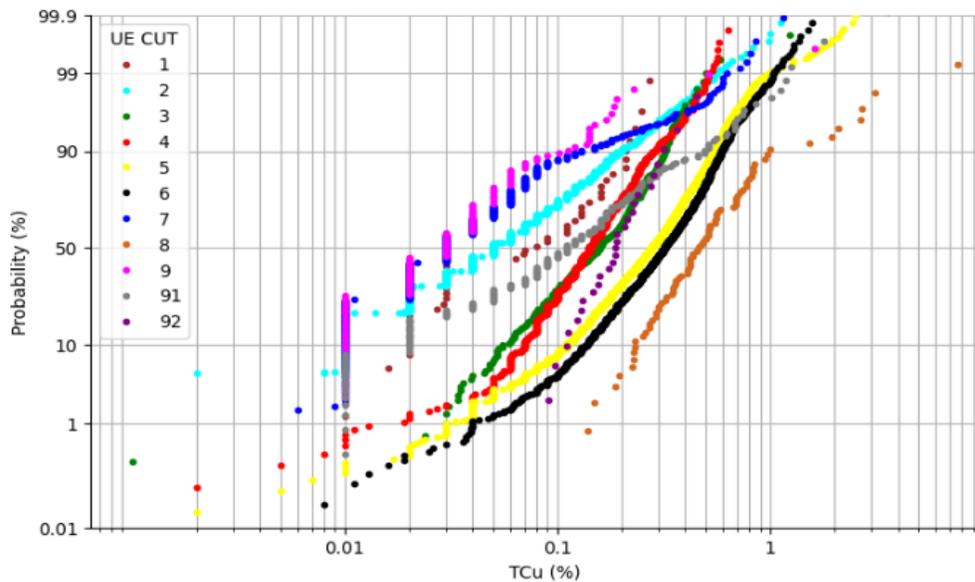
Figure 14.6: Probability-Plot for TCu by Estimation Unit

	N° samples	Mean	Std	Min	25%	50%	75%	Max
UE_AU								
1	54.0	0.056	0.069	0.005	0.020	0.035	0.049	0.390
2	1763.0	0.064	0.079	0.000	0.020	0.040	0.080	0.950
3	612.0	0.073	0.052	0.003	0.042	0.061	0.090	0.600
4	396.0	0.135	0.119	0.010	0.079	0.106	0.147	1.135
5	2315.0	0.279	0.210	0.000	0.144	0.230	0.353	3.080
6	1921.0	0.307	0.236	0.000	0.150	0.252	0.392	3.520
7	543.0	0.064	0.125	0.000	0.010	0.020	0.065	1.960
91	198.0	0.125	0.138	0.010	0.060	0.090	0.130	1.400
92	27.0	0.142	0.059	0.056	0.098	0.141	0.173	0.285

Figure 14.7: Statistics for Au by Estimation Unit
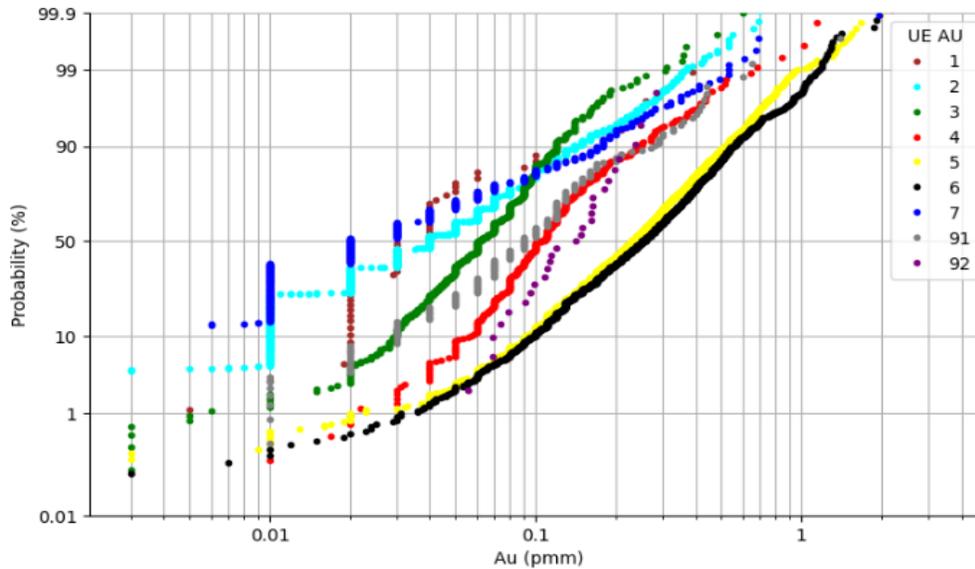
Figure 14.8: Probability-Plot for Au by Estimation Unit

14.7 Resource Block Model

A block model was established to cover the project area, including an area sufficient to accommodate open pit (or underground mining). The block model created in Vulcan™. All blocks were assigned to the code of each corresponding solid in their respective geology. Block estimation was based on the variography for each estimation unit, an outlier review, estimation plans, and validations.

14.7.1 Density

For density assignation within the block model, the information delivered by Andes Belt Mining was used. For the Domeyko deposit, the mineral zone, alteration and lithology was used to determine the assignment of the density in each block. Table 14.3 shows the density values for alteration, lithology and mineral zone.

Table 14.3: Density by lithology, alteration and mineral zone

Mineral Zone	Lithology	Alteration												
		Density (t/m³)							Number of Samples					
		ARG	KB	KFELD	QS	Q	PROP	BX_TUR	ARG	KB	KFELD	QS	Q	PROP	BX_TUR
Leached	BX_TUR							2.645							13
	BXI	2.350							1						
	PQD	2.397							15						
Secondary Sulphure	BX_TUR							2.380							9
	PQD		2.550		2.370			2.440		1		1			1
Primary Sulphure	BX_TUR							2.450							1
	AND						2.790							1	
	BXI		2.722	2.744		2.730				6	5		4		
	IDT		2.799	2.733		2.807				15	3		15		
	PQD	2.444	2.640	2.735	2.563	2.720			5	50	46	7	5		

Data analysis confirms that the density values in the primary zone are correct compared to similar deposits, but the leachate density values are very high in the tourmaline breccia. There are also some lithologies without density data, which were grouped with lithologies of similar characteristics. A density of 2.3 t/m³ was used for the gravel unit and 2.394 t/m³ for the leachate unit. A density of 1.8 t/m³ was used for landfill removal. The density assignment is shown in Table 14.4.

Table 14.4: Density assignment by lithology, alteration and mineral zone

Mineral Zone	Lithology	Alteration	Density (t/m³)
All	landfill removal	All	1.8
All	Gravel	All	2.3
Leached	All except Gravel	All	2.394
Secondary	All except Gravel	ARG/QS	2.37
	BXTUR	BXTUR	2.386
	All except Gravel	KB/KFELD/Q/PROP/IDT1/IDT2	2.55
	GND/IDT	All	2.386
Primary	BXTUR	All	2.645
	AND/GND	All	2.79
	BXI/BXI_1	All	2.731
	IDT	All except KFELD	2.8
	IDT	KFELD	2.733
	PQD	KB	2.64
	PQD	KFELD	2.735
	PQD	QS	2.563
	PQD	Q	2.72
	PQD	PROP	2.79
	PQD	PROP	2.444

14.7.2 Variography

To model and describe the spatial variability of the mineralization for each one of the estimation units and each grade the following tasks were performed:

- Correlograms were applied to the 2-meter composite databases with the complete database.

- Methodology used to develop the correlogram models defined as the main direction the orientations of the mineralization provided on variogram maps.

- The information from the exploratory data study and the delivered estimation units were used to configure the experimental directional correlograms.

- The experimental directional correlograms were interpreted to obtain the theoretical correlogram models, which provided a 3D model for the calculation of Kriging weights.

- The nugget effect is inferred from the correlogram along the drillhole with a step every 2 meters or from omnidirectional correlogram.

- Some models include several structures (a maximum of 4 for anisotropy zone in 3 directions).

- Some ranges have very elevated values, but these are modelled only to be able to reach variance 1 or more, due to a marked zonal anisotropy observed in some units. The actual range is attained only when the sill of the zonal anisotropy found is reached.

- When there are few data or a lot of variability, it was decided to perform an omnidirectional variogram.

- For the copper unit 3, only an omnidirectional variogram was made.

- For the copper units 9 and 91 were estimated by inverting the distances, therefore they don't have variography.

- For zonal anisotrophy, copper unit 7 and gold unit 1 have four structures.

Table 14.5 shows the TCu variogram models for the Domeyko deposit and Figure 14.9 shows the principal variogram copper (KFELD in primary) and Figure 14.10 shows the second principal variogram copper (KB in primary).

Table 14.5:   TCu variography for Domeyko

UE_CUT	NUGGET	Bearing	Plunge	Dip	Type	Sill	Major	Semi	Minor	Type	Sill	Major	Semi	Minor	Type	Sill	Major	Semi	Minor
							Structure 1					Structure 2					Structure 3/4		
1	0.2	15	-20	35	Sph	0.2	55	5	12	Sph	0.6	90	25	43	Sph	0.1	1000	55	1000
2	0.1	90	20	-70	Sph	0.3	15	10	45	Sph	0.2	30	35	55	Sph	0.26	80	60	60
3	0.3	0	0	0	Sph	0.4	5	5	5	Sph	0.28	35	35	35					
4	0.1	285	-45	70	Sph	0.5	45	15	40	Sph	0.32	75	60	44	Sph	0.18	1000	1000	45
5	0.15	0	-65	80	Sph	0.25	15	45	15	Sph	0.4	110	55	45	Sph	0.18	10000	60	1000
6	0.15	340	-80	80	Sph	0.25	22	15	10	Sph	0.48	90	38	37	Sph	0.29	1000	55	45
7	0.1	15	-75	80	Sph	0.25	15	15	10	Sph	0.5	60	30	34	Sph / Sph	0.1 / 0.05	74 / 75	1000 / 10000	40 / 133
8	0.1	330	85	80	Gau	0.4	8	10	35	Sph	0.44	55	55	45	Sph	0.06	60	1000	100
91	0.2	10	0	0	Sph	0.25	35	18	10	Sph	0.4	65	50	70	Sph	0.23	10000	1000	75
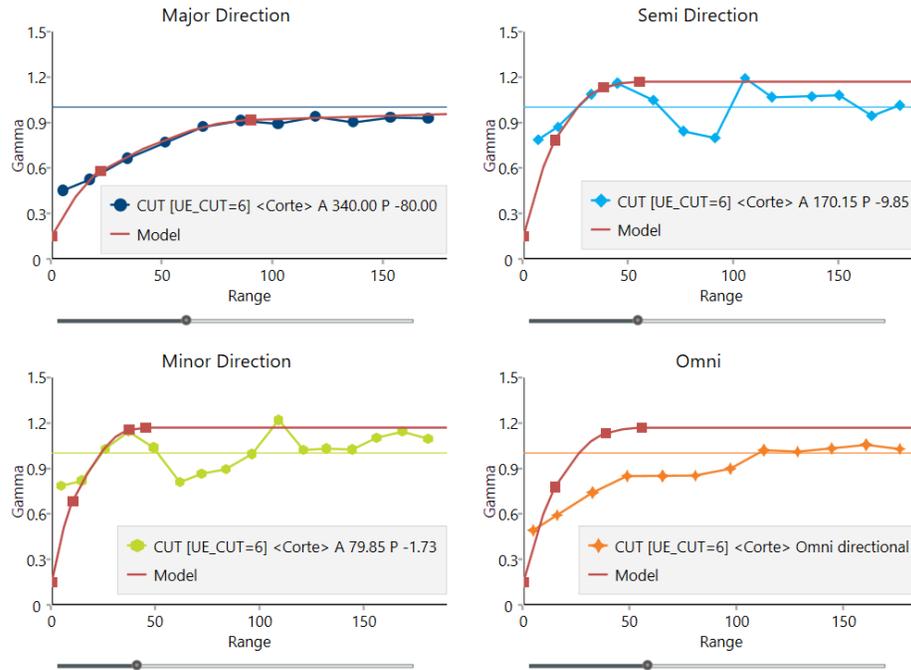
Figure 14.9:   Directional Correlogram for TCu in Estimation Unit 6 (KFELD in primary)
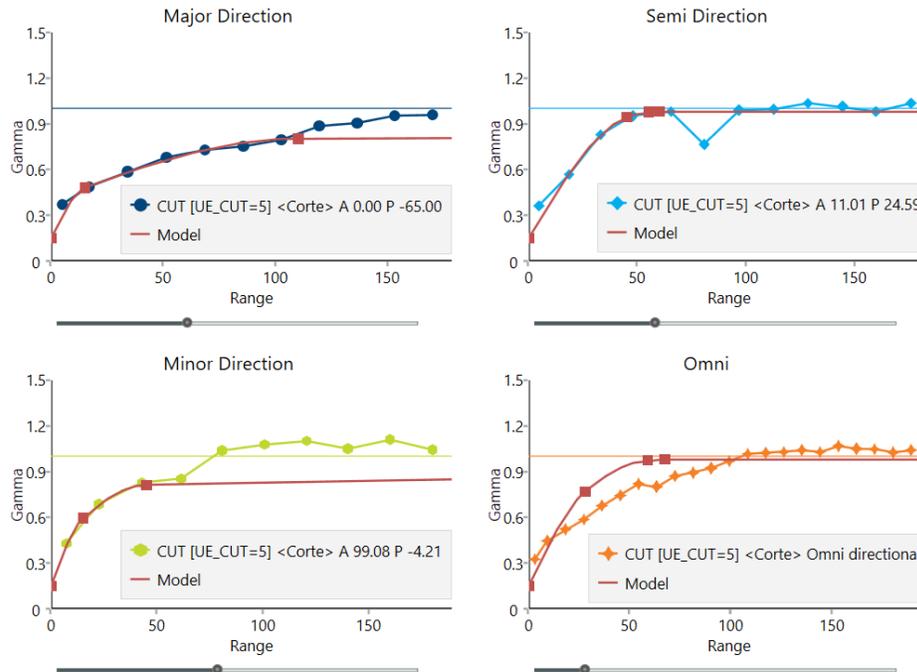
Figure 14.10: Directional Correlogram for TCu in Estimation Unit 5 (KB in primary)

Table 14.6 shows the Au variogram models for the Domeyko deposit and Figure 14.11 shows the principal variogram gold (KFELD in primary) and Figure 14.12 shows the second principal variogram gold (KB in primary).

Table 14.6: Au variography for Domeyko

UE_AU	NUGGET	Bearing	Plunge	Dip	Structure 1					Structure 2					Structure 3/4				
					Type	Sill	Major	Semi	Minor	Type	Sill	Major	Semi	Minor	Type	Sill	Major	Semi	Minor
1	0.05	90	0	-80	Exp	0.3	45	5	10	Exp	0.55	50	30	20	Gau Gau	0.09 0.2	55 60	9000 10000	25 10000
2	0.1	170	0	-80	Exp	0.2	55	4	15	Sph	0.25	60	45	18	Gau	0.45	10000	10000	20
3	0.3	150	0	-70	Exp	0.25	6	6	6	Exp	0.23	20	35	20	Sph	0.05	10000	50	10000
4	0.25	130	0	-70	Gau	0.85	75	85	55	Gau	0.06	80	9000	60	Gau	0.1	10000	10000	65
5	0.25	100	65	-25	Exp	0.53	75	90	20	Gau	0.01	9000	95	30	Gau	0.36	10000	100	10000
6	0.15	140	-5	30	Exp	0.65	60	45	70	Gau	0.27	80	9000	80					
7	0.2	15	0	90	Gau	0.2	75	5	10	Exp	0.55	80	60	20	Exp	0.05	10000	10000	25
91	0.2	110	0	-70	Sph	0.48	50	135	20	Sph	0.03	60	140	9000	Sph	0.28	10000	150	10000
92	0.1	0	0	0	Gau	0.2	40	40	40										
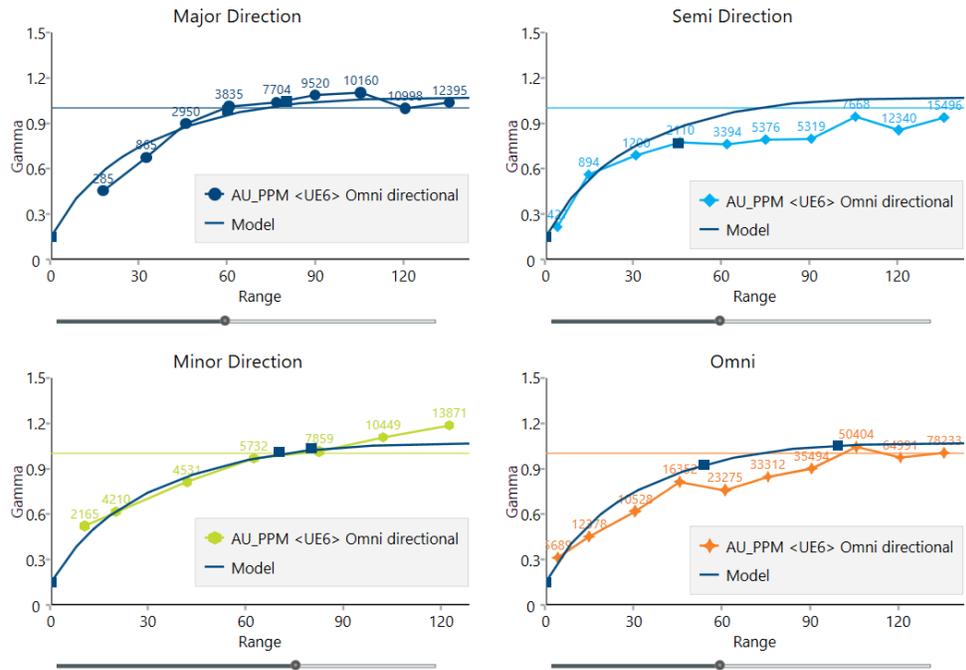
Figure 14.11: Directional Correlogram for Au in Estimation Unit 5 (KFELD in primary)
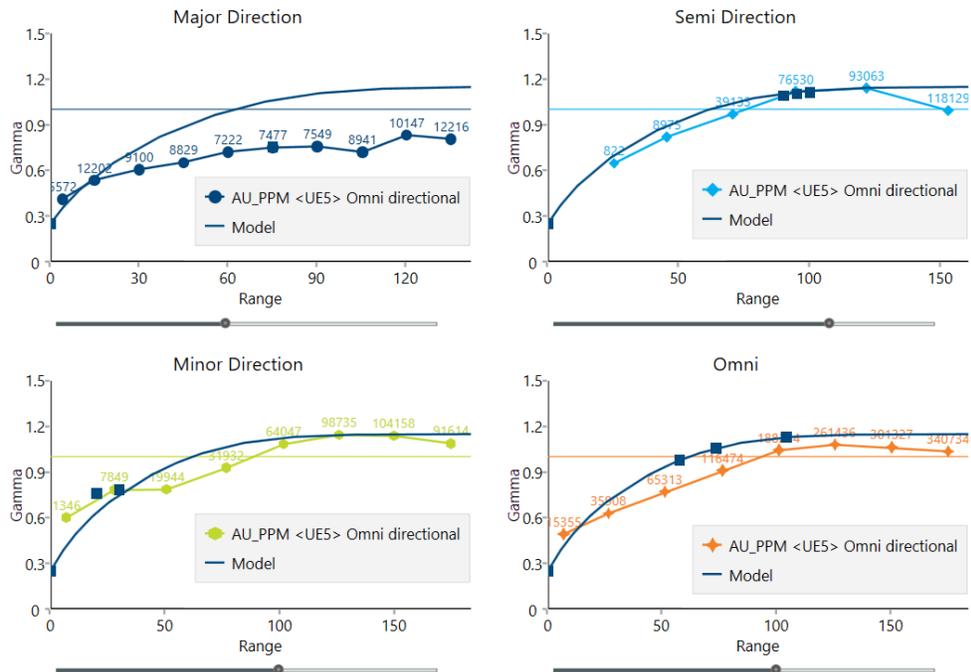
Figure 14.12: Directional Correlogram for Au in Estimation Unit 5 (KB in primary)

14.7.3 Block Model

A subcell block model created by SRK in Vulcan™ format was used for grade storage. The coordinates and data for model construction are presented in Table 14.7. The coordinates are UTM coordinates. According to the configuration used in Vulcan™, for the X axis to point to the east and the Y axis to point to the north. The estimation model is 20x20x15m with subcells of 5x5x5m.

Table 14.7:   Block model construction data

Parameters	Value
Origin East (UTM)	316,000.0
Origin North (UTM)	6,790,650.0
Origin Elevation (UTM)	0.0
Bearing	90° (from the X' axis)
Plunge	0.0
Dip	0.0
Distance in East (m)	2060.0
Distance in North (m)	3100.0
Distance in Elevation (m)	1500.0
Cell Size in East (m)	20.0
Cell Size in North (m)	20.0
Cell Size in Elevation (m)	15.0
SubCell Size in East (m)	5.0
SubCell Size in North (m)	5.0
SubCell Size in Elevation (m)	5.0

14.7.4 Outliers

To make sure that the deposit is not overestimated, high grades must be identified and, subsequently, during the estimation process, restricted whether by capping or by using a restricted search radius. Log-probability histograms were used to detect outliers for Cu and Au.

All outliers were used as capping in grade estimation. Table 14.8 and Table 14.9 show high-grade capping outliers for copper and gold, respectively.

Table 14.8:   Outliers for copper

UE_CUT	TCu Value (%)
1	0.3
2	0.86
3	0.17
4	0.65
5	1.4
6	1.5
7	0.88
8	3.0
9	0.2
91	1.3
92	0.33

Table 14.9:   Outliers for gold

UE_Au	Au Value (ppm)
1	0.52
2	0.7
3	0.37
4	0.68
5	1.67
6	1.42
7	0.2
91	0.44
92	0.2

14.7.5   Estimation Plan

The grade estimation plan for Domeyko deposit is divided into ellipsoids nested inside each grade unit. The general configurations are detailed below:

- Passes 1 and 2 were determined in accordance with the distribution of the correlogram function for each preferential direction. The first pass tends to contain 90% of the variogram sill, and the second step tends to contain 100%. The third pass corresponds to twice the maximum variogram range.

- There is a sixth pass that is performed to complete some blocks with grades, which will always remain as inferred material.

- The estimates were carried out using the Ordinary Kriging (OK) method and angles determining search directions were the same as those used on the correlograms. Block discretization was 4x4x4 for all the estimations. Some estimation passes use the Simple Kriging estimator (SK), and others use the Inverse Distance estimator (ID^2).

- The configuration of maximum and minimum sample numbers added to the maximum number of samples per drillhole ensures a minimum of two drillholes for block estimation in the case of passes 1, 2, 3, 4 and 5.

- In the total copper, for units 5 and 6, the KFELD and KB alteration directions were used for the search angles.

- The estimation plans for copper and gold use outliers and variograms are independent for each estimation unit and grade.

Table 14.10 shows the estimation plans for TCu and Table 14.11 shows the estimation plans for Au.

Table 14.10: Copper Estimation Plan

Estimation Unit	Type	Pass	Search Angles			Search Radii			Samples for estimate		Capping TCu (%)	Max Samples per Drillhole
			Bearing (°)	Plunge (°)	Dip (°)	Major (m)	Semi (m)	minor (m)	minimum	Maximum		
1	OK	1	15	-20	35	80	35	35	6	14	0.3	5
	OK	2	15	-20	35	160	70	70	6	14	0.3	5
	OK	3	15	-20	35	320	140	140	6	14	0.3	5
	OK	4	15	-20	35	640	280	280	6	14	0.3	5
	OK	5	15	-20	35	1280	560	560	4	8	0.3	
	OK	6	15	-20	35	12800	5600	5600	2	6	0.3	
2	OK	1	90	20	-70	75	50	50	6	14	0.86	5
	OK	2	90	20	-70	150	100	100	6	14	0.86	5
	OK	3	90	20	-70	300	200	200	6	14	0.86	5
	SK	4	90	20	-70	600	400	400	6	14	0.86	5
	SK	5	90	20	-70	1200	800	800	4	8	0.86	
	SK	6	90	20	-70	12000	8000	8000	2	6	0.86	
3	OK	1	0	0	0	40	40	40	6	14	0.17	5
	OK	2	0	0	0	80	80	80	6	14	0.17	5

| Estimation Unit | Type | Pass | Search Angles | | | Search Radii | | | Samples for estimate | | Capping TCu (%) | Max Samples per Drillhole |
			Bearing (°)	Plunge (°)	Dip (°)	Major (m)	Semi (m)	minor (m)	minimum	Maximum		
	OK	3	0	0	0	160	160	160	6	14	0.17	5
	OK	4	0	0	0	320	320	320	6	14	0.17	5
	OK	5	0	0	0	640	640	640	4	8	0.17	
	OK	6	0	0	0	6400	6400	6400	2	6	0.17	
4	OK	1	285	-45	70	75	55	40	6	14	0.65	5
	OK	2	285	-45	70	150	110	80	6	14	0.65	5
	OK	3	285	-45	70	300	220	160	6	14	0.65	5
	OK	4	285	-45	70	600	440	320	6	14	0.65	5
	OK	5	285	-45	70	1200	880	640	4	8	0.65	
	OK	6	285	-45	70	12000	8800	6400	2	6	0.65	
5	OK	1	bearing	plunge	dip	70	55	40	6	14	1.4	5
	OK	2	bearing	plunge	dip	140	110	80	6	12	1.4	5
	OK	3	bearing	plunge	dip	280	220	160	6	8	1.4	5
	OK	4	bearing	plunge	dip	560	440	320	5	8	1.4	4
	OK	5	bearing	plunge	dip	1120	880	640	4	8	1.4	
	OK	6	bearing	plunge	dip	11200	8800	3200	2	6	1.4	
6	OK	1	bearing	plunge	dip	85	45	35	6	14	1.5	5
	OK	2	bearing	plunge	dip	170	90	70	6	14	1.5	5
	OK	3	bearing	plunge	dip	340	180	140	4	7	1.5	3
	OK	4	bearing	plunge	dip	680	360	320	5	8	1.5	4
	OK	5	bearing	plunge	dip	1360	720	640	4	8	1.5	
	OK	6	bearing	plunge	dip	13600	8000	3200	2	6	1.5	
7	OK	1	15	-75	80	60	30	35	4	8	0.88	3
	OK	2	15	-75	80	120	60	70	4	8	0.88	3
	OK	3	15	-75	80	240	120	140	4	8	0.88	3
	SK	4	15	-75	80	480	240	280	4	8	0.88	3
	SK	5	15	-75	80	960	480	560	2	6	0.88	
	SK	6	15	-75	80	9600	4800	5600	2	6	0.88	
8	OK	1	330	85	80	55	55	50	4	8	3	3
	OK	2	330	85	80	110	110	100	4	8	3	3

Estimation Unit	Type	Pass	Search Angles			Search Radii			Samples for estimate		Capping TCu (%)	Max Samples per Drillhole
			Bearing (°)	Plunge (°)	Dip (°)	Major (m)	Semi (m)	minor (m)	minimum	Maximum		
	OK	3	330	85	80	220	220	200	4	8	3	3
	SK	4	330	85	80	440	440	400	4	8	3	3
	SK	5	330	85	80	880	880	800	3	6	3	
	SK	6	330	85	80	8800	8800	8000	2	6	3	
9	ID^2	1	0	0	0	50	50	50	4	8	0.2	3
	ID^2	2	0	0	0	100	100	100	4	8	0.2	3
	ID^2	3	0	0	0	200	200	200	4	8	0.2	3
	ID^2	4	0	0	0	400	400	400	4	8	0.2	3
	ID^2	5	0	0	0	800	800	800	2	6	0.2	
	ID^2	6	0	0	0	8000	8000	8000	2	6	0.2	
92	OK	1	10	0	0	55	50	70	5	12	1.3	4
	OK	2	10	0	0	110	100	140	5	12	1.3	4
	OK	3	10	0	0	220	200	280	5	12	1.3	4
	OK	4	10	0	0	440	400	560	5	12	1.3	4
	SK	5	10	0	0	880	800	1120	3	8	1.3	
	SK	6	10	0	0	8800	8000	11200	2	6	1.3	
92	ID^2	1	0	0	0	50	50	50	2	5	0.33	
	ID^2	2	0	0	0	100	100	100	2	5	0.33	
	SK	3	0	0	0	200	200	200	2	5	0.33	
	SK	4	0	0	0	400	400	400	2	5	0.33	
	SK	5	0	0	0	800	800	800	2	6	0.33	
	SK	6	0	0	0	8000	8000	8000	2	6	0.33	

Table 14.11: Gold Estimation Plan

Estimation Unit	Type	Pass	Search Angles			Search Radii			Samples for estimate		Capping Au (ppm)	High Yield Restriction				Max Samples per Drillhole
			Bearing (°)	Plunge (°)	Dip (°)	Major (m)	Semi (m)	minor (m)	minimum	Maximum		Au (ppm)	Major (m)	Semi (m)	minor (m)	
1	OK	1	90	0	-80	60	30	25	5	10	0.52					
	OK	2	90	0	-80	120	60	50	4	6	0.52					
	OK	3	90	0	-80	240	120	100	4	6	0.52					
	OK	4	90	0	-80	480	240	200	4	6	0.52					
	OK	5	90	0	-80	960	480	400	2	4	0.52					5
	OK	6	90	0	-80	10000	5000	5000	1	5	0.52					10
2	OK	1	170	0	-80	60	45	20	6	14	0.7					5
	OK	2	170	0	-80	120	90	40	6	14	0.7					5
	OK	3	170	0	-80	240	180	100	4	6	0.7					3
	OK	4	170	0	-80	480	360	200	3	5	0.7					2
	OK	5	170	0	-80	10000	7000	4000	3	5	0.7					
	OK	6	170	0	-80	20000	15000	8000	1	5	0.7					
3	OK	1	150	0	-70	50	50	20	6	12	0.37					5
	OK	2	150	0	-70	100	100	40	6	12	0.37					5
	OK	3	150	0	-70	200	200	80	4	6	0.37					3
	OK	4	150	0	-70	400	400	160	4	6	0.37					3
	OK	5	150	0	-70	800	800	320	1	5	0.37					
	OK	6	150	0	-70	10000	10000	5000	1	5	0.37					
4	OK	1	130	0	-70	80	80	65	6	12	0.68					5
	OK	2	130	0	-70	160	160	130	6	12	0.68					5
	OK	3	130	0	-70	320	320	260	6	12	0.68					5
	OK	4	130	0	-70	640	640	520	6	12	0.68					5
	OK	5	130	0	-70	1280	1280	1040	4	8	0.68					
	OK	6	130	0	-70	10000	10000	8000	1	5	0.68					
5	OK	1	100	40	-25	100	80	30	6	12	1.67					5
	OK	2	100	40	-25	150	120	60	4	8	1.67					3
	OK	3	100	40	-25	300	240	120	3	4	1.67					2
	OK	4	100	40	-25	600	480	240	4	8	1.67					3
	OK	5	100	40	-25	1200	960	480	4	8	1.67					

Estimation Unit	Type	Pass	Search Angles			Search Radii			Samples for estimate		Capping Au (ppm)	High Yield Restriction				Max Samples per Drillhole
			Bearing (°)	Plunge (°)	Dip (°)	Major (m)	Semi (m)	minor (m)	minimum	Maximum		Au (ppm)	Major (m)	Semi (m)	minor (m)	
	OK	6	100	40	-25	10000	8000	4000	1	5	1.67					
6	OK	1	140	0	60	80	45	80	6	12	1.42					5
	OK	2	140	0	60	160	90	160	6	12	1.42					5
	OK	3	140	0	60	320	180	320	6	12	1.42					5
	OK	4	140	0	60	640	360	640	4	8	1.42					3
	OK	5	140	0	60	1280	720	1280	4	8	1.42					
	OK	6	140	0	60	10000	5000	10000	1	5	1.42					
7	OK	1	15	0	90	80	60	25	6	12	0.2	0.2	20	20	20	5
	OK	2	15	0	90	160	120	50	6	12	0.2	0.2	20	20	20	5
	OK	3	15	0	90	320	240	100	5	10	0.2	0.2	20	20	20	4
	OK	4	15	0	90	640	480	200	5	10		0.2	20	20	20	4
	SK	5	15	0	90	1280	960	400	3	5		0.7	20	20	20	
	SK	6	15	0	90	10000	8000	4000	1	5		0.7	20	20	20	
91	OK	1	110	0	-70	45	100	20	6	14	0.44					
	OK	2	110	0	-70	60	150	40	5	10	0.44					
	OK	3	110	0	-70	120	300	80	4	6	0.44					
	OK	4	110	0	-70	240	480	160	3	5	0.44					
	OK	5	110	0	-70	480	960	320	3	5	0.44					
	OK	6	110	0	-70	5000	10000	3000	1	5	0.44					
92	OK	1	0	0	40	20	20	40	4	6	0.2					
	OK	2	0	0	40	40	40	80	4	6	0.2					
	OK	3	0	0	40	80	80	160	4	6	0.2					
	OK	4	0	0	40	160	160	320	4	6		0.1	30	30	30	
	SK	5	0	0	40	320	320	640	4	6						
	SK	6	0	0	40	5000	5000	10000	1	5						

14.7.6 Volume of influence

For this deposit it was not necessary to create an influence volume due to the delimitation that exists by the isoley solid and by the alteration solids called KFELD and KB.

14.8 Validations

The value of the nearest neighbor grade was estimated to perform the global bias comparison between the estimated and actual mean values and to perform a drift analysis. Section by section and plan views were also reviewed visually.

14.8.1 Visual Review

A visual review of the behavior of composite grades with respect to the grades estimated in the block model was carried out based on sections and plan views spanning the entire deposit. In general, no deviations are appreciated, with high and low estimated grades respecting the grade variations shown by the database.

The following Figures show a section with the estimated grades and composites with copper and gold grades. The colors show the grade ranges. Cool colors (blue) indicate low grades, and warm colors (red) indicate the highest grades.
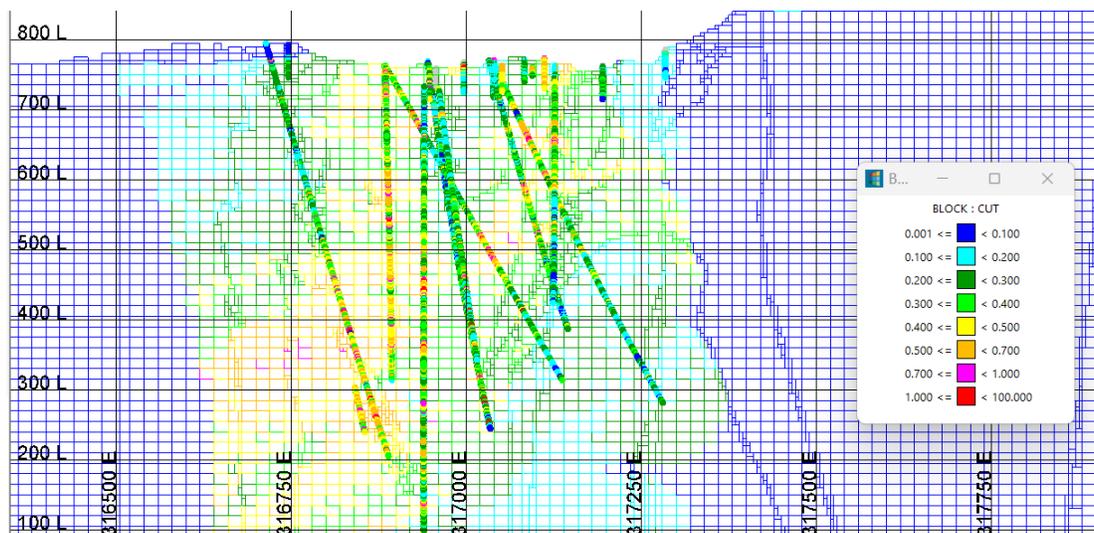
Figure 14.13: Section N6792250 with composites and blocks for TCu
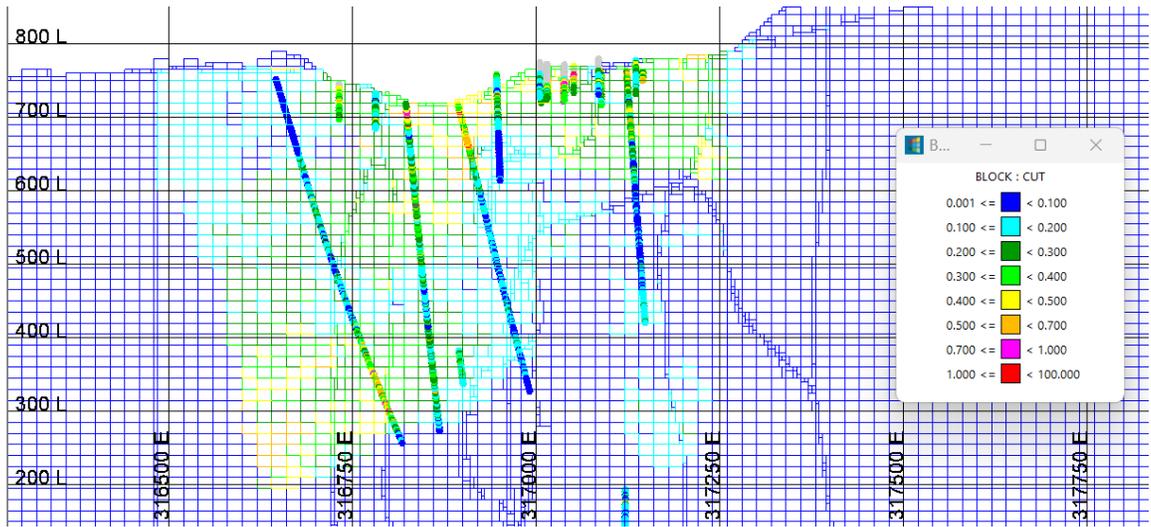
Figure 14.14: Section N6792100 with composites and blocks for TCu
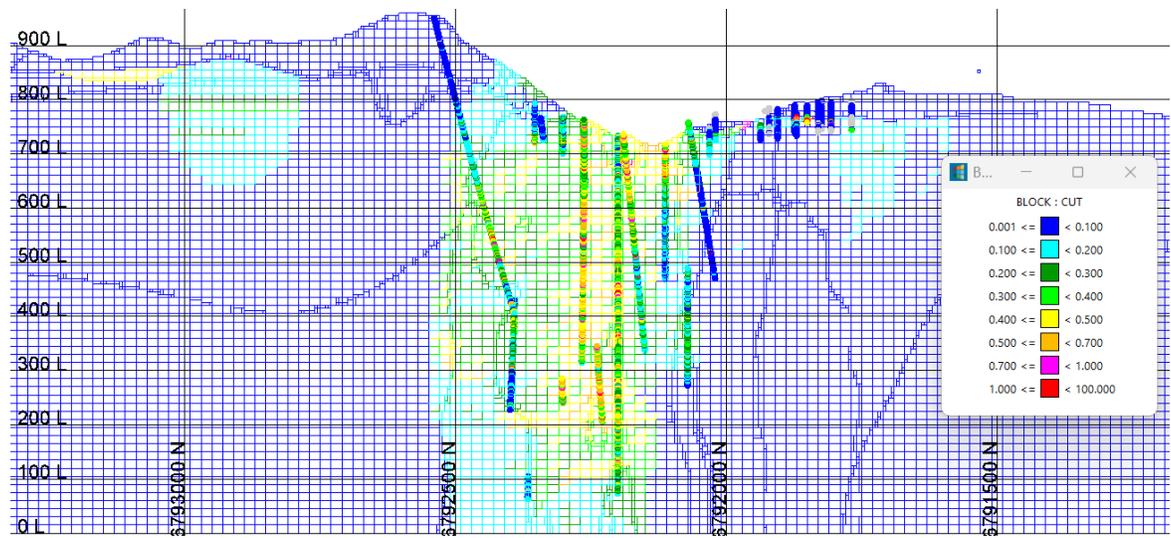
Figure 14.15: Section E316900 with composites and blocks for TCu
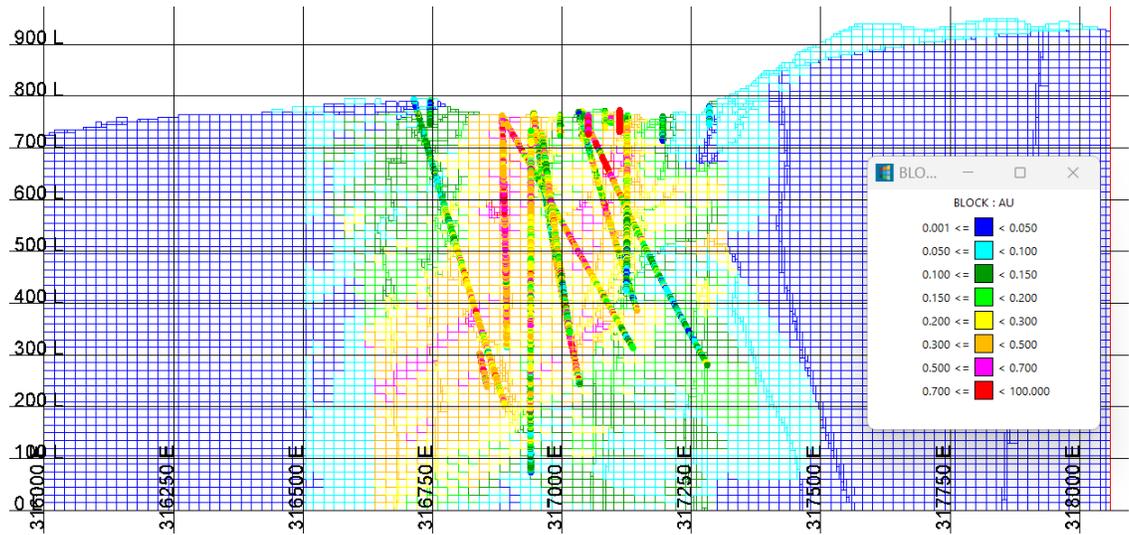
Figure 14.16: Section N6792250 with composites and blocks for Au
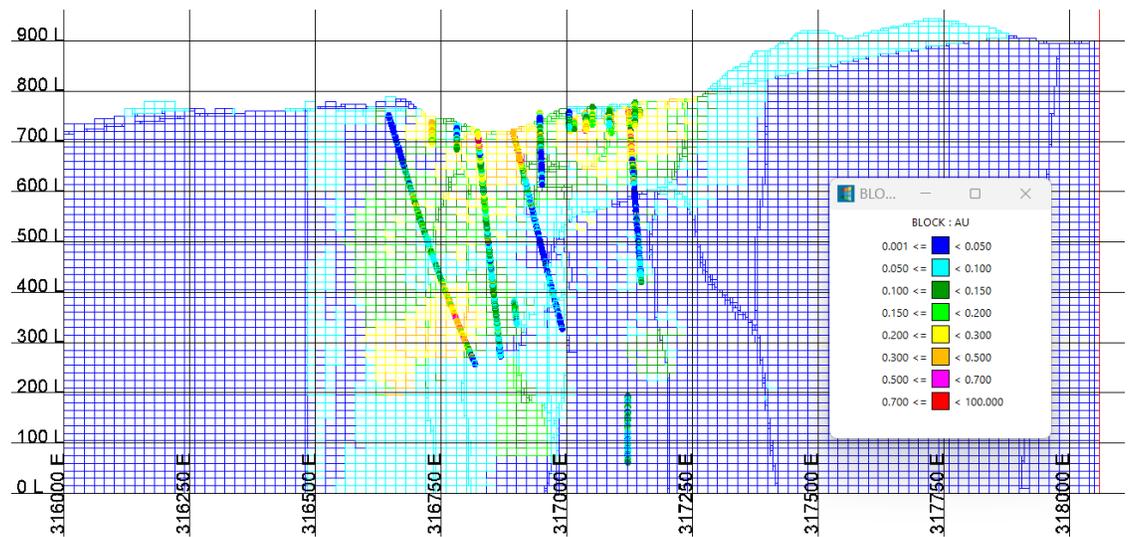
Figure 14.17: Section N6792100 with composites and blocks for Au
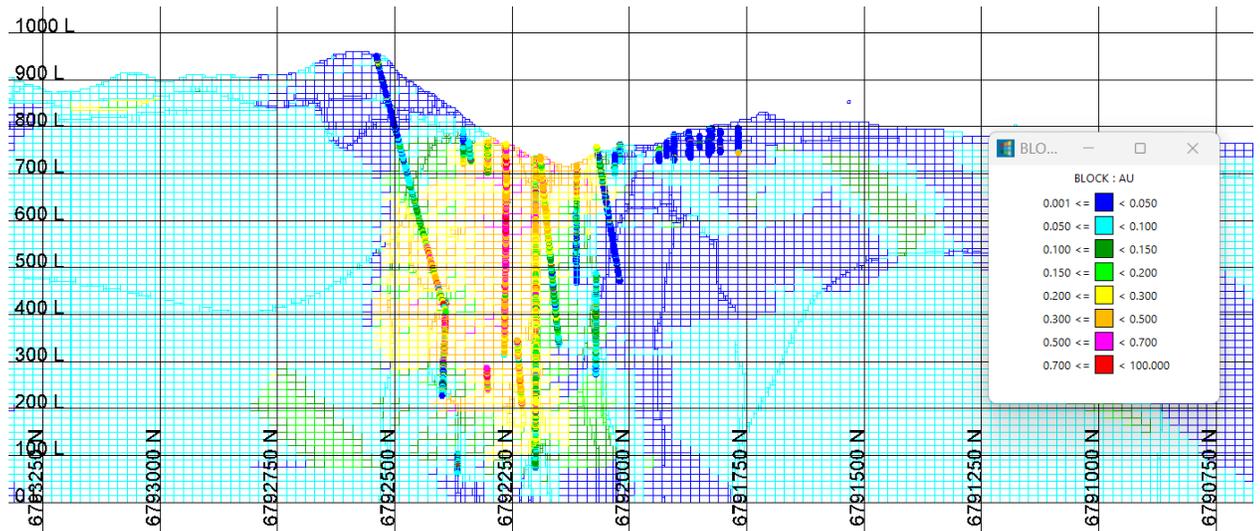
Figure 14.18: Section E316900 with composites and blocks for Au

14.8.2 Overall Bias Review

Overall mean values were calculated for each estimation unit contained in the block model and on composite samples in the form of the nearest neighbor (NN). To ensure there is no overall bias, mean grades must be similar, with an absolute error not higher than 10% for inferred resources.

Table 14.12 and Table 14.13 show the comparison of estimated mean values with respect to the nearest neighbor by TCu and Au, respectively. Only the first 4 estimation pass are presented because passes 5 and 6 increase the estimation variability too much. Units 93 do not have estimated blocks. Low grade units and units with few samples show a greater bias, especially unit 92, where the last passes used Simple Kriging with a very low local average.

Table 14.12: Cu Validation for global bias

Estimation Unit	Pass	TCu Est. (%)	TCu NN (%)	Δ Error (%)	Ton	TCu Est. (%)	TCu NN (%)	Δ Error (%)	Ton
1	3	0.091	0.038	58.4	1,469,150	0.115	0.097	15.7	23,564,743
	4	0.116	0.100	13.5	22,095,593				
2	1	0.077	0.073	5.2	13,540,636	0.058	0.087	-49.3	1,549,017,819
	2	0.097	0.094	3.4	43,818,100				
	3	0.096	0.078	18.8	227,819,981				
	4	0.050	0.089	-77.2	1,263,839,103				
3	4	0.088	0.106	-20.3	2,241,529	0.088	0.106	-20.3	2,241,529
4	1	0.185	0.182	1.7	6,117,332	0.179	0.176	1.5	136,167,959
	2	0.187	0.193	-3.0	34,469,277				
	3	0.173	0.170	1.9	61,059,536				
	4	0.180	0.170	5.5	34,521,814				
5	1	0.317	0.313	1.2	44,028,612	0.288	0.270	6.3	250,261,170
	2	0.316	0.297	6.1	79,806,180				
	3	0.274	0.254	7.5	96,133,808				
	4	0.217	0.189	12.8	30,292,570				
6	1	0.347	0.339	2.4	21,538,540	0.353	0.345	2.3	156,891,567
	2	0.345	0.335	2.9	67,698,937				
	3	0.363	0.356	1.9	53,161,468				
	4	0.365	0.361	0.9	14,492,622				
7	1	0.054	0.051	5.3	1,718,892	0.038	0.053	-38.9	84,210,746
	2	0.052	0.060	-15.2	5,412,236				
	3	0.053	0.056	-5.3	19,275,291				
	4	0.031	0.051	-64.1	57,804,327				
8	1	0.814	1.162	-42.8	179,820	0.526	0.545	-3.6	8,790,941
	2	0.539	0.516	4.2	833,018				
	3	0.732	0.557	23.9	2,713,688				
	4	0.403	0.521	-29.3	5,064,416				
91	1	0.271	0.231	14.7	772,080	0.202	0.199	1.5	72,555,485
	2	0.245	0.215	12.5	8,355,174				
	3	0.186	0.186	0.0	34,856,018				
	4	0.207	0.209	-1.2	28,572,213				

Estimation Unit	Pass	TCu Est. (%)	TCu NN (%)	Δ Error (%)	Ton	TCu Est. (%)	TCu NN (%)	Δ Error (%)	Ton
92	1	0.212	0.201	5.3	1,717,245				
	2	0.220	0.197	10.3	5,648,704	0.059	0.196	-233.1	293,171,805
	3	0.060	0.195	-226.9	27,957,195				
	4	0.054	0.196	-261.7	257,848,661				

Note:

Pass= estimation pass for Cu

Cu Est.= copper estimation value

Cu NN = nearest neighbor value

Ton= tonnage associated with the estimation pass

Δ Error= percentage difference between the estimated grade and the nearest neighbor grade

(1) = indicates weighted average or unit total for first 4 passes

Table 14.13: Au Validation for global bias

Estimation Unit	Pass	Au Est. (ppm)	Au NN (ppm)	Δ Error (%)	Ton	Au Est. (¹) (ppm)	Au NN (¹) (ppm)	Δ Error (¹) (%)	Ton (¹)
1	1	0.036	0.033	10.2	975,020				
	2	0.036	0.040	-12.3	4,261,540	0.048	0.047	2.8	44,561,710
	3	0.042	0.047	-13.2	13,775,445				
	4	0.054	0.048	11.0	25,549,705				
2	1	0.055	0.053	3.5	5,473,533				
	2	0.076	0.081	-6.9	39,153,888	0.093	0.091	2.2	1,118,977,818
	3	0.084	0.091	-8.9	185,587,870				
	4	0.095	0.091	4.6	888,762,528				
3	1	0.069	0.064	7.0	41,125				
	2	0.063	0.061	2.8	6,434,195	0.076	0.078	-3.0	210,015,390
	3	0.072	0.070	3.6	61,935,559				
	4	0.078	0.082	-5.9	141,604,511				
4	1	0.150	0.144	3.9	7,871,818				
	2	0.167	0.164	1.5	8,716,010	0.162	0.154	5.1	21,362,851
	3	0.174	0.151	13.1	4,704,671				
	4	0.213	0.162	23.7	70,353				
5	1	0.295	0.291	1.1	54,000,421				
	2	0.254	0.237	6.7	26,980,673	0.274	0.266	3.1	89,835,238
	3	0.212	0.198	6.9	8,854,144				
	4								

Estimation Unit	Pass	Au Est. (ppm)	Au NN (ppm)	Δ Error (%)	Ton	Au Est. ([1]) (ppm)	Au NN ([1]) (ppm)	Δ Error ([1]) (%)	Ton ([1])
6	1	0.311	0.306	1.8	42,055,795	0.297	0.292	1.6	86,197,189
	2	0.284	0.280	1.3	43,050,386				
	3	0.266	0.247	7.2	1,091,008				
	4								
7	1	0.053	0.051	3.6	3,326,014	0.051	0.045	12.5	148,480,009
	2	0.056	0.055	2.1	11,629,370				
	3	0.054	0.046	14.3	38,658,535				
	4	0.049	0.043	13.4	94,866,090				
91	1	0.141	0.143	-1.4	4,118,208	0.196	0.197	-0.6	67,534,009
	2	0.176	0.182	-3.2	5,577,599				
	3	0.196	0.205	-4.2	26,823,215				
	4	0.206	0.201	2.8	31,014,988				
92	1	0.137	0.145	-6.0	253,793	0.091	0.089	2.5	31,339,184
	2	0.158	0.139	12.3	1,012,088				
	3	0.153	0.143	6.8	5,176,778				
	4	0.075	0.075	-0.1	24,896,526				

Note: Pass= estimation pass for Au

Au Est.= gold estimation value

Au NN = nearest neighbor value

Ton= tonnage associated with the estimation pass

Δ Error= percentage difference between the estimated grade and the nearest neighbor grade

([1]) = indicates weighted average or unit total for first 4 passes

14.8.3 Drift analysis

To review the potential existence of grade inconsistencies across the deposit, average values were calculated across 50 m bands on the X and Y, and 25 m bands on the Z axes. This procedure is denominated drift review. Drifts are shown only for estimation units 6, and all estimation passes were used. The plots show the estimated block model (blue), the nearest neighbor (orange), mean of the declustered samples (red), and number of samples (grey).

Figure 14.19, Figure 14.20 and Figure 14.21 show the drifts of principal estimation unit for copper.

Figure 14.22, Figure 14.23 and Figure 14.24 show the drifts of principal estimation unit for gold.

In each of the drifts, it can be seen that the averages by bands between the estimated value and the value of the nearest neighbor are very similar, except at the border of the deposit, where the number of samples is very low and the estimation error is higher (At the edges of the deposit and when the tonnage is lower, the bias between the three lines begins to increase).
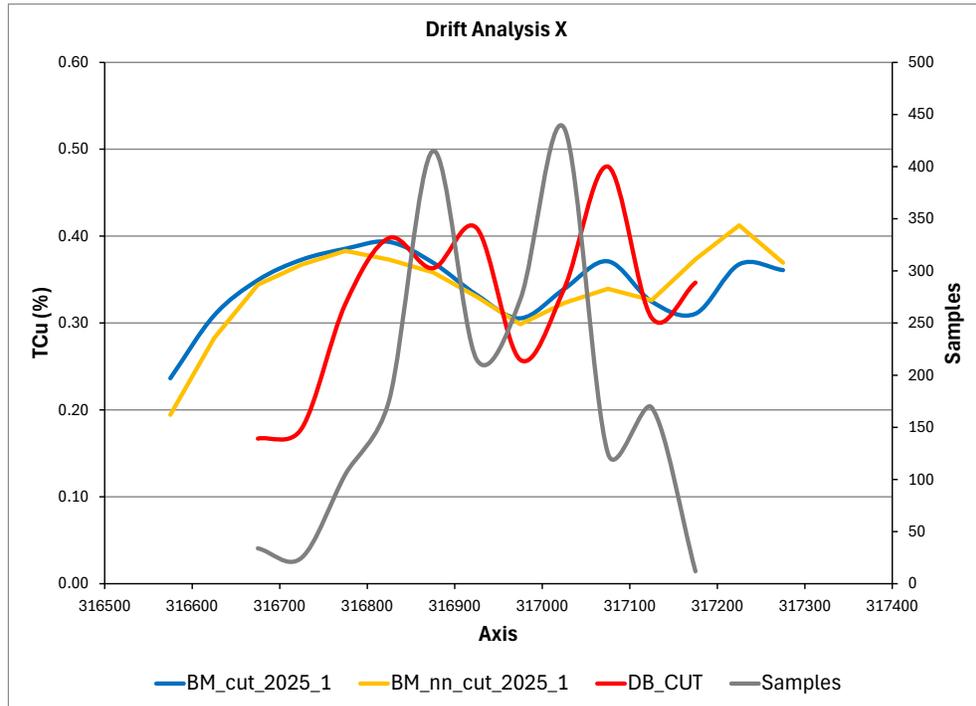
Figure 14.19: Drift review for Cu in easting coordinate
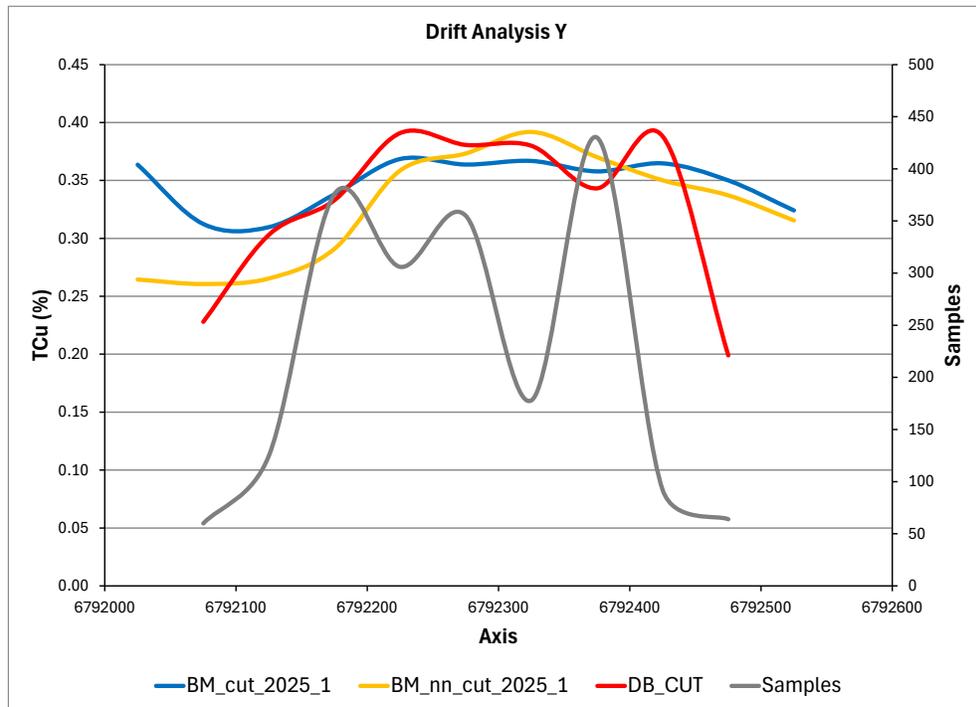
Figure 14.20: Drift review for Cu in north coordinate
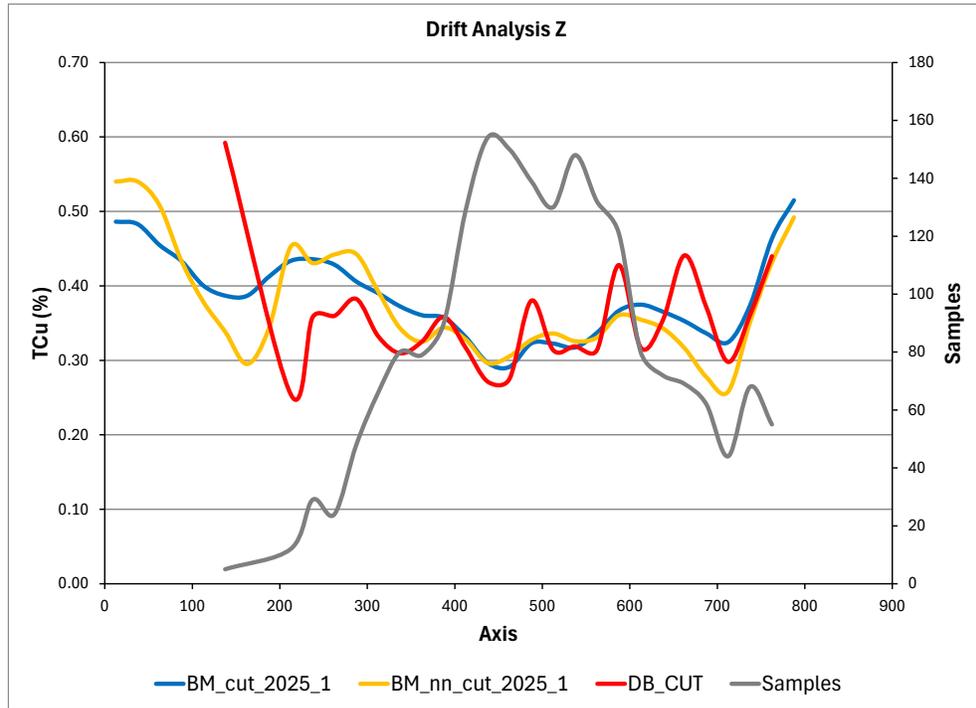
Figure 14.21: Drift review for Cu at level
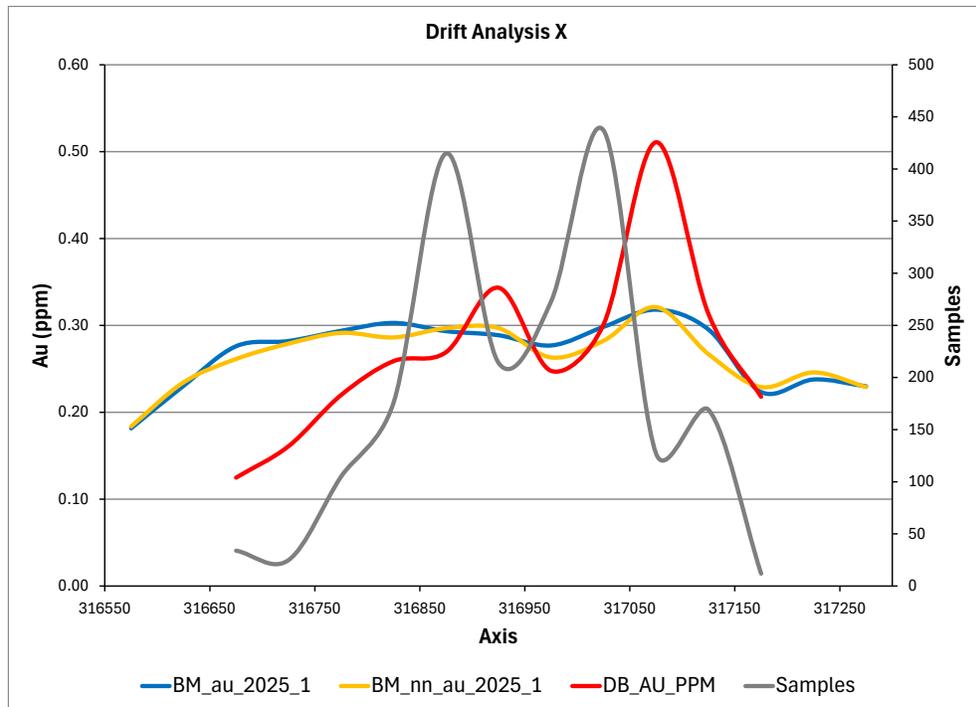
Figure 14.22: Drift review for Au in easting coordinate
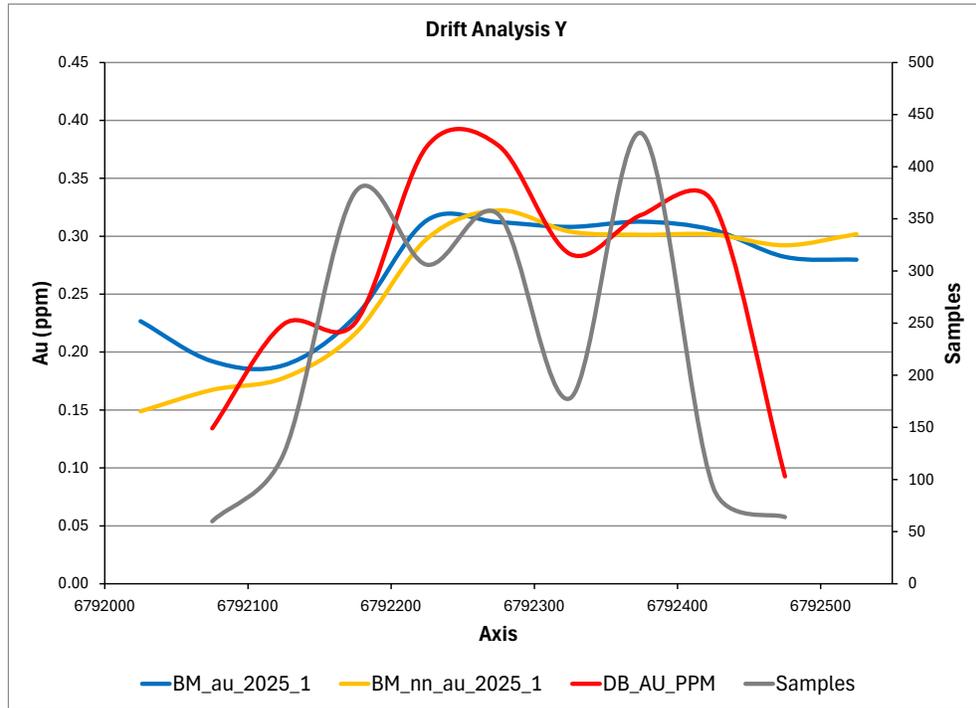
Figure 14.23: Drift review for Au in north coordinate
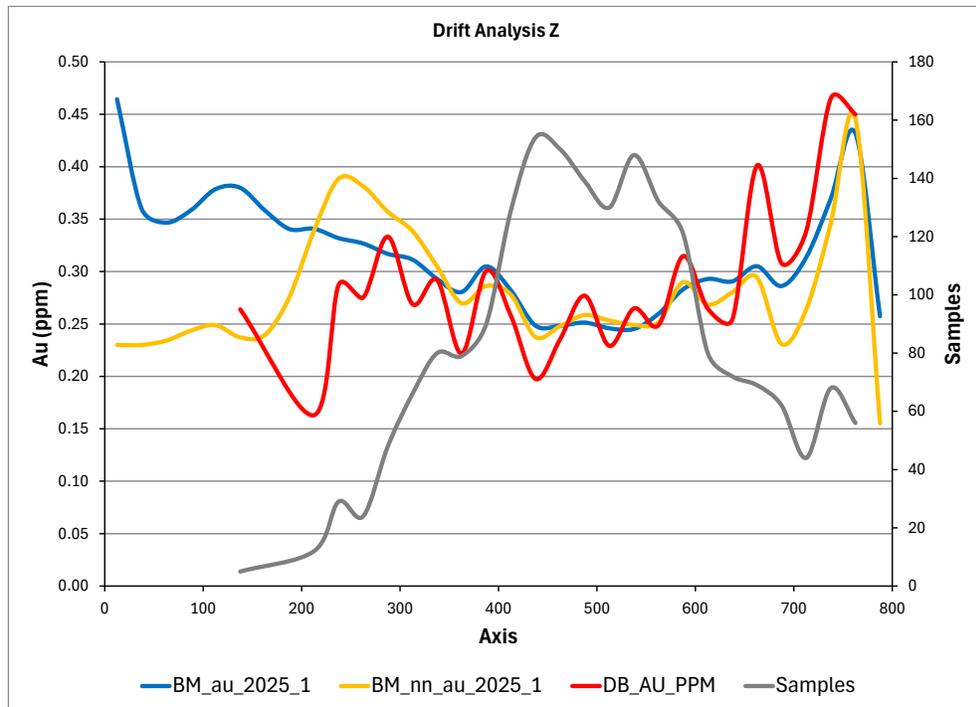
Figure 14.24: Drift review for Au at level

14.9　Mineral Resource Classification

The amounts of mineral and the corresponding grades for the Domeyko deposit was classified in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves.

The mineral resource classification is typically a subjective concept. The best industry practices suggest that the classification must consider the reliability of the geological continuity of the mineralized units, the quality and quantity of the exploration data supporting the estimates, and the geostatistical confidence in tonnage and grade estimates. The appropriate classification criteria must be focused on integrating both concepts in order to delineate regular areas in a similar resource classification.

The continuity interpreted by the correlograms is between 75 and 90 meters in primary zone and 50 meters in secondary zone, the Domeyko mineral resources were classified as:

14.9.1　In Primary zone (inside isograde 0.1% TCu)

- Measured: when the average distance between a block and the two nearest drillholes is less than or equal to 30 meters and has been estimated by at least two drillholes.

- Indicated: when the average distance between a block and the two nearest drillholes is less than or equal to 55 meters and has been estimated by at least two drillholes and is not classified as a Measured Resource.

- Inferred: when a block is estimated by total copper and is not classified as a measured or indicated resource.

14.9.2　In Secondary and Leached zone (inside isograde 0.1% TCu)

- Measured: when the average distance between a block and the two nearest drillholes is less than or equal to 20 meters and has been estimated by at least two drillholes.

- Indicated: when the average distance between a block and the two nearest drillholes is less than or equal to 35 meters and has been estimated by at least two drillholes and is not classified as a Measured Resource.

- Inferred: when a block is estimated by total copper and is not classified as a measured or indicated resource.

14.9.3　In other zones (Outside isograde and BXTUR)

- Measured: when the average distance between a block and the two nearest drillholes is less than or equal to 35 meters and has been estimated by at least two drillholes.

- Indicated: when the average distance between a block and the two nearest drillholes is less than or equal to 60 meters and has been estimated by at least two drillholes and is not classified as a Measured Resource.

■ Inferred: when a block is estimated by total copper and is not classified as a measured or indicated resource.

14.10 Mineral Resource Statement

CIM Definition Standards for Mineral Resources and Mineral Reserves define a Mineral Resource as: "A concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge".

When declaring the mineral resources for the Domeyko deposit, SRK states the following:

■ The mineral resources identified in the block model are classified in accordance with CIM definitions for the Measured, Indicated and Inferred categories.

■ Volume determinations were carried out below the topography provided by Andes Belt as of October 05, 2025.

14.10.1 Mineral Resource Statement

Volume determinations have been prepared by separating in one zone, which corresponds to superficial sulfide mineralization focused on a resource pit with a primary grade of copper and gold as a by-product. The subcell model was reblocked to obtain a regular block model. This regular block model will be used to:

■ Create the Resource Pit (using Whittle software)

■ Make the Resource Statement

Table 14.14 shows the technical and operational parameters necessary to define the oxide and sulfide envelopes and the commercial orientations with the objective of being used in mining optimization.

Table 14.14: Economic technical parameters for mining optimization

Price Cu	USD/pound	4.20	Benchmark
Price Au	USD/troy ounce	2,200	Benchmark
Slope Angle	degrees	45	Benchmark
Mining Cost (without transport)	USD/t	1.2	*Company Data*
Mining Cost (transport)	USD/t-km	0.23	*Company Data*
Process Cost	USD/t min	11.3	*Company Data*
G&A	USD/pound	0.3	*Company Data*
Total Copper Sale Cost	USD/pound	0.418	*Company Data*
Total Gold Sale Cost	USD/troy ounce	5	*Company Data*
Recovery Cu	%	87.41	*Company Data*
Recovery Au	%	65.42	*Company Data*
Payable Au	%	100	*Supposed*
Discount rate	%	10	Benchmark

Figure 14.25 shows 3D view of the resulting economic envelope for the pit number 36 (revenue factor = 1) that is contained in the secondary and sulfide zone of the Domeyko project.

Figure 14.26 shows section view of the resulting economic envelope.
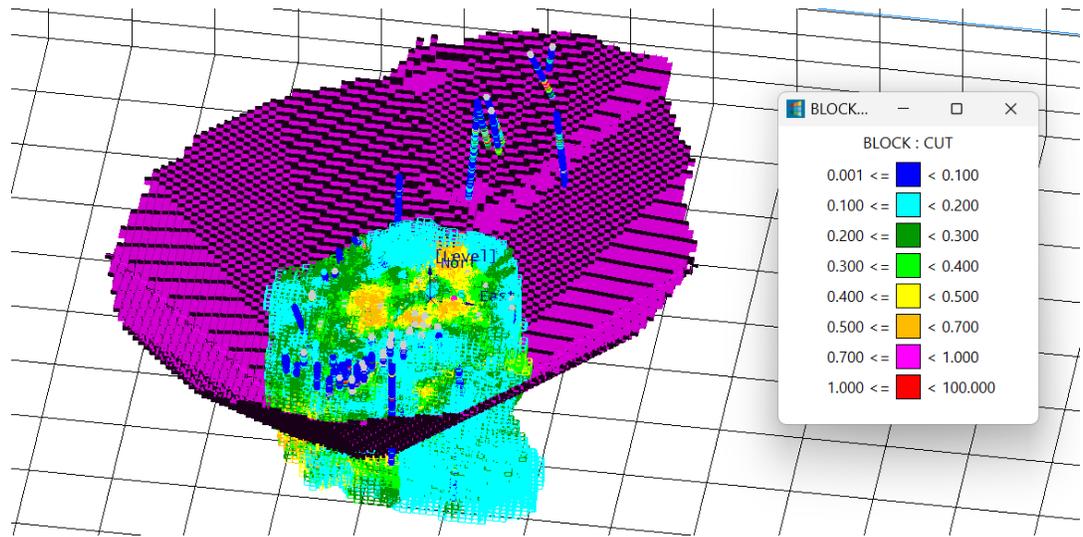
Figure 14.25: 3D view Pit 36 in sulfide zone for copper and gold
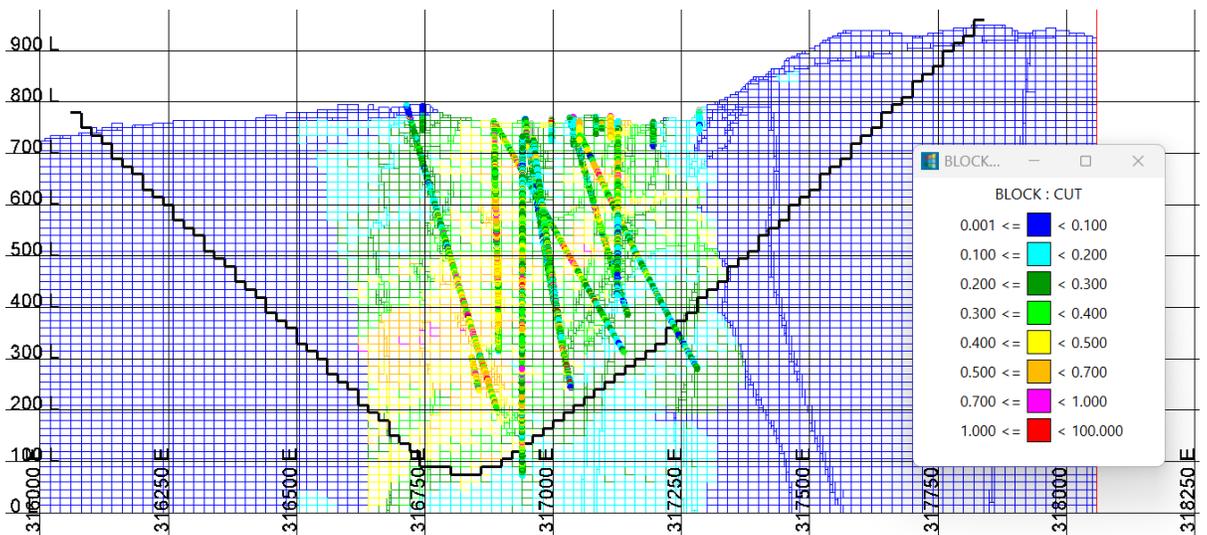
Figure 14.26: Section view Pit 36 in sulfide zone for copper and gold

Table 14.15 indicates the grade-ton report in primary sulfide zone and Table 14.16 indicates the grade-ton report in secondary sulfide zone, including economy envelopes for open pit exploitation, by cut-off grade of 0.2% total copper.

Table 14.15: Tonne-grade Report by primary sulfide zone for open pit resource (pit 36) and by cut-off grade of 0.2% total copper

Classification	Total Copper (%)	Tonnage	Gold (ppm)
Measured	0.355	15,390,011	0.319
Indicated	0.344	85,425,928	0.277
Measured + Indicated	0.346	100,815,939	0.284
Inferred	0.339	256,327,624	0.239
Total Mea+Ind+Inf	0.341	357,143,563	0.252

Table 14.16: Tonne-grade Report by secondary sulfide zone for open pit resource (pit 36) and by cut-off grade of 0.2% total copper

Classification	Total Copper (%)	Tonnage	Gold (ppm)
Measured	0.377	101,683	0.138
Indicated	0.420	555,815	0.122
Measured + Indicated	0.414	657,499	0.124
Inferred	0.421	10,105,844	0.122
Total Mea+Ind+Inf	0.421	10,763,343	0.122

Notes to accompany the Mineral Resource Estimate:

1. The Independent and Qualified Person for the Mineral Resource Estimate, as defined by NI 43-101, is Joled Nur from SRK Consulting (Chile), and the effective date is December 31, 2024.

2. These mineral resources are not mineral reserves, as they do not have demonstrated economic viability.

3. The mineral resource estimate follows current CIM definitions and guidelines for mineral resources.

4. The results are presented undiluted, without metallurgical deductions, and are considered to have reasonable prospects for economic viability. The estimate encompasses 14 domains for copper, 14 domains for gold, defined by geological solids. The resource was estimated using Vulcan release 2023.

5. High-grade capping supported by statistical analysis was done on raw assay data before compositing and established on a per-zone basis. All domains were capped.

6. Grade interpolation was performed by Ordinary Kriging on 2.0 m composites from drillhole in a block model with a block size of 25.0 m by 25.0 m by 15.0 m with subcells.

7. Density was assigned for each of the lithologies and mineral zone

8. The estimate is categorized as inferred mineral resources. The inferred category is defined in areas where the drill spacing is less than 250 meters and reasonable geological and grade continuity.

9. The Mineral Resource Estimate for open pit. It is reported at a rounded cut-off grade of 0.20 % Cu.

10. The NI 43-101 Technical Report and Initial Mineral Resource Estimate - Domeyko Project - December 2025 cut-off grades should be re-evaluated considering future prevailing market conditions (metal prices, exchange rates, mining costs etc.).

Table 14.17 indicates the grade-ton report in primary sulfide zone and indicates the grade-ton report in secondary sulfide zone, including economy envelopes for open pit exploitation.

Table 14.17: Tonne-grade Report by primary sulfide zone for open pit resource (pit 36)

| Cutoff Tcu (%) | Resources in Primary Zone | | | | | | | | | | | |
| | Measured | | | Indicated | | | Inferred | | | Totals | | |
	Tcu (%)	kt	Au (ppm)	Tcu (%)	kt	Au (ppm)	Tcu (%)	kt	Au (ppm)	Tcu (%)	kt	Au (ppm)
0	0.269	23,563	0.235	0.282	117,168	0.228	0.121	1,311,649	0.088	0.136	1,452,381	0.101
0.05	0.288	21,829	0.252	0.299	109,932	0.240	0.128	1,210,000	0.092	0.145	1,341,760	0.107
0.1	0.310	19,809	0.273	0.309	104,846	0.250	0.258	442,928	0.178	0.269	567,584	0.195
0.15	0.332	17,751	0.297	0.323	97,301	0.261	0.298	340,005	0.210	0.305	455,057	0.224
0.2	0.355	15,390	0.319	0.344	85,426	0.277	0.339	256,328	0.239	0.341	357,144	0.252
0.25	0.383	12,702	0.345	0.372	68,698	0.298	0.377	193,142	0.267	0.376	274,541	0.279
0.3	0.413	9,892	0.372	0.405	51,379	0.322	0.410	145,953	0.288	0.409	207,223	0.301
0.35	0.447	7,166	0.404	0.441	35,617	0.345	0.447	101,670	0.309	0.446	144,452	0.323
0.4	0.482	4,810	0.435	0.477	23,303	0.366	0.481	69,640	0.325	0.480	97,753	0.340
0.45	0.520	2,936	0.460	0.512	13,980	0.389	0.515	43,419	0.339	0.515	60,336	0.356
0.5	0.560	1,560	0.472	0.555	6,731	0.411	0.560	20,935	0.344	0.559	29,226	0.366
0.55	0.598	790	0.497	0.600	2,949	0.431	0.604	9,601	0.351	0.603	13,340	0.378
0.6	0.629	356	0.528	0.647	1,121	0.481	0.656	3,710	0.345	0.652	5,186	0.387
0.65	0.663	65	0.559	0.688	438	0.504	0.696	1,782	0.349	0.693	2,285	0.385
0.7	0	0	0	0.731	130	0.549	0.729	754	0.351	0.729	884	0.381
0.75	0	0	0	0.802	16	0.437	0.790	129	0.358	0.791	145	0.367
0.8	0	0	0	0.802	16	0.437	0.868	16	0.235	0.834	32	0.338
0.85	0	0	0	0	0	0	0.868	16	0.235	0.868	16	0.235
0.9	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0

Table 14.18: Tonne-grade Report by secondary sulfide zone for open pit resource (pit 36)

| Cutoff Tcu (%) | Resources in Primary Zone | | | | | | | | | | | |
| | Measured | | | Indicated | | | Inferred | | | Totals | | |
	Tcu (%)	kt	Au (ppm)	Tcu (%)	kt	Au (ppm)	Tcu (%)	kt	Au (ppm)	Tcu (%)	kt	Au (ppm)
0	0.351	116	0.142	0.408	584	0.120	0.387	11,464	0.136	0.387	12,165	0.136
0.05	0.351	116	0.142	0.408	584	0.120	0.387	11,464	0.136	0.387	12,165	0.136
0.1	0.351	116	0.142	0.408	584	0.120	0.392	11,246	0.134	0.393	11,947	0.134
0.15	0.351	116	0.142	0.408	584	0.120	0.413	10,453	0.124	0.412	11,154	0.124
0.2	0.377	102	0.138	0.420	556	0.122	0.421	10,106	0.122	0.421	10,763	0.122
0.25	0.377	102	0.138	0.443	498	0.128	0.443	9,072	0.123	0.442	9,672	0.124
0.3	0.390	87	0.137	0.492	382	0.131	0.480	7,426	0.129	0.479	7,896	0.130
0.35	0.428	58	0.146	0.514	338	0.132	0.521	5,870	0.135	0.520	6,266	0.135
0.4	0.480	29	0.127	0.573	236	0.146	0.570	4,345	0.149	0.570	4,611	0.148
0.45	0.545	14	0.153	0.623	177	0.157	0.661	2,756	0.161	0.658	2,947	0.161
0.5	0.545	14	0.153	0.652	148	0.147	0.698	2,283	0.154	0.694	2,446	0.153
0.55	0.000	-	0.000	0.680	118	0.155	0.760	1,721	0.153	0.755	1,839	0.154
0.6	0.000	-	0.000	0.784	58	0.190	0.789	1,473	0.151	0.789	1,532	0.153
0.65	0.000	-	0.000	0.830	44	0.183	0.917	801	0.113	0.912	844	0.116
0.7	0	0	0	0.901	29	0.145	0.974	643	0.106	0.971	672	0.107
0.75	0	0	0	1.061	14	0.249	0.986	615	0.103	0.988	629	0.106
0.8	0	0	0	1.061	14	0.249	1.002	571	0.094	1.003	586	0.098
0.85	0	0	0	0	0	0	0.868	443	0.078	1.055	443	0.084
0.9	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0

15 Mineral Reserves Estimates

For the purposes of this study, the chapter entitled "Mineral Reserves Estimate" is used solely as an operational term to describe the portion of the mineable resource considered as potential feed to the processing plant within the conceptual mine plan evaluated at the PEA level. The use of the terms "mineable material", "ore", or "reserves" within this chapter does not imply the declaration of Mineral Reserves as defined under applicable reporting codes (e.g., NI 43-101 or JORC). No Mineral Reserves have been estimated for the Project at this stage.

All references to mineable material or ore are intended exclusively to represent material scheduled for processing in the PEA mine plan and should not be interpreted as having demonstrated economic viability at the level required for Mineral Reserve classification.

15.1 Methodology

The Domeyko mine plan has considered all categories of mineral resources for its development, namely Measured, Indicated, and Inferred Resources, to determine the maximum potential of the project. When Inferred Resources are included, they cannot be reported as Mineral Reserves.

15.1.1 Pit Optimization

Pit optimization is carried out using Whittle 4DX strategic software, which enables determination of the mining extraction sequence and the maximum economic pit. The methodology is based on the Lerchs and Grossman algorithm, which enables valorization of the block model taking as reference both commercial orientations and technical parameters such as metallurgical recoveries and slope angles. The output consists of a series of theoretical nested envelopes associated with different metal prices.

The optimization considered the following process:

- Resource optimization considered mineral concentration as the main mineral processing method.

Estimation of the NPV for each envelope will be based on Whittle results and the defined economic parameters, and the value of the money over time will be incorporated by means of a discount rate defined.

This pit optimization represents a preliminary evaluation of the Project's economic potential, intended to support the selection of the maximum economic pit and to provide input for defining the concentrator plant treatment capacity. The outcomes are conceptual in nature and are used as a basis for further mine planning and economic evaluation.

15.1.1.1 Optimization Parameters

The following tables summarize the mining, metallurgical, and economic information available for pit optimization. This includes data derived from benchmarking and expert judgment, among other sources.

For this preliminary strategic analysis, metallurgical deductions are not considered, and therefore the price of gold is assumed to be USD2,200/pound (lower range).

Table 15.1:   Mining, Metallurgical, and Economic Parameters

Item	Unit	Value	Source of Information
Copper Price	USD/pound	4.20	Benchmarking / expert judgment
Gold Price	USD/troy ounce	2,200	Benchmarking / expert judgment
Mining Cost (excluding haulage)	USD/t	1.20	Benchmarking / expert judgment
Haulage Cost	USD/t-km	0.23	Benchmarking / expert judgment
Processing Cost *	USD/t	11.3	Benchmarking / expert judgment
Copper Selling Cost	USD/pound	0.418	Benchmarking / expert judgment
Gold Selling Cost	USD/troy ounce	5.00	Benchmarking / expert judgment
G&A	USD/pound	0.30	Benchmarking / expert judgment
Copper Recovery	%	87.41	Expert judgment
Gold Recovery	%	65.42	Expert judgment
Metallurgical Deductions	%	not applied	Supposed
Overall Slope Angle	(°)	45	Benchmarking / expert judgment
Discount Rate	%	10	Benchmarking / expert judgment
Minimum Copper Cut-off Grade	%	0.20	Benchmarking / expert judgment

* For strategic analysis, conventional electrical energy (power supply) and sustainability costs are considered

Recovery Estimation:

The recovery estimation was based on the database provided by the client, which includes Rougher tests at 106 microns and 212 microns. The average of both datasets was considered to target a particle size of 150 microns, which is the most widely accepted criterion given its impact on tailings and CAPEX/OPEX. Subsequently, Rougher recovery results were weighted according to tonnage by geometallurgical units, and cleaning stage recoveries were estimated. Based on this approach, the overall average recoveries are 87.41% for copper and 65.42% for gold.

15.1.1.2   Mining Cost Adjustment Factor (MCAF)

For the development of pit optimization, a mine cost adjustment factor was applied. This factor is calculated by selecting a reference elevation/level (870 m a.s.l.), for which a base mining cost value (1.2 USD/t) is assigned. Then, a linear regression is used to estimate the curve representing the mining cost above and below the reference elevation/level. The formulas are shown below:
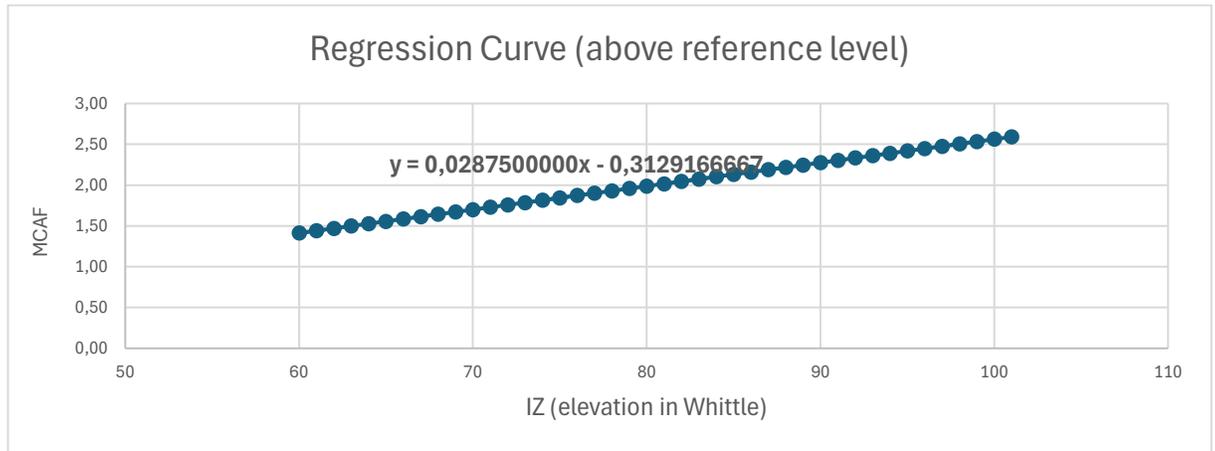
Figure 15.1:   Regression Curve (above reference level)
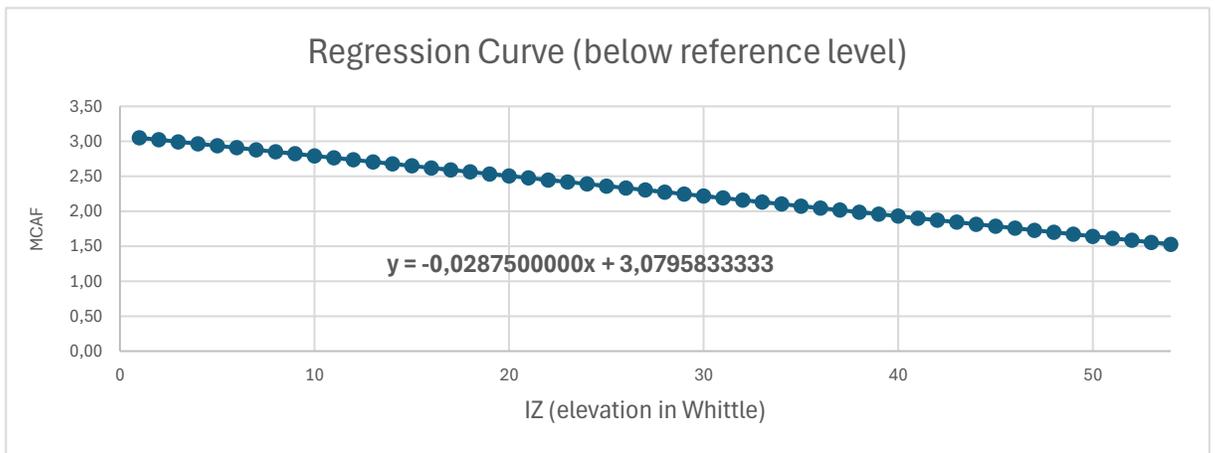
Figure 15.2:   Regression Curve (below reference level)

Where:

Y: MCAF

X: IZ, elevation in Whittle

The mine cost is calculated by multiplying the base cost by the MCAF. For the final estimation of the regression curve, an ex-pit distance of 2 km was estimated.

It is necessary to apply the Mining Cost Adjustment Factor (MCAF) to adjust mining costs and reflect the actual and complex differences for each ore block, such as plant distance, pit depth, and rock type. This approach enables a more accurate final pit optimization and supports better decision-making, ensuring that resources are exploited in a more profitable and realistic manner, rather than purely theoretical.

However, it is important to clarify that this is a conceptual model subject to adjustments in subsequent engineering studies.

15.1.1.3 Pit optimizations results

During the pit optimization stage, a series of evaluation and sensitivity analyses were carried out to obtain a more accurate definition of the ultimate pit and the base case to be assessed in subsequent project stages. The following scenarios were executed:

- Case 1: optimization with overall slope of 37°

- Case 2: optimization with overall slope of 40°

- Case 3: optimization with overall slope of 45°

- Case 4: Case 3 + cut-off grade of 0.20% TCu

- Case 5: Case 3 + cut-off grade of 0.25% TCu

Processing Capacity Analysis:

- Case 6: Case 5 + Mill Processing 30ktpd

- **Case 7: Case 5 + Mill Processing 35ktpd (Base Case)**

- Case 8: Case 5 + Mill Processing 40ktpd

- Case 9: Case 5 + Mill Processing 45ktpd

For each case evaluated in the processing capacity analysis, a corresponding assessment was performed to define the match between mine capacity and mill capacity.

Given the number of scenarios analyzed, only the results for the Base Case are reported, which corresponds to Case 7.

The following table shows the results obtained for pit optimization for the Base Case:

Table 15.2: Pit Optimization (Base Case)

Pit	Revenue Factor (RF)	Cu Price (USD/lb)	Au Price (USD/oz)	Total Rock Mt	Ore Mt	Strip Ratio	TCU (%)	AU (g/t)
1	0.30	1.26	660	0.43	0.39	0.11	0.483	0.707
2	0.32	1.34	704	0.63	0.58	0.10	0.484	0.654
3	0.34	1.43	748	2.73	2.16	0.26	0.474	0.548
4	0.36	1.51	792	3.73	3.05	0.22	0.476	0.505
5	0.38	1.60	836	8.38	5.87	0.43	0.470	0.460
6	0.40	1.68	880	13.2	8.9	0.48	0.462	0.428
7	0.42	1.76	924	16.3	11.3	0.45	0.444	0.413
8	0.44	1.85	968	21.5	14.8	0.46	0.430	0.391
9	0.46	1.93	1,012	26.7	17.9	0.49	0.419	0.375
10	0.48	2.02	1,056	32.6	21.0	0.55	0.411	0.361
11	0.50	2.10	1,100	47.8	27.4	0.74	0.401	0.346

Pit	Revenue Factor (RF)	Cu Price (USD/lb)	Au Price (USD/oz)	Total Rock Mt	Ore Mt	Strip Ratio	TCU (%)	AU (g/t)
12	0.52	2.18	1,144	127	53	1.39	0.389	0.322
13	0.54	2.27	1,188	160	64	1.52	0.386	0.316
14	0.56	2.35	1,232	190	73	1.59	0.384	0.308
15	0.58	2.44	1,276	226	83	1.72	0.382	0.302
16	0.60	2.52	1,320	299	102	1.93	0.378	0.295
17	0.62	2.60	1,364	364	118	2.09	0.376	0.289
18	0.64	2.69	1,408	440	134	2.29	0.377	0.281
19	0.66	2.77	1,452	459	138	2.32	0.377	0.280
20	0.68	2.86	1,496	597	164	2.65	0.375	0.277
21	0.70	2.94	1,540	743	187	2.97	0.377	0.276
22	0.72	3.02	1,584	777	192	3.04	0.377	0.276
23	0.74	3.11	1,628	882	207	3.27	0.379	0.276
24	0.76	3.19	1,672	961	218	3.42	0.380	0.276
25	0.78	3.28	1,716	1,020	226	3.52	0.379	0.276
26	0.80	3.36	1,760	1,104	235	3.69	0.380	0.277
27	0.82	3.44	1,804	1,137	240	3.75	0.380	0.277
28	**0.84**	**3.53**	**1,848**	**1,180**	**244**	**3.83**	**0.380**	**0.277**
29	0.86	3.61	1,892	1,204	247	3.87	0.380	0.277
30	0.88	3.70	1,936	1,238	251	3.94	0.380	0.277
31	0.90	3.78	1,980	1,272	254	4.00	0.380	0.276
32	0.92	3.86	2,024	1,276	255	4.01	0.380	0.276
33	0.94	3.95	2,068	1,304	257	4.07	0.380	0.277
34	0.96	4.03	2,112	1,343	261	4.15	0.380	0.277
35	0.98	4.12	2,156	1,350	262	4.16	0.380	0.276
36	1.00	4.20	2,200	1,355	262	4.17	0.380	0.276
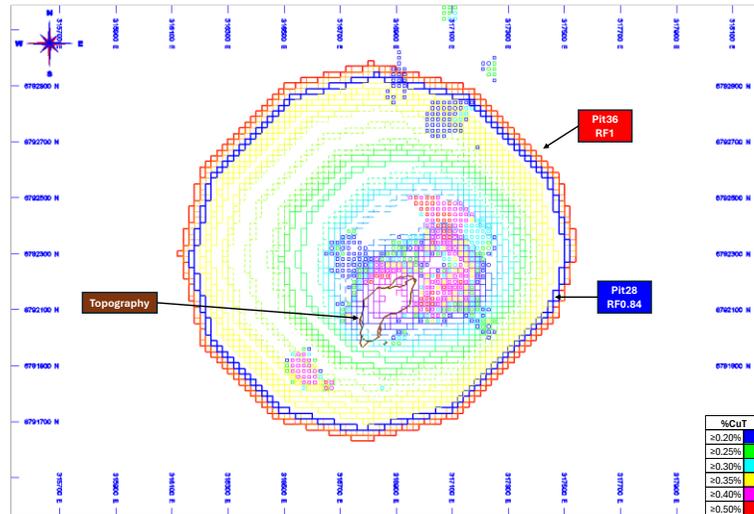
Figure 15.3:   Pit Optimization results (Base Case) – Level 735 m.a.s.l.
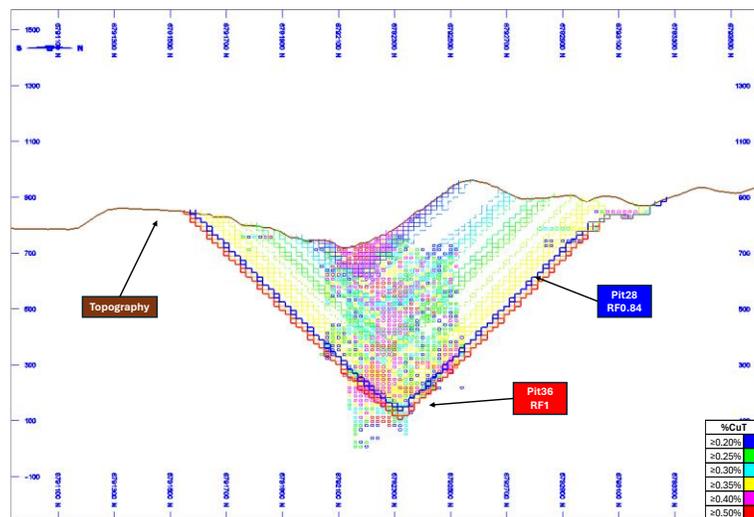
Figure 15.4:   Pit Optimization results (Base Case) – East 316880

To determine the NPV of each envelope and for each case, the results obtained from Whittle optimization were used and the Milawa Algorithm was applied. The Millawa Algorithm module adds a new dimension to life-of-mine scheduling. It optimizes the schedule, considering all production and economic constraints, while seeking to maximize NPV, alternatively, it can be used to "balance" your schedule by seeking to maximize the utilization of available mining and processing capacity. The Milawa Algorithm module is a proprietary algorithm which schedules the mining of each pushback over the life of the mine. It responds to all production constraints, price and cost models (Table 15.1) within Whittle and provides controls over the schedule.

The approach taken for final pit selection was mainly driven by selecting the pit shell with the highest NPV. In the specific case, the results do not consider investments of any kind, and a discount of 10% was applied.

Figure 15.3 and Figure 15.4 shows the resulting pit shells from the optimization (pit 1 to 36). The following figure and table show the outcome of applying the Milawa Algorithm, as illustrated in the pit-by-pit chart. This chart presents the Best Case, Specific Case, and Worst Case scenarios. These cases refer to the consumption of resources by the algorithm using the pit shells obtained during optimization as pseudo-mining phases.

- Best Case corresponds to a plan executed through pit-by-pit extraction.

- Worst Case represents a plan executed by extracting bench-by-bench.

- Specific Case is an intermediate plan determined based on the planner's experience, where a certain number of pits are selected to more accurately resemble the intended mining sequence and phases.

Table 15.3:   Milawa NPV analysis

Pit	RF	Best Case (MUSD)	Specified Case (MUSD)	Worst Case (MUSD)	Ore (Mt)	Waste (Mt)	Total Rock (Mt)
1	0.30	21	21	21	0	0	0
2	0.32	29	29	29	1	0	1
3	0.34	100	100	100	2	0	3
4	0.36	130	130	130	3	0	4
5	0.38	236	236	236	7	2	8
6	0.40	330	330	330	11	3	13
7	0.42	381	381	381	13	3	16
8	0.44	462	461	461	16	5	22
9	0.46	525	522	522	20	7	27
10	0.48	576	571	571	23	10	33
11	0.50	685	676	676	29	19	48
12	0.52	1,068	1,060	987	55	71	127
13	0.54	1,192	1,188	1,053	66	95	160
14	0.56	1,285	1,281	1,121	74	115	190
15	0.58	1,375	1,353	1,166	84	142	226
16	0.60	1,515	1,482	1,183	103	197	299
17	0.62	1,614	1,543	1,214	118	246	364
18	0.64	1,698	1,622	1,197	134	306	440
19	0.66	1,717	1,643	1,203	138	321	459
20	0.68	1,804	1,714	1,132	164	433	597
21	0.70	1,858	1,761	1,032	187	556	743
22	0.72	1,868	1,784	1,006	192	585	777

Pit	RF	Best Case (MUSD)	Specified Case (MUSD)	Worst Case (MUSD)	Ore (Mt)	Waste (Mt)	Total Rock (Mt)
23	0.74	1,891	1,770	915	207	675	882
24	0.76	1,905	1,801	832	218	744	961
25	0.78	1,914	1,849	767	226	794	1,020
26	0.80	1,922	1,850	682	235	869	1,104
27	0.82	1,924	1,851	640	240	898	1,137
28	**0.84**	**1,927**	**1,853**	**593**	**244**	**935**	**1,180**
29	0.86	1,929	1,852	572	247	957	1,204
30	0.88	1,931	1,850	534	251	988	1,238
31	0.90	1,932	1,852	501	254	1,018	1,272
32	0.92	1,932	1,847	498	255	1,021	1,276
33	0.94	1,932	1,846	468	257	1,046	1,304
34	0.96	1,933	1,841	434	261	1,082	1,343
35	0.98	1,933	1,847	426	262	1,088	1,350
36	1.00	1,933	1,848	420	262	1,093	1,355
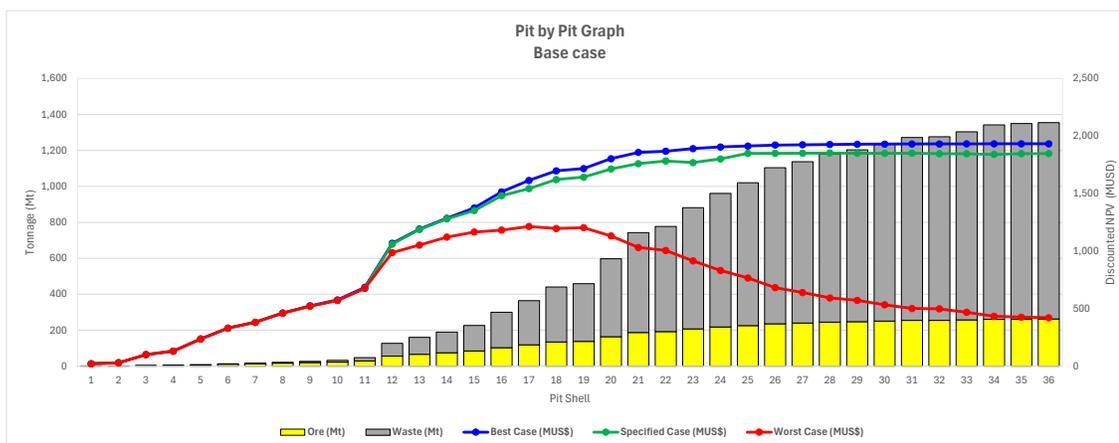
Figure 15.5: Pit by Pit Graph – Milawa NPV Results

Worst Case Scenario reaches its maximum value at pit 17 (RF 0.62) and Best-Case Scenario at pit 36 (RF 1). The Specified Case Scenario maximum is reached at 28 (Rf 0.84). From pit 24 to 31 the Specified Case shows no significant variations in terms of NPV (between 0.1% to 2.8%).

It is worth mentioning that these scenarios are conceptual and developed in terms of strategic mine planning only.

The chart visually demonstrates how each scenario cumulative cash flow and resource consumption over time. The Specific Case was chosen for subsequent scheduling and economic analysis because it provides a realistic compromise between theoretical optimization and practical implementation.

As shown in the chart, between pits 24 and 36, the impact of waste removal on ore recovery becomes significant. Moreover, for Revenue Factor 1 (RF1), the Net Present Value (NPV) decreases. This observation is critical when selecting the ultimate pit, which in this case corresponds to Pit 28, representing a Revenue Factor 0.84 based on the defined base prices.

15.1.1.4 Pit optimizations: capability and sensitivity analysis parameters

15.1.1.4.1 Optimal Capacity Analysis

Several evaluations were performed for different mine and plant capacities with the objective of identifying and optimizing strategic capacities business value (NPV), while considering technical and economic aspects. The following configurations were analyzed:

- Mine: capacities ranging from 90 ktpd to 250 ktpd.
- Mill: capacities ranging from 30 ktpd to 45 ktpd.

The results of these strategic evaluations are presented in the following table and figure:

Table 15.4: Capacity Analysis

Mill	Mine		NPV (MUSD)		EPVI
ktpd	ktpd	Mtpy	w/o Investment	w/ Investment	
30	151	55	1,593	443	0.385
35	164	60	1,853	553	0.425
40	192	70	1,929	479	0.331
45	205	75	2,067	467	0.292
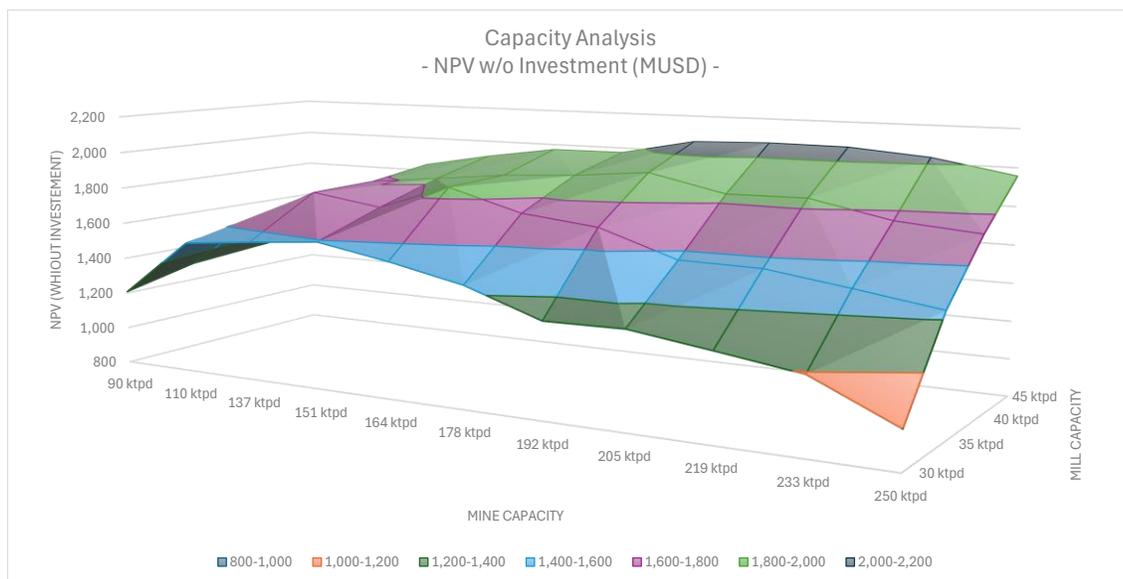
Figure 15.6: Capacity Analysis (NPV without investment)

In the previous results (Figure 15.6) the different outcomes for mine and mill capacity in terms of NPV without investments can be observed. However, to determine the optimal match between capacities, the EPVI index was applied (EPVI: Excess Present Value Index). EPVI is used to rank mutually exclusive project by indicating how much additional value (above a base NPV) is generated per unit of capital invested.

To establish the best definition, mine and mill preliminary investment estimates were applied based on expert judgment, considering the following assumptions:

Mine investment: USD250 million.

Mill investment: USD30,000 per tonne of installed processing capacity.

Given the above, investments according to mill capacity are as follows:

Table 15.5: Preliminary Investment

Mill Capacity ktpd	Investment (MUSD)		
	Mine	Mill	Total
30	250	900	1,150
35	250	1,050	1,300
40	250	1,200	1,450
45	250	1,350	1,600

The above yields the results shown in Table 15.4, which can be summarized in the following graphs:
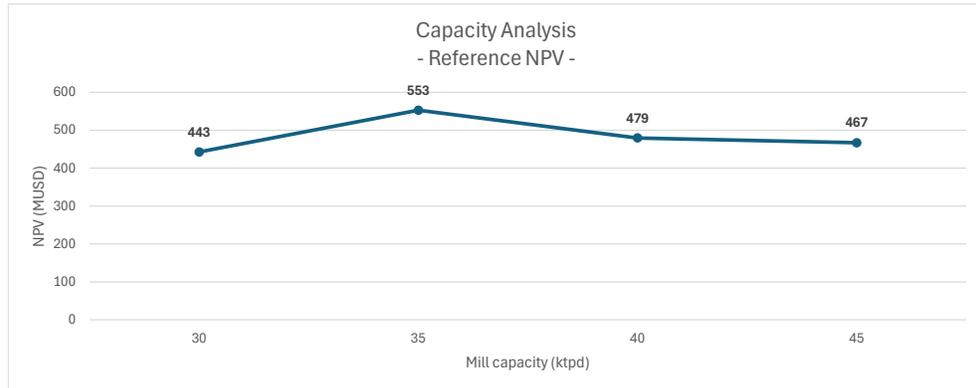
Figure 15.7: Capacity Analysis, reference NPV
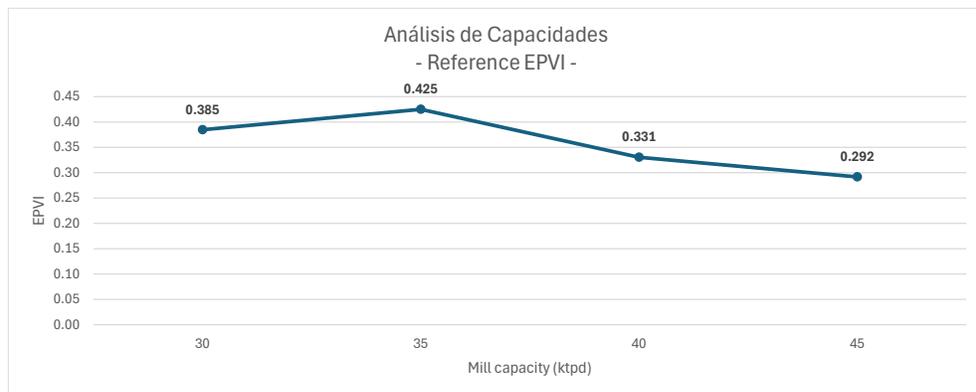
Figure 15.8: Capacity Analysis, reference EPVI

Based on the strategic capacity analysis, the optimal match between mine and mill was determined to be **164 ktpd for the mine** and **35 ktpd for the processing plant**. This configuration yields an approximate Net Present Value (NPV) of **USD553 million** and an **EPVI of 0.425**, indicating that for every dollar invested, the project generates an additional value of 0.425. This result reflects a balance between operational feasibility and economic optimization, supporting the selection of this configuration as the base case for subsequent project stages.

15.1.1.4.2   Sensitivity Analysis

In addition to the capacity analysis, a sensitivity study was performed on key technical and economic parameters to identify the optimal pit associated with the base case capacities. The following parameters were tested:

- Overall slope angle: 37°, 40°, and 45°

- Operating costs: mining and processing

- Metal prices: copper and gold

The results of the various optimizations are presented in the following table and figure.

Table 15.6: Overall Angle Sensitivity

Overall Angle	NPV (MUSD)	EPVI
37°	104	0.08
40°	213	0.16
45°	553	0.43
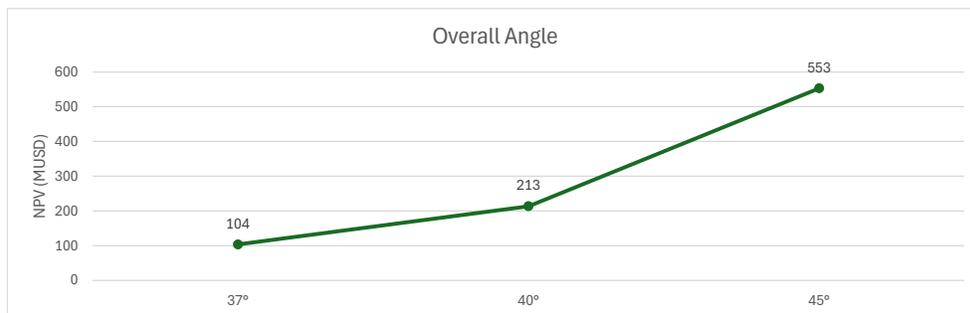
Figure 15.9: Overall Angle Sensitivity

Table 15.7: Processing Cost Sensitivity

Variation	Processing Cost (USD/t)	NPV (MUSD)	EPVI
-15%	9.605	734	0.56
-10%	10.170	668	0.51
BASE	**11.300**	**553**	**0.43**
10%	12.430	430	0.33
15%	12.995	364	0.28

Table 15.8: Mining Cost Sensitivity

Variation	Mining Cost (USD/t)	NPV (MUSD)	EPVI
-15%	1.02	707	0.54
-10%	1.08	651	0.50
BASE	**1.20**	**553**	**0.43**
10%	1.32	451	0.35
15%	1.38	404	0.31

Table 15.9:   Price Sensitivity

Variation	Copper Price (USD/pound)	Gold Price (USD/troy ounce)	NPV (MUSD)	EPVI
-15%	3.570	1870	-139	-0.11
-10%	3.780	1980	85	0.07
BASE	**4.200**	**2200**	**553**	**0.43**
10%	4.620	2420	1,013	0.78
15%	4.830	2530	1,241	0.95
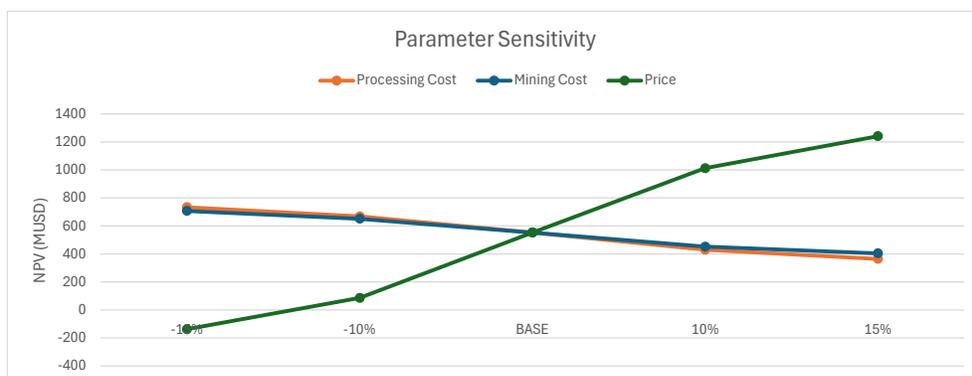
Figure 15.10: Parameter Sensitivity (costs and prices)

15.1.1.5   Summary of Cases

The following figure summarizes the cases evaluated.
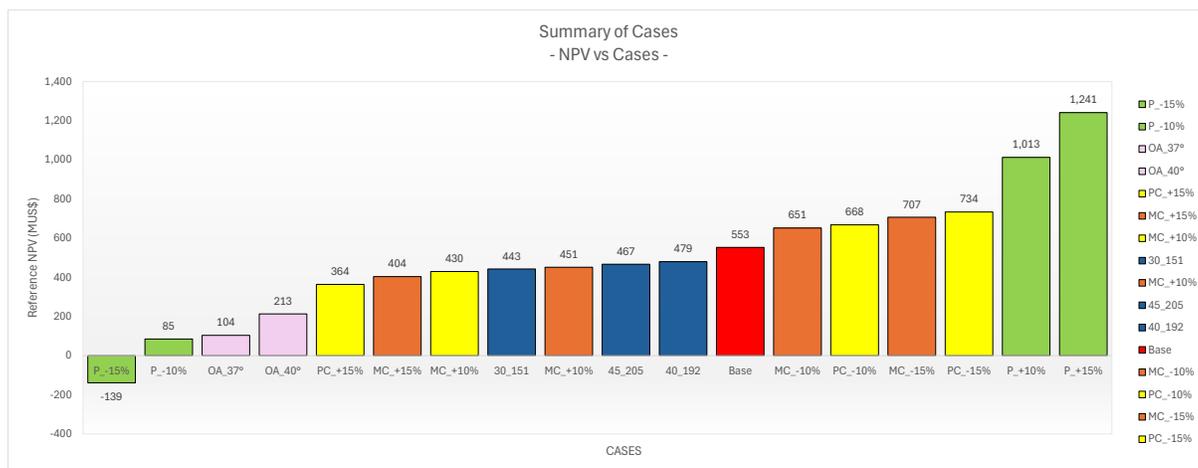
Figure 15.11: Summary of Cases evaluated

Based on the various assessments considering technical and economic parameters, the following observations can be made:

▪ **Capacity Analysis:** The configuration that generates the highest economic value corresponds to a mine capacity of **164 ktpd** and a plant capacity of **35 ktpd**, resulting in an NPV of approximately **USD553 million**. This configuration is considered the **Base Case** for the study.

▪ **Sensitivity Analysis:** The greatest impact on project value is driven by **metal price variations**, followed by changes in **processing costs**, and to a lesser extent, **mining costs**.

▪ **CAPEX Variation:** A variation of **±10% in capital expenditure** results in an approximate impact of **±USD130 million** on NPV (order of magnitude).

The Net Present Value (NPV) and Excess Present Value Index (EPVI) assessment presented in this chapter is intended solely to identify the best option in terms of final pit optimization. This analysis does not represent a detailed economic evaluation of the project, but rather a guide for mine planning. A comprehensive estimate of capital and operating costs, as well as the full economic assessment, will be provided in Chapter 21 (Capital and Operating Cost) and Chapter 22 (Economic Assessment).

15.1.2   Cut-Off Grade

The cut-off grade for copper was established at 0.2% TCu, calculated based on operating and selling costs, metallurgical recovery, and metal price assumptions. The calculation incorporates the following parameters:

▪ Mining cost (average): USD 2.12/t

▪ Processing cost: USD 11.30/t

▪ Selling cost: USD 0.418/pound

▪ G&A: USD 0.30/pound

▪ Metallurgical recovery: 87.41%

- Copper price: USD 4.20/pound

The cut-off grade represents the minimum copper grade at which the revenue from recovered metal equals the total cost of mining, processing, and selling. This ensures that only material contributing positive economic value is included in the resource model.

$$Cut-off\ Grade\ (\%Cu) = \frac{Mining\ Cost + Processing\ Cost}{(Copper\ Price - Selling\ Cost - G\&A) \times 2204.62 \times Recovey} \times 100$$

$$Cut-off\ Grade\ (\%Cu) = \frac{US\$2.12/t + US\$11.3/t}{(US\$4.2/pound - US\$0.418/pound - US\$0.30/pound) \times \frac{t2204.62}{pound} \times 87.41\%} \times 100$$

$$Cut-off\ Grade\ (\%Cu) = 0.20\%$$

15.1.3 Mining Phase Design

The phase designs developed for the Domeyko pit enable the preparation of a feasible mine plan that supports the declaration of project resources, ensuring continuous and safe extraction.

The design was developed based on the defined mining equipment, established geotechnical recommendations, and operational conditions such as minimum phase widths and dimensions to ensure adequate plant feed (phases designed for 2–3 years of production). It should be noted that, at this study level, ramp designs were not included; these will be developed in the subsequent prefeasibility stage.

The geotechnical recommendations considered for estimating the ultimate pit limit—including slope angles for phase design, inter-ramp angles, overall slope angles, and containment berms—are described in Chapter 16.2 Geomechanical Considerations.

For the formulation of phase designs, the following general and operational criteria were applied:

15.1.3.1 Mining Method Definition

The study contemplates an open-pit mining method with 15 m benches. The operation combines conventional open-pit mining with quarry-type extraction due to site topography. Therefore, accessibility to upper benches without dedicated ramps will be reviewed during the prefeasibility stage. Phase widths range from 100 to 150 meters, with a minimum operational width of 60 meters.

15.1.3.2 Maximum Mine Extraction Capacity

The maximum mine extraction capacity is estimated at 164 kt/month, with a processing capacity of 35 kt/month of ore to the concentrator plant. The determination of optimal capacities is based on the strategic analysis presented in Chapter 15.1.1.4.

15.1.3.3   Initial Topography

The initial topography used for mine design corresponds to the surveys provided by Andean Belt in the file "DD_CNIV_drone_1K_psad56-19s.dxf."
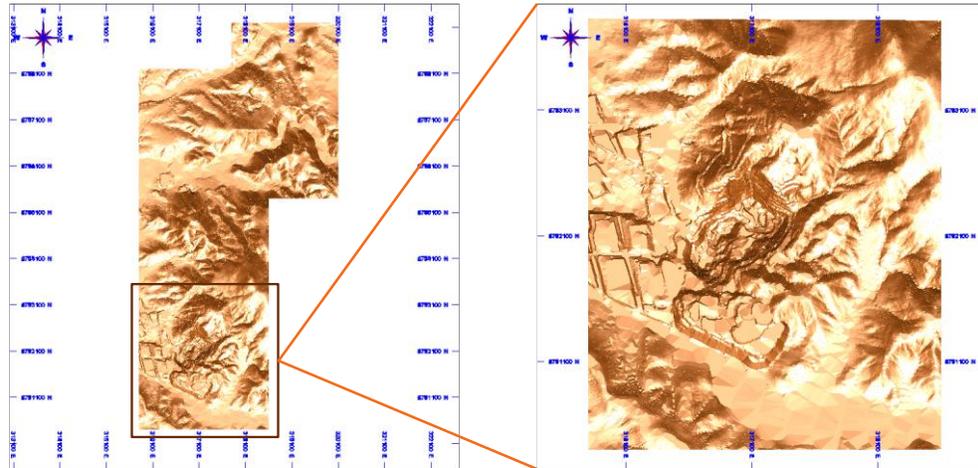
Figure 15.12: Initial Topography

15.1.3.4   Resources Category

All resource categories (Measured, Indicated, and Inferred) were considered for the formulation of the designs. The study applies a traditional open-pit approach to generate computational pit shells, which serve as the basis for phase design selection and mine designs.

The main geotechnical parameters and design criteria are detailed in Chapter 16, section 16.2. The final pit designs are illustrated in the following figures:
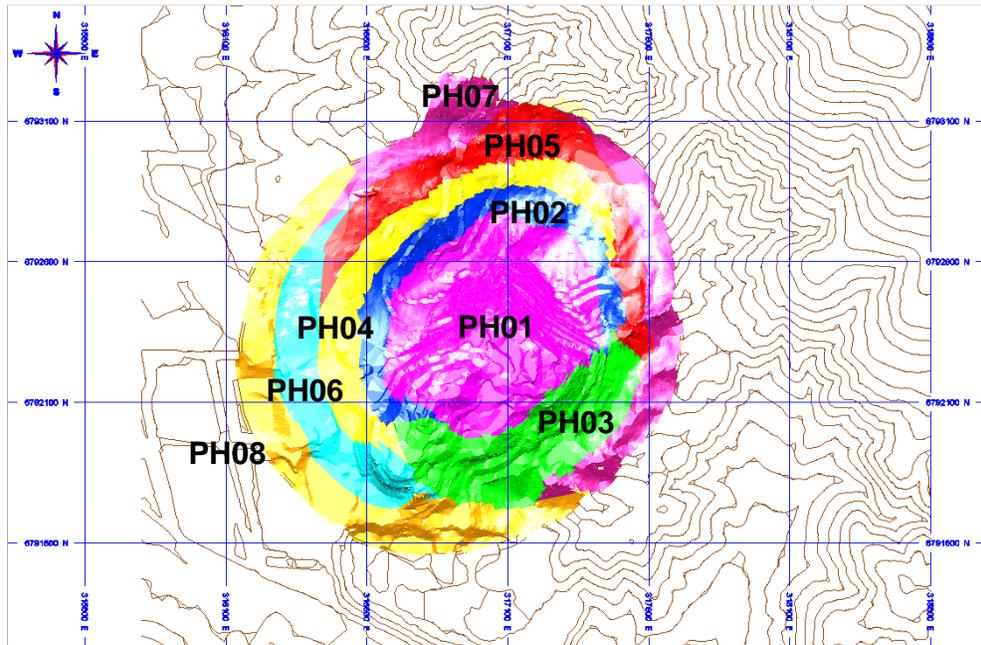
Figure 15.13: Phase Design
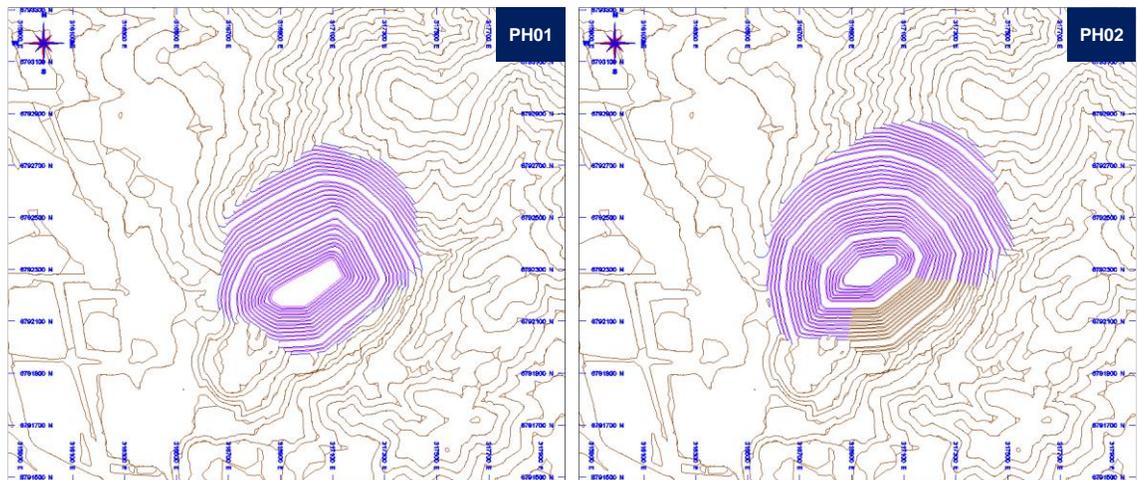
Figure 15.14: Phase 01 and Phase 2
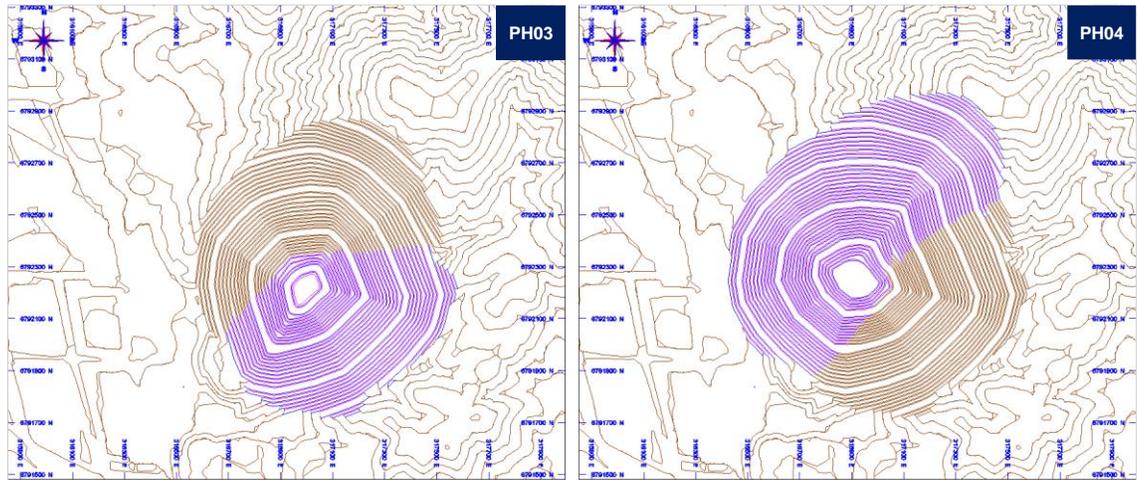
Figure 15.15: Phase 03 and Phase 4
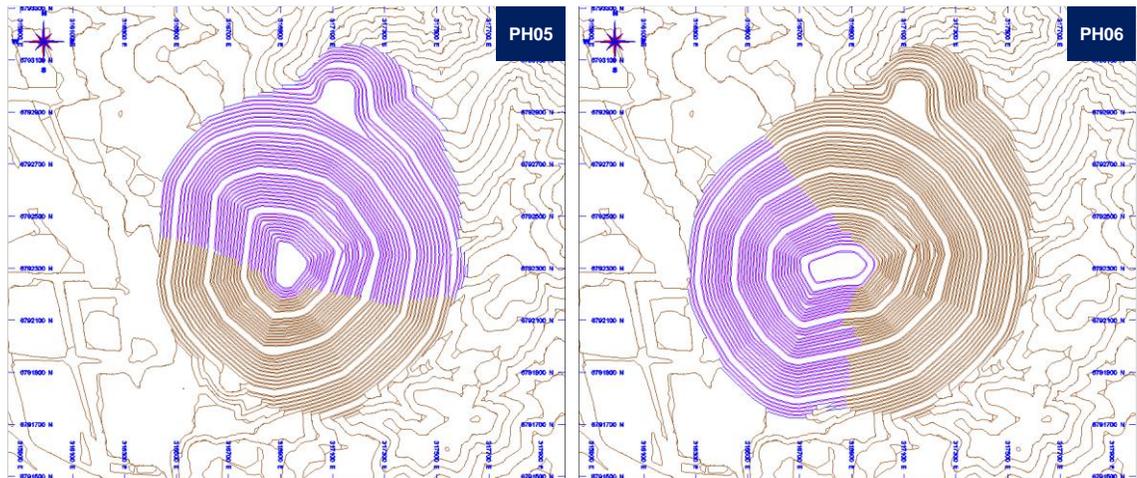
Figure 15.16: Phase 05 and Phase 06
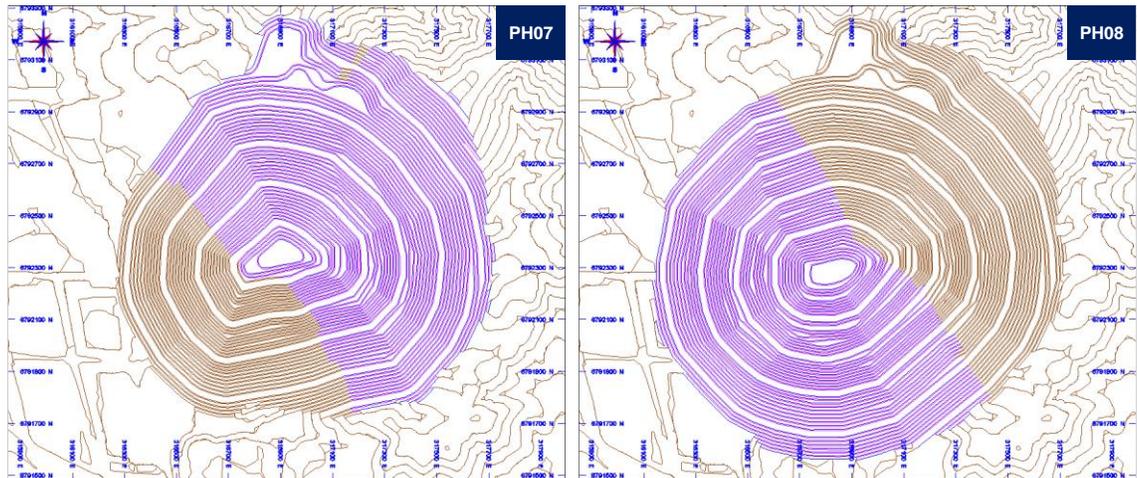
Figure 15.17: Phase 07 and Phase 08

The following table presents the mineral resource inventory for each phase of the Domeyko project:

Table 15.10: Resource Inventory Domeyko

Phase	Sulfide			Leachable			Waste	TOTAL	Strip Ratio	Global Index
	Cutoff >= 0.20 %TCu			Cutoff >= 0.15 %TCu						
	kt	TCu (%)	Au (ppm)	kt	TCu (%)	Au (ppm)	kt	kt		(t Fine/kt Rock)
Ph 01	40,429	0.36	0.304	1,500	0.21	0.062	46,923	88,851	1.20	1.65
Ph 02	34,581	0.35	0.270	1,613	0.19	0.108	57,823	94,018	1.72	1.28
Ph 03	30,936	0.34	0.234	341	0.31	0.060	56,636	87,913	1.84	1.21
Ph 04	48,156	0.33	0.233	2,260	0.21	0.103	94,654	145,069	2.01	1.09
Ph 05	39,232	0.33	0.236	4,687	0.24	0.136	120,376	164,295	3.19	0.80
Ph 06	34,233	0.36	0.240	478	0.18	0.050	87,989	122,700	2.58	0.99
Ph 07	39,533	0.31	0.232	1,230	0.22	0.150	181,201	221,964	4.61	0.56
Ph 08	42,772	0.38	0.265	27	0.19	0.044	223,675	266,475	5.23	0.62
Total	309,871	0.35	0.252	12,136	0.22	0.113	869,278	1,191,285	2.84	0.90

From the previous table, it can be noted that only leachable resources are reported, and these are considered as waste material for the development of the strategic mine plan.

The total sulfide ore extracted, considering Measured, Indicated, and Inferred categories, amounts to **309.8 Mt** with an average copper grade of **0.35% TCu** and an average gold grade of **0.252 ppm**. The total waste rock extracted is **1,191 Mt**, resulting in a **strip ratio of 2.84** and a **global index of 0.90**. The global index is an indicator used to rank phase designs, reflecting the performance of phases in terms of contained metal versus total rock extraction.

It should be noted that the inclusion of Inferred Resources is conceptual and should not be considered for mine planning or economic studies beyond this Preliminary Economic Assessment evaluation, as **Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability**.

15.2 Mineable Resources Statement

In this declaration of mineable resources, we can comment on the following:

- The mineable resources presented in this section represent a subset of the Mineral Resources estimated for the project.

- These resources have been by an optimized open pit shell based on reasonable assumptions regarding metal prices, operating costs, metallurgical recoveries, and geotechnical parameters.

- It is important to note that these mineable resources do not constitute Mineral Reserves as defined by international standards.

- Mineable resources have been categorized according to international standards definitions into Measured, Indicated, and Inferred classes. Inferred resources are considered too speculative to support economic considerations and cannot be converted into Mineral Reserves. There is no certainty that all or any part of the Mineral Resources will be converted into Mineral Reserves.

- The mineable resources were derived by applying the following constraints:

  - Pit Optimization: Conducted using Whittle software with economic and technical assumptions.

  - Design Parameters: Overall slope angles, and berm configurations based on geotechnical studies.

  - Cut-off Grade: Determined considering processing costs, metallurgical recovery, and metal prices.

  - Dilution and Mining Losses: neither dilution or mining losses were considered.

- The reported mineable resources have been estimated based on an optimized pit shell using a copper price of USD4.20 per pound and a gold price of USD2,200 per troy ounce.

- The parameters applied for resource optimization are summarized in Table 15.11.

- Table 15.11 presents the total mineable resources by category, as reported from the Strategic Mine Plan (Chapter 16, section 16.4):

Table 15.11: Mineable Resources Statement

Resources Category	Tonnage	Grade		Fine	
	kt	Cu (%)	Au (ppm)	t Cu	t Au
Measured	14,825	0.36	0.318	52,668	5
Indicated	79,727	0.35	0.281	276,732	22
Inferred	215,545	0.34	0.236	742,003	51
Total	**310,097**	**0.35**	**0.251**	**1,071,403**	**78**

16 Mining Methods

16.1 Mining Methods

For this study, the Project Domeyko is planned to operate as a conventional open pit mining operation feeding a concentrator plant with a nominal processing rate of 35,000 tonnes per day (tpd). The operation will include all standard open pit unit operation, namely drilling, blasting, loading, hauling, and auxiliary services.

Mining will be carried out in 15-meter-high benches, with phase widths ranging from 100 to 150 meters, designed to provide plant feed from approximately 2 to 3 years per phase. A minimum phase width of 60 meters has been considered. At this stage of engineering, the phases have been developed without ramp design; ramp configurations will be optimized during the next stage (Pre-Feasibility Study), where operational phase designs will be completed.

The mine plan contemplates the extraction of Mineral Resources described in Section 16.4, which include Measured, Indicated, and Inferred Resources. In subsequent stages (Pre-Feasibility).The term "ore" or "ore feed" is used in this study solely to describe material scheduled for processing in the conceptual mine plan and does not imply the declaration of Mineral Reserves as defined by NI 43-101. This preliminary evaluation does not include any dilution or mining recovery factors.

The following Figure 16.1 shows a general layout of the Domeyko Project:
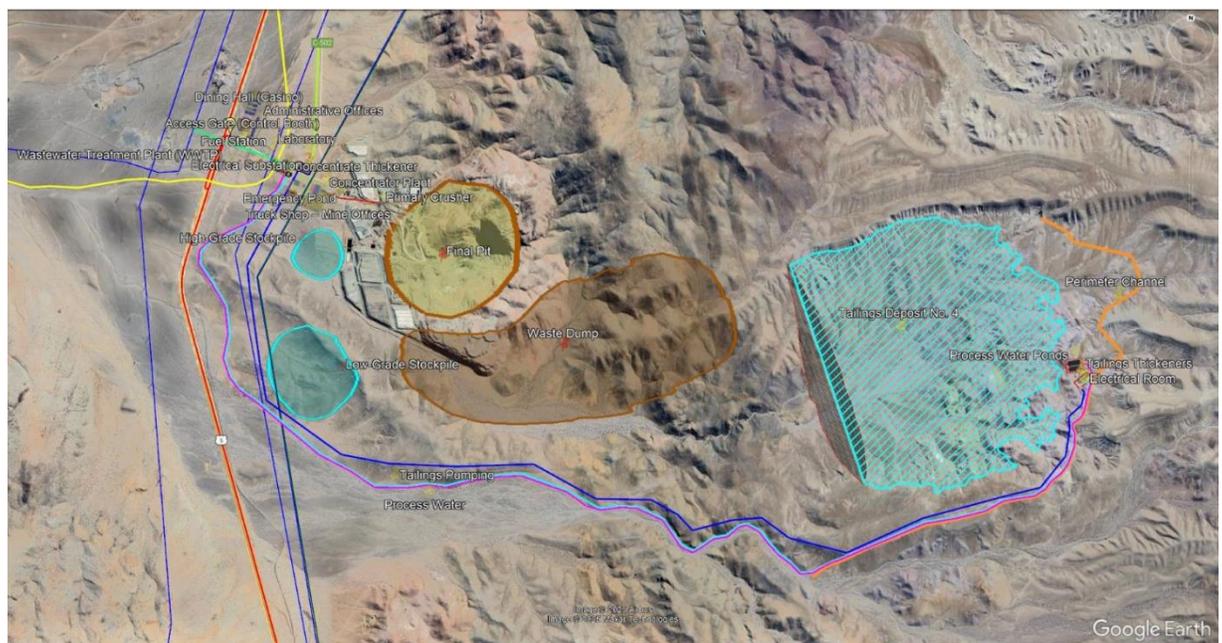
Figure 16.1: General Layout of the Domeyko Project

16.2 Geotechnical Open Pit Studies

16.2.1 Introduction

The stability analysis for the Domeyko Sulfuros Mine Pit and Waste Dump Project, at this engineering stage, is based on the available geological, structural, and geotechnical data, as well as the findings from the technical site visit conducted by SRK specialists to the Dos Amigos Pit.

This study includes the stability analysis of the final pit of the Domeyko Sulfuros Mine Pit and the Waste Dump (final design) at this engineering stage.

16.2.2 Base Information

For this study, geotechnical information was obtained from approximately 16,000 meters of mapping conducted in 77 drillholes from campaigns carried out between 2018 and 2022, which include partial geotechnical data. Additionally, detailed geotechnical mapping information from approximately 5,800 meters was incorporated, obtained from 12 drillholes with complete geotechnical data collected during the 2025 campaign, along with the results of 242 laboratory tests conducted in 2025.

16.2.3 Visual Record at the Dos Amigos Pit Slopes

SRK specialists conducted a site visit from October 27th to 29th, 2025. During this visit, two main findings related to the pit's stability were identified: two areas with inter-ramp scale failures and three areas with groundwater seepage. The locations of these findings are indicated on a satellite photograph presented in Figure 16.2.

Figure 16.2: Satellite view of the Dos Amigos Pit

During the site visit, the behavior of the benches was also assessed, identifying four main zones:

- **Northern wall**, in the area adjacent to the inter-ramp faulting, where a regular behavior was observed with significant berm losses.

- **Northeastern wall**, with a height exceeding 100 meters, showing a bench definition ranging from regular to good, with localized faulting.

- **Southeastern wall**, characterized by bench definition ranging from regular to poor.

- **Southwestern and western walls**, where the benches exhibit good development.

A panoramic image where the north, northeast, and south walls can be seen is presented below.

Figure 16.3: Panoramic photo taken from the viewpoint of the southeastern wall of the Dos Amigos Pit

Additionally, images presenting the main findings from a hydrogeological perspective are included. Figure 16.4 shows the main pit lake at the bottom of the Dos Amigos open pit, and Figure 16.5 presents an image of the collar of drillhole SDDK25-11, which exhibits artesian flow.
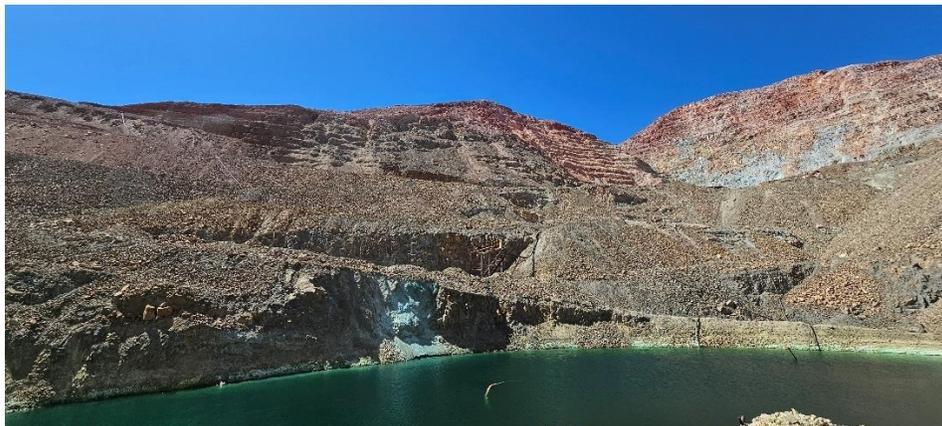
Figure 16.4: Photo of the main groundwater seepage in the pit

Figure 16.5: Photo of the collar of drillhole SDDK25-11 showing groundwater seepage

The condition of this drillhole indicates that the hydrogeological system is confined; however, the available information is not sufficient to determine further details in this regard, and it should therefore be examined in detail in subsequent stages.

16.2.4 Structural Domain Definition

Although structural information is limited, the data on major and intermediate faults was considered.
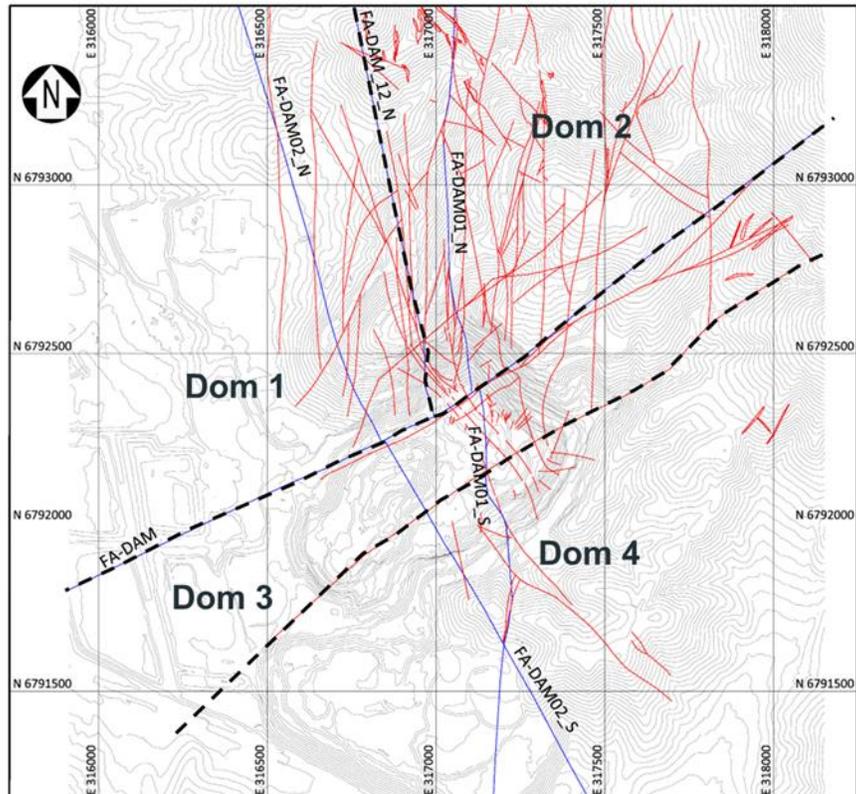
Figure 16.6: Geological Information available and preliminary structural domain definition

16.2.5 Open Pit Geotechnical Design

As part of the activities for this study, a preliminary geotechnical design for the Domeyko is presented, i.e., the parameters recommended here and defining bench geometry and maximum interramp heights and interramp angles must be validated through further analysis to verify the preliminary geotechnical design proposed in this report.

For their part, the bases for this preliminary design, which support the recommended geometry, correspond to the results obtained from the bench-berm analysis conducted using SBlock software and the currently available structural geological-geotechnical information.

16.2.6 General Considerations

The geotechnical design of the open pit mine slopes requires a definition of the bench-berm system geometry. The purpose of this analysis is to study the berm design for berms to be able to contain potential bench-level block/wedges that may occur during the mining operation. At the same time, it enables a preliminary definition of the magnitude of the interramp angles used in planning and mine design processes, in accordance with the quality of the available structural information and the structural domain definition.

The evaluation of a bench-berm design provides a geometric definition of the dimensions of a bench unit, enabling the development of a mine pit extraction process in a safe and sustainable way.

Figure 16.7 shows the parameters defining the geometry of a bench-berm system.
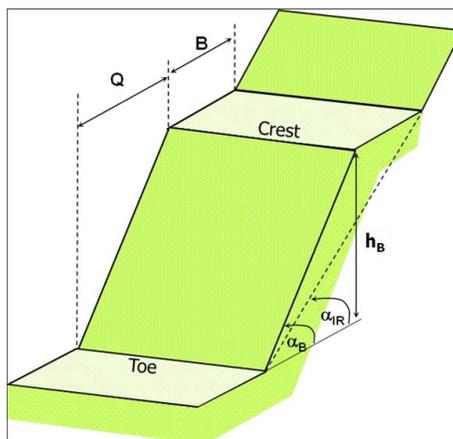
Figure 16.7: Geometry of a bench-berm system

Where:

- Bench height, hB (m).

- Bench face angle, αB (º).

- Breakage, Q (m).

- Berm width, B (m).

- Interramp angle, αIR (º).

Considering the existing structural data, the slope behavior observed during the sit visit and the future design of the Domeyko pit the evaluation of the bench-berm design, based on the Block Theory (Goodman and Shi, 1985) using SBlock1 software (Estherhuizen, 2004), is presented below.

16.2.7 Bench-Berm Design and Analysis

To define the best slope design at a bench level and evaluate whether acceptability criteria is met, the work methodology shown in Flow chart identifying the work stages for slope analysis at a bench level (Hormazábal et al., 2015) has been applied. This methodology for bench-berm analysis and design enables the conduction of a validation of the behavior of the current structural information with respect to the condition of the walls of the current exploitation worksites to subsequently verify the behavior of the current structural information with respect to a mine design at a bench level.

To develop the above, the following stages have been considered:

- Visual documentation of the wall condition in accordance with a site visit to the Domeyko areas.

- Identification of the structures that control critical instabilities and block formation or key blocks on the walls.

- Review of the data collected on site to estimate structure spacing and persistence.

- Instability back-analysis at a bench level.

- Evaluation of structural system "activity" with respect to block formation, using SBlock software (Estherhuizen, 2025).

16.2.8 Bench-Berm Configuration Analysis

The methodology used to perform the analysis of the Domeyko pit, considering a bench design for the project development, is summarized below:

- SBlock software, based on the block theory, was used to estimate effective and required berm parameters in addition to the probability of failure (PF) and the effective berm percentage for each one of the established bench orientations and designs.

- Structural behavior based on the orientation of principal structures was considered in each domain. This is a major assumption; hence it needs to be verified in the future.

- The Dos Amigos pit visual current slope performance used as basic information.

- The shear strength properties of the structures were considered in accordance with the ranges obtained from similar projects Distinguishing by geotechnical zone.

- In accordance with Read & Stacey (2009) recommendations, a bench-level acceptability criterion considering a probability of failure lower than 30% (PF<30%) was adopted.

- In accordance with Read & Stacey (2009) recommendations, a bench-level acceptability criterion considering a probability of failure lower than 30% (PF<30%) was adopted; however, a spillage-free berm of FB > 2 m has also been considered. The acceptability criteria are based on international standards.

Using this procedure, the characterization and field observations, the preliminary design is established and presented below.

16.2.9 Geotechnical Characterization

In order to estimate the expected Rock Rass Quality for the project rock mass properties, the mapping data from the drillholes conducted in 2025 was utilized.

Initially, to differentiate behavior with depth, geotechnical zones were defined according to the criteria outlined by Russo & Ramirez (2023).

Three geotechnical zones are defined as follows:

- Geotechnical Zone 2° SS: Complete weathering of the rock mass, affecting both the discontinuities and the rock itself.

- Geotechnical Zone 2° TR: Partial weathering of the rock mass, significantly affecting the discontinuities and to a lesser extent the rock.

- Geotechnical Zone 1°: The rock mass is unweathered.

Through the drillholes, it is evident that there is a poorly developed Zone 2° SS, which could be influenced by the location of the drillholes themselves, as they are situated in the center of the future pit and could be affected by the presence of major faults.

Drillhole 2° SS SDDK25-07   **Drillhole 2° TR SDDK25-03**

Drillhole 1° SS SDDK25-03

Figure 16.8:   Drillholes extracted by geological zone

The boundaries of the zones are as shown in Figure 16.9.
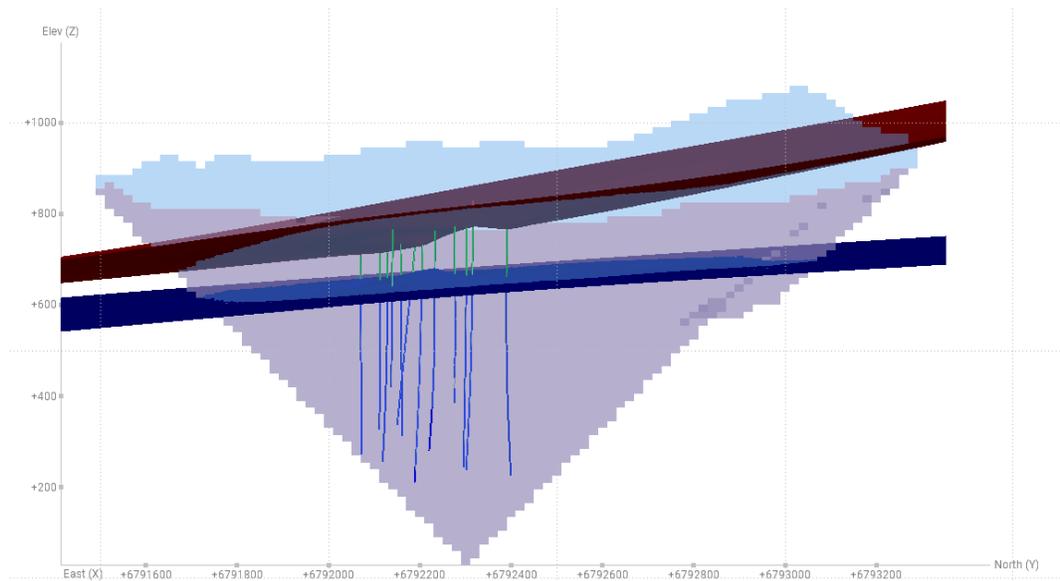
Figure 16.9: Geological zone boundaries along with drillhole mapping, spatial view

Based on these zones, lithology and alteration, geotechnical units with similar behavior were grouped.

It should be noted that the number of tests available is not sufficient to definitively define the Geotechnical Units, but for the current stage of the project, it is adequate.

Considering the laboratory tests as well as the drillhole mappings, the geotechnical units are defined along with the intact rock properties (Table 16.1, highlighted in bold in this table).

Table 16.1: Intact Rock Properties by geotechnical unit

UG	Lithology	Alteration	ZG	Density (g/cm³)	Porosity (%)	σ_{ci} (MPa)	m_i -	E (GPa)	n -	GSI -
UGB01a	AND	All	2°	**2.79**	**0.47**	80	20	35	0.2	60
UGB01b			1°			120	25	30	0.25	**88**
UGB02a	BXH	All	2°	**2.44**	**6.19**	20	7	10	0.15	**46**
UGB02b			1°			**22**	7	**19**	**0.13**	**88**
UGB03a	BXI (BXI + BXTur)	ANH + KB + KFELD	2°Tr	**2.73**	**1.1**	30	10	7	0.25	**54**
UGB03b		QS + Q				45	12	22	0.25	**78**
UGB03c		All	1°			**67**	15	**74**	**0.27**	87
UGB04a	IDT	All	2°ss	**2.75**	**1.8**	60	18	30	0.25	40
UGB04b			2°Tr			80	20	40	0.25	**60**
UGB04c			1°			**105**	**21**	**50**	**0.25**	**88**
UGB05a	PQD (PQD + PQDt)	KB+QS	2°ss	**2.53**	**4.75**	35	15	15	0.2	**44**
UGB05b			2°Tr			45	18	20	0.2	**58**
UGB05c						**58**	**19**	**47**	**0.21**	**85**
UGB05a	PQD (PQD + PQDt)	Others	2°ss	**2.69**	**1.65**	70	18	30	0.25	**54**
UGB05b			2°Tr			120	20	40	0.25	**54**
UGB05c			1°			**172**	22	**58**	**0.27**	**89**
UGB06a	DDIO (DDIO1 + DDIO2)	All	2°Tr	**2.97**	**0.44**	100	20	60	0.25	**50**
UGB06b			1°			**147**	23	**95**	**0.27**	86
UGB07a	GND	All	2°	-	-	120	22	40	0.25	60
UGB07b			1°			150	23	50	0.22	85

*The parameters obtained through laboratory information or drillhole mapping are highlighted in bold, while the other values were estimated based on literature and experience in similar projects.

As mentioned earlier, considering this information, the results of the bench berm analysis, and field observations, the preliminary design presented in Table 16.2 was generated.

Table 16.2:   Preliminary design parameters determined through Bench Berm Analysis

Zone	Geotechnical Zone	Interramp Angle	Maximum Height	Step out	Bench Height	Bench Face Angle	Berm Width
		(°)	(m)	(m)	(m)	(°)	(m)
1	2° SS	46	120	25	15	75	10.5
	2° TR	48	135	25	15	75	9.5
	1°	53	135	25	15	80	8.7
2	2° SS	43	135	25	15	75	12.1
	2° TR	45	150	25	15	75	11
	1°	50	150	25	15	75	8.6
3	2° SS	48	135	25	15	75	9.5
	2° TR	50	150	25	15	75	8.6
	1°	55	150	25	15	80	7.9

Where Zone 1 corresponds to structural domains 2, 3, and 4; Zone 2 corresponds to the area between Faults FA-DAM02_N and FA-DAM12_N; and Zone 3 corresponds to the remainder of structural domain 1.

16.2.10   Interramp Global Design and Analysis

The stability of the Domeyko Sulfuro Pit design is carried out through a stability analysis using the 2D limit equilibrium method, considering the following:

Five sections are defined to perform the inter-ramp and global analysis of the pit, as indicated in Figure 16.10.

■ The major faults that sub-parallel to the section to under analysis were considered.

■ The analysis is performed with the presence of the phreatic level, so that the results include hydrological conditions.

■ The stability analysis is carried out for static case and a pseudo-static case, based on benchmarking conducted between nearby projects and operations. A horizontal seismic coefficient Kh=0.20 was used.
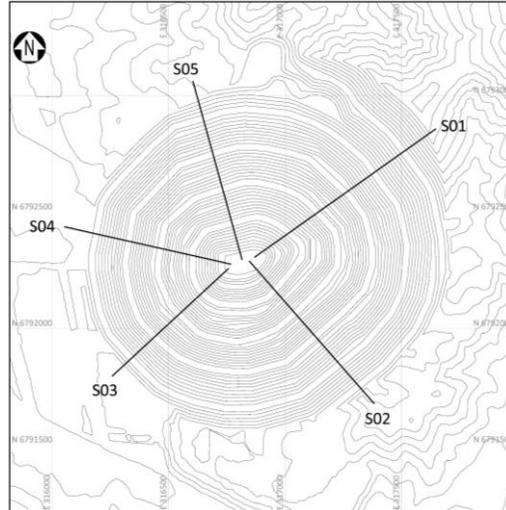
Figure 16.10: Location of the analysis sections

- The Mohr Coulomb properties for the major faults are:

    – Cohesion (c): 10 kPa

    – Friction angle (ϕ): 26°

- The stability analysis results are presented in Table 16.3, which highlights the three lowest safety factors (FS) for each section.

Table 16.3: Stability Analysis Results for Domeyko Pit

Section	Slope Type	Height (m)	Factor of Safety	
			Static Case	Pseudo-Static Case
	IRA	716	2.14	1.64
S01	GL	872	1.99	1.52
	IRA	750	2.07	1.62
	IRA	623	2.60	1.97
S02	GL	772	2.32	1.75
	IRA	720	2.65	2.07
	IRA	50	1.90	1.45
S03	GL	631	2.59	1.97
	IRA	600	3.02	2.36
	IRA	316	4.80	3.70
S04	IRA	464	3.83	2.95
	GL	614	3.00	2.30
	IRA	542	2.79	2.13
S05	GL	692	2.31	1.75
	IRA	600	2.53	1.95

It is determined that all combinations, both Interramp (IRA) and Global, for the analyzed sections, are stable, according to the conditions indicated above.

16.3 Hydrology & Hydrogeology Considerations

On October 27-28 and 29, Senior Hydrogeologist, along with other SRK professionals, visited the Domeyko pit area associated with the Dos Amigos Mine.

On that occasion, at least three areas with groundwater occurrence were observed at the bottom of the pit, which are described as follows:

1. **Groundwater Outflow 1:** located right below the NNE slope on an intermediate bench. This outflow could be explained by the fact that immediately upstream there is a significant surface stream that is cut off by the excavation, and water could enter through that wall and accumulating on the intermediate bench.

Figure 16.11: Groundwater Outflow 1

2. **Groundwater Outflow 2:** this is associated with an unlined pond that stores a significant volume at the bottom of the pit around some drillholes drilled in the 2025 campaign that presented artesian water. According to verbal information, when drillholes 5 (SDDK25-5) and 8 (SDDK25-8) were drilled, water appeared on the surface, and then drillhole 11 (SDDK25-11) was drilled, which also produced water but caused a decrease in pressure in the previous drillholes. Drillhole 11 was visited on site, and water was indeed flowing from the base (see photo), which was conducted through a ditch to lined ponds to prevent infiltration. It was observed that the water management system is not efficient, which could be causing water recirculation.

This observation suggests that there could be a pressurized hydrogeological system at depth, which may be cut off by these three drillholes, raising the water level. It is necessary to determine whether the existing lagoon corresponds to a water table in the system or whether it could be just a reservoir in equilibrium with direct evaporation from the free water surface of the lagoon/pond.

Figure 16.12: Groundwater Outflow 2
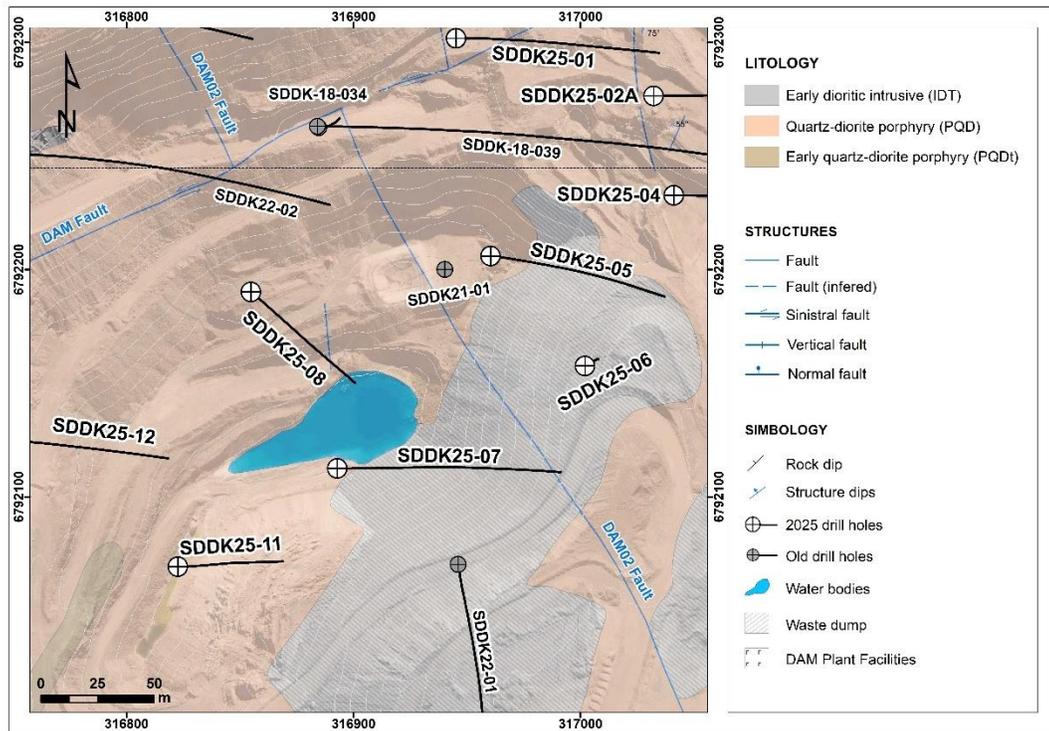
Figure 16.13: Location of recent drillholes around the groundwater outflow

3. **Groundwater Outflow 3:** Towards the south wall of the pit, at the bottom, there is a third area with surface water that is distinguished by a beach of light-colored precipitated salts on the surface, which shows the effect of evaporation on these free waters. However, there is no information that these waters come from an emerging confined level, which should be reviewed in the next stage of the study.

Figure 16.14: Groundwater Outflow 3

16.3.1 Hydrogeological findings

Historical satellite images were reviewed on Google Maps, and indeed, since at least 2004, moisture has been evident at the bottom of the pit. From 2013 onwards, it can be seen that there were already three areas with groundwater, which have not changed since that date, as there has been no mining activity in the pit. Only in the recent drilling campaign (2025) was a pressurized system identified at depth.

This level appears to originate from a rock aquifer that is distinct from the aquifer in alluvial deposits located downstream toward the town, where there are groundwater rights. This must be studied in detail in the next engineering stage in order to rule out any impact on third-party rights.

Similarly, it is likely that the quality of the rock mass (geotechnics) or the structural factory determined by the orientation of faults and their filling control groundwater flow, which should also be investigated.

Based on what has been reviewed and analyzed, it is necessary to include works to permanently drain water from the pit and works to depressurize the confined system within the project. These wells could be located outside the pit (out-pit wells) in a hydrogeological singularity or in the pit itself (in-pit) along with a possible system of horizontal drains drilled in more advanced stages of exploitation to depressurize specific areas. It is common for these works to interfere with operations, so it is advisable to incorporate them into the mine design stages.

16.3.2 Hydrological findings

As noted in the site visit chapter, there is a ravine on the northeast slope that, during rainfall, carries a significant amount of surface water directly into the pit. This must be quantified to assess whether it may be necessary to install a contour channel to divert this non-contact water to an adjacent basin from where it can return to its natural course.

The estimation of surface runoff and possible conveyance/diversion works should be addressed in the next engineering stage, possibly also integrating aspects related to the adjacent waste dump.

Another important factor to evaluate is the evaporation of the system, as this phenomenon should allow for the balancing of the pit lake in the post-closure stage.

16.4 Mine Schedule

The mine plan for Domeyko Project contemplates the extraction of sulfide mineralization classified as Measured, Indicated, and Inferred Resources. These materials will be processed in a concentrator plan at a nominal rate of 35,000 tonnes per day (tpd) over an estimated life of 25 years.

The mine plan was developed using Minemax Scheduler, a strategic mine planning software that applies a Mixed Integer Linear Programming (MILP) optimization model incorporating constraints, financial parameters, and production objectives. The plan defines the extraction sequence for each designed phase and seek to maximize the Net Present Value (NPV) of resource exploitation, considering phase precedence constraints, maximum bench extraction per period, and selecting the schedule that delivers the best technical and economic outcomes.

The schedule was prepared on an annual basis, with maximum mining rate of 70 million tonnes per year (Mtpy). For processing decisions, a minimum copper cutoff-grade of 0.20% TCu was applied. However, in the calculation of the reference NPV with Minemax Scheduler, the economic contribution of gold contained within the copper cut-of criterion was included. This approach ensures that material with insufficient metallurgical recovery data is not scheduled for processing, as it is considered to have only a minimum level of confidence for inclusion in the current mine plan. It should be noted that grades below the minimum copper cut-off grade of 0.20% lack recovery test data; therefore, material below this grade is sent to waste dumps. Mineral resource information will be updated and refined during the next stage (Pre-Feasibility Study).

To optimize the mine plan, tow stockpiles have been incorporated:

- High-grade Stockpile (≥ 0.30% TCu) with a capacity of 10 Mt.
- Low-Grade Stockpile (0.20% ≤ TCu < 0.30%) with a maximum capacity of 40 Mt.

The following table presents some of the technical and economic parameters considered for the evaluation of the strategic mine plan using Minemax Scheduler software.

Table 16.4:   Technical and Economic parameters

Item	Unit	Value
Copper Price	USD/pound	4.20
Gold Price	USD/troy ounce	2,200
Mining Cost (excluding haulage)	USD/t	1.20
Haulage Cost	USD/t-km	0.23
Processing Cost	USD/t	11.3
Copper Selling Cost	USD/pound	0.418
Gold Selling Cost	USD/troy ounce	5.00
G&A	USD/pound	0.30
Rehandling Cost	USD/t	1.5
Mine Movement (max)	Mtpy	70
Processing Capacity	ktpd	35
metallurgical deduction		not applied

The following figure illustrates the material flow considered in the Domeyko Project mine plan:
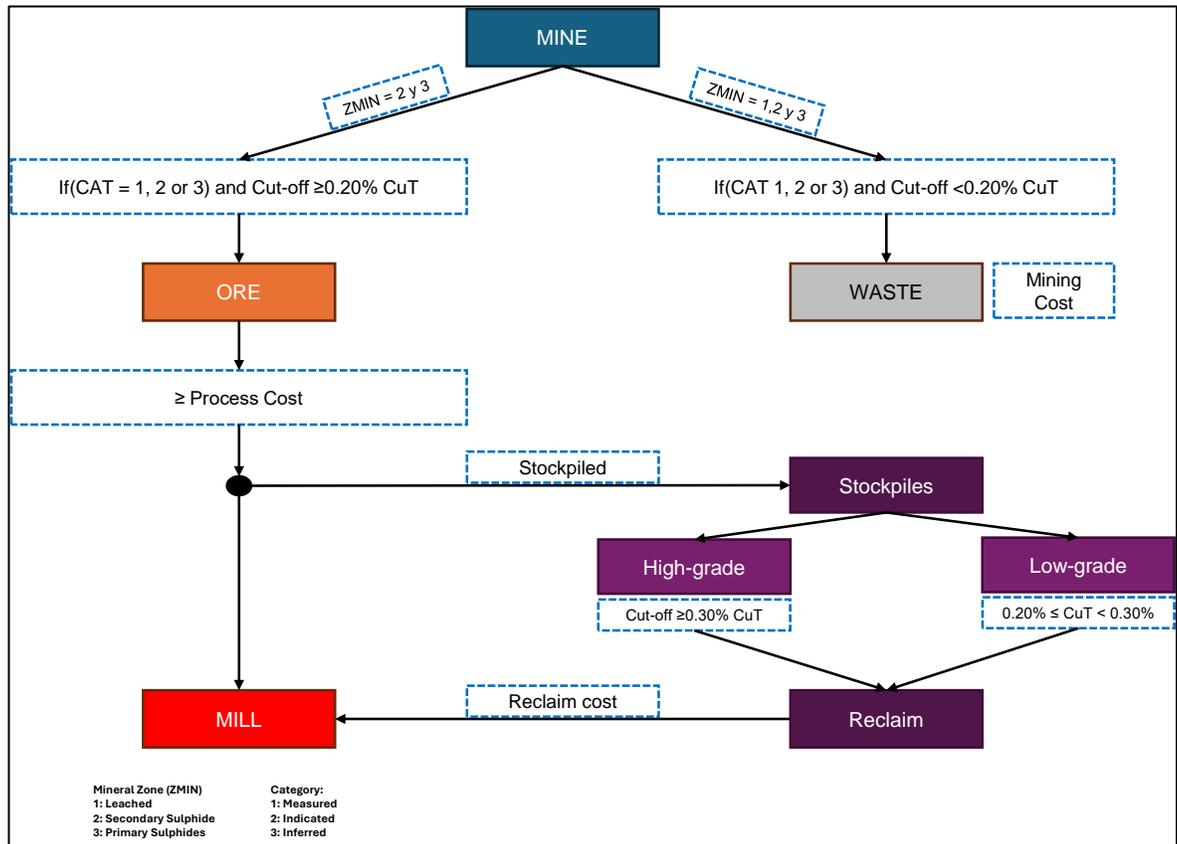
Figure 16.15: Schedule diagram

In the previous figure, it is highlighted that the material types 2 and 3 (ZMIN) correspond to secondary sulfides (ZMIN = 2) and primary sulfide (ZMIN = 3). Resources defined as leachable were considered as waste material (ZMIN = 1).

The development of the strategic mine plan considered a maximum extraction rate of 12 benches per year at the phase-bench level, with up to four phases developed within the same period. These parameters aim to provide operational realism to the strategic mine plan, ensuring compatibility between strategic objectives (maximize NPV) and production objectives such as:

- Realistic drilling/blasting/loading cycles.

- Reduction of dilution.

- Geotechnical risk control.

- Limiting the number of active phases to avoid capital dispersion, reduces non-productive fronts, improves ore flow to the plant, and achieves a better value sequence, among others.

16.4.1   Mine Plan Results

During the development of the strategic mine plan for the Domeyko Project, several mine plan alternatives were evaluated, with the most attractive option being the following:

▪   Base Case: Minimum Cut-off grade of 0.20% TCu and concentrator throughput of 35 ktpd.

This evaluation presents the results of the Base Case mine plan, which serves as the foundation for the estimation of the various chapters detailed in this report.

The following table shows a summary of the results of the Base Case plan mentioned:

Table 16.5:   Summary Base Case

SUMMARY	unit	Base Case: 0.2@TCu_35ktpd
Plant feed from mine	kt	244,325
Cu grade from mine	%	0.372
Au grade from mine	ppm	0.279
Plant feed from stockpiles	kt	65,772
Cu grade from stockpiles	%	0.25
Au grade from stockpiles	ppm	0.148
Total Plant feed	kt	310,097
Cu grade to plant	%	0.346
Au grade to plant	ppm	0.251
Contained Copper (fine)	t	1,071,403
Contained Gold (fine)	t	77.985
Copper Recovery	%	88.21
Gold Recovery	%	64.61
Recovered Copper	t	945,033
Recovered Gold	t	50.39
High-grade stock additions	kt	10,677

SUMMARY	unit	Base Case: 0.2@TCu_35ktpd
Cu grade in High-grade Stock	%	0.33
Low-grade stock additions	kt	55,095
Cu grade in Low-grade Stock	%	0.23
Total stock additions	kt	65,772
Waste to Dumps	kt	880,256
Total Mine Extraction	kt	1,190,353
Total Stock Rehandle	kt	65,772
Total Mine Movement	kt	1,256,126
Strip Ratio		2.84
Life of Mine	years	26

16.4.2 Mine Movement

The strategic plan projects a mine extraction rate ranging from 164 to 192 ktpd, with a peak of 192 ktpd between periods 13 and 18 (six years). This increase is required to achieve the development of the final phase (Phase 8), which represents the largest volume of material. Starting from period 19, the mine extraction rate begins to progressively decline until mining activities conclude in period 22.

The following figure illustrates the total mine movements to the different destinations:

Figures illustrating the mine development and material movement by period are provided in Appendix 3. These figures present the spatial evolution of the open pit and support the mine movement sequence described in this section.
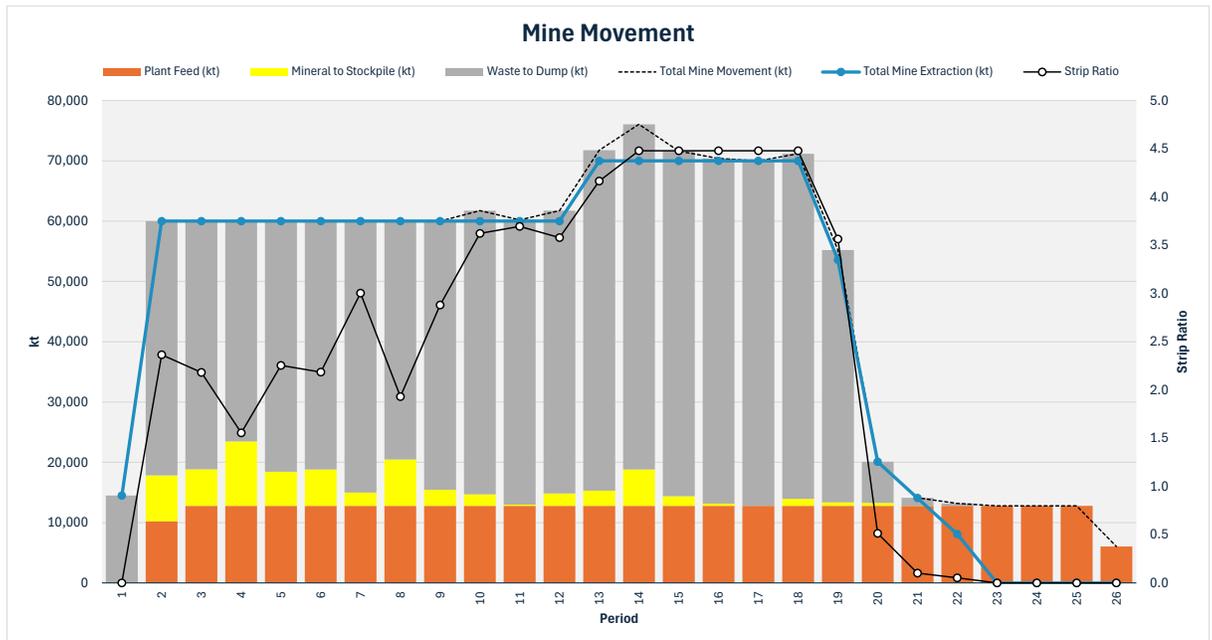
Figure 16.16: Mine Movement

16.4.3 Concentrator Plant Feed

Plant feed is a central element of the strategic plan, as it determines both operational continuity and the stability of fine copper production. This section presents the projected results for ore feed to the concentrator plant, as well as a review of ore feed by phase to identify potential operational dependency risks.

During the first year of mine development, a pre-stripping period occurs, with approximately 14.5 Mt of material removed to access ore in the second year. In the second year of mining, plant feed reaches 80% of the nominal rate (approximately 10.22 Mt) with an average copper grade of 0.43% and an average gold grade of 0.323 ppm. By the third year, the estimated production level of 35 ktpd (approximately 12.7 Mt/year – 35 ktpd) is achieved, with an average copper grade of 0.41% and an average gold grade of 0.364 ppm.

From periods 2 to 19, the treatment profile remains at 35 ktpd, with occasional support from stockpiles. However, in period 14, plant feed consists of 52% ore from the mine and 48% from stockpiles, mainly due to the intensive development of Phase 8, which has the largest material volume. In the final periods (23 to 26), the concentrator plant is fed exclusively from stockpiles.

Overall, ore is primarily supplied directly from the mine, ensuring operational continuity with adjustments through stockpile management.

The following figures illustrate the strategic plan development, showing ore sent directly from the mine and stockpiles, as well as ore feed by phase:
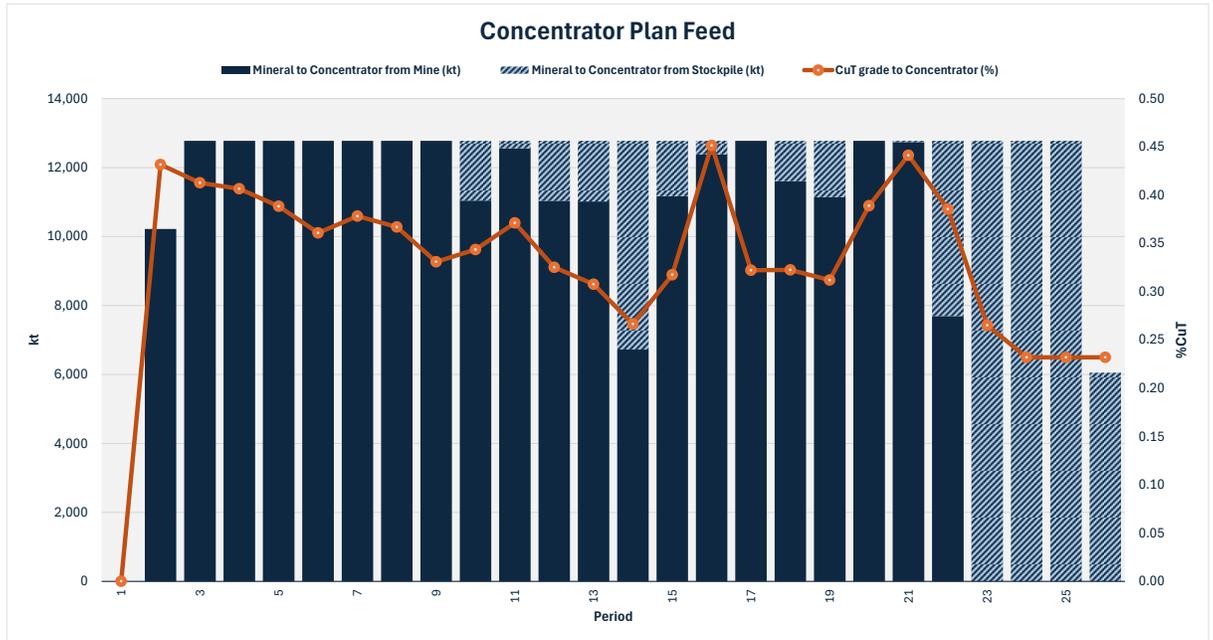
Figure 16.17: Concentrator Plant Feed
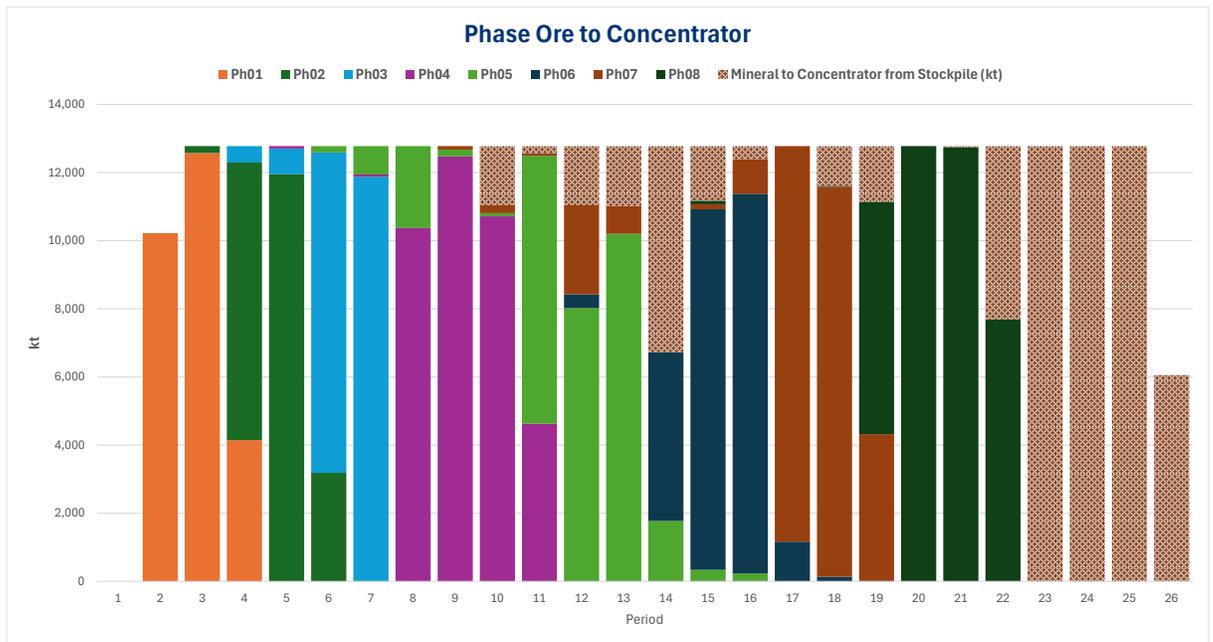
Figure 16.18: Phase Ore to Concentrator

From Figure 16.18, it can be noted that the strategic plan was developed with the objective of reducing risks and uncertainties. This was achieved by feeding the concentrator plant from more than one phase, ensuring that the plan is not single-phase but rather bi-phase or multi-phase. In this plan, this objective is met during periods 4 to 14, although some periods rely primarily on a single phase. It is important to keep this condition in mind for the next Pre-Feasibility stage, where different mine design and scheduling alternatives must be studied. These alternatives will allow for a better match between design, sequencing, and ore feed from multiple phases.

Table 16.6 shows the summary of the Base Case Mine Plan for Domeyko Project.

16.4.4 Stockpiles Inventory

As previously mentioned, the mine plan includes two stockpiles:

- High-grade (HG) Stockpile (≥ 0.30% TCu) with a capacity of 10 Mt.
- Low-Grade (LG) Stockpile (0.20% ≤ TCu < 0.30%) with a maximum capacity of 40 Mt.

The HG stockpile has a maximum capacity of 10 Mt, while the LG stockpile has a maximum capacity of 40 Mt. Ore is primarily delivered to the respective stockpiles during the first nine periods of the plan, with rehandling of material occurring from period 10 onwards. The total rehandling of ore takes place from period 23 through the end of the plan in year 26.

The following figure illustrates the stockpile inventory:
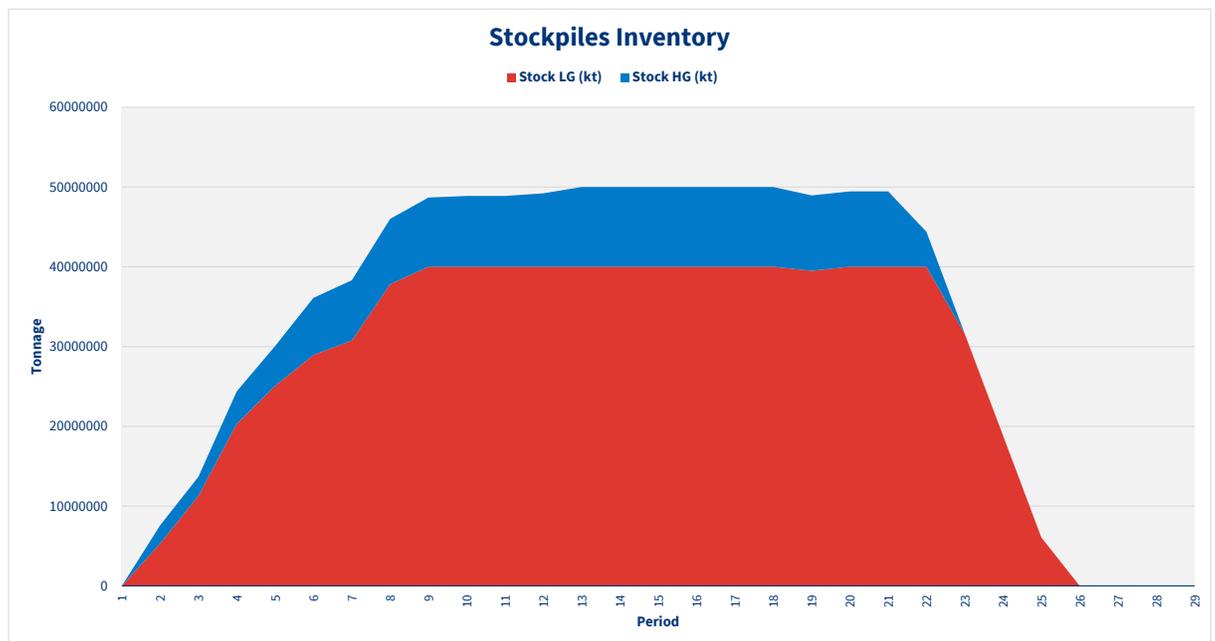
Figure 16.19: Stockpiles Inventory

Table 16.6: Base Case Mine Plan

Base Mine Plan Proyecto Domeyko	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Mineral to Concentrator from Mine	Mt	0	10	13	13	13	13	13	13	13	11	13	11	11	7	11	12	13	12	11	13	13	8	0	0	0	0
TCu Grade from Mine	%	0.0	0.43	0.41	0.41	0.39	0.36	0.38	0.37	0.33	0.36	0.37	0.34	0.32	0.29	0.33	0.46	0.32	0.33	0.32	0.39	0.44	0.42	0.00	0.00	0.00	0.00
Au Grade from Mine	ppm	0.0	0.32	0.36	0.29	0.33	0.26	0.28	0.22	0.24	0.28	0.29	0.21	0.29	0.21	0.22	0.33	0.24	0.32	0.22	0.25	0.34	0.34	0.00	0.00	0.00	0.00
Mineral to Concentrator from Stockpile	Mt	0	0	0	0	0	0	0	0	0	2	0	2	2	6	2	0	0	1	2	0	0	5	13	13	13	6
TCu Grade from Stockpile	%	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.24	0.26	0.24	0.24	0.24	0.26	0.00	0.23	0.26	0.00	0.23	0.33	0.27	0.23	0.23	0.23
Au Grade from Stockpile	ppm	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.16	0.16	0.16	0.16	0.15	0.15	0.00	0.15	0.15	0.00	0.14	0.15	0.15	0.14	0.14	0.14
Mineral to Concentrator	Mt	0	10	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	6
TCu Grade to Concentrator	%	0.0	0.43	0.41	0.41	0.39	0.36	0.38	0.37	0.33	0.34	0.37	0.33	0.31	0.27	0.32	0.45	0.32	0.32	0.31	0.39	0.44	0.39	0.27	0.23	0.23	0.23
Au Grade to Concentrator	ppm	0.0	0.32	0.36	0.29	0.33	0.26	0.28	0.22	0.24	0.26	0.29	0.20	0.27	0.19	0.21	0.33	0.24	0.30	0.21	0.25	0.34	0.26	0.15	0.14	0.14	0.14
Contained Copper (fine)	Mt	0	44	53	52	50	46	48	47	42	44	47	42	39	34	41	58	41	41	40	50	56	49	34	30	30	14
Contained Gold (fine	kt	0.0	3.3	4.6	3.8	4.3	3.3	3.5	2.8	3.0	3.4	3.7	2.6	3.5	2.4	2.7	4.2	3.1	3.9	2.7	3.2	4.3	3.4	1.9	1.8	1.8	0.9
Copper Recovery	%	0.0	88.3	88.4	88.4	88.4	88.4	88.0	88.4	88.4	88.3	88.2	88.4	88.2	88.3	88.3	88.2	87.7	87.9	87.7	88.0	87.8	88.2	88.3	88.3	88.3	88.3
Gold Recovery	%	0.0	64.5	64.4	64.4	64.4	64.5	65.1	64.4	64.4	64.5	64.7	64.1	64.8	64.6	64.4	64.7	64.8	65.3	65.2	64.6	64.6	64.4	64.5	64.4	64.4	64.4
Recovered Copper (fine)	kt	0	39	47	46	44	41	43	41	37	39	42	37	35	30	36	51	36	36	35	44	50	43	30	26	26	12
Recovered Gold (fine)	t	0	2	3	2	3	2	2	2	2	2	2	2	2	2	2	3	2	3	2	2	3	2	1	1	1	1
High-Grade Stockpile Material	Mt	0	2	0	2	1	2	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
TCu Grade in High-Grade Stockpile	%	0.0	0.33	0.34	0.33	0.33	0.33	0.33	0.32	0.32	0.31	0.35	0.33	0.33	0.32	0.31	0.33	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Low-Grade Stockpile Material	Mt	0	5	6	9	5	4	2	7	2	2	0	1	2	6	2	0	0	1	1	1	0	0	0	0	0	0
TCu Grade in Low-Grade Stockpile	%	0.0	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.24	0.22	0.24	0.22	0.22	0.22	0.23	0.23	0.00	0.21	0.22	0.22	0.21	0.00	0.00	0.00	0.00	0.00
Total Stockpile Material	Mt	0	8	6	11	6	6	2	8	3	2	0	2	3	6	2	0	0	1	1	1	0	0	0	0	0	0
Waste to Dump	Mt	15	42	41	37	42	41	45	40	45	47	47	47	56	57	57	57	57	57	42	7	1	0	0	0	0	0
Total Mine Extraction	Mt	15	60	60	60	60	60	60	60	60	60	60	60	70	70	70	70	70	70	54	20	14	8	0	0	0	0
Total Stockpile Rehandle	Mt	0	0	0	0	0	0	0	0	0	2	0	2	2	6	2	0	0	1	2	0	0	5	13	13	13	6
Total Mine Movement	Mt	15	60	60	60	60	60	60	60	60	62	60	62	72	76	72	70	70	71	55	20	14	13	13	13	13	6
Strip Ratio		0.0	2.37	2.18	1.56	2.26	2.19	3.00	1.93	2.88	3.62	3.70	3.58	4.17	4.48	4.48	4.48	4.48	4.48	3.57	0.51	0.10	0.05	0.0	0.0	0.0	0.0
Mining Rate	ktpd	40	164	164	164	164	164	164	164	164	164	164	164	192	192	192	192	192	192	147	55	39	22	0	0	0	0

16.5   Waste Storage Facilities

The project includes a waste storage facility (WSF) located immediately to the south of the open pit. This location was selected to minimize haul distances, reduce operating costs, and maintain waste placement activities within the authorized project footprint.

The facility has an estimated total capacity of approximately 1,000 Mt of waste material, which is sufficient to accommodate the projected stripping volumes generated over the life of mine according to the preliminary mine plan. The overall configuration, geometry, and development sequence of the WSF were designed considering operational efficiency, physical stability, haul road access, and local topographic constraints.

Waste will be placed by the primary haul truck fleet following a bench-and-lift construction approach, allowing the operation to maintain safety berms, control overall slope angles, and preserve adequate access during each construction stage. At the PEA level, conservative assumptions regarding waste densities, swell factors, and geomechanical parameters have been applied to ensure that the estimated capacity of the WSF remains within reasonable ranges for this stage of study.

The waste storage facility has been defined using design parameters consistent with standard industry practices, considering the overall geometry of the structure, the waste rock angle of repose, and the operational criteria required for its staged construction. These parameters establish the configuration of the facility, its principal dimensions, and the operational slope conditions. Table 16.7 presents the values adopted for the design, which form the basis for estimating the facility's capacity and its development throughout the life of the project.

Table 16.7:   General Design Parameters for the Waste Storage Facility

Parameters	Value	Unit
Density	1.8	t/m^3
Angle of repose	37	°
Bench height	50	m
Maximum Height	230	m
Berm width	50	M

The main considerations for the placement of the waste storage facility are as follows:

- It must not interfere with areas designated for other project infrastructure.
- The facility must remain within the permitted project footprint and avoid impacts on pit development.
- Safe operational access for the haul fleet must be maintained throughout all stages of construction.
- Maintain an approximate distance of 150 m between the pit and the toe of the waste dump.

▪ Required capacity: approximately 1,000 Mt of waste rock based on the projected mine plan.

The design of the Domeyko waste storage facility is presented in Figure 16.20.
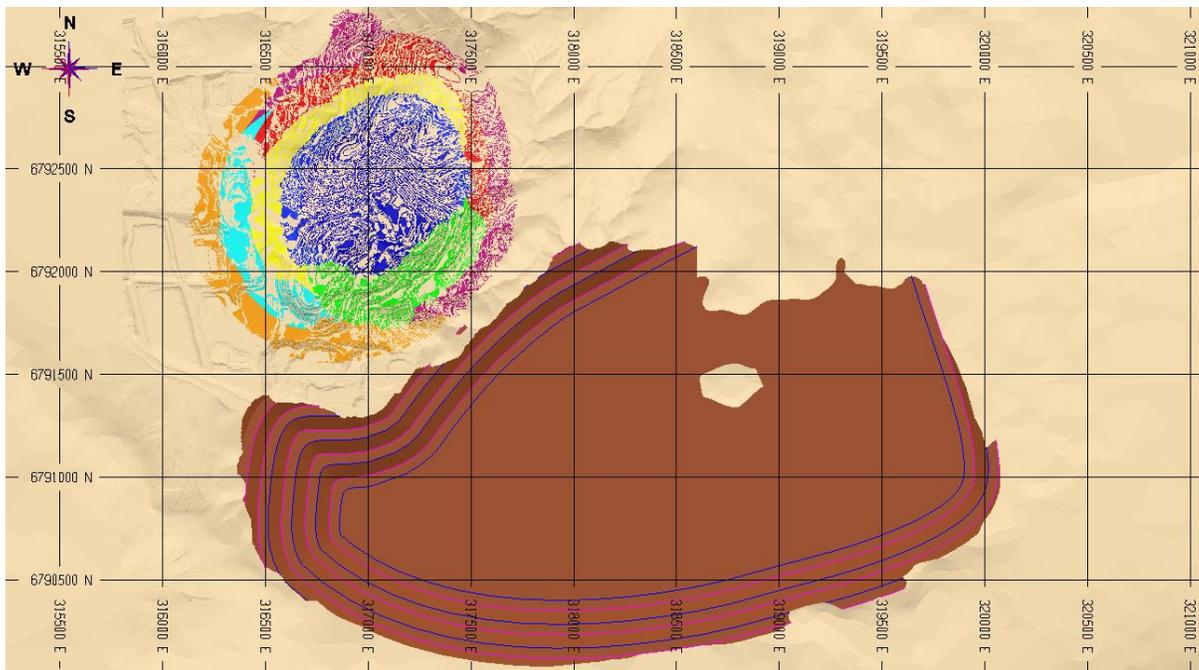
Figure 16.20: Footprint and Layout of the Waste Storage Facility for the Domeyko Project

16.5.1 Construction Sequence

The waste storage facility will be developed progressively from west to east, beginning along the southern margin of the facility. Waste placement will initially be carried out from at least three discharge nodes located on the western and eastern access points, prioritizing the shortest haul distances from the pit. As dumping continues, these discharge nodes will advance eastward, allowing the facility to grow laterally in a controlled manner consistent with local topography and haulage efficiency.

The western sector of the dump is underlain by lower natural terrain, with ground elevations around 700 m, which requires a greater amount of vertical fill to reach the final design surface. Consequently, this area will be developed using up to four stacked lifts, each separated by a 50 m operational berm. Toward the east, natural ground elevations increase to approximately 900 m, reducing the vertical filling requirements. As a result, the eastern sector will be developed as a single lift, adequate to achieve the final dump geometry while maintaining the required operational safety margins.

The open pit will be mined using concentric pushback phases, ensuring that dump development remains compatible with future pit expansion. Throughout the life of the project, a minimum separation distance of approximately 150 m will be maintained between the pit crest and the dump toe.

This staged development approach ensures continuous and safe access for haul trucks, provides adequate operational berms between lifts, and supports a coherent progression of waste placement consistent with the life-of-mine waste schedule.

16.5.2 Waste Storage Facility Capacity

The capacity of the waste storage facility was estimated using Hexagon MineSight/MinePlan. A final dump surface and the corresponding three-dimensional solid were generated within the software, representing the full geometry of the designed facility. The resulting dump solid was then intersected with the pre-mining topographic surface to isolate the net fill volume.

To support the construction sequence and evaluate the distribution of storage capacity, the resulting dump volume was subdivided into elevation-based lifts, corresponding to the western and eastern sectors of the facility. For each lift, the enclosed volume was reported by the software and converted from cubic meters to tonnes using the design bulk density of 1.8 t/m³.

The volumes for each lift are summarized in Table 16.8, and together provide an estimated total dump capacity of approximately 1,000 Mt, which is sufficient to accommodate the projected life-of-mine waste tonnage.

Table 16.8:   Waste storage facility lift and corresponding tonnage capacity

	Unit	Value
Lift 1	Mt	11
Lift 2	Mt	136
Lift 3	Mt	255
Lift 4	Mt	306
Lift 5	Mt	343
Total	**Mt**	**1,051**

As shown in Table 16.8 the combined capacity of all lifts results in an estimated total dump capacity of approximately 1,000 Mt. This installed capacity is sufficient to accommodate the projected life-of-mine waste tonnage and provides an appropriate operational margin for this stage of the study.

16.5.3 Geotechnical Considerations for Waste Storage Facilities

Physical stability verification of the waste dump design was conducted using the limit equilibrium method (Slide2, Rocscience) to determine the minimum safety factor (FS) against sliding. Three (3) critical sections of the dump were analyzed, selected based on the maximum slope height and overall slope angle. A plan view showing the location of the analyzed waste dump sections is presented in Figure 16.21, while Table 16.9 summarizes the geometric parameters.
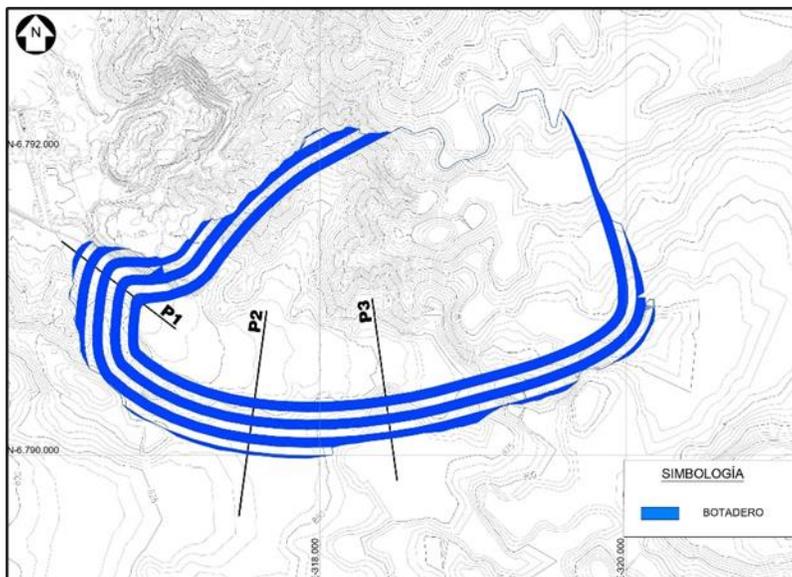
Figure 16.21: Plan view of analyzed waste dump sections

Table 16.9:   Geometric parameters of sections

Section	Maximum height (m)	Overall angle (°)
P1	230	23
P2	165	24
P3	135	26

Table 16.10 presents the adopted shear strength parameters for the dump waste and subsoil materials. The selected values are based on the consultant's experience. For the waste rock characterization, the low-strength rockfill envelope proposed by Leps (1970) was used.

Table 16.10: Adopted geotechnical parameters

Material	Unit weight γ (t/m³)	Friction angle Interna ϕ (°)	Cohesion c (kPa)	$\tau = A\sigma_n^B$ (kPa)	
Waste Rock	1.9	-	-	$\tau = 1.536\sigma_n^{0.89}$	
Foundation Soil	2.1	40	15	-	-
Bedrock	2.4	35	500	-	-

For the stability analysis, the following considerations were made:

▪ The GLE (General Limit Equilibrium) method was used to solve limit equilibrium solution. Non-circular failure surfaces (more critical than circular surfaces) were analyzed using Simulated Annealing search method.

▪ The sections were evaluated under both static and pseudo-static conditions. For the latter, a horizontal seismic coefficient (K_h) of 0.20 was adopted, equivalent to 50% of the effective acceleration (Ao) for the project's seismic zone (Zone 3; Ref 2)

▪ Acceptability criteria were based on those established by SERNAGEOMIN in the guidelines for waste dump project submissions from mining operations (Ref 3).

Table 16.11 presents the minimum safety factors obtained for each section. The results show that established acceptability criteria are met in all analyzed cases.

Table 16.11: Adopted Acceptability Criteria and Safety Factors

Case	Acceptability Criteria (Sernageomin, 2023).	Section P1	Section P2	Section P3
Static	FS ≥ 1.30	1.94	1.78	1.68
Pseudo-static	FS ≥ 1.10	1.23	1.15	1.11

16.5.4   Water Management System

From a hydrogeological perspective, the mining project must ensure that the waste dump and stockpiles incorporate surface runoff management structures designed to collect and direct upstream flows toward designated drainage infrastructure. This approach minimizes the generation of contact water, which would otherwise require controlled handling and treatment. As a reference, the site receives an average annual precipitation of approximately 40 mm/year, occurring predominantly between May and August.

Rainfall that falls directly onto these facilities may run off along the dump slopes, evaporate, or infiltrate into the underlying materials. In the next engineering stage, subsurface investigations will be required, including test pits, soil sampling, and material characterization, to support the development of infiltration models under variably saturated conditions. Additionally, the installation and monitoring of hydrogeological wells will be essential to determine the depth of the water table at each location and to assess potential interactions between the waste storage facilities and groundwater systems.

16.6 Mine Fleet

Mining operations at the Domeyko Project are planned as a conventional open pit truck-and-shovel operation. The mining fleet comprises loading, hauling, and auxiliary equipment sized to meet the material movement requirements defined by the life-of-mine mine plan.

At the PEA level, the equipment fleet has been defined using representative equipment classes and capacity ranges, rather than specific manufacturers or models. Fleet selection and sizing are based on industry-standard productivity assumptions, haulage distances estimated using MineHaul software (Dave Carkeet), and operating conditions considered appropriate for this stage of study. The proposed fleet configuration provides sufficient operational flexibility to accommodate variations in production rates while maintaining reasonable operating efficiency. All mining equipment considered in the fleet is assumed to be diesel-powered, consistent with conventional open pit mining practice efficiency.

16.6.1 Drilling Equipment

Drilling activities at the Domeyko Project will be carried out using a combination of large-diameter production drill rigs and smaller-diameter support drill rigs, suitable for a large-scale open pit mining operation.

Production drilling will be performed using rotary blast hole drills in the approximately 10 5/8-inch diameter class, which constitute the primary drilling units throughout most of the mine life. These drills provide the required drilling capacity to support the planned blasting activities in both ore and waste and are consistent with the planned mine production rates. The selected drilling equipment and hole diameters are compatible with a planned bench height of approximately 15 m, as defined in the mine design.

In addition, a smaller-diameter drill rig in the approximately 6 1/2-inch class is included as a support unit to carry out auxiliary drilling activities, such as buffer holes, and drilling in areas with operational or geometric constraints.

At the PEA level, drilling equipment has been defined using representative drill classes rather than specific manufacturers or models. The number of drill units varies over the life of mine in accordance with bench development requirements and production rates and is considered appropriate to sustain the planned blasting schedule.

A summary of the drilling equipment classes, and fleet size considered over the life of mine is presented in Table 16.12.

Table 16.12: Summary of Drilling Equipment

Drill Type	Primary Function	Hole Diameter (in)	Minimum Units	Average Units	Maximum Units
Rotary Blast Hole Drill	Production drilling	~10 5/8	1	3	3
Rotary Blast Hole Drill	Support drilling	~6 1/2	1	1	1

16.6.2 Blasting

Blasting operations at the Domeyko Project are assumed to be fully performed by a specialized third-party contractor. The scope of services includes blast hole checking, charging, tie-in, area isolation and control, and blast initiation. The contractor is responsible for the supply, handling, and loading of explosives, as well as the operation and management of explosive magazines and associated storage facilities.

Production blasting is planned to use a regular blast pattern of approximately 8 m × 10 m, consistent with the selected drilling diameters and a planned bench height of approximately 15 m, as defined in the mine design. Blasting parameters are assumed to be applicable to both ore and waste material.

A commercial emulsion explosive, Blendex 950, is assumed for blasting activities. At the PEA level, blasting is treated as an operating cost item, and no owner-operated blasting equipment is included in the mining fleet. This approach is consistent with common industry practice for projects at this stage of development and provides flexibility in the selection of blasting technologies and service providers.

Accordingly, blasting costs are treated entirely as an operating cost item in the mine operating cost estimate, with no associated capital expenditure considered at the PEA level.

16.6.3 Loading Equipment

The loading fleet for the Domeyko Project consists of a combination of large hydraulic shovels and front-end loaders, selected to meet the material movement requirements defined in the life-of-mine plan.

Hydraulic shovels represent the primary loading units throughout most of the mine life, with a nominal bucket capacity of approximately 29 m³, providing the productivity required during periods of high material movement. The number of operating units varies over time in accordance with the project production profile.

Front-end loaders are incorporated as supplementary loading equipment, with a nominal bucket capacity of approximately 19 m³, providing additional operational flexibility and supporting both ore and waste loading activities during specific periods of the mine life.

At the PEA level, loading equipment has been defined using representative equipment classes and capacity ranges, without reference to specific manufacturers or models, based on industry-standard productivity assumptions.

A summary of the loading equipment classes, nominal bucket capacities, and fleet size ranges considered over the life of mine is presented in Table 16.13.

Table 16.13: Summary of loading equipment classes, nominal bucket capacities, and fleet size over the life of mine

Equipment Type	Primary Function	Nominal Bucket Capacity (m³)	Minimum Units	Maximum Units	Average Units
Hydraulic Shovel	Primary loading ore and waste	29	1	5	4
Front-End Loader	Supplemental loading	19	1	2	2

As shown in Table 16.13, the loading fleet varies over time in response to the project production profile. The defined minimum, average, and maximum fleet sizes provide sufficient capacity and operational flexibility to support the planned material movement requirements and are considered appropriate for a PEA-level evaluation.

16.6.4   Haulage Equipment

The haulage fleet for the Domeyko Project consists of large-capacity rigid haul trucks operating as part of a conventional open pit truck-and-shovel mining system. Haul trucks in the 230–240 t payload class have been selected to provide appropriate compatibility with the selected loading equipment and to efficiently meet the material movement requirements defined in the life-of-mine plan.

The haul truck fleet size varies over life of mine in response to changes in production rates and haulage distances. Fleet sizing has been determined based on estimated annual material movement, average equivalent haul distances, and standard industry assumptions for truck productivity, availability, and utilization.

A summary of the haul truck fleet size considered over the life of mine, including minimum, average, and maximum units in operation, is presented in Table 16.14.

Table 16.14: Summary of Haulage Equipment

Equipment Type	Payload Class (t)	Minimum Units	Average Units	Maximum Units
Haul Truck	230–240	2	18	35

Haulage distances were estimated using MineHaul software (Dave Carkeet) following a structured, mine-planning-based approach. Mining phases were first defined and, together with the life-of-mine mine plan, imported into the haulage model. Based on this information, haulage routes were subsequently designed for each material destination, including the primary crusher, waste dumps, and stockpiles. Haulage simulations were then performed for each operating period. Based on the simulated material flows from the pit to each destination, MineHaul calculates average haul distances weighted by the tonnage assigned to each route, which were used as inputs for haul truck productivity and fleet sizing calculations.

Haulage distances increase progressively as the pit deepens and waste placement advances, reflecting the evolution of the mine geometry over time. Average equivalent haul distances have been estimated for each year of operation and used as the basis for haul truck productivity calculations. The defined haulage fleet provides sufficient capacity and operational flexibility to support the planned production profile.

The average haul distances estimated for each year of operation and used for haul truck productivity calculations are summarized in Table 16.15.

Table 16.15:   Average Haul Distances

Year	Average Equivalent Haul Distance (km)	Year	Average Equivalent Haul Distance (km)
1	4.58	14	4.62
2	2.63	15	4.62
3	3.24	16	4.44
4	3.06	17	5.52
5	3.40	18	6.12
6	3.68	19	6.56
7	3.47	20	6.22
8	3.65	21	6.11
9	3.22	22	4.70
10	3.78	23	2.68
11	4.09	24	2.98
12	3.41	25	2.50
13	4.47	26	2.18

Overall, the selected haulage fleet configuration and the estimated average haul distances provide sufficient capacity and operational flexibility to support the planned material movement requirements over the life of mine. The fleet sizing approach, based on representative equipment classes, variable fleet size, and evolving haul distances, is considered appropriate for a PEA-level evaluation and consistent with standard industry practice for large-scale open pit operations.

16.6.5   Auxiliary Equipment

At the PEA level, the auxiliary fleet was sized using practical productivity indicators (KPIs) linked to the main operational drivers of the mine plan. Dozer requirements were estimated as a function of the number of primary loading units, the number of active waste dumps, and the number of primary production drills. Wheel dozers were estimated based on the number of primary loading units and the number of active ramps.

Motor grader and water truck requirements were estimated using material movement–based criteria (ktpd), reflecting their role in maintaining haul road conditions and controlling dust levels as production varies over time. The auxiliary fleet varies over the life of mine in response to changes in production rates and mine geometry.

The auxiliary equipment fleet was sized using practical productivity indicators (KPIs), which are summarized in Table 16.16.

Table 16.16:   Auxiliary Equipment Sizing Criteria (KPIs)

Equipment Type	Sizing Basis	KPI
Dozer	per primary loading unit	0.5
Dozer	per active waste dump	1
Dozer	per primary production drill	0.5
Wheel Dozer	per primary loading unit	0.5
Wheel Dozer	per active ramp	0.5
Motor Grader	per material movement	1 per 100 ktpd
Water Truck	per material movement	1 per 100 ktpd

A summary of the auxiliary equipment fleet size considered over the life of mine is presented in Table 16.17.

Table 16.17: Summary of Auxiliary Equipment

Equipment Type	Minimum Units	Average Units	Maximum Units
Dozer	2	5	5
Wheel Dozer	1	4	5
Motor Grader	1	2	3
Water Truck	1	2	3

17 Recovery Methods

The term "ore" is used in this study solely to describe material scheduled for processing in the conceptual mine plan and does not imply the declaration of Mineral Reserves as defined by NI 43-101.

17.1 General Description of Process Scenarios

The Domeyko project's concentrator plant was evaluated in a SAG production line scenario at a 150 µm grind size, achieving high copper and gold recoveries without increasing energy costs or affecting the processing of high-density thickened tailings.

For tailings processing, the alternative of high-density tailings was considered over conventional tailings. This decision was based on optimizing seawater consumption through reduced make-up and on the technology's sustainability and permitting advantages.

Due to water scarcity in the area, seawater was adopted as the supply source, considering the following aspects: the plant's proximity to the coast, benchmarking of various companies in Chile using untreated seawater and ongoing projects based on this supply, and primarily due to comparative tests between seawater and freshwater, which indicated no differences in rougher copper and gold recovery.

17.2 Sulfide Flotation in Seawater

The following describes the sulfide flotation process using, the general facility design, and the unit operations considered, in accordance with the state of the art of proven technologies and experience in similar operations in Chile.

The use of seawater in the flotation process is well-established in Chile, given its geography and the numerous projects located near the coast. Operations at Michilla and Minera Tocopilla began in the 1980s using seawater. In 2010, Esperanza and Sierra Gorda, each with a capacity of 100 ktpd, were commissioned using seawater; therefore, this demonstrates the process's seawater use.

However, the selection of reagents needs to be studied to achieve high recovery not only in the rougher stage but also in the cleaner stage, due to the challenges posed by pyrite depression and phyllosilicates in obtaining high-grade concentrates in a seawater environment.

Its impact on equipment maintenance must also be considered, given the corrosion chlorine causes on metal parts and coatings.

17.2.1 Mine Plan

The developed mine plan enables the plant to be fed with 35,000 tpd of copper and gold ore, corresponding to an annual processing capacity of 12,775 ktpy. The average grades are 0.35% Cu and 0.25 ppm Au, although during the first five years, the concentrator is fed higher-grade ore at 0.40% Cu and 0.31 ppm gold. Table 17.1 presents the total ore values for the plan, cumulatively at the LOM.

Table 17.1:   The Mine plan LOM cumulative feed plant

Domeyko LOM Mining Plan	Unit	Total
Ore to concentrator	dkt	310,097
Au grade to concentrator	%	0.35
Cu grade to concentrator	ppm	0.251
Fine copper content	t	1,071,403
Fine gold content	t	77.985
TCu recovery	%	88.21
Au recovery	%	64.61
Recovered fine copper	t	945,033
Recovered fine gold	t	50.39

17.2.2   General Flow Diagram

Figure 17.1 presents the block diagram of the concentrator proposed for the PEA study, which considers the following unit operations:

- Primary crushing
- SAG ball mill
- Flotation
- Concentrate thickening and filtration/washing
- High-density tailings thickening
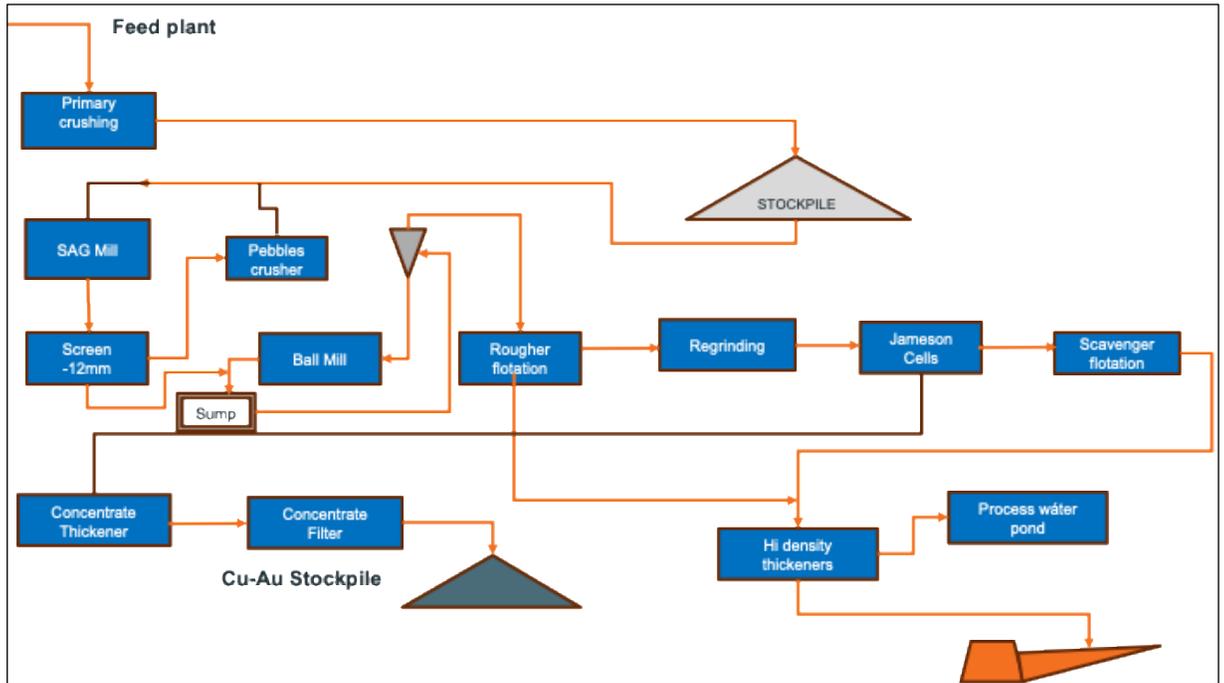
Figure 17.1: Domeyko Concentrator Process Diagram

17.2.2.1 Process Description

17.2.2.1.1 Crushing

The ore from the mine, with a controlled ROM particle size distribution, is fed to the primary gyratory crusher at a rate of 35,000 tpd. The crusher product, in turn, is smaller than 8 inches, with a P80 of 4 inches. An intermediate stockpile with a live capacity of 35,000 tons for a 24-hour buffer is included in this area. The utilization of the crushing area is 70%, that is, 16.6 hours of runtime.

17.2.2.1.2 SAG milling

The grinding circuit operates with a SAG mill in series with a single-unit ball mill and a pebble-crushing circuit with recirculation to the SAG mill; that is, a SABC-A type circuit (SAG-Ball Mill-Crusher). The pebble crusher operates in an open circuit to obtain a product with a P80 of 12 mm. The ball mill operates in a closed circuit with two hydrocyclone banks to obtain a ground product with a P80 of 150 µm. The utilization of the grinding area is 92%, that is, 22.08 hours of runtime.

17.2.2.1.3   Flotation

The flotation plant comprises the rougher, regrinding, cleaner, and scavenger stages. The flotation time for the rougher stage was defined at 30 minutes, based on 15-minute flotation tests and a Plant/Laboratory scaling factor of 2.0. For the cleaning stage, Jameson pneumatic cells were considered for their greater efficiency in processing fine particles. The flotation stage has a 92% utilization rate, consistent with the grinding plant's utilization rate.

17.2.2.1.4   Concentrate handling

The concentrate from the flotation plant will be sent to a preliminary thickener and storage before filtration. The concentrate will be filtered or dried to achieve a moisture content of 9% using a Larox horizontal filter press. During this stage, the concentrate will be washed with desalinated water to remove residual saltwater, which contains the contaminants chlorine and sodium.

17.2.2.1.5   Tailings

The tailings from the flotation plant, containing 32% solids, will be sent to the tailings storage area, located 13 km away, via a conveying system with centrifugal pumps. In this area, three high-density tailings thickeners will be fed to achieve a solids concentration (Cp) of 65%. For this operation, high-torque thickeners with diameters less than 45 m are being considered to process slurries with a yield stress of 100-150 pascals.

The thickened tailings from the thickener discharge will be sent to the tailings storage area through a pipeline system with separate spigots and low-energy slurry distribution to facilitate placement in thin layers.

17.2.2.1.6   Water Management

Seawater supplied from the coast is stored in a seawater pond, from which the process draws its supply. Water recovered from the high-density thickeners is collected in a process water pond in the tailings area. From there, it is returned to the plant's process water pond, from where it is reinjected into the concentrator's process water loop. This pond also collects filtered water from the concentrate.

17.2.3   Plant Design

The following section presents the general design criteria for the process and unit operations, based on data from the mine plan, client and consultant criteria, metallurgical test results, vendor criteria, calculations, industry standards, and benchmarking. Table 17.2, presents the code for the information sources.

Table 17.2:   Sources of information

CODE	REFERENCE
A	DOMEYKO CRITERIA
B	SRK CRITERIA
C	METALLRGICAL TESTING
D	VENDOR CRITERIA
E	BALANCE CALCULATION
F	INDUSTRY STANDAR
G	BENCHMARKING

The General Criteria for the plant are presented in Table 17.3 and Table 17.4 below.

Table 17.3:   General plant criteria

Ore to Plant Sulfide			
Parameter	**Unit**	**Value**	**Reference**
Ore to Plant Sulfide	Kt/year	12,775	Plan PEA Domeyko @0.2%CuT_Mill_35ktpd_Mina_60-70ktpd
Cut grade	%	0.35	idem
Au grade	g/t	0.25	idem
Cu recovery	%	87.41	C
Au recovery	%	65.42	C
Copper produced	Kt/year	39.1	E
Gold produced	Koz/year	67	E
Ref. onza troy	G	31.1	F
Cu concentrate grade	%	26.5	A,B

Table 17.4: General plant criteria

Concentrator design			
Parameter	**Unit**	**Value**	**Reference**
Nominal production	t/d	35,000	Plan PEA Domeyko @0.2%CuT_Mill_35ktpd_Mina_60-70ktpd
Utilization plant	%	92.0	B
Days per year	d/year	365	F
Design factor	%	15	B
Design production	t/d	40,250	E
Feed rate	t/h	1,585	E
Specific garvity SG		2.6	C
Size P80	μm	150	C

17.2.4 Crushing

The design criteria for the crushing plant are presented in Table 17.5 below

Table 17.5: Crushing criteria

Primary crushing	Unit	Value	Reference
Utilization	%	70	B
Throughtput	t/h	2,083	E
Close side Setting	inches	4"-5"	F
Operating lines	Qty	1	A
ROM P80 particle size	inches	5"-6"	F
Product P80 particle size	inches	4"	F
Stockpile capacity	t	35,000	E
Hours per day	h	24	F
Ore moisture	%	2	B

Based on these criteria, a 42"x55" 450 kW gyratory crusher was sized to process the ore at a rate of 2,083 tph with a 5" setting. The maximum capacity of this equipment is 3,300 tph. The crusher product, with a particle size of 80% -4", will be conveyed to the primary stockpile, enclosed by a dome, which will have a capacity of 35,000 t. The efficiency of the crushing and SAG milling areas depends largely on receiving a controlled ROM particle size from the mine, achieved through blasting.

17.2.5 Grinding

The design criteria for the Sag milling plant are presented in Table 17.6 below.

Table 17.6: Sag Milling Criteria

SAG & Ball mill	Unit	Value	Reference
Utilization	%	92	B
Throughput	t/h	1585	E
JK Simmet			
Kinetic parameter Axb	-	42	C
Kinetic parameter t_a		0.41	C
SCSE (Sag Circuit Specific Energy)	kwh/t	10.0	C
Energy consumption (benchmarking)	kwh/t	8.0	C
DWi	kWh/m3	6.9	C
Hardness			
SPI (Sag Power Index)	-	95.7	C
Work index	kwh/t	12.8	C
Sag Mill	Tyoe	Dual pinion	
Sag mill screen slot	mm	12.7	F
Sag Mill solid discharge	%	70	F
Ball mill	type	Dual Pinion	F
F80	um	2500-3500	E
P80	um	150	F
Ball Mill solid discharge	%	78	F
Hydrocyclones			
Overflow sloids	%	32	F
Underflow solids	%	80	F
Circulating load	%	300	F
Hydrocyclones pressure	psi	15	F
Pebbles Crusher	type	Cone MP 1000	F
F80	mm	50	F
P80	mm	19	F
Discharge solids	%	97	F
operating lines	Qty	1	B
Pebbles production	%	15	B

In addition to this background information, the correlation between the Axb parameter and energy consumption, obtained from benchmarking SAG operations, is presented in Figure 17.2 and was used for SAG mill sizing. This graph forecasts an energy consumption of 7-8 kWh/t for an ore with an Axb parameter of 42 in a standard SABC-A circuit. This graph indicates that the Domeyko ore falls on the borderline between hard and medium-hardness ores in terms of Axb value.
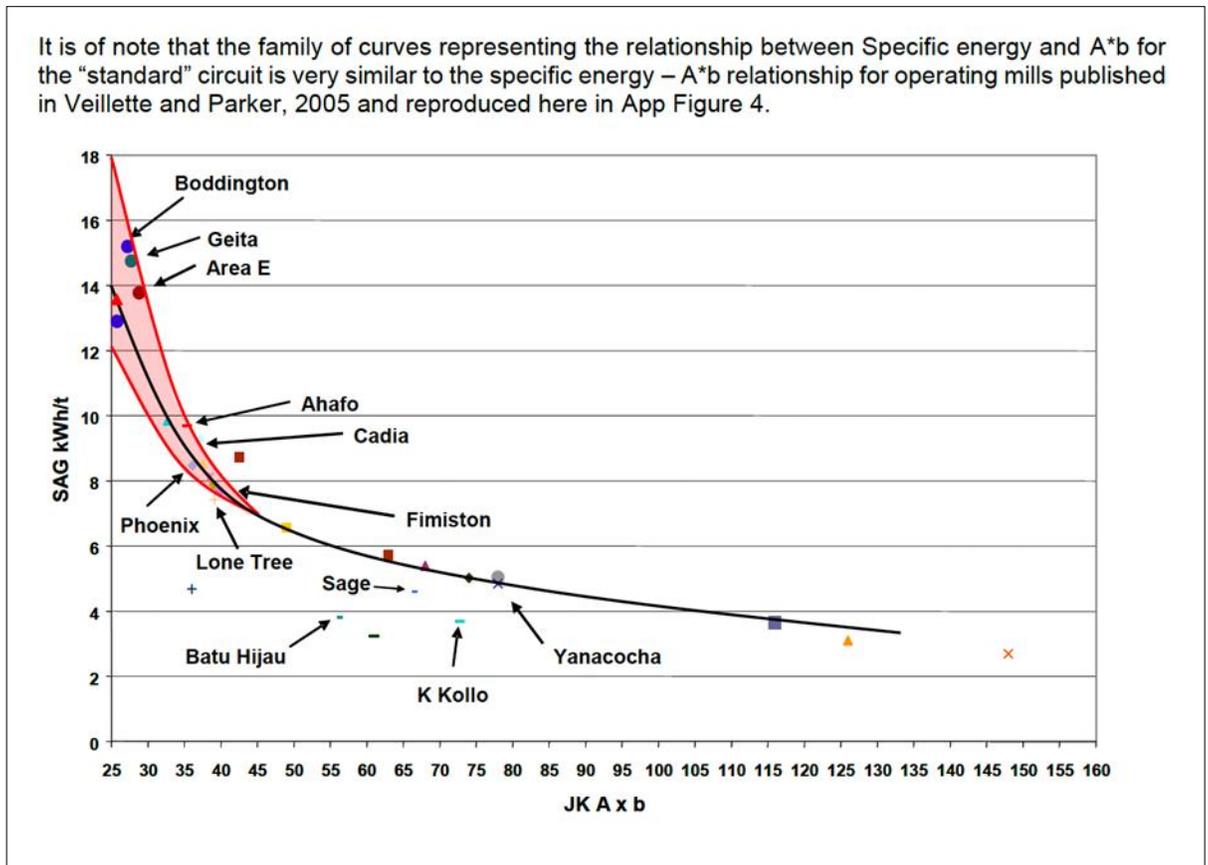
Figure 17.2: **Correlation Axb versus energy consumption (kWh/t)**

The SAG circuit was then sized using JKSImmet simulation, which yielded the following design data:

- SAG Mill: 36x19 ft

- Power demand: 11.500 kW

- Motor power: 12.500 kW

- Feed rate: 1.585 t/h

- Energy consumption: 7,25 kWh/t

- Pebble production: 21%

The recirculation circuit for uncrushed pebbles was also evaluated. This analysis indicated that the circuit has higher energy consumption, generates more pebbles, and requires a larger-diameter mill (38 x 20 ft).

Furthermore, the ball mill was sized using Bond's methodology, determining energy consumption based on F80, P80, and WI, and its size based on the predictive power equation. The results obtained are as follows:

- Ball mill: 26x44ft

- Power demand: 13.900 kW

- Motor power: 16.000 kW

- Feed rate: 1.585 t/h

- Energy consumption: 8,77 kWh/t

The hydrocyclone classification system requires two clusters of 10 26″ cyclones suitable for fine separation down to 150 µm.

17.2.6 Flotation

The flotation plant comprises the rougher, regrinding, cleaner, and scavenger stages. The rougher stage design was based on flotation tests performed on nine representative samples from the resources, using seawater with a particle size between 106 µm and 212 µm.

The cleaner stage design was primarily based on benchmarking data, as testing of this stage is ongoing.

Table 17.7 and Table 17.8 below present the design criteria for the rougher and cleaner stages. Based on these criteria, a rougher flotation row comprising six 300 m³ cells and a flotation time of 30 minutes was selected to achieve 92% copper recovery at this stage.

Table 17.7: Rougher flotation design criteria

Flotation rougher	Unit	Value	Reference
Capacity	tpd	35,000	Plan PEA
au grade first 5 years	%	0.40	Plan PEA
Cu grade first 5 years	g/t	0.31	Plan PEA
Cu recovery	%	92.01	C
Au recovery	%	72.69	C
Operating lines		1	B
Utilization	%	92	F
Throughtput	tph	1585	E
Ore SG		2.6	C
Rougher conc. SG		3.1	C
Rougher feed Cp	%	32	F
Rougher Cu recovery	%	92	C
Rougher mass yield	%	9	C
Flotation time	min	15	C
Scaling factor industrial/Lab		2	B
Flotation time	min	30	E
Seawater density	t/m³	1.025	C
Sea water SG	t/m³	1.271	E
Flotation flow rate	m³/h	3896	E
Useful cell volume	%	85%	E
Nominal flow rate	m³/h	4583	E
Request flotation volume	m³	2292	E
Cell capacity	m³	300	D

Table 17.8: **Cleaner-scavenger regrinding and flotation design criteria**

Regrinding & Cleaner - Scavenger

Regrinding	Unit	Value	Reference
Operating lines		1	B
Utilization	%	92.0	F
F80	µm	150	C
P80	µm	45	C
Wi regrinding	kwh/t	10.24	80% Ball mill WI
Energy consumption	kwh/t	4.84	E

Cleaner - Scavenger	Unit	Value	Reference
Operating lines		1	B
Utilization	%	92.0	F
Feed solids	%	20.0	F
Underflow solids	%	70.0	F
P80	µm	45	B,F
SG scavenger conc.		2.9	C
SG final concentrate		4.5	C
Cleaner Cu recovery	%	95	B
Cleaner Au recovery	%	90	B
Cleaner cells	Type	Jameson	G
Feed rate	m³/h	balance	G
Scavenger cells	Tipo	Conventional	G
Scavenger time	min	24	C
Final concentrate Cu grade	%	26.5	B
Scavenger recirculation	%	25	B
2nd cleaner recirculation	%	20	B

The main equipment in this area includes the 2,000 kW Vertimill VTM-3000 for regrinding, the Jameson pneumatic cells for primary and secondary cleaning, and the 100 m³ scavenger cells.

The objective of the Jameson cell is to enhance the cleaning stage to produce a final concentrate with grades exceeding 26.5% Cu, from ores with average grades of 0.40% Cu, primarily chalcopyrite, which are of lower quality. This occurs in a seawater environment where the use of lime as a pyrite depressant is restricted, and where some Domeyko ores with a higher phyllosilicate content could contaminate the concentrates.

17.2.7 Filter

The filtration of concentrates to obtain a shippable product with 9% moisture is carried out through the stages of thickening, filtration, and washing of concentrates. Table 17.9 presents the design criteria for this stage.

Table 17.9:   Thickening and filtration design criteria

Concentrate thickening & filtration and washing			
Concentrate thickening	Unit	Value	Reference
Operating lines		1	B
Utilization	%	92.0	F
P80	µm	45	C
Settling feed rate	t/h/m^2	0.5	G
Underflow solids	%	65	G
Holding tank capacity	h	12	G

Concentrate filtration and washing	**Unit**	**Value**	**Reference**
Operating lines	cu	2	B
Utilization	%	85.0	F
Pressure filter	Type	Horizontal filter	F
Filtration and washing rate	kg/m^2/h	250	G
Moisture	%	9	A
Washing rate	-	2	G
Stockpile concentrate capacity	days	7	G

The main equipment selected for this area comprises a 10 m-diameter Hi-rate thickener and two 90 m² horizontal pressure Larox filters, suitable for an average production rate of 30 t/h, equivalent to 660 t/d. A reverse osmosis plant must be provided to produce desalinated water for concentrate washing and for freshwater.

17.2.8 Concentrate Management

The filtered concentrates will be stored in a closed stockpile with a 7-day and a 5,000-ton capacity. Using two front-end loaders, the concentrate will be loaded onto 30-ton trucks for transport to nearby shipping ports. The Port of Las Lozas, owned by CMP, and the Port of Barquitos, owned by Codelco, both located in the Atacama Region, where the Domeyko project is situated, have been preliminarily considered for exporting the concentrates.

17.2.9 Tailings Thickening

The tailings from the flotation plant will be sent to the tailings storage facility in Sector 4, considered the best option due to its proximity to the plant and the size of the dam. The tailings will be pumped in series through three pumps to this facility, located 275 m higher in elevation.

Three high-density tailings thickeners, 45 m in diameter, will be located in the storage area to obtain thickened tailings with a solids content of 65%. The water recovered from the thickeners will be collected in a 45,000 m³ pond with a 24-hour accumulation time, then recirculated to the processing plant via a hybrid gravity-pumped discharge. The design criteria for the tailings thickeners are presented in Table 17.10 below.

Table 17.10: Tailings design criteria

Tailings thickening	Unit	Value	Reference
Tailings technology	-	High density	B
Operating lines		3	E
Utilization	%	92.0	F
P80	um	150	C
GE		2.5	C
Thickening rate	t/h/m^2	0.4	G
Underflow solids	%	65	B,G
Drainage from deposit	%	1	F

Process water ponds	Unit	Value	Reference
Seawater	h	24	G
Tailings recovered water	h	12	G
Plant recovered water	h	12	G
Tailing drainage	h	12	G
Concentrate spill pond	h	12	G
Treated water tank	h	12	G
OR treatment plant capacity	m^3/h	20	E

17.2.10   Equipment List

The list of equipment, coded according to the flow diagram, is presented in Table 17.11, Table 17.12, Table 17.13, Table 17.14, and Table 17.15, and its description, dimensions, and installed power are also indicated.

Table 17.11: List of Crushing and Grinding Equipment

CRUSHING

Flowsheet	Description	Qty	Sizing	Power kW
A	Primary crusher	1	Gyratory crusher 42"X65"	450
B	Rock breaker	1	Rock breaker 5.9 m	45
C1	Belt feeder	1	48"x10m	90
C	Stockpile feeding conveyor belt	1	Conveyor Belt 48" x 100m	200
D	Stockpile	1	Capacity 35.000 t	-
E	Stockpile discharge belt feeder	6	Belt feeder 48"x 8ft	45

GRINDING

Flowsheet	Description	Qty	Sizing	Power kW
F	SAG conveyor belt feeding	1	Conveyor belt48"x60m	150
G	SAG Mill	1	Sag mill 36ft x 19ft	12,500
H	SAG discharge screen	2	Screen10ftx24ft	130
H1	Crusher Pebbles conveyor belt feeding	1	Conveyor belt 36"x60m	50
I	Crusher Pebbles conveyor belt feeding	1	Cone crusher MP600	450
J	Discharge Crusher conveyor belt	1	Conveyor belt 36"x40m	40
J1	Recirculation conveyor belt	1	Conveyor belt 36"x40m	50
K	Ball mill sump	1	Capacity 600 m^3	-
L	Hydrocyclones feeding pump	4	Centrifugal pump 2.862 m^3/h	4,000
M	Hydrocyclones cluster	2	Cluster 10 hydrocyclones 26"	-
N	Ball Mill	1	Ball mill 26t x 40ft or 26ftx44ft	16,000

Table 17.12: List of Flotation Equipment

FLOTATION				
Flowsheet	**Description**	**Qty**	**Sizing**	**Power kW**
P	Rougher cells	6	Tank Cells 300 m³	1,800
Q	Regrinding feeding sump	1	Capacity 60 m³	-
R	Regrinding hydrocyclones pump	2	Centrifugal pump 784 m³/h	200
S	Regrinding hydrocyclones cluster	1	Cluster 8 hydrocyclones 15"	-
T	Vertical mill feeding sump	1	Capacity 100 m³	-
U	Vertical mill feeding pump	2	Centrifugal pump 264 m³/h	200
V	Vertical Mill	1	Vertimill VTM- 3000	2,000
W	First cleaning sump	1	Capacity 120 m³	-
X	First cleaning pump	2	Centrifugal pump 1.233 m³/h	500
X1	Second cleaning pump	2	Centrifugal pump 986 m³/h	-
Y	First cleaning Jameson cell	1	Jameson cell Mod.B6500/24 Cap.1200 m³	-
Z	Second cleaning Jameson cell	1	Jameson cell Mod.B4000/24 Cap.500 m³	-
AA	Final concentrate sump	1	Capacity 15 m³	-
AB	Final concentrate pump	2	Centrifugal pump 99 m³/h	40
AC	Scavenger cells	4	Tank Cell 100 m³	480
AD	Scavenger concentrate pump	1	Capacity 18 m³	-
AE	Scavenger concentrate sump	2	Centrifugal pump 117 m³/h	20

Table 17.13: List of thickening and filtration equipment for concentrate

	CONCENTRATE HANDLING			
Flowsheet	**Description**	**Qty**	**Sizing**	**Power kW**
AQ	Hi-rate thickener	1	Hi-rate 10m diameter, Torque 0,8 MN-m	15
AR	Hi-rate thickener pump	2	Centrifugal pump 21 m³/h	20
AS	Concentrate holding tank	1	Capacity 323 m³	150
AT	Pump feeding fiter	4	Centrifugal pump 12 m³/h	120
AU	Larox pressure filter	2	Filter 90 m²	60
AV	Filtrated water tank	1	Capacity 320 m³	-
AW	Filtrated water pump	2	Centrifugal pump 14 m³/h	6
AX	Recovered water pond	1	HDPE pond 45.000 m³	-
AY	Recovered water pump	6	Centrifugal pump 593 m³/h, six operating, one st-by	3,000
AZ	Filter conveyor belt	2	Conveyor belt 24"x20	30
BA	Stockpile feeding conveyor belt	1	Conveyor belt 24"x100	50
BB	Concentrate stockpile	1	Capacity 5.000 t	-

Table 17.14: List of tailings equipment

	TAILINGS			
Flowsheet	**Description**	**Qty**	**Sizing**	**Power kW**
AF	Final tailing reception box	1	Cap. 500 m³	-
AG	Tailing series pump train	9	Centrifugal pump 2.159 m³/h, two train of three pumps, one train stand-by	9,000
AH	Tailings distributor box	1	Capacity 500 m³	-
AI	Hi density thickener	3	Hi-density 45 m diameter, Torque 14 MN-m	300
AJ	Hi density thickener discharge pump	6	Centrifugal pump 300m³/h, two by thickener	1,200
AK	Hi density tailings deposit	1	Capacity 310 Mt	-
AL	Drainage pond	1	Capacity 3.000 m³	-
AM	Drainage pond pump	2	Centrifugal pump 8 m³/h	6
AN	Recovered water pond	1	HDPE pond 45.000 m³	-
AP	Recovered water pump	3	Recovered water pump 1.472 m³/h, two and one st-by	900

Table 17.15: Total power and equipment

Total power (MW)	**42.9**
Total equipment	**82**

17.2.11 Supplies

The concentrator plant requires the following supplies to process 12.8 Mt/year (Table 17.16).

Table 17.16: Supplies Required for the Concentrator Plant (12.8 Mt/year)

Category	Item	Consumption Rate	Total per Year
Water	Seawater	0.6 m^3/t	7.68 Mm^3
	Treated & freshwater (RO plant)	200 m^3/d	73,000 m^3
Reagents	Main Collector	20 g/t	256 t
	Secondary Collector	15 g/t	192 t
	Diesel	10 g/t	128 t
	Lime	100 g/t	1,280 t
	Frother	10 g/t	128 t
	PAX	10 g/t	128 t
	Rheological Flocculant	10 g/t	128 t
	Corrosion Inhibitor	20 g/t	256 t
Consumables	Unit mill balls	20 g/t	256 t
	Regrinding balls	40 g/t	512 t
	Crusher steel	5 g/t	64 t
	SAG mill lining	15 g/t	192 t
	Filter cloths	1 / month	12 units

17.2.12 Layout and Location of Concentrator Plant

Figure 17.3 shows the layout of the plant, which is located on an area of 7 hectares, located northeast of the mine, and includes the following main facilities:

- Primary crushing
- Stockpile
- Milling
- Hydrocyclones

- Flotation

- Stirring

- Concentrated Thickener

- Concentrated Filtration

- Concentrated Storage

- Tailings Thickeners

- Process Water Pool

- Seawater Pond

- Emergency Pond

- Reagent Ponds Area
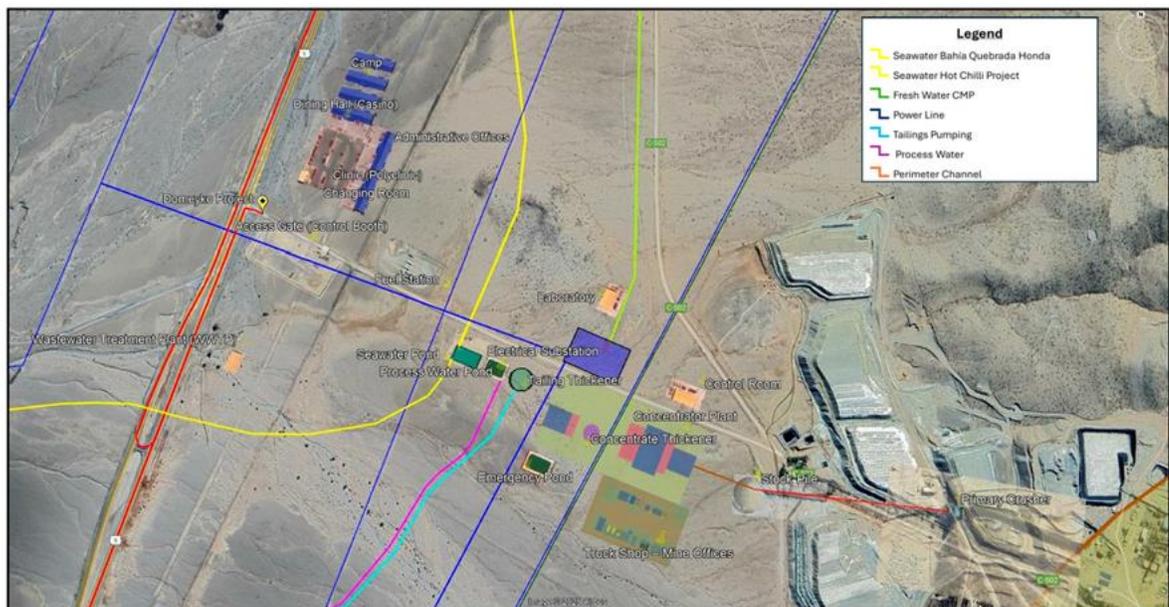
Figure 17.3:   Concentrator plant layout and location

18 Project Infrastructure

This chapter provides an overview of the off-site and on-site infrastructure required to support the development and operation of the Domeyko Sulfuros Project. The Project is located in the Atacama Region of northern Chile, an area with a well-established mining presence, extensive regional infrastructure, and reliable access to transportation corridors and utilities. The region benefits from proximity to major service centers, including the cities of Vallenar, Copiapó, and La Serena, which host the nearest airports, logistics providers, and mining-related services.

At the local scale, the Project area lies less than 1 km from Route 5, Chile's primary north–south highway, and approximately 2.4 km from the town of Domeyko. This location enables efficient personnel transport, supply delivery, and concentrate shipment. The Puerto Las Losas terminal in Huasco, situated 104 km from the site, is anticipated to serve as the primary port facility for concentrate export. Alternative transport options, such as the reactivation of the nearby inactive railway line, may provide additional logistical flexibility.

The Project infrastructure includes internal access roads, the concentrator plant, the truck shop, the Civic Area, fuel and reagent storage, and the laboratory and control room, as well as the plant's service utilities. The water supply system consists of a seawater intake, pumping stations, and a 63 km pipeline delivering 280 L/s to the plant site. The Project infrastructure includes internal access roads, the concentrator plant, the truck shop, the Civic Area, fuel and reagent storage, and the laboratory and control room, as well as the plant's service utilities. The water supply system consists of a seawater intake, pumping stations, and a 63-km pipeline delivering 280 L/s to the plant site. Electrical supply alternatives evaluated for the Project include upgrading the nearby Dos Amigos Substation and the development of renewable energy-based solutions supported by a Battery Energy Storage System (BESS) to ensure continuous 24/7 operation. For the purposes of this study, a renewable energy-based supply alternative has been selected as the Base Case.

Tailings management infrastructure includes the selected Tailings Storage Facility (TSF) alternative, which incorporates a perimeter diversion channel designed to safely manage stormwater and protect the storage facility under extreme precipitation events. Supporting facilities also include wastewater treatment, backup power systems, explosives storage, and communications infrastructure.

Overall, the infrastructure described in this chapter has been conceptually designed to support a 35 ktpd concentrator, ensuring operational continuity, regulatory compliance, and integration with the region's existing utilities and transportation networks.

18.1 Location and Access

The Domeyko Sulfuros Project is located in the Atacama Region, an area characterized by a well-developed mining infrastructure and strong regional connectivity through major urban centers such as Copiapó and Vallenar. At a broader territorial scale, the cities of La Serena (147 km to the south) and Copiapó (207 km to the north) host the nearest airports and associated services, providing reliable national and international access to the project area.

Within the region, the city of Vallenar—located 52.5 km from the project site—serves as the primary logistical hub for supplies, transportation, and support services. At the local scale, the project lies 2.4 km from the town of Domeyko and less than 1 km from Route 5, where the main access gate is planned, ensuring direct and efficient connectivity with Chile's longitudinal highway system.

For concentrate shipment, Puerto Las Losas, located in Huasco, is expected to serve as the primary export terminal. The port is situated 104 km from the project and is accessible via Route 5 followed by Route C-46. As an alternative to trucking, the potential use of the existing but currently inactive railway line is being considered for future concentrate transport by rail.
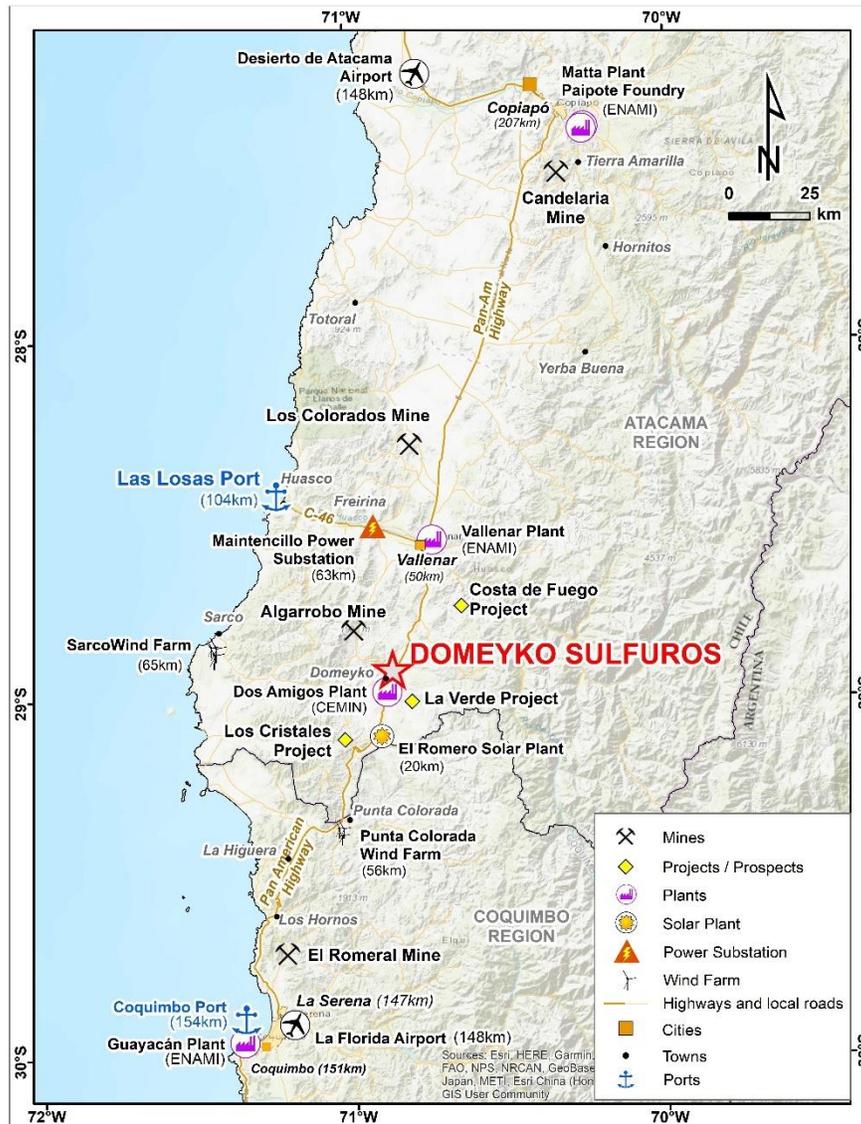
Figure 18.1: Project Location

18.2   Interior Roads

The project includes a main access point located on the eastern side of the property, at kilometer 610 of Route 5 North, using the existing road known as Dos Amigos. The current internal road network will be maintained and respected, ensuring that the new infrastructure is positioned adjacent to the main Dos Amigos road. Additionally, there is a secondary northern access via public road C-502, which connects directly to the town of Domeyko.

The proposed access control area will include an induction and personnel entry verification zone, along with a mixed weighing area. This facility will manage both copper concentrate transport vehicles and those intended for services or operational support activities. Its installation plays a key role in operational safety by ensuring that all personnel, contractors, and visitors comply with access, induction, and safety requirements before entering the industrial zone. The concentrator plant and its facilities will remain segregated from mining extraction routes, reducing interaction risks between industrial traffic and mining operation equipment.

Figure 18.2:   Access and Interior Roads

18.3   Buildings and Facilities

The plant's plot plan was designed based on criteria aimed at optimizing operational efficiency, minimizing water consumption, and improving energy efficiency; controlling dust emissions to the environment, reducing environmental impacts, and making the most of the site's topographic conditions. The main guidelines applied were as follows:

- Locate the primary crusher approximately 250 m from the pit edge.

- Incorporate an intermediate encapsulated coarse ore stockpile with autonomy equivalent to 16 hours of operation.

- Design a compact concentrator plant on a descending slope to reduce transportation costs, earthworks, and facilitate gravitational pulp flow.

- Install water tanks at higher elevations to allow gravity-fed distribution.

- ▪ Implement encapsulated systems in conveyors, screens, and transfer points to minimize dust emissions.

- ▪ Position the Civic Area more than 650 m away to reduce personnel exposure to noise and dust.

- ▪ Locate the wastewater treatment plant in low areas, away from the Civic Area and opposite to prevailing winds.

- ▪ Do not include an on-site camp, given the reasonable distances to nearby towns.

- ▪ Incorporate the clinic and emergency response facilities within the Civic Area.

Based on these criteria, the plot plan shown in Figure 18.3 was defined, including the location of the concentrator plant, truck shop, Civic Area, control room, and areas designated for water and power supply.
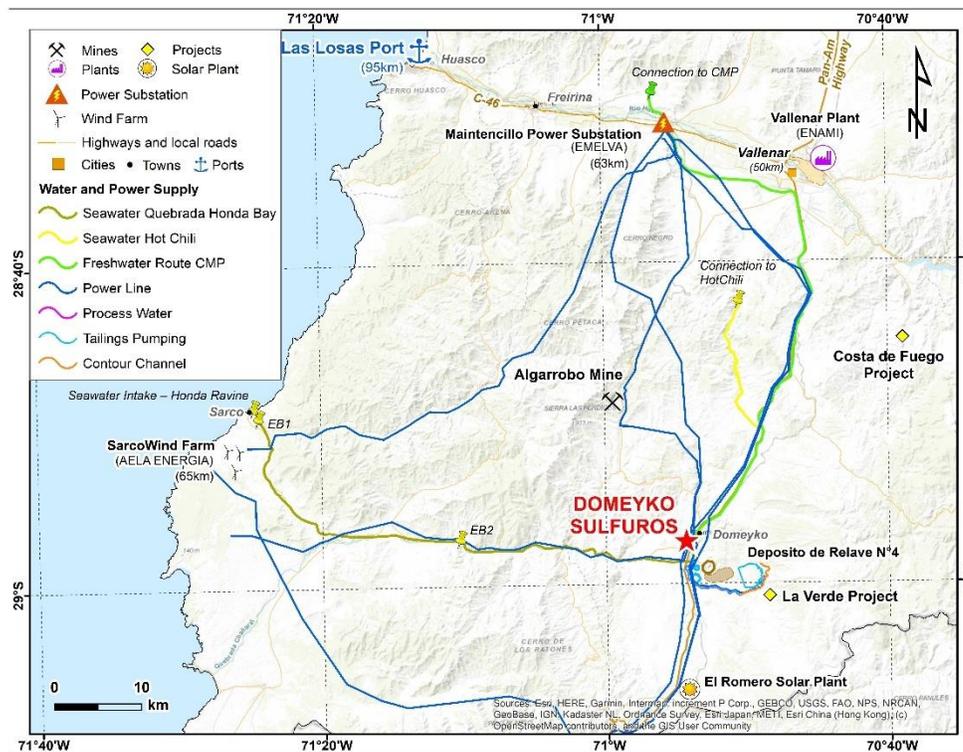
Figure 18.3: Plot Plan

The conceptual development evaluated several compact platform configurations for the concentrator plant, optimizing adaptation to the natural terrain of the selected area. The construction of the plant earthworks considers successive engineered layers, each designed to ensure the structural integrity and load-bearing capacity required for long-term performance.
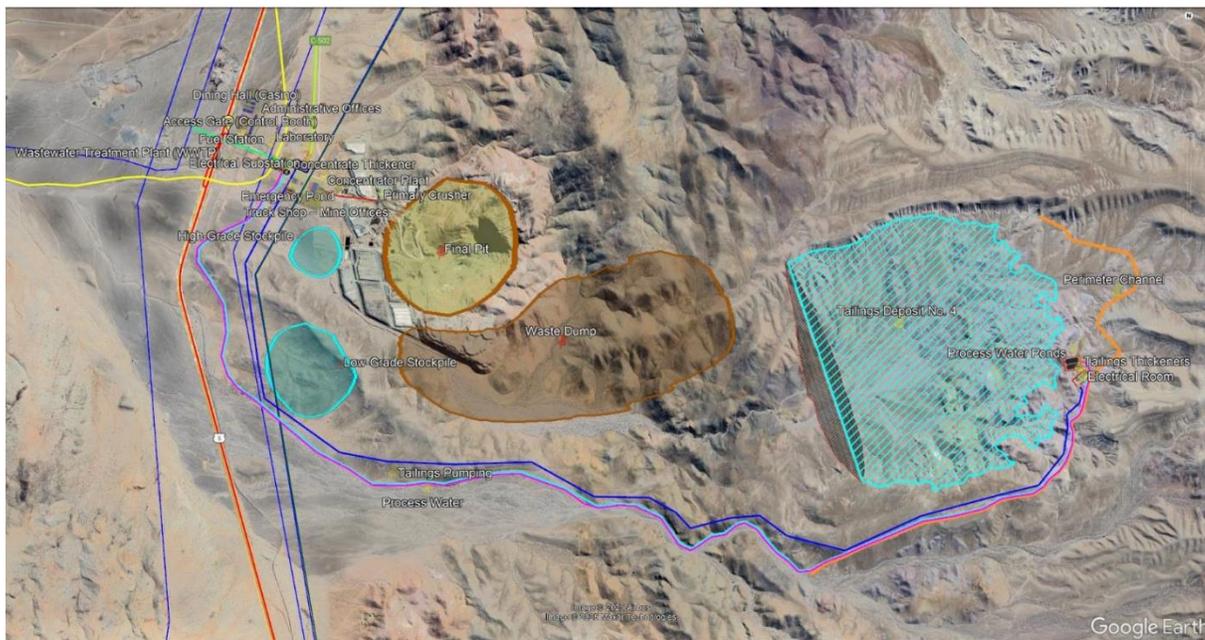
Figure 18.4: Layout Proyecto Domeyko

For the selected Tailings Storage Facility alternative (N° 4), the design requires the incorporation of a perimeter diversion channel. This structure is a critical component for protecting the tailings facility, as it captures and redirects surface runoff from surrounding catchments, preventing uncontrolled inflows into the TSF. The channel alignment follows the natural topography to minimize earthworks and ensure safe water management under extreme precipitation events. For the evaluated facility, the estimated channel length is approximately 6.5 km. This configuration is shown in the general layout of the Domeyko Sulfuros Project presented in Figure 18.4.

18.3.1 Concentrator Plant

The plant location was selected based on criteria including distance from the open pit, natural ground slope, and overall site accessibility. The chosen alternative is situated close to the pit, minimizing ore haulage distances and ensuring efficient truck traffic between the mine and the processing plant. Furthermore, the site is positioned on a naturally descending surface, which supports gravity-assisted flotation and substantially reduces the amount of required cut-and-fill earthworks, thereby lowering the associated construction and earthmoving costs.
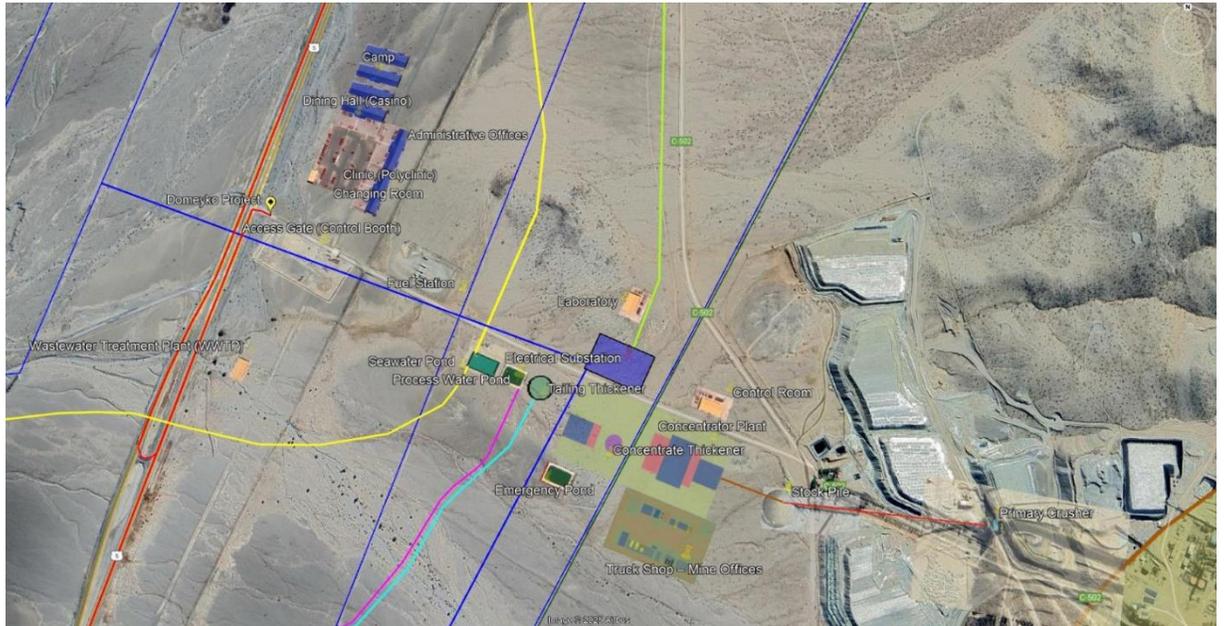
Figure 18.5:   Domeyko Plant Layout

The concentrator plant is located on a platform approximately 350 m long by 180 m wide, situated northeast of the mine. It includes the following main facilities:

- Primary Crushing
- Stockpile
- Grinding
- Hydrocyclones
- Flotation
- Regrinding
- Concentrate Thickener
- Concentrate Filtration
- Concentrate Storage
- Tailings Thickeners
- Process Water Pond
- Seawater Pond
- Reagent Tank Area
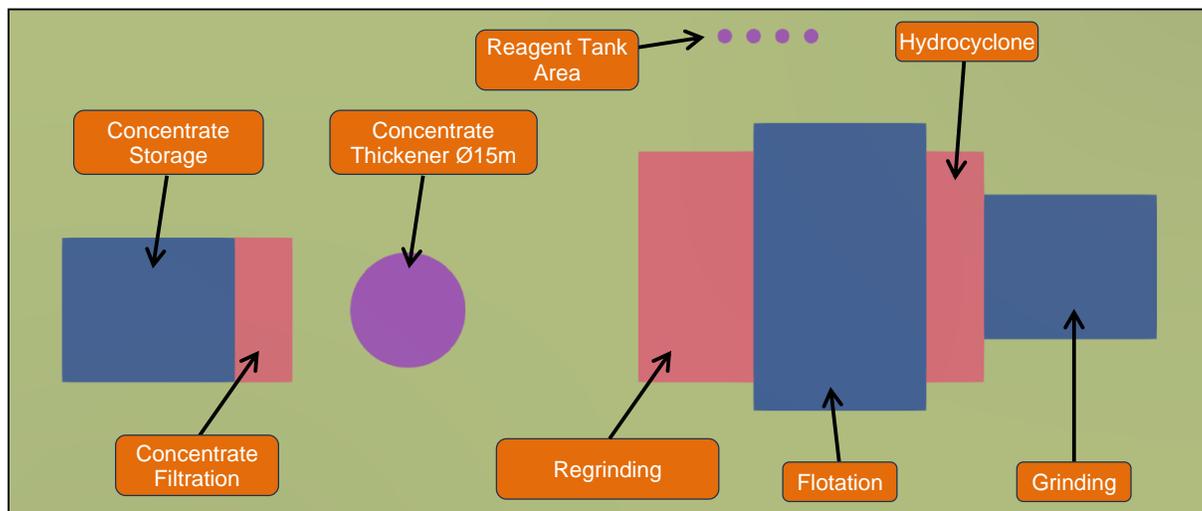
Figure 18.6: Layout of Concentrator Plant

The concentrate handling and storage area incorporates all necessary facilities for proper filtration, stockpiling, and dispatch of copper concentrate. These facilities include filtration sectors, storage, weighing, sampling, and dispatch areas. The concentrate produced and stored in the warehouse will later be loaded onto trucks in the dispatch area for subsequent transportation.

The infrastructure associated with filtration includes the following main elements:

- A truck scale
- A control station
- A warehouse for concentrate storage
- Sampling equipment
- A wheel-wash station for trucks

The concentrate storage building must maintain a slightly negative internal pressure compared to the external atmospheric pressure to prevent the emission of particulate matter into the environment.

18.3.2 Truck Shop

The Truck Shop design was developed considering the maximum fleet projected during the peak operational demand period, which includes the following equipment:

- 35 CAEX CAT 793 trucks
- 2 Front-end loader

- 5 PC5500 rock breakers

- 3 Diesel drills 10 5/8"

- 1 Diesel drill 6 1/2"

- 6 Bulldozers

- 5 Wheel dozers

- 3 Motor graders 16M

- 3 Water trucks

Based on this fleet, a platform of 200 m long by 136 m wide has been designed, allowing safe and efficient circulation of mining equipment in the central area, while light vehicles circulate along the perimeter through independent access points, avoiding dangerous interactions or crossings.

The Truck Shop building includes three maintenance bays plus an additional bay for repairs and welding. It is a covered structure integrating spare parts warehouses, tire storage, and welding work areas. Around the building are located the lubricant storage yard, compressor room, an area for dump body changes, a washing platform, and a zone for tire change and storage.
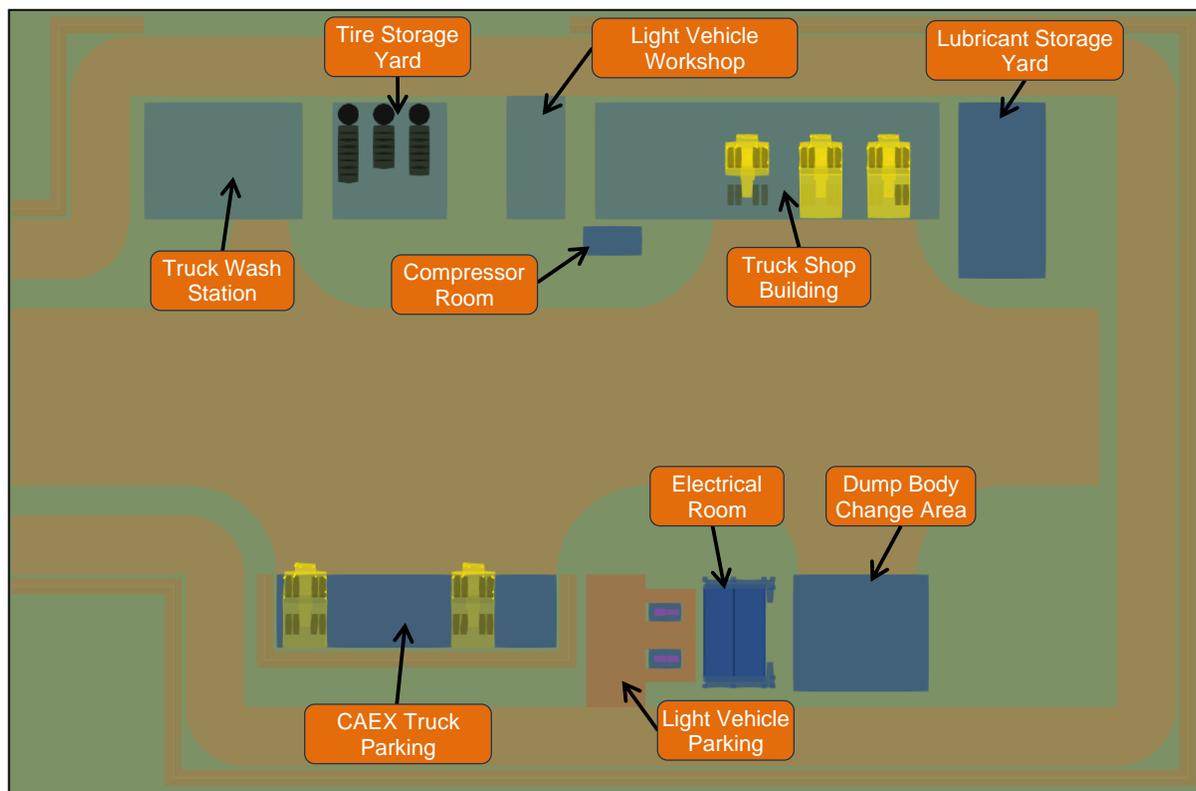
Figure 18.7: Layout of Tuck Shop

18.3.3 Civic Area

The Civic Area infrastructure consists mainly of prefabricated modular structures designed to be assembled and interconnected on-site. These units are manufactured with pre-installed electrical and sanitary systems, reducing construction timelines by approximately 50% through streamlined manufacturing processes.

The modular buildings are installed on a compacted platform supported by semi-buried concrete blocks serving as the substructure. The superstructure consists of Smart Flex-type modules or equivalent, made of steel frames externally clad with opaque TR-4 sheets. Floors, perimeter walls, and ceilings have adequate thermal insulation, while interiors are finished with OSB panels and gypsum board (RH in wet areas). Floors are made of structured wood with high-traffic vinyl coating, and ceilings consist of corrugated sheets with a gabled slope.

The number and type of offices are adjusted to project requirements, including spaces for Plant, Mine, and Operations Room. These include areas for Management, Superintendents, Supervisors, administrative staff, secretarial offices, meeting rooms, and sanitary facilities.
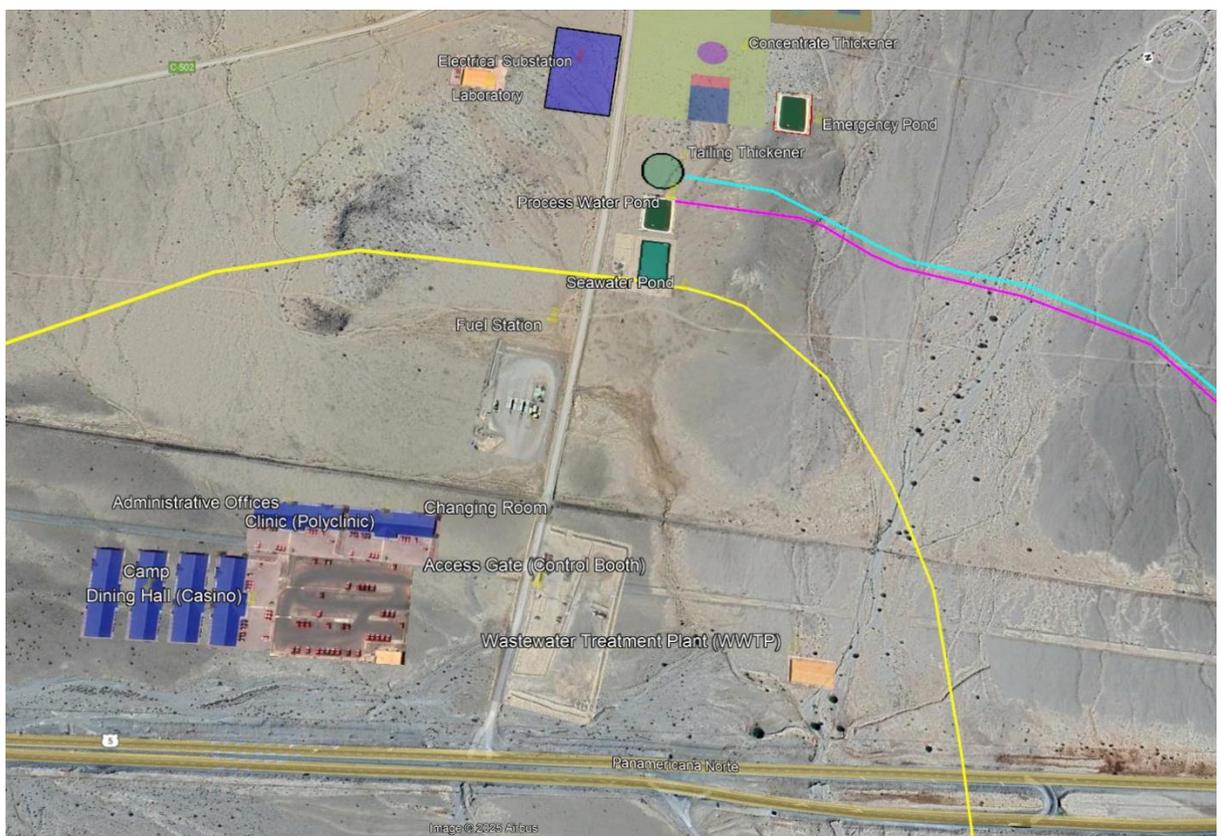
Figure 18.8: Civic Area Layout

The Civic Area will include the following installations:

- Access Gate: Located next to Route 5, it will include an access booth, HSEC induction room, restrooms, parking for buses, trucks, and light vehicles, as well as a truck scale for load control. The prefabricated structure will have an approximate area of 75 m², with an additional induction room of 30 m². There will be 6,200 m² allocated for bus parking and 1,200 m² for light vehicles. The truck scale will be installed over a reinforced concrete trench measuring 4 m x 14 m.

- Camp: No on-site camp is planned due to the proximity of the project to Route 5 and nearby towns such as Domeyko and Vallenar, which provide adequate accommodation services for personnel.

- Offices: Based on staffing requirements, offices and meeting rooms for approximately 50 people will be provided, equivalent to an office area of 1,600 m² (20 x 80 meters).

- Dining Hall (Casino): A surface area of 1,200 m² is projected, with capacity to serve both company and contractor personnel. Its design allows early construction and use during the construction phase.

- Warehouse: The warehouse will serve as storage for minor spare parts, replacement equipment, and safety gear. This building, estimated at 1,800 m² (30 x 60 m), will include storage areas, small workshops, offices, meeting rooms, and restrooms. Additionally, a fenced area of approximately 40,000 m² will be available for storing large parts, structures, and oversized elements.

- Laboratory: The concentrator plant laboratory is a key facility for operational control and process quality management. Its design includes areas for chemistry, metallurgy, particle size analysis, and sample preparation, integrated into a modular building with controlled ventilation systems and safe handling of reagents. The laboratory will operate with a LIMS (Laboratory Information Management System) for traceability, enabling efficient daily process control, recovery monitoring, and compliance with commercial concentrate specifications.

- Clinic (Polyclinic): The onsite clinic serves as the primary medical care and emergency response facility for the operation. The design consists of a modular infrastructure equipped with a medical examination room, procedure area, observation room, sanitary facilities, basic pharmacy, and essential life-support equipment. Its location within the Civic Area provides rapid access from the main operational zones, ensuring appropriate emergency response times and compliance with the project's occupational health and safety standards. The facility will also be equipped with an ambulance to respond to medical emergencies.

- Control Room: The Control Room is the nerve center of the concentrator plant operation, enabling real-time supervision and control of all process stages: crushing, grinding, flotation, thickening, filtration, industrial services, and electrical systems. Its function is to ensure operational continuity and optimize metallurgical performance through the integration of DCS/SCADA platforms and high-availability communications.

- The facility is developed as a modular structure with environmental conditioning, acoustic insulation, and electrical and communication redundancy. It includes operator stations, videowall, server room, and supervision spaces, allowing coordination of operational activities and rapid response to contingencies or process deviations.

- Explosives Magazine: The magazine is designed for the safe storage of explosives and initiation systems required for mine operations. Its design complies with current regulations, including safety distances, access control, adequate ventilation, and structures resistant to fire and overpressure events.

This facility ensures continuous and safe supply of explosives for drilling and blasting activities. Two separate areas are considered: one for explosives (ANFO, emulsions, and boosters) and another exclusively for detonators and accessories, both with perimeter fencing, entry/exit logs, surveillance systems, and maneuvering yards. Its operation guarantees traceability, regulatory compliance, and protection of personnel and nearby facilities.

18.4 Infrastructure, Supplies, and Services

18.4.1 Fuel Supply

Fuel will be provided by an external company complying with regulations and standards established by the Superintendence of Electricity and Fuel (SEC). A fuel supply system with a capacity of 80 m³ will be installed at the mining services facility next to the Truck Shop, serving both construction and operational phases. For light equipment, a fuel station with a capacity of 40 m³ will be installed along the access road to the plant.

18.4.2 Wastewater Treatment Plant (WWTP)

The WWT plant will be located in a low area to allow gravitational flow and maintain a considerable distance from offices and dining facilities. As shown in Figure 18.8, it is positioned southeast of the Civic Area due to slope and prevailing northwest winds. This type of plant consists of a single in-situ reinforced concrete tank incorporating pretreatment, sludge thickening, and pump well.

The WWT plant will include:

- Pretreatment
- Pump well and flow regulator
- Moving bed reactor
- Sludge thickening and digesting chamber
- Secondary sedimentation
- Disinfection system

18.5   Water Supply and Water Distribution

The seawater supply system required to sustain a 35 ktpd concentrator was sized at 280 L/s, pumped through a 450-mm-diameter steel pipeline extending approximately 63 km from Bahía Quebrada Honda to the plant site. The system includes a seawater intake and two pumping stations (EB1 and EB2). This configuration ensures continuous water delivery for processing requirements, as illustrated as Route 1 (red) in Figure 18.9.

Figure 18.9:   Seawater Pumping System Alignment Alternatives

18.5.1   Alternative Supply Options:

▪ Hot Chili Project: This project includes a seawater supply system for its Productora Plant, represented as Route 2 (yellow) in Figure 18.8. Its pipeline passes approximately 30 km from Domeyko, offering potential for a synergy agreement between both projects.

▪ CMP Desalinated Water: Another alternative is the use of desalinated water from CMP's plant located 102 km from Domeyko, which currently supplies Cerro Colorado. Its pipeline passes approximately 72 km from the concentrator plant, represented as Route 3 (green) in Figure 18.8. Further engineering stages should explore this possibility.

18.5.2 Design Considerations

The intake system will be constructed in HDPE due to seawater corrosion and low pressure in this section. Between pumping stations EB1 and EB2, the pipeline to the plant must be steel, internally lined with HDPE or with increased wall thickness to ensure long-term operational integrity. Seawater will be stored in a 25,000 m³ freshwater pond at the plant site, providing 24 hours of operational autonomy.

The entire seawater conveyance system, including pumping stations and intake, is located outside environmentally sensitive areas such as the Pingüino de Humboldt National Reserve and the Sarco Wind Farm.
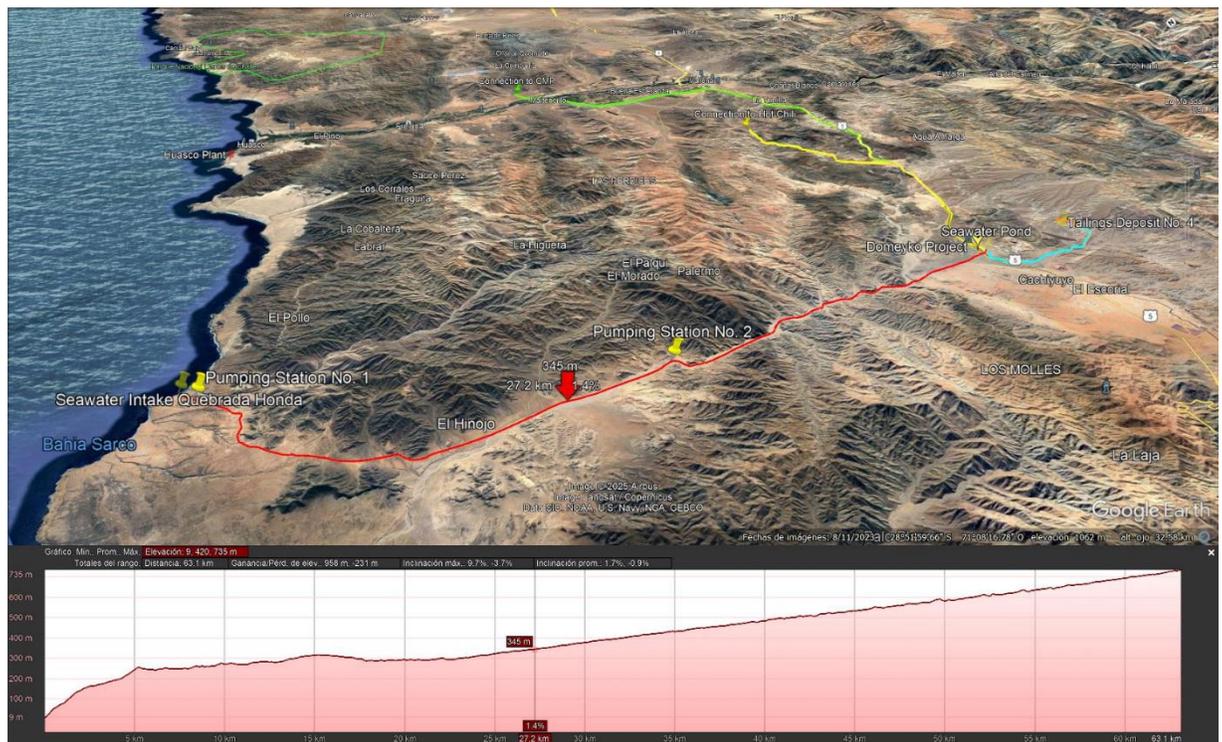
Figure 18.10: Elevation Profile of the Pumping System

18.6 Electrical Power Supply

The electrical power supply system is a critical component of the Project infrastructure and has been evaluated considering reliability, cost, constructability, and alignment with current energy market conditions in northern Chile.

The Project electrical demand is continuous in nature, driven primarily by the concentrator plant and associated auxiliary systems. Several electrical supply alternatives have been identified, including connection to the national grid and renewable energy-based solutions supported by battery energy storage systems. These alternatives are described in the following sections.

For the purposes of this study, the Project electrical supply is assumed to be based on renewable energy sources, complemented by Battery Energy Storage Systems (BESS) to ensure continuous 24/7 operation. Conventional grid connection options remain technically viable and are presented as alternatives to be further evaluated in subsequent engineering stages.

18.6.1 Northern Interconnected Power System Connection and Electrical Supply Alternatives

The total electrical power demand for the Domeyko Project is approximately 70 MW, of which 52 MW correspond to the concentrator plant and 8 MW to the seawater intake system and pumping stations EB1 and EB2.

Several electrical supply alternatives have been identified for the Project, including a conventional connection to the Northern Interconnected Power System (SEN) and renewable energy options integrated into the SEN. These alternatives are illustrated in Figure 18.11 and summarized below.
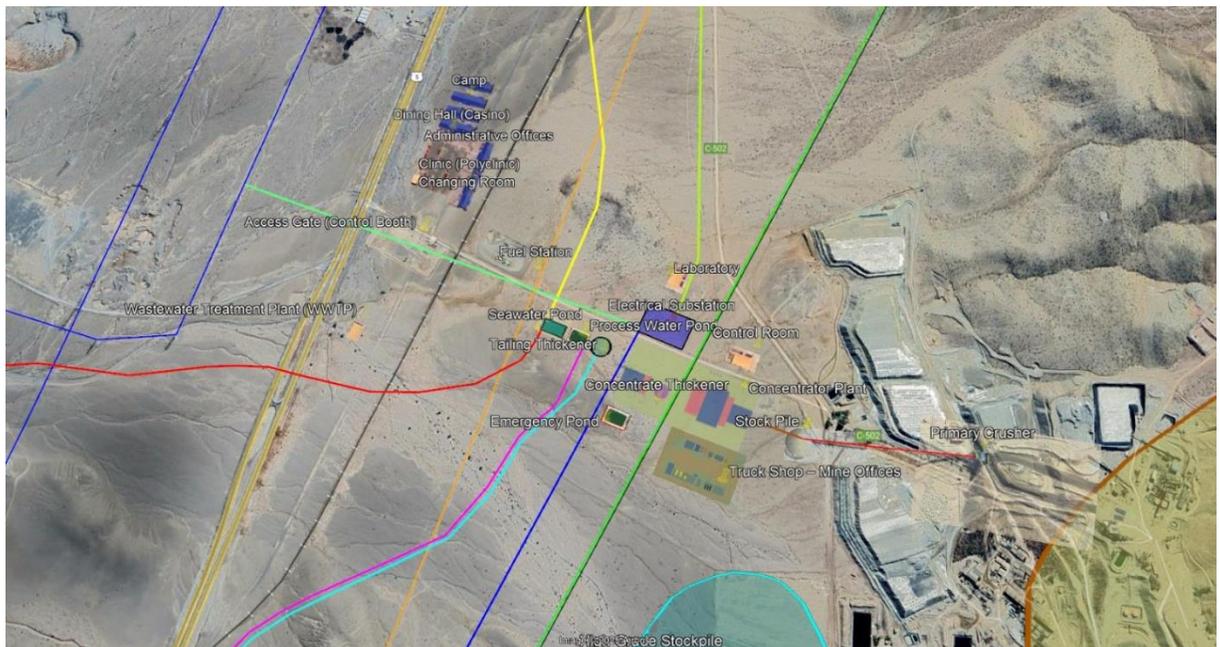
Figure 18.11: Electrical Supply Alternatives

Figure 18.11 summarizes the electrical power supply alternatives evaluated for the Domeyko Project:

1. Alternative 1: Connection to the Northern Interconnected Power System (SEN) via the Dos Amigos substation.

2. Alternative 2: Renewable power supply from the Cabo Leones I Wind Farm.

3. Alternative 3: Renewable power supply from the El Romero Solar Photovoltaic Plant.

4. Alternative 4: Renewable power supply from the La Huella Solar Photovoltaic Plant.

The SEN connection would be provided through the Dos Amigos electrical substation, located approximately 1,500 m from the plant site. This substation currently supplies approximately 8 MW at 110 kV and would require upgrading to meet the full Project demand (Alternative 1).

In parallel, renewable energy alternatives connected to the SEN have been identified, including nearby wind and solar photovoltaic generation projects (Alternatives 2, 3, and 4). These options benefit from existing high-voltage transmission infrastructure crossing or adjacent to the Project area, enabling direct tap-off connections with limited requirements for new transmission works.

For the Base Case considered in this study, the Project electrical supply is assumed to be sourced primarily from renewable energy, supported by a BESS configuration to provide operational reliability and continuity. This assumption is consistent with current regional energy availability, industry trends, and long-term energy cost and sustainability objectives. A detailed trade-off analysis and final selection of the electrical supply configuration will be carried out in subsequent project stages.

18.6.2   Alternative 2 – Cabo Leones I Wind Farm

The Cabo Leones I Wind Farm has an installed capacity of 119.3 MW, distributed across 55 wind turbines, and is connected to the SEN through a step-up substation that transforms from 33 kV to 220 kV. For the Domeyko Project, this alternative provides a nearby renewable energy source, with the 220 kV transmission line passing approximately 1,500 m west of the plant, allowing for a direct tap-off without the need for long transmission extensions. Its proximity and compatible voltage level reduce capital investment in electrical infrastructure and support an efficient connection to the SEN.
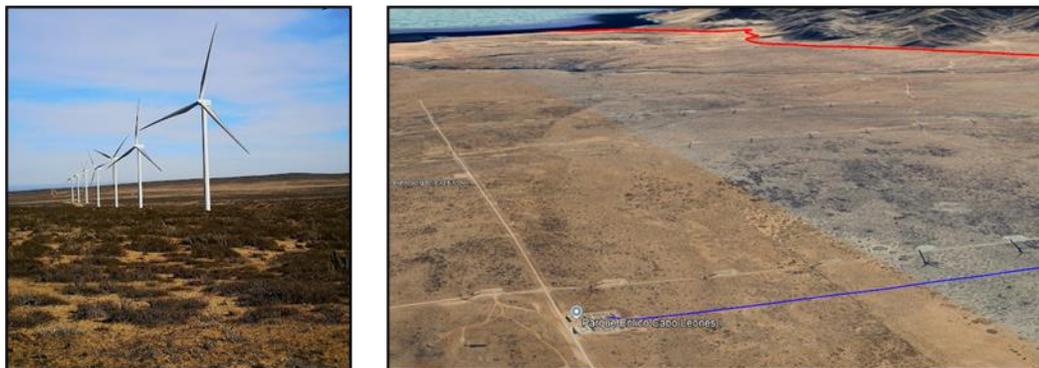
Figure 18.12: Location of Alternative 2

18.6.3   Alternative 3 – El Romero Solar Photovoltaic Plant

The El Romero PV Plant has an installed capacity of 196 MW, with internal collection at 33 kV and connection to the SEN through a 220/33 kV – 230 MVA transformer at the El Romero Substation. For the Domeyko Project, this option offers a high-capacity renewable energy source with existing infrastructure that crosses directly through the project area, enabling a tap-off at the plant's own substation. The physical proximity and high available capacity make this a robust option with reduced requirements for additional linear electrical works.

18.6.4 Alternative 4 – La Huella Photovoltaic Plant

The La Huella PV Plant has an installed capacity of 91.96 MW and injects 84 MW into the SEN through a 33 kV collector system and a step-up transformer to 220 kV. For the Domeyko Project, this alternative offers a favorable connection point, as the transmission line linking the plant to the Don Héctor Substation crosses the project site, allowing for a direct tap-off at the Domeyko substation. This configuration minimizes construction complexity and lowers the capital costs associated with extending additional transmission infrastructure.
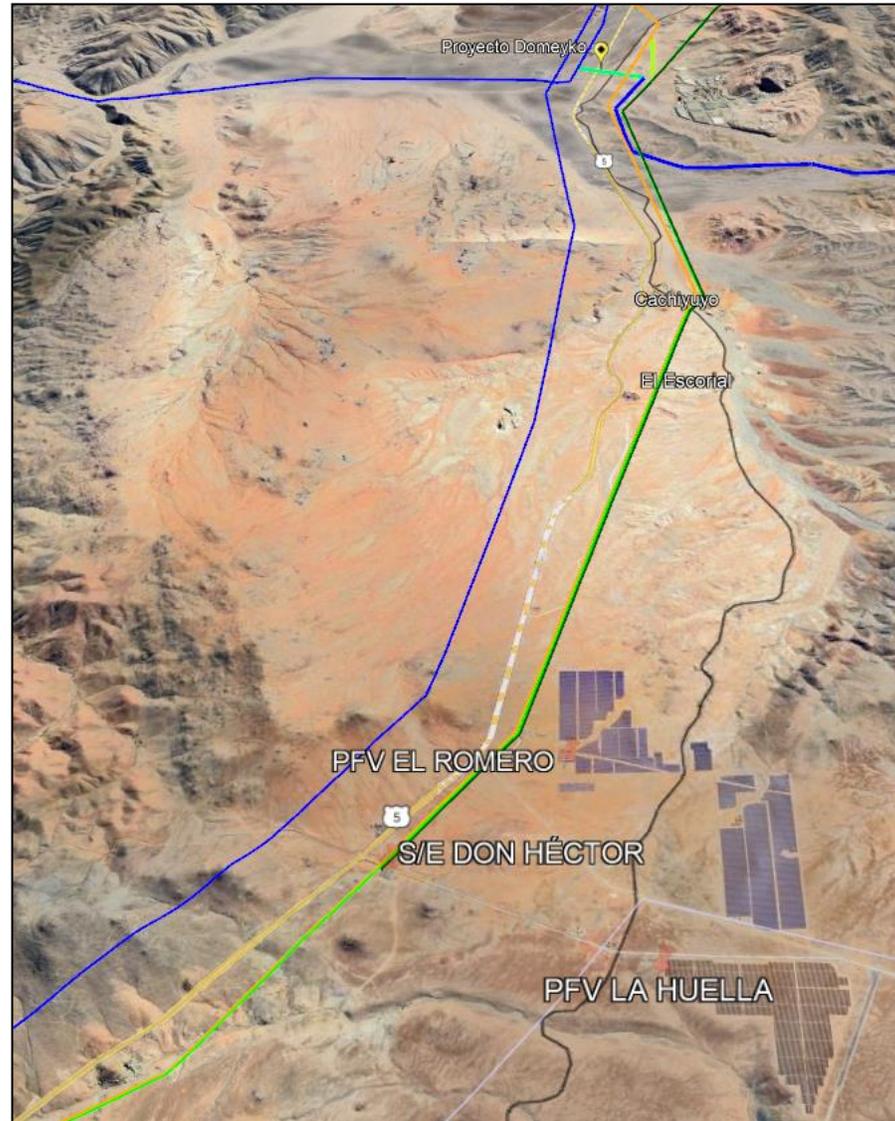
Figure 18.13: Location of Alternatives 3 and 4

18.6.5 Use of Non-Conventional Electrical Energy

The use of non-conventional renewable energy (NCRE) is considered a highly attractive alternative in northern Chile, and several mining operations are currently evaluating or incorporating such systems. In the case of the Domeyko Project, the electrical demand presents a continuous load profile of 70 MW, operating steadily 24 hours per day, seven days a week. To support this type of supply, a 110 kV substation equipped with a Battery Energy Storage System (BESS) is required, as illustrated in the following diagram:
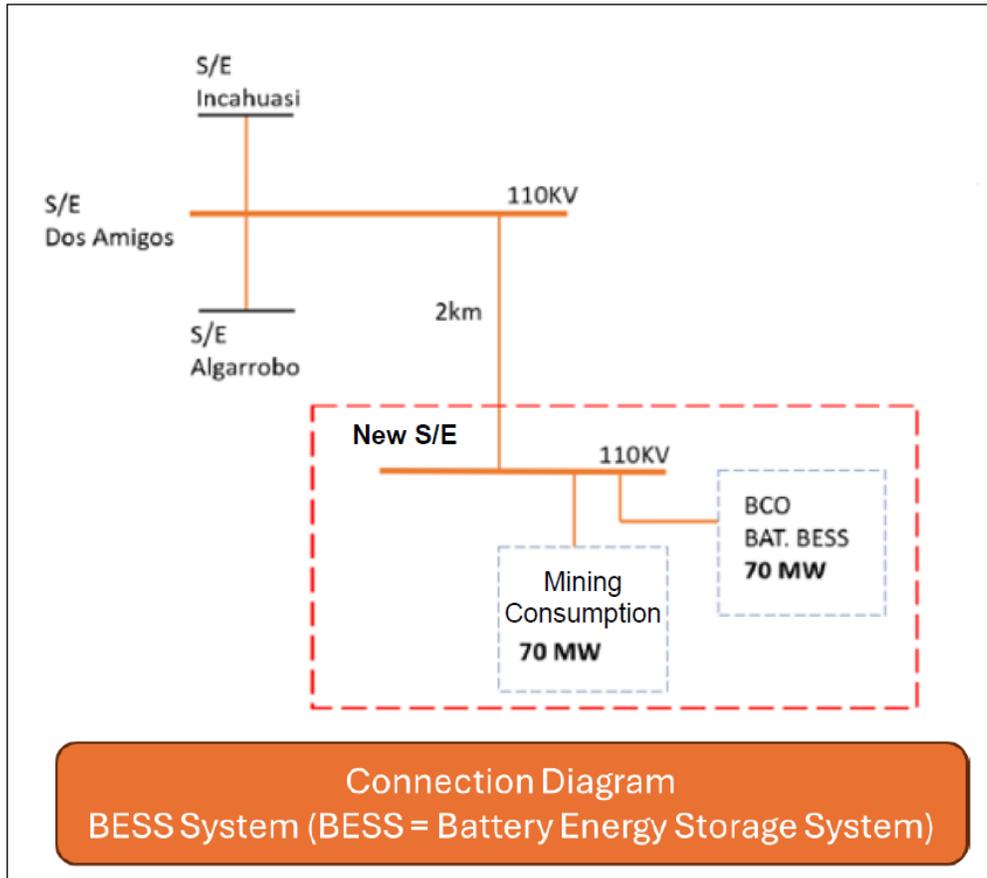
Figure 18.14: BESS System Connection Diagram

The system requires a daily charging and consumption cycle of approximately 140 kWh to support a continuous electrical demand of 70 MW operating 24 hours per day, 7 days per week. The installation of the 110 kV substation and the associated BESS battery bank will be the responsibility of the energy provider, while the mining project must supply the land required for both the substation and the battery storage facilities.

As a reference, the monomial cost—which includes the BESS system—is estimated to be in the range of USD 35–40/MWh. Adding the estimated energy purchase cost of approximately USD 30/MWh results in a total delivered cost of roughly USD 70/MWh. Securing this supply will require a long-term Power Purchase Agreement (PPA) of at least 15 to 20 years, which provides long-term price stability for the project.

The cost of BESS battery systems is on the order of USD 500,000 per installed MW, to which an additional USD 35–40 million must be added for the system infrastructure. It is recommended that a more advanced conceptual study be carried out by a specialized firm, given the potential impact that this configuration may have on the overall economic evaluation of the project.

18.6.6 Internal Electrical Distribution

The internal distribution network will be designed with multiple 23 kV feeders supplied from the plant's main substation, located near the grinding area (Figure 18.15). From this node, electrical power will be distributed to the various consumption areas through underground conduits or overhead lines, including:

- Mining services infrastructure
- Primary crusher
- SAG and Ball mills
- Flotation circuits
- Concentrate thickening and filtration
- Tailings thickening and filtration
- General plant infrastructure

18.6.6.1 Electrical Rooms

All equipment will be designed for continuous, full-load operation 24 hours per day. No correction factors for power, current, or insulation are required, as the site elevation is approximately 1,000 masl. All electrical equipment and buildings housing electrical systems must comply with Chilean Standard NCh 2369.

The main electrical rooms considered in the project include:

- Main Electrical Room
- Mine Electrical Room
- Primary Crushing Electrical Room
- SAG Mill Electrical Room
- Ball Mill Electrical Room
- Flotation and Regrinding Electrical Room
- Thickening and Tailing Filtration Electrical Room
- Thickening, Filtration, and Concentrate Storage Electrical Room

18.6.6.2 Back Up Power Generation

Backup power has been included in the project design. For minor equipment, dedicated UPS systems will be used to cover short-duration interruptions. For major or critical equipment—particularly thickeners and pumping systems—diesel generators will be installed to maintain operation during plant-wide blackout conditions, allowing recirculation and process continuity for up to 12 hours.

18.7 Tailings Storage Facility

18.7.1 General Aspects and Criteria

For the definition of the Domeyko Sulfuros Tailings Storage Facility, the criteria listed below were established:

- According to the mine plan defined for the project, the tailings storage facility must be able to accommodate 310 Mt of dry tailings.

- The nominal production of dry tailings corresponds to 35 ktpd, considering a 26-year operating life.

- It is expected that no tailings will be generated during the first year (pre-stripping). TSF operation is expected to begin on year 2.

- The tailings thickening level corresponds to high-density tailings, with a 65% solids content.

- The dry density of the deposited tailings corresponds to 1.5 t/m³.

- The tailings will be deposited subaerially, from the point farthest away from the main embankment/wall.

- The tailings will be transported by pipeline, with a solids content of approximately 30%, to the thickening platform located near the storage facility, where they will be thickened to 65% solids, and from where they will finally be pumped and deposited through spigots-system distributed throughout the basin.

18.7.2 Tailings Storage Facility Location

To define the location of the tailings storage facility (TSF), an initial search was conducted within a radius of no more than 20 km from the project area. From this search, five potential sites were selected, three of which (Sites 1, 2, and 3) correspond to the locations previously identified in the study carried out by NCL Ingeniería y Construcción SPA (2023). SRK subsequently optimized the site locations and the associated deposition models.

In the integrated analysis conducted by SRK, the selection criteria considered included proximity to the processing plant, the volume of material required to construct the main embankment, potential interferences, environmental factors, and hydrological and hydrogeological conditions. Figure 18.15 illustrates the location of the evaluated sites and alternatives.
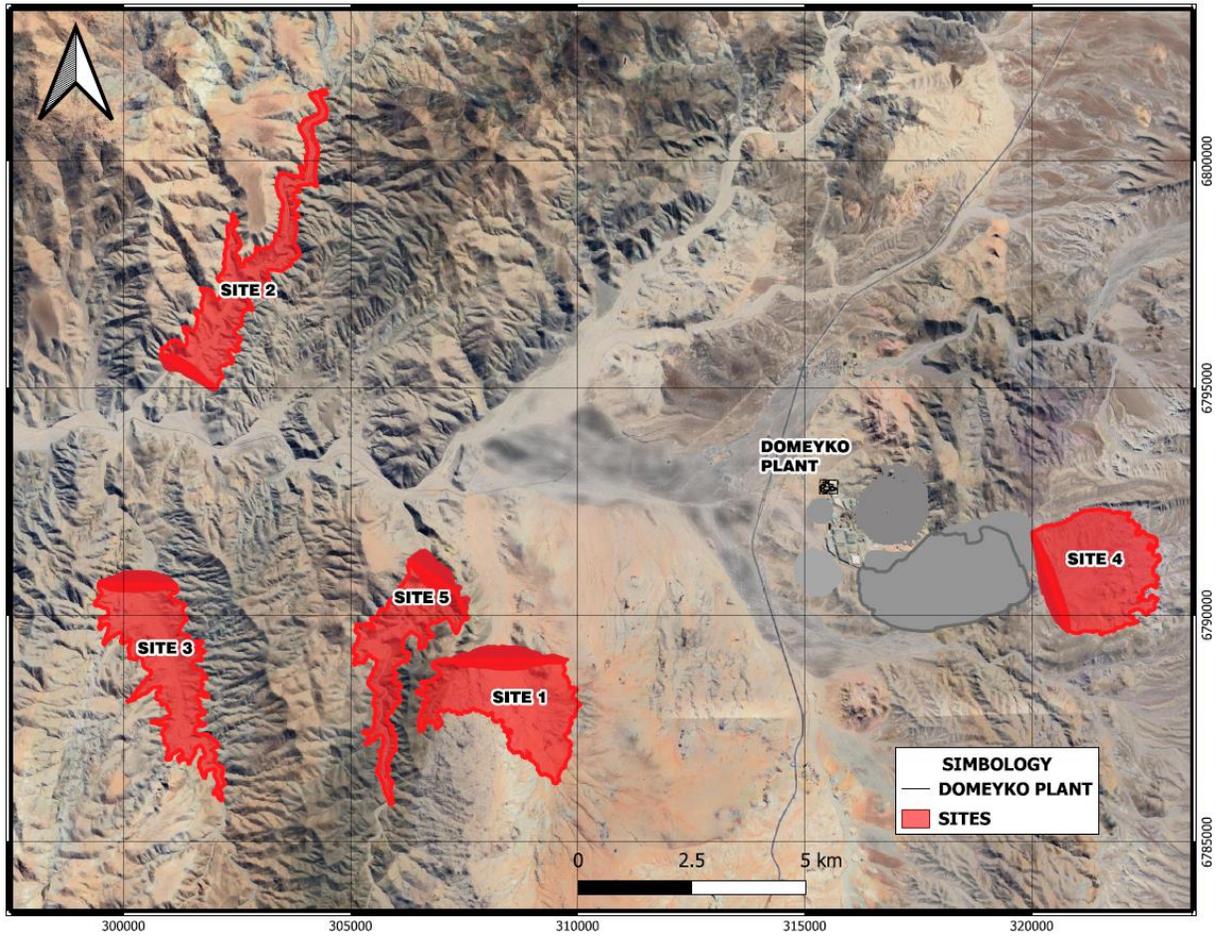
Figure 18.15: TSF location evaluated alternatives

Source: Own elaboration – Google Earth

Below, Table 18.1 presents the most relevant characteristics of each site, considering the evaluation aspects mentioned above.

Table 18.1:   Preliminary TSF Location Alternatives – Main features

Site N°	Main Wall Volume/ Height	Transport Distance/ ΔH	Hydrogeology/ Hydrology	Environmental	Interferences	Comments
1	Vol.: 44,9 Mm³ H: 135 m	D: 12,8 km ΔH: 173 m	It is possible that underlying groundwater is present. Contributing watershed of 26.8 km²	Presence of flora under conservation status (cacti) and desert bloom vegetation	Crossing of Route 5 for material and tailings transport.	Large containment embankment (high cost) and extensive surface footprint. Located over two major ravines. Significant transport elevation. Relevant environmental considerations. Site not recommended.
2	Vol.: 13,6 Mm³ H: 125 m	D: 21,1 km ΔH: 0 m	It is possible that underlying groundwater is present. Contributing watershed of 161.6 km².	Potential presence of fauna under conservation status.	Relevant interference with public road C-486. Crossing of Route 5 for material and tailings transport.	Environmental and interference aspects of high/complex relevance. Significant effort required for water management. Site not recommended.
3	Vol.: 24,7 Mm³ H: 128 m	D: 23,5 km ΔH: 44 m	Main embankment located in a hydrogeological narrow zone where groundwater rises, reaching approximately 10 m depth. Contributing watershed of 89.1 km²	There is evidence of artisanal mining in the embankment area. There is evidence of a small settlement with housing, crops, and grazing. Presence of flora under conservation status (cacti). Presence of undetermined structures (archaeological review required).	Impacts public road C-510. Crossing of Route 5 for material and tailings transport.	Environmental and interference aspects of medium relevance. Site potentially recommended.
4	Vol.: 23,6 Mm³ H: 105 m	D: 11 km ΔH: 220 m	Located upstream watershed of the mine, confined and with a hydrogeological narrow zone downstream of the embankment, that will allow control of potential infiltrations. Easy to monitor. Contributing watershed of 17.7 km².	Presence of artisanal mining and small undetermined structures (potential grazing).	Not present.	Significant transport elevation (TDH). Environmental aspects of medium relevance. No interferences. Low effort required for water management. It is the only site that allows material transport with mining trucks without crossing Route 5. Site recommended.
5	Vol.: 37,7 Mm³ H: 189 m	D: 13,3 km ΔH: 118 m	Watershed with limited hydrogeological development (permeable sedimentary deposits). Embankment located where the ravine opens toward the tributary basin of the Algarrobal ravine, which may require a more detailed study. No hydrogeological information available. Contributing watershed of 54 km².	Presence of small undetermined structures (potential grazing).	Crossing of Route 5 for material and tailings transport.	Large containment embankment (high cost). Significant transport elevation. Environmental aspects of medium relevance. Site not recommended.

As indicated in Table 18.1, two potential preferred alternatives were initially identified: Site 3 and Site 4.

Site 3 is located approximately 20 km east of the Domeyko facilities, while Site 4 is located immediately west of the Domeyko facilities, adjacent to the waste rock dump. The main embankment at Site 4 is positioned approximately 13,5 km from the processing plant.

Preliminary analysis indicates that the embankments at both sites would require material volumes on the order of 24 Mm³, with basin areas of approximately 5 Mm². Regarding tailings transport, Site 3 presents a lower elevation differential of approximately 43 m along the tailings transport alignment, whereas Site 4 requires a total dynamic head (TDH) of 220 m.

The principal distinction between these two alternatives lies in the feasibility of constructing the main embankment using waste rock at economically viable costs. At Site 3, material would need to be hauled from the Domeyko facilities using conventional trucks, crossing Route 5 and significantly increasing haul distances, fleet requirements, and the number of trips. Conversely, at Site 4, transport can be performed using project's CAEX equipment, substantially reducing construction costs.

Furthermore, in subsequent engineering phases, a co-disposal strategy for waste rock and tailings could be considered due to the proximity of both facilities, enabling operational synergies and potential cost savings.

Based on these considerations, Site 4 is identified as the preferred option for tailings disposal for the purposes of this study.

18.7.3 TSF Main Embankment/Wall Design

The embankment is designed to provide sufficient capacity to contain the tailings tonnage in accordance with the defined production requirements. The embankment is constructed using rockfill material, compacted in layers with thicknesses compatible with the compaction equipment employed. In all cases, and prior to the placement of fill, a 0,50 m-thick scar layer is incorporated, which will be verified during subsequent engineering phases.

The embankment has been designed in four downstream raise stages, starting from a starter embankment, with a downstream slope of 2(H):1(V), an upstream slope of 1,5(H):1(V), and a total crest width of 24 m. Of this crest width, a 4 m-wide section is designated as a granular support layer for the upstream impermeabilization. The total material volumes are estimated at 22,77 Mm³ of rockfill and 1,10 Mm³ of granular support material. Figure 18.16 presents a typical cross-section of the Main Embankment/Wall.
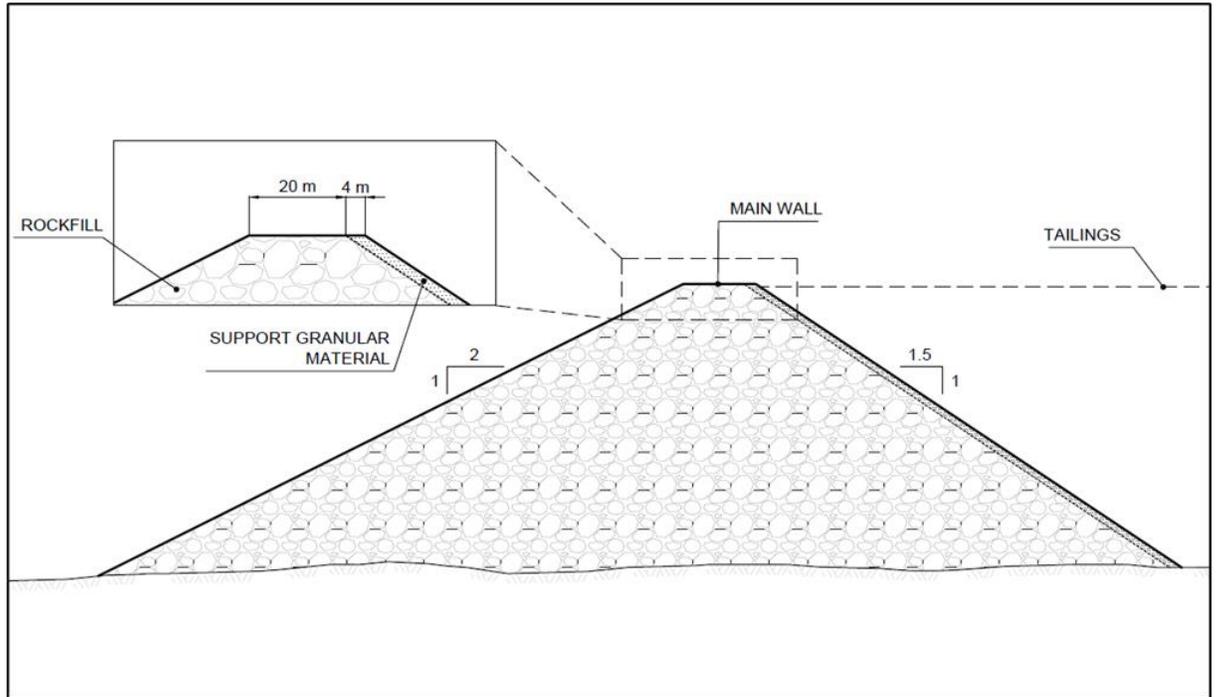
Figure 18.16: TSF Main Embankment/Wall – Typical Cross-section
Source: Own Elaboration

Additionally, alignments have been developed for the non-contact surface water management works, with the platform also partially accommodating the tailings transport pipelines. For surface water management, the alignment is proposed along the perimeter of the planned tailings fill area, incorporating a slope to ensure proper runoff along the entire route. These designs are described in greater detail later in this document.

Figure 18.17 presents a general schematic of the TSF, illustrating the tailings storage facility at its final stage.
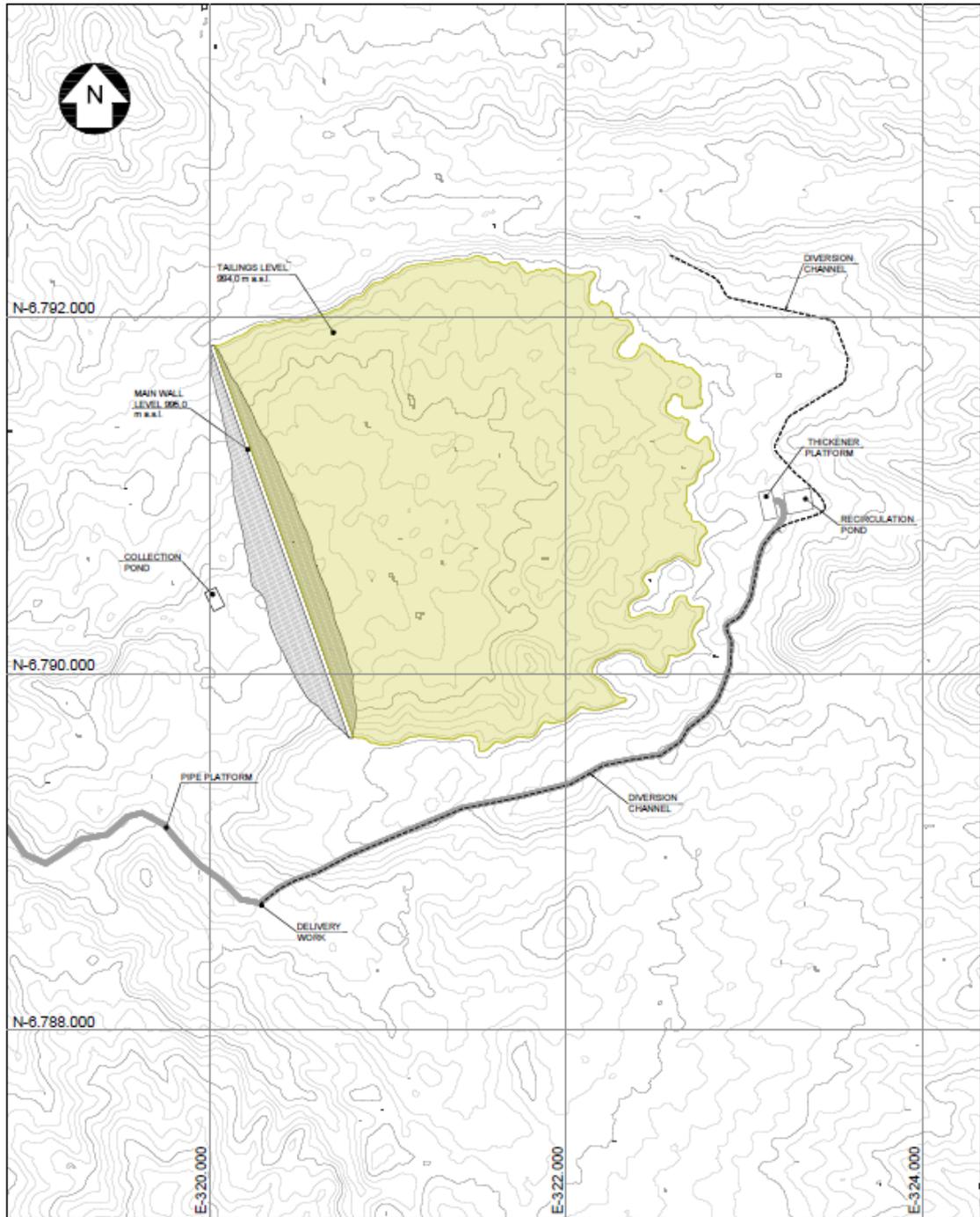
Figure 18.17: Tailings Storage Facility Works – General View
Source: Own Elaboration.

Based on the preliminary tailing's deposition data, it is possible to develop the growth curve for the main embankment of the TSF. As shown in Figure 18.18, the initial embankment is planned at an elevation of 940 m a.s.l., providing approximately three years of operational capacity. From year 4, the first embankment raise is projected to an elevation of 955 m a.s.l., allowing for an additional two years of operation. The second raise is planned for year 7, reaching an elevation of 970 m a.s.l., providing five years of operation.

The final two raises are spaced further apart in time, as a large surface area has been established, filling the lower sections of the facility. These raises are projected for years 13 and 21, attaining elevations of 985 m a.s.l. and 995 m a.s.l., respectively.
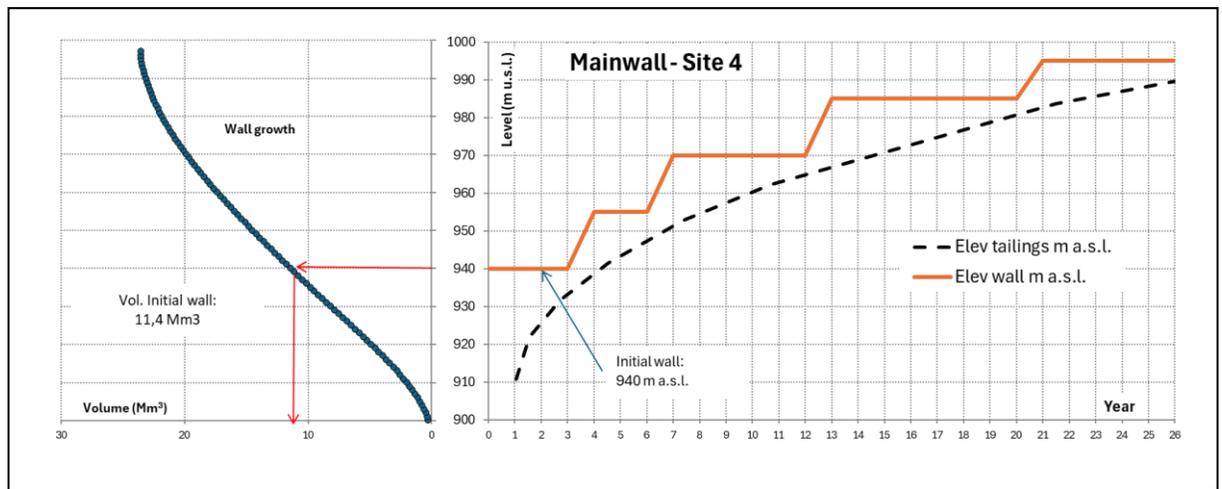
Figure 18.18: Main Embankment/Wall Growth
Source: Own Elaboration.

The following table shows the TSF cumulative tailings tonnage for each wall growth/stage.

Table 18.2:   TSF main wall Growth/stages

Stage	Wall Elev. (m a.s.l.)	Wall Volume (m³)	Tailings Cumulative tonnage (t)
Initial wall	940	11.411.966	32.004.661
1st growth	955	15.952.686	76.523.815
2nd growth	970	19.861.066	151.274.758
3rd growth	985	22.578.362	248.057.775
4th growth	995	23.534.444	313.073.628

18.7.4 TSF Hydrogeology

Site 4 is the most environmentally protected option, as it is located upstream from the mine and immediately upstream from the spent ore dump.

It is located in a headwater basin where the erosion valley narrows downstream as the rock outcrops on both slopes, creating a hydrogeological narrowing that allows groundwater, which flows down guided by the hydraulic gradient, to emerge just downstream of the designed wall.

The findings show that immediately downstream of the wall there is a sheepfold or hamlet where vegetation can be seen, possibly due to the rise in water levels at this point.

Any potential infiltration could be managed in a more limited way, as it would flow through a section of limited length, which would facilitate capture works.

Due to the geometry of the basin, the tailings occupy practically the entire surface, so the construction of contour channels or non-contact water diversion works could be avoided.

18.7.5 Tailings and Water Transport Platform

The tailings pipeline and water recirculation system are located on a platform configured in three layouts, according to site-specific terrain conditions and water management requirements. In general, the works involve extensive earthworks to accommodate the full platform width. The platform provides space for a 4 m-wide service road, with a 0,15 m-thick wearing course. Additionally, a clear width of 4 m is allocated along the platform to accommodate the trench containing both the tailings and water recirculation pipelines. In selected sections, extra width is provided to accommodate the non-contact water management trench (diversion channel), which is described in further detail later in this document.

Figure 18.19 and Figure 18.20 present the typical cross-sections considered in this study.
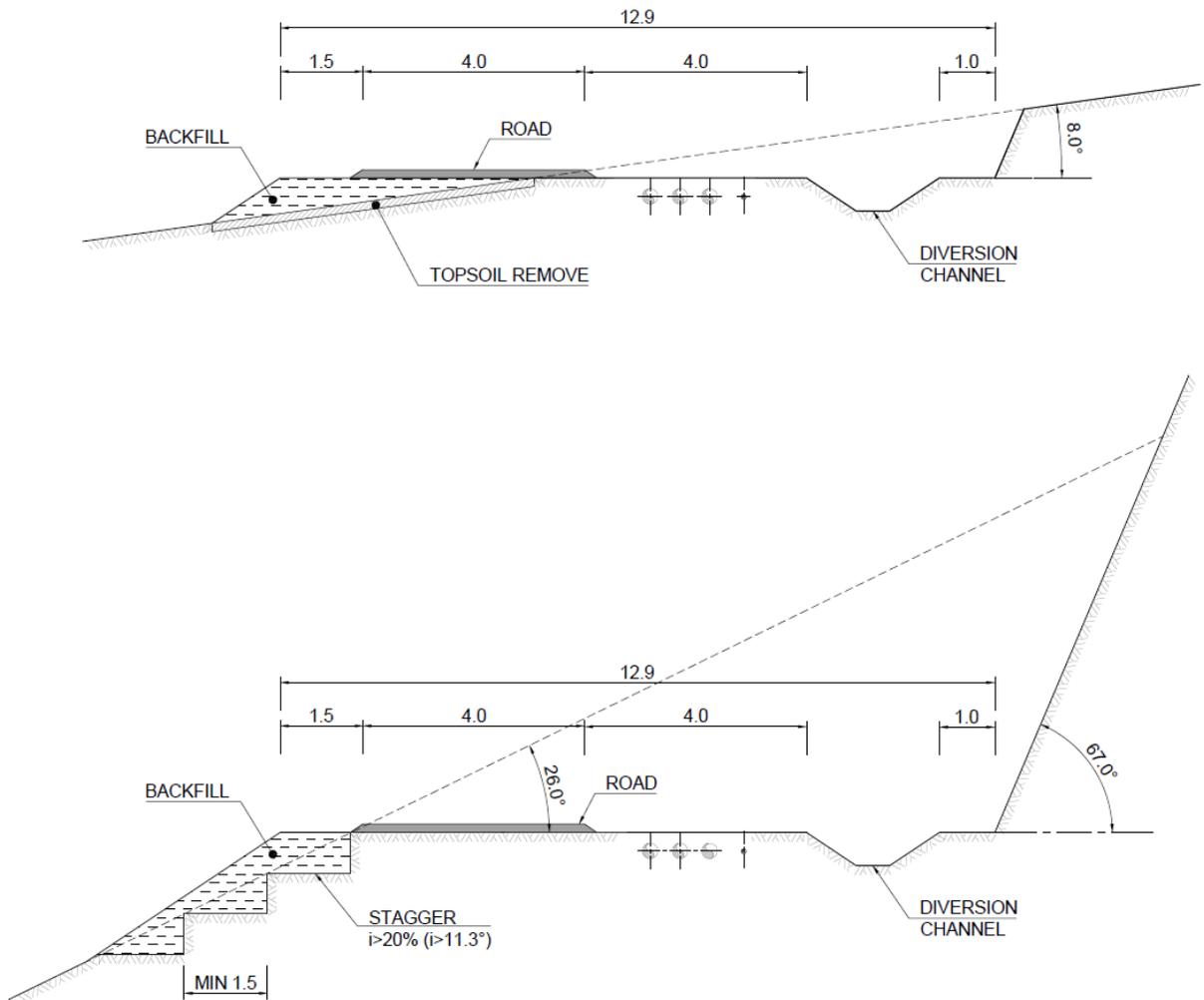
Figure 18.19: Tailings/Water Transport and Water Management Platforms - Typical Sections
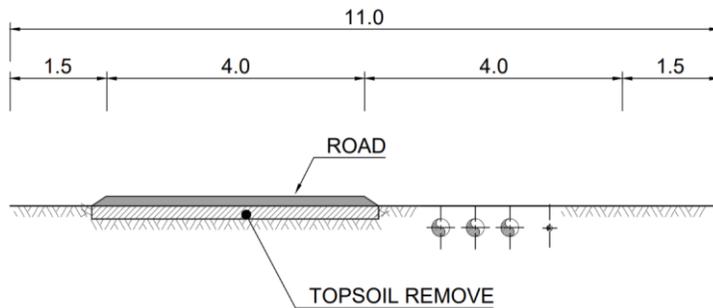
Figure 18.20: Tailings/Water Transport (no Water Management) Platform - Typical Section

18.7.6 TSF Non-contact Water Management

The alignment for the non-contact surface water management works have been designed. This platform will also partially accommodate the pipelines used for tailings transport toward the facility. For surface water management, a layout is proposed that follows the perimeter of the planned impoundment area, incorporating a longitudinal gradient to ensure adequate conveyance of the intercepted flows along the alignment.

The ditch geometry is conceived as a trapezoidal channel excavated in soil or rippable rock, without lining. The internal dimensions comprise a basal width of 0.6 m, a flow depth of 0.6 m, side slopes of 1.5:1 (H:V), and a longitudinal slope of approximately 1 %. Figure 18.21 presents a typical cross-section of the platform that will contain the ditch.
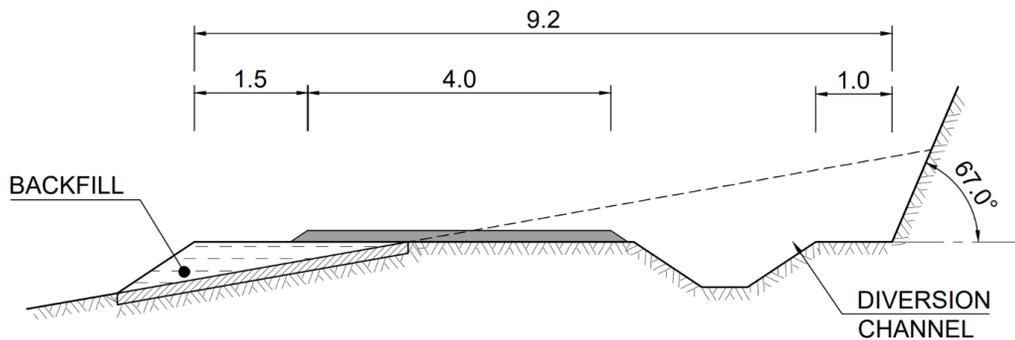
Figure 18.21: Non-contact Water Management Platform – Typical Cross-section
Source: Own Elaboration.

18.7.7 TSF Contact Water Management

Conceptually, the management of contact water is achieved through a basal drainage system, which will intercept any contact water flows that may percolate through the main embankment. The drainage system consists of a French-drain–type structure, comprising a drainage trench backfilled with a granular material suitable for conveying water, and covered with one or two filter layers. These trenches will route the contact water toward the collection pond located downstream of the main embankment.

For cost estimation purposes, the recirculation pond has been preliminarily designed with basal dimensions of 50×25 m and a depth of 2.0 m. All pond faces will be provided with a double HDPE lining to prevent leakage.

The contact-water management system also includes two monitoring wells located downstream of the main embankment, with depths ranging between 30.0 m and 50.0 m, depending on the thickness of the alluvial/colluvial layer present in the downstream area.

To collect the free water that forms a pond in the area adjacent to the main embankment, perforated drainpipes will be installed in trenches and placed along the full upstream slope height of the main wall. These drains will convey the captured water beneath the embankment and discharge it into the collection pond. The drainpipes will be installed primarily in the central zone of the embankment, or in the area where the formation of the free-water pond is expected.

18.7.8 TSF Quantities

The quantities of work have been reported by discipline, specifically considering:

- Earthworks
- Civil works
- Instrumentation

Given the current engineering level, the major items within each discipline have been quantified based on the design models developed in this study. Certain minor items and lower-relevance disciplines have been considered as allowances, which will be defined in subsequent engineering phases.

The earthworks discipline includes the quantities associated with construction of the main embankment, the thickener platform located within the tailing's storage facility, the tailings-pipeline platforms, the perimeter diversion channel, and the recirculation pond. Each of these quantities is based on preliminary engineering layouts.

For the main embankment, the crest width and slope configuration were defined based on the consultant's experience. Once the project geometries were established, the embankment quantities were calculated through volumetric analyses derived from 3D models developed using AutoCAD® Civil 3D® (AutoDesk).

For the platforms, quantities were estimated based on typical cross-sections defined for the study.

The civil-works quantities were developed using preliminary geometries, relying on conceptual designs such as that of the recirculation pond.

Geotechnical instrumentation and the basal drainage system have been included as an allowance, expressed in terms of the main embankment's construction value.

All quantities are net values, and any additional volumes associated with excavation swell or fill compaction requirements are not included in the take-offs. These effects are incorporated into the unit-cost development to prevent distortions in the reported quantities.

Finally, Table 18.3 presents the take-offs corresponding to the tailings area. It is important to note that the quantities reported correspond to the initial construction of the TSF, including all previously described auxiliary works and the construction of the starter embankment, which will provide containment capacity through Year 3 of project operation.

Table 18.3: TSF Work Quantities

Item	Detail	Qty	Unit
Main wall	Topsoil remove e=0.50m	238,631	m^3
Main wall	Rockfill	10,559,267	m^3
Main wall	Backfill	1,091,329	m^3
Main wall	Liner HDPE	272,832	m^2
Main wall	Geotextile	272,832	m^2
Tailings pipeline platform	Rock excavation	13,714	m^3
Tailings pipeline platform	Rock excavation rippable	82,286	m^3
Tailings pipeline platform	Soil excavation	41,143	m^3
Tailings pipeline platform	Compacted backfill	19,301	m^3
Tailings pipeline platform	Topsoil remove e=0.15m	10,745	m^3
Tailings pipeline platform	Gravel pavement e=0.15m	7,795	m^3
Tailings pipeline platform	Trench excavation	3,734	m^3
Tailings pipeline platform	Allowance	1	gl
Collection pond	Soil excavation	1,934	m^3
Collection pond	Liner HDPE	4,967	m^3
Collection pond	Geotextile	2,483	m^2
Collection pond	Allowance	1	gl
Water process pond	Soil excavation	112,212	m^3
Water process pond	Liner HDPE	54,783	m^2
Water process pond	Geotextile	54,783	m^2
Water process pond	Allowance	1	gl
Thickeners platform	Rock excavation	1,604	m^3
Thickeners platform	Rock excavation rippable	9,622	m^3
Thickeners platform	Soil excavation	4,811	m^3
Thickeners platform	Compacted backfill	15,943	m^3
Diversion channel	Rock excavation	400	m^3
Diversion channel	Rock excavation rippable	2,398	m^3
Diversion channel	Soil excavation	1,199	m^3
Diversion channel	Compacted backfill	979	m^3
Diversion channel	Topsoil remove e=0.15m	597	m^3
Diversion channel	Gravel pavement e=0.15m	649	m^3
Diversion channel	Trench excavation	927	m^3
Diversion channel	Allowance delivery work	1	gl
Drainage system	Allowance	1	gl

Item	Detail	Qty	Unit
Geotechnical instrumentation	Allowance	1	gl

18.7.9 TSF Costs

18.7.9.1 Initial CAPEX

This chapter presents the estimation of direct costs associated with the works required for the installation of the tailing's storage facility, considering the immediate capital expenditures prior to commissioning. Each cost item comprises the following components:

- Quantity Development: Corresponds to the quantification of items based on the considerations described in the previous chapter.

- Man-hours per Item and Productivity: Includes the unit and total man-hours required for each item in the estimate.

- Labor Cost per Item: Defined as the product of the labor rate per discipline and the total estimated man-hours for each item. This rate incorporates direct labor costs (salary, statutory benefits, insurance, travel allowances, transportation, lodging, meals, personal protective equipment, consumables, tools and construction equipment), as well as contractor indirect costs. An "all-in" labor rate is proposed, differentiated into two primary disciplines: Earthworks and Civil Works.

- Cost of Materials and Process Equipment: Corresponds to the product of the unit cost and the declared quantity in the materials or equipment list.

- Subcontract Costs: Includes the unit and total cost associated with installations executed by subcontractors. This category also includes allowances for items that, given the maturity of the project, have not yet been quantified.

Table 18.4 presents the estimation of the Initial Capex by element.

Table 18.4:   TSF Costs Estimation – Initial CAPEX

Item	Cost (USD)
Main wall	132,561,656
Tailings pipeline platform	3,216,825
Collection pond	92,197
Water process pond	1,950,176
Thickeners platform	628,437
Diversion channel	151,528
Drainage system	4,906,852
Geotechnical instrumentation	883,233
Total	144,390,903

18.7.9.2 OPEX

This estimate considers the costs incurred after the start-up of project operations and prior to the cessation date. These expenditures extend over the operational life of the facility, established up to 26 years.

Table 18.5 presents the annual summary.

Table 18.5: OPEX Summary

Item	Value (USD/year)
Labor	2,580,000
Equipment	1,352,544
Total	**3,932,544**

The staffing requirements have been estimated for operational activities associated with tailings discharge. The annual personnel counts and associated costs are based on benchmark data from projects with comparable characteristics. The positions considered include:

- Supervisors
- Equipment Team
- QA/QC Team
- Topography Team

The equipment requirements have been estimated primarily for operational activities within the tailing's basin. The annual quantities and costs are based on benchmark data from projects with comparable characteristics. The equipment included in this estimate is detailed below.

- Bulldozer
- Roller
- Excavator
- Hauling truck
- Front loader
- Water truck
- Pickup trucks

18.7.9.3 COST DISTRIBUTION

Table 18.6 presents the cost distribution/vector for the TSF facilities. It includes the estimated values for the initial Capex, as well as the subsequent embankment raises. The final column also incorporates the operational costs estimated in the preceding chapter.

Table 18.6: Cost Distribution - TSF

Year	Capex (MUSD)	Comment	Opex (MUSD/year)
1	144.39	Initial Capex	0
2			3.93
3			3.93
4	47.75	1st growth	3.93
5			3.93
6			3.93
7	40.48	2nd growth	3.93
8			3.93
9			3.93
10			3.93
11			3.93
12			3.93
13	27.53	3rd growth	3.93
14			3.93
15			3.93
16			3.93
17			3.93
18			3.93
19			3.93
20			3.93
21	9.62	Final growth	3.93
22			3.93
23			3.93
24			3.93
25			3.93
26			3.93
Total	**269.77**		**98.31**

18.8 Recommendations

In terms of geotechnical investigations for the subsequent engineering stages, it is recommended to carry out a field campaign aimed at characterizing the foundation soils for the main embankment, as well as the rock typology and quality along the alignments of the pipeline platforms and the perimeter channel. The latter is required to define excavation slopes for future design stages.

Geophysical investigations are also recommended, consisting primarily of two orthogonal survey lines covering both the embankment axis and the basin area along its longitudinal direction. Additionally, exploratory test pits are recommended within the existing waste rock dump, to characterize the material that will be used for the construction of the main embankment during its initial stages.

Figure 18.22 presents a schematic layout of the recommended geotechnical investigations for the TSF, which shall be refined in upcoming engineering phases.
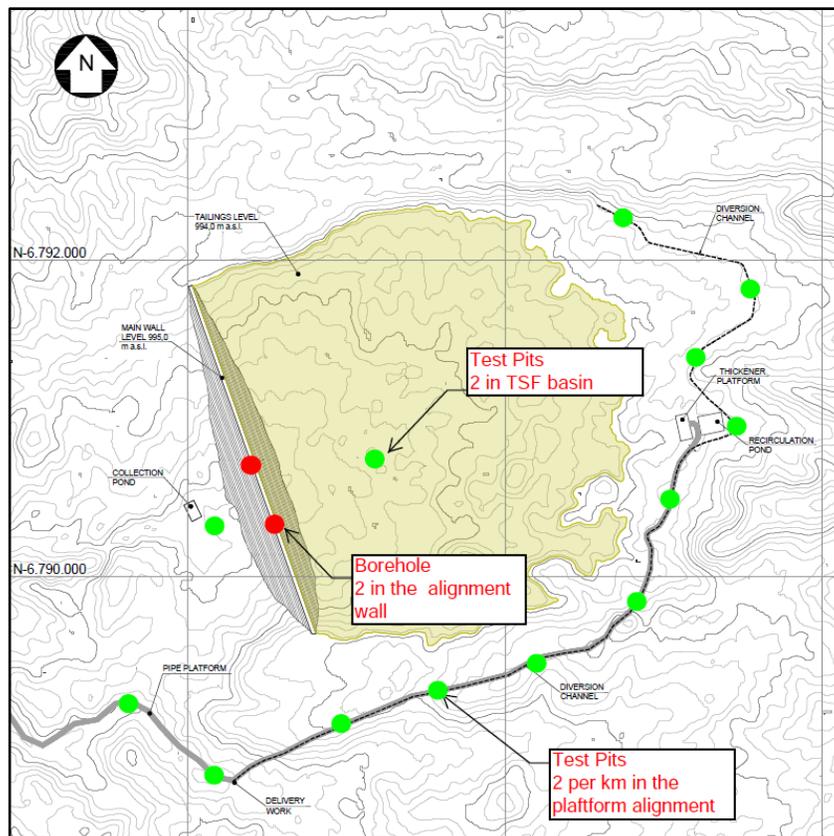
Figure 18.22: TSF Recommended Exploration

19 Market Studies and Contracts

As of the effective date of this Technical Report, the Project does not have any off-take agreements, sales contracts, or other material agreements related to the marketing, transportation, treatment, or refining of its mineral products. No binding commercial contracts have been executed at this stage of Project development.

The evaluated development scenario considers the production of a copper concentrate with payable gold content, intended for sale on the international market. For the purposes of this Preliminary Economic Assessment (PEA), it is assumed that concentrate production would be sold to international smelters and/or traders under standard commercial terms typical for copper concentrates of comparable quality.

The concentrate is classified as a clean concentrate, with no significant deleterious elements. Accordingly, no penalties associated with deleterious elements have been considered in the commercialization assumptions adopted for the economic evaluation.

Metal revenues have been estimated using long-term benchmark prices of USD 4.3/lb for copper and USD 2,500/oz for gold, expressed in real terms and without price increases. These prices are considered representative for long-term assessment purposes at the Preliminary Economic Assessment (PEA) level and are consistent with publicly available long-term market forecasts. Metallurgical deductions have been applied (96.6% for Cu and 95% for Au with a minimum payable Au grade in concentrate of 1 g/t). For preliminary strategic analyses, the calculations have been simplified using lower prices but without applying metallurgical deductions. Commercial terms assumed in the economic model include benchmark payability factors and treatment and refining charges (TC/RC) for copper concentrate, as well as refining charges for payable gold. Concentrate selling and realization costs, including inland transportation from the processing plant to port, port handling, ocean freight, insurance, commissions, sampling, financial costs, and applicable TC/RC, have been incorporated into the economic model as deductions from gross metal revenues.

Concentrate logistics are assumed to follow a conventional route, consisting of transportation from the processing plant to an export port, followed by maritime shipment to international smelters and refineries. The availability of logistics infrastructure and market access is assumed to be consistent with current regional mining industry practices.

Given the preliminary nature of this study, no detailed market studies or commercial negotiations have been completed to date. The commercialization assumptions adopted are considered appropriate for a PEA-level evaluation and are expected to be refined as the Project advances to pre-feasibility and feasibility stages.

In this context, Table 19.1 presents a concise summary of the market and commercialization assumptions applied in the economic evaluation, providing a transparent, high-level basis for revenue estimation consistent with standard industry practices for copper concentrate sales.

Table 19.1: Key Market and Commercialization Assumptions – Base Case

Aspect	Base Case Assumption
Commercial Product	Copper concentrate with payable gold
Contract Status	No off-take or commercialization contracts in place
Target Market	International copper concentrate market (smelters and traders)
Concentrate Quality	Clean concentrate, no penalties for deleterious elements
Pricing Basis	Long-term real prices: Cu USD 4.3/lb; Au USD 2,500/oz
Payability Assumptions	Cu 96.6%; Au 95% (minimum payable Au: 1 g/t)
Treatment and Refining Terms	TC/RC and refining charges based on industry benchmarks
Selling and Logistics Costs	Included as realization costs (~40 US¢/lb Cu payable)
Level of Definition	Preliminary (PEA-level), subject to refinement in PFS/FS

20 Environmental Studies, Permitting and Social or Community Impact

This section presents the environmental, social and permitting aspects of the Domeyko Sulfuros Project for the Preliminary Economic Assessment stage, based on the information available for the Project and its location area.

The basic environmental and social information used to prepare this section was as follows:

- Environmental Impact Declaration (DIA) Operational Continuity Dos Amigos Mine. May 2019
- Addendum DIA for the Dos Amigos Mine Operational Continuity. August 2019.
- Supplementary Addendum to the DIA for the Continuation of Operations at the Dos Amigos Mine. November 2019.
- DIA Restart of Operations at the Dos Amigos Plant. December 2018.
- DIA Operational Restart of the Dos Amigos Plant. July 2019.
- DIA Operational Restart of Dos Amigos Plant. September 2018.
- Dos Amigos Closure Plan. Wood, July 2024.
- Environmental Monitoring of the Site:
  - Air Quality and Meteorological Monitoring Reports, Dos Amigos Station. SERPRAM, September 2023 to December 2024.
  - Water Quality Monitoring Reports, Well 5. AGQ, March and September 2024.
  - Water Quality Monitoring Reports, Salvador Well. AGQ, March and September 2024.
  - PTAS Water Quality Monitoring Reports. AGQ, March, September and December 2024.
  - Camp Drinking Water Quality Monitoring Reports. AGQ, June and December 2024.
  - Drinking Water Quality Monitoring Reports for Offices. AGQ, June and December 2024.
- Public information on environmental assessments of other projects in the area (https://seia.sea.gob.cl).
- Public information on territorial background of the project area (https://www.ide.cl/).
- Information gathered during a visual inspection of the project areas carried out from October 27 to 29, 2025.

20.1 Baseline Conditions

This section contains the baseline background information for different components of the Project area, according to the information available, as mentioned above.

The Project area is located in the Atacama region. The area associated with the mine, plant, tailings and part of the linear infrastructure is located in the commune of Vallenar, while the seawater intake and the other part of the linear infrastructure are located in the commune of Freirina. See Figure 20.1.
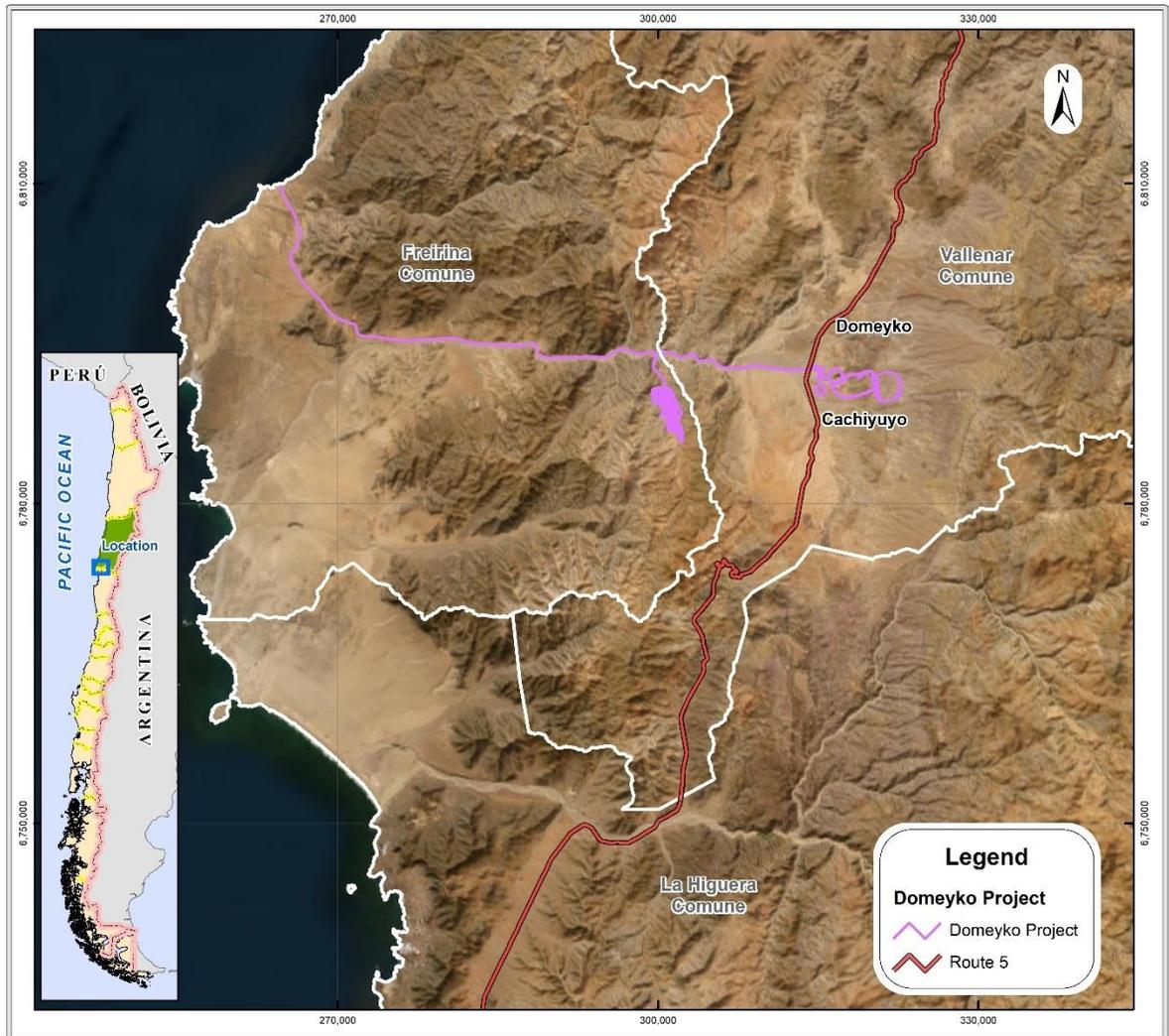
Figure 20.1:   Project area

20.1.1 Climate and Meteorology

The predominant climate in the Atacama region, where the project area is located, is desert, covering 81% of the region's surface area, with the remaining percentage characterized by a high mountain climate. The area where the mine, plant, tailings deposit options and part of the linear infrastructure are located has a transitional desert climate, and towards the coast, a coastal desert climate with abundant cloud cover (see Figure 20.2). These climatic units are characterized by annual precipitation lower than evaporation and an average annual temperature below 18°C.
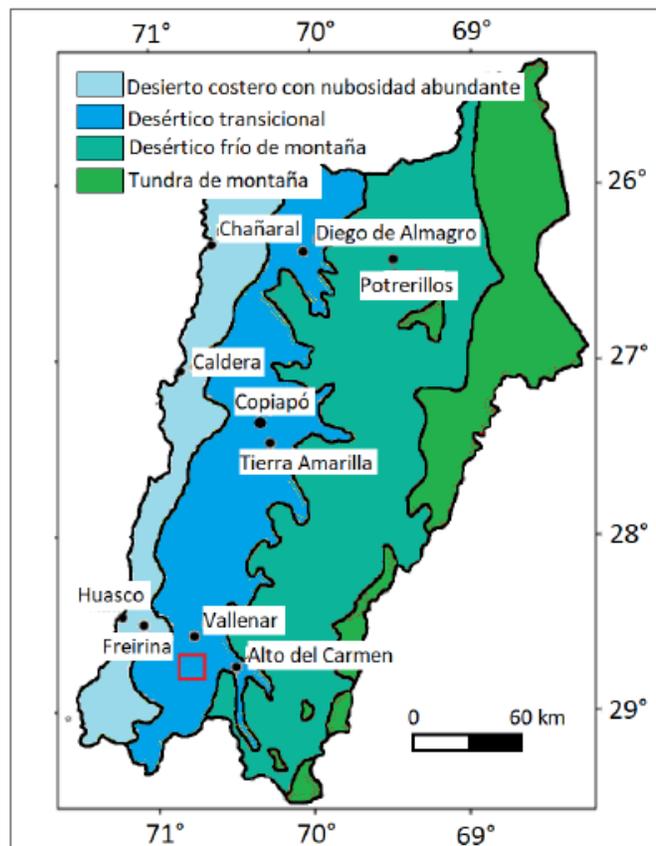
Figure 20.2: Types of climates in the Atacama region
Source: Wood, 2024

The meteorological characterization presented below is based on data from nearby stations belonging to the General Water Directorate (DGA), supplemented by information from the company's station in the town of Domeyko. The information was taken from the Dos Amigos Closure Plan (Wood, 2024).

20.1.1.1 Precipitation

The area where the mine and plant are located has a transitional desert climate with low precipitation, varying between 50 and 70 mm per year. In particular, precipitation data from the Domeyko station of the General Water Directorate (DGA), located 3 km from the mine-plant sector, shows an annual average of 40 mm per year between 1998 and 2018.

Rainfall is concentrated in the months between May and August, with the highest monthly rainfall recorded in May. In the summer months, rainfall is almost non-existent. Figure 20.3 shows the climogram for the Domeyko area, which shows the distribution of average monthly rainfall throughout the year based on data from the DGA.
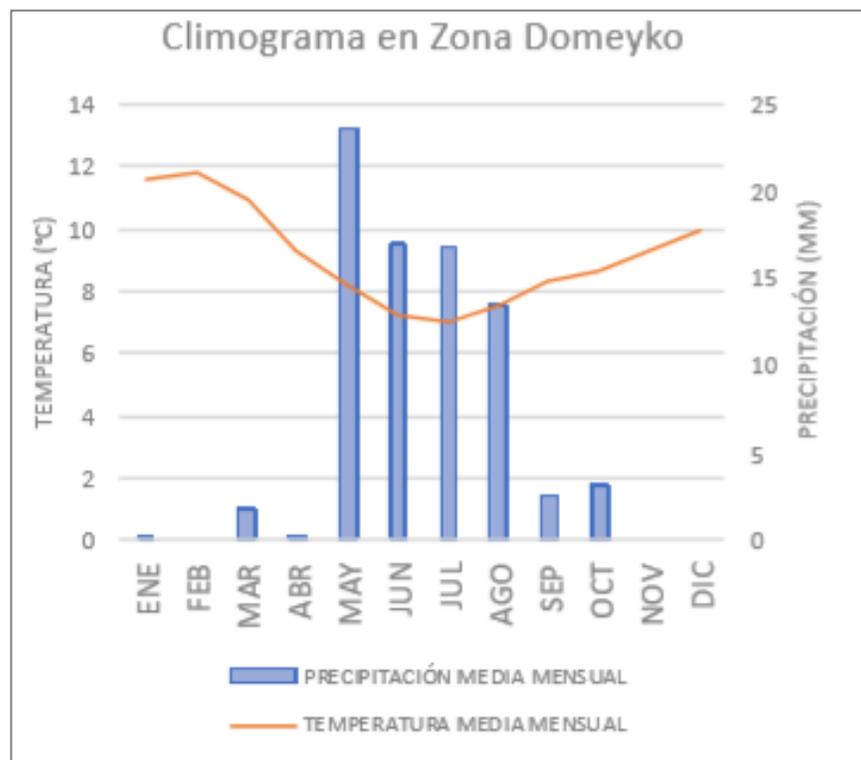
Figure 20.3: Climate chart for the mine and plant project area
Source: Wood, 2024.

With regard to maximum precipitation in 24 hours with a 10-year return period, the records presented by the DGA indicate that the mine-plant area has monthly isohyets of 40 to 50 mm. Specifically, there is a study that characterizes the maximum precipitation in 24 hours with a return period of 10 and 100 years as 56 mm and 115.4 mm, respectively, considering an elevation of 986 meters above sea level.

20.1.1.2 Temperature

The temperature in the area varies between a minimum of -1 to -2 °C and a maximum of 38 °C, with an average annual temperature of 15 to 17 °C according to records from the Santa Juana weather station of the DGA between 2010 and 2018.

In addition, the temperature in the project area varies greatly between day and night, as it is a desert area with predominantly sunny days. In particular, the average annual temperature during the sunniest hours reaches 25°C, while at night it can drop to an average of 12°C, as shown in Figure 20.4.
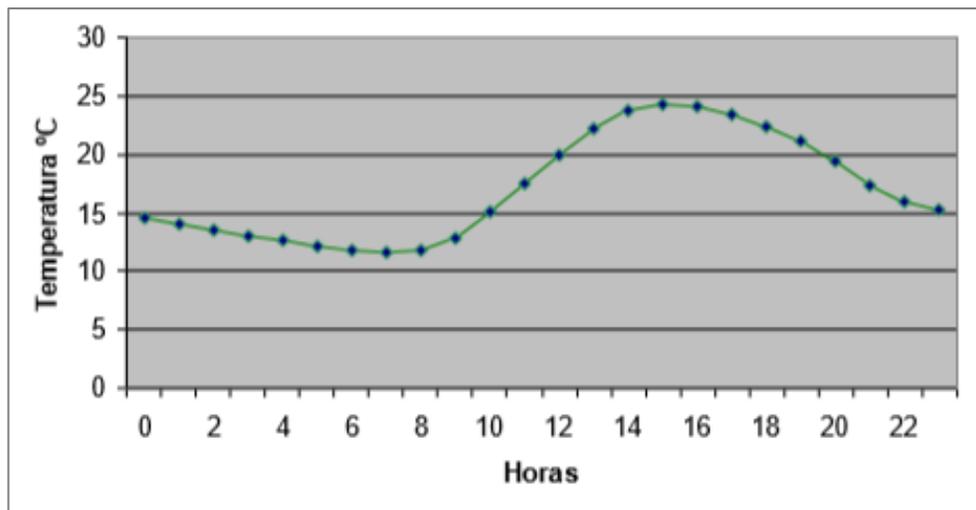
Figure 20.4:   Hourly average temperatures
Source: Wood, 2024.

20.1.1.3 Relative Humidity

The relative humidity in the Domeyko area averages 55%, with a maximum of 86% and a minimum of 15%.

20.1.1.4 Wind speed and direction

Wind speed is described based on data from the Dos Amigos station in Domeyko (SERPRAM, 2024) . For the year 2024, in this area, the prevailing speeds reach values between 0 and 8.7 m/s, with the maximum recorded in August. The average for the entire measurement period is 2.0 m/s, with an average of 9.5% calm conditions.

As for wind direction, Figure 20.5 shows that the predominant components between January and March are south-southwest (25.6%) and west-southwest (17.4%); between April and June, they are south-southwest (17.0%) and north-northeast (12.0%); between July and September, they are from the south-southwest (15.8%) and north-northeast (11.7%), and N (1.0%); and between October and December, they are from the south-southwest (25.0%) and west-southwest (18.9%).
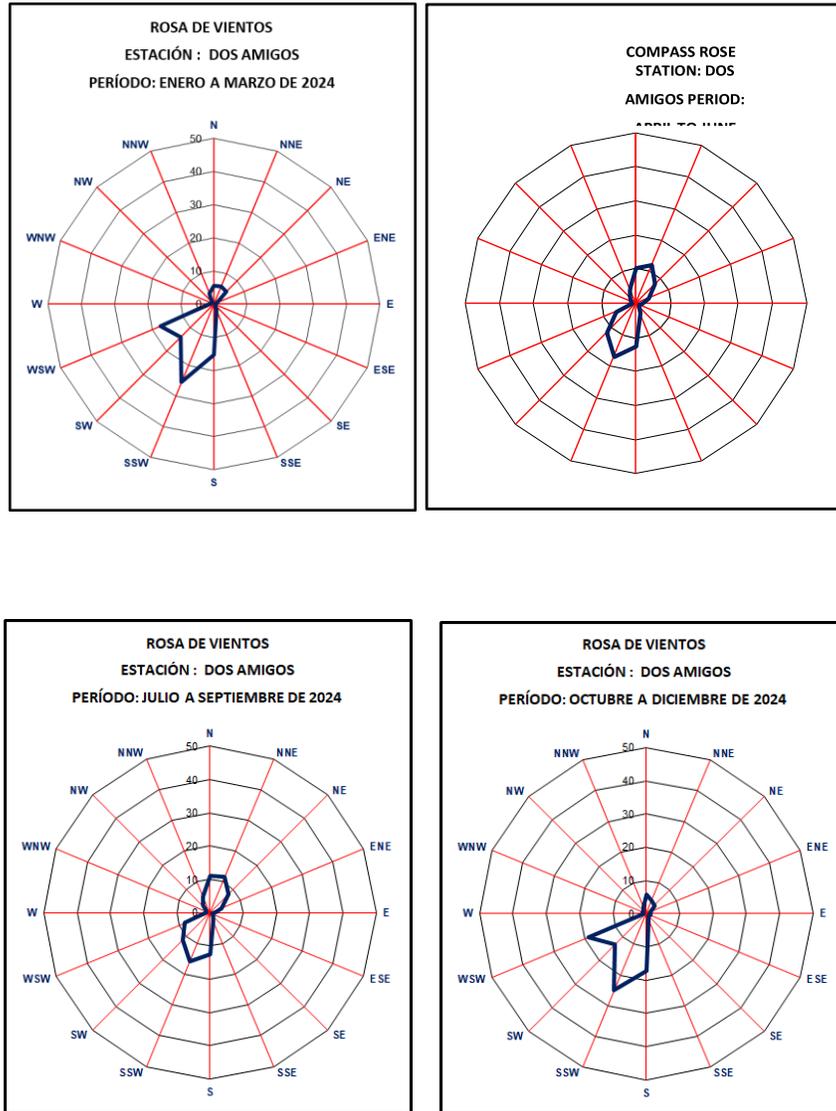
Figure 20.5: Wind roses year 2024, Dos Amigos station
Source: SERPRAM, 2024.

In general, it can be observed that throughout the year there is a greater component from the southwest and, to a lesser extent, from the northeast.

20.1.2 Air Quality

Air quality information for the area is based on monitoring carried out by SERPRAM in the town of Domeyko, where respirable particulate matter smaller than 10 microns (PM-10) and sulfur dioxide (SO_2) are recorded. The analysis is based on records for the year 2024. The average annual concentrations are presented in the Table 20.1 and Figure 20.6.

Table 20.1: Annual concentrations of PM-10 for the period 2020-2024

Year	Annual Average (µg/m3N)
2020	24
2021	23
2022	22
2023	23
2024	13
Average 2020-2024	**21**

Source: SERPRAM, 2023-2024.
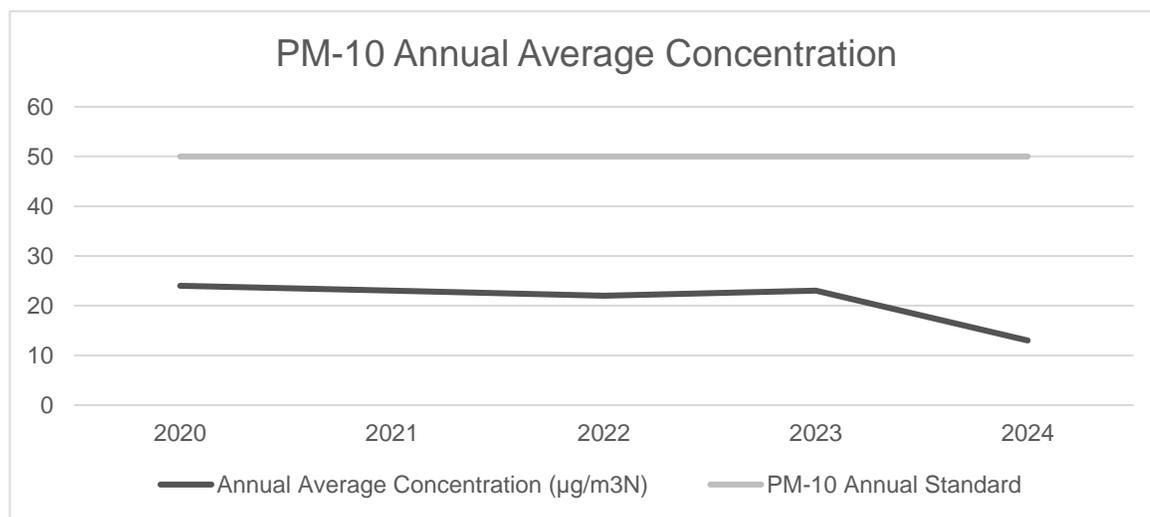
Figure 20.6: PM-10 annual average concentration 2020-2024

The annual PM-10 values range from 13 µg/m³ in 2024 to 24 µg/m³ in 2020, complying throughout the period with the annual regulations applicable to PM-10 (50 µg/m³).

It is relevant to maintain air quality monitoring records so that they can be used in the project environmental baseline.

Air quality is relevant considering that, between 15 and 17 km from the mine area, La Campana observatory, the GTM observatory and the Warsaw-OGLE telescope are located. Additionally, La Silla observatory is located about 30 km away, and the commune of Vallenar has been declared an area of scientific and research value for astronomical observation or "astronomical area" by D.S. No. 2 of February 2023 of the Ministry of Science, Technology, Knowledge and Innovation.

20.1.3 Hydrology

According to the basin delimitation of the General Water Directorate (DGA) the Domeyko Project is located in the Coastal and Island Basins between the Huasco River and Fourth Region (DGA Code: 039), in the Quebrada Chañaral sub basin (DGA Code: 0394), and more specifically, in the Quebrada Chañaral at Junta Quebrada La Hoyada sub sub basin(DGA Code: 03940), and also in the Quebrada Los Pozos sub basin and sub sub basin (DGA Codes: 0393 and 03930 respectively) and the Quebrada Honda sub basin and sub sub basin (DGA Codes: 0392 and 03920 respectively).

The surface drainage network (Figure 20.7) is composed of ephemeral channels associated mainly with the Algarrobal, Barrancones, La Manga and Pastos Largos catchments, as exposed in the Dos Amigos Closure Plan (Wood, 2024). These streams flow only in response to intense rainfall events and there are no perennial watercourses within or immediately adjacent to the project's footprint. This characterization is consistent across the different studies.
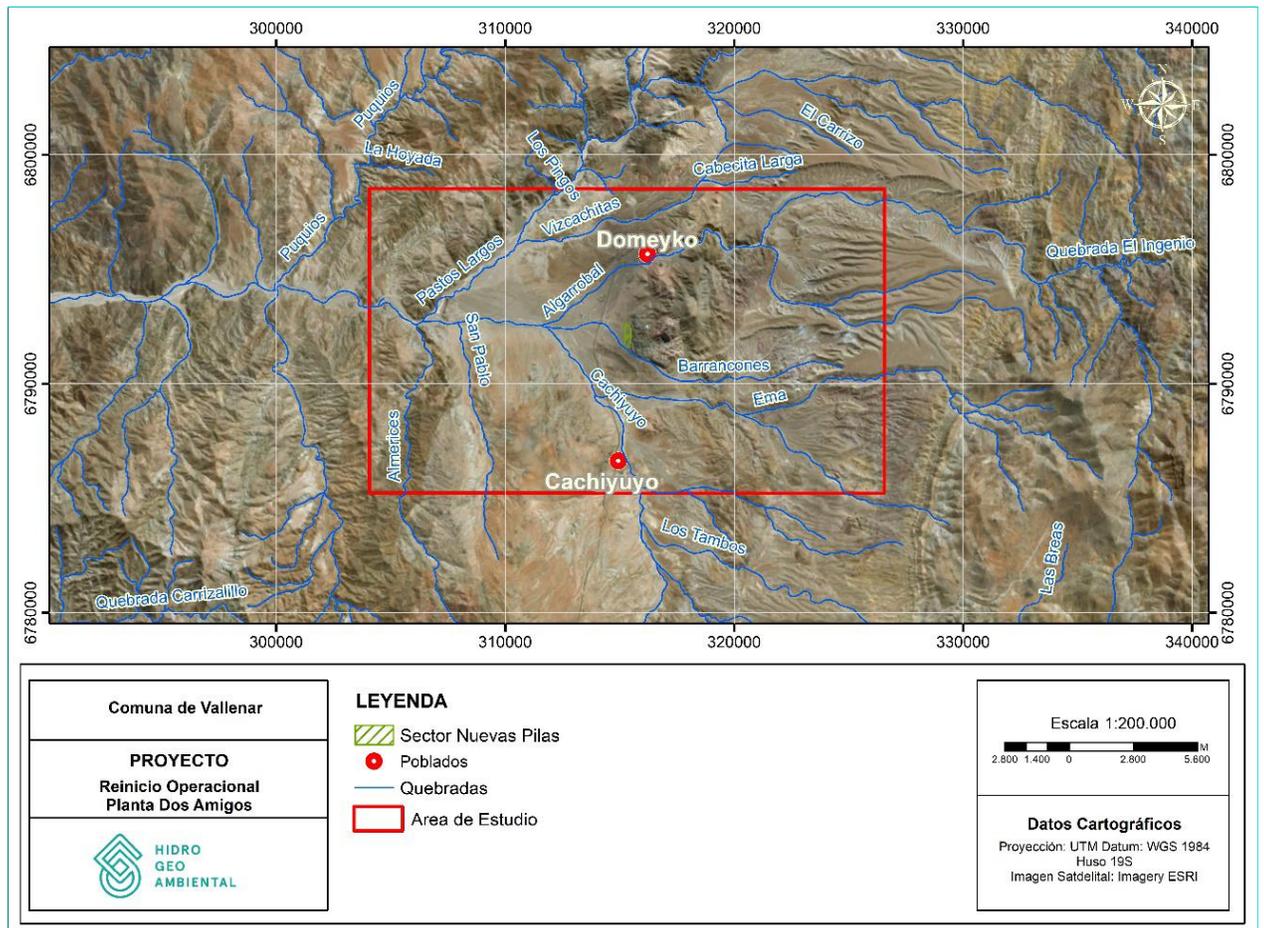
Figure 20.7: Main streams in the Chañaral river basin

Peak flow estimates for 50- and 100-year return periods in the principal ephemeral channels have been calculated using standard Chilean hydrological methods (DGA empirical approaches and the Rational Method) in the RCA 04/2020 hydrology and hydrogeology study.

Results are summarized in the Dos Amigos Closure Plan (Wood, 2024), which concludes that, under a 100-year event, the maximum flows generated in nearby channels (including Quebrada Suroeste, which would generate a maximum instantaneous flow of approximately 1.6-1.85 m^3/s) are not sufficient to reach the plant facilities. A fluvial defense structure (gabion wall) has been included in the Dos Amigos Closure Plan (Wood, 2024) as an additional safeguard from Quebrada Sur Oeste, and regarding the sectoral permit corresponding to River Regulation or Defense Works (Article 157). Overall, flood risk to site infrastructure is assessed as low. The absence of detailed hydraulic flood modelling introduces some uncertainty, but this is not considered material at a PEA level.

No permanent surface-water bodies occur near the project and no specific surface-water quality sampling has been reported. The cited studies infer that surface-water quality risks are negligible because of the ephemeral nature of the channels, lack of nearby surface-water users and the topographic separation between the plant and main drainages. This absence of analytical surface-water data is noted as a minor baseline limitation, but is not considered significant for the current study.

The available information does not identify any licensed surface-water abstractions or critical surface-water receptors within the local catchments. The main receptor identified for storm events is the Ruta 5 Norte highway, which could be affected by localized mud deposition during rare, intense storms. Given the hydrological setting and the lack of surface-water usage, the current baseline information is regarded as adequate and appropriate for PEA disclosure.

20.1.4 Hydrogeology

The project is located within the Domeyko Depression, a structurally controlled basin infilled by alluvial deposits over fractured bedrock. Two main hydrostratigraphic units are recognized across the studies: (i) a fractured bedrock unit with low to very low primary permeability, and (ii) an overlying alluvial/colluvial fill that locally hosts a productive aquifer. The hydrogeological investigations, combining drilling, geophysics and pumping tests, show that the main groundwater resource is located several kilometres north of the plant area, in the Algarrobal–Bandurrias sector, as stated in the Dos Amigos Closure Plan (Wood, 2024).
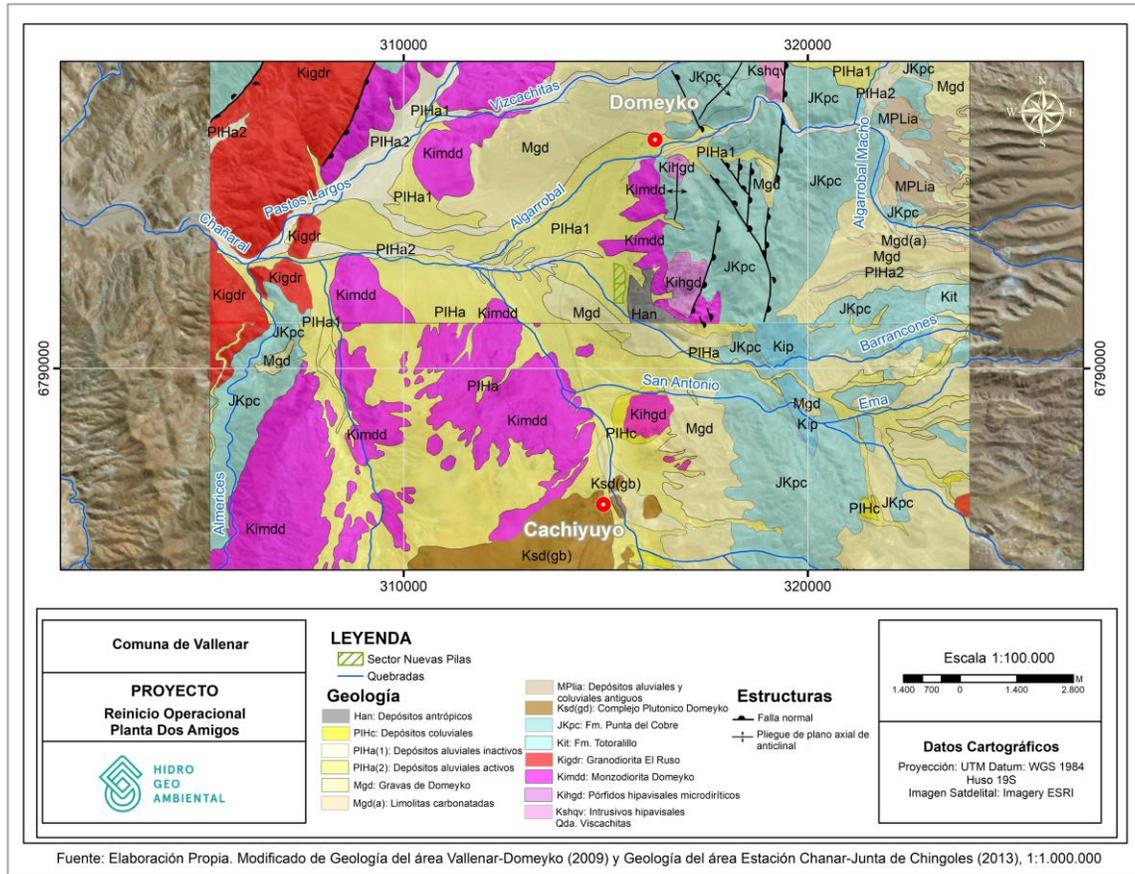
Figure 20.8: Regional Geological map
Source: HGA, 2019.

A deep exploration drillhole (MAD 15-150, 311 m deep) drilled within the pit area did not intersect groundwater to its total depth, and available data indicate that the regional water table occurs at depths on the order of several tens of meters below surface, with no significant saturated zone beneath the plant platform. This supports the conclusion that there is no direct hydraulic connection between plant facilities and the main aquifer. The consistency of this result across different studies (Dos Amigos Closing Plan (Wood, 2004) and the hydrogeological studies for RCA 137/2019 and RCA 04/2020) provides a high level of confidence in this interpretation.

Groundwater levels from historical records (DGA and company wells) and the 2019 monitoring campaign (Figure 20.9 and Figure 20.10) have been used to construct piezometric interpretations in the DIA Operational Restart of the Dos Amigos Plant (2019) Hydrogeological report. These indicate that regional groundwater flow is generally from east to west, following the basin morphology and discharging towards lower elevation areas along the Domeyko Depression. While no monitoring wells exist directly within the plant footprint (consistent with the absence of groundwater there), the regional flow pattern is well constrained and adequate for PEA purposes.
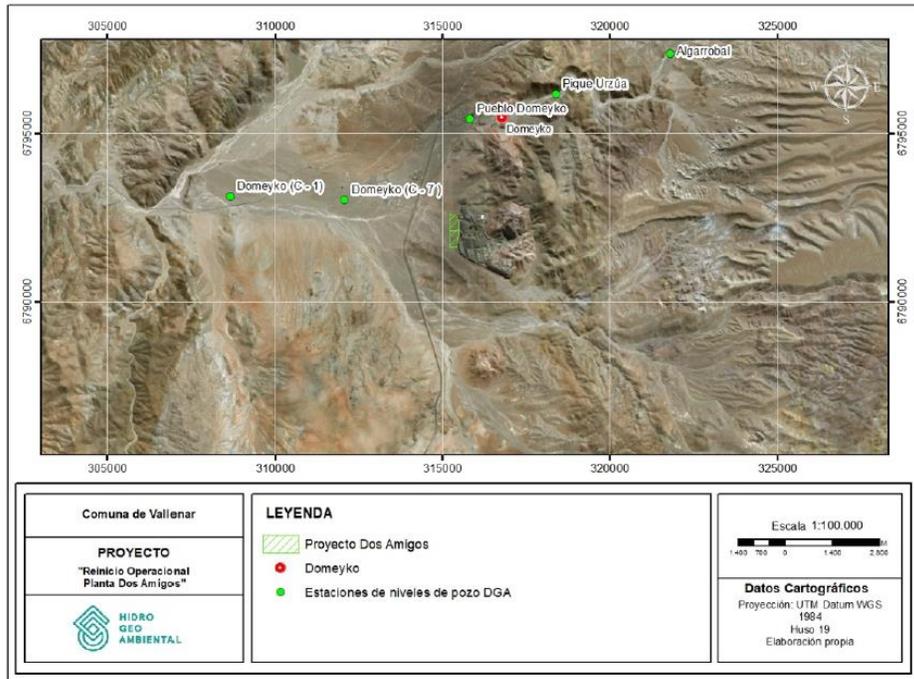
Figure 20.9: Location of DGA wells with historical data
Source: HGA, 2019.
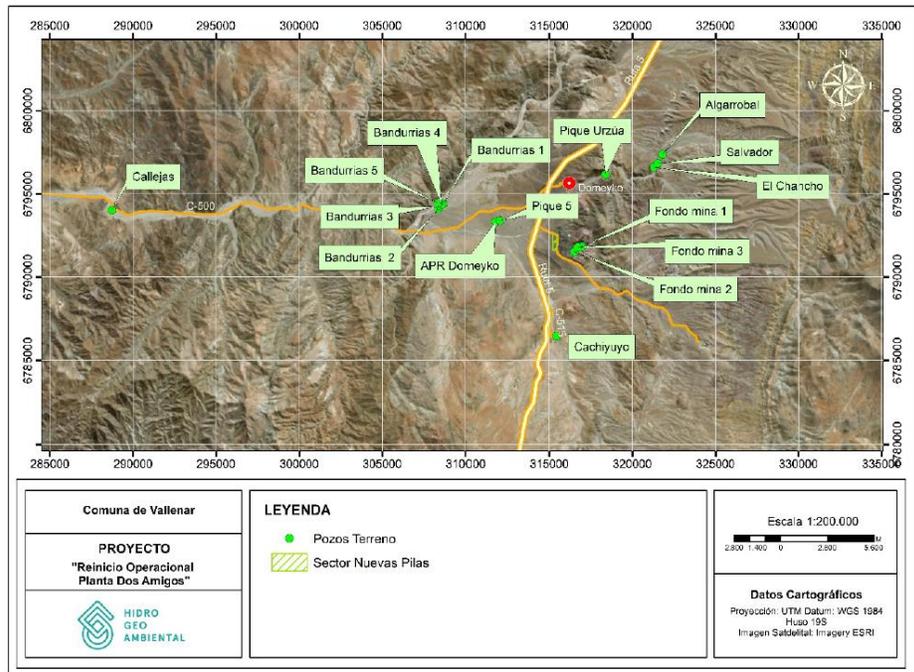
Figure 20.10: Location of wells monitored by HGA in the 2019 campaign
Source: HGA, 2019.

Hydraulic properties derived from pumping tests, summarized in the *Dos Amigos Closure Plan (Wood, 2024)*, show a heterogeneous but locally high-productivity aquifer in the alluvial sediments, with transmissivity values ranging over more than an order of magnitude. This level of characterization is considered sufficient to support the conceptual hydrogeological model and to evaluate potential drawdown impacts at PEA level.

A groundwater balance and recharge assessment has been carried out using a conceptual hydrological model and the EvalHid tool in the DIA Operational Restart of the Dos Amigos Plant (2019) Hydrogeological study. The model suggests that the projected abstraction rates for the Domeyko project are compatible with the estimated recharge, given the existing portfolio of groundwater rights in the basin. The methodology is appropriate for this stage, although reliance on regional analogues introduces some uncertainty that could be reduced by additional data and refined modeling in a future Feasibility Study.

Groundwater quality has been characterized by sampling a network of regional wells and analyzing major ions and trace elements. The DIA Operational Restart of the Dos Amigos Plant (2019) Hydrogeological report includes standard hydrochemical interpretations (e.g., Piper diagrams) and comparison with Chilean drinking-water and irrigation standards, while the Dos Amigos Closing Plan (Wood, 2024) provides a concise summary. Overall, groundwater is slightly alkaline with locally elevated concentrations of certain constituents (e.g., sulfate, nitrate, chloride and some trace metals). These conditions reflect both natural water–rock interaction and local anthropogenic influences in the broader basin. Importantly, the sampled wells are located in the productive aquifer north of the plant (Figure 20.11); no groundwater occurs beneath the plant facilities themselves, so the hydrochemical data should be interpreted as representative of the regional resource rather than of the immediate plant footprint.
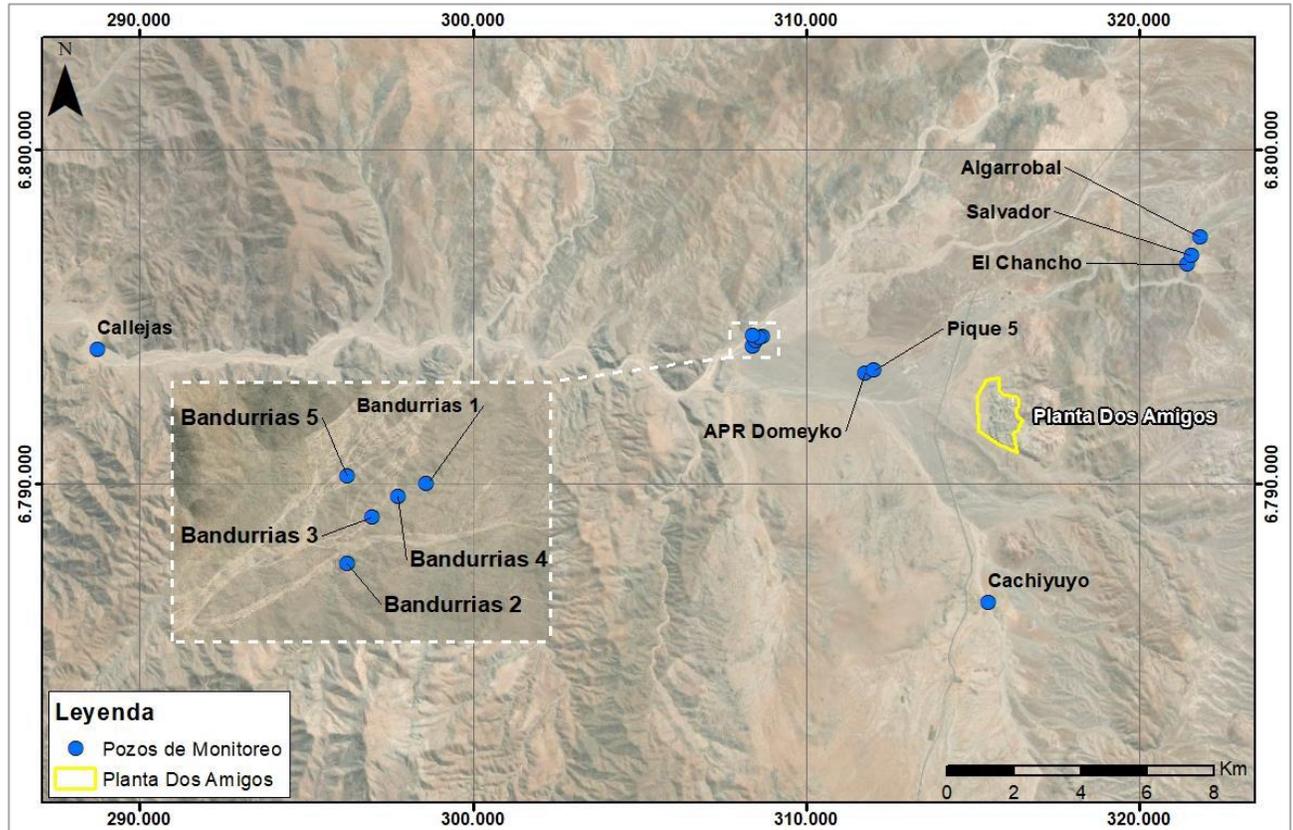
Figure 20.11: Monitoring wells in the area (Dos Amigos Closing Plan, Wood, 2004)

Groundwater use and rights within the relevant sub-basin are documented in the DIA Operational Restart of the Dos Amigos Plant (2019) Hydrogeological report, which lists existing licenses, including those held by the project, that sum up a total of 23.75 l/s. Total granted rights and their spatial distribution indicate that the main users (mining companies and rural water systems) exploit the same regional aquifer in the Algarrobal–Bandurrias area. The project's planned abstraction is within its existing licensed allocation.

A conceptual hydrogeological model integrating geology, structure, stratigraphy, groundwater levels, hydraulic properties, recharge and water quality is presented in the DIA Operational Restart of the Dos Amigos Plant (2019) Hydrogeological report and adopted in the Dos Amigos Closing Plan (Wood, 2024). The model indicates that the plant facilities are hydraulically disconnected from the main aquifer, which is located at depth and at some distance to the north, while project water supply is obtained from wells in the regional alluvial aquifer. This conceptual model is internally consistent and considered adequate for PEA-level assessment. No numerical groundwater flow or solute-transport modelling has been undertaken to date; such modelling could be considered in a future Feasibility Study if warranted by project scale or regulatory requirements.

20.1.5   Biodiversity

The information related to biodiversity was taken from the DIAs submitted for the mine and plant area between 2018 and 2019 and general public information about the area. It should be noted that for all areas of the project covered by this PEA (mine and waste dump extension, tailings deposit, linear infrastructure), no baseline studies have been developed and these will have to be carried out in the next stages of the Project.

20.1.5.1   Flora and vegetation

According to Gajardo, 1994 , the project area is located in the Desert Region, with the inland sector in the Flowering Desert - Flowering Desert of the Serranías subregion, and the coastal sector in the Coastal Desert - Coastal Desert of Huasco subregion (see Figure 20.12). The characteristics of these sectors are as follows:

- Flowering Desert: its character is determined by the influence of sufficient rainfall to cause the flowering of ephemeral species, generally with a varied flora.
  - Flowering Desert of the Serranías: covers intermediate mountainous areas, often featuring scrub vegetation communities that have been heavily thinned by human exploitation, either for firewood or for goat grazing. It has a high degree of floristic diversity.
- Coastal Desert: It has a great floral richness due to the action of frequent coastal fogs and has a large amount of endemic flora.
  - Huasco Coastal Desert: This is the southern sector of the coastal desert, where the vegetation has a greater degree of continuity and permanence under the occasional influence of rainfall. It represents a transition that marks the southern limit of many species and the northern limit of others.
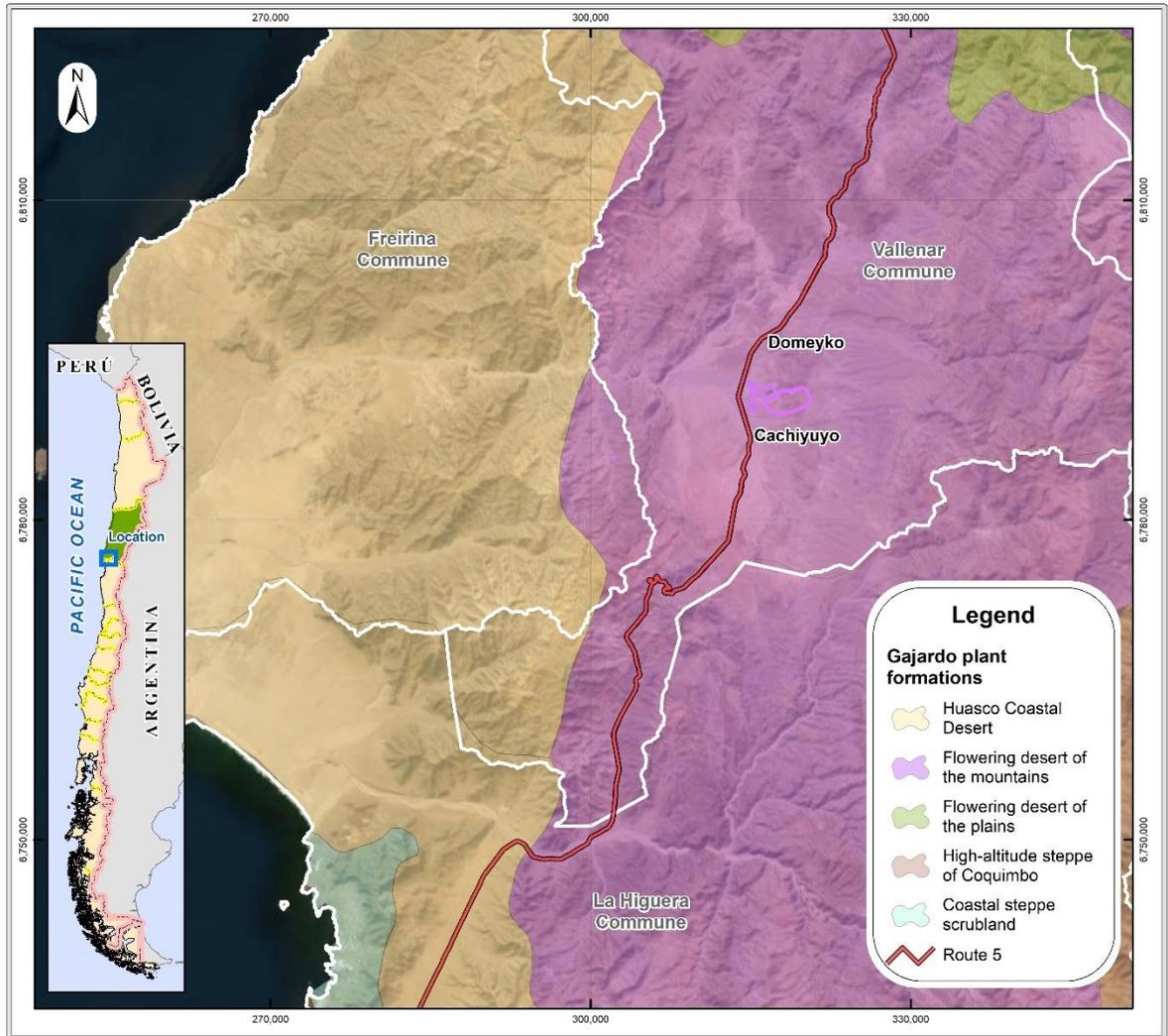
Figure 20.12: Classification of vegetation according to Gajardo (1994)
Source: Own elaboration based on Gajardo (1994)

Particularly, in the mine and plant areas, according to the information available for the DIAs for the submitted between 2018 and 2019, it corresponds to an area with bare soil and also, in some sectors, with sparse, light scrub, a herbaceous layer and the occasional presence of succulents. There are some species in conservation, particularly cacti. There are xerophytic formations in the area as defined by Law 20.283/2008 on Native Forest Recovery.

With regard to the area associated with linear infrastructure and water extraction on the coast, no specific biotic baseline studies have been developed for the Project, which should be carried out in the next stage.

According to publicly available information (Environmental Impact Study Expansion of the San Juan Wind Park. 2023) , the coastal sector has vegetation dominated by the shrub species *Oxalis gigantea* and *Heliotropium stenophyllum* with coverage ranges of varying between 10% and 50%, accompanied by succulents that generally have very low coverage ranges. There is evidence of the presence of succulents such as *Eulychnia acida, Eriosyce napina*, and *Echinopsis deserticola*, among others. The area has a significant richness of species that reach their ideal state during the rainy season, when both endemic and native herbaceous plants emerge, characteristic of the flowering desert phenomenon.

20.1.5.2   Fauna

The central part of the mine and plant areas has been affected by historical mining and, in the surrounding area, there is an habitat of scrub and herbaceous plants. The fauna present consists of reptiles, birds and mammals such as foxes.

It should be noted that, according to field observations in the mine area, there is a presence of the Tricahue Parrot (*Cyanoliseus patagonus*), classified as "Endangered" for the Atacama region. The presence of this species and its implications must be studied in the next stages of the project's engineering.

In the coastal sector, according to information from the Environmental Impact Study of the San Juan Wind Park, the natural habitat consists of scrubland dominated by shrub and succulent vegetation and grassland dominated by herbaceous vegetation. The fauna species present in these habitats are reptiles, birds and mammals such as foxes and guanacos. Most of the reptiles are in some state of conservation, while the guanaco (*Lama guanicoe*) is classified as "Vulnerable" the fox (*Lycalopex griseus*) is classified as "Least Concern".

As the project involves the extraction of seawater, marine biological studies need to be carried out, but no information is currently available for the area.

20.1.5.3   Protected areas or areas of interest

With regard to the presence of areas with some type of environmental protection associated with the Project, it should be noted that the Project area has no direct relationship with any of the areas established in the instructions that "standardize criteria and technical requirements for areas placed under official protection and protected areas for the purposes of the Environmental Impact Assessment System" (Ordinary No. 130844, 2013) , which are binding in the environmental assessment of projects. However, it is important to note that the Punta de Choros Marine Reserve, which belongs to this category, is located approximately 22 km south of the seawater extraction area.

Notwithstanding the above, there are some sensitive areas that need to be taken into consideration and that are located near the project works. These are as follows:

▪ Regional Priority Sites: The definition of priority sites in the Atacama region is part of the Strategy and Action Plan for the Conservation and Sustainable Use of Biodiversity in Atacama 2010-2017 (MMA, 2010), which identifies and delimits priority sites for conservation in the region. These include the following sites, both characterized by their high plant biodiversity:

- The Quebrada el Chañar Priority Site. This site is located near the Project's linear infrastructure. Its relationship to the Project works is presented in the Figure 20.13.

- The Sarco Priority Site: This is located near the kar water extraction pipeline in the coastal sector. The relationship with the Project works is presented in Figure 20.13.
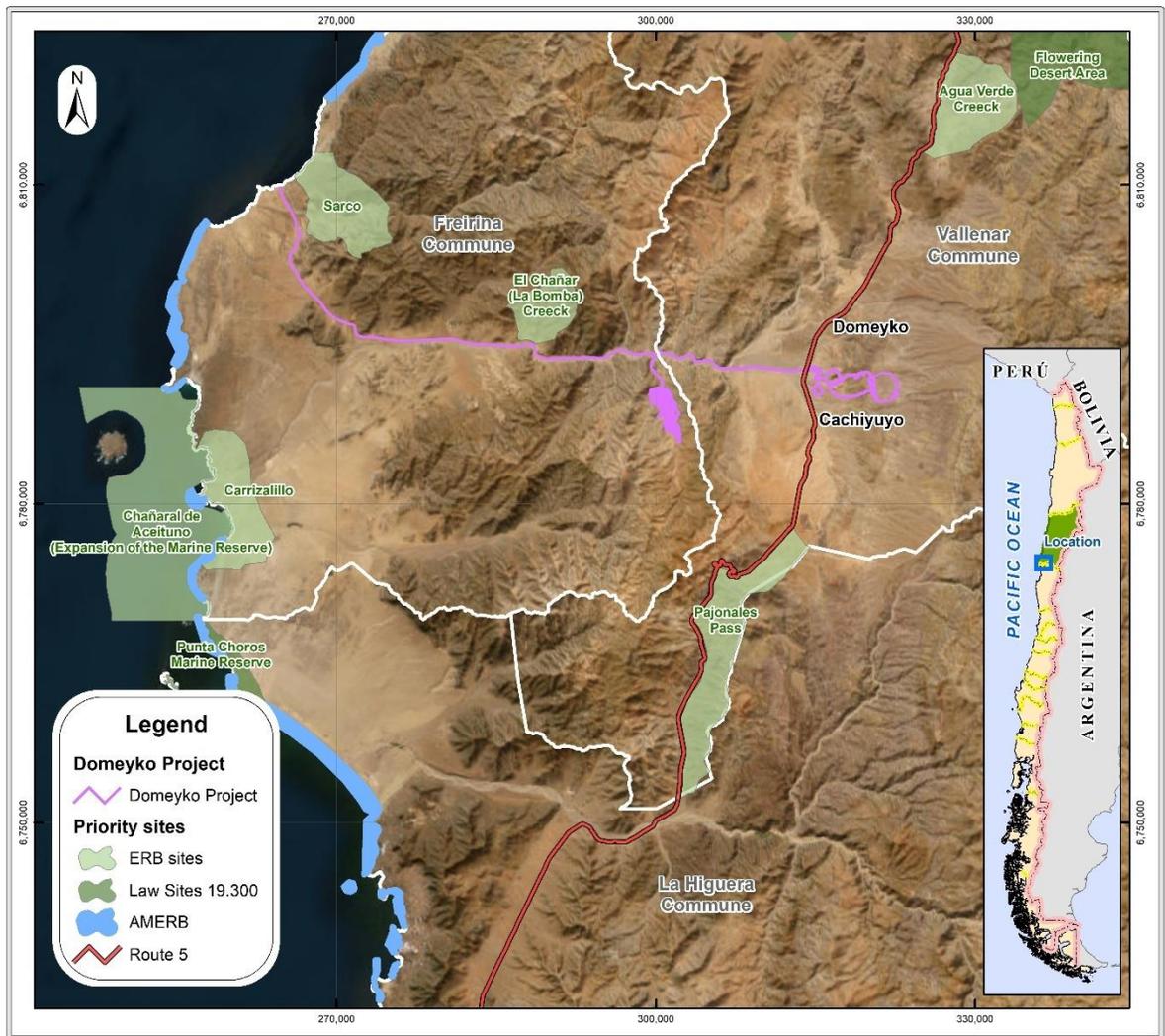
Figure 20.13: Areas of environmental interest

20.1.6   Cultural Heritage

Regarding the presence of archaeological findings in the project area, the information gathered in the current plant and mine area indicates that there are no pre-Hispanic findings. Notwithstanding this, the bibliography indicates the presence of archaeological sites in the general area, mainly belonging to the Molle culture. In the coastal sector, references (Environmental Impact Study for the Expansion of the San Juan Wind Park. 2023) indicate the potential presence of heritage elements corresponding mainly to shell middens and, to a lesser extent, structures. In the following stages of the Project, detailed surveys of the archaeological component should be carried out.

As for paleontological findings, there is no information for the mine and plant area. In the coastal sector, there could be paleontological potential, but this requires specific studies in the next stages of the project.

20.2   Permitting

This section contains background information on permits for the Project, considering the requirements of Chilean environmental and sectoral legislation, the permits obtained for the current operation, and those estimated to be required for the Project subject to this PEA, based on the information available and what is typically required for mining projects in Chile.

20.2.1   Regulatory Settings

Chile has in place a comprehensive regulatory framework governing both environmental approvals and a number of associated construction and operating permits, generally referred to as Environmental Sectoral Permits. The Environmental Impact Evaluation System (SEIA) was established in 1994 with the promulgation of Law 19.300. The implementing regulations have been modified on more than one occasion since then as the system has evolved, most recently in 2024. The SEIA is administered by the Environmental Evaluation Service (SEA), an arm of the Environment Ministry (MMA).

Mining and other activities in Chile are subject to environmental review and can be accessed via three mechanisms, as follows:

- A *Pertinencia de Ingreso* (or *Pertinencia*) is a document prepared for small projects or minor modifications to existing projects, which demonstrates that the effects of the proposed action are below the threshold requiring formal environmental review. Once accepted by the SEA, the project or modification can proceed without undergoing environmental review (although sectoral permits, or modifications to existing permits, may be required).

- An Environmental Impact Declaration (DIA) must be submitted by the proponent for projects or project modifications that are significant enough to warrant environmental review, but which are not expected to result in significant environmental impacts as these are defined legally.

- An Environmental Impact Study (EIA) must be submitted by the proponent for projects or project modifications where significant environmental impacts are expected to occur, and where specific measures for impact avoidance, mitigation or compensation will need to be agreed upon.

The SEA approves DIAs and EIAs following regulatory review and (in the case of EIAs) formal public consultation, by issuing an Environmental Qualification Resolution (RCA). RCAs can run to several hundred pages in length for complex projects and usually contain numerous conditions of approval related to both environmental and social aspects of project development, that must be adhered to by the project proponent during all phases of the project life cycle.

There are a number of sectoral permits that a project will require. The "environmental part" of these permits is included in the EIA or DIA evaluation. The relevant Environmental Sectoral Permits (PAS) are described and listed in the SEIA regulation.

The Environmental Impact Assessment Regulation (D.S. No. 40/2013) defines two types of Sectoral Permits:

- With only environmental contents: These permits are approved with the RCA. The proponent needs to show the corresponding sectoral public agency the RCA, and this one must give the permit approval.

- Mixed, with environmental and non-environmental content: For these permits, the RCA guarantees that the project complies with the environmental requirements of the permit. The non-environmental requirements can be submitted to the corresponding sectoral public agency during the SEIA process but cannot be granted until the RCA is in place.

One of the most important effects of the RCA is that once the project has been approved by the SEA, no PAS may be denied for environmental reasons.

Accordingly, the sectoral public agencies are not entitled to review the RCA environmental conditions or even reject a PAS due to the infringement of environmental requirements. The PAS may, nevertheless, be denied for non-environmental reasons, such as non-compliance with technical, engineering or safety standards, etc.

Finally, there are activities that require permits that are not covered by environmental regulations, or that include some technical aspects that go beyond environmental issues. The number of sectoral permits required by a project will depend on the individual characteristics of each project. These permits are typically processed when the RCA is in place.

20.2.2 Current Permitting Situation

The Dos Amigos Mining Complex began production at the end of 1997, after obtaining the environmental permits. Subsequently, expansions have been developed that have received environmental approval. Table 20.2 shows the Environmental Qualification Resolutions (RCA) for the current operation.

Table 20.2:   Environmental permits Dos Amigos current operation

Project	Legal Reference	Validity (years)
Dos Amigos Mining Project	RCA No. 066/1996	8
Expansion Dos Amigos Project	RCA No. 070/1998	4

Project	Legal Reference	Validity (years)
Expansion II Dos Amigos Project	RCA No. 090/2005	3
Expansion III Dos Amigos Project	RCA No. 019/2009	10
Modification of Crushing Plant Dos Amigos Complex	RCA No. 23/2017	3
Operational Restart of Dos Amigos Plant	RCA No. 137/2019	10
Operation Continuity Dos Amigos Mine	RCA No. 04/2020	5

Source: https://seia.sea.gob.cl/busqueda/buscarProyectoResumen.php

RCA N° 137/2019 is currently active, with processing at the plant of minerals from third parties. Although the Dos Amigos Mine Operational Continuity project has RCA N° 04/2020, it is not in operation, and the mine is currently shut down.

Notwithstanding the permits obtained to date for the Dos Amigos Complex, the sulfide project covered by this report comprises a different one, with larger facilities that extend to the coastal sector. Therefore, it must be entered into the Environmental Impact Assessment System as a new project.

With regard to sectoral permits, the current operation has permits associated with its main mining facilities that were granted by the National Geology and Mining Service (SERNAGEOMIN). Table 20.3 shows these permits.

Table 20.3:   Relevant sectoral mining permits Dos Amigos current operation

Permit	Legal Reference
Dos Amigos Process Plant	Resolution No. 661/1997
Dos Amigos Waste Dumps	Resolution No. 733/1997
Dos Amigos Process Plant Expansion	Resolution No. 019/1998
Dos Amigos Closure Plan	Resolution No. 1559/2009
Dos Amigos Plant Expansion III	Resolution No. 0245/2014
Dos Amigos Closure Plan	Resolution No. 1270/2025

Source: Dos Amigos Operation Closure Plan. Wood, 2024

The current operation also has health permits associated with drinking water supply and sewage management facilities, as well as permits associated with the management of non-hazardous and hazardous industrial solid waste.

The sulfide project will require to process different sectoral permits for its new facilities, such as the pit, waste dump, stockpiles, concentrator plant, and associated sanitary facilities.

20.2.3   Requirements for Project Scenarios

As indicated in the previous section, the development of the sulfide project will require the preparation and obtaining of the environmental permit and also the sectoral permits applicable to the facilities.

To this end, strategies must be established to enable the project to be approved in the following engineering phases.

Environmental Permit

The environmental permit requires the preparation of an Environmental Impact Study (EIA) or an Environmental Impact Declaration (DIA). Considering the size of the project, its characteristics, and location, it is estimated that it must undergo an environmental assessment through an EIA.

An EIA requires the early preparation of an environmental baseline that considers seasonality in aspects associated with biodiversity and water resources. Considering the characteristics of the project, the location area, and applicable legislation, it is estimated that baselines will need to be prepared for the following variables:

- Climate and meteorology
- Air quality
- Noise and vibrations
- Brightness
- Electromagnetic fields
- Geology, geomorphology, and natural hazards
- Hydrology
- Hydrogeology
- Soil physical and chemical characterization
- Water quality
- Flora and vegetation
- Fauna, vertebrate and invertebrate
- Fungi and lichens
- Biological, physical and chemical marine baseline
- Archaeology
- Paleontology
- Land use
- Roads and traffic flows
- Economy

- Tourism

- Protected areas

- Social characterization and anthropological studies in the case of indigenous communities.

Some relevant considerations for the planning and preparation of baseline studies are as follows:

- Biological and water resource studies require seasonality, so it is necessary to allow at least one year for their development

- Marine studies also require seasonality and specific permits from the maritime authority for their development

The processing times in the Environmental Impact Assessment System are defined by the legal framework. These are shown in the diagram at Figure 20.14.

The maritime concession and environmental permits constitute the critical path of the project execution plan; therefore, it is recommended that these matters receive special attention and be initiated as a priority.

EIA Process: 120 days + 60 days

Evaluation Process ⟶

Evaluation			Suspension	Evaluation		Suspension	Evaluation		
Admision	**Public Services Report**	**ICSARA**	**ADENDA**	**Public Services Report**	**ICSARA Suplementary**	**ADENDA Suplementary**	**Public Services Report**	**ICE**	**RCA**
5 days since submittal	30 days	30 days	(extension 2 times)	15 days	15 days	(extension 2 times)	15 days	5 days before meeting Evaluation Commission	10 days since evaluation

Extract publication: 10 days

Public Participation 60 days

Early Ending: 40 days since submittal

Note: all are bussines day
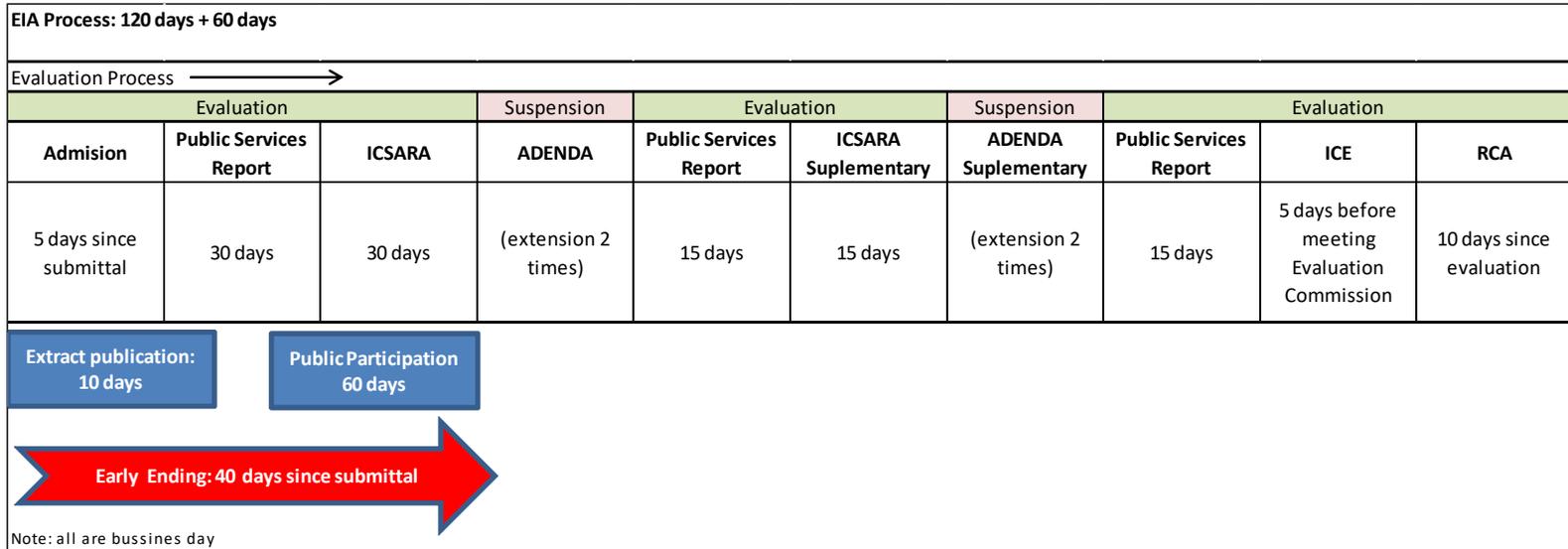
Figure 20.14: Diagram of the EIA Process

Although the legal timeframes for the authority are established, the total processing time for an EIA will ultimately depend on the time it takes for the project owner to respond to the authority's set of queries (ICSARAs: Consolidated Report on Requests for Clarifications, Rectifications or Additions).

In addition to the public participation indicated in the diagram above, if the project has a significant impact on one or more indigenous groups, the Environmental Assessment Service (SEA) may open an Indigenous Consultation process.

20.2.4 Sectoral Permits

Based on the facilities and characteristics of the sulfide project, a Master Permit Plan must be developed to assess the work and time required for the preparation and processing of these permits. This plan must consider the following:

▪ Detailed identification of the required permits.

▪ Identification of the technical and administrative requirements for each permit.

▪ Identification of timelines and responsibilities for preparing each permit application.

The applicable permits will depend on the final design of the project. A priori, considering the mine and plant works, tailings deposit, and seawater extraction and conveyance, it is estimated that the sulfide project would require the following main types of sectoral permits:

Table 20.4: **Principal type of sectoral permits to be required by the sulfide project**

Facility/Item	Permit	Type	Authority
Mine	Mining method	SP	SERNAGEOMIN
	Mine electrification project	SP	SERNAGEOMIN
	Watercourses modification / regularization works	PAS 156/157	DGA
Plant	Mineral Processing or Treatment Plant Projects	SP	SERNAGEOMIN
Dumps and Stockpiles	Waste Dump or Mineral Storage Facility.	PAS 136	SERNAGEOMIN
	Watercourses modification / regularization works	PAS 156/157	DGA
Tailings deposit*	Tailings deposit	PAS 135	SERNAGEOMIN
Tailings Pipeline	Watercourses modification / regularization works	PAS 156/157	DGA
Closure plan	Mining Site Closure Plan Project	PAS 137	SERNAGEOMIN
Sea water pipes	Watercourses modification / regularization works	PAS 156/157	DGA

Facility/Item	Permit	Type	Authority
Seawater extraction	Marine concession	SP	Directorate-General for Maritime Territory
Drinking water supply	Private Drinking Water Supply System	SP	Regional Ministerial Secretariat of Health
Sewerage System	Wastewater Management Works	PAS 138	Regional Ministerial Secretariat of Health
Non-hazardous waste	Storage of non-hazardous industrial waste	PAS 140	Regional Ministerial Secretariat of Health
Hazardous waste	Storage of hazardous industrial waste	PAS 142	Regional Ministerial Secretariat of Health
Hazardous Substances	Hazardous Substances Storage Warehouse	SP	Regional Ministerial Secretariat of Health
Buildings	Favorable Construction Report	PAS 160	SAG/SEREMI Housing and Urban Planning
	Building Permit	SP	Municipal Works Department

*The identification of permits for tailings, considers thickened tailings deposits
Note: SP: Sectoral Permit; PAS: Sectoral Environmental Permit

It should be noted that the applicability of permits associated with the DGA must be confirmed in the following stages of engineering, when more details are available about the works and their relationship with local drainage systems.

The estimated times vary depending on the type of permit, but currently range from 60 days to two years or more. The latter are associated with the DGA (hydraulic works) and the maritime authority (maritime concession).

It should be noted that Chile recently issued the Framework Law on Sectoral Authorizations (Law 21,770, 2025), which aims to simplify and streamline the processing of sectoral permits, reducing processing times. However, its implementation will be gradual and requires the enactment of specific regulations to become fully operational. Considering that the Sulfides Project is still in its early stages, there is some possibility that it may benefit from the application of this law.

Any interference of the sulfates project with current operations that involves modification of the approved environmental and sectoral situation, should be processed within the context of the current approvals.

20.3 Environmental Management

Currently, Dos Amigos' operations have environmental management limited to air and water quality monitoring and waste management in accordance with applicable local legislation. This management was developed with CEMIN personnel from the Catemu Plant operation in the Valparaíso region.

It should be noted that the development of the Project will require the establishment of a specific environmental management system for the site.

20.3.1 Air Quality

Currently, the Dos Amigos Complex do monitoring of Respirable Particulate Matter (PM10) and Sulfur Dioxide (SO_2) as commitments established in RCA N° 137/2019. The results of these monitoring activities are reported monthly to the Superintendency of the Environment (SMA).

Air quality management is an important issue for the project, considering that it is located very close to the town of Domeyko (approximately 2.5 km north of the project) and that, as mentioned above, there are astronomical observatories in the surrounding area.

In the next stage of the project, the air quality baseline must be developed and, based on the project information, an atmospheric dispersion model must be developed to assess the project's impact on air quality and the environmental management measures to be considered.

Furthermore, given that the commune of Vallenar is considered to be of astronomical interest, it is necessary to evaluate the project's luminosity aspects and comply with the applicable legislation in this regard (Supreme Decree No. 1 of 2022 of the Ministry of the Environment) and with the criteria of the Environmental Impact Assessment System on the susceptibility of affecting astronomical areas (SEA, 2024).

20.3.2 Cultural Heritage

As part of the baseline studies to be developed in the context of the project's Environmental Impact Assessment, archaeological and paleontological surveys of the construction site areas will be required. Any findings must be handled in accordance with current legislation on the matter.

20.3.3 Waste Management

This section describes how waste from the project should be managed, based on local regulations.

20.3.3.1 Wastewater

The Dos Amigos Complex currently has a wastewater management system in place. Notwithstanding the above, the sulfide project will require the installation of a system in line with the associated labor. This system must comply with applicable legislation (DFL No. 725/1967) and obtain the required permits (PAS 138).

20.3.3.2 Solid Waste

The Project will require the temporary disposal of domestic solid waste, non-hazardous industrial solid waste, and hazardous solid waste. The disposal of this waste is regulated by Chilean regulations (DFL No. 725/1967) and will require obtaining the applicable permits (PAS 140 for domestic and non-hazardous industrial waste and PAS 142 for hazardous industrial waste).

20.3.3.3 Mining waste

Mining waste for the project will consist of waste rock dumps and tailings deposits.

The environmental management of these facilities must consider aspects of acid mine drainage, potential infiltration into groundwater, and the management of storm water. These issues must be addressed in detail in the next stage of the project's engineering, as they will be fundamental to the project's environmental assessment.

With regard to the tailings deposit, the option of thickened tailings over conventional tailings has significant environmental benefits by reducing size, water content, and minimizing the risk of water contamination.

20.3.4 Water Management

The water supply for the Domeyko Sulfides project relies on an integration with a seawater catchment and its supply corridor. This system includes a 62 km seawater pipeline extending from Bahía Sarco to the Domeyko concentrator plant, and having two intermediate pumping stations.

The selected alignment avoids environmentally sensitive areas, ensuring minimal ecological and operational conflict along such corridor.

The project also counts with fresh groundwater extraction rights for 23.75 l/s, distributed in 4 nearby wells.

The project is located in an arid environment, where natural runoff is limited, it can appear suddenly during short, high-intensity precipitations. Under these conditions, stormwater originating from the surrounding slopes may concentrate rapidly in the quebrada and low areas of the project footprint. To prevent this runoff from entering operational zones, the project incorporates contour channels aligned with the natural topography. These channels intercept and direct clean stormwater around the plant and associated facilities, avoiding contact with process areas and reducing the risk of localized erosion.

Dewatering strategies are still to be defined, based on the information that can be gathered by future groundwater investigations in the pit area.

20.3.5 Monitoring

Based on the EIA developed to obtain the environmental permit, the environmental monitoring required for the sulfide project must be defined. A priori, based on the characteristics of the project and its location, the following monitoring is estimated:

- Air quality (particulate matter and gases).
- Quality and level of groundwater associated with the mine- waste dumps and tailings deposit facilities.

Other monitoring associated with biodiversity or other variables should be defined based on the project's environmental impact assessment.

20.4 Social or Community Impact

The project is located in the Atacama region, in the municipalities of Vallenar (mine-plant area) and Freirina (seawater intake). The mine area is located close to 43 kilometers from the city of Vallenar and about 2.5 kilometers from the town of Domeyko.

According to the 2017 population census, Domeyko has a population of 796. The local economy is based mainly on small and medium-scale mining and seaweed harvesting on the nearby coast.

According to the information available (Wood, 2024), the indigenous communities in the mine and plant area are located more than 40 km from the sector. CEMIN currently has a stakeholder map for the Dos Amigos Complex, which identifies the political, social, economic and institutional actors.

Notwithstanding the above, for the sulfide project, the social studies must be updated and it is recommended that a process of engagement with the stakeholders identified for the project be initiated at an early stage.

Sites N° 3 and N° 4 of the tailings deposit show evidence of artisanal mining. Site N° 3 in particular also shows evidence of livestock use and subsistence agriculture, and a rolled road that provides access to a mining site. These land use issues should be addressed early on in the preliminary and baseline studies to be developed in the project areas in order to identify their sensitivity and management options.

In the coastal sector, according to public information (Environmental Impact Statement for the Expansion of the San Juan Wind Farm. 2023), there are sites of cultural significance to the Diaguita Tierra y Mar indigenous community. There is a potential presence of sites of interest to people belonging to the Changos ethnic group, who are present in the commune of Freirina. This requires the development of early studies to understand the use of the territory and marine space in the sector, including the potential presence of Benthic Resource Management and Exploitation Areas (AMERB) and Protected Coastal Marine Areas (ECMPO).

20.5   Mine Closure

20.5.1   Regulatory Settings

In Chile, mine closure is regulated under Law 20,551/2011 and Supreme Decree No. 41/2012. Both legal bodies regulate mine closure for mine sites and facilities. Law No. 20,551 regulates the closure of mining activities. It establishes that mining projects must submit for approval a closure plan to the Mining Authority (Servicio Nacional de Geología y Minería – acronym in Spanish SERNAGEOMIN) in accordance with the corresponding RCA.

The objective of this closure plan is to integrate and develop all activities and actions aimed to mitigating the effects caused by the mining industry within places where it is developed in order to assure their physical and chemical stability, according to environmental regulations. The Closure Plan has to be approved by SERNAGEOMIN before starting the exploration or exploitation of mining activities or through operation of processing facilities. Additionally, mining projects with an extraction capacity higher than 10,000 tonnes per month must provide a performance bond with closure obligations, the amount of which will be determined based on the periodical estimation of the Closure Plan implementation and management costs.

The law establishes that mine closure plans are part of the life cycle of mine facilities and, thus, should be implemented gradually during the various stages of the mining operation so that, at the end of the mine life, closure activities have been fully implemented in a way that complies with the law. Closure Plans should include a Public Disclosure Program for the community in order to provide information about closure activities, implementation dates, and deadlines for the execution of the actions.

Mining companies subject to the general application procedure must have their Closure Plan audited every five years, at their own expense, according to the oversight program prepared by SERNAGEOMIN.

20.5.2   Current Situation

The "Planta Dos Amigos" site has the following environmental authorizations:

- EIA "Proyecto Minero Dos Amigos" approved by RCA 066/1996
- DIA "Ampliación Proyecto Dos Amigos" approved by RCA 070/1998
- DIA "Ampliación II Proyecto Dos Amigos" approved by 090/2005
- DIA "Ampliación III Proyecto Dos Amigos" approved by 019/2009
- DIA "Modificación Planta de Chancado de minerales Complejo Minero Dos Amigos" approved by 93/2017
- DIA "Reinicio Operacional Planta Dos Amigos" approved by 137/2019

In addition, the "Planta Dos Amigos" site has the following SERNAGEOMIN authorizations:

- "Operación de la Planta de Procesamiento Dos Amigos" approved by Res. No. 661/1997.

- "Proyecto de Explotación y Deposito de Desmontes de Mina Dos Amigos" approved by Res. No. 773/1997.

- "Ampliación de La Planta de Procesamiento Dos Amigos" approved by Res. No. 019/1998

- "Expansión Fase IV y Estudio Estabilidad Fase IV Mina Dos Amigos" approved by Res. No. 115/2006

- "Plan de Cierre Proyecto Mina Dos Amigos" approved by Res. No. 1559/2009

- "Ampliación III Planta Dos Amigos" approved by Res. No. 0245/2014

SERNAGEOMIN has approved a closure plan for the facilities at the Dos Amigos plant through Resolution No. 1270/2025 of June 2025, which was submitted by the mining company CEMIN-PULLALLI.

The main facilities considered in the regulatory closure plan for the Dos Amigos Plant are:

1. Mine

    a. Pit

    b. Waste Dump

2. Hydrometallurgical plants

    a. Crushing plants

    b. Leach pads and leach ponds

    c. SX plant

    d. EW plant

3. Supply systems

    a. Power supply and distribution

    b. Industrial and potable water supply and distribution

    c. Fuel supply and distribution

4. Infrastructure

    a. Administrative facilities

    b. Road infrastructure and internal roads

    c. Operational support infrastructure

    d. Camps, currency exchange offices, and others

    e. Solid industrial waste

    f. Waste water treatment plant

20.5.3   Requirements for Project Scenarios

In accordance with the above, the closure cost estimate was developed considering the following facilities:

- Pit expansion

- Stockpiles

- Waste Storage Facility

- Concentrator Plant

- Truck Shop

- Civic Area

- Fuel Supply

- Wastewater Treatment Plant (WWT)

- Seawater supply from Bahía Quebrada Honda (63 km)

- Energy Supply

- Tailings deposit

The closure cost estimate for this alternative is detailed Table 20.5. Therefore, the total cost closure cost assumes the existing facilities and closures activities from the approved closure plan by SERNAGEOMIN and the alternative described (see Table 20.6).

Table 20.5:   Alternative Closure Cost

Direct Cost (MUSD)	Indirect Cost (MUSD)	20%	Total (MUSD)
119.6		23.9	143.5

As mentioned, the following table present the total closure cost.

Table 20.6:   Alternative Closure Cost + existing facilities

Project (MUSD)	Existing (MUSD)	Facilities[1]	Total (MUSD)
143.5		22.0	165.5

The alternative defined in this PEA, will require an updated Closure Plan according to the law.

_____

[1] Only considers the direct and indirect costs of the regulatory closure plan

21 Capital And Operating Costs

21.1 Introduction

This chapter presents the capital (CAPEX) and operating cost (OPEX) estimates for the Domeyko Project, developed at a Preliminary Economic Assessment (PEA) level. The cost estimates are based on the mine plan, design criteria, and technical assumptions defined in the preceding chapters, including mining methods, processing plant, infrastructure, tailings, and environmental considerations.

Costs were estimated using industry benchmark data, appropriate scaling factors, and engineering judgment.

The capital and operating costs presented in this chapter correspond to the Base Case defined for the project economic evaluation. The Base Case assumes a power supply strategy based on 100% Non-Conventional Renewable Energy (NCRE), adopting a reference electricity price of USD 70/MWh.

21.2 Capital Cost

The capital cost (CAPEX) estimate for the Domeyko Project includes all expenditures required to develop and operate the project under the Base Case configuration. The estimate covers open pit mine development, construction of the processing plant, tailings storage facilities, associated infrastructure, and mine closure activities.

Mining CAPEX represents a significant portion of the initial investment and includes costs related to the acquisition of mining equipment, mine prestripping, and development activities required to enable the planned production schedule. These costs are primarily associated with equipment-based investments and operationally driven infrastructure directly linked to open pit mining.

Processing plant CAPEX includes the costs associated with the concentrator facilities, encompassing major and auxiliary process equipment, civil works, mechanical erection, piping, electrical systems, and instrumentation, as defined by the conceptual process plant design. Capital costs related to plant-support infrastructure are accounted for separately within the infrastructure CAPEX component.

Tailings CAPEX comprises the facilities and infrastructure required for tailings storage and management throughout the life of mine, including staged expansions aligned with the production plan. Closure CAPEX considers conceptual rehabilitation, dismantling, and post-operation environmental commitments for the main project components.

In addition to direct costs, the total CAPEX includes indirect costs such as construction support services, and general construction-related expenses. Contingencies were applied at 35% for all capital components, except for mining CAPEX, where a contingency of 15% was used due to the higher confidence level in equipment-based cost estimates. Sustaining capital has been estimated separately and represents investments required during operations to maintain the Project's production capacity.

The capital cost estimate distinguishes between initial capital, required prior to start-up, and deferred capital, incurred during the operating life of the project as part of staged developments and expansions. A summary of the estimated capital costs for the Base Case, including initial, deferred, and total CAPEX, is presented in Table 21.1.

Table 21.1:   Summary of Initial, Deferred and Total Capital Costs – Base Case

Cost Component	Unit	Initial CAPEX	Deferred CAPEX	Total CAPEX
Mine CAPEX – Open Pit	MUSD	174	332	506
Mine Prestripping	MUSD	33	0	33
Processing Plant CAPEX + Infrastructure	MUSD	448	0	448
Tailings	MUSD	144	125	270
Closure	MUSD		166	166
Total Direct Costs	MUSD	**800**	**623**	**1,422**
Indirect Costs	MUSD	163	78	241
Contingencies	MUSD	291	179	469
Sustaining CAPEX	MUSD		26	26
Pre-Development and Project Definition CAPEX	MUSD	30		30
Total	MUSD	**1,283**	**905**	**2,188**

21.2.1   Mine – Mining Capital Costs

Mining capital costs include the investments required to develop and support the open pit mining operation of the Domeyko Project, in accordance with the mine plan and operational criteria defined in Chapter 16.

Mining CAPEX comprises both initial capital, required to enable production start-up, and deferred capital, incurred during the life of mine to sustain and expand mining activities. Initial mining CAPEX includes the acquisition of the primary loading, haulage, drilling, and auxiliary equipment fleet, as well as mine prestripping activities required to access the initial ore phases. For the Domeyko Project, mine prestripping has been estimated at USD 33 million and is included as part of the initial mining CAPEX.

Deferred mining CAPEX includes additional equipment purchases and capital reinvestments scheduled over the life of mine, in accordance with the mine plan. The mining capital cost estimate was developed using OEM reference pricing, benchmarking data, and engineering judgment.

Facilities and support infrastructure associated with mining operations are included within the Infrastructure CAPEX and are presented separately in 21.2.3.

A summary of the mining capital costs for the Base Case, including initial, deferred, and total CAPEX, is presented in Table 21.2.

Table 21.2:   Mining Capital Cost Breakdown – Direct Costs (Base Case)

Cost Item	Unit	Initial CAPEX	Deferred CAPEX	Total CAPEX
Mine prestripping	MUSD	33.0	0.0	33.0
Loading equipment	MUSD	53.1	71.7	124.8
Haulage equipment	MUSD	79.4	204.1	283.5
Drilling equipment	MUSD	20.6	20.6	41.2
Auxiliary equipment	MUSD	21.0	35.3	56.4
Total Mining CAPEX	MUSD	207.1	331.7	538.8

21.2.2   Processing Plant – Capital Costs

Processing plant capital costs include the investments required for the design, supply, construction, and commissioning of the process facilities of the Domeyko Project, in accordance with the design criteria and capacity defined for the Preliminary Economic Assessment (PEA).

Processing capital includes costs associated with major equipment and process areas, such as crushing, stockpile handling, grinding, flotation, thickening, filtration, and concentrate handling, as well as systems directly integrated into the process flowsheet.

The processing capital cost estimate was developed at a conceptual level based on a process-area breakdown, using reference unit costs, budgetary quotations, benchmarking against comparable projects, and engineering judgment.

General project infrastructure, including power supply, water systems, main pipelines, control room facilities, and other supporting infrastructure, is included within the Infrastructure CAPEX and is presented in Section 21.2.3.

A summary of the processing capital costs, broken down by major process area, is presented in Table 21.3.

Table 21.3: Processing Capital Cost Breakdown by Major Process Area – Direct Costs (Base Case)

Process Area	CAPEX (MUSD)
Crushing	23.9
Stockpile and material handling	8.3
Grinding	53.6
Flotation	30.8
Tailings thickening	43.9
Tailings storage and water recovery	3.8
Concentrate thickening	1.3
Concentrate filtration and storage	29.0
Reagents and flocculants plant	2.9
Electrical and instrumentation	49.4
Plant piping	6.9
Total Processing Plant CAPEX	253.7

Overall, the processing capital for the concentrator plant amounts to USD 253.7 million, reflecting a level of definition consistent with a PEA study. This estimate incorporates the major process equipment and process areas and provides a solid and consistent basis for the economic evaluation of the Base Case.

21.2.3 Infrastructure Capital Costs

Infrastructure capital costs include the investments required to develop the main services and support installations necessary for the construction and operation of the Domeyko Project.

Infrastructure CAPEX includes, among others, power supply, water supply and conveyance systems, tailings pipelines, maintenance workshops, the control room building, and general and administrative facilities, such as the civic camp. These items correspond to project-wide infrastructure and were estimated independently from mining and processing capital costs.

For the purposes of the cost estimate, the Base Case assumes that the Project will be supplied through an electrical power supply system based on renewable energy sources, complemented by the electrical infrastructure required to ensure continuous operation. The different power supply alternatives and their technical configurations are described in Chapter 18 – Project Infrastructure.

A summary of the infrastructure capital costs, broken down by the main components considered, is presented in Table 21.4.

Table 21.4: **Infrastructure Capital Cost Summary – Direct Costs (Base Case)**

Infrastructure	CAPEX (MUSD)
Power Supply	6.29
Water Supply System (Φ 18") (*)	96.9
Truck Workshop	18.1
Tailings Pipes (2 xΦ 20") (*)	40.3
Reclaimed Water Pipe (Φ 30") (*)	21.0
Civic District (Modular Construction)	9.8
Control Room (Only considers the building)	2.0
Total Infrastructure	**194.4**

Overall, the infrastructure capital cost estimate represents a key enabling component for the execution of the mine plan and the operation of the processing plant, providing a consistent basis for the economic evaluation of the Base Case.

21.2.4   Tailings Capital Cost

Tailings management facility capital costs include the investments required for the design, construction, and commissioning of the tailings disposal facilities for the Domeyko Project. These costs have been estimated to support safe and stable tailings management over the life of the Project.

Tailings CAPEX comprises an initial capital component, required to establish the tailings management facilities at the start of operations, and deferred (growth) capital expenditures, associated with the staged expansion of the facilities in line with the Project's production schedule. The capital cost estimate includes the tailings storage facility, containment and stability works, tailings conveyance and discharge systems, and associated water management infrastructure.

A summary of the initial, deferred, and total tailings management facility capital costs considered for the Base Case is presented in Table 21.5.

Table 21.5: Capital Expenditure Schedule – Direct Costs (Initial and Growth CAPEX)

Year	Unit	Initial CAPEX	Deferred CAPEX	Total CAPEX	Comment
1	MUSD	144.4		144.4	
4	MUSD		47.8	47.8	1st Growth
7	MUSD		40.5	40.5	2nd Growth
13	MUSD		27.5	27.5	3rd Growth
21	MUSD		9.6	9.6	Final Growth
Total		**144.4**	**125.4**	**269.8**	

Overall, tailings capital costs amount to USD 269.8 million, including both initial and deferred capital expenditures, and provide a consistent and adequate basis for the economic evaluation of the Base Case.

21.2.5 Closure Capital Cost

Closure costs include the investments required for the rehabilitation and closure of the main facilities of the Domeyko Project, in accordance with standard mining industry practices.

The closure capital cost estimate was developed using a facility-based approach, considering costs associated with the closure of the open pit, waste rock dumps, tailings storage facility, supply systems, as well as other existing facilities and complementary works required to ensure adequate long-term physical and environmental stability at the end of mine life.

A summary of the closure capital costs, is presented in Table 21.6.

Table 21.6: Closure Capital Cost Summary – Direct Costs (Base Case)

Facility / Component	Total CAPEX (MUSD)
Water supply facilities	5.3
Open pit closure	0.3
Waste rock dump closure	78.5
Tailings storage facility closure	59.4
Existing facilities and other closure works	22
Total Closure CAPEX	**165.5**

Overall, closure capital costs amount to MUSD 165.5 million, providing an adequate basis for the economic evaluation of the Base Case.

21.2.6 Pre-Development and Project Definition Capital Costs

Pre-development capital costs include expenditures associated with the acquisition of baseline information and the execution of technical studies required to advance the Domeyko Project from the PEA stage toward pre-feasibility and feasibility. These costs are incurred prior to the start of construction and are considered enabling investments aimed at reducing key technical, environmental, and permitting uncertainties.

The pre-development CAPEX includes, among others, metallurgical and geometallurgical test work, hydrogeological field campaigns and associated studies, drilling programs for geological, geotechnical, and hydrogeological characterization, environmental baseline studies and permitting activities, and engineering work required for the preparation of a future Pre-Feasibility and Feasibility Study´s.

Based on the currently available information, these activities are scheduled primarily during the pre-investment period and include both specific costs and global estimates. The total pre-development and project definition capital expenditure has been incorporated into the economic model as owner's costs incurred prior to the start of construction and will be refined as the Project advances to subsequent study stages.

Table 21.7 summarizes the pre-development and project definition capital expenditures required to advance the Domeyko Project beyond the PEA stage, including owner's costs incurred prior to construction to support technical studies, engineering, and permitting activities.

Table 21.7:   Pre-Development and Project Definition Capital Costs (Base Case)

Category	Unit	CAPEX Year -5	CAPEX Year -4	Total CAPEX
Metallurgical Studies	MUSD	1.0	0.7	1.7
Hydrogeology	MUSD	1.3	1.6	2.9
PFS Engineering Studies	MUSD	3.0		3.0
FS Engineering Studies	MUSD		5.4	5.4
Environmental & Permitting (EIA)	MUSD	1.5	1.5	3.0
Drilling Programs	MUSD	8.4	5.3	13.7
Total Pre-Development CAPEX	**MUSD**	**15.2**	**14.5**	**29.7**

21.3 Operating Costs (OPEX)

Operating costs (OPEX) for the Domeyko Project correspond to the recurring expenditures associated with mining operations, processing plant operations, infrastructure, tailings management, and general administration, in accordance with the mine plan and operating criteria.

OPEX estimates were developed at a conceptual level using reference unit costs, historical information from comparable projects, and engineering judgment. Costs are presented in U.S. dollars and correspond to the Base Case.

Table 21.8 summarizes the Project operating costs on a life-of-mine basis, expressed in million U.S. dollars (MUSD). The table provides a consolidated overview of the relative contribution of mining, processing, and tailings management activities to total Project operating costs and serves as a reference framework for the detailed operating cost discussions presented in the following sections.

Table 21.8:   **Summary of Project Operating Costs (Life-of-Mine Basis)**

Cost Component	Unit	Cost
Mining – Open Pit	**MUSD**	**2,701**
Processing Plant	**MUSD**	**2,341**
Crushing Plant	MUSD	98
SAG Milling	MUSD	1,117
Flotation	MUSD	319
Water Supply	MUSD	211
Concentrate Thickening and Filtration (Cu/Au)	MUSD	171
Tailings (Process and Geotechnical)	MUSD	425
Concentrator Administration	**MUSD**	**326**
Tailings Storage Facility (Operations)	**MUSD**	**98**
Total Project Operating Costs	**MUSD**	**5,466**

21.3.1 Mining Operating Costs Estimation

Mine operating costs were estimated using a disaggregated approach, considering the main components of the mining cycle: drilling, blasting, loading, haulage, auxiliary equipment, and general and administrative expenses (G&A). Each component was calculated using its corresponding operational drivers, such as extracted tonnage, total material moved, and haulage distances.

For each component, the estimate includes, as applicable, labor, fuel, tires, supplies and power, and maintenance costs. Fuel consumption and maintenance costs were valued using equipment-specific factors and hourly rates applied to operating hours defined in the mine plan. General and administrative (G&A) costs were estimated based on benchmarking values, using references from mining projects comparable in terms of scale and type of operation.

Drilling and blasting costs were calculated based on extracted ore tonnage, while loading, haulage, auxiliary equipment, and G&A costs were estimated based on total material moved. For reporting purposes, unit mining costs are expressed in USD per tonne (USD/t); for drilling and blasting, the unit cost is calculated using extracted tonnage, whereas for the remaining unit operations it is calculated using total material moved.

Table 21.9 summarizes the unit mining operating costs by component, including total mine operating cost, mining cost excluding haulage, and haulage cost expressed in USD per wet metric tonne-kilometre (USD/wt-km), allowing for a clear understanding of the relative contribution of each activity to total mine OPEX.

Table 21.9:   Summary of Unit Mining Operating Costs

Cost Component	Unit cost	Unit	Total Cost	Unit
Drilling	0.16	USD/t	200	MUSD
Blasting	0.27	USD/t	344	MUSD
Loading	0.31	USD/t	391	MUSD
Hauling	0.96	USD/t	1,214	MUSD
Auxiliary Equipment	0.26	USD/t	324	MUSD
G&A	0.18	USD/t	228	MUSD
Total Mine OPEX	**2.13**	USD/t	**2,701**	**MUSD**
Mining Cost without Hauling	1.17	USD/t	1,487	MUSD
Hauling (distance-based)	0.23	USD/t-km		

Note: Total costs (MUSD) correspond to life-of-mine accumulated values. The distance-based haulage cost is presented as a unit coefficient (USD/t-km) and is included within total haulage costs.

Year 1 corresponds to the pre-stripping period of the Project. Mining activities performed during this period are related to waste removal required to access the orebody and are therefore classified as capital expenditures (pre-stripping CAPEX) in the economic evaluation.

Figure 21.1, shows the evolution of unit mining operating cost by period, broken down by cost component, expressed in USD per wet metric tonne (USD/wt).
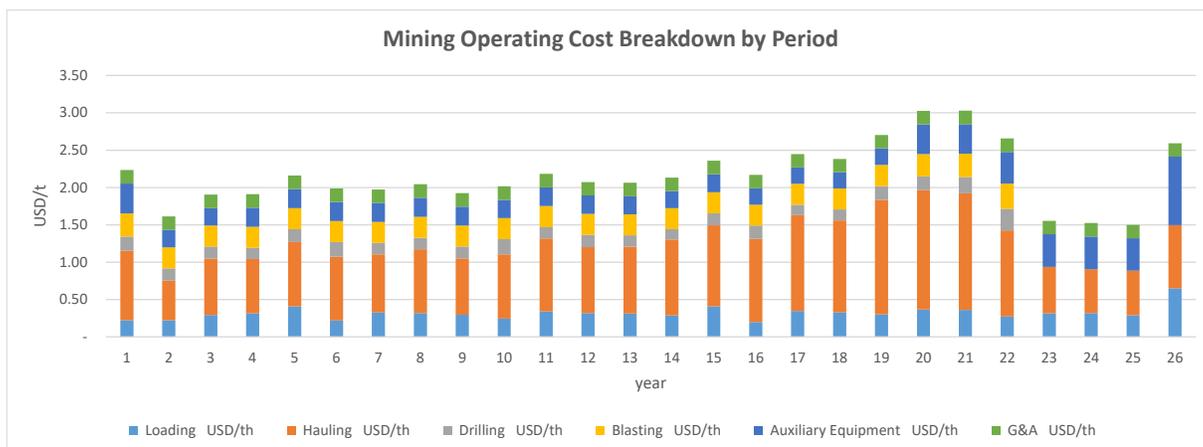
Figure 21.1: Evolution of Unit Mining Operating Cost by Component over the Life of Mine (USD/wt)

Overall, the evolution of unit mining operating costs consistently reflects changes in mining sequence, haulage distances, and production rates throughout the life of the project. The cost increase observed during higher production periods, followed by a ramp-down phase and subsequent processing of stockpiled ore, results in an operating cost profile that is internally consistent and provides adequate support for the mining OPEX assumptions used in the project economic evaluation.

21.3.2 Processing Plant Operating Costs Estimation

21.3.2.1 Overview

The processing plant operating costs for the Domeyko Project include all activities required to process run-of-mine material from reception through to the production of final copper concentrate. These activities comprise crushing, grinding, flotation, concentrate thickening and filtration, tailings handling, water management, and associated auxiliary services.

Process-related tailings handling costs within the concentrator are included in processing plant operating costs, while site-based Tailings Storage Facility operating costs are estimated separately and presented in this section.

21.3.2.2 Basis of Estimation

Processing plant operating costs were estimated using a bottom-up, disaggregated approach based on the main functional areas of the concentrator. The estimate considers the principal cost drivers associated with ore processing, including throughput, energy consumption, reagent usage, water supply requirements, labor, maintenance, and general plant services.

Unit operating costs were developed using a combination of conceptual design parameters, benchmark data from comparable operations, and typical consumption factors applicable at a PEA level. Where applicable, costs include labor, materials and consumables, power, maintenance, and contracted services. Energy and consumable consumption were estimated using unit factors applied to the plant throughput defined in the mine plan.

Processing-related tailings handling activities within the concentrator, including thickening, filtration, and process water management, are included within the processing plant operating costs. Operating costs associated with the Tailings Storage Facility (TSF) are estimated separately and are presented in Section 21.3.3.

The resulting processing plant operating costs are expressed as unit costs per tonne of ore processed (USD/t) and as annual costs (MUSD/year). Life-of-mine processing operating costs are summarized separately to support consistency with the economic evaluation.

Table 21.10 presents a summary of the processing plant operating costs by expenditure item:

Table 21.10: Processing Plant Operating Cost Breakdown

Cost Item	KUSD/year	USD/t ore processed
Labor wage costs	17,245	1.35
Materials and Supplies	43,701	3.42
Energy	25,201	1.97
Administration, Contracted Services	15,781	1.24
Seawater supply	7,927	0.62
Total concentrator	**109,854**	**8.60**

Table 21.11 and Table 21.12 summarize the processing plant operating costs, providing complementary views of concentrator operating expenditures. Table 21.10 presents the distribution of operating costs by major functional area of the concentrator, expressed as annual costs (MUSD/year) and unit costs per tonne of ore processed (USD/t ore processed). Table 21.11 complements this information by summarizing processing operating costs on a life-of-mine basis, expressed as unit costs per tonne of ore processed and corresponding total costs in MUSD, supporting consistency with the economic evaluation.

Table 21.11: Processing Plant Operating Costs by Unit Operation

AREA COSTS	MUSD/year	USD/t ore processed
Plant Administration	13.1	1.05
Crushing Plant	4.0	0.31
SAG Milling	46.0	3.60
Flotation	13.1	1.03
Water Supply	8.6	0.68
Concentrate Thickening and Filtration	7.0	0.55
Tailings (Process and Geotechnical)	17.5	1.37
TOTAL CONCENTRATOR	**109.9**	**8.60**

Table 21.12: Processing Operating Costs Summary

	Unit cost (USD/t of ore processed)	Total Cost	Unit
Crushing Plant	0.31	98	MUSD
SAG Grinding	3.60	1,117	MUSD
Flotation	1.03	319	MUSD
Water Supply	0.68	211	MUSD
Copper/Gold Concentrate Thickening and Filtration	0.55	171	MUSD
Tailings (Process and Geotechnical)	1.37	425	MUSD
Processing Subtotal	7.55	2,341	MUSD
Concentrator Administration	1.05	326	MUSD
Total	8.60	2,667	MUSD

21.3.2.3 Plant Administration

General and administrative (G&A) costs associated with the concentrator plant were estimated on a unit basis, expressed per tonne processed. A value of USD 0.7 per tonne was applied to the plant operating throughput and incorporated into the processing plant operating cost. These costs include plant-level administrative functions and support services directly related to the operation of the concentrator.

21.3.2.4 General Considerations

The operating cost of the Domeyko concentrator plant, with a nominal processing capacity of 35,000 tpd, was estimated at USD 9.6 per tonne under conventional grid electricity pricing assumptions. This value is consistent with benchmarking data from concentrator plants of comparable scale and complexity, such as the Manto Verde operation, which processes approximately 32,000 tpd.

Processing plant operating costs are highly sensitive to electricity pricing. The evaluation of renewable energy supply options available in the III Region of Chile indicates that plant operating costs could be reduced to approximately USD 8.6 per tonne. Accordingly, this renewable energy supply option has been adopted as the base case for the processing plant and should be further assessed and refined during the Pre-Feasibility Study (PFS) stage.

The level of detail provided in this section reflects the relative importance of processing costs to the Project economics and supports the robustness of the processing operating cost estimate at a PEA level.

21.3.3 Tailings Storage Facility Operating Costs

Operating costs associated with the Tailings Storage Facility (TSF) include the expenditures required for the continuous operation of the facility following the start-up of mining operations and throughout the operational life of the Project. These costs are related to tailings discharge activities, on-site equipment operation, and routine operational control of the facility.

The TSF operating cost estimate includes labor and equipment costs associated with tailings deposition, embankment management during operations, surface preparation, and general site activities. Staffing levels and equipment requirements were estimated based on benchmark data from tailings storage facilities with comparable characteristics and operating conditions.

TSF operating costs have been estimated on an annual basis and are incorporated into the Project operating cost model as a separate cost component. The technical basis, cost assumptions, and annual cost distribution for TSF operations are described in detail in Chapter 18 – Tailings Storage Facility.

Table 21.13 summarizes the estimated annual operating costs for the Tailings Storage Facility. These costs are included as a separate component within the total Project operating costs and are directly incorporated into the economic cash flow model.

Table 21.13: Tailings Storage Facility Operating Costs Summary

Cost Component	Unit	Value
Labor	MUSD/year	2.58
Equipment	MUSD/year	1.35
Total TSF Operating Costs	**MUSD/year**	**3.93**

22 Economic Assessment

22.1 Introduction

This chapter presents the Preliminary Economic Assessment (PEA) of the mining project, with the objective of estimating its economic viability and value generation potential under a defined set of technical, operational, and market assumptions, consistent with the level of definition associated with this stage of study.

The Project considers a medium-scale mining operation, with an annual production below 50 ktmf (kilotonnes of fine metal), a mine life of 26 years (LOM), and a pre-operational period estimated at approximately 5 to 6 years, which includes the stages of engineering, environmental permitting and approvals, construction, and commissioning. The start of the concentrator ramp-up is projected for early 2032, which defines the Base Case scenario for the economic evaluation.

The economic valuation is performed using constant prices, without time escalation. The market assumptions adopted include a copper price of USD 4.3/lb, a gold price of USD 2,500/oz, and an electricity price of USD 70/MWh, corresponding to non-conventional renewable energy supply. Operating costs are estimated using an input–output approach, while sustaining capital costs are assumed to be equivalent to 1.5% per year of the mobile equipment CAPEX. Capital investment costs are determined based on benchmarking of comparable projects, incorporating contingencies of 35% for plant CAPEX and 15% for mining CAPEX, consistent with the level of uncertainty associated with a PEA-level study.

The economic evaluation is presented on both a pre-tax and post-tax basis, in accordance with the current Chilean tax and mining royalty framework. The post-tax analysis incorporates the Chilean Mining Royalty established under Law No. 21,591 and subsequent amendments, applying the royalty regime corresponding to the Project's annual fine copper production level.

For the production range considered in this Preliminary Economic Assessment, the royalty is calculated under the component applicable to operations with average annual sales below 50,000 tonnes of fine copper, based on a marginal rate applied to the mining operating taxable income (RIOMA), in accordance with Article 4 of the Royalty Law and the effective rates defined in Annex Table 2 of Chilean Internal Revenue Service (SII) Circular No. 3. Accordingly, the royalty is calculated on the mining operating margin rather than on gross sales.

In addition, the evaluation includes the First Category Income Tax at a rate of 27%, applied in accordance with current Chilean tax legislation, with taxable income reflecting depreciation allowances and the effect of initial capital expenditures. The following table provides a summary of the baseline scenario.

Tabla 22.1: Base case summary

Parameters	Unit	Base Case 100% Renewable Energy
Copper Price (Pcu)	USD/lb	4.3
Gold Price (Pau)	USD/oz	2,500
G&A Cost	USD/t milled	1.2
Copper Recovery	%	88
Gold Recovery	%	65
Copper Payability	%	96.6
Gold Payability	%	95
Minimum Payable Gold Grade	g/t concentrate	1
Plant + Infrastructure Contingency	%	35
Mining Contingency	%	15
Power Price	USD/MWh	70
Total Capex (with Prestripping)	MUSD	2,188
Concentrator Total Operating Costs	MUSD	5,466
Royalty *(This is an average, as it is calculated based on Average Annual Sales (MTFC)*	%	1.17
Corporate Income Tax	%	27

In addition, sensitivity analyses are carried out on the main economic variables of the Project, including metal prices, CAPEX, and OPEX, in order to assess the robustness of the results and the Project's value exposure to variations in key assumptions.

Given the preliminary nature of the evaluation, it is important to note that this study does not constitute a definitive assessment of economic viability, but rather a high-level approximation that incorporates a higher degree of uncertainty and risk compared to pre-feasibility or feasibility studies. In this context, the future availability of inputs, equipment, and services is assumed under market conditions consistent with current demand, as well as supply lead times in line with industry benchmarks. Accordingly, the results should be interpreted as a basis for identifying optimization opportunities, defining alternative scenarios, and supporting strategic decision-making, rather than as a basis for final investment decisions.

22.2　Methodology Used

The economic evaluation of the Project is developed using a Discounted Cash Flow (DCF) approach, a methodology widely accepted in the mining industry for the estimation of the economic value of long-term projects. The analysis is based on annual cash flows defined from the start year of the model in 2026, covering the full period of Project development, construction, operation, and closure.

Project revenues are estimated based on the metal production profiles defined by the mine plan, which consider extraction, processing, and recovery rates applicable to each period. The valuation of metal products incorporates metallurgical deductions, minimum payable grades, and payability factors, realistically reflecting typical commercial terms for the sale of copper concentrates and the valuation of contained gold. In addition, realization costs are included, such as transportation, freight, insurance, refining charges, and other costs associated with concentrate marketing.

The cost structure considers both operating costs (OPEX) and capital costs (CAPEX), explicitly including cost components associated with mining, processing, and tailings disposal. Capital costs incorporate contingencies consistent with the level of definition of the study, while closure costs are included as a negative cash flow at the end of the Project life, reflecting the estimated closure and post-closure obligations.

The economic model incorporates an accelerated depreciation scheme for assets, consistent with the applicable tax regulations, allowing the fiscal impact of the Project to be appropriately reflected over time. On this basis, applicable taxes are calculated, including income taxes and other relevant levies, enabling the determination of both pre-tax and post-tax cash flows.

Cash flows are discounted using a real discount rate of 8%, applied consistently to both pre-tax and post-tax cash flows, in order to estimate comparable economic indicators and evaluate Project value generation under both approaches. All values are expressed in real terms, without inflation adjustments, assuming constant prices, costs, and economic assumptions over the evaluation horizon.

This methodology provides a coherent and transparent framework for evaluating the economic viability of the Project under a copper concentrate production scheme with gold as a by-product, allowing assessment of its financial performance, sensitivity to key variables, and value generation potential under the assumptions defined for a PEA-level study.

22.3　Financial Model Parameters

22.3.1　Production Plan

The financial model is developed based on the mineral resources defined in Chapter 15 of this report, incorporating Measured, Indicated, and Inferred Resources, with the objective of providing an integrated assessment of the overall economic potential of the Project, consistent with the level of definition associated with a PEA-level evaluation. Metallurgical recoveries for payable metals over the life of mine were determined based on metallurgical test work, reflecting the expected behavior of the ore under the processing conditions considered in the study.

The mine plan considers a 26-year mine life (LOM), with a total of 310 Mt of ore, at average grades of 0.35% Cu and 0.251 g/t Au. Total fine copper production amounts to approximately 945 kt, equivalent to an average annual production of approximately 40 ktmf. In the case of gold, total cumulative production over the Project life reaches approximately 1.5 Moz.

Table 22.1 and Table 22.2 presents the mine plan for the evaluated scenario, together with the associated annual and cumulative production profiles, which form the basis for the estimation of revenues and cash flows in the economic model. For the purposes of this economic evaluation, all tonnages are expressed in kilotonnes of dry metric tonnes (kt dmt), unless otherwise stated.

Table 22.1: Mine Plan and Production Summary – Base Case

Item	Unit	Total	1	2	3	4	5	6	7	8	9	10	11	12
Ore to Concentrator from Mine	kt dmt	244,325	0	10,220	12,775	12,775	12,775	12,775	12,775	12,775	12,775	11,043	12,560	11,040
TCu Grade from Mine	%	0.37	0	0.43	0.41	0.41	0.39	0.36	0.38	0.37	0.33	0.36	0.37	0.34
Au Grade from Mine	ppm	0.28	0	0.32	0.36	0.29	0.33	0.26	0.28	0.22	0.24	0.28	0.29	0.21
Ore to Concentrator from Stockpiles	kt dmt	65,772	0	0	0	0	0	0	0	0	0	1,732	215	1,735
TCu Grade from Stockpiles	%	0.25	0	0	0	0	0	0	0	0	0	0.24	0.24	0.26
Au Grade from Stockpiles	ppm	0.148	0	0	0	0	0	0	0	0	0	0.166	0.163	0.163
Ore to Concentrator (Total)	kt dmt	310,097	0	10,220	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775
TCu Grade to Concentrator	%	0.35	0	0.43	0.41	0.41	0.39	0.36	0.38	0.37	0.33	0.34	0.37	0.33
Au Grade to Concentrator	ppm	0.251	0	0.323	0.364	0.294	0.334	0.258	0.276	0.216	0.238	0.264	0.288	0.204
Contained Fine Copper	t	1,071,403	0	44,113	52,750	51,939	49,629	46,110	48,343	46,902	42,270	43,892	47,428	41,565
Contained Fine Gold	t	77.985	0	3.3	4.64	3.75	4.27	3.29	3.52	2.76	3.04	3.38	3.68	2.61
TCu Recovery	%	88.21	0	88.31	88.39	88.37	88.39	88.36	87.99	88.39	88.39	88.33	88.24	88.38
Au Recovery	%	64.61	0	64.48	64.39	64.41	64.39	64.46	65.07	64.39	64.39	64.49	64.68	64.41
Recovered Fine Copper	kt	945,033	0	38.96	46.63	45.9	43.87	40.74	42.54	41.46	37.36	38.77	41.85	36.73
Recovered Fine Gold	t	50.39	0	2.13	2.99	2.42	2.75	2.12	2.29	1.78	1.96	2.18	2.38	1.68
Ore to High-Grade Stockpile	kt dmt	10,677	0	2,291	104	1,703	881	2,191	383	648	491	204	2	758
TCu Grade – High-Grade Stockpile	%	0.33	0	0.33	0.34	0.33	0.33	0.33	0.33	0.32	0.32	0.31	0.35	0.33
Ore to Low-Grade Stockpile	kt dmt	55,095	0	5,318	5,973	9,004	4,775	3,864	1,825	7,045	2,197	1,732	215	1,305
TCu Grade – Low-Grade Stockpile	%	0.23	0	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.24	0.22	0.24	0.22
Ore to Stockpiles (Total)	kt dmt	65,772	0	7,609	6,077	10,707	5,656	6,055	2,207	7,693	2,687	1,936	217	2,062
Waste to Waste Dump	kt dmt	880,256	14,509	42,171	41,148	36,518	41,569	41,170	45,018	39,532	44,538	47,021	47,223	46,898
Total Mine Extraction	kt dmt	1,190,353	14,509	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Total Stockpile Rehandling	kt dmt	65,772	0	0	0	0	0	0	0	0	0	1,732	215	1,735

Table 22.2:   Mine Plan and Production Summary – Base Case

Item	Unit	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Ore to Concentrator from Mine	kt dmt	11,019	6,725	11,171	12,387	12,775	11,610	11,140	12,775	12,742	7,694	0	0	0	0
TCu Grade from Mine	%	0.32	0.29	0.33	0.46	0.32	0.33	0.32	0.39	0.44	0.42	0	0	0	0
Au Grade from Mine	ppm	0.29	0.21	0.22	0.33	0.24	0.32	0.22	0.25	0.34	0.34	0	0	0	0
Ore to Concentrator from Stockpiles	kt dmt	1,756	6,050	1,604	388	0	1,165	1,635	0	33	5,081	12,775	12,775	12,775	6,052
TCu Grade from Stockpiles	%	0.24	0.24	0.24	0.26	0	0.23	0.26	0	0.23	0.33	0.27	0.23	0.23	0.23
Au Grade from Stockpiles	ppm	0.16	0.157	0.15	0.149	0	0.146	0.147	0	0.143	0.152	0.146	0.143	0.143	0.143
Ore to Concentrator (Total)	kt dmt	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	12,775	6,052
TCu Grade to Concentrator	%	0.31	0.27	0.32	0.45	0.32	0.32	0.31	0.39	0.44	0.39	0.27	0.23	0.23	0.23
Au Grade to Concentrator	ppm	0.274	0.187	0.214	0.328	0.244	0.301	0.215	0.247	0.337	0.265	0.146	0.143	0.143	0.143
Contained Fine Copper	t	39,312	34,058	40,575	57,682	41,165	41,209	39,872	49,690	56,390	49,265	33,895	29,651	29,651	14,047
Contained Fine Gold	t	3.5	2.39	2.73	4.2	3.11	3.85	2.74	3.15	4.31	3.38	1.87	1.82	1.82	0.86
TCu Recovery	%	88.17	88.3	88.37	88.24	87.71	87.91	87.73	88.03	87.83	88.15	88.33	88.34	88.34	88.34
Au Recovery	%	64.83	64.61	64.43	64.66	64.82	65.32	65.22	64.6	64.69	64.44	64.45	64.44	64.44	64.44
Recovered Fine Copper	kt	34.66	30.07	35.86	50.9	36.11	36.23	34.98	43.74	49.53	43.43	29.94	26.19	26.19	12.41
Recovered Fine Gold	t	2.27	1.54	1.76	2.71	2.02	2.52	1.79	2.04	2.79	2.18	1.2	1.18	1.18	0.56
Ore to High-Grade Stockpile	kt dmt	776	59	59	114	0	14	0	0	0	0	0	0	0	0
TCu Grade – High-Grade Stockpile	%	0.33	0.32	0.31	0.33	0	0.31	0	0	0	0	0	0	0	0
Ore to Low-Grade Stockpile	kt dmt	1,756	5,990	1,545	274	0	1,151	593	500	33	0	0	0	0	0
TCu Grade – Low-Grade Stockpile	%	0.22	0.22	0.23	0.23	0	0.21	0.22	0.22	0.21	0	0	0	0	0
Ore to Stockpiles (Total)	kt dmt	2,531	6,050	1,604	388	0	1,165	593	500	33	0	0	0	0	0
Waste to Waste Dump	kt dmt	56,449	57,225	57,225	57,225	57,225	57,225	41,836	6,811	1,310	410	0	0	0	0
Total Mine Extraction	kt dmt	70,000	70,000	70,000	70,000	70,000	70,000	53,569	20,086	14,085	8,104	0	0	0	0
Total Stockpile Rehandling	kt dmt	1,756	6,050	1,604	388	0	1,165	1,635	0	33	5,081	12,775	12,775	12,775	6,052

22.3.2 Smelting and Refining Terms

The evaluated case considers the production of a copper concentrate with payable gold content, intended for sale on the international market.

The total cost of concentrate selling has been estimated at 40 US¢/lb of copper and includes all components associated with concentrate commercialization, including inland transportation from the processing plant to port, ocean freight, loading and unloading costs, commissions, insurance, sampling, financial costs, as well as the applicable treatment and refining charges (TC/RC) for the copper concentrate.

The produced concentrate is classified as a clean concentrate; therefore, no penalties for deleterious elements are considered in the commercial terms.

The smelting and refining assumptions used for the processing of the copper concentrate are based on benchmarks from comparable projects and operations, representative of market conditions for concentrates with similar characteristics. These assumptions are summarized in the table presented below.

Table 22.3:   Smelting and Refining Assumptions – Copper Concentrate

Item	Unit	Value
Concentrate Grade	%	26%
Copper Payability	%	96.6%
Inland Transportation Cost to FOB Port and Port Charges	USD/dmt concentrate	40
Treatment Charge (TC)	USD/dmt concentrate	86
Ocean Freight Cost	USD/t concentrate	54
Commissions + Sampling + Financial Costs	USD/lb Cu payable	0.0064
Copper Refining Charge (RC)	USD/lb Cu payable	0.086
Gold Payability	%	95%
Minimum Payable Gold	g/t concentrate	1
Gold Refining Charge	USD/oz Au payable	5

22.3.3 Metal Prices

Metal prices used in the economic evaluation of the Domeyko Project were estimated based on long-term forecasts published by various companies and industry analysts, considering representative values for evaluation purposes.

Table 22.4 summarizes the long-term prices adopted for copper and gold in the Base Case scenario of the evaluation.

Table 22.4: Commodity Price Assumptions

Commodity	Unit	LOM
Copper	USD/lb	4.3
Gold	USD/oz	2,500

22.3.4 Capital and Operating Cost

Operating costs were estimated primarily using an input–output methodology, complemented by benchmarking against comparable mining operations, allowing for a representative reflection of the costs associated with mining and processing operations. Mining costs include drilling, blasting, loading, and haulage activities, while processing costs include crushing, grinding, flotation, auxiliary services, and energy consumption. For power supply, a non-conventional energy price of USD 70/MWh was assumed, covering 100% of the Project's energy demand. In addition, general and administrative (G&A) costs were estimated at USD 1.2 per tonne of ore, representing on average approximately 6% of total operating expenditures.

Capital cost estimation considers the main areas of the Project, including mining, processing plant, and tailings disposal. Mining CAPEX was estimated based on the equipment fleet requirements defined by the mine plan and the haulage distances considered, while processing plant CAPEX incorporates the estimation of process equipment and associated infrastructure. Tailings CAPEX includes the infrastructure required for tailings disposal and management over the life of the Project. An indirect cost factor of 30% was applied to direct costs, and contingencies of 35% for plant CAPEX and 15% for mining CAPEX were included, consistent with the level of definition associated with a PEA-level evaluation.

Overall, these estimates are intended to coherently reflect the expected costs of the Project, recognizing the uncertainties inherent to this stage of evaluation.

Table 22.5 summarizes the Project capital expenditures for the Base Case, distinguishing between initial and deferred capital and presenting the resulting total CAPEX by major cost component.

Table 22.6 complements this information by summarizing the Project operating costs on a life-of-mine basis, providing a consolidated view of the relative contribution of mining, processing, tailings management, and general and administrative activities to total operating expenditures.

Table 22.5: Summary of Initial, Deferred and Total Capital Costs – Base Case

Cost Component	Unit	Initial CAPEX	Deferred CAPEX	Total CAPEX
Mine CAPEX – Open Pit	MUSD	174	332	506
Mine Prestripping	MUSD	33	0	33
Processing Plant CAPEX + Infrastructure	MUSD	448	0	448
Tailings	MUSD	144	125	270
Closure	MUSD		166	166
Total Direct Costs	MUSD	**800**	**623**	**1,422**
Indirect Costs	MUSD	163	78	241
Contingencies	MUSD	291	179	469
Sustaining CAPEX	MUSD		26	26
Pre-Development and Project Definition CAPEX	MUSD	30		30
Total	MUSD	**1,283**	**905**	**2,188**

Table 22.6: Summary of Project Operating Costs (Life-of-Mine Basis)

Cost Component	Unit	Cost
Mining – Open Pit	MUSD	2,701
Processing Plant	MUSD	2,341
Crushing Plant	MUSD	98
SAG Milling	MUSD	1,117
Flotation	MUSD	319
Water Supply	MUSD	211
Concentrate Thickening and Filtration (Cu/Au)	MUSD	171
Tailings (Process and Geotechnical)	MUSD	425
Concentrator Administration	MUSD	326
Tailings Storage Facility (Operations)	MUSD	98
Sub Total Operating Cost	MUSD	5,466
G&A	MUSD	372
Total	MUSD	5,838

22.3.5   Royalties and Taxes

SRK does not provide expert tax advice. The tax assumptions used in the economic evaluation are based on a simplified taxation framework applied for economic modelling purposes at a Preliminary Economic Assessment (PEA) level.

For the purposes of the financial model, the Chilean Mining Royalty is applied in accordance with the current royalty legislation (Law No. 21,591 and subsequent amendments). Based on the Project's average annual fine copper production, the royalty is calculated under the regime applicable to operations with annual sales below 50,000 tonnes of fine copper. Under this regime, the royalty is determined using a marginal rate applied to the mining operating taxable income (RIOMA), rather than on gross sales.

The applicable marginal royalty rates are determined as a function of the Project's annual fine copper production, expressed in metric tonnes of fine copper (MTFC), and are summarized in Table 22.7.

Table 22.7:   Chilean Mining Royalty – Marginal and Effective Rate Assumptions (MTFC Basis)

Average Annual Sales (MTFC)	Marginal Royalty Rate (%)	Effective Royalty Rate (%)
0 – 12,000	0.00%	0.00%
12,000 – 15,000	0.40%	0.03%
15,000 – 20,000	0.90%	0.18%
20,000 – 25,000	1.40%	0.34%
25,000 – 30,000	1.90%	0.56%
30,000 – 35,000	2.40%	0.79%
35,000 – 40,000	2.90%	1.03%
40,000 – 50,000	4.40%	1.85%

Marginal royalty rates are applied on a marginal basis according to average annual fine copper sales. The effective royalty rate represents an indicative average rate applicable to the mining operating taxable income (RIOMA) for each production range, based on the guidance provided in SII Circular No. 3. These rates are applied in simplified form for economic modelling purposes within this PEA.

In addition, a corporate income tax rate of 27% is applied to the taxable income of mining producers, consistent with Chile's semi-integrated tax system. For tax calculation purposes, straight-line depreciation over a five-year useful life is assumed.

Additional details regarding the mining royalty legislation, applicable guidance issued by the Chilean Internal Revenue Service (SII), and the methodology applied for royalty calculation in the financial model are provided in Appendix 5.

22.4   Financial Results

The economic evaluation is developed using a Discounted Cash Flow (DCF) approach, considering 2026 as the base year. The start of the concentrator ramp-up is projected for early 2032. A real discount rate of 8% is applied for project valuation, both to pre-tax and after-tax cash flows. Metal prices, as well as operating and capital costs, are expressed in real terms; therefore, no inflation adjustments are considered in the economic model.

The Net Present Value (NPV) at an 8% discount rate amounts to USD 560 million before taxes and USD 328 million after taxes.

Table 22.8 summarizes the life-of-mine economic results of the Project, including revenues, operating costs, taxes, cash flows, and NPV metrics derived from the discounted cash flow analysis.

Table 22.9 summarizes the annual production, revenues, capital expenditures, operating costs, and cash flows used in the discounted cash flow analysis. The information is presented on a year-by-year basis from the start of the evaluation period through the end of the Project life, and forms the basis for the calculation of pre-tax and after-tax cash flows and associated economic indicators.

These economic results are based on a mine plan that contains a high percentage of inferred resources, so improved resource information is needed to validate these results.

Table 22.8: Summary of Project Economic Results (Life-of-Mine Basis)

Revenue	Unit	Value
Cu Revenue	MUSD	7,807.4
Au Revenue	MUSD	3,562.9
Total Revenue	**MUSD**	**11,370.3**

Costs	Unit	Value
Concentrator Total Operating Costs	MUSD	5,465.5
Leach Plant Total Operating Costs	MUSD	0.0
G&A	MUSD	372.1
Total Operating Costs	**MUSD**	**5,871.0**

EBITDA	**MUSD**	**5,499.4**

Depreciation	MUSD	-2,154.6

Taxes	Unit	Value

Royalty		
Total Cu Fines	kt CuF	945.0
Tax %	%	0.0
EBITDA	MUSD	5,499.4
Royalty to pay	**MUSD**	**53.1**

Taxable Income Before Tax, After Royalty	MUSD	5,446.3
Depreciation	MUSD	-2,154.6
Cumulative Positive Taxable Income (after loss carryforward)	MUSD	3,291.7
Corporate Income Tax (27%)	**MUSD**	**937.7**

Net Operating Cash Flow After Taxes	**MUSD**	**4,508.6**

Cashflow	Unit	Value
Before Tax Cashflow	MUSD	3,344.8
NPV Before Tax @ 8%	**MUSD**	**560.3**

After Tax Cashflow	MUSD	2,354.0
NPV After Tax @ 8%	**MUSD**	**327.6**

Table 22.9: Annual Cash Flow Summary – Base Case

Ítem	Unit	Total	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Production																	
Cu Fines Recovered	kt CuF	945	0	0	0	0	0	0	39	47	46	44	41	43	41	37	39
Au Fines Recovered	oz	1,503,175	0	0	0	0	0	0	63,701	90,394	72,012	82,984	63,171	68,445	51,992	58,331	65,181
CAPEX																	
Total Capex	MUSD	2,188	15	14	37	111	452	653	20	2	99	7	0	81	6	31	23
Selling Costs																	
Copper Selling Cost	MUSD	847	0	0	0	0	0	0	35	42	41	39	37	38	37	33	35
Gold Selling Cost	MUSD	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue																	
Total Revenue	MUSD	11,370	0	0	0	0	0	0	473	599	550	559	486	514	466	447	475
Operational Costs																	
Concentrator Total Operating Costs	MUSD	5,466	0	0	0	0	0	0	190	230	231	246	236	234	239	231	241
EBITDA																	
EBITDA	MUSD	5,499	0	0	0	0	0	0	190	230	231	246	236	234	239	231	241
Revenue After Tax	MUSD	4,509	0	0	0	0	0	0	270	352	303	296	209	200	163	151	165
Cashflow																	
Before Tax Cashflow	MUSD	560	-15	-14	-37	-111	-452	-653	251	353	205	291	235	183	206	169	196
After Tax Cashflow	MUSD	328	-15	-14	-37	-111	-452	-653	250	351	204	289	209	120	158	120	142

Table 22.10: Annual Cash Flow Summary – Base Case

Ítem	Unit	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Production																	
Cu Fines Recovered	kt CuF	42	37	35	30	36	51	36	36	35	44	50	43	30	26	26	12
Au Fines Recovered	oz	71,319	49,412	68,750	45,916	52,086	80,913	60,382	76,407	53,186	60,025	83,438	64,671	34,969	34,560	34,560	16,373
CAPEX																	
Total Capex	MUSD	48	36	130	44	21	34	14	43	1	3	34	1	1	1	1	225
Selling Costs																	
Copper Selling Cost	MUSD	37	33	31	27	32	46	32	32	31	39	44	39	27	23	23	11
Gold Selling Cost	MUSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revenue		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenue	MUSD	515	421	449	357	420	612	441	480	415	504	607	512	330	298	298	141
Operational Costs																	
Concentrator Total Operating Costs	MUSD	248	244	265	279	286	270	289	287	266	176	157	150	134	134	133	72
EBITDA																	
EBITDA	MUSD	248	244	265	279	286	270	289	287	266	176	157	150	134	134	133	72
Revenue After Tax	MUSD	192	124	137	61	101	250	113	138	103	230	316	254	133	111	111	58
Cashflow																	
Before Tax Cashflow	MUSD	204	125	40	19	97	293	123	136	133	310	400	346	180	148	148	-163
After Tax Cashflow	MUSD	144	88	7	17	80	216	98	95	102	227	283	253	132	109	109	-167

The negative cash flow observed in the final period reflects the closure costs incurred at the end of the Project life.

Several integrated economic scenarios were evaluated for the Project to support the selection of the Base Case presented in this section. These scenarios reflect alternative assumptions and configurations considered during the economic assessment. Additional details regarding the evaluated economic scenarios are provided in Appendix 4.

22.5 Sensitivity Analysis

The sensitivity analysis was developed considering variations in the discount rate, metal prices, and operating and capital costs. In terms of revenues, and as shown in the corresponding figure, the Project exhibits a high sensitivity to metal prices: the copper breakeven price is approximately USD 3.4/lb, while the gold breakeven price is close to USD 1,250/oz. Given that long-term price forecasts for both metals show an upward trend, the Project presents potential to improve its economic indicators.

With respect to costs, the analysis indicates that operating costs (OPEX) are one of the most sensitive variables. Therefore, efficient management focused on cost control and reduction will be a key factor in safeguarding and enhancing the Project's economic value.

Table 22.11: Sensitivity Analysis of Project NPV to Key Economic Variables
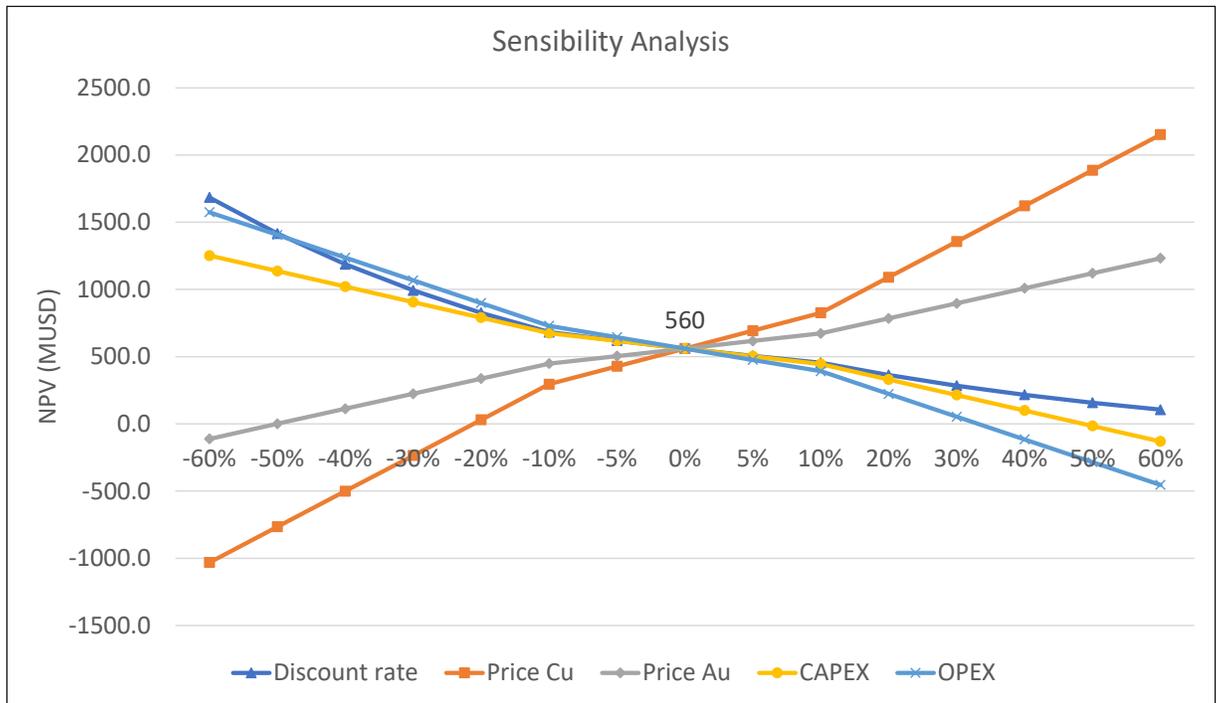
Sensitivity of the Project Net Present Value (NPV) to variations in discount rate, copper and gold prices, and operating and capital costs. The base case corresponds to an NPV of USD 560 million at a discount rate of 8%.

23 Adjacent Properties

23.1 Adjacent Properties

Within the area of the Domeyko Sulfuros Project, as well as in its surrounding sectors, there are various mining concessions held by third parties, the distribution and location of which are illustrated in Figure 23.1.
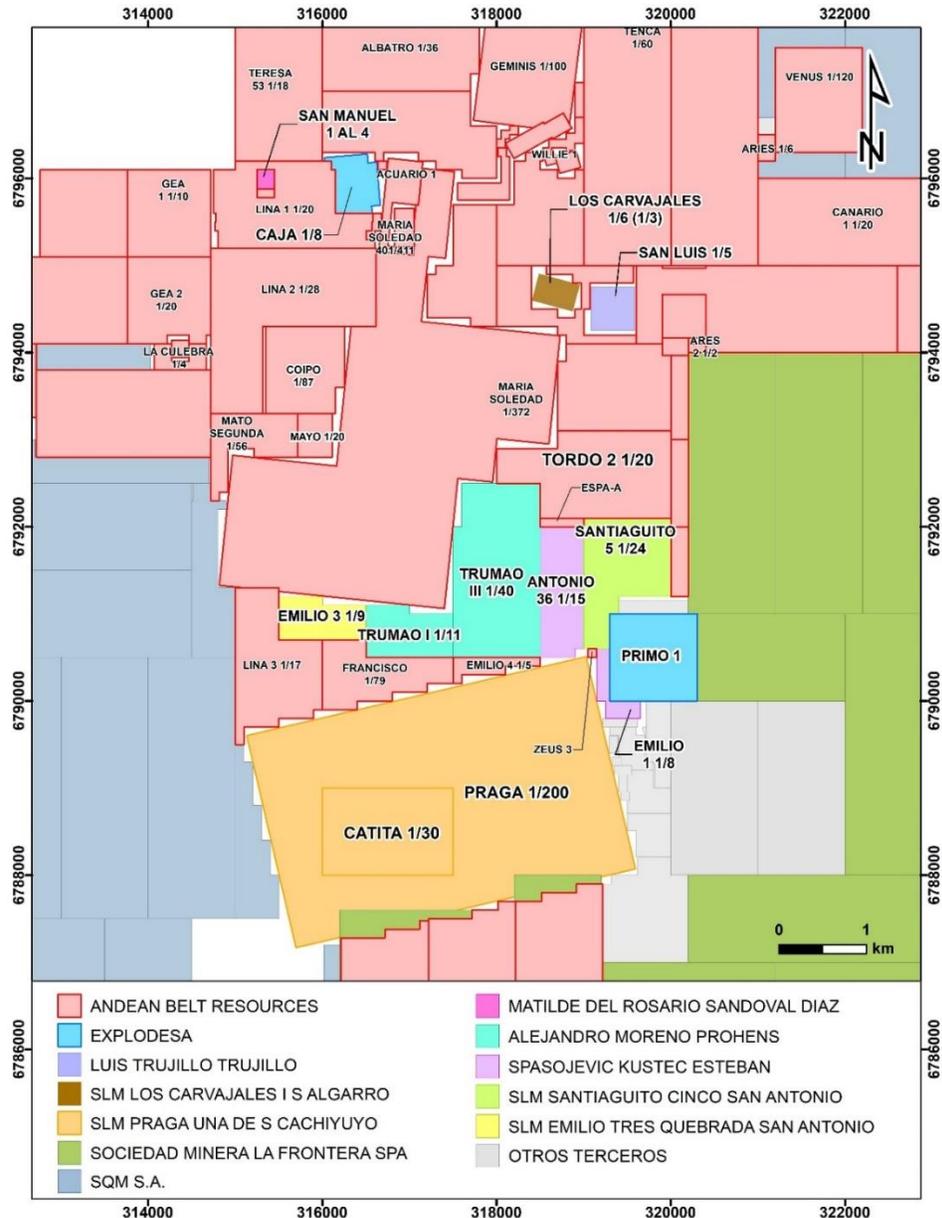
Figure 23.1: Distribution and location of Adjacent Properties

23.2 SRK Comment

The Qualified Person reports that they have not independently verified the information related to these adjacent properties. Consequently, this information is presented solely for contextual purposes and should not be interpreted as indicative of the nature, extent, or continuity of mineralization on the property that is the subject of this Technical Report.

24 Other Relevant Data and Information

24.1 Exploration Potential

In addition to the resources estimated in October 2025, three potential areas have been identified with evidence of structures, alteration, geophysical anomalies, and mineral occurrences, representing potential mineral resources within the Domeyko Sulfuros project properties and capable of adding resources in future exploration campaigns.

In these areas, there is evidence of copper porphyry systems, as in the case of Tricolor (TRC), where 22 diamond drillholes have been completed, along with oxide and secondary copper sulfide extraction work, exposing the sulfide zone.

The other two areas of interest, María Soledad Oeste (WMAS) and María Soledad Sur (SMAS), are more concealed (conceptual) targets where no drilling has yet been conducted. In these areas, alteration, structures, geophysical anomalies, and copper mineralization indicate the potential for deeper mineralized zones. Exploratory drilling will be required to confirm and delineate these targets (Figure 24.1 and Figure 24.2).
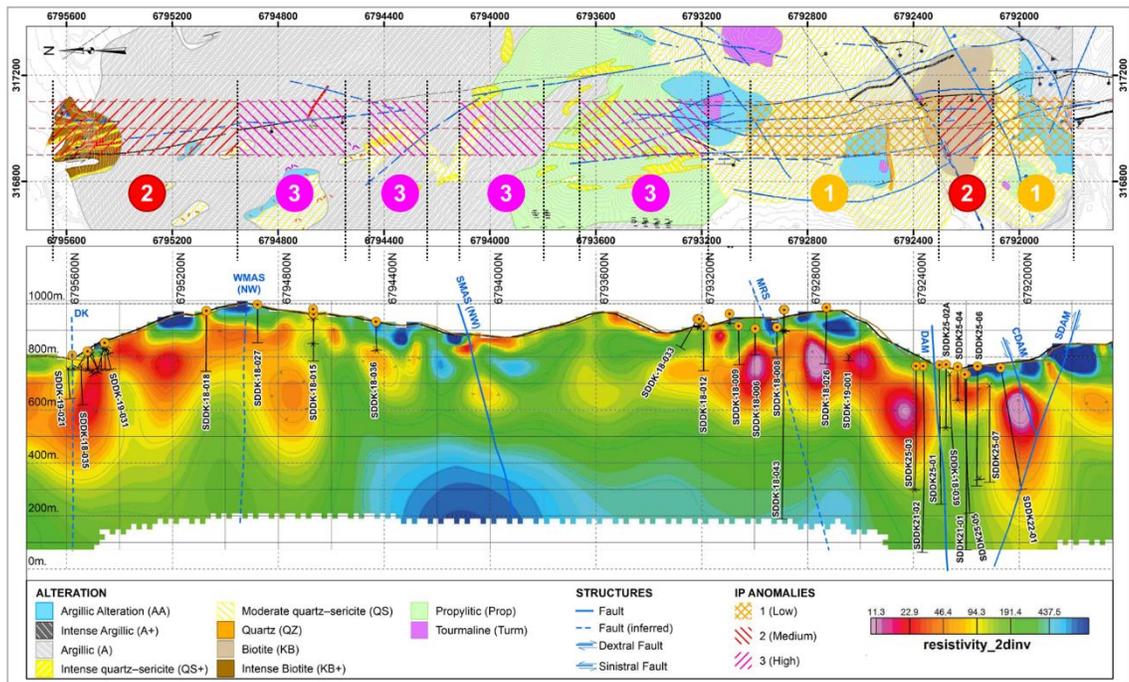
Figure 24.1: NS Pole-Dipole IP Section and alteration mapping, showing the completed diamond drillholes
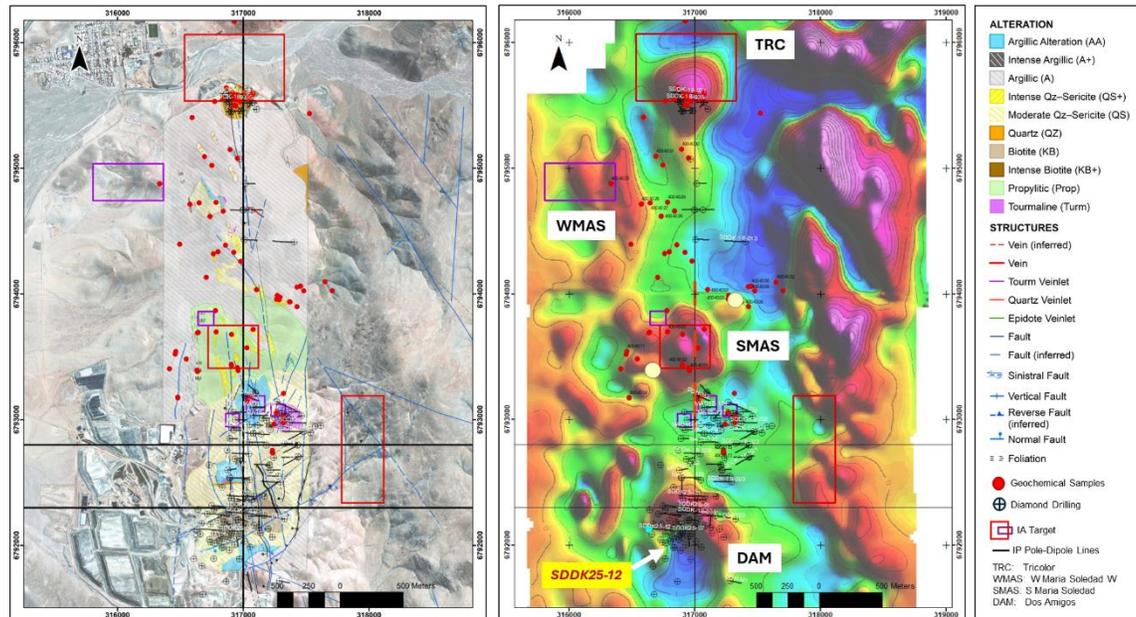
Figure 24.2: Alteration and Magnetometry Maps with Exploration Targets – Domeyko Sulfuros Project

On the left: alteration map and exploration targets; on the right: magnetometry geophysics and potentials. Drillhole SDDK25-12 is indicated, which intercepts a mineralized shear zone.

24.1.1 Tricolor

Tricolor is the best-known target within the Domeyko district. Historical workings in tunnels and shafts focused on Cu-Au veins and breccias, following zones of secondary enrichment and gold-bearing veins. In general, the old workings followed two NS-trending vein corridors with widths ranging from 20 to 70 centimeters. The host rocks for these veins correspond to the Tricolor and Dos Amigos porphyries.

Petrographically, the Dos Amigos porphyry is a "crowded" porphyry, with large plagioclase phenocrysts (2–3 mm) and hornblende relics (2–3 mm) that are biotitized. Quartz "eyes" are also recognized in this porphyry. The Tricolor porphyry is a fine-grained, recrystallized granoblastic rock with potassic alteration, black biotite and magnetite clusters, and quartz veins with potassic feldspar and biotite. These are fine-grained, pre-mineral porphyries compared to the "crowded" porphyries (Figure 24.3).

The drillholes at Tricolor intersect the veins and host rocks only shallowly, as their depths and inclinations do not reach vertically significant zones. However, the Cu and Au grades are similar to those observed at the Dos Amigos pit (Table 24.1). Moreover, a magnetic anomaly suggests that drilling has only targeted the periphery of a more magnetic body (Figure 24.4 and Figure 24.5).

It is important to note that in Cretaceous porphyries, Cu-Au mineralization is associated with magnetite and biotite alteration. The resources estimated at Dos Amigos are also located over a magnetic anomaly of similar dimensions to the one observed at Tricolor.

Figure 24.3: **Dos Amigos porphyry truncating a quartz vein of the Tricolor porphyry**

Drillhole SDDK 18-035 @64.75 m. Dos Amigos porphyry dike intercept from 50 to 66 m, 16 m @ 0.50% Cu and 0.25 ppm Au
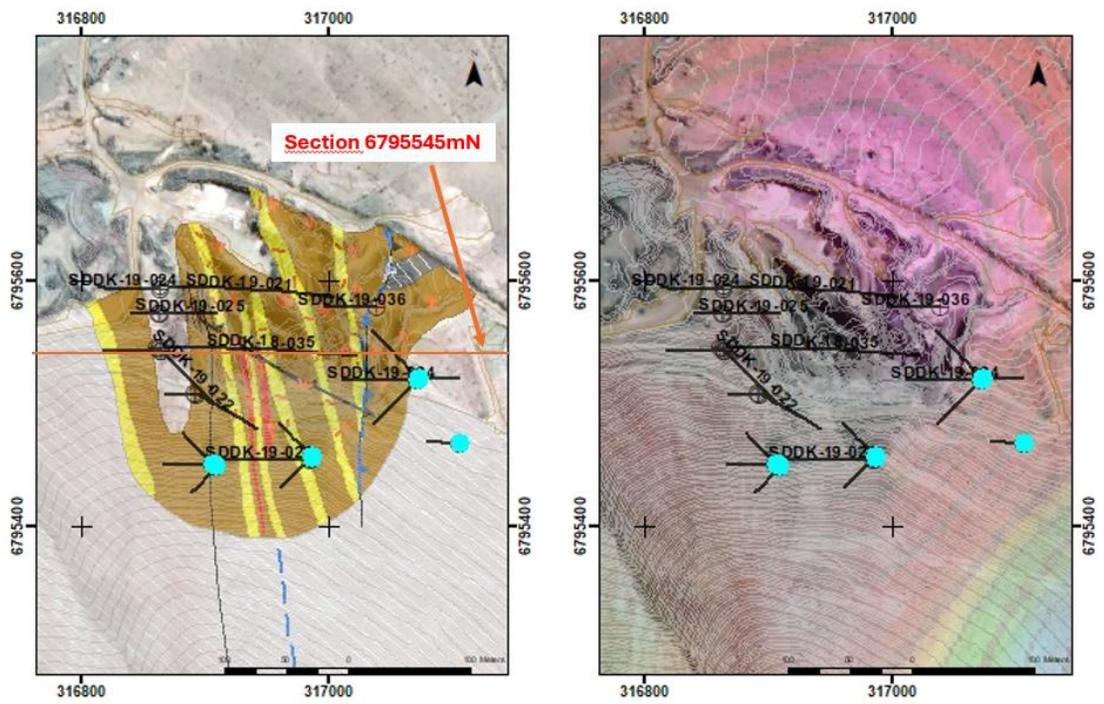
Figure 24.4: **Drillhole Distribution, Alteration, and Magnetic Anomalies – Tricolor Target**

On the left: diamond drillholes completed at Tricolor, intercepting the host rocks with biotite and quartz-sericite alteration. On the right: magnetic anomaly and drillholes completed. Drillholes with lower Cu and Au grades are highlighted in turquoise; these are located at higher topography and south of the center of the magnetic anomaly
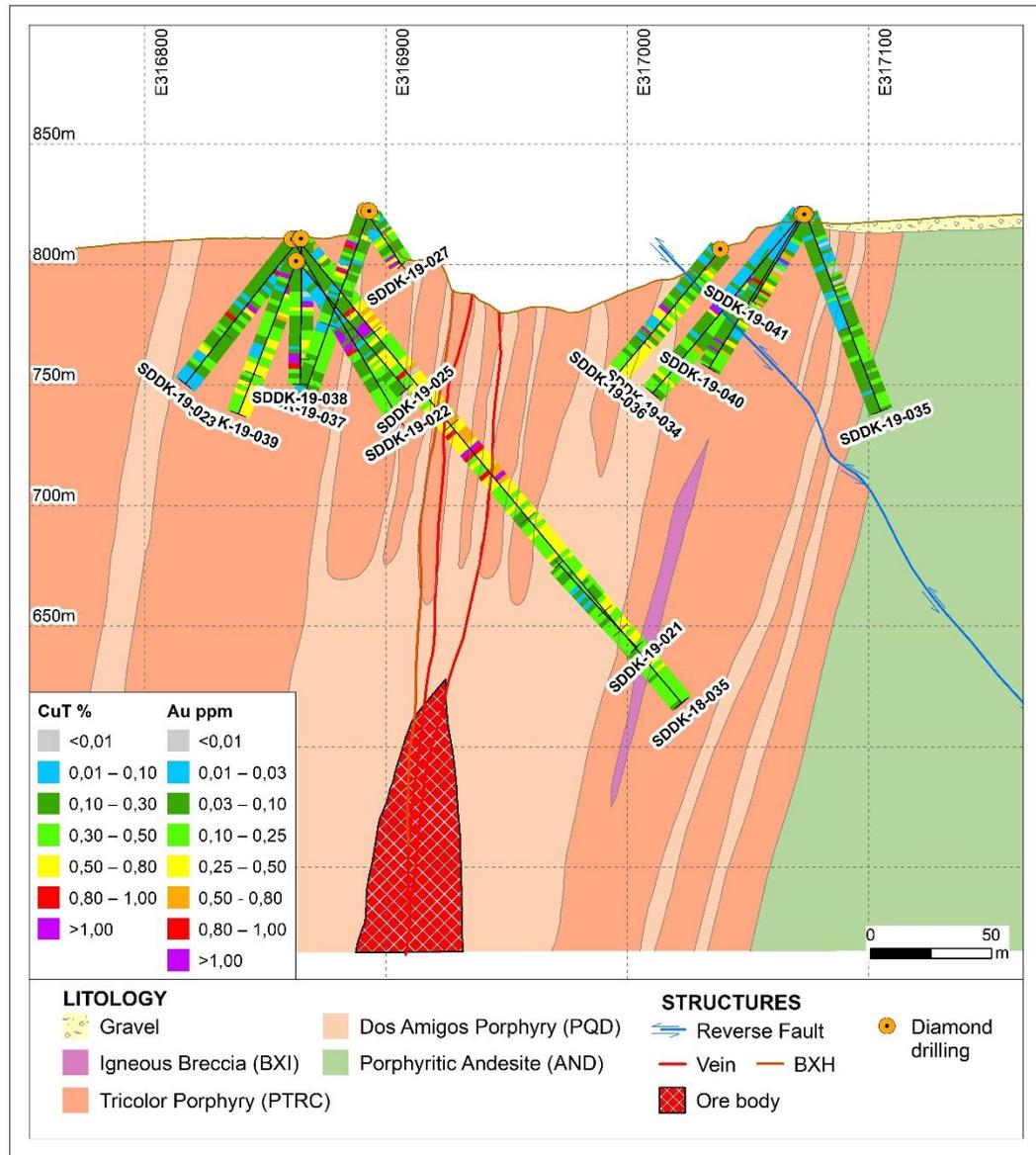
Figure 24.5: Section 6795545 mN

The Dos Amigos porphyry (PQD) intrudes the Tricolor porphyry as dikes. The center of the magnetic anomaly, which would correspond to the central body of the Dos Amigos porphyry, has not been tested

Table 24.1:   Summary of diamond drillhole intercepts at Tricolor

ID_HOLE	TYPE	East (m)	North (m)	Elevation (m)	Dip	Azimuth	From (m)	To (m)	%CuT pond	ppm Au pond
SDDK 18-035	DH	316863	6795545	810	-51	90	0,00	250,00	0,53	0,32
SDDK 19-021	DH	316864	6795596	797	-48	90	0,00	209,85	0,28	0,36
SDDK 19-022	DH	316861	6795545	810	-50	135	0,00	101,75	0,37	0,17
SDDK 19-023	DH	316864	6795543	811	-50	270	0,00	76,90	0,19	0,42
SDDK 19-024	DH	316864	6795593	797	-50	270	0,00	78,00	0,28	0,32
SDDK 19-025	DH	316863	6795574	801	-50	90	2,15	67,85	0,23	0,53
SDDK 19-026	DH	316986	6795455	853	-50	270	0,00	132,40	0,21	0,08
SDDK 19-027	DH	316891	6795509	822	-51	120	3,20	96,80	0,33	0,13
SDDK 19-028	DH	316907	6795451	848	-66	270	0,00	106,90	0,13	0,11
SDDK 19-029	DH	316906	6795451	848	-70	315	0,00	102,50	0,21	0,10
SDDK 19-030	DH	316909	6795449	848	-70	225	0,00	93,50	0,15	0,14
SDDK 19-031	DH	316986	6795457	853	-70	225	0,00	108,45	0,18	0,13
SDDK 19-032	DH	316987	6795456	853	-70	315	0,00	120,00	0,19	0,15
SDDK 19-033	DH	317106	6795468	829	-70	270	0,00	81,50	0,11	0,12
SDDK 19-034	DH	317073	6795519	821	-50	270	0,00	97,15	0,23	0,15
SDDK 19-035	DH	317074	6795521	821	-69	90	0,00	87,50	0,15	0,08
SDDK 19-036	DH	317039	6795579	806	-50	270	0,00	67,70	0,32	0,22
SDDK 19-037	DH	316893	6795508	822	-70	270	0,00	81,50	0,30	0,12
SDDK 19-038	DH	316865	6795542	811	-89	90	0,00	60,75	0,38	0,19
SDDK 19-039	DH	316863	6795573	801	-70	270	0,00	68,00	0,40	0,38
SDDK 19-040	DH	317073	6795521	821	-49	315	0,00	84,15	0,25	0,15
SDDK 19-041	DH	317073	6795521	821	-50	225	0,00	82,65	0,29	0,19

Drillholes SDDK19-028 to SDDK19-035 are highlighted in turquoise on the plan map in Figure 24.5

24.1.2   María Soledad (WMAS-SMAS)

In general, the María Soledad target is located at the highest elevation south of the Tricolor mine and up to the Marisol breccia. It corresponds to volcanic and volcaniclastic host rocks, which near Tricolor exhibit stronger argillic alteration with moderate to weak dissemination of hematite-goethite and quartz-albite veinlets. The volcanic host rocks are cut by acidic composition dikes with high quartz content and an aplitic texture; some of these dikes show porphyritic textures. The dikes outcrop as elongate bodies trending NS to NNW with subvertical dips, ranging in thickness from 0.5 to 5 m. These dikes host quartz-sericite-pyrite-alunite (hematite-goethite) alteration with minor occurrences of Cu oxides and chalcocite.

In the eastern part, the volcanic host rocks are recrystallized, forming a contact-type hornfels band, where hydrothermal breccias occur with thicknesses between 0.5 and 2 m, trending NS to N20W and dipping westward (Figure 6).

In the María Soledad Sur (SMAS) area of interest, at the western edge of the magnetic anomaly (Figure 24.1 and Figure 24.2), there is an NS-trending shear zone and dike intrusions with quartz-sericite (=Cu oxides-chalcocite) alteration in volcanic host rocks. This zone correlates to the south with drillhole SDDK25-12 at Dos Amigos (Figure 24.2), which contains Cu-Au mineralization in a ductile shear zone.

For this area of interest, there is evidence of Cu-Au mineralization, favorable structural zones, favorable host rocks, and geophysical anomalies (magnetometry and IP), suggesting a conceptual potential for mineral resources that should be tested with deep drilling.
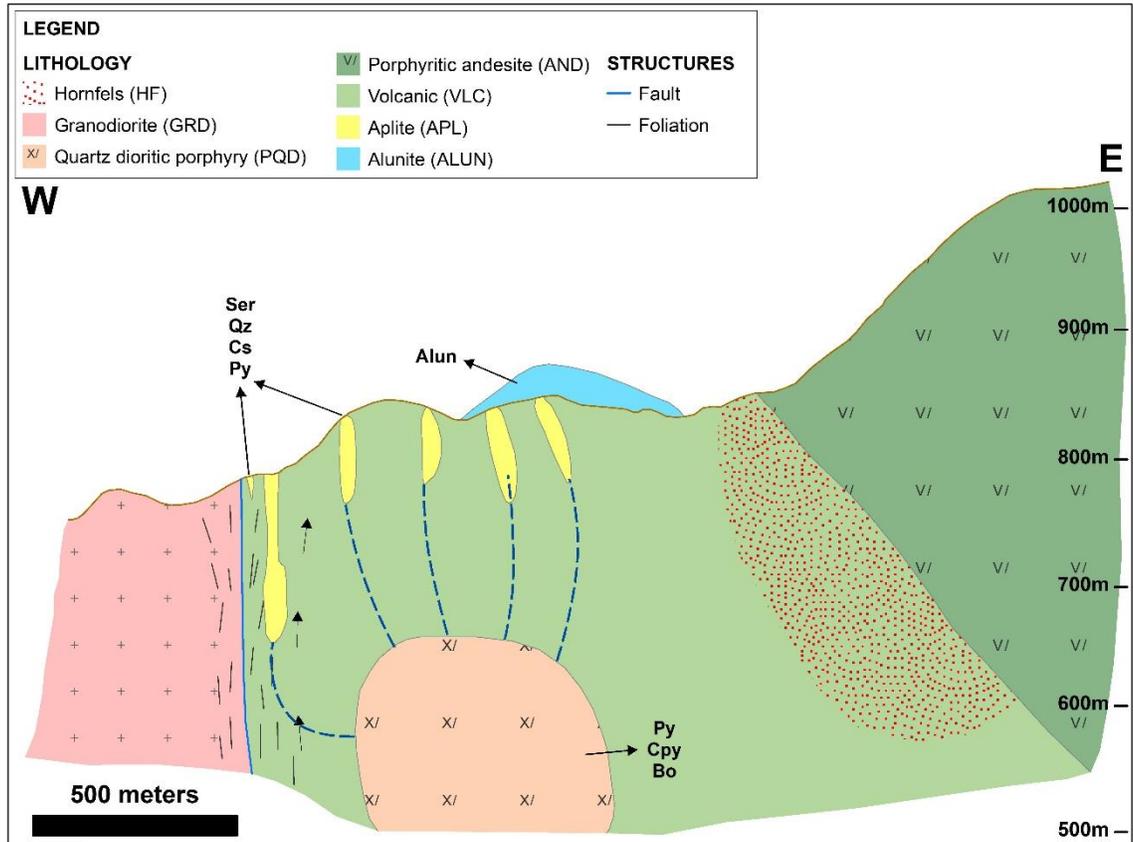
Figure 24.6:   Conceptual diagram of the María Soledad exploration target

24.1.3   Resource Potential of the Domeyko District

The information described above regarding host rocks, alterations, mineral occurrences, geophysical anomalies, and Cu-Au grades demonstrates the geological potential of the Domeyko District, which includes the Tricolor (TRC), West María Soledad (WMAS), and the South María Soledad (SMAS) targets. The potential resource ranges for these targets are between 300 and 800 Mt. The projected Cu and Au grades would be similar to the average grades of the resource estimated in October 2025 at Dos Amigos.

24.2   Data Integration and Drill Optimization utilizing Machine Learning

The Company implemented an iterative workflow assisted by Machine Learning (ML) algorithms to validate and optimize drill planning, as well as to generate new district-scale exploration targets. This process was conducted in close collaboration with the exploration team and structured into three main phases.

24.2.1 Infill Campaign Optimization and Resource Model Validation

A predictive model was developed for the infill zone to compare the consistency between the current resource model and the proposed drilling campaign. The objective was to verify data redundancy or data gaps in the planned holes. The model integrated the following geoscientific variables:

- Geological Modelling: 3D Lithology, Alteration, and Structural models.
- Geophysics: IP (Chargeability and Resistivity), Homogenized Magnetometry (2D and 3D).
- Textural Analysis: Voxel analysis using Haralick and Gabor methods to identify rock heterogeneity patterns.

As a result of this analysis, and following technical validation by the geological team, adjustments were made to the drill grid. This allowed for the strategic reallocation of drill meters towards zones of higher geological uncertainty, thereby optimizing the campaign budget.

24.2.2 Brownfield Target Generation (District Prospectivity)

Concurrently, a prospectivity model was generated to identify zones of interest within the Brownfield area. This model processed a multi-layer integration to detect patterns analogous to known mineralization, utilizing the following data sources:

- Mapping: District-scale 2D Lithological and 3D Structural mapping.
- Remote Sensing: ASTER imagery.
- Advanced Geophysics: Homogenized Magnetometry (2D and 3D) and Ternary representation of UVW vectors from Magnetization Vector Inversion (MVI).
- Textural Analysis: Voxel analysis using Haralick and Gabor methods.

24.2.3 Feedback and Continuous Improvement

The workflow was established as an iterative support process for the exploration team. The modelling provided feedback on input data quality and resolution, enabling specific technical recommendations to improve data acquisition in future campaigns, ensuring the models are progressively fed with higher-fidelity information.

24.3 SRK Comments

The Qualified Persons note that the information related to these properties has not yet been independently verified. The data integration study and the associated properties were not reviewed by the Qualified Person for the purposes of this report. However, should these resources be confirmed in subsequent stages of study, there is a strong potential for the generation of synergies that could be effectively incorporated into the mine plan, thereby enhancing the overall economic performance of the Project through increased mineral tonnage.

24.4 Other Advantages

24.4.1 Community

The relationship with the local community is positive and has been continuously maintained since the start of operations at the Dos Amigos Mine, owned by CEMIN Holding Minero, from 1996 to the present.

24.4.2 Permits

The necessary permits are in place with the relevant authorities to carry out brownfield drilling, enabling the development of exploration campaigns within the Domeyko district.

24.4.3 Logistics

The Domeyko Sulfuros Project has significant logistical potential that supports its development.

25 Interpretation and Conclusions

25.1 Geology

The project area includes several porphyry copper centers, located within a north-south-elongated hydrothermal alteration zone of 6 x1.5 km surface dimensions. The porphyry stocks that intrude the volcanic rocks of the Punta del Cobre Formation (Early-Cretaceous) at Dos Amigos and Tricolor are of dioritic to granodioritic composition, with plagioclase and quartz phenocrysts in a microcrystalline groundmass composed of an aggregate of plagioclase and quartz.

Based on geological review, SRK validates that the main mineralization at the Domeyko Sulfuros project correspond to a copper-gold (Cu-Au) porphyry system, peripherally associated with skarns, mantos and breccia pipes deposits. The results of the 3D modeling indicate that the mineralization remains open to the north-west, therefore, further investigation of these areas should be considered to assess the continuity and potential extension of the high-grade mineralization.

The drillholes executed under CEMIN Holding Minero management from 2018 to 2024 and Tintina in 2025 have yielded a satisfactory quantity and quality of geological information, including lithology, alteration, and mineralogy related to mineralization. The data collected, database and information are sufficient for the current stage of the project and are in line with industry standards.

The drill orientations align appropriately with the orientation of mineralization, and the core logging adheres to industry standards for exploring a porphyry Cu-Au deposit. Additionally, collar and downhole surveys have been carried out using industry-standard instrumentation. No problems were found in drilling, sampling, or core recovery that could materially affect the quality of the data.

Sample preparation and analysis are adequate for the type of deposit and followed procedures and protocols accomplish requirement of industry standards. Sample security procedures met industry standards at the time the samples were collected. Current sample storage procedures and storage areas are consistent with industry standards.

The analytical laboratory (ALS) used is independent and accredited for select analytical methods. The QAQC program adopted is consistent with industry standards and has led to a reliable database.

The lithological, alteration and mineral zone models for the deposit were developed based on the interpretation of geological maps, cross-sections, and a 227-drilling database.

SRK conducted a comprehensive review of the geological interpretation supporting the lithological, alteration, and mineralization models. The analysis concluded that the rationale was scientifically robust, and that the interpretation adhered to established industry standards. Additionally, the review of drillholes revealed no discrepancies. It was confirmed that Tintina geologists adhered to best practices in logging and sampling, and the project's rock library was comprehensive, rigorous, and well-organized.

From a district-scale property perspective, the comprehensive geological data set recently compiled by project geologists indicates the presence of additional intrusive bodies to the north of the Dos Amigos orebody, particularly at the Maria Soledad and Tricolor targets. These areas are considered highly prospective and warrant further exploration to assess their potential for resource growth. These targets exhibit lithological, alteration, and mineralization characteristics similar to those of the Dos Amigos deposit. Rock geochemistry, geophysical surveys, and historical drilling data suggest the potential for additional resources. Therefore, further investigation of these areas in subsequent exploration phases should be considered to evaluate their full potential.

25.2 Resources

The estimation units for copper and gold are primarily defined by the boundaries of alteration and mineral domains. The highest-grade values and tonnage are predominantly concentrated within the Primary Mineral Zone.

Variographic analysis indicates continuities in a northerly direction ranging from 80 to 100 meters, with the most significant continuity observed in the subvertical direction of the deposit. For this analysis, all estimation units were used independently, with units 5 (primary in KB) and 6 (primary in KFELD) within the 0.1% copper envelope being the most relevant.

The validations show good correlations up to the third pass, after that the revision between the estimated value and the nearest-neighbor is more irregular. At lower grades, although the percentage error is significant, the absolute differences in grade values remain minimal."

Resources were classified as measured, indicated, and inferred. For the most relevant primary sulfides, the drillhole grid for measured resources is approximately 45 meters, while for indicated resources it is around 80 meters. All other resources are classified as inferred.

In order to generate and report the mineral resource statement, it was required to construct a resource pit for the copper and gold sulfide mineralization. For this purpose, technical and economic parameters usually applied to similar deposits, along with benchmarking data and company-specific information, were utilized.

For the resource pit, at a Cu cut-off grade of 0.2%, there are 357 Mt in the sulfide zone with @0.34% Cu and @0.25ppm Au. Of the total resources, 100 Mt correspond to measured+indicated resources with @0.35% Cu and @ 0.28 ppm Au.

At the Domeyko Sulfides Project, the Dos Amigos deposit displays characteristic features of a porphyry copper system, with moderate copper grades averaging approximately 0.3% Cu, accompanied by a substantial tonnage of mineralization. Furthermore, gold is a significant byproduct, with grades contributing notably to the overall economic potential of the deposit.

25.3 Mineral Reserves

"Mineral Reserves" is used solely as an operational term to describe the portion of the mineable resource considered as potential feed to the processing plant within the conceptual mine plan evaluated at the PEA level.

Regarding mineable resources, the following can be concluded:

25.3.1 Methodology and Compliance

The mineable resource estimation was developed using industry-standard tools (Whittle 4DX and Milawa Algorithm) and complies with NI 43-101 guidelines. The approach is conceptual and intended for strategic planning purposes only.

25.3.2 Base Selection

The configuration of 164 ktpd mine capacity and 35 ktpd plant capacity was identified as the optimal scenario, delivering an estimated NPV of $553 million and an EPVI of 0.425, balancing operational feasibility and economic performance.

25.3.3 Resource Statement

The mineable resources total 310.1 Mt with an average grade of 0.35% TCu and 0.251 ppm Au, containing approximately 1,071,403 t of copper and 78 t of gold. The global strip ratio is 2.84. *Important: These resources are not Mineral Reserves and do not have demonstrated economic viability.*

25.3.4 Sensitivity Analysis

- Metal prices have the greatest impact on project value, followed by processing costs and mining costs.
- CAPEX variations of ±10% result in an approximate ±USD130 million impact on NPV.

25.3.5 Cut-off Grade

The cut-off grade of 0.20% TCu was determined based on operating costs, recoveries, and metal prices, ensuring inclusion of material with positive economic contribution.

25.4 Mining

The term "ore" is used in this study solely to describe material scheduled for processing in the conceptual mine plan and does not imply the declaration of Mineral Reserves as defined by NI 43-101.

25.4.1 Mining Method Feasibility

The proposed conventional open-pit mining method is appropriate for the Domeyko Project's geological and topographical conditions. Bench height (15 m) and phase widths (100–150 m) are consistent with industry standards. However, ramp designs are not yet defined, which introduces operational uncertainty that must be addressed in the next stage.

25.4.2 Resource Basis and Limitations

The current mine plan includes Measured, Indicated, and Inferred Resources. Inferred Resources will be treated as waste for Mineral Reserve reporting, in compliance with NI 43-101. No dilution or mining recovery factors have been applied, making this a conceptual plan subject to adjustment during Pre-Feasibility.

25.4.3 Geotechnical Considerations

From a geotechnical and mining methods standpoint, the study completed for the Domeyko Sulfuros Project is based on a combination of drillhole information, laboratory tests, and observations of existing pits, which is considered adequate for a profile / PEA-level engineering study, although still preliminary. The database includes approximately 16,000 m of mapping in 77 drillholes with partial geotechnical information and about 5,800 m of detailed mapping in 12 drillholes with complete geotechnical data, as well as 242 laboratory tests carried out in 2025.

Interpretation of this information allowed the definition of structural domains and three geotechnical weathering zones (2° SS, 2° TR and 1°), as well as the grouping of lithologies and alterations into geotechnical units with intact rock and rock mass properties derived from tests, published references and experience in comparable projects. Although the number of tests is still limited, it is considered sufficient to support preliminary slope design parameters at this stage.

In general, the quality of the intact rock and rock mass ranges from fair to very good, with the most prevalent geotechnical units being mainly of good to very good quality.

Bench-berm analysis indicates that it is possible to adopt a typical configuration of 15 m bench heights, bench face angles between 75–80°, and effective berm widths in order of 7.9 to 12.1 m, with maximum interramp heights between 120 and 150 m and interramp angles of approximately 43–55°, depending on the structural and geotechnical zone. These parameters satisfy international acceptability criteria at bench scale (PF<30% and spillage-free berms with an excess effective width >3 m) and allow definition of a technically viable open pit design for the.

The 2D limit-equilibrium stability analysis, performed on five representative sections of the pit, considered major faults, an assumed phreatic level, and both static and pseudo-static conditions with a horizontal seismic coefficient Kh = 0.20. Under these assumptions, the factors of safety obtained for both interramp, and global slopes exceed commonly accepted values for this level of study (static FS typically ≥~1.9 and pseudo-static FS ≥~1.45), with estimated probabilities of failure <1%. Consequently, all slope configurations analyzed are considered globally stable at a preliminary level.

Observations in the Dos Amigos pit show interramp-scale failures, berm loss, and the presence of a pressurized hydrogeological system (see pages and artesian flow), suggesting that groundwater conditions may play a relevant role in slope behavior and should be characterized in greater detail in subsequent project stages.

In summary, interpretation of the available information indicates that:

- The current geotechnical framework is consistent and sufficient to support a preliminary open pit design at PEA level.

- There are significant uncertainties mainly associated with the hydrogeological model, structural characterization and the limited number of tests; therefore, the design parameters must be regarded as preliminary and subject to confirmation during pre-feasibility and feasibility studies.

25.4.4 Mine Schedule Optimization

25.4.4.1 Strategic Planning Approach

The mine schedule was developed using Minemax Scheduler with a Mixed Integer Linear Programming (MILP) optimization model, ensuring that the sequence of extraction maximizes Net Present Value (NPV) under operational and economic constraints. This approach provides a robust framework for strategic decision-making at the Preliminary Economic Assessment (PEA) level.

25.4.4.2 Base Case Scenario: Alignment with Project Objectives

- The schedule successfully integrates key technical parameters—such as maximum mining rate (70 Mtpy), processing capacity (35 ktpd), and cut-off grade (0.20% TCu)—to deliver a plan that balances production targets with economic performance, resulting in an estimated 25-year mine life. The inclusion of stockpiles for high-grade and low-grade material enhances operational flexibility and supports consistent plant feed.

- During the first year of mine development, a pre-stripping period occurs, with approximately 14.5 Mt of material removed to access ore in the second year. In the second year of mining, plant feed reaches 80% of the nominal rate (approximately 10.22 Mt) with an average copper grade of 0.43% and an average gold grade of 0.323 ppm. By the third year, the estimated production level of 35 ktpd (approximately 12.7 Mt/year – 35 ktpd) is achieved, with an average copper grade of 0.41% and an average gold grade of 0.364 ppm. Overall, ore is primarily supplied directly from the mine, ensuring operational continuity with adjustments through stockpile management.

- Phase sequencing and pushback design were configured to ensure early access to high-grade ore, improving project cash flow during the initial years.

- A minimum cut-off grade of 0.20% total copper was applied for processing decisions, with gold credits incorporated into the economic evaluation.

- Two stockpiles were included in the plan:

  - High-Grade Stockpile (≥ 0.30% TCu) with a capacity of 10 Mt.

 - Low-Grade Stockpile (0.20% ≤ TCu < 0.30%) with a capacity of 40 Mt.

- Ore rehandling from stockpiles is scheduled from Year 10 onwards, with full rehandling completed by Year 26.

- Sinking Rate (vertical advance of the pit) was a critical parameter in defining phase development. The adopted sinking rate ensures timely exposure of deeper high-grade zones without exceeding practical limits for haulage and bench preparation.

- The schedule incorporates pushback design and phase sequencing to minimize stripping ratios in early years, reducing upfront waste movement and improving early cash flow.

- The strategic mine schedule was developed with the objective of reducing risks and uncertainties. This was achieved by feeding the concentrator plant from more than one phase, ensuring that the plan is not single-phase but rather bi-phase or multi-phase. In this plan, this objective is met during periods 4 to 14, although some periods rely primarily on a single phase. It is important to keep this condition in mind for the next Pre-Feasibility stage, where different mine design and scheduling alternatives must be studied. These alternatives will allow for a better match between design, sequencing, and ore feed from multiple phases.

- The current schedule is preliminary and does not yet incorporate detailed geotechnical constraints, hydrogeological considerations, or updated metallurgical recovery data. These factors will require refinement during the Prefeasibility Study.

25.4.4.3 Limitations and Next Steps

The current schedule does not account for dilution, mining recovery, or detailed ramp designs, and relies on conceptual assumptions for geotechnical and hydrogeological conditions. These factors introduce uncertainty that must be addressed in subsequent engineering stages to ensure technical and economic viability.

25.4.5 Waste Storage Facilities

The waste storage facilities defined for the Domeyko Project have been developed in accordance with standard industry practices for large-scale open pit operations. The selected location, geometry, and development sequence allow the facilities to accommodate the projected life-of-mine waste volumes while maintaining compatibility with pit expansion and other project infrastructure.

The conceptual design provides sufficient storage capacity to support the planned mine schedule and is based on conventional waste rock dump configurations, representative material properties, and progressive lift development. The adopted geometric parameters and construction sequence support safe and efficient waste placement throughout the life of the project.

Conservative preliminary geotechnical design criteria have been applied, and conceptual stability analyses were carried out for representative sections of the waste storage facilities under both static and pseudo-static conditions. The results indicate that all analyzed sections meet the adopted acceptability criteria, providing confidence that the conceptual dump geometry is suitable at this stage of the evaluation.

Overall, the waste storage facilities provide a technically sound and robust basis for the evaluation of the Domeyko Project. Further site-specific investigations, refinement of material properties, and detailed stability analyses are expected to be undertaken in subsequent pre-feasibility and feasibility study stages to confirm and optimize the design.

25.4.6 Mine Fleet

The equipment fleet defined for the Domeyko Project is considered appropriate for a Preliminary Economic Assessment and consistent with standard industry practices for large-scale open pit operations. The selected truck-and-shovel configuration is based on proven equipment classes and conventional operating philosophies, avoiding reliance on untested technologies or project-specific equipment solutions.

Fleet sizing and composition are aligned with the life-of-mine production profile, material movement requirements, and evolving haulage distances. The use of representative equipment classes, variable fleet sizes over time, and productivity assumptions consistent with industry benchmarks provides sufficient operational flexibility to accommodate changes in mine geometry and production rates.

Blasting is assumed to be contractor-performed, and auxiliary equipment has been sized using practical productivity indicators, supporting a flexible and capital-efficient operating strategy at this stage of the project. No material constraints related to equipment selection have been identified at the PEA level.

Overall, the proposed mine fleet provides a reasonable and technically sound basis for the economic evaluation of the Domeyko Project. Further optimization of fleet composition, equipment selection, and operating strategies is expected to be undertaken in subsequent pre-feasibility and feasibility study stages.

25.5 Process

The design of Domeyko's process was based on the chemical and mineralogical characteristics, as well as on metallurgical test results, of nine samples representing the main geological units of the reservoir, and on the use of raw seawater as the plant's water supply.

Considering the weighted average hardness obtained in these samples, which indicates that the Domeyko ore is of medium hardness, which leads, in the comminution area, to the design of a standard Sag grinding plant, with primary crushing, Sag mill and balls in series, and pebble crusher.

On the other hand, flotation tests conducted at 106 µm and 212 µm serve as the basis for selecting an intermediate grind size of 150 µm, which optimizes the set of key process parameters: Cu and Au recoveries, energy consumption, and tailings treatment.

From the perspective of reducing Capex and Opex, the plant layout was defined as a single production line using large-diameter, high-capacity equipment available in the industry, such as a 36 x19 ft Sag mill and a 26 x24 ft ball mill. Likewise, the rougher flotation plant comprises a row of 6 cells, each 300 m³, capable of processing the 35,000 tpd required by the project.

The grades of 0.38% Cu and 0.25 ppm Au, which are moderate, require a cleaning stage with high efficiency and the ability to produce high-grade concentrates; for this reason, Jameson pneumatic cells were used, which have demonstrated excellent performance in industry.

For the design of the tailings processing, sector 4, close to the plant, was selected, and a high-density thickener with 65% solids was implemented to optimize water consumption, achieve a sustainable process from environmental and permitting perspectives, and facilitate permit issuance.

It can be concluded that the design of the concentrator plant at this preliminary stage of the Domeyko (PEA) project employs a Cu and Au recovery strategy that reflects proven experience in Chile, balances metallurgical performance with water efficiency, and provides a solid technical foundation to advance the project.

During the development of the PEA study, several initiatives were identified for analysis in the next stage of PFS engineering to optimize processes. Among the most important are the study of the trade-off between Sag circuits with and without crushing and Sag versus HPGR, the comparison of gold recovery by centrifugal concentrators, and, finally, the evaluation of tailings disposal using conventional versus high-density technologies.

25.6   Infrastructure

The Domeyko Sulfuros Project is favorably located near the cities of Vallenar, Huasco, La Serena, and Copiapó, which provide robust regional infrastructure, including airports, hospitals, accommodation, emergency services, and police facilities. This regional setting provides appropriate support for the development and operation of the Project.

The Project area is accessed via Route 5, and existing 110 kV and 220 kV transmission lines associated with two solar power facilities and one wind power facility pass adjacent to the proposed concentrator plant site. This proximity provides a strong technical basis for the implementation of a renewable energy–based power supply scheme.

To improve energy efficiency, major facilities have been designed on terraced platforms to take advantage of gravity-assisted flow. Crushing and screening facilities are fully enclosed to minimize dust emissions, and all water, including runoff from the plant site, is collected, stored, and recirculated within the process circuit.

The Domeyko Sulfuros Plant requires an estimated seawater supply of approximately 280 l/s and an electrical power demand of approximately 60 MW. For the purposes of this Preliminary Economic Assessment (PEA), the Project Base Case assumes an electrical power supply sourced 100% from renewable energy, supported by Battery Energy Storage Systems (BESS), to ensure continuous 24-hour operation.

The National Electrical System is considered a technically viable alternative for the Project power supply and may be evaluated and potentially integrated in subsequent engineering and optimization stages, without modifying the renewable energy assumption defined for the Base Case.

Seawater supply will be secured through the construction of a dedicated pipeline approximately 63 km in length, with a design capacity of 280 L/s, supported by an associated pumping system requiring approximately 8 MW of installed power. This solution avoids the use of continental water resources and is consistent with established seawater supply practices in the region.

25.7 Environmental, Social, Community and Closure

25.7.1 Permitting

The sulfide project covered by this report comprises a new project, and will require to be submitted into the Environmental Impact Assessment System.

The environmental permit requires the preparation of an Environmental Impact Study (EIA) or an Environmental Impact Declaration (DIA). Considering the size of the project, its characteristics, and location, it is estimated that it must undergo an environmental assessment through an EIA.

An EIA requires the early preparation of an environmental baseline that considers seasonality in aspects associated with biodiversity and water resources.

Some environmental and social sensitive issues, that need to be addressed at early stages in the baselines studies, are the following:

- Presence in the mine area of the Tricahue Parrot (*Cyanoliseus patagonus*), classified as "Endangered" for the Atacama region.

- Land use in the costal and tailing alternatives areas, and potential presence of sites of interest of indigenous people, mainly in the coastal area.

- Presence of species associated with the flowering desert in the coastal area and linear infrastructure requiring specific flora studies.

The applicable sectoral permits will depend on the final design of the project.

25.7.2 Environmental management

Air quality management is an important issue for the project, considering that it is located very close to the town of Domeyko (approximately 2.5 km north of the project) and that, there are astronomical observatories in the surrounding area and the commune of Vallenar was declared as of astronomic interest. In the next stage of the project, the air quality baseline must be developed and based on the project information, an atmospheric dispersion model must be developed to assess the project's impact on air quality and the environmental management measures to be considered.

Mining waste management of waste dumps and tailing deposit must consider aspects of acid mine drainage, potential infiltration into groundwater, and the management of storm water. These issues must be addressed in detail in the next stage of the project's engineering, as will be relevant to the project's environmental impact assessment.

With regard to the tailings deposit, the option of thickened tailings over conventional tailings has significant environmental benefits by reducing size, water content, and minimizing the risk of water contamination.

Water management for this project is composed by a seawater catchment and its supply corridor, and the operation's contour channels. The former will provide water from Bahía Sarco to the Domeyko concentrator plant, while the selected alignment avoids environmentally sensitive areas, ensuring minimal ecological and operational conflicts along said infrastructure. The latter considers contour channels that align with natural topography, intercept and direct clean stormwater, preventing it from entering operational zones.

Dewatering strategies still have to be defined, based on findings by further groundwater investigations.

25.7.3 Social or Community Impact

Social studies must be developed, and it is recommended that a process of engagement with the stakeholders identified for the project be initiated at an early stage.

Sites N° 3 and N° 4 of the tailings deposit show evidence of artisanal mining. Site N°3 in particular also shows evidence of livestock use and subsistence agriculture, and a rolled road that provides access to a mining site. These land use issues should be addressed early on in the preliminary and baseline studies to be developed in the project areas in order to identify their sensitivity and management options.

In the coastal area, there are potential sites of cultural significance to the Diaguita Tierra y Mar indigenous community. Also, there is a potential presence of sites of interest to people belonging to the Changos ethnic group, who are present in the commune of Freirina. This requires the development of early studies to understand the use of the territory and marine space in the area.

25.7.4 Closure

Alternative N° 1, that consider Pit expansion, Dump expansion, Seawater supply from Bahía Quebrada Honda and Tailings deposit N° 4 represent a total cost is 165.5 MUSD.

The alternative defined in this PEA will require an updated Closure Plan in compliance with Law N°20.551 and its regulations. This update must reflect the technical, environmental, and financial implications of the proposed alternative, ensuring that all closure activities remain aligned with current operational conditions and legal requirements. The closure plan should include updated cost estimates, guarantee adjustments. Additionally, the update must incorporate stakeholder engagement elements, such as the Public Disclosure Program, and adhere to the mandatory audit and renewal cycles defined by SERNAGEOMIN.

It is important to define the closure strategies of the project, as well the future use for example, of power lines and closure activities regarding to the heap leach pad overlaps in sectors 02 and 04.

25.8   Capital and Operating Cost

The capital and operating cost estimates developed for the Domeyko Project define a coherent and internally consistent cost framework that supports the Preliminary Economic Assessment and the associated economic evaluation.

Mining and processing activities represent the dominant contributors to total Project operating costs, consistent with the scale and characteristics of the Domeyko deposit. Mining operating costs are primarily driven by total material movement and haulage requirements, reflecting the large-scale open pit configuration of the Project. The classification of pre-stripping activities as capital expenditures ensures appropriate alignment between mining operations and economic reporting.

Processing operating costs, averaging approximately USD 8.6 per tonne of ore processed, are driven mainly by grinding requirements, energy consumption, and consumables. The processing cost estimate is supported by multiple levels of cost breakdown, including expenditure category, unit operation, and life-of-mine totals, providing confidence in the robustness of the estimate at the PEA level.

Operating costs associated with the Tailings Storage Facility are estimated separately from processing costs and are driven primarily by labor and equipment requirements for tailings deposition and embankment management. The separation of tailings operating costs from processing costs improves cost transparency and avoids double counting within the Project operating cost structure.

Overall, the capital and operating cost estimates are aligned with a technically conventional Project configuration and no material cost-related constraints or inconsistencies have been identified that would preclude advancement of the Domeyko Project to subsequent stages of study. The cost framework developed at the PEA level provides a robust foundation for further refinement during pre-feasibility and feasibility studies, where increased engineering definition and site-specific data are expected to improve cost confidence.

25.9   Economic Analysis

The economic evaluation indicates that, under the assumptions defined for a Preliminary Economic Assessment (PEA) level study, the Domeyko Project demonstrates positive economic results on both a pre-tax and post-tax basis. The evaluation is consistent with the level of definition associated with a PEA and incorporates a long-term mine plan, long-term reference metal prices, operating cost estimates based on unit cost assumptions for consumables, labor, energy, and services, capital cost estimates derived from Project requirements, and a taxation framework aligned with current Chilean legislation.

While unit operating costs per tonne processed are within competitive ranges relative to comparable mining projects, the estimated C1 cash cost is above the industry average (because gold production, which represents approximately 30% of revenue, was not included in this calculation). This outcome highlights potential opportunities for operational and strategic improvements aimed at enhancing Project economics as the Project advances to subsequent study stages.

Overall, the results support the economic viability of the Domeyko Project at a PEA level and indicate the presence of meaningful potential for value generation, subject to further technical and economic refinement in pre-feasibility and feasibility studies.

25.10   Master Plan

The Domeyko Project Master Schedule summarizes the pre-mining development path from the current PEA stage through permitting, construction readiness, and start-up. The schedule integrates the key workstreams required to advance the Project, including exploration and technical maturation (PFS and FS), environmental baseline programs, preparation and submission of the Environmental Impact Assessment (EIA), and the subsequent regulatory review process under Chile's SEIA framework.

A key milestone within the pre-operational period is the approval of the Environmental Qualification Resolution (RCA), which enables the commencement of major construction activities. In the Master Schedule, the RCA approval is treated as a primary schedule driver given its role as a prerequisite for Project construction. In parallel, sectoral permitting activities associated with major Project components (e.g., waste facilities, tailings, process plant, and closure-related approvals) are advanced to support execution readiness and reduce the risk of post-RCA bottlenecks.

Following RCA approval, the schedule transitions into execution activities, including detailed engineering for key packages, procurement of long-lead items, and construction and installation activities. Mine development activities, including pre-stripping, and the plant commissioning and ramp-up period are then completed prior to achieving stable operations.

The Master Schedule is presented at a PEA level and is therefore preliminary in nature. Timing and durations are intended to provide a reasonable, high-level framework consistent with this level of study and are expected to be refined as the Project advances to subsequent study stages (including pre-feasibility and feasibility), and as permitting strategies, engineering definition, procurement planning, and execution sequencing are further developed.

The figure presents the high-level sequence of activities for the pre-mining phase from the PEA stage through construction and start-up. The RCA approval is highlighted as the key schedule driver, as it enables the commencement of major construction activities. The schedule is preliminary and presented at a PEA level; timing and durations are subject to refinement as the Project advances and as permitting and execution strategies are further developed.
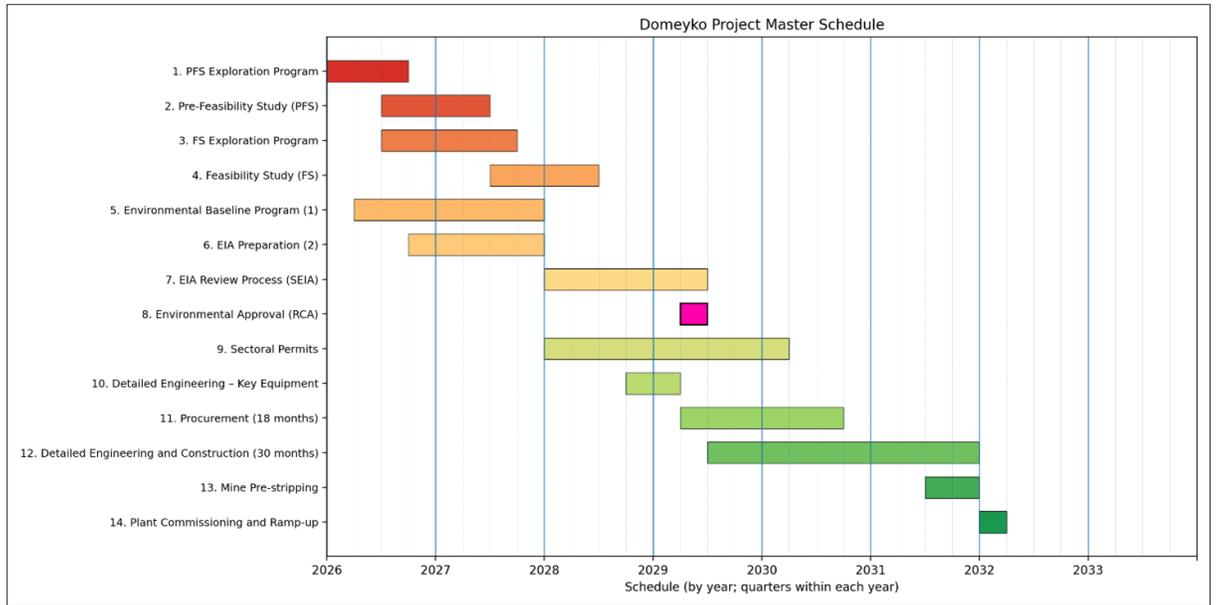
Figure 25.1: Domeyko Project Master Schedule (Summary)

The maritime concession and environmental permits constitute the critical path of the project execution plan; therefore, it is recommended that these matters receive special attention and be initiated as a priority.

25.11 Disclaimer

Qualified Persons has not conducted an independent legal due diligence review of mining properties, nor of taxation or permitting matters. However, based on the information made available to the Qualified Person and on their professional judgment, no material issues or fatal flaws related to , mining properties, taxation, or permitting have been identified that would be expected to preclude the potential development of the Project as contemplated at the PEA level.

This statement should not be interpreted as a legal, tax, or permitting opinion, nor as confirmation of the validity of mining properties, or that all permits required for future development have been obtained. Additional reviews by qualified legal, tax, and permitting professionals will be required at subsequent stages of project development.

26 Recommendations

The term "ore" or "ore feed" is used in this study solely to describe material scheduled for processing in the conceptual mine plan and does not imply the declaration of Mineral Reserves as defined by NI 43-101

26.1 Geology

- SRK recommends continuing with the good sampling, logging and storage practices observed during the field visit. Regarding the geological model, it is recommended to better define the KB and KFELD units in the Logging, to better define the limits of these alterations.

- The mineralized body is open towards the edge of the KB and KFELD alteration zones and also at north-west direction. In addition, it is known from old drillings that there are high-grade sectors in the secondary mineral both in the center of the deposit and in the northern sector dominated by a tourmaline breccia body. In order to determine the mineralization in these lateral and deep sectors, it is necessary to carry out new inclined and deep drillings that cut the KB and KFELD alterations.

  - It is also recommended to better characterize the different intrusive pulses found at Dos Amigos, whether through petrographic, mineralogical, chronological, and structural studies, in order to define the mineralizing, pre-mineralization, and post-mineralization pulses. Likewise, it is recommended to better characterize and delineate the alteration.

  - It would be advisable to carry out a characterization of the veinlets and detailed mapping of them in the existing drillholes from the different campaigns, in order to develop a veinlet model in a future study.

  - It is recommended to explore the Maria Soledad and Tricolor prospects, with good surface characterization and the completion of some deep drillholes to confirm the presence of hypogene mineralization.

26.2 Resources

- SRK recommends increase the number of drillings to improve the categorization and interpretation and maturity of the geological model. It is recommended to carry out more drilling focused on having a mesh of 80 meters.

- By increasing the number of drillholes, variography and resource estimation will improve, leading to a better understanding of grade continuity.

- It is necessary to delimit the deposit in order to separate the waste material from the mineral. For this process, a 0.1% TCu isograde was combined with alterations, but for future work it will be necessary to have a more defined geological variable for their separation. This variable can be lithological, alteration, mineral zone or, if possible, a mineralogical separation, such as using pyrite, pyrite-chalcopyrite or chalcopyrite-pyrite zones or a combination of them.

- In order to better calculate the tonnage of material, both waste and mineral, it is necessary to have more density samples.

- Additional metallurgical studies are required to establish copper and gold recovery parameters that will contribute to the design criteria for a copper-gold sulfide processing plant and support the financial model in future studies.

26.3 Mineable Resources

26.3.1 Advance to Pre-Feasibility Study (PFS)

- Incorporate detailed geotechnical designs, including ramp configurations and operational phase layouts.

- Validate mine and plant capacities through trade-off studies considering capital costs, water balance, and tailings management.

26.3.2 Resource Model Updates

- Improve geological confidence by converting Inferred Resources to Indicated or Measured categories through additional drilling.

- Update metallurgical recovery assumptions with comprehensive test work.

26.3.3 Economic Analysis

- Conduct sensitivity and risk analysis for metal prices, costs, and discount rates.

26.3.4 NI 43-101 Compliance

- Maintain clear disclosure that Mineral Resources are not Mineral Reserves and there is no certainty of conversion.

26.4 Mining

26.4.1 Mining Method

26.4.1.1 Advance to Pre-Feasibility Stage

- Develop detailed ramp designs and operational phase layouts.

- Incorporate dilution and mining recovery factors into the mine plan.

- Validate geotechnical parameters through additional drilling and slope stability analysis.

26.4.1.2 Ramp Design and Accessibility

- Develop detailed ramp configurations to ensure safe and efficient access to all phases.

- Trade-off: Wider ramps improve safety and productivity but increase stripping and reduce ore recovery in narrow phases.

26.4.1.3 Bench Height and Berm Design

- Validate the 15 m bench height against geotechnical stability and equipment capabilities.

- Trade-off: Larger benches reduce drilling and blasting costs but may increase slope instability risk.

26.4.1.4 Equipment Selection

- Compare scenarios using larger haul trucks and shovels versus smaller, more flexible fleets.

- Trade-off: Larger equipment reduces unit costs but requires higher initial investment and larger working areas.

26.4.1.5 Dilution and Recovery Factors

- Incorporate realistic dilution and mining recovery assumptions into the plan.

- Trade-off: Lower dilution improves grade but may require tighter operational controls and higher drilling precision.

26.4.2 Economic and Technical Trade-Offs

- Perform full economic analysis including CAPEX/OPEX, taxes, and royalties.

- Confirm the optimal throughput scenario (35 vs 40 ktpd) through sensitivity studies and risk assessment.

26.4.3 Geotechnical Considerations

- It is recommended to continue collecting geotechnical and geological data to meet the recommendations regarding laboratory testing, geotechnical mapping, and structural and hydrogeological modelling, in line with the project stage as described in Varona et al. (2022).

- Special emphasis should be placed on hydrogeological modelling, as field observations during the site visit indicate that some drillholes exhibited artesian behavior, suggesting the presence of a confined aquifer, which may have significant implications for subsequent stability analyses.

- In subsequent project stages, it is recommended to use triple-tube coring, drillhole orientation, and televiewers for all geotechnical and hydrogeological drillholes.

- Once these data have been collected, the models developed at this stage must be reviewed and updated, and the stability analyses for each phase must be developed accordingly.

26.4.4 Mine Schedule

26.4.4.1 Throughput vs. Mine Life Trade-Off

- Evaluate the economic impact of increasing plant capacity (e.g., 35 ktpd vs. 40 ktpd vs. 45 ktpd) against mine life reduction and higher upfront capital costs.

- Perform sensitivity analysis on NPV, IRR, and payback period for each throughput scenario.

26.4.4.2 Cut-Off Grade Optimization

- Update cut-off grade assumptions using refined metallurgical recovery data and economic parameters during Prefeasibility.

- Consider dynamic cut-off strategies to maximize NPV under varying metal prices and operating costs.

- Trade-off: Higher cut-off grades improve head grade but reduce tonnage and increase strip ratio, potentially lowering NPV.

26.4.4.3 Stockpile Strategy

- Analyze the economic benefit of high-grade vs. low-grade stockpiling under different price scenarios.

- Consider blending strategies to maintain consistent plant feed grade and optimize recoveries.

26.4.4.4 Phase Sequencing and Ramp Design

- Optimize phase designs to minimize haulage distances and reduce operating costs.

- Reassess phase designs to minimize initial stripping ratios and reduce pre-stripping CAPEX.

- Conduct sensitivity analyses on processing rates (e.g., 30–45 ktpd) to identify the optimal balance between CAPEX, OPEX, and NPV.

- Assess phased plant expansions versus single-line design for flexibility and risk mitigation

- Trade-off: Aggressive phase sequencing may improve early cash flow but increase geotechnical risk and operational complexity.

26.4.4.5 Capital vs. Operating Cost Balance

- Evaluate the trade-off between investing in larger equipment fleets for higher throughput versus maintaining smaller fleets with longer mine life.

- Consider the impact on maintenance, fuel consumption, and labor requirements.

26.4.4.6 Risk and Sensitivity Analysis

- Conduct comprehensive sensitivity studies on metal prices, operating costs, and discount rates.

■ Include scenario planning for potential regulatory or environmental constraints.

26.4.5 Waste Storage Facilities

For subsequent stages of the project, it is recommended to undertake more detailed stability analyses for the waste storage facilities, including three-dimensional evaluations and sensitivity analyses. These studies would support a more comprehensive assessment of stability performance under varying material properties, groundwater conditions, and seismic assumptions.

It is also recommended to refine the dump geometry and construction sequence as part of future study stages. This refinement should consider updated geotechnical information, operational constraints, and potential optimization of overall slopes and lift configurations as the mine plan is further developed.

In addition, early definition of closure criteria for the waste storage facilities is recommended. This work would support the integration of long-term stability, landform design, and closure requirements into the detailed design process, reducing uncertainty and facilitating a smoother transition to later project stages.

26.4.6 Mine Fleet

For subsequent stages of the project, it is recommended to review the make-or-buy strategy for blasting activities. This evaluation should consider alternative contracting arrangements and potential owner-operated scenarios, with the objective of confirming the most cost-effective and operationally flexible approach for the project.

In addition, future study stages should assess alternative fleet dispatch and management strategies, including the potential use of more advanced fleet management systems. This evaluation would support improved equipment utilization, cycle time control, and overall operational efficiency as production rates increase and haulage conditions evolve.

Finally, it is recommended to further refine the sizing of auxiliary equipment using more detailed production schedules and operating assumptions, with the objective of improving reliability and optimizing capital and operating costs as mine geometry and material movement requirements are better defined.

26.5 Process

The Domeyko Project concentrator plant is based on a conventional, proven processing flowsheet and is considered relatively well optimized. However, given the moderate copper and gold head grades, the operation faces inherent challenges in achieving robust economic performance. In this context, it is essential to continue evaluating process initiatives to improve metal recoveries while minimizing both capital and operating costs.

The current plant configuration consists of a single production line based on SAG grinding, followed by conventional flotation with an optimized cleaning stage incorporating Jameson cells. Tailings are managed through a high-density thickened tailings system, which significantly reduces overall water consumption. The use of raw seawater as the primary water source represents a low-cost, sustainable alternative that avoids desalination while maintaining acceptable flotation performance.

Although the current design is generally well optimized, several opportunities for further improvement have been identified and are recommended for evaluation at the PFS stage, as summarized below.

- During the PEA stage, the SAG grinding circuit was evaluated both with and without crushed pebble recirculation. The option incorporating pebble crushing and recirculation demonstrated improved energy efficiency. It is recommended that this configuration be re-evaluated using a phased, flexible design approach, whereby the project could initially operate without a pebble crusher in the early years, when the ore feed is expected to be softer, and subsequently install the pebble crusher as ore competency increases. With the incorporation of a larger-diameter SAG mill and a pebble-crushing circuit, a potential throughput of up to 40,000 tpd could be achieved.

- Results from the Axb and SPI comminution test work indicate that UG2 and UG3 units exhibit higher competency. These units represent approximately 40% of the mineral resources. Based on this, it is recommended that a trade-off study between SAG milling and HPGR-based comminution be conducted using a larger and more representative sample set across all geological units. The relationship between specific energy consumption and the Axb parameter indicates that the Domeyko ore lies near the transition between medium- and high-hardness. A reduction in Axb from the current average of approximately 42 would result in a sharp increase in energy consumption, exceeding 10 kWh/t. Under such conditions, HPGR technology may offer advantages not only in lower specific energy consumption but also in reduced downstream ball mill energy demand. Figure 26.1 shows the current power consumption of the Sag circuit obtained in tests on the Domeyko ore, as reported by JKTech at the University of Queensland.
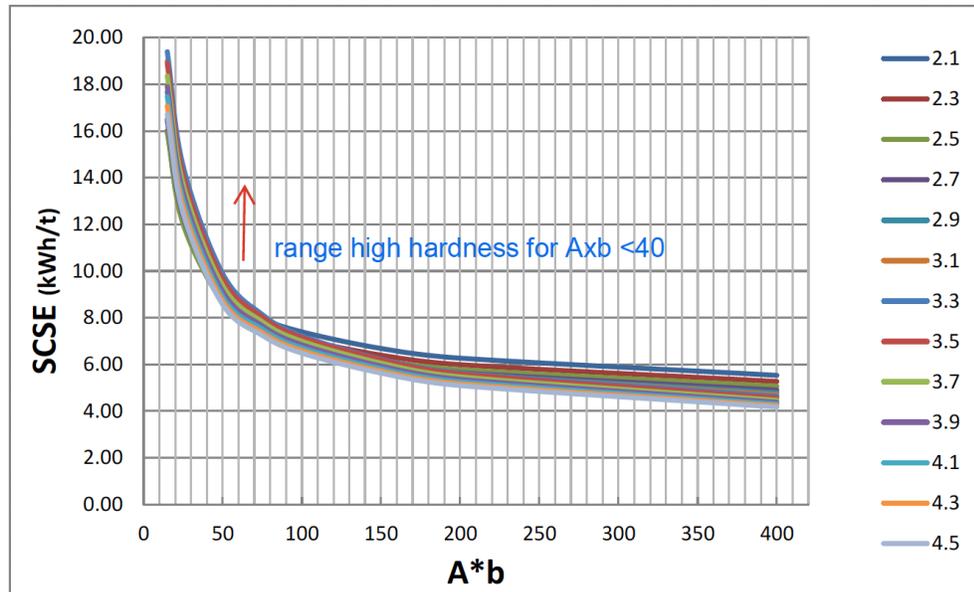
Figure 26.1: Energy consumption versus Axb

▪ Metallurgical test work has identified that a portion of the gold is associated with pyrite, which is depressed under the current flotation conditions, resulting in gold losses to tailings. To mitigate this loss mechanism, it is recommended that a centrifugal gravity concentrator (Knelson or Falcon type) be evaluated for installation on the hydrocyclone underflow stream. Preliminary estimates indicate that this approach could increase overall gold recovery from approximately 65% to 70%. As part of this initiative, detailed mineralogical studies focusing on Au-chalcopyrite and Au–pyrite associations should be completed in the next project stage.

▪ The optimization of reagent schemes and the target regrind P80 must be finalized at the laboratory scale before the PFS stage to achieve a final concentrate grade exceeding 26.5% Cu and a cleaner-circuit recovery of approximately 95% under seawater flotation conditions.

▪ In addition to the targeted test work described above, the full PFS metallurgical program should be completed using samples from at least three dedicated metallurgical drillholes. The program should include comprehensive testing of comminution, flotation, and tailings sedimentation. A preliminary estimate of approximately 90 samples has been defined to support this level of evaluation.

▪ For tailings management, it is recommended that conventional thickened tailings (approximately 55% solids) be evaluated in parallel with high-density tailings (approximately 65% solids). This comparative test work will generate a robust database to support a trade-off analysis considering thickener sizing, tailings storage facility design, seawater pumping requirements, and overall water make-up demand for each alternative.

26.6   Infrastructure

From an infrastructure perspective, the following recommendations are proposed to support and further refine the Project development:

▪ Advance technical definition and optimization of the renewable energy–based power supply defined for the Project Base Case, including confirmation of generation mix, installed capacity, and Battery Energy Storage System (BESS) requirements, with the objective of ensuring reliable 24/7 operation and cost stability in subsequent study stages.

▪ Evaluate integration options with the National Electrical System as a technical alternative, focusing on grid interconnection requirements, operational flexibility, and potential benefits as backup or supplementary supply, without modifying the renewable energy assumption defined for the Base Case.

▪ Advance logistics and infrastructure trade-off studies, including the evaluation of rehabilitation of the existing, currently non-operational rail line for concentrate transport to the Port of Las Losas, and assess its potential impact on capital costs, operating costs, and overall Project economics.

26.7   Environmental, Social, Community and Closure

26.7.1   Permitting

▪ Develop preliminary environmental and social baseline studies to better guide the baseline work to be carried out in the context of the Project's environmental permit.

▪ In particular, it is recommended to initiate studies as soon as possible to assess and characterize the presence of the Trichahue Parrot in the mine area, in order to determine its presence and guide specific studies of the species and management alternatives.

▪ Considering that part of the Project area includes a sector where the flowering desert can occur, it is recommended to begin flora surveys as soon as possible, in order to have records of all seasons for different years, so as to be able to capture the specific characteristics of the phenomenon in the area.

26.7.2   Environmental management

▪ Considering that the project is located in Vallenar, which is a commune declared as an astronomical area, and that there are observatories nearby, it is recommended to consider this early on in the project design.

▪ It is recommended to do specific studies associated with acid mine drainage, potential infiltration into groundwater, and the management of storm water. These issues must be addressed in detail in the next stage of the project's engineering, as they will be fundamental to the project's environmental assessment.

▪ From the point of view of water resources, the following is recommended:

– Install a weather station to measure temperature, precipitation, evaporation, and solar radiation.

– Physical, chemical, and isotopic samples of groundwater should be taken after drilling hydrogeological drillholes. It is also suggested that private district wells be included in this network (permits must be obtained) in order to establish baseline quality, as there is even an APR (Rural Drinking Water System) in the town of Domeyko.

– For the pre-feasibility study (PFS), detailed hydrological studies must be carried out to estimate recharge to the hydrogeological system, but hydrology must also be carried out for the design of works, which must take into account regulatory aspects related to climate change.

– Once the PFS prospecting stage is complete, the following hydrogeological studies must be updated or carried out:

  – Conceptual hydrogeological model of the Domeyko pit for input into geomechanical models and to determine drainage/depressurization costs.

  – Hydrogeological characterization of tailings deposit.

  – Hydrogeological, hydrochemical, and hydrological baselines for environmental permitting.

  – Infiltration studies of stockpiles: Ballast dump, low-grade stockpile, high-grade stockpile.

26.7.3   Social or Community Impact

These land use issues on the coastal area and tailing deposit, should be addressed early on in the preliminary and baseline studies to be developed in the project areas in order to identify their sensitivity and management options.

26.7.4   Closure

The alternative defined in this PEA will require an updated Closure Plan in compliance with Law N°20.551 and its regulations. This update must reflect the technical, environmental, and financial implications of the proposed alternative, ensuring that all closure activities remain aligned with current operational conditions and legal requirements. The closure plan should include updated cost estimates, guarantee adjustments. Additionally, the update must incorporate stakeholder engagement elements, such as the Public Disclosure Program, and adhere to the mandatory audit and renewal cycles defined by SERNAGEOMIN.

Also, the design of the pit expansion overlaps the heap leach pad in sectors 02 and 04; therefore, the material from these pads must be transported to another location. Therefore, the cost of relocating these leach pads corresponds to operational cost. The options for moving these materials might be: (i) relocating materials to existing heap leach pads with sufficient capacity, or (ii) relocating heap leach pads to new areas near the site.

In the first case, the costs of relocating the leach pads would only involve transportation and disposal in available areas (25.7 MUSD). Meanwhile, closure costs would remain the same, as the closure activities considered for the existing heap leach pads involve covering with clay and soil, on the surface area.

The second option involves higher relocation cost, because of surface preparation, geomembrane, solution collection and hauling distances. This option represents an estimate of 29.3 MUSD.

Regarding the closure cost estimate, it is assumed that the power lines will have future use; therefore, their dismantling, removal, and disposal have not been valued. Except for the lines that feed the pumping stations of the seawater supply system.

26.8 Capital and Operating Cost

26.8.1 Capital Cost

It is recommended that capital cost estimates be refined in subsequent study stages through increased engineering definition, particularly for the processing plant, infrastructure, and Tailings Storage Facility. Given the material contribution of tailings capital expenditures (approximately USD 270 million), further refinement of embankment raise strategies, construction sequencing, and material sourcing is expected to be a key focus area.

Pre-development and project definition costs should continue to be tracked and refined as the Project advances, with improved cost traceability for drilling programs, engineering studies, environmental permitting, and baseline data acquisition.

26.8.2 Operating Cost

Further work is recommended to refine mining productivity assumptions and haulage parameters as mine planning and scheduling are advanced. Sensitivity analyses focusing on haulage distances, fleet utilization, and operating hours are expected to provide additional insight into mining cost variability.

For processing operations, additional evaluation of comminution circuit performance, energy consumption, and reagent usage is recommended, as these factors represent the dominant contributors to the average processing cost of USD 8.6 per tonne of ore processed. Continued assessment of power supply strategies, including renewable energy integration, is expected to remain a key focus area for operating cost optimization.

26.8.3 Tailings Management and Operating Costs

It is recommended that Tailings Storage Facility operating costs, currently estimated at approximately USD 98 million on a life-of-mine basis, be further refined through detailed operational planning and, where appropriate, three-dimensional stability and operational sequencing analyses. Early definition of closure and post-operational monitoring criteria is also recommended to ensure alignment between operational and long-term cost assumptions.

26.9　Economic Analysis

It is recommended that the Project advance to subsequent study stages with the objective of reducing the uncertainties inherent to a Preliminary Economic Assessment level. This should include further development of mine, process, and tailings engineering, as well as refinement of the capital investment and construction schedules.

Particular emphasis should be placed on evaluating alternatives aimed at increasing copper production, with the objective of improving unit operating costs and enhancing overall Project value. In addition, it is recommended to expand and further develop sensitivity and scenario analyses, particularly with respect to metal prices, capital expenditures (CAPEX), and operating costs (OPEX), given the Project's demonstrated sensitivity to these variables.

Further refinement of the geological, mining, and metallurgical bases is also recommended, with specific focus on gold due to its material impact on the Project's economic results. This includes improving assumptions related to costs, metallurgical recoveries, and development schedules. In parallel, it is recommended to continue advancing the permitting processes and to further identify and manage Project risks, in order to strengthen the technical and economic basis of the Project in support of a potential pre-feasibility level evaluation.

26.10　Master Plan

Refine the Project Master Schedule in subsequent study stages (PFS and FS) by developing a higher-definition, integrated schedule (Level 3–4) that incorporates detailed logic, critical path analysis, and defined float for key engineering, permitting, procurement, and construction work packages.

Maintain the Environmental Qualification Resolution (RCA) as the primary schedule driver, ensuring that pre-RCA activities—such as environmental baseline programs, EIA preparation and submission, SEIA review, and critical sectoral permits—are adequately resourced and supported by risk mitigation strategies, given their direct impact on construction start.

The maritime concession and environmental permits constitute the critical path of the project execution plan; therefore, it is recommended that these matters receive special attention and be initiated as a priority.

Develop a detailed and sequenced sectoral permitting plan aligned with the Master Schedule, with the objective of minimizing post-RCA execution bottlenecks and improving construction readiness.

Advance early engineering definition for long-lead equipment and systems, in order to validate procurement durations, market availability, and potential supply-chain constraints that may influence the Project critical path.

Evaluate controlled schedule overlap opportunities between engineering, permitting, and procurement activities, particularly for works not directly conditioned by RCA approval, with the objective of optimizing the overall Project timeline without materially increasing regulatory risk.

Incorporate schedule risk and contingency analysis, including alternative scenarios related to regulatory delays, contractor availability, supply-chain constraints, and climatic conditions, to improve the robustness of the Project schedule.

Align the Master Schedule with the overall Project execution strategy, including contracting approach, procurement strategy, and construction management philosophy, ensuring consistency between schedule, cost estimates, and risk management in future study stages.

Preliminary analysis suggests that advancing the start of operations by up to approximately one year may represent an opportunity to enhance Project value, with a potential increase in NPV estimated at approximately USD 30–50 million. This potential upside is conceptual in nature and subject to confirmation through more detailed engineering, scheduling, and permitting assessments.

Closure

This report, Technical Report NI 43-101 – PEA Domeyko Sulfuros was prepared by:
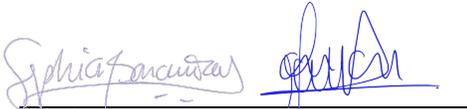
Sophia Bascuñán; Martín Cares

and reviewed by

Patricio Martínez

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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Appendix 1 Title Opinion Letter

Eugenio Ramirez Cifuentes
Lawyer

Santiago, November 28th, 2025

Title Opinion Letter

The undersigned hereby confirms that the Chilean company 'Andean Belt Resources SpA' (hereinafter, the "Company") is the legal owner of the mining properties detailed in Annex A, attached to this document (hereinafter, the "Assets"), in accordance with the laws and other applicable regulations of the Republic of Chile.

The Assets were acquired by the Company during 2022 and 2023 and in November 2024 they were registered in its name in the corresponding Mining Registry of the city of Vallenar, Atacama Region.

Nevertheless, the Assets may still appear under the name of the previous owner in the records kept by the National Service of Geology and Mining. This situation does not alter the ownership of the Assets in the name of 'Andean Belt Resources SpA'.

This document has been prepared after reviewing the following documentation:

- Deed of Sale of Mining Concessions, executed at the offices of Public Notary Juan Ricardo San Martín Urrejola on September 12, 2025.
- Certificates of Registration of Sale of Mining Claims, issued by the Mining Registry, Vallenar, Chile, dated November 20, 2025.

Eugenio Ramírez Cifuentes
Lawyer
Chilean Tax-Id: 10.967.227-0

Eugenio Ramirez Cifuentes
Lawyer

Annex A

- List of the exploitation concessions.

ID Number (ROL)	Name	Holder	Area (ha)	Expiration Date	Concession Type
03301-3959-5	ANTONIO 4 1/37 (2)	Andean Belt Resources SpA	180	na	Exploitation
03301-4926-4	MAYA XVIII 1/36 (2)	Andean Belt Resources SpA	176	na	Exploitation
03301-4927-2	MAYA XIX 1/38 (2)	Andean Belt Resources SpA	187	na	Exploitation
03301-4509-9	TERESA 53 1/18 (2)	Andean Belt Resources SpA	180	na	Exploitation
03301-4510-2	TERESA 54 1/30 (2)	Andean Belt Resources SpA	295	na	Exploitation
03301-4511-0	TERESA 55 1/10 (2)	Andean Belt Resources SpA	100	na	Exploitation
03301-0832-0	TOPAZE 1/4 (2)	Andean Belt Resources SpA	20	na	Exploitation
03301-4310-K	EMILIO 4 1/5 (2)	Andean Belt Resources SpA	17	na	Exploitation
03301-5181-1	LA CULEBRA 1/4 (2)	Andean Belt Resources SpA	4	na	Exploitation
03301-5555-8	SAN GUILERMO 1/5 (2)	Andean Belt Resources SpA	25	na	Exploitation

Appendix 2   Term Sheet

Term Sheet

Andean Belt Resources SpA

Financing for the exploration and resource definition of primary sulfide mineralization at the Domeyko Sulfuros project in northern Chile

For aggregate gross proceeds of US$4.0 million

Transaction:	Investment via capital increase of Andean Belt Resources SpA (the "Partnership") to fully finance exploration and studies at the Domeyko Sulfuros property in Chile.
Issuer:	Andean Belt Resources SpA (the "Company"), a Chilean mining exploration company, incorporated under the laws of Chile on April 11, 2012.
Offering:	Subscription of to-be issued common shares (the "Shares") of the Company under Chilean law (the "Offering").
Proceeds:	Tintina Mines Limited (the "Investor") shall commit the proceeds of the Offering to the Company on the Closing Date, as follows - Investor: US$4.0 million.
Closing Date:	Will be the date of the execution of the subscription of the capital increase.
Disbursement Date:	Will be no later than April 30, 2024. The investor shall use best efforts to make the funds available by March 29, 2024.
Shareholders Interest:	Investor: 65-75% of the Company's Capital Current Chilean Investors: 25-35% of the Company's Capital The exact % of the Company's Capital to be received by the Investor is subject to both, the Due Diligence and USD/CLP exchange rate fluctuations. Under no circumstances, the % of the Company's Capital the Investor will earn under the terms of this Transaction will be less than 65%.
Business Plan:	Andean Belt Resources SpA and the current Chilean Investors have a long and reliable track record in exploration and mining in Chile.

The exploration assets held by Andean Belt Resources SpA consist of five exploration projects in Chile (Domeyko Sulfuros, Amalia Norte, Soledad, El Volcan, Las Lolas) being the Domeyko Sulfuros project the flagship property of the portfolio and the main rationale of the Partnership.

Tintina Mines Limited has a long and reliable track record in successfully advancing and monetizing mining properties in Canada as well as access to international capital markets.

The immediate plan will be:

Conduct a comprehensive exploration of the primary sulfide mineralization of the Domeyko Sulfuros project, with the central objective of advancing the project towards a resource definition stage supported by reports generated in accordance with international standards.

Use of Proceeds: *Domeyko Sulfuros Project:* Conduct a comprehensive exploration of the primary sulfide mineralization with the central objective of advancing the project towards a resource definition stage supported by reports generated in accordance with international standards.

General corporate purposes and maintenance of licenses in good standing.

Shareholders' Rights: The shareholders participating in the Partnership will be represented in the Board of Directors and the Technical Committee according to the % holdings of shares of the Company, i.e. the Investor will have the right to name two members and the existing shareholders, as a group, one member in case that the number of members will be set to three.

While the existing shareholders, as a group, will own a minimum of 10% of the outstanding shares, they will be entitled to have at least one member in both, Board of Directors and the Technical Committee.

Precedent Conditions: Including, but not limited to:

1. Complete due diligence to the Investor's satisfaction, which includes:
   a. Legal review of the Mining Properties and their good-standing
   b. Legal and financial review of the Company
2. Approval of the Transaction by TSX-V and the shareholders of the Investor.

For the avoidance of doubt, this Term Sheet is not intended to be exhaustive on all matters, which may be subsequently covered in future negotiations, requests, agreements and contracts.

Accepted and signed this ___6___ of ___February___ 2024 by

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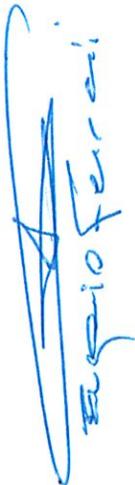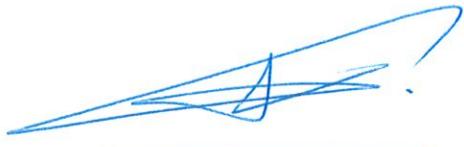
By: Eugenio Ferrari
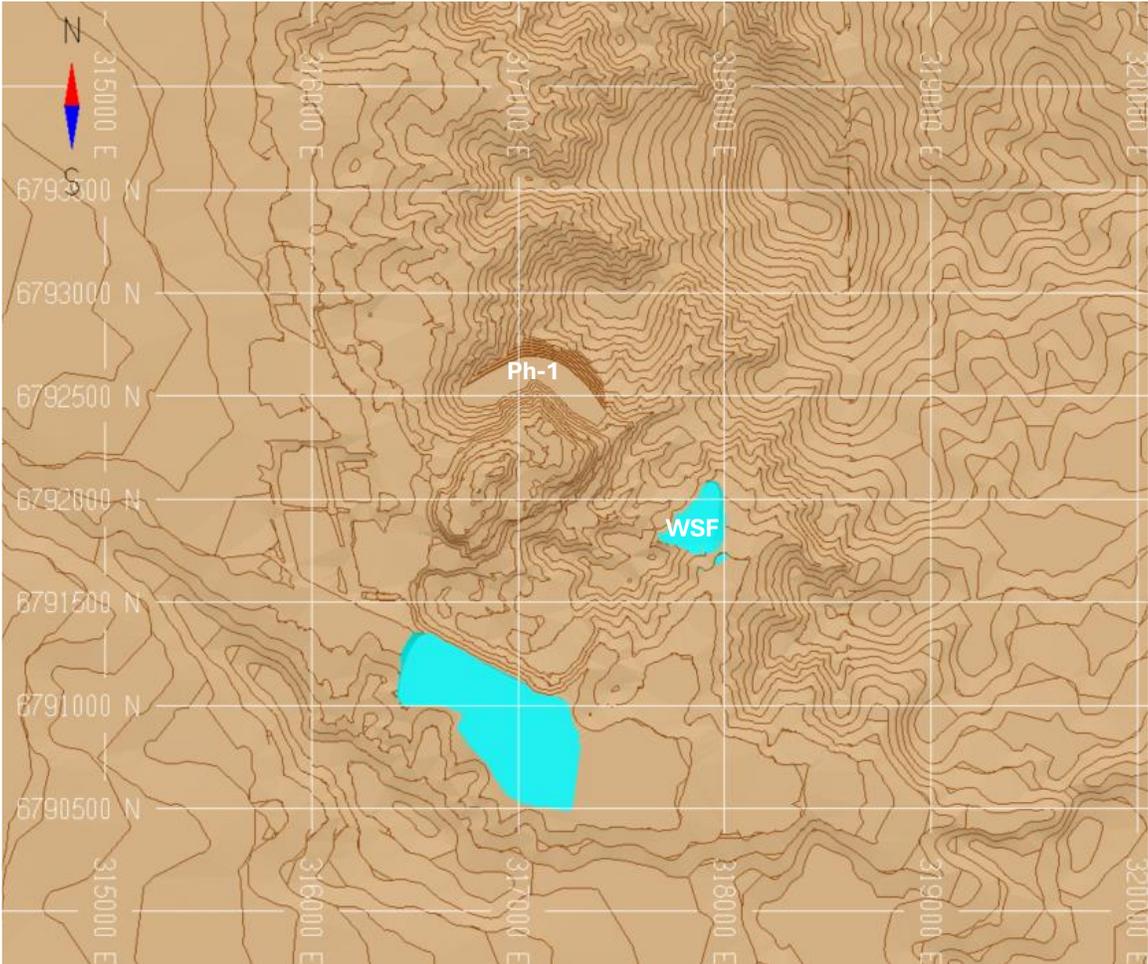
Position: CEO & Director

Tintina Mines Limited
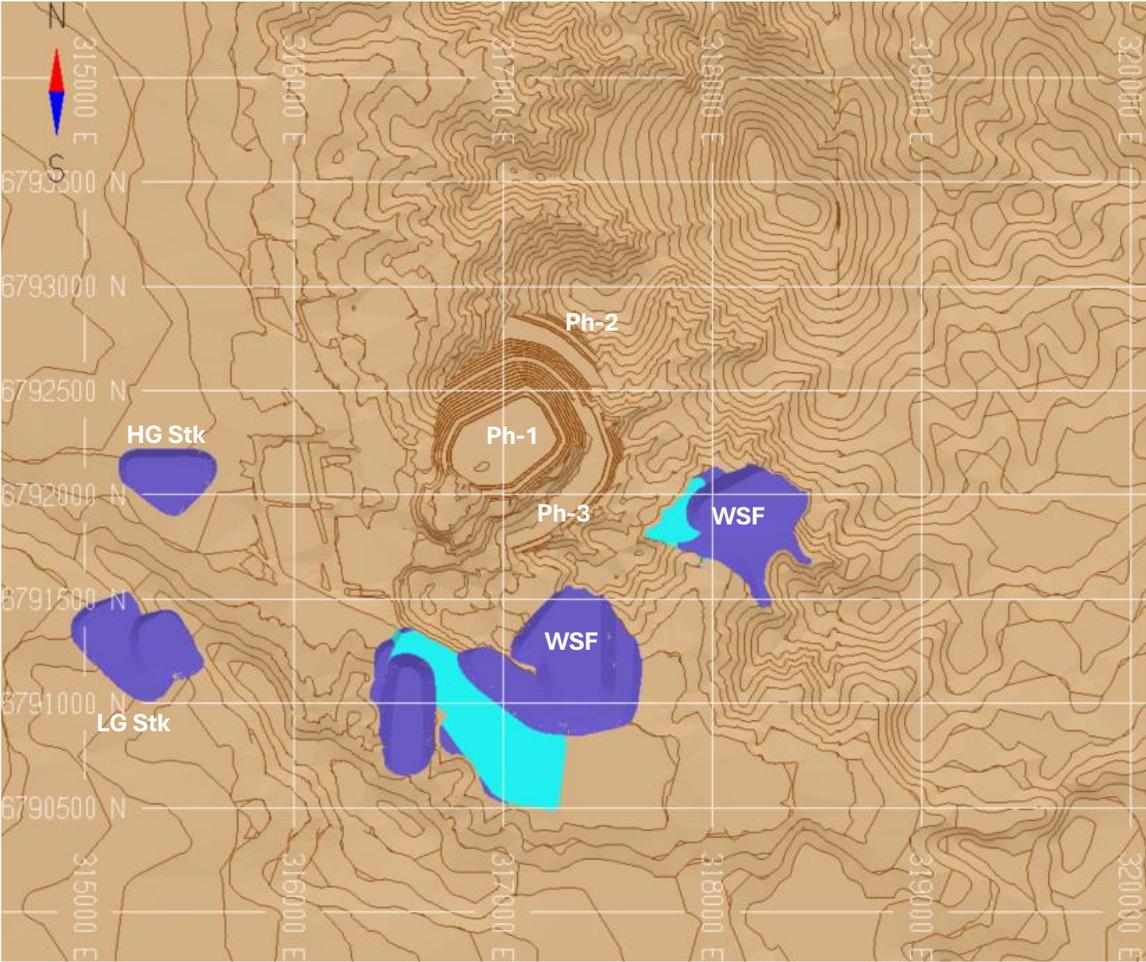
By: Carla Cruz Camus

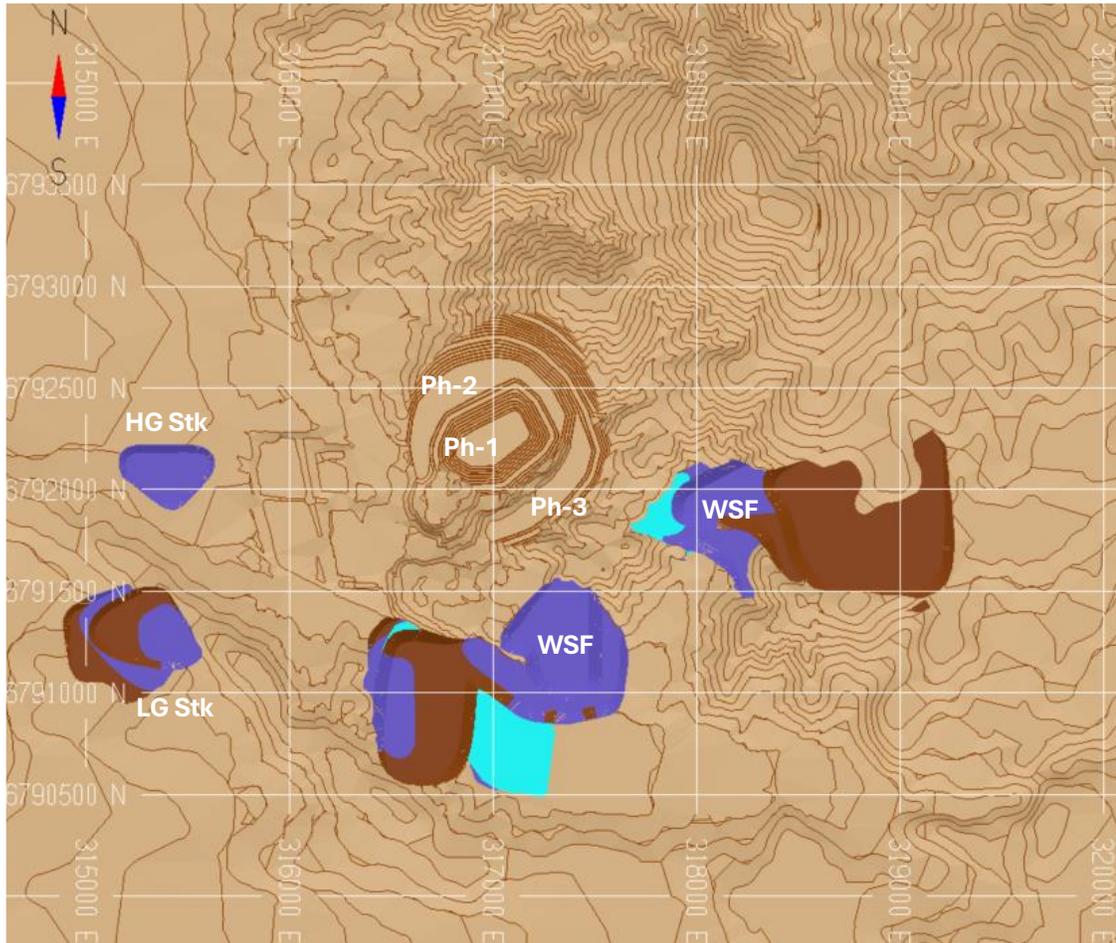Position: CEO & Director

Andean Belt Resources SpA

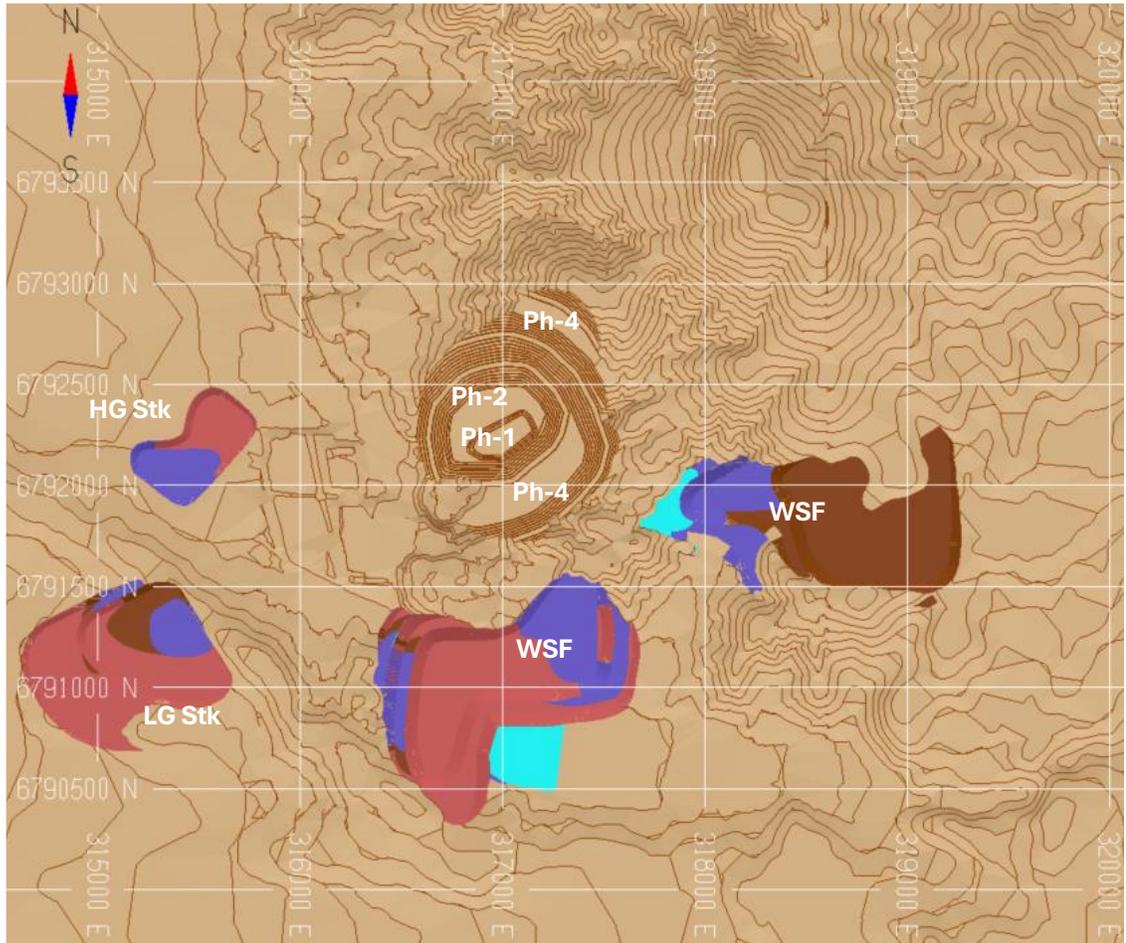# Appendix 3   Mine Development by Period

Figure A.3. 1:   First year of the Domeyko Mine
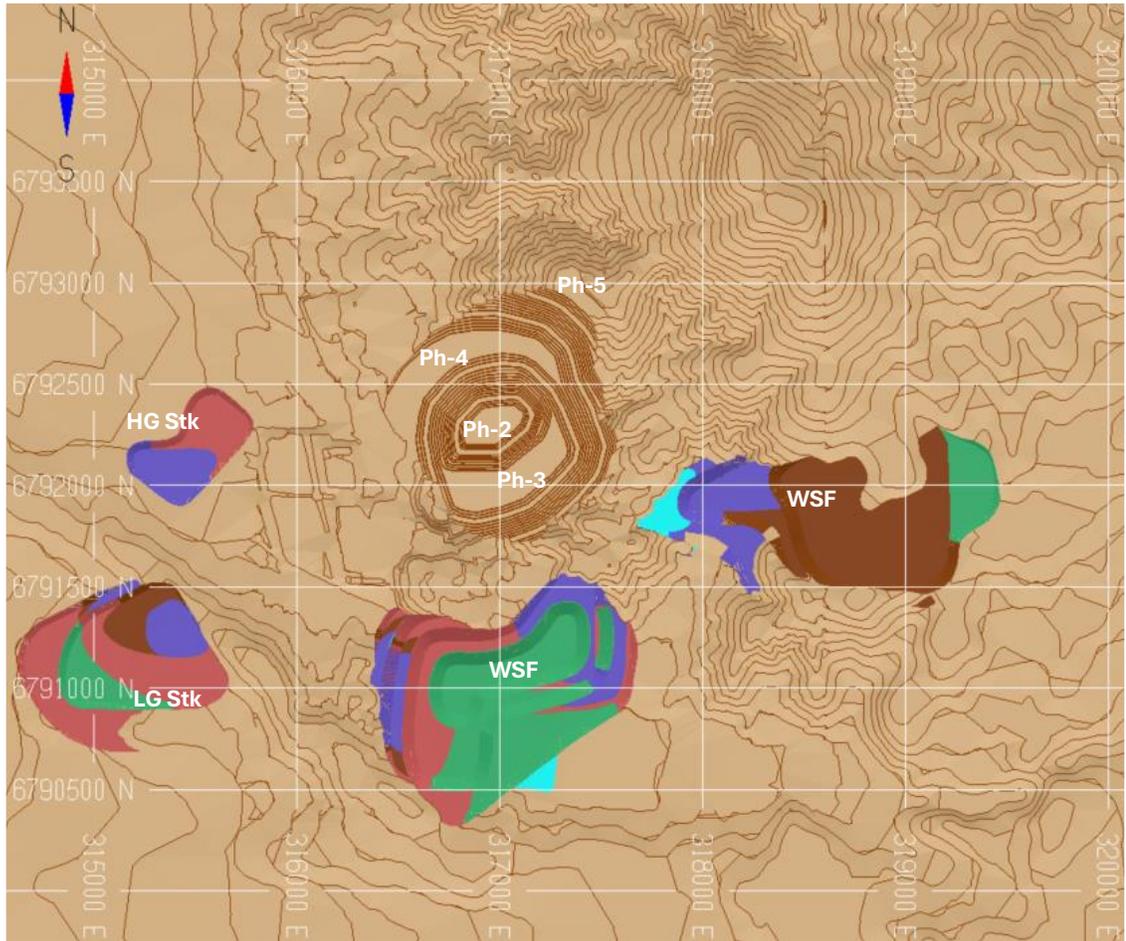
Figure A.3. 2:   Second year of the Domeyko Mine
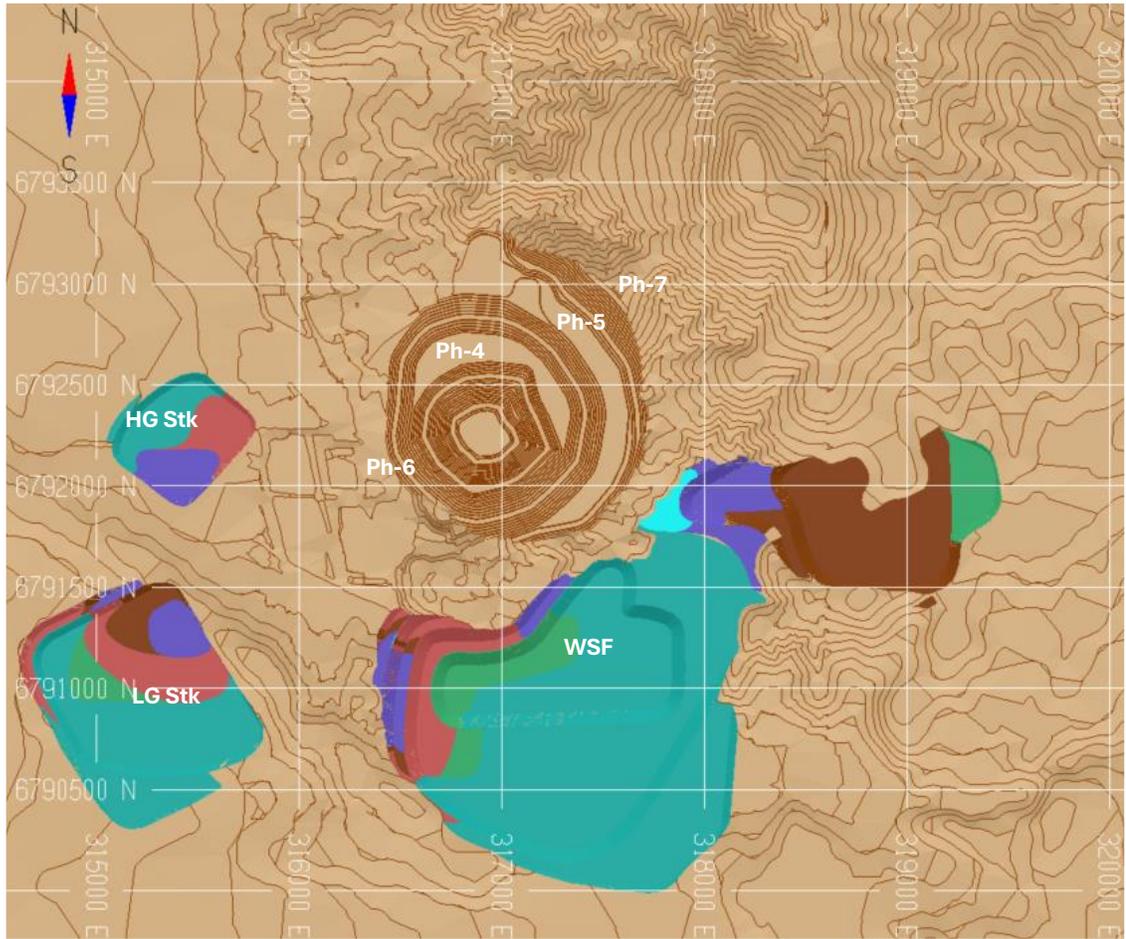
Figure A.3. 3: **Third year of the Domeyko Mine**

Figure A.3. 4:   **Fourth year of the Domeyko Mine**
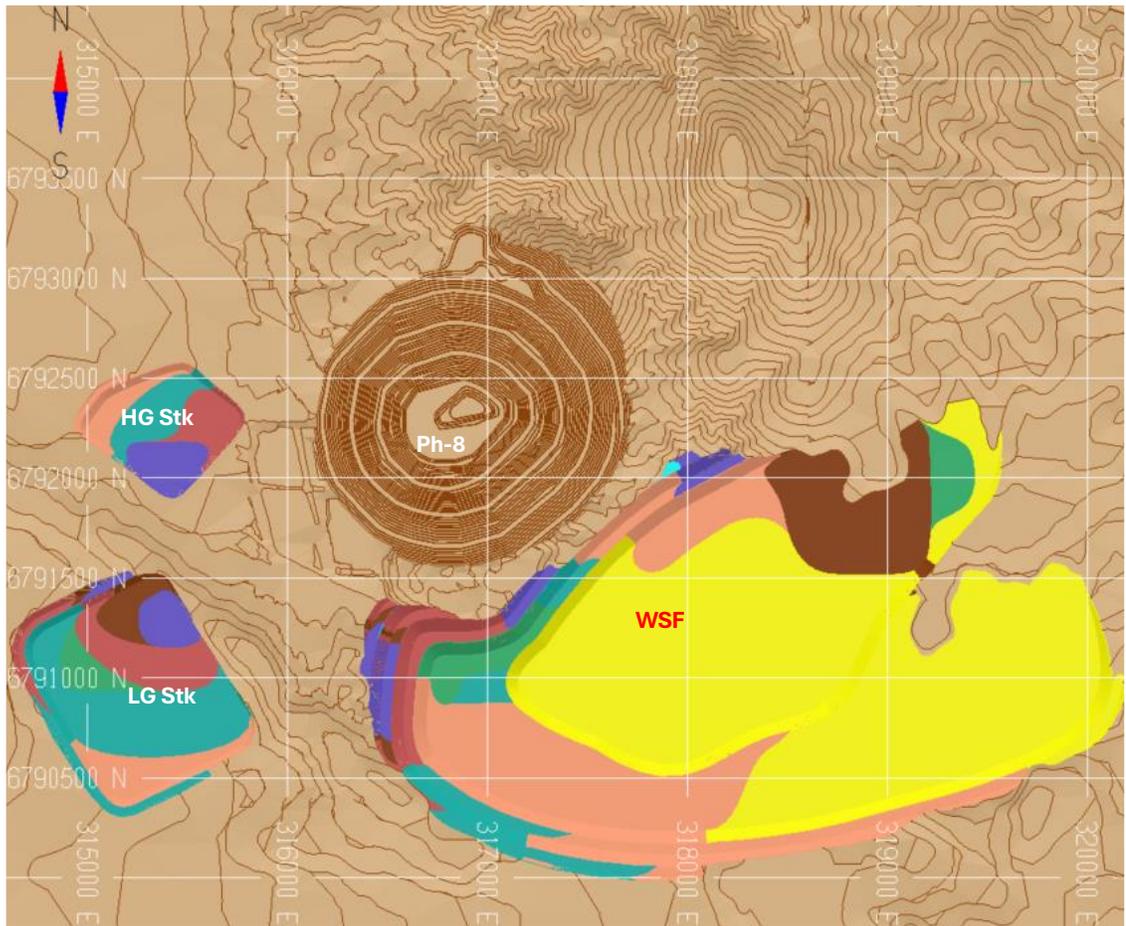
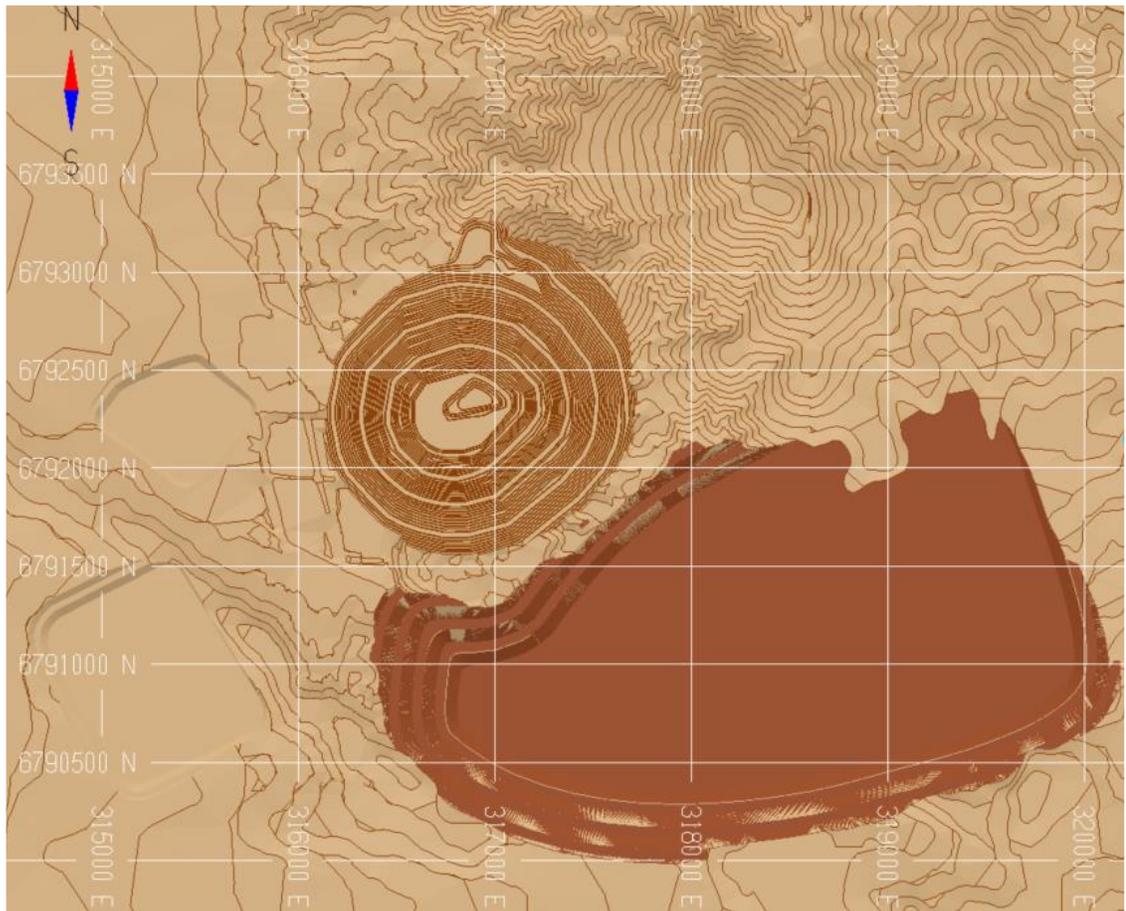**Figure A.3. 5:   Fifth year of the Domeyko Mine**

Figure A.3. 6:   Tenth year of the Domeyko Mine

Figure A.3. 7:   Fifteenth year of Domeyko Mine

Figure A.3. 8:   Twentieth year of the Domeyko Mine

Figure A.3. 9:   Final Pit of the Domeyko Mine

Appendix 4   Economic Sensitivity Scenarios

In addition to the Base Case evaluation, two sensitivity scenarios, both more conservative than the Base Case, were assessed to evaluate the Project's exposure to key economic variables, specifically gold price and power supply assumptions.

The first sensitivity scenario (E1) considers a reduction in the long-term gold price to USD 2,200/oz, while maintaining all other assumptions consistent with the Base Case. The second sensitivity scenario (E2) evaluates the use of conventional power supply, resulting in an increase in the assumed electricity cost to USD 100/MWh.

The principal parameters applied in the Base Case and sensitivity scenarios are summarized in Table A.4. 1.

Table A.4. 1: Summary of Parameters Used in Sensitivity Scenarios

Parameter	Unit	Base Case Renewable Energy	E1 – Au Price USD 2,200/oz	E2 -Conventional Energy
Copper Price (Pcu)	USD/lb	4.3	4.3	4.3
Gold Price (Pau)	USD/oz	2,500	2,200	2,200
G&A Cost	USD/t milled	1.2	1.2	1.2
Copper Recovery	%	88	88	88
Gold Recovery	%	65	65	65
Copper Payability	%	96.6	96.6	96.6
Gold Payability	%	95	95	95
Minimum Payable Gold Grade	g/t concentrate	1	1	1
Plant + Infrastructure Contingency	%	35	35	35
Mining Contingency	%	15	15	15
Power Price	USD/MWh	70	70	100

Sensitivity Results

Both sensitivity scenarios continue to generate positive economic results at a PEA level. However, each individual variation results in a reduction in Net Present Value (NPV) of approximately 24% relative to the Base Case.

When the combined effect of both variations—lower gold price and higher power cost—is considered, the Project NPV decreases by approximately 42% relative to the recommended Base Case scenario.

These results highlight the Project's sensitivity to gold price and power cost assumptions and reinforce the importance of further refining these parameters, as well as evaluating alternative development and optimization strategies, as the Project advances to subsequent study stages.

Table A.4. 2 presents a summary of the principal pre-tax economic indicators for the Base Case and selected sensitivity scenarios evaluated at a PEA level.

Table A.4. 2: Pre-Tax Economic Indicators – Base Case and Sensitivity Scenarios

Economic Indicators	Unit	BC: Renewable Energy	E1: Price Au 2200	E2: EE Conventional Energy
NPV Pretax @ 8%	MUSD	560	426	323
TIR Pretax	%	15%	13%	12%
IVAN Pretax	ratio	0.49	0.37	0.28
Payback	years	8	9	11

Figure A.4. 1 shows the comparative pre-tax NPV for the Base Case and sensitivity scenarios.

NPV by Scenario (MUSD)
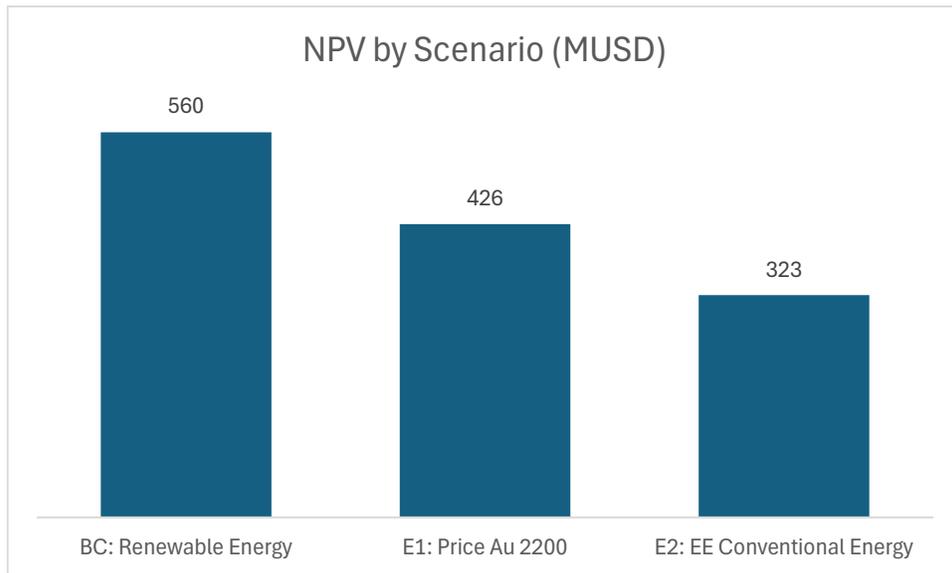
Figure A.4. 1: **Pre-tax Net Present Value (NPV)**

Cost and Capital Impacts

The impact of adopting conventional power supply (E2 scenario) is primarily driven by an increase in operating costs, with processing costs increasing from USD 8.6/t milled in the Base Case to USD 9.58/t milled under the conventional energy scenario. In addition, this scenario results in a moderate increase in capital expenditures, associated with the requirement to incorporate additional infrastructure for power supply.

The principal operating cost and capital cost indicators for each scenario are summarized in Table A.4. **3**.

Table A.4. 3: Cost and Capital Indicators – Additional Sensitivity Scenarios

Cost Indicators	Unit	Base Case: Renewable Energy	E1: Au Price USD 2,200/oz	E2: Conventional Energy
Cash cost (C1)	US¢/lb Cu	264	264	279
Mine Cost	USD/t moved	2.13	2.13	2.13
Plant Cost	USD/t milled	8.6	8.6	9.58
Selling Cost	US¢/lb Cu	40.6	40.6	40.6
Initial Mine Equipment Investment	MUSD	174	174	174
Pre-stripping Investment	MUSD	33	33	33
Initial Direct Capital – Plant and Infrastructure	MUSD	448	448	459
Initial Direct Capital – Tailings	MUSD	144	144	144
Initial Indirect Capital	MUSD	163	163	166
Initial Capital Contingency	MUSD	291	291	296
Pre-Development and Project Definition CAPEX	MUSD	30	30	30
Total Initial Investment	MUSD	1,283	1,283	1,302

Appendix 5 Mining Royalty Legislation and Application Methodology

Introduction

This appendix summarizes the mining royalty and taxation framework applied in the economic evaluation of the Domeyko Project. The purpose of this appendix is to document the assumptions, references, and calculation methodology used to estimate the mining royalty for cash flow modeling purposes.

The economic evaluation considers the mining royalty legislation currently in force in Chile, together with the guidance provided by the Chilean Internal Revenue Service (Servicio de Impuestos Internos, SII), as outlined in Circular No. 3 and its Annex 2. These references are used exclusively for economic modeling and evaluation purposes. The full legal texts are not reproduced herein.

Applicable Mining Royalty Legislation

The mining royalty applied in the economic evaluation is based on the Chilean Mining Royalty Law currently in force at the time of preparation of this PEA. The royalty regime establishes a progressive royalty rate applicable to copper sales, depending on the level of fine copper production and profitability indicators.

The royalty framework distinguishes between different production thresholds and applies marginal rates according to defined brackets. The applicable royalty rates are determined based on the annual fine copper sales and the corresponding calculation methodology established in the legislation and SII guidance.

SII Circular No. 3 and Annex 2

SII Circular No. 3 provides interpretative guidance for the application of the mining royalty law, including definitions, calculation procedures, and reference tables used to determine the effective royalty rate.

In particular, Annex 2 of Circular No. 3 presents effective royalty rates by production bracket, which are used in this economic evaluation to estimate the applicable royalty rate for each period of the Life of Mine (LOM).

The Circular and its annexes are referenced as technical guidance for the implementation of the royalty calculation methodology and do not constitute legal advice.

Royalty Calculation Methodology

The mining royalty is calculated on a period-by-period basis and incorporated into the project cash flow model. The methodology applied follows these general steps:

1. Determination of Annual Fine Copper Sales: Annual fine copper production sold is calculated based on mine production, metallurgical recovery, payable metal factors, and applicable deductions.

2. Identification of Applicable Production Bracket: The annual fine copper sales are compared against the production thresholds defined in the mining royalty framework to identify the applicable bracket.

3. Application of Effective Royalty Rate: The effective royalty rate corresponding to the identified production bracket is obtained from Annex 2 of SII Circular No. 3.

4. Royalty Calculation: The mining royalty for each period is calculated by applying the effective royalty rate to the relevant revenue base, in accordance with the assumptions adopted for the economic evaluation.

5. Integration into Cash Flow Model: The calculated royalty is incorporated as a cash outflow in the project cash flow, prior to the calculation of after-tax cash flows and Net Present Value (NPV).

Assumptions and Limitations

The royalty calculation presented in this appendix is subject to the following assumptions and limitations:
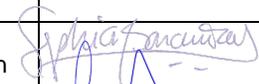
- The analysis is based on the mining royalty legislation and SII guidance in force at the time of preparation of this PEA.

- No allowance has been made for potential future changes in legislation, regulations, or tax interpretation.

- The royalty calculation is intended solely for economic evaluation purposes and does not constitute a legal or tax opinion.

- Actual royalty payments may differ from the estimates presented herein due to operational, commercial, regulatory, or fiscal factors.

References

- Chilean Mining Royalty Law (as currently in force)

- Servicio de Impuestos Internos (SII), Circular No. 3

- SII Circular No. 3, Annex 2 – Effective Royalty Rate Table

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Project No.	05-2898-01
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01-08-2026	C	Client Comments		
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12-23-2025	A	Internal Review		
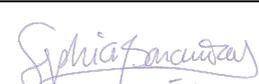
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