



Marimaca Oxide Deposit Project

NI 43-101 Technical Report & Feasibility Study Antofagasta Region, Chile

Effective Date: August 25, 2025

Report Date: October 8, 2025

Prepared for:

Marimaca Copper Corp.
66 Wellington St West, Suite 5300
Toronto, Ontario, Canada, M5K 1E6

Prepared by:

Ausenco Chile Limitada
Avenida Las Condes 11283, Floor 6
Las Condes, Santiago Chile, C.P. 7590992

List of Qualified Persons:

Scott C. Elfen, P.E., Ausenco Engineering Canada ULC
James Millard, P. Geo., Ausenco Sustainability ULC
Tommaso Roberto Raponi, P. Eng., Ausenco Engineering Canada ULC
Carlos Guzmán, FAusIMM, NCL Ingeniería y Construcción SpA.
Luis Oviedo, RM, CMC, NCL Ingeniería y Construcción SpA.



CERTIFICATE OF QUALIFIED PERSON

Scott C. Elfen, P.E.

I, Scott C. Elfen, P.E., certify that:

1. I am employed as the Global Lead Geotechnical and Civil Services of Ausenco Engineering Canada ULC (Ausenco), with an office address of 1050 West Pender Street, Suite 1200, Vancouver, BC, V6E 3S7, Canada.
2. This certificate applies to the technical report titled *“Marimaca Oxide Deposit Project, NI 43-101 Technical Report & Feasibility Study, Antofagasta Region, Chile”* (the “Technical Report”), prepared for Marimaca Copper Corp. (the “Company”) with a report date of October 8, 2025, and an effective date of August 25, 2025 (the “Effective Date”).
3. I graduated from the University of California, Davis, CA, in 1991 with Bachelor of Science degree in Civil Engineering (Geotechnical).
4. I am a Registered Civil Engineer in the State of California (license no. C56527) by exam since 1996, Registered Civil Engineer in the State of Idaho (license No. 3961670, and Registered Professional Engineer in Province of British Columbia (License No. 64064).
5. I have practiced my profession continuously for 28 years with experience in the development, design, construction and operations of heap leach facilities, mine waste storage facilities, such as waste rock storage facilities and tailings storage facilities ranging from slurry to dry stack facilities, focusing on precious and base metals, both domestic and international. In addition, I have developed geotechnical and hydrological design parameters for open pits, plant foundation design, and other supporting infrastructure. Examples of projects where I served as global lead for the design of heap leach pads and ponds include Barrick’s PEA, PFS, FS, and detail design and construction of several phases of the Pierina Gold Mine (Peru), Barrick’s detailed design and construction of multiple phases for Lagunas Norte Gold Mine, and Arizona Sonoran Copper Company’s PFS design for Cactus and Parks Salyer Project.
6. I have read the definition of “Qualified Person” set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for those sections of the Technical Report that I am responsible for preparing.
7. I visited the Marimaca Oxide Deposit Project on June 12, 2025 for one day.
8. I am responsible for sections 2.4.2, 12.4, 12.4.1, 18.4 to 18.5.2, 18.10, 25.17.1.3, 25.17.2.2, 26.3, and 27 of the Technical Report.
9. I am independent of the Company as independence is defined in Section 1.5 of NI 43-101.
10. I have had no previous involvement with the project.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: October 8, 2025.

“Signed and sealed”

Scott C. Elfen, P.E.

CERTIFICATE OF QUALIFIED PERSON

James Millard, P. Geo.

I, James Millard, P. Geo., certify that:

1. I am employed as a Director, Strategic Projects with Ausenco Sustainability ULC (Ausenco), with an office address of 18-4515 Central Blvd, Burnaby BC V5H 0C6, Canada.
2. This certificate applies to the technical report titled *"Marimaca Oxide Deposit Project, NI 43-101 Technical Report & Feasibility Study, Antofagasta Region, Chile"* (the "Technical Report"), prepared for Marimaca Copper Corp. (the "Company") with a report date of October 8, 2025, and an effective date of August 25, 2025 (the "Effective Date").
3. I graduated from Brock University in St. Catharine's, Ontario in 1986 with a Bachelor of Science in Geological Sciences, and from Queen's University in Kingston, Ontario in 1995 with a Master of Science in Environmental Engineering.
4. I am a member (P. Geo.) of the Association of Professional Geoscientists of Nova Scotia, Membership No. 021 and the Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories and Nunavut, Membership No. 1624.
5. I have practiced my profession for over 30 years. I have worked for mid- and large-size mining companies where I have acted in senior technical and management roles, in senior environmental consulting roles, and provided advise and/or expertise. These key areas include feasibility-level study reviews; NI 43-101 report writing and review; due diligence review of environmental, social, and governance areas for proposed mining operations and acquisitions, and directing environmental impact assessments and permitting applications to support construction, operations, and closure of mining projects. In addition to the above, I have been responsible for conducting baseline data assessments, surface and groundwater quantity and quality studies, mine rock geochemistry and water quality predictions, mine reclamation and closure plan development, and community stakeholder and Indigenous peoples' engagement initiatives. Recently, I acted as Qualified Person for environmental/sustainability sections in the following project reports: "Volcan Project, NI 43-101 Technical Report on Preliminary Economic Assessment, Tierra Amarilla, Atacama Region, Chile"; "Colomac Gold Project, NI 43-101 Technical Report and Preliminary Economic Assessment, Northwest Territories, Canada"; "Santo Tomás Copper Project, NI 43-101 Technical Report and Preliminary Economic Assessment, Northern Sinaloa State, Mexico"; "Lemhi Gold Project, NI 43-101 Technical Report and Preliminary Economic Assessment, Idaho, USA"; "Tolillar Project NI 43-101 Technical Report on Preliminary Economic Assessment, Salta Argentina"; "Santo Domingo Project NI43-101 Technical Report on Feasibility Study Update, Atacama Region, Chile"; "Cerro Las Minitas Project NI 43-101 Technical Report Preliminary Economic Assessment, Durango State, Mexico"; and, "Panuco Project NI 43-101 Technical Report and Preliminary Economic Assessment, Sinaloa State, Mexico."
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for those sections of the Technical Report that I am responsible for preparing.
7. I have not visited the Marimaca Oxide Deposit project site.
8. I am responsible for Sections 1.16, 3.4, 4.7 to 4.9, 20, 25.13, 25.17.1.4, 25.17.2.3, 26.5, and 27 of the Technical Report.

9. I am independent of the Company as independence is defined in Section 1.5 of NI 43-101.
10. I have not been previously involved with the Marimaca Oxide Deposit Project.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: October 8, 2025.

"Signed and sealed"

James Millard, P. Geo.

CERTIFICATE OF QUALIFIED PERSON

Tommaso Roberto Raponi, P. Eng.

I, Tommaso Roberto Raponi, P. Eng., certify that:

1. I am employed as a Principal Metallurgist with Ausenco Engineering Canada ULC, (Ausenco), with an office address of Suite 1550 - 11 King St West, Toronto, ON M5H 4C7.
2. This certificate applies to the technical report titled "*Marimaca Oxide Deposit Project, NI 43-101 Technical Report & Feasibility Study, Antofagasta Region, Chile*" (the "Technical Report"), prepared for Marimaca Copper Corp. (the "Company") with a report date of October 8, 2025, and an effective date of August 25, 2025 (the "Effective Date").
3. I graduated from the University of Toronto with a Bachelor of Applied Science degree in Geological Engineering with specialization in Mineral Processing in 1984.
4. I am a Professional Engineer registered with the Professional Engineers Ontario (No. 90225970), Engineers and Geoscientists British Columbia (No. 23536) and NWT and Nunavut Association of Professional Engineers and Geoscientists (No. L4508).
5. I have practiced my profession continuously for over 40 years with experience in the development, design, operation and commissioning of mineral processing plants, both domestic and internationally. My project design and development experience includes the generation of capital and operating costs for heap leach projects, including the Camino Minerals Corp., Puiquiois copper heap leach project and associated infrastructure and financial modelling of project economics.
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for those sections of the Technical Report that I am responsible for preparing.
7. I have not visited the Marimaca Oxide Deposit Project site.
8. I am responsible for sections 1.1 to 1.4, 1.9, 1.13 to 1.15, 1.17 to 1.19, 2.1 to 2.3, 2.5, 2.7, 3.1 to 3.3, 4.1 to 4.6, 4.10, 5, 12.5, 13, 17, 18.1 to 18.3.4, 18.6 to 18.9, 19, 21.1 to 21.1.2, 21.1.4 to 21.2.3, 21.2.5, 21.2.6, 22, 24, 25.1, 25.2, 25.6, 25.10 to 25.12, 25.14 to 25.16, 25.17.1.1, 25.17.1.5 to 25.17.1.7, 25.17.2.4, 26.1, 26.4, 26.6, and 27 of the Technical Report.
9. I am independent of the Company as independence is defined in Section 1.5 of NI 43-101.
10. I have had no prior involvement on the project.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: October 8, 2025.

"Signed and sealed"

Tommaso Roberto Raponi, P. Eng.

CERTIFICATE OF QUALIFIED PERSON

Carlos Guzmán, FAusIMM

I, Carlos Guzmán, FAusIMM, certify that:

1. I am employed as Principal Project Director with NCL Ingeniería y Construcción SpA (NCL), with an office address of General del Canto 230, office 401, Providencia, Santiago, Chile.
2. This certificate applies to the technical report titled “Marimaca Oxide Deposit Project, NI 43-101 Technical Report & Feasibility Study, Antofagasta Region, Chile” (the “Technical Report”), prepared for Marimaca Copper Corp. (the “Company”) with a report date of October 8, 2025, and an effective date of August 25, 2025 (the “Effective Date”).
3. I graduated from the Universidad de Chile with a degree in Mining Engineering in 1995.
4. I am a Fellow Member of the Australasian Institute of Mining and Metallurgy (FAusIMM), Member N° 229036.
5. I have practiced my profession for 32 years. I have been directly involved in reviews and reports as a consultant on numerous explorations, mining operation and projects around the world for due diligence and regulatory requirements. I have extensive experience in mining engineering. I have worked on mining engineering assignments.
6. I have read the definition of “Qualified Person” set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for those sections of the Technical Report that I am responsible for preparing.
7. I visited the Marimaca Oxide Deposit Project site on May 23, 2018, for a period of one day.
8. I am responsible for Sections 1.11 to 1.12.3, 2.6, 12.3, 15, 16, 21.1.3, 21.2.4, 25.8, 25.9, 25.17.1.2, 25.17.2.1, and 27 of the Technical Report.
9. I am independent of Company as independence is defined in Section 1.5 of NI 43-101.
10. I have been previously involved with the Marimaca Oxide Deposit Project, as a QP for Mining Methods of the Technical Report “Preliminary Economical Assessment for Marimaca Project, Antofagasta, II Region, Chile” that has an effective date of 4 August 2020 and as QP for Mineral Reserves and Mining Methods for the Technical Report “Definitive Feasibility Study for Marimaca 1-23 Claim Project, Antofagasta, II Region, Chile”, date effective June 13, 2018, prepared for Coro Mining Corp.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: October 8, 2025.

“Signed and sealed”

Carlos Guzmán, FAusIMM.

CERTIFICATE OF QUALIFIED PERSON

Luis Oviedo, RM, CMC

I, Luis Oviedo, RM, CMC, certify that:

1. I am employed as a Consulting Geologist with NCL Ingeniería y Construcción SpA. (NCL), with an office address of 230 General del Canto, office 401, Providencia, Santiago, Chile.
2. This certificate applies to the technical report titled *“Marimaca Oxide Deposit Project, NI 43-101 Technical Report & Feasibility Study, Antofagasta Region, Chile”* (the “Technical Report”), prepared for Marimaca Copper Corp. (the “Company”) with a report date of October 8, 2025, and an effective date of August 25, 2025 (the “Effective Date”).
3. I earned a degree in Geology from the Universidad de Chile in 1976 and completed postgraduate studies in “Evaluation and Certification of Mining Assets” at the Pontificia Universidad Católica de Valparaíso, Chile, in 2008.
4. I am a Professional Geologist and registered member in good standing with the Chilean Mining Commission (*Comisión Calificadora de Competencias en Recursos y Reservas Mineras*), RM, CMC Registration No. 013. I am also a registered member in good standing with the Association of Geologists (*Colegio de Geólogos*), and with the Association of Engineers of Chile (*Colegio de Ingenieros de Chile*).
5. I have practiced my profession for over 58 years since graduation. I have been directly involved in resource estimates for all types of mines, audits, due diligence, mine lives and technical reports of resources for stock exchanges and financial institutions in Canada, Chile, Peru, Ecuador and Colombia. Projects that I have contributed to include “Completes Maiden JORC Resource for the Tiros Project RREE,” Resouro Metals Inc, Jorc ASX Release, July 2024, Proyecto IOCG Capricornio: Models of the Economic Potential Study, Antofagasta, Chile, Fresnillo April 2024 and AG-Mining, Bolivia Properties Technical 43-101 Report 2020.
6. I have read the definition of “Qualified Person” set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for those sections of the Technical Report that I am responsible for preparing.
7. I visited the Marimaca Oxide Deposit project site on three occasions: three days in December 2016, two days in August 2019, and three days February 2022.
8. I am responsible for Sections 1.5 to 1.8.8, 1.10, 2.4.1, 6, 7, 8, 9, 10, 11, 12.1 to 12.2.1, 14, 23, 25.3 to 25.5, 25.7, 26.2, and 27 of the Technical Report.
9. I am independent of the Company as independence is defined in Section 1.5 of NI 43-101.
10. I have been involved with the Marimaca Oxide Deposit Project since November of 2016. My contributions include the preparation of the first resource estimate in 2017. I also authored NI 43-101 Technical Reports: “Updated Resource Estimate for the Marimaca Copper Project, Antofagasta Province Region II, Chile” (May 2018); “Updated and Expanded Resource Estimate for the Marimaca Copper Project, Antofagasta Province Region II, Chile” (January 2020); “Preliminary Economic Assessment, Marimaca Project, Antofagasta, II Region, Chile” (August 2020); “Updated Mineral Resource Estimation for the Marimaca Copper Project” (June 2023); and “Marimaca Extends Shallow Oxide Potential at Mercedes Satellite Target 2024.”
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: October 8, 2025.

“Signed and sealed”

Luis Oviedo, RM CMC

Important Notice

This report was prepared as National Instrument 43-101 Technical Report for Marimaca Copper Corp. (Marimaca) by Ausenco Chile Limitada and Ausenco Sustainability ULC (Ausenco), and Ingeniería y Construcción SpA. (NCL), collectively the Report Authors. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in the Report Authors' services, based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Marimaca subject to terms and conditions of its contracts with each of the Report Authors. Except for the purposes legislated under Canadian provincial and territorial securities law, any other uses of this report by any third party are at that party's sole risk.

Table of Contents

1	Summary.....	1
1.1	Introduction	1
1.2	Terms of Reference.....	1
1.3	Property Description and Location	1
1.4	Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements.....	2
1.5	History	2
1.6	Geology and Mineralization.....	3
1.7	Exploration and Drilling.....	4
1.7.1	Target for Further Exploration - Mercedes Shallow Oxide Potential at Mercedes Satellite Target ...	5
1.7.2	Drilling	6
1.8	Sampling Preparation and Security.....	8
1.8.1	Drillhole Sampling in Analytical Laboratories.....	8
1.8.2	Reverse Circulation Sampling.....	9
1.8.3	Core Sampling.....	9
1.8.4	Density Determinations.....	9
1.8.5	Sample Security and Storage.....	9
1.8.6	Sample Preparation and Analysis.....	9
1.8.7	Quality Assurance and Quality Control	10
1.8.8	Qualified Person (NCL) Comments.....	11
1.9	Mineral Processing and Metallurgical Testwork.....	11
1.10	Mineral Resource Estimate	14
1.11	Mineral Reserve Estimate	20
1.12	Mining Methods.....	21
1.12.1	Pit and Mining Phases Designs	21
1.12.2	Mine Production Schedule	22
1.12.3	Mine Equipment Requirement.....	23
1.13	Recovery Methods	23
1.14	Project Infrastructure.....	24
1.15	Market Studies and Contracts.....	24
1.16	Environmental, Permitting and Social Considerations	25
1.16.1	Environmental Considerations	25
1.16.2	Closure and Reclamation Considerations.....	26
1.16.3	Permitting Considerations.....	26
1.16.4	Social Considerations	27

1.17	Capital and Operating Costs.....	28
1.17.1	Capital Cost Estimate.....	28
1.17.2	Operating Cost Estimate.....	28
1.18	Economic Analysis.....	29
1.18.1	Economic Summary.....	29
1.18.2	Financial Model Parameters.....	29
1.18.3	Financial Model Results.....	30
1.18.4	Sensitivity Analysis	31
1.19	Conclusions and Recommendations.....	31
2	Introduction.....	33
2.1	Introduction	33
2.2	Qualified Persons	33
2.3	Terms of Reference.....	34
2.4	Site Visits and Scope of Personal Inspection	34
2.4.1	Site Inspection by Mr. Luis Oviedo, RM CMC.....	34
2.4.2	Site Inspection by Mr. Scott C. Elfen, P. E.	34
2.5	Effective Dates	34
2.6	Sources of Other Information	34
2.7	Currency, Units, Abbreviations and Definitions.....	34
3	Reliance on Other Experts.....	40
3.1	Introduction	40
3.2	Property Agreements, Mineral Tenure, Surface Rights and Royalties	40
3.3	Taxation	40
3.4	Environmental, Permitting, Closure, and Social and Community Impacts	40
4	Property Description and Location.....	41
4.1	Introduction	41
4.2	Property and Title in Chile	42
4.3	Project Ownership	42
4.4	Mineral Tenure and Royalties	42
4.4.1	Properties that Comprise the Marimaca Project	43
4.4.2	Marimaca 1-23 Claims.....	43
4.4.3	La Atómica.....	43
4.4.4	Atahualpa	44
4.4.5	Olimpo y Cedro (Formerly Naguayán).....	44
4.4.6	Llanos/Mercedes	44
4.5	Surface Rights.....	47
4.6	Water Rights	47

4.7	Environmental Considerations.....	47
4.8	Permitting Considerations	47
4.9	Social License Considerations	48
4.10	Project Risks and Uncertainties	48
5	Accessibility, Climate, Local Resources, Infrastructure and Physiography	49
5.1	Accessibility.....	49
5.2	Climate	50
5.3	Local Resources and Infrastructure	50
5.4	Physiography.....	50
5.5	Seismicity	51
6	History	52
6.1	Regional History	52
6.2	Property Exploration History	52
7	Geological Setting and Mineralization	53
7.1	Regional Geology	53
7.2	Project Geology.....	55
7.3	Deposit Descriptions	57
7.4	Comments on Geological Setting and Mineralization	59
8	Deposit Types	61
8.1	Deposit Model.....	61
8.2	Comments on Deposit Type.....	63
9	Exploration	64
9.1	Introduction	64
9.2	Grids and Surveys.....	64
9.3	Geological Mapping	67
9.4	Petrographic Studies.....	71
9.5	Drill Sample Re-Assaying and Logging	71
9.6	Geochemistry.....	72
9.7	Geophysics	74
9.8	Exploration Status	76
9.9	Targets for Further Exploration	77
9.9.1	Mercedes Shallow Oxide Potential at Mercedes Satellite Target.....	77
9.10	New Exploration Targets.....	79
10	Drilling	81
10.1	Introduction	81
10.2	Drilling Description.....	81

10.2.1	Recovery	86
10.2.2	Sample Length/True Thickness.....	86
11	Sample Preparation, Analyses, and Security	87
11.1	Historical Sampling.....	87
11.2	Marimaca Sampling Methods	87
11.2.1	Drillhole Sampling	87
11.2.2	Sample Rejects and Pulps Storage	87
11.3	Marimaca Reverse Circulation Sampling	87
11.4	Marimaca Core Sampling	88
11.5	Density Determinations	88
11.6	Sample Security and Storage	88
11.7	Analytical and Test Laboratories.....	88
11.8	Sample Preparation and Analysis.....	89
11.9	Quality Assurance and Quality Control.....	89
11.9.1	Standards.....	90
11.9.2	Duplicates.....	94
11.9.3	Blanks	97
11.10	Sample Recovery.....	99
11.11	Comment on Sample Preparation, Analyses, and Security.....	99
12	Data Verification.....	100
12.1	Verification Performed by Marimaca	100
12.2	Verification Performed by Mr. Luis Oviedo	100
12.2.1	Luis Oviedo's Site Inspection	101
12.3	Verification Performed by Mr. Carlos Guzmán.....	101
12.4	Verification Performed by Mr. Scott Elfen.....	101
12.4.1	Scott Elfen's Site Inspection	101
12.5	Verification Performed by Tommaso Roberto Raponi.....	102
13	Mineral Processing and Metallurgical Testing	103
13.1	Introduction	103
13.2	Comminution Testwork	105
13.3	Mineralogy	106
13.4	Metallurgical Testwork	109
13.4.1	Geomet I and II	110
13.4.2	Geomet III.....	116
13.4.3	Geomet IV.....	118
13.4.4	Geomet V.....	119
13.4.5	Geomet VI.....	124

13.4.6	Geomet VII.....	125
13.5	Metallurgical Variability.....	131
13.6	Deleterious Elements.....	133
13.7	Recovery Estimates.....	133
13.7.1	Copper Extraction Models.....	133
13.7.2	Net Acid Consumption Models.....	134
13.8	Comments on Mineral Processing and Metallurgical Testing	135
14	Mineral Resource Estimates.....	136
14.1	Introduction	136
14.1.1	Exploration Status	136
14.1.2	Twin Hole Analysis.....	140
14.2	Geological Models.....	141
14.2.1	Definition and Generation of the Block Model	146
14.2.2	Geological Model Coding	147
14.3	Density Assignment.....	147
14.4	Grade Capping/Outlier Restrictions.....	148
14.4.1	Contact Analyses	148
14.4.2	Outliers	153
14.5	Composites.....	155
14.6	Variography.....	160
14.7	Estimation/Interpolation Methods.....	162
14.8	Block Model Validation	163
14.8.1	Visual Validation.....	163
14.8.2	Statistical Validation.....	164
14.8.3	Swath Plots	166
14.9	Classification of Mineral Resources	169
14.9.1	Reasonable Prospects for Eventual Economic Extraction	171
14.9.2	Other Considerations and Criteria for Optimization.....	173
14.10	Mineral Resource Statement	173
14.11	Factors That May Affect the Mineral Resource Estimate	176
15	Mineral Reserve Estimates.....	177
15.1	Introduction	177
15.2	Block Model	177
15.3	Parameters for Mine Design	178
15.3.1	Base Parameters.....	178
15.3.2	Slope Angles	180
15.3.3	Dilution and Ore Losses.....	181

15.3.4	Cut-Off Grades.....	182
15.4	Mineral Reserves Statement.....	182
15.5	Comments on Mineral Reserves.....	184
16	Mining Methods.....	185
16.1	Mining Design Overview.....	185
16.2	Geotechnical Considerations.....	185
16.3	Hydrogeological Considerations.....	190
16.4	Pit Optimization Results.....	197
16.5	Pit Design.....	198
16.5.1	Final Pit Design.....	198
16.5.2	Mining Phases Design.....	201
16.5.3	Tabulation of In-Pit Mineral Reserves.....	202
16.6	Mine Production Schedule.....	202
16.7	Drilling and Blasting.....	206
16.7.1	Explosives Storage Facility.....	206
16.8	Grade Control.....	206
16.9	Mining Equipment.....	207
16.10	Mine Rotation Schedule.....	210
16.11	Waste Dump and Stockpile.....	210
17	Recovery Methods.....	213
17.1	Overview.....	213
17.2	Process Flowsheet.....	214
17.3	Plant Design.....	216
17.4	Process Description.....	218
17.4.1	Primary Crushing.....	218
17.4.2	Secondary Crushing.....	218
17.4.3	Tertiary Crushing.....	218
17.4.4	Agglomeration.....	219
17.4.5	Leaching.....	219
17.4.6	Solution Management.....	221
17.4.7	Solvent Extraction.....	222
17.4.8	Solvent Extraction Block Diagram.....	224
17.5	Energy, Water, and Process Materials Requirements.....	224
17.5.1	Water Distribution System.....	224
17.5.2	Acid.....	226
17.5.3	Salt.....	226
17.5.4	Specific Reagents.....	226

17.5.5	Reagents and Consumables Consumption.....	226
17.5.6	Electrical Power	228
18	Project Infrastructure	229
18.1	Introduction	229
18.2	Site Access.....	233
18.3	Built Infrastructure.....	234
18.3.1	General Support Facilities	234
18.3.2	Chemical and Reagent Storage Facilities.....	234
18.3.3	Truck Shops	235
18.3.4	Accommodation	235
18.4	Heap Leach Pad and Ponds	235
18.4.1	Process and Emergency Ponds.....	236
18.5	Spent Leached Ore (Ripios) Storage Facilities.....	238
18.5.1	South Ripios Dump	238
18.5.2	North Ripios Dump	239
18.6	Power and Electrical.....	241
18.6.1	Power Substation-23 KV Power Line	241
18.7	Fuel	241
18.8	Seawater Supply.....	241
18.8.1	Reverse Osmosis Plant	242
18.9	Management and Disposal of Surface Runoff and Contact Water.....	243
18.10	Seismic Rating	243
19	Market Studies and Contracts	244
19.1	Summary	244
19.2	Market Studies.....	244
19.2.1	Copper	244
19.2.2	Sulphuric Acid.....	246
19.3	Commodity Price Projections.....	248
19.3.1	Copper	248
19.3.2	Sulphuric Acid.....	250
19.4	Contracts.....	250
19.5	Comments on Market Studies and Contracts.....	251
20	Environmental Studies, Permitting, and Social or Community Impact	252
20.1	Environmental Considerations.....	252
20.1.1	Baseline and Supporting Studies	252
20.1.2	Environmental Monitoring.....	266
20.1.3	Water Management	268

20.1.4	Emissions and Wastes	269
20.2	Permitting Considerations	270
20.2.1	Environmental Permits	271
20.2.2	Mining Permits	272
20.2.3	Additional Permits and Authorizations	272
20.3	Social Considerations	273
20.3.1	Community Identification.....	273
20.3.2	Community Relations Plan or Stakeholder Communication Strategy.....	276
20.4	Closure and Reclamation Planning	276
20.4.1	Closure and Reclamation Plans	276
20.4.2	Closure Cost Estimates	279
20.5	Comments on Environmental Studies, Permitting and Social or Community Impact	279
21	Capital and Operating Costs	281
21.1	Capital Costs.....	281
21.1.1	Overview.....	281
21.1.2	Basis of Estimate	282
21.1.3	Mine Capital Costs.....	286
21.1.4	Process Capital Costs.....	287
21.1.5	Infrastructure Capital Costs.....	287
21.1.6	Indirect Capital Costs.....	288
21.1.7	Owner's (Corporate) Capital Costs	291
21.1.8	Contingency.....	292
21.2	Operating Costs.....	292
21.2.1	Overview.....	292
21.2.2	Basis of Estimate	293
21.2.3	Summary of Operating Cost Estimate	293
21.2.4	Mine Operating Cost	294
21.2.5	Process Operating Costs.....	294
21.2.6	General and Administration Costs	300
22	Economic Analysis	302
22.1	Forward-Looking Information Cautionary Statements.....	302
22.2	Methodologies Used.....	303
22.3	Financial Model Parameters	303
22.3.1	Assumptions	303
22.3.2	Capital and Operating Costs.....	304
22.3.3	Sales and Marketing Costs	304
22.3.4	Copper Price Forecast	304

22.3.5	Taxes.....	304
22.3.6	Working Capital	305
22.3.7	Closure Costs	305
22.3.8	Salvage Value.....	305
22.3.9	Royalties	305
22.3.10	Copper Production	306
22.4	Economic Analysis.....	306
22.5	Sensitivity Analysis	311
22.6	Comments on Economic Analysis	312
23	Adjacent Properties.....	313
24	Other Relevant Data and Information.....	314
24.1	Project Execution Strategy	314
24.2	Project Execution Schedule.....	316
24.3	Key Project Milestones	316
24.4	Engineering, Procurement and Construction Management Approach	316
24.4.1	Engineering.....	316
24.4.2	Procurement.....	317
24.4.3	Construction	318
24.4.4	Pre-Commissioning and Commissioning	318
25	Interpretation and Conclusions.....	321
25.1	Introduction	321
25.2	Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements.....	321
25.3	Geology and Mineralization.....	321
25.4	Exploration and Drilling.....	322
25.5	Analytical Data Collection in Support of Mineral Resource Estimation.....	322
25.6	Metallurgical Testwork	322
25.7	Mineral Resource Estimate	323
25.8	Mineral Reserve Estimate	323
25.9	Mining Methods.....	323
25.10	Recovery Plan.....	324
25.11	Infrastructure	324
25.12	Markets and Contracts.....	325
25.13	Environmental, Permitting and Social Considerations	325
25.14	Capital Cost Estimate	326
25.15	Operating Cost Estimate	327
25.16	Economic Analysis.....	327
25.17	Risks and Opportunities	328

25.17.1	Risks.....	328
25.17.2	Opportunities	329
26	Recommendations.....	331
26.1	Recommended Work Program Cost Summary	331
26.2	Exploration and Drilling.....	331
26.3	Infrastructure	331
26.4	Mineral Processing and Metallurgical Testing	332
26.5	Environmental, Permitting and Social Considerations	332
26.6	Project Execution	333
27	References.....	334

List of Tables

Table 1-1:	Table of Intersections.....	5
Table 1-2:	Drill Campaigns Summary Conducted for the Marimaca Project to Date.	6
Table 1-3:	QA/QC Controls in the Project's History	10
Table 1-4:	Cu Extraction Models	13
Table 1-5:	Net Acid Consumption Models	13
Table 1-6:	Experimental Values of Acid Consumption Model.....	14
Table 1-7:	Mineral Zones Specific Gravity	15
Table 1-8:	MOD Total Mineral Resource Estimate (2025 MRE)	18
Table 1-9:	Technical and Economic Parameters for Whittle Run	18
Table 1-10:	In-Pit Consolidated Mineral Resource Statement.....	19
Table 1-11:	Marimaca Mineral Reserve Estimate as of August 25, 2025	21
Table 1-12:	Mine Production Schedule	22
Table 1-13:	Capital Cost Summary	28
Table 1-14:	Operating Cost Estimate	29
Table 1-15:	Summary Economics	30
Table 1-16:	Pre-Tax and Post-Tax NPV Sensitivity Analysis.....	31
Table 1-17:	Recommended Work Program Cost Summary	32
Table 2-1:	Qualified Persons	33
Table 2-2:	Abbreviations and Acronyms	35
Table 2-3:	Units of Measurement	38
Table 4-1:	List of Concessions that form the Marimaca Claims	46
Table 7-1:	Marimaca Project: Summary Characteristics of the Main Rock Type Units.....	56
Table 9-1:	Table of Intersections.....	78
Table 10-1:	Marimaca Drillholes Used in Resource Estimate	82

Table 11-1:	The Evolution of Marimaca’s QA/QC Programs and Their Respective Coverage	89
Table 11-2:	SRM Analysis Summary for Geostats Materials in the 2016-2018 Campaigns	91
Table 11-3:	SRM Analysis Summary for Intern Materials in the 2018-2019 Campaigns	91
Table 11-4:	SRM Analysis Summary for Intern Materials in the 2021-2022 Campaign	92
Table 11-5:	Duplicate Analysis Summary of All Drilling Campaigns	95
Table 11-6:	Check Sample Analysis of 2016’s Pilot Campaign	95
Table 11-7:	Blank Sample Analysis of All Drilling Campaigns	97
Table 13-1:	Metallurgical Testwork Summary Table	103
Table 13-2:	Mineralization Zones Definitions	105
Table 13-3:	Crushing Work Index and Abrasion Index Test Results	106
Table 13-4:	Geomet I and II Samples Chemical and Mineralogical Characterization	110
Table 13-5:	Geomet I and II Column Leach Test Heights	111
Table 13-6:	Geomet I and II M1 to M4 Sulphation Tests Results	112
Table 13-7:	Geomet I and II M5 to M7 Sulphation Tests Results	112
Table 13-8:	Geomet I and II Agglomeration Acid Addition per Sample	113
Table 13-9:	Geomet I and II Column Leach Tests Results Summary	114
Table 13-10:	Geomet I ISO-pH Test	115
Table 13-11:	ISO-pH Tests, CuT Recovery and Acid Consumption	117
Table 13-12:	Geomet V Columns Results	121
Table 13-13:	Seawater and Initial Leaching Solution Characterization	124
Table 13-14:	Geomet VI, Column Leach Solutions Final Impurities Assays	125
Table 13-15:	Geomet VII Column Leach Tests Results	126
Table 13-16:	Weighted Average Grades LOM	132
Table 13-17:	Cu Extraction Models	134
Table 13-18:	Cu Extraction Models – Absolute Error Modelling at 3:1 Solution to Ore Ratio	134
Table 13-19:	Net Acid Consumption Models	135
Table 13-20:	Experimental Values of Acid Consumption Model	135
Table 14-1:	Marimaca Project Drilling Summary 2016–2022	138
Table 14-2:	Solid and Block Model Volumes per Mineral Zone	146
Table 14-3:	Definition of the Block Model	146
Table 14-4:	Mineral Zones Specific Gravity	148
Table 14-5:	Samples Used to Estimate each Mineral Zone	153
Table 14-6:	Outliers Limits	154
Table 14-7:	Statistics, Original Data, 6- and 10-m Composites (CuT & CuS)	160
Table 14-8:	Correlograms, Adjusted Models, CuT	161
Table 14-9:	Kriging Plan Parameters	162
Table 14-10:	D85 per Direction and Population (m)	163
Table 14-11:	Statistic Comparison, Blocks vs Composites – CuT	165
Table 14-12:	Statistic Comparison, Blocks vs Composites – CuS	165
Table 14-13:	Resource Classification Runs – Parameters	169

Table 14-14:	Technical and Economical Parameters for Whittle Run.....	171
Table 14-15:	Resource Cut-off Grades per Mineral Zone	172
Table 14-16:	In-Pit Consolidated Mineral Resource Statement, Marimaca, (CoG 0.10% CuT).....	173
Table 14-17:	Mineral Resource Estimate for the Marimaca Deposit, Base CoG of 0.10% CuT.....	175
Table 14-18:	Sensitivity of the Mineral Resource to Changes in CuT CoG	176
Table 15-1:	Pit Optimization Parameters	179
Table 15-2:	Dilution and Losses of Regularization Process	181
Table 15-3:	Marimaca Mineral Reserve Estimate as of August 25, 2025	183
Table 16-1:	DDH Drill Holes Considered for the Geotechnical Characterization of the Marimaca Deposit	187
Table 16-2:	Properties for Stability Analysis by Geological Geotechnical Unit	187
Table 16-3:	Geotechnical Properties of Geological Structures	188
Table 16-4:	Typical Values for FS and PF Acceptability Criteria for Open Pit Mines	188
Table 16-5:	Hydraulic Conductivity Value per Geological Unit	194
Table 16-6:	Pit Optimization Results	197
Table 16-7:	Mine Design Parameters	199
Table 16-8:	In-Pit Mineral Reserves by Mining Phase	202
Table 16-9:	Mine Production Schedule	204
Table 16-10:	Mine to Stockpiles	204
Table 16-11:	Total Plant Feed.....	205
Table 16-12:	Total Plant Feed by Reserves Category	205
Table 16-13:	Peak Fleet Requirements for Pre-Production and Commercial Production	208
Table 16-14:	Fleet Requirements by Year	208
Table 17-1:	Process Design Criteria	216
Table 17-2:	Water Consumption	225
Table 17-3:	Reagents Consumption	227
Table 17-4:	Consumables Consumption.....	227
Table 17-5:	Plant Power Consumption.....	228
Table 18-1:	Heap Leach Pad Design Criteria	236
Table 19-1:	Operating Cost Estimate For 100 kt/a Sulphuric Acid Plant.....	248
Table 19-2:	Long-term Consensus Copper Price Breakdown	249
Table 19-3:	Copper Price Summary	250
Table 20-1:	Identified Species	256
Table 20-2:	Environmental Monitoring Measures	266
Table 20-3:	Waste and Emissions of the Marimaca Project.....	270
Table 20-4:	Identified Sectoral Permits.....	273
Table 20-5:	Indigenous Changos Organizations in the Mejillones Commune	274
Table 20-6:	Closure Measures for the Project Facilities.....	277
Table 21-1:	Capital Cost Estimate	282
Table 21-2:	Exchanges Rates	283
Table 21-3:	Budget Quotes Packages Phase 1	284

Table 21-4:	Budget Quotes Incidence (Procured Supplies).....	284
Table 21-5:	Construction Work Package Information.....	285
Table 21-6:	Cost Construction Quotes Incidence.....	286
Table 21-7:	Mine Capital Cost Estimate Summary.....	287
Table 21-8:	Process Plant Direct Cost Estimate	287
Table 21-9:	Infrastructure Direct Cost Estimate.....	288
Table 21-10:	Indirect Cost Estimate	288
Table 21-11:	Owner's Costs Estimate.....	291
Table 21-12:	Contingency.....	292
Table 21-13:	Main Reagents Price.....	293
Table 21-14:	Operating Cost Summary	293
Table 21-15:	Mine Cost	294
Table 21-16:	Process Operating Cost by Area	295
Table 21-17:	Process Operating Cost by Category	295
Table 21-18:	Labour Cost Breakdown	296
Table 21-19:	Energy BOOT Contract Cost Breakdown	297
Table 21-20:	Energy Costs	297
Table 21-21:	Maintenance Costs.....	297
Table 21-22:	Sulphuric Acid Cost.....	298
Table 21-23:	Consumables Average Cost	298
Table 21-24:	Reagents Average Cost.....	299
Table 21-25:	Ripios Disposal Annual Costs.....	299
Table 21-26:	Port Annual Costs	299
Table 21-27:	Purchase of Seawater Cost.....	300
Table 21-28:	Seawater Supply BOOT Contract Cost Breakdown	300
Table 21-29:	Seawater Supply Operating Costs	300
Table 21-30:	General and Administration Annual Cost.....	301
Table 21-31:	General and Administration Personnel.....	301
Table 22-1:	Mine Fleet Salvage Value	305
Table 22-2:	Summary Economics	307
Table 22-3:	Annual Cashflow Statement (Years -2 to 6)	309
Table 22-4:	Annual Cashflow Statement (Years 7 to 14)	310
Table 22-5:	Sensitivity Pre-Tax	312
Table 22-6:	Sensitivity Post-Tax.....	312
Table 24-1:	Project Milestones.....	316
Table 25-1:	Capital Cost Summary	326
Table 25-2:	Operating Cost Estimate	327
Table 26-1:	Recommended Work Program Cost Summary	331

List of Figures

Figure 1-1:	Distribution of Copper Minerals by Geological Sub-Domain	16
Figure 4-1:	Project Location Map	41
Figure 4-2:	Marimaca Project Concessions	45
Figure 5-1:	Accessibility to Marimaca Project	49
Figure 5-2:	Project Location.....	51
Figure 7-1:	Regional Coastal Cordillera Geology	53
Figure 7-2:	Regional Geology Plan.....	54
Figure 7-3:	Marimaca Project Detailed Sub-surface Interpreted Geology	58
Figure 7-4:	Marimaca Project, Illustrative Litho-Structure (a) and Mineralization Section NE100 (b) Sections are 220°South-east	59
Figure 7-5:	3D View of the Marimaca Oxide Blanket Looking Towards NE (Mineral Domains Modelled in Leapfrog)	60
Figure 8-1:	Unraveling the Origin of the Andean IOCG Clan: A Re-Os Isotope Approach.....	61
Figure 8-2:	3D View of the Marimaca Oxide Blanket and Subdomains, Looking Northeast.....	63
Figure 9-1:	Location of Holes Drilled in Campaign Completed in 2022 MRE	65
Figure 9-2:	(a) Image, and (b) Topographic Contour Map.....	67
Figure 9-3:	Underground Geological Mapping – General Area.....	68
Figure 9-4:	Underground Geological Mapping – Marimaca Pirquineros Area.....	69
Figure 9-5:	Surface Sampling	70
Figure 9-6:	Underground Workings Sampling	71
Figure 9-7:	Geochemical Sample Location Plan	73
Figure 9-8:	Geophysical Survey Location Plan.....	74
Figure 9-9:	Induced Polarization (IP) Lines	75
Figure 9-10:	Induced Polarization (IP) Chargeability Results Compared with Magnetics	76
Figure 9-11:	Plan View of Selected Drill Holes at Mercedes	77
Figure 9-12:	Map of MOD Resource and Near MOD Exploration Target Ranges	80
Figure 10-1:	Drill Hole Database Plan View, 2022 Drilling Noted with Blue Drill Traces.....	85
Figure 10-2:	Drill Hole Database in an Oblique Section Looking NE.....	86
Figure 11-1:	Shewart Chart for Material MRC-2 in the 2021-2022 RC Campaign.....	93
Figure 11-2:	Shewart Chart for Material MRC-3 in the 2021-2022 RC Campaign.....	93
Figure 11-3:	Shewart Chart for Material MRC-7 in the 2021-2022 Campaign	94
Figure 11-4:	Validation Plot for PRD Samples in the 2021-2022 Campaign – RC.....	96
Figure 11-5:	Validation Plot for PUD Samples in the 2021-2022 Campaign.....	96
Figure 11-6:	Control Chart for Material MRC-1 in the 2021-2022 Campaign	98
Figure 11-7:	Control Chart for Material MRC-8 in the 2021-2022 Campaign	98
Figure 13-1:	Modal Mineralogy for Column Leach Test Samples.....	107
Figure 13-2:	Copper Department Column Leach Test Samples	108

Figure 13-3:	Gangue Mineralogy for Column Leach Test Samples.....	108
Figure 13-4:	Location of Samples for Geomet I to VII Metallurgical Testing Programs	109
Figure 13-5:	Geomet V, Copper Extraction as a Function of Solution Application at 12 L/h/m ²	122
Figure 13-6:	Geomet V, Net acid consumption as a Function of Solution Application at 12 L/h/m ²	122
Figure 13-7:	Geomet V, Copper Extraction as a Function of Solution Application at 15 L/h/m ²	123
Figure 13-8:	Geomet V, Net Acid Consumption as a Function of Solution Application at 15 L/h/m ²	123
Figure 13-9:	Geomet VII BROCC Comparison of Copper Extraction at Crush Sizes of P ₈₀ 19 mm and 12.7 mm as a Function of Solution Application	127
Figure 13-10:	Geomet VII BROCC Net Acid Consumption at P ₈₀ of 19 mm and 12.7 mm Crush Sizes as a Function of Solution Application	127
Figure 13-11:	Geomet VII: BROCC Copper Extraction as a Function of Solution Application at Three Irrigation Rates	128
Figure 13-12:	Geomet VII: BROCC Net Acid Consumption as a Function of Solution Application at Three Irrigation Rates	128
Figure 13-13:	Geomet VII: Copper Extraction as a Function of Solution Application at P ₈₀ 12.7 mm Crush Size and 10 L/h/m ² Irrigation Rate	129
Figure 13-14:	Geomet VII: Net Acid Consumption as a Function of Solution Application at a Crush Size P ₈₀ of 12.7 mm and 10 L/h/m ² Irrigation Rate	130
Figure 13-15:	Geomet VII: Copper Leach Extraction as a Function of Solution Application with Resting Time of 35 and 45 Days	130
Figure 13-16:	Geomet VII: Net Acid Consumption as a Function of Solution Application with Resting Time of 35 and 45 Days	131
Figure 13-17:	CuT, CuS, CuCN and CuR in Variability Tests per Metallurgical Units	132
Figure 14-1:	Marimaca Project Drill Hole Location	137
Figure 14-2:	Lithological and Structural Interpretation. (a) NW 400 Sections (b) NW 650 Sections	141
Figure 14-3:	Lithology and Structure Section Integration	142
Figure 14-4:	Marimaca Project, 3D Lithological Model	143
Figure 14-5:	Marimaca Project, (a) Illustrative Litho-Structure, and (b) Updated Mineralization Section NE100.....	143
Figure 14-6:	Mineral Zone Views of The Oxide Blanket	144
Figure 14-7:	3D Mineral Zones Model.....	145
Figure 14-8:	Block Model Showing Domains of the Model of CuT – Section B-B'	145
Figure 14-9:	Mineral Zone Solids and Blocks.....	147
Figure 14-10:	Brochantite – Mixed Contact, CuT and CuS	149
Figure 14-11:	Brochantite – Mixed Contact, CuT and CuS	150
Figure 14-12:	Enriched - Chrysocolla Contact, CuT and CuS	151
Figure 14-13:	Contact Analysis Results – CuT	152
Figure 14-14:	Contact Analysis Results – CuS	152
Figure 14-15:	Log-Probability Plot CuT – Brochantite	154
Figure 14-16:	Sample Length Histogram	155

Figure 14-17:	Composite Lengths (Codes from the Database Logs) 6 m	156
Figure 14-18:	Composite Lengths (Codes from the Database Logs) 10 m	157
Figure 14-19:	Composite Lengths (Codes from the Solid Model) 6 m	158
Figure 14-20:	Composite Lengths (Codes from the Solid Model) 10 m	159
Figure 14-21:	CuT Correlogram vs Variogram Comparison – Brochantite	161
Figure 14-22:	CuT Correlogram – Brochantite.....	162
Figure 14-23:	Visual Revision of the Model of CuT from Micromine	164
Figure 14-24:	Swath Plot – Brochantite – East Direction (each 50 m)	166
Figure 14-25:	Swath Plot – Brochantite – North Direction (each 50 m).....	167
Figure 14-26:	Swath Plot – Brochantite – Elevation (each 20 m).....	168
Figure 14-27:	Classification Model vs Drillhole Data	170
Figure 14-28:	Classification Model, Before and After Smoothing – Elevation 1,000	170
Figure 14-29:	Slope Angles	172
Figure 14-30:	Resource Pit, CuT and Category Block Models.....	174
Figure 15-1:	Slope Domains for Pit Optimization	180
Figure 16-1:	Projection of DDH Drill Holes Considered for the Geotechnical Characterization of the Marimaca Deposit.....	186
Figure 16-2:	Geotechnical Domains in Feasibility Pit, Marimaca Oxides Project.....	189
Figure 16-3:	Geotechnical Domains in Feasibility Pit, Marimaca Oxides Project.....	190
Figure 16-4:	Geology Map, Local Basins and Distribution of Geological and Hydrogeological Exploration Drill Hole in Marimaca Project Area	192
Figure 16-5:	Location and Piezometric Level Of Well SHM-01.....	193
Figure 16-6:	Hydrogeological Map	196
Figure 16-7:	Pit Optimization Results	198
Figure 16-8:	Final Pit Design	200
Figure 16-9:	Mining Phases Design.....	201
Figure 16-10:	Final Pit Design	210
Figure 16-11:	Final Waste Dump Layout	211
Figure 16-12:	Final Low Grade Stockpile Layout	212
Figure 17-1:	Process Flowsheet for Phase 1 and Phase 2	215
Figure 17-2:	Leaching Stage Diagram	220
Figure 17-3:	Solution Management During an Emergency Condition.....	222
Figure 17-4:	Solvent Extraction Block Diagram	223
Figure 17-5:	Water Distribution System Diagram	225
Figure 18-1:	Infrastructure Layout	230
Figure 18-2:	Phase 1 Site Plan	231
Figure 18-3:	Phase 2 Site Plan	232
Figure 18-4:	Access Routes.....	233
Figure 18-5:	Solution Handling Ponds	237
Figure 18-6:	South Ripios Dump.....	239

Figure 18-7:	North Ripios Dump	240
Figure 18-8:	Seawater Pipeline.....	242
Figure 19-1:	Copper Demand Changes 2021 to 2050.....	245
Figure 19-2:	Projected Copper Demand 2021 to 2035.....	246
Figure 19-3:	Chilean Sulphuric Acid Market Balance – Historical and Projected	247
Figure 19-4:	Chilean Sulphuric Acid Market Projected Consumption and Production to 2033	247
Figure 20-1:	Air Quality Monitoring Stations Locations	253
Figure 20-2:	Flora Sampling Points	255
Figure 20-3:	Wildlife Baseline Studies	257
Figure 20-4:	Coastal Sector Visual Inspection Track.....	259
Figure 20-5:	Interior Sector Visual Inspection Track	260
Figure 20-6:	Archaeological Findings, West Area	261
Figure 20-7:	Archaeological Findings, East Area.....	262
Figure 20-8:	Meteorological Monitoring Stations	264
Figure 20-9:	Indigenous Organizations Locations, Mejillones Commune	275
Figure 22-1:	Payable Copper (kt Cu).....	306
Figure 22-2:	Post-tax Unlevered Frees Cash Flow	308
Figure 22-3:	Sensitivity Analysis	311
Figure 24-1:	Project Execution Strategy Diagram.....	315
Figure 24-2:	Start-up Area	319
Figure 24-3:	Stages of Plant Start-up.....	320

1 SUMMARY

1.1 Introduction

Marimaca Copper Corp. (Marimaca) commissioned Ausenco Chile Ltda. and Ausenco Sustainability ULC (collectively, Ausenco) to compile a Feasibility Study (FS) of the Marimaca Oxide Deposit (MOD) Project. The FS was prepared in accordance with the Canadian disclosure requirements of National Instrument 43-101 (NI 43-101) and in accordance with the requirements of Form 43-101 F1.

The responsibilities of the engineering companies who were contracted by Marimaca to prepare this report are as follows:

- NCL Ingeniería y Construcción SpA. (NCL) completed work related to geological setting, deposit type, exploration work, drilling, sample preparation and analysis, data verification, Mineral Resource Estimate, Mineral Reserve Estimate, open pit mine, ore stockpile, waste rock facility, mine production schedule, mine capital cost & mine operating cost.
- Ausenco managed and coordinated the work related to the report and developed FS-level design and cost estimate for the process plant, heap leach design, general site infrastructure, environmental, permitting and economic analysis.

1.2 Terms of Reference

The purpose of this report is to present the results of the FS and to support Marimaca's disclosure responsibilities.

All units of measurement used in this report are metric unless otherwise noted. Currency is expressed in United States dollars (USD or US\$).

1.3 Property Description and Location

The concessions that make up the MOD Project and the surrounding Marimaca District concessions are located in Chile's Antofagasta Province, Region II, approximately 25 km east of the Port of Mejillones, 45 km north of the city of Antofagasta, and 1,250 km north of Santiago, Chile. The Project is located at a low altitude of approximately 1,100 meters above sea level (masl) in the Coastal Cordillera at coordinates 374,820 E and 7,435,132 S (WGS84 UTM). The Antofagasta Region has a deep mining heritage and is the largest copper-producing region in Chile, the world's largest producer of copper.

1.4 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Marimaca Oxide Development (MOD) Project (the Project) is comprised of 20 mining/exploitation concessions covering approximately 961 hectares (ha). These concessions are listed in the National Mining Claims Register, and are located in the Sierra Naguayán area, Commune of Mejillones, Antofagasta Province, Antofagasta Region.

All other concessions held by subsidiaries of Marimaca Copper Corp. are currently part of the broader Marimaca District or the Sierra de Medina area.

The Project concessions are located in the zones referred to as La Atómica, Marimaca 1-23, Atahualpa, and 17 parts of the zone referred to as Llanos/Mercedes. Each of these zones are made up of several mining/exploitation concessions. Each of the mining/exploitation concessions that make up the MOD Project are in good standing and all required annual fees have been made up to and including 2025, without interruption.

Compañía Minera Cielo Azul Limitada (“MCAL”), a Chilean subsidiary of the Company, originally held some of the Company’s interests in the mining/exploitation concessions through option agreements entered into.

Certain concessions that underpin the Project are held by other Chilean subsidiaries of the Company, namely Sociedad Contractual Minera Compañía Minera NewCo Marimaca (“Newco Marimaca”) and Inversiones Cielo Azul Limitada (“ICAL”).

In addition, certain net smelter return (NSR) royalty interests have been created over the concessions that make up the Project. These include the 1.0% NSR granted to Osisko Gold Royalties in September 2022, for which the Company received US\$15.5 million.

Marimaca holds two legal mining easements that cover a substantial portion of the project area. Marimaca has been granted a provisional easement over the area designated for the construction of the water pipeline. The final award of this provisional easement, through a court resolution, is still pending but is anticipated in the coming months.

The Company does not hold any water rights or maritime concessions. However, MCAL entered into a sea water supply option agreement in October 2022 to secure the future water supply required for the Project.

1.5 History

For decades, field expeditions and systematic campaigns—driven mainly by institutions such as SERNAGEOMIN—have created detailed geological maps, representing the most recent studies on the area’s structure and evolution.

In 2016, Coro Mining Corp (Coro), a predecessor company to Marimaca Copper, began assembling the ground holdings, and the Marimaca deposit was identified following a reverse circulation (RC) drilling program.

An initial resource estimate was completed in January 2017. Mineral reserves were first estimated in 2018, and a feasibility study was completed in June of that year. Some baseline information generated to support the 2018 Feasibility Study was utilized in the 2020 PEA.

An Environmental Impact Statement (Declaración de Impacto Ambiental, DIA) and the Mining Safety Regulations and Environmental Qualification Resolution (Resolución de Calificación Ambiental, RCA) were approved on July 5, 2018.

Mineral resources were updated in late 2019, as reported in the 2020 Mineral Resource Estimate (2020 MRE), again in the 2022 Mineral Resource Estimate (2022 MRE) and in the 2023 Mineral Resource Estimate (2023 MRE). These are considered historical resource estimates for the Project.

Coro changed its name to Marimaca Copper Corp. in May 2020.

The drill grid is spaced at 50 x 50 m, while in the northern part, the hole distance is set at 100 m centers. The 2023 MRE comprised of drilling from previous programs and additional drilling completed from February 2022 to August 2022. The 2025 MRE captures 139,164 m distributed across 554 drill holes.

A feasibility study was completed in 2025, and the results are discussed in this report.

1.6 Geology and Mineralization

The region primarily consists of Jurassic volcanic and intrusive rocks and minor exposures of older Triassic acid volcanic and Palaeozoic rocks. The main structural system is the Atacama Fault System (AFS), which has been active since the Jurassic period. These NS to NE-oriented faults shape the fabric of the Coastal Cordillera, where Cu-Ag “manto-type” and IOCG type deposits dominate the metallogeny.

Due to its unique structural and supergene mineralization characteristics, Marimaca, situated in the historic Naguayán District, stands out as an anomaly among occurrences of this type of IOCG mineralization.

The host rock is the “Naguayán Plutonic Complex,” a monzodiorite intruded by a dyke swarm system consisting of various bimodal dyke episodes ranging in composition from gabbro to rhyodacite. The system is oriented NS to NE, NW, and WNW, dipping 45-50° to 60-75° towards the east and southeast.

The main fabric consists of a sheeted-like fracture zone, including faults and dykes, oriented NS to NNE, that controls the mineralization at Marimaca and can be observed for kilometers (km) beyond the project area limits.

Background rock alteration consists of Na-Ca metasomatism. The mineralization is associated with the alteration of albite, actinolite, chlorite, and iron oxides. The NS to NE parallel fracture and related veins control chalcopyrite-magnetite-rich primary mineralization.

Intense, extensive, and pervasive events of supergene oxidation produced a copper oxide blanket that forms the deposit at Marimaca. Surface data indicate that copper oxides are influenced by a highly fractured host rock, creating a high-permeability background generated by the superposition of multiple fracturing events and dyke intrusions. The oxidation resulted from the alteration of a previous secondary sulphide-enriched blanket, producing zonation from Brochantite-Atacamite at the cores immediately surrounding the remnant patches of secondary sulphides and successive external halos of predominant chrysocolla and further external wad.

Compared to other belt deposits, Marimaca is entirely hosted by intrusive rock units that become extremely permeable due to intense fracturing. Consequently, the style of mineralization varies significantly from typical volcanic-hosted manto-type copper deposits.

Marimaca's most important structural feature is a system of sub-parallel, planar, pervasive, and persistent fractures occurring along an NS elongated structural belt.

The Marimaca alteration consists of a metasomatism with little evidence of destructive hydrothermal alteration. Calc-sodic (Na-Ca) metasomatism is a background alteration, whereas albitization and chlorite are alteration minerals associated with mineralization. Some K-spar and biotite are also observed. Limonite, mostly goethite, is associated with copper mineralization in the oxide zone.

The mineralogy of the oxide zone consists of Brochantite, Atacamite, Chrysocolla, and was occurring as disseminations and impregnation of fractures in the parallel band system with an NS orientation, but also in diagonal fault systems with NE and NW orientations. The subjacent mixed zone consists of copper oxides and remnants of chalcocite and covellite, minor pyrite and chalcopyrite. The secondary sulphides carry mostly sooty chalcocite, replacing pyrite and covellite after chalcopyrite.

There is strong evidence that the actual body of oxide formed due to the oxidation of a previous sulphide blanket. Remnants of this blanket were encountered, consisting of chalcocite and covellite replacing pyrite and chalcopyrite. The oxidation process is evident in the Mixed zone, where green and black copper oxides partially replace secondary sulphides. The blanket's mineralogical zoning and copper grade distribution suggest repeated lateral migration and accumulation events.

1.7 Exploration and Drilling

Recent exploration work includes:

- Updating the drilling sample database with new assays (mostly cyanide soluble copper CuCN) for all samples >0.1 Cu%. Since the 2021 campaign, Sequential Copper has been the standard assay methodology for all samples.
- Re-logging previous drill holes to better define mixed and secondary sulphide mineralization, benefiting from the new assay data.
- Updating and verifying the topographic field bases.
- Completing a new drone-driven imaging and topographic ortho-restitution.
- Re-interpreting rock geochemistry.
- Conducting high-resolution magnetics and deep IP/R geophysics surveys provided additional information for the deep sulphide exploration.
- Detailed surface mapping of dyke system, emphasizing rock types and contact relationships.

The 2022 photogrammetric survey was updated using a new high-resolution UAV survey. The total district area, measuring 56 km², was surveyed along 302 flight lines spaced 55–70 m apart at an average altitude of 200 m above the surface (Figure 9-2). The flight resolution was 5 cm per pixel. A digital elevation model (DEM) was generated with interpolated level curves at 1-m intervals for use at a 1:1,000 scale.

Other products, including RGB, lithology, limonite, and FeOx index images, were also produced. Conventional topography provided essential support, creating a sufficient network of points from official bases to balance and orthorectify the UAV image and DEM. All topographic bases have been certified, with coordinates reported in the UTM PSAD56 and WGS84 systems.

1.7.1 Target for Further Exploration - Mercedes Shallow Oxide Potential at Mercedes Satellite Target

Reverse circulation (RC) drilling at the Mercedes Target (Mercedes) has expanded the area of surface oxide copper mineralization to 700 m along strike and 400 m in width. A total of eight holes were completed, with six intersecting mineralization. Mercedes is situated less than 500 m north of the northern edge of the Marimaca Oxide Deposit (MOD) and continues to demonstrate clear potential to enhance the Company's leachable resource base. In 2021, 25 shallow RC drills were completed, targeting the anomalies identified in both the magnetic survey and surface geochemical sampling previously completed. The Company has completed an additional 2,200 m to extend the mineralized envelope of the discovery.

Table 1-1 shows intersections encountered in the drilling program presented in the news release titled "Marimaca extends shallow oxide potential at Mercedes satellite target, 2024."

Table 1-1: Table of Intersections

Hole	TD	From	To	m	%CuT
MER-18	250	4	50	46	0.20
		4	14	10	0.36
		20	44	24	0.20
		192	240	48	0.15
MER-19	290	52	60	8	0.33
		186	220	34	0.20
MER-20	260	18	104	86	0.21
		22	62	40	0.31
		22	42	20	0.50
MER-21	300	72	94	22	0.21
		82	92	10	0.29
		268	284	16	0.21
MER-22	300	No significant intercepts			
MER-23	300	40	66	26	0.23
MER-24	250	No significant intercepts			
MER-25	250	8	76	68	0.64

Hole	TD	From	To	m	%CuT
		28	70	42	0.89
		164	214	50	0.33
		202	214	12	0.74

1.7.2 Drilling

The drilling database includes data from 139,164 m of drilling, comprising 52 Diamond Drill (DDH) holes totaling 11,978 m and 502 Reverse Circulation (RC) holes totaling 127,186 m. Hole collars and deviations were surveyed. Samples were carefully logged and assayed for total and soluble copper, as well as CuCN. The resource estimation focused on total copper and soluble copper.

For the 2023 Mineral Resource Estimate historical drill samples were re-logged, incorporating the updated assays. All new data was entered into the project database. As a result, mineral domains were better defined, and detailed mapping, supported by the continued Sequential Copper assaying methodology. All samples with 0.1% Cu or higher from the historic database were assayed for CuCN, and all new drilling samples since the 2021 campaign have been analyzed using the Sequential Copper methodology. Table 1-2 summarizes the drill campaigns conducted for the Project to date.

Table 1-2: Drill Campaigns Summary Conducted for the Marimaca Project to Date.

Marimaca Project			
Drilling Summary March-August 2016			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse Circulation	15	2,710
Resource 100x100 RCH Drilling	Reverse Circulation	39	8,910
DDH Metallurgy Column Test	Diamond Drilling HQ	6	2,008
Total RCH		54	11,620
Total DDH		6	2,008
Marimaca Project			
Drilling Summary September-December 2017			
Project	Type	Holes	Total Meters
Infill 50x50 m RCH Drilling	Reverse Circulation	59	11,928
DDH Geometallurgy	Diamond Drilling PQ	4	820
DDH Geotechnics	Diamond Drilling HQ3	6	1,230
Total RCH		59	11,928
Total DDH		10	2,050
Marimaca North-East			
Drilling Summary November 2017-January 2018			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse Circulation	11	2,950
Total RCH		11	2,950

La Atómica			
Drilling Summary November 2017-January 2018			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse circulation	14	3,220
Total RCH		14	3,220
Phase II La Atómica Project			
Drilling Summary August 2018-August 2019			
Project	Type	Holes	Total Meters
Exploration - Delineation	Reverse Circulation	55	12,980
EW Exploration	Reverse Circulation	6	1,050
Manolo Sector Exploration	Reverse Circulation	9	2,120
DDH Geometallurgy - La Atómica	PQ Diamond Drilling	9	2,203
Total RCH		70	16,150
Total DDH		9	2,203
Phase II Atahualpa - Tarso Projects			
Drilling Summary August 2018-August 2019			
Project	Type	Holes	Total Meters
Discovery and Exploration	Reverse Circulation	61	17,700
High Grade Exploration - Delineation	Reverse Circulation	16	4,200
EW Exploration	Reverse Circulation	32	7,266
Tarso Exploration	Reverse Circulation	29	7,200
DDH Geometallurgy - Atahualpa	PQ Diamond Drilling	14	2,715
Total RCH		138	36,366
Total DDH		14	2,715
Phase III Marimaca Deep Drilling, Marimaca Mixed Target (MAMIX)			
Drilling Summary February-September 2021			
Project	Type	Holes	Total Meters
Marimaca Sulphide	Reverse Circulation	4	2,772
Marimaca Re-entry (MAMIX)	Reverse Circulation	13	3,610
Total RCH		4	6,382
Phase IV Marimaca Infill - MAMIX			
Drilling Summary February - August 2022			
Project	Type	Holes	Total Meters
Marimaca Infill RCH Drilling	Reverse Circulation	150	33,952
Marimaca Infill DDH Drilling	PQ Diamond Drilling	6	1,600
Marimaca Re-entry (MAMIX)	Reverse Circulation	25	3,968
Marimaca (MAMIX)	Reverse Circulation	2	650
DDH Geotechnics	Diamond Drilling HQ3	7	1,402
Total RCH		152	38,570
Total DDH		13	3,002
Marimaca 2025 MRE	Reverse Circulation	502	127,186
	Diamond Drilling	52	11,978
TOTAL		554	139,164

Drillex and Major Drilling completed the 2021 and 2022 RC drilling using diameters ranging from 5 3/4 to 5 5/8 inches. Local contractors oversaw the drilling operation. An experienced topographer examined the collars. Datawell Services conducted the downhole surveys for the 2021 and 2022 campaigns.

The drill holes were placed approximately 50 m apart in two directions: 220° and 310°, with a dip of -60°. Thirty-one holes were re-entered, totaling 6,578 m and reaching depths of up to 500 m.

Samples were collected at 2 m intervals. Recoveries were monitored by weighing samples, and precise control was applied during the division process at the drill site. Marimaca technical staff verified all data. Measured recoveries exceed 95% for RC drilling, with no significant variations observed.

All holes were geologically logged using digital data capture. The data includes rock types, structure, alteration, and mineralization based on drilling intervals, recoveries, and analytical results. After validation, the mineral and alteration zones were delineated. The results were entered into a database as a table containing all mapped data, and a consolidated drill log was produced. Most of this work was conducted by an experienced senior consultant geologist, with support from a junior geologist.

Drill cuttings from RCH were collected and cleaned to provide a geological description of the samples. The initial log documented rock types, structures (as observed in the cuttings), and alteration. Copper mineralogy was re-logged as chemical results became available.

Besides measuring deviations, most holes were surveyed with an optical televiewer (OPTV or BHTV) to gather structural and orientation data. This device continuously and thoroughly recorded the walls, capturing structural details. The structures were categorized into ranks based on their width, and the results were reported and plotted on stereographic nets and rosette diagrams. This information helped in building the structural model in the 2023 MRE exercise.

1.8 Sampling Preparation and Security

There are no historical records or knowledge of pre-Marimaca sampling.

1.8.1 Drillhole Sampling in Analytical Laboratories

Since 2017, assay samples informing Marimaca Mineral Resources have been prepared at a laboratory site in Calama and assayed by Andes Analytical Assay Ltd. (AAA) in Santiago. During earlier campaigns, samples were prepared at the project site and assayed by Geolaquim Ltd. in Copiapó, with AAA as the umpire laboratory. MC only worked with an umpire laboratory during the first RC drilling campaign.

Laboratory personnel transfer samples from the Project to Calama, and then the prepared pulps are returned to generate the analysis batches. Upon reception, sample details are logged, and insertion points for quality control samples in the sample flow are determined.

Laboratory results are loaded directly from digital assay certificates into the database to minimize error sources.

All laboratories are ISO certified and independent from Marimaca.

1.8.2 Reverse Circulation Sampling

Marimaca RC holes are drilled on a continuous 2-meter basis, and their samples are riffle split on site three times, up to one-eighth (12.5%) of their volume. The last split yields “sample A”, which is sent for preparation and assaying, and “sample B”, which is used to obtain drill cuttings (1 kg) and coarse/preparation duplicates and then stored in special facilities on site.

1.8.3 Core Sampling

For diamond drill holes (DDH), samples are collected every 2 m from a half-core, while the other half is stored on site. Samples are prepared according to a standard protocol: drying (less than 5% humidity), crushing to 80% at -10 Tyler mesh = 1.65 mm, homogenizing, splitting, and pulverizing a 400-gram (g) subsample to 95% at -150 Tyler mesh = 0.104 mm. AAS assays all samples for total copper (CuT) and soluble copper (CuS). The latter was initially determined from a specific CuS test and is currently derived from a sequential copper (CuSec) routine.

1.8.4 Density Determinations

Specific gravity was systematically measured on core fragments using a water displacement method with a paraffin coating. The fragments range from 7 to 26 cm in length. Measurements were conducted by Mecánica de Rocas (Rock Mechanics lab in Calama). Each selected piece was logged in detail and photographed. Then, they were sent to Calama’s Rock Tests certified laboratories for the corresponding unit weight assessment.

Density samples were collected at approximately 20 m intervals. From 2016 to 2022, 634 samples were tested.

1.8.5 Sample Security and Storage

All drilling assay samples are collected by company personnel or under their direct supervision. Samples from Marimaca were initially processed at the project site and shipped directly from the property to a laboratory facility for final preparation. Later, upon their return, they returned to the laboratory for analysis.

Appropriately qualified staff at the laboratories collect assay samples. Sample security involved two aspects: maintaining the chain of custody of samples to prevent unnoticed contamination or mixing, and making active tampering as difficult as possible.

1.8.6 Sample Preparation and Analysis

Samples are prepared following a standard protocol: Drying (<5% humidity), crushing up to 80% to -10 Tyler mesh = 1.65 mm, homogenizing, splitting and pulverizing a 400-g subsample up to 95% to -150 Tyler mesh = 0.104 mm. AAS assays all samples for total copper (CuT) and soluble copper (CuS). The latter was initially obtained from a specific CuS test and currently from a sequential copper (CuSec) routine.

Laboratory results are loaded directly from digital assay certificates into the database to minimize error sources.

1.8.7 Quality Assurance and Quality Control

The analytical quality control uses coarse/preparation (PRD) and pulp (PUD) duplicates, standard reference materials (SRM), and, since 2018, fine blanks (FBL) for contamination analyses. Check samples (CHD) were only used during the pilot exploration campaign.

Control samples are systematically inserted among regular samples and submitted for assaying to the primary laboratory, which is currently Andes Analytical Assay (AAA), and was previously Geolaquim (GLQ). Marimaca has protocols for handling analytical results, which are described further in this section. These protocols can ultimately trigger re-assays of entire or portions of sample batches. Table 1-3 illustrates the evolution of QA/QC controls throughout the Project's history.

Table 1-3: QA/QC Controls in the Project's History

Hole Type	Campaign	Period	Holes	Lab	Coverage				
					CHD	PRD	PUD	SRM	FBL
RC	MAR 01-16	2016	15	GLQ	19%	-	-	-	-
				AAA					
	MAR 17-54	2016	39	GLQ	-	-	6%	6%	-
	MAR 55-124	2017-2018	84	AAA	-	7%	7%	5%	1%
	LAR 01-14								
	LAR 15-84	2018	70	AAA	-	7%	7%	4%	3%
	AER 01-03	2018-2019	138	AAA	-	8%	8%	4%	4%
	ATR 01-109								
	TAR 01-26								
	MAR 125-178	2021-2022	156	AAA	-	7%	7%	3%	4%
	LAR 85-109								
	ATR 110-167								
DDH	TAR 27-42								
	MAD 01-06	2016	6	GLQ	-	-	10%	8%	-
	MAD 07-16	2017	10	AAA	-	-	10%	7%	1%
	ATD 01-13	2019	22	AAA	-	-	11%	7%	2%
	LAD 01-09								
	ATD 14-18	2021-2022	18	AAA	-	-	10%	5%	5%
	LAD 10-11								
	MAD 17-22								

Source: Marimaca, 2023.

Marimaca has continuously improved and refined its QA/QC programs over time. Total coverage is approximately 20% in all cases, which surpasses industry standards. There is a surplus of duplicate sample coverage for RC holes, largely to the detriment of SRM sample coverage, which reached only 3% in the most recent campaign.

The SRM analysis demonstrates very good accuracy and precision at almost all levels, with generally minor observations and some uncertainty in the case of recent DDH holes, primarily due to low coverage. The QP recommends at least doubling the total SRM coverage, and, to the extent possible, reducing the number of reference values to five or fewer.

The duplicate analysis demonstrates excellent precision, with almost no discrepancies, except for the limited control measures implemented during the pilot drilling campaign. This issue is moderately alleviated due to the strong correlation among check samples. The QP recommends considering the inclusion of more control samples in future campaigns and reducing excessive duplicate coverage in favour of other control types.

The blank analysis shows no evidence of contamination. While not irrelevant, the absence of blank samples in previous campaigns is of moderate to low concern, particularly after reviewing the quality controls reported by both laboratories. Given that the SRM and duplicate sample analyses performed well, the QP considers it reasonable to infer a low probability of contamination in campaigns that lack blanks.

1.8.8 Qualified Person (NCL) Comments

After three visits and carefully reviewing field protocols, reports, and QA/QC procedures, the QP concludes that both company and laboratory personnel took care in collecting, managing, and assaying drill hole data. Thus, there is no reason to doubt the reliability of exploration and information provided by Marimaca. Furthermore, an extensive review of reports and analytical results suggests that, apart from minor concerns that can be easily mitigated through recommended measures, the resource database used by Marimaca appears to be free of apparent bias.

1.9 Mineral Processing and Metallurgical Testwork

Marimaca has completed seven metallurgical testing campaigns between 2017 and 2024 (Geomet I, II, III, IV, V, VI and VII) to characterize the metallurgical response of samples collected from its Marimaca Copper Project. A summary of these testwork campaigns is as follows:

Geomet I and II: Testwork with seven samples (Marimet 1 to 7) including ISO pH, sulphation, and column tests (1 m). Testworks were performed at crush sizes P_{90} of 12.7 mm and P_{90} of 19.0 mm, irrigation rate 10 L/h/m², without salt, raffinate (10 g/L H₂SO₄, Cu: 0.3 g/L).

Geomet III: Bottle rolls ISO pH tests.

Geomet IV: A first phase considered four samples (BROC, CRIS, WAD, MIX) including ISO pH tests, sulphation, and mini columns (30 cm). NaCl dosage in agglomeration (0 and 15 kg/t) and resting time (2 and 15 days) were analyzed. A second phase of tests included mixtures (OX, COMB, SU) including ISO pH test, sulphation, mini columns, and taller columns (1 and 1.5 m). Irrigation rates of 5 and 8 L/h/m², NaCl dosage in agglomeration (0, 15, and 25 kg/t), and resting time (2, 15, and 30 days) were analyzed. ROM leach tests (1 m³ gabion baskets). Seawater (H₂SO₄: 10 g/L, Cl⁻: 40 g/L) was used in both phases. Crush size P_{90} of 12.7 mm.

Geomet V: This program included five samples (BROC, CRIS, WAD, MIX, ENR) in mini columns (0.30 m dia.) and columns (4 m high). Crush size: P_{90} of 12.7 mm. ISO pH and sulphation tests were included. Agglomeration acid dose: 20 and 30 kg/t for mini columns and 20 and 25 kg/t for columns. Salt dose: 0 kg/t for BROC, CRIS and WAD, 15 kg/t for MIX and

ENR. Rest time: 3 days for BROCC, CRIS and WAD, 30 days for MIX and ENR. Irrigation rate: 12 L/h/m² for mini columns and 12 – 15 L/h/m² for columns.

Geomet VI: This program utilized a sample with 50% BROCC / 50% CRIS leached in 1 m high columns to determine the impurity dissolution capacity. Testwork with five column leach tests in series. Seawater (H₂SO₄: 10 g/L, Cl⁻: 22 g/L) is used for columns 1 and 2. Pregnant leach solution (PLS) from columns is fed to SX, generating raffinate that is fed to column 3. Crush size: P₉₀ of 12.7 mm. Irrigation rate: 10 L/h/m². Agglomeration acid dosage: 20 kg/t, rest: 3 days. No salt added during curing. Irrigation cycle per stage: 10 days.

Geomet VII: This program included five samples (BROCC, CRIS, WAD, MIX, ENR) leached in 4 m high columns. ISO pH and sulphation tests were included. Crush sizes include P₈₀ of 19 mm and 12.7 mm. Irrigation rates of 6-8-10 L/h/m² for BROCC. Salt dose: 0 kg/t for BROCC, CRIS, WAD, and 15 kg/t for MIX and ENR. Rest period: 3 days for BROCC, CRIS, WAD; 30 and 45 days for MIX and ENR. Irrigation solution: Raffinate specially prepared for the campaign. It contains 0.33 g/L Cu, 2.5 to 3.1 g/L FeT, 2.23 g/L Al, 1.59 g/L Mg, 21.3 to 24.2 g/L chloride and 10 g/L H₂SO₄.

Comminution testing: Comminution testing was completed at SGS Chile. The test program included bond crushing work index (CWi) tests and Bond Abrasion (Ai) tests. The abrasion index is used to estimate steel consumption in the crusher linings. Results were obtained for metallurgical units BROCC, CRIS, WAD, ENR and MIX. Average CWi value for the BROCC samples was 17.0 kWh/t, classified as difficult to crush. Average CWi for CRIS was 18.2 kWh/t, also classified difficult to crush. WAD samples have an average CWi of 14.2 kWh/t, considered medium difficulty to crush, while the ENR samples had an average CWi of 20.1 kWh/t, classified as very difficult to crush. For design purposes, the 75th percentile a value of 23 kWh/t was used.

Testwork campaigns permitted determination of copper extraction and acid consumption for the mineral subzones: BROCC, CRIS, WAD, MIX and ENR under different operating conditions. The testwork program provided information to define process operating conditions for each mineral subzone.

Metallurgical variability tests were done during 2020 in order to improve the knowledge about mineral characteristics based on chemical characterization and ISO-pH tests for sample composites of metallurgical units BROCC, CRIS, WAD, ENR and MIX. Chemical characterization included total copper head grade (CuT), acid soluble copper (CuS), cyanide soluble copper (CuCN), residual copper (CuR) and analytical acid consumption (CAA). ISO-pH tests included kinetics of copper dissolution up to 72 hour at a pH of 1.1. A total of 412 composite samples were tested. Results show that variability tests adequately cover the life of mine (LOM) plan.

The testwork program permitted to develop a geometallurgical model for copper recovery and net acid consumption. The kinetic copper extraction model is the proxy model recovery that best suits for this parameter. It is based on data from columns from 0.3 m to 4 m height for all the model zones available, using the subset data from Geomet V and VII. The data used for ENR zone need to be developed with more representative samples as only one set of data is used to develop this model. The model for each mineral subzone is presented in Table 1-4. These models are valid for leach solution to ore ratios between 2:1 to 3:1 t at 4 m column height.

The parameters used are defined as follows:

- LP: Leaching potential (LP) defined by the following equation:

$$LP = \frac{CuS + CuCN}{CuT}$$

- LR: Leaching ratio (m³ of solution: tonnes of ore leached).

Table 1-4: Cu Extraction Models

Cluster	UGM	Cu Extraction, %
C1	BROC/CRIS	$LP * 0.920 * \frac{1 - \text{EXP}(-1.74 * LR^{0.63})}{1 - \text{EXP}(-1.74 * 3^{0.63})}$
C2	WAD	$\frac{0.97 * CuS + 0.7 * CuCN + 0.202 * CuR}{CuT} * \frac{1 - \text{EXP}(-1.4 * LR^{0.62})}{1 - \text{EXP}(-1.4 * 3^{0.62})}$
C3	MIX	$LP * 0.875 * \frac{1 - \text{EXP}(-1.7 * LR^{0.66})}{1 - \text{EXP}(-1.7 * 3^{0.66})}$
C4	ENR	$LP * 0.738 * \frac{1 - \text{EXP}(-1.3 * LR^{0.7})}{1 - \text{EXP}(-1.3 * 3^{0.7})}$

Model fitting regarding the Geomet V and Geomet VII campaigns at solution to ore ratio of 3:1 shows that absolute error of copper extraction for BROC/CRIS model is within 2.2 percentual points in Geomet V and Geomet VII. For WAD the model overestimates Geomet V by 0.8 percentual points and significantly underestimates Geomet VII by 16.8 percentual points. For MIX the model slightly underestimates Geomet V by 3.2 percentual points and overestimate Geomet VII by 6.8 percentual points. For ENR the model overestimates Geomet V by 5.1 percentual points and overestimates Geomet VII by 6.2 percentual points.

The net acid consumption model (CAN) was developed using a set of data available for Geomet VII. The net acid consumption model used is a function of “F1” as experimental value of the ratio CAB/CAA at a given leaching ratio (LR) and “F2” as experimental value of the leaching potential (LP) recovery at a given leaching ratio. The parameters used are defined as follows:

- CAA: Analytical acid consumption (kg/t)
- CAB: Gross acid consumption (kg/t)

Table 1-5: Net Acid Consumption Models

Cluster	UGM	Net Acid Consumption, kg/t
C1	BROC/ CRIS	$CAA * F1 - 0.154 * CuT * LP * F2$
C2	WAD	$CAA * F1 - 0.154 * CuT * LP * F2$
C3	MIX	$CAA * F1 - 0.154 * CuT * LP * F2$
C4	ENR	$CAA * F1 - 0.154 * CuT * LP * F2$

The experimental values are:

Table 1-6: Experimental Values of Acid Consumption Model

<i>Leach Solution to Ore Ratio</i>	F1	F2
1.50	0.73	0.78
2.00	0.79	0.82
2.50	0.86	0.86
3.00	0.92	0.88

The copper recovery model and net acid consumption model are adequate for the level of this engineering and testwork done. However, it is recommended to perform additional testing, focusing on further geometallurgical development in order to improve model accuracy. Metallurgical tests should consider the following operational design conditions:

- Heap height: 4 m
- Leaching ratio: 3.0:1 m³/t for oxides and 2.2:1 m³/t for sulphides
- Crushed product size P₈₀: 12.7 mm
- Irrigation rate: 10 L/h/m²
- Irrigation in two stages using intermediate leach solution (ILS) in the first stage and raffinate in the second stage
- Air addition rate: 0.3 m³/h/m² (for sulphides)
- Salt addition in agglomeration – design: 15 kg/t (sulphides)
- Agglomerated ore moisture: 8 % (wet basis)

It is recommended to update the net acid consumption model to consider unique values of the experimental factors F1 and F2 for each mineral subzone.

1.10 Mineral Resource Estimate

The Mineral Resources Estimation discussed herein is based on information from 139,164 m of DDH and RC drilling, stored in a secured central database, and evaluated using a geostatistical block modelling technique.

For the 2023 Mineral Resource Estimate, rock structure and mineral zone distribution were manually interpreted on paper using a series of orthogonal vertical cross-sections oriented NE and NW, at a scale of 1:1,000. The entire deposit area was covered with sections spaced 50 meters apart. The identified mineral zones include: Brochantite, chrysocolla, enriched, mixed, and wad. Additionally, a chalcopyrite unit was identified and modelled, but it has been considered waste for this MRE, which is based on leachable material. Then, the lines of the sections were transformed into 3D

units using geological criteria, Leapfrog tools, and several technical meetings for final approval. The order of interpretation was litho-structure first, followed by the mineral zone, with transparent overlays.

The Mineral Zone (MZ) interpretations were used as MRE domains. The interpretation of mineral zones was primarily based on drillhole logging.

For the 2023 MRE exercise, the lithological model was fully updated, incorporating revisions to rock and structure units based on detailed surface mapping and drill hole sample logging. The Mineral Zone model was also updated, primarily reflecting the results from new infill drilling.

Hole collars and deviation were surveyed. Samples were logged and assayed for Total and Soluble Cu (CuT and CuS). All >0.1% CuT samples were assayed for Cyanide Soluble Cu (CuCN) as part of the Sequential Cu methodology, aiming to improve the quality of mixed and secondary sulphide logging. The resource estimation was limited to CuT and CuS.

The drilling, logging, sampling, analysis, and recording information procedures are consistent with generally recognized industry's best practices. The QP concludes that the samples are representative of the source materials and there is no evidence that the sampling process introduced any bias.

The average specific gravity (SG) of each estimation unit was calculated using a set of 634 measures from the DDH campaigns and surface samples, divided by mineral zone. Outliers were not considered when calculating the average figures; Table 1-7 presents the specific gravity and number of samples for each of the mineralized zones.

Table 1-7: Mineral Zones Specific Gravity

Mineral Zone	N Samples	Mean Specific Gravity
BROC	160	2.639
CP	24	2.746
CRIS	110	2.665
ENR	39	2.681
MIX	42	2.695
WAD	67	2.628
LIX	84	2.657
PY	69	2.729
EST	39	2.642
Total	634	2.665

Marimaca implemented analytical quality control measures consistent with accepted industry best practices. The analytical quality control program includes the use of control samples inserted with all samples submitted. The control samples show good results. See Section 11 for details.

To validate the use of data from the DDH and RC exploration campaigns, samples from twin holes (RC vs. DDH) with a maximum depth close to 10 m from both campaigns were compared using the GS Lib Getpairs routine.

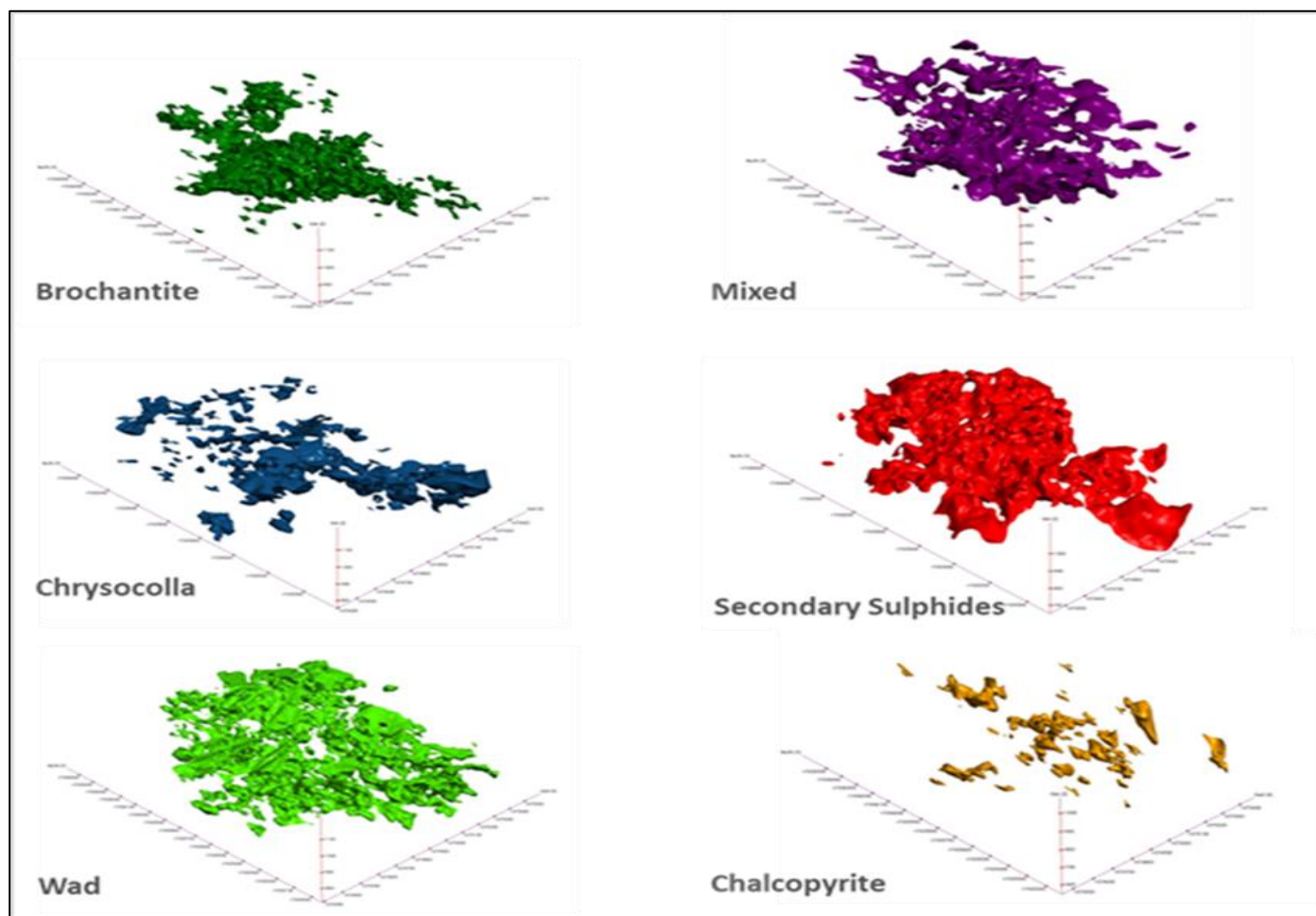
Virtually all samples are 2 m long, so it was decided that no further action was necessary in this regard.

The contact characteristics between the units to be estimated were reviewed, considering the mean grade of the samples and their distance to the contact as defined in the solids model.

The existence of outliers in the estimation populations was analyzed using the log-probability curves for each sample's population, looking for singularities in the curves that may signal the presence of an outlier limit. Identified values were used to cap the different populations.

The MRE is divided into six mineralogical sub-domains. Brochantite, Chrysocolla, Mixed, Secondary Sulphides, and WAD are part of the leachable resources for the Project. Chalcopyrite is included for completeness of the resource estimate but is explicitly excluded from the MRE for the FS. Figure 1-1 shows the distribution of copper minerals by geological sub-domain.

Figure 1-1: Distribution of Copper Minerals by Geological Sub-Domain



Source: Marimaca, 2023.

The deposit shows inherent grade dispersion, as seen in the twin holes RC vs RC analysis. This dispersion is also reflected in the RC vs DDH analysis; however, the grade distribution among different populations remains similar, as shown by the QQ plots. The slight differences in means between the compared populations consistently favour the RC samples, which aligns with the earlier discussion on the chosen drilling method. This is common in oxide deposits, where water influence during DDH drilling causes some ore to be washed away. The observed dispersion characterizes the deposit, as confirmed by cross-validation with the nearest-neighbour; therefore, it is concluded that combining DDH and RC samples does not introduce bias into the data. The QP sees no valid reason to prevent the joint use of DDH and RC samples for resource estimation.

Correlograms were created for the mineral zones in the geological model, including Brochantite, Chrysocolla, Enriched and Mixed, Wad, and Chalcopyrite. The variography of CuT was conducted using all samples within the estimation MZ solids. Correlograms in various directions were calculated based on the structural zones outlined in the structural model and discussions with Marimaca's technical team. The nugget for each population was determined using downhole correlograms.

Ordinary Kriging was used for grade interpolation due to the characteristics of the deposit and the availability of data. Four kriging plans were developed to be executed sequentially. The main idea is to systematically fill the grade model, starting with a restrictive estimation plan that only considers interpolation between drill holes with separations below 85% of the variogram sill. The subsequent plans gradually increase the search distance and relax other restrictions until the estimation is complete.

Resource classification was performed based on the conditions determined by the number and location of samples in the neighbourhood of each block. This criterion complies with the requirements established by the CIM code. The first pass produces block estimates with at least two drill interceptions, both within distances shorter than the D85. The second pass maintains the restriction on the number of drill intercepts but doubles the search range to twice the D85. These two passes generate Measured and Indicated Resources, respectively. The third pass increases the search radius to four times the D85 and limits the number of drill holes within this range to one, resulting in an Inferred Resource. A fourth pass was added, utilizing a large search radius to ensure that all blocks within the geological model are accurately estimated. This fourth pass produces potential mineralized rock.

Visual Validation, Statistical Validation, SWAT plots, and Nearest-Neighbour Analysis were conducted to verify the quality of the generated block model. The validation results showed that the estimated grades maintain the characteristics of the mean grade, overall variability, and tendencies of the original samples.

Table 1-8 shows the MOD 2025 MRE. The resource evaluation presented here provides a reasonable estimate of the Mineral Resources at the Project based on the current sampling level. The Mineral Resources have been estimated in accordance with the current CIM Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines and definitions under the JORC 2012 Code. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserve.

Table 1-8: MOD Total Mineral Resource Estimate (2025 MRE)

Mineral Resource Category and Type	Quantity (Mt)	CuT (%)	CuS (%)	CuT (t)	CuS (t)
Total Measured	103.4	0.45	0.27	466,041	278,165
Total Indicated	110.1	0.35	0.19	387,772	205,489
Total Measured and Indicated	213.5	0.40	0.23	853,813	483,654
Total Inferred	21.2	0.29	0.14	62,231	29,104

Notes: **1.** The independent and qualified person responsible for the mineral resource estimate, as defined by NI 43-101, is professional geologist Luis Oviedo, RM CMC, and the effective date is August 25, 2025. **2.** These mineral resources are not mineral reserves, as they do not demonstrate economic viability. The mineral resource estimate adheres to current CIM and JORC definitions and guidelines. **3.** The results are presented undiluted and are considered to have reasonable prospects of economic viability. **4.** Mineral Resources are reported at a copper price of US\$4.90/lb Cu. Assumes a variable Mining Cost by pit depth averaging US\$2.01/t, variable processing cost by mineral subdomain (see Table 1-9), variable recoveries by mineral subdomain (See Table 1-9), US\$0.31/t G&A, \$3.60/t cathode transport cost, US\$0.25/lb Cu SX-EW and selling costs. Pit slope angles range from 32-45 degrees.

Once the block model was finished and validated, a Whittle pit was run using the technical parameters provided by Marimaca and agreed upon by NCL's QP for Resource estimation, as shown in Table 1-9. CuR refers to recoverable copper, CuT refers to total copper grade, CuS refers to soluble copper, CuCN refers to cyanide soluble copper.

Table 1-9: Technical and Economic Parameters for Whittle Run

Parameters	Unit	Value	Comments
Copper Price	US\$/lb	\$4.90	-
Mining Cost (Variable by Pit Depth)			
Average	US\$/t	\$2.01	Average
Processing Cost (Variable by rock type and Net Acid Consumption)			
BROC/CRIS/WAD	US\$/t	Net Acid Consumption (kg/t)* Acid Price (US\$/t)/1000 (kg/t) + 2.83 (US\$/t)	
MIX/ENR	US\$/t	Net Acid Consumption (kg/t)* Acid Price (US\$/t)/1000 (kg/t) + 2.83 (US\$/t)	
Acid price	US\$/t	\$100	-
Recoveries (Variable by Rock Type and Leachable Potential)			
BROC	%	LP*0.92*1	Leachable potential: LP=(CuS+CuCN)/CuT
CRIS	%	LP*0.92*1	Leachable potential: LP=(CuS+CuCN)/CuT
WAD	%	(0.97*CuS + 0.7*CuCN+ 0.202* CuR)/ CuT*1*1	Residual Copper: CuR=CuT-CuS-CuCN
MIX	%	0.736	Leachable potential: LP=(CuS+CuCN)/CuT
ENR	%	LP*0.738*0.95306	Leachable potential: LP=(CuS+CuCN)/CuT
Other Costs and Charges			
G&A	US\$/t	\$0.3125	US\$5.0M per year at a throughput of 16 Mt/a
Cathodes transport cost	US\$/t Cu	\$3.6	US\$0.12/t/km and 30 km route to port
SX/EW Selling Cost	US\$/lb Cu	\$0.25	-
Mining Parameters			
Pit Slope Overall Angles	°	45-37-32	-
Royalties			
Osisko	%	1.0	Across all claims
Marimaca 1-23	%	0.5	-
La Atómica	%	1.0	-

The slope angles applied are global angles, allowing for the inclusion of ramps and safety berms. These values were obtained from Ingeroc's report (2024). The slopes used for the Whittle run correspond to the overall angles derived from a preliminary pit design.

In the QP's opinion, the resource evaluation presented here provides a reasonable estimate of the Mineral Resources at the Project based on the current sampling level. The Mineral Resources have been estimated in accordance with the current CIM Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines.

Whittle shells were run at various cut-off grades (CoGs), as shown in Table 1-10. In-Pit Resources by category, including all valuable Mineral Zones, for a CoG of 0.10% CuT. It should be noted that the reported figures do not include non-leachable material (chalcopyrite). This Mineral Zone has been considered waste for the purposes of pit generation and reporting; however, there is some minor tonnage within the pit limits, which, as mentioned, is not reported as a Resource of any kind.

Table 1-10 summarizes the In-Pit Resources per category for CuT, including all the Mineral Zones estimated. Detail per Mineral Zone is given in the body of this report. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Table 1-10: In-Pit Consolidated Mineral Resource Statement

Cut-off	All Material Inside Pit Shell											
	Measured			Indicated			Measured + Indicated			Inferred		
	Mt	CuT(%)	CuS(%)	Mt	CuT(%)	CuS(%)	Mt	CuT(%)	CuS(%)	Mt	CuT(%)	CuS(%)
1.00	6.80	1.37	0.81	2.80	1.36	0.67	9.70	1.37	0.77	0.20	1.31	0.16
0.95	7.90	1.32	0.78	3.40	1.29	0.64	11.30	1.31	0.74	0.20	1.28	0.18
0.90	9.10	1.27	0.75	4.10	1.23	0.62	13.20	1.26	0.71	0.20	1.21	0.22
0.85	10.60	1.21	0.72	5.00	1.17	0.59	15.60	1.20	0.68	0.30	1.14	0.24
0.80	12.40	1.16	0.69	6.00	1.10	0.57	18.40	1.14	0.65	0.40	1.05	0.28
0.75	14.40	1.10	0.66	7.30	1.05	0.55	21.70	1.08	0.62	0.50	0.97	0.30
0.70	16.90	1.05	0.63	8.80	0.99	0.53	25.60	1.03	0.60	0.70	0.91	0.31
0.65	19.70	1.00	0.60	10.70	0.93	0.50	30.40	0.97	0.57	1.00	0.84	0.31
0.60	23.30	0.94	0.57	13.00	0.88	0.48	36.30	0.92	0.54	1.30	0.79	0.31
0.55	27.30	0.89	0.54	16.00	0.82	0.45	43.30	0.86	0.51	1.80	0.73	0.30
0.50	32.20	0.83	0.51	19.80	0.76	0.42	52.00	0.80	0.48	2.40	0.68	0.29
0.45	37.90	0.77	0.48	24.70	0.71	0.39	62.60	0.75	0.45	3.30	0.62	0.28
0.40	44.60	0.73	0.44	31.10	0.65	0.36	75.70	0.70	0.41	4.60	0.56	0.26
0.35	52.60	0.67	0.41	39.30	0.59	0.33	91.90	0.64	0.38	6.00	0.52	0.24
0.30	62.20	0.62	0.38	50.10	0.53	0.30	112.30	0.58	0.34	8.00	0.47	0.22
0.25	72.60	0.57	0.35	63.50	0.48	0.27	136.10	0.53	0.31	10.40	0.42	0.20
0.20	83.90	0.52	0.31	78.90	0.43	0.23	162.80	0.48	0.27	13.20	0.38	0.18
0.15	94.30	0.49	0.29	94.30	0.39	0.21	188.50	0.44	0.25	16.60	0.34	0.16
0.10	103.40	0.45	0.27	110.10	0.35	0.19	213.50	0.40	0.23	21.20	0.29	0.14
0.05	118.40	0.40	0.24	138.40	0.29	0.15	256.80	0.34	0.19	27.80	0.24	0.11
0.00	122.50	0.39	0.23	145.10	0.28	0.15	267.60	0.33	0.19	29.80	0.23	0.10

Notes: 1. The independent and qualified person responsible for the mineral resource estimate, as defined by NI 43-101, are professional geologist Luis Oviedo, RM, CMC, and the effective date is August 25, 2025. 2. These mineral resources are not mineral reserves, as they do not demonstrate economic viability. The mineral resource estimate follows current CIM definitions and guidelines. 3. The results are presented undiluted and are considered reasonable prospects for economic viability. 4. The highlighted row is the base case.

1.11 Mineral Reserve Estimate

Mineral reserves for the Project have been estimated by the QP, using industry best practices and conforming to the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014) and JORC Standard for Ore Reserves (JORC 2012). The Company has reported the Ore Reserve Estimate to the ASX in accordance with the JORC Code 2012 (see news release dated August 25, 2025).

Mineral Reserves are summarized in Table 1-11 and have an effective date of August 25, 2025. The Qualified Person responsible for the estimate is Carlos Guzmán, FAusIMM, an employee of NCL.

Other than the risks identified in this report, the QP is not aware of any other environmental, permitting, legal, title, taxation, socio-economic or political factors that could materially affect the Mineral Reserve Estimate.

In order to evaluate the economic potential of the resources, a pit optimization was generated using the Measured and Indicated resources only. Base case pit parameters include a range from 37° to 45° overall slope angles, ore and waste mining average cost of US\$2.0/t, average US\$6.25/t for process, US\$0.25/t for general and administrative (G&A), US\$0.26 for sustaining capital, US\$0.25/lb for SX/EW, US\$3.6/t cathodes for logistics and average US\$0.06/lb for royalties. Copper price of US\$4.25/lb and cathode premium of US\$100/t cathodes was utilized, as well as a variable recovery as function of the leachable potential. These parameters were provided by Marimaca Copper and Ausenco.

Table 1-11 reports the Mineral Reserve for the Project based on the production schedule used for this study. Mineral Reserves have been defined within an open pit mine plan generated considering diluted Measured and Indicated Mineral Resources.

Mineral Resources were converted to Mineral Reserves recognizing the level of confidence in the Mineral Resource Estimate and reflecting any modifying factors. The Proven Mineral Reserve is based on Measured Mineral Resources and Probable Mineral Reserve is based on Indicated Mineral Resources after consideration of all mining, metallurgical, and financial aspects of the Project.

The Mineral Reserve is that part of the Mineral Resource which can be economically mined by open pit mining methods. Dilution of the Mineral Resource model and an allowance for ore loss were included in the Mineral Reserve Estimate.

Table 1-11: Marimaca Mineral Reserve Estimate as of August 25, 2025

Reserve Category	Ore Type	Tonnage (kt)	Copper Grades			Contained Copper (kt)
			(%CuT)	(%CuS)	(%CuCN)	
Proven Mineral Reserves	BROC	39,456	0.58	0.41	0.08	227.5
	CRIS	17,607	0.42	0.30	0.04	73.8
	WAD	17,242	0.26	0.14	0.05	44.8
	MIX	17,298	0.44	0.12	0.19	76.7
	ENR	2,693	0.40	0.07	0.19	10.6
Total Proven Mineral Reserves		94,297	0.46	0.28	0.09	433.4
Probable Mineral Reserves	BROC	25,617	0.49	0.35	0.06	125.1
	CRIS	17,517	0.35	0.24	0.03	61.8
	WAD	20,650	0.25	0.13	0.04	51.9
	MIX	14,555	0.37	0.10	0.16	53.3
	ENR	6,000	0.37	0.07	0.19	22.1
Total Probable Mineral Reserves		84,339	0.37	0.21	0.08	314.2
Total Mineral Reserves (Proven and Probable)	BROC	65,073	0.54	0.39	0.07	352.6
	CRIS	35,124	0.39	0.27	0.04	135.7
	WAD	37,892	0.26	0.14	0.05	96.7
	MIX	31,853	0.41	0.11	0.18	130.0
	ENR	8,693	0.38	0.07	0.19	32.8
Total Mineral Reserves (Proven and Probable)		178,635	0.42	0.25	0.08	747.6

Notes: 1. Mineral Reserves are reported as constrained within Measured and Indicated pit design and supported by a mine plan featuring a constant copper cathodes production rate. The pit design and mine plan were optimized with average overall slopes angles varying from 37° to 45°, ore and waste mining average cost of \$2.0/t, average \$6.25/t for process, \$0.25/t for G&A, \$0.26 for sustaining capital, \$0.25/lb for SX/EW, \$3.6/t cathodes for logistics and average \$0.06/lb for royalties, copper price used was \$4.25/lb and cathode premium of \$100/t cathodes, as well as a variable recovery as function of solubility ratio. The average processing recovery is 72% and for this average, the cut-off is 0.10%CuT. 2. Mineral Reserves considers a fully diluted Resource model, representing 1% of mining dilution. 3. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content. 4. %CuT corresponds to total copper grade, %CuS to acid soluble copper grade and %CuCN to cyanide soluble copper grade. 5. Tonnage, grade measurements and contained copper are in metric units.

1.12 Mining Methods

1.12.1 Pit and Mining Phases Designs

A mine plan was developed for the Marimaca Oxide Deposit to produce 50,000 t/a of copper cathode. The total mining rate starts at 25 Mt/a (Year 1) and peaks at approximately 35 Mt/a (Year 4 through Year 9).

The final pit design was based on the economic shell generated at a copper price of US\$4.25/lb. This shell was smoothed, and narrow pit bottoms were eliminated, adding ramps, to obtain an executable final pit with an overall slope angle between 37 to 45 degrees. The final pit design has two exits on the south of the pit which give access to the ore to the crusher and three exits to the west for access to the waste storage area.

The final pit is 1,800 m long in the SE-NW direction and up to 1,000 m wide in the NE-SW direction. Four pit bottoms can be identified, from south to north at 815 mRL and three at 885 mRL. The total area disturbed by the pit is approximately 108 hectares.

A set of eight mining phases or pushbacks were designed by analyzing the Whittle® series of nested shells. Pit bottoms were selected to project them to surface, applying recommended slopes.

One waste rock storage area at the west of the pit was designed for the life of the Project. The ore extracted from the mine will be transported to the primary crusher or to the low-grade stockpile, both located southeast of the pit.

1.12.2 Mine Production Schedule

Criteria and assumptions used in preparing the production plan include:

- The production plan has been developed on a quarterly basis from prestripping through Year 3, half year basis for Years 4, 5 and 6, and annually basis thereafter.
- The mine and plant are scheduled to operate 365 days a year.
- The process plant is designed to produce 50,000 t/a of Cu metal in a SX/EW plant.

Table 1-12 shows the mine production for each mining year. The schedule is based on 50,000 t/a of copper cathodes to align with the maximum capacity of SX/EW plant. The heap leach throughput is designed for an initial 12 Mt/a through Year 5, and expanded to 16 Mt/a thereafter due to the drop of the head grade from the mine. Table 1-12 also shows the total material movement from the mine by year, which peaks at 39.7 Mt during Year 9 (including re-handling from stockpile to plant).

Table 1-12: Mine Production Schedule

Year	Mine to Plant		Mine to Stock		Waste	Total Mined	Stock to Plant		Total to Plant		Total Movement
	kt	(%CuT)	kt	(%CuT)	kt	kt	kt	(%CuT)	kt	(%CuT)	kt
Y00	-	-	4,170	0.33	4,330	8,500	-	-	-	-	8,500
Y01	9,600	0.50	5,080	0.22	10,320	25,000	-	-	9,600	0.50	25,000
Y02	11,440	0.53	4,710	0.31	8,850	25,000	560	0.58	12,000	0.53	25,560
Y03	11,705	0.53	5,386	0.29	7,909	25,000	295	0.72	12,000	0.53	25,295
Y04	11,603	0.53	4,072	0.37	19,318	34,993	397	0.73	12,000	0.54	35,390
Y05	11,564	0.53	4,536	0.28	18,509	34,609	436	0.73	12,000	0.54	35,045
Y06	13,418	0.46	2,249	0.50	19,218	34,884	582	0.73	14,000	0.48	35,466
Y07	16,000	0.44	4,351	0.23	14,650	35,000	-	-	16,000	0.44	35,000
Y08	11,713	0.43	5,277	0.19	16,295	33,285	4,287	0.60	16,000	0.48	37,572
Y09	11,340	0.41	7,783	0.18	15,878	35,000	4,660	0.44	16,000	0.42	39,660
Y10	16,000	0.45	1,997	0.18	9,503	27,500	-	-	16,000	0.45	27,500
Y11	3,586	0.53	1,055	0.19	1,112	5,753	12,414	0.19	16,000	0.26	18,167
Y12	-	-	-	-	-	-	16,000	0.18	16,000	0.18	16,000
Y13	-	-	-	-	-	-	11,035	0.18	11,035	0.18	11,035
TOTAL	127,969	0.48	50,667	0.26	145,889	324,525	50,667	0.26	178,635	0.42	375,191

1.12.3 Mine Equipment Requirement

The mine fleet required is based on annual mine production rate, mine work schedule and hourly equipment production estimates. Equipment types and the maximum number of units required for the forecasted production are presented in Section 16.

The drilling equipment will consist of diesel units capable of drilling 7½" diameter holes in all material types. Support units capable of drilling 6½" diameter holes for pre-splitting and one buffer line will also be used. One production unit will be required for pre-stripping and two from the start of commercial production through Year 3 of the mine plan, then increased to three units. The support unit requirement is one through Year 3 and then increased to two units.

Two 29m³ hydraulic shovel and one 23 m³ front-end-loader are required from Year 1 throughout the LOM. During the pre-production phase, six 220 t trucks are required. The number of haul trucks required gradually increases to a maximum of 13 units utilized in Years 7 to 9, then gradually decreases as less material is mined toward the end of the LOM. In general, five track dozers, two wheel dozers, two motor graders and two water trucks will be required in the auxiliary mine fleet.

1.13 Recovery Methods

The proposed recovery methods are based on well-proven unit operations in the industry including heap leaching, solvent extraction and electrowinning. There are no unique or novel processing methods required for copper extraction and recovery. The process considers a three-stage crushing circuit with the product fed to an agglomeration stage, followed by dynamic heap leaching, solvent extraction and electrowinning obtaining Grade A copper cathodes at a production rate of 50 kt/a.

The key design criteria for the plant are:

- The Project is divided into two phases. The first phase, from year one to five, considers the treatment of oxide ores at a rate of 12 Mt/a. The second phase, from year six to thirteen, considers the treatment of oxide and sulphide ores at a rate of 16 Mt/a.
- The process includes a three-stage crushing circuit with the product feeding an agglomeration stage, followed by dynamic heap leaching. Primary crushing considers an operating availability of 70% while from secondary crushing to heap leaching stacking has an operating availability of 75%.
- During Phase 2, salt (sodium chloride) is added to the agglomeration stage in order to improve copper extraction from sulphide minerals. For the leaching of sulphides, air is added in the heap using blowers.
- Pregnant leach solution (PLS) from heap leaching is fed to the solvent extraction and electrowinning stages obtaining A-grade copper cathodes at a production rate of 50 kt/a. The operating availability of heap leaching solutions management, SX and EW is 98%.
- Phase 1 considers an average total copper head grade and recovery of 0.53% and 77.8%, respectively. Phase 2 considers an average copper head grade and recovery of 0.37% and 68.3%, respectively.

The total operating power for the process plant for Phase 1 and Phase 2 is 244 GWh/a (20.3 kWh/t ore) and 281 GWh/a (17.6 kWh/t ore), respectively. The Project uses seawater. Seawater is pumped from Mejillones to the seawater pond located in the operational plant area. The process plant includes sulphuric acid storage and dosing, as well as reagent dosing for the solvent extraction (diluent and extractant), and electrowinning process (cobalt sulphate, guar and surfactant). In Phase 2 the process plant includes salt (NaCl) storage and dosing.

1.14 Project Infrastructure

Marimaca is a greenfield project. The minimal infrastructure that is currently on site is related to mineral exploration activities and site management of project study work activities.

Most project Infrastructure will be constructed for Phase 1. For Phase 2, infrastructure will be expanded in tertiary crushing, agglomeration, heap leaching and pond areas, as well as the addition of salt storage and heap leach air blowers. Ripios dump construction will progressively continue during the initial years of operation.

Offsite infrastructure that will be constructed for the Project includes the high-voltage power line and the Industrial Sea Water delivery pipeline.

On-site infrastructure for the project includes the mine open pit, mine stockpile, mine waste dump, primary crusher, secondary crusher, tertiary crusher, agglomeration, heap leach pad, SX/EW plant & dedicated ripios waste dumps for the disposal of spent ore from the dynamic heap leaching operation.

1.15 Market Studies and Contracts

Market price assumptions and payment terms were based on a review of public information, market forecasts, and comparable operations globally. This study uses a copper price of US\$4.30/lb, which is slightly lower than the long-term consensus copper price of US\$4.36/lb, provided by 19 major banks.

The Project is expected to produce a high purity, >99.99% copper cathode which aligns with the London Metal Exchange Grade A copper specifications. The Company assumes it will sell the cathode produced FOB Mejillones, which is a large export terminal for copper cathode and concentrates. No contracts for the transportation or off-take of the copper cathode are in place but are expected to be in line with industry norms. A copper cathode premium of US\$0.11/lb copper was estimated for the purpose of financial modelling of the project, which is less than the average of the current Chinese premium and European premium as reported by Codelco in 2024.

The Company completed a review of the sulphuric acid market in Chile using external consultants and reviewing the long-term supply and demand forecasts as provided by the Comision Chilena del Cobre ("Cochilco"). The assumed acid price for the study is US\$90/t CFR Mejillones over the life of the Project, aligning with the projected decline in sulphuric acid consumption towards the end of the decade. The Company has also identified the opportunity to supply up to 150,000 t of acid per year by producing its own acid via the process of burning elemental sulphur at an owner-operated plant in Mejillones. An option agreement to acquire a used sulphuric acid plant in Chile from CEMIN Holding Minero ("CEMIN") has been executed to advance this approach.

The Company currently has an option agreement with a large utility company for the supply of water to the Project with confirmed pricing and a range of qualities required to supply the Project. The Company can exercise this option to convert to a water supply agreement at any time. Under the agreement, one of Chile's largest energy suppliers will supply seawater following its use in cooling systems at an electricity plant in Mejillones. The option has a term of five years, with the ability to extend for two years. The option period will allow the Company to advance final project permitting and technical studies, including water pipeline studies that are already underway. The exercise of the option will trigger the execution of a water supply agreement priced on a take-or-pay basis for the Project's life of mine. The principal terms of the water supply agreement have been negotiated and agreed in the option documentation.

1.16 Environmental, Permitting and Social Considerations

The project will take place in the Antofagasta Region, near the town of Mejillones. This region is characterized by extreme environmental conditions for biotic development, namely hyper-arid conditions, intense solar radiation and high wind speeds all constitute adverse conditions for ecosystems. The area of influence of the Project is also characterized by scarce human settlements, mostly due to the harsh environmental conditions.

1.16.1 Environmental Considerations

The main environmental considerations for the Project are its demand for sea water and its proximity to protected flora species. Due to the hyper-arid conditions of the zone, water rights are difficult to obtain and require comprehensive documentation. In terms of water management, the Project assumes that water demand will be supplied from sea water extracted in the Mejillones bay area through a concession with an existing thermoelectrical facility, and does not require other water rights. The Project does not require the use of continental groundwater or other forms of water sources and therefore does not have or require additional extraction permits.

Environmental baseline studies were conducted between 2022 and 2024 and were presented alongside an Environmental Impact Statement (DIA) submitted in 2024 (DIA Proyecto Minero Óxidos de Cobre Marimaca, JIA, 2024) which is currently under assessment. These campaigns indicate that the most relevant environmental aspect is its proximity to flora and fauna species that are present in the sensitive ecosystems, particularly in the form of protected flora species (*Nolana onoana*¹). A secondary aspect that was noted in the campaigns is the presence of human groups in proximity, particularly in Mejillones that make use of the bay area for economic and cultural activities, including a fishermen association of the Indigenous group Changos. These communities are outside of the Project Influence Area (IA). Although there is no predicted impact reported, it is recommended to continue with early and ongoing engagement and communication measures to develop and maintain a positive relationship with the human groups present in the area.

Regarding surface water runoff, contour channels will be installed around the mine areas, waste rock storage facilities, ripios dumps and any other facilities that could contaminate water. Collection channels have been designed at the base of uncontacted areas to pass non-contact water (clean surface runoff water) and convey to discharge points downstream. For the management of "contact" mine waters and along the roads, these will be collected through

Endemic species of Chile, classified as "Critically Endangered" (CR) according to the Regulations for the Classification of Wild Species.

channels in each of the facilities and directed to settling ponds to allow for settling of solids and then subsequent evaporation by means of the intense solar radiation.

Project activities during the construction, operation, and closure phases will generate different types of waste and emissions. Atmospheric emissions will be mostly managed through mitigation measures and monitoring at nearby receptors. Domestic, industrial and hazardous waste will be managed according to legal requirements in the appropriate facilities, which include a landfill in the project area. Mining waste (low-grade mineralized material and sterile rock) will be managed at specially designed dumps located next to the open pit areas. Generation of acid rock drainage (ARD) could occur if materials are exposed to water, so this potential impact will be managed by reducing contact between the material and water through contour channels and collection systems. The generation of ARD will be monitored by a series of wells on the project grounds that will monitor groundwater quality to detect any contamination by ARD.

1.16.2 Closure and Reclamation Considerations

In Chile, Law 20.551 requires that a closure plan and accompanying cost estimate is submitted to and approved by the National Geology and Mining Service (SERNAGEOMIN) to ensure the physical and chemical stability of the areas in which mining is developed and establish guarantees for the effective closure of mining facilities. The closure plan will be developed and designed to ensure long-term stability of both physical and chemical properties of the site, and to blend in with the high-altitude, rocky environment. The main closure measures shall include:

- Above ground facilities will be dismantled or demolished and foundations below ground level will be covered.
- Spent mineralized material on the heaps shall be rinsed until it can be demonstrated that they do not contain levels of contaminants.
- Long-term stabilization of all exposed erodible materials.
- Access to areas such as the open pit, waste rock storage facilities and the heap leach facilities shall be restricted.

The Closure permit will be obtained during the process of Sectoral Permitting after receiving the DIA approval.

1.16.3 Permitting Considerations

Permits required by projects in Chile are classified in two categories: Environmental Permits and Sectoral Permits. The Environmental Permits are granted for any project approved within the SEIA and comprise the Environmental Qualification Resolution (Resolución de Calificación Ambiental, RCA) and the Sectoral Environmental Permits (Permiso Ambiental Sectorial, PAS). All applicable PAS must be presented along with the Environmental Impact Study (EIA) and cover relevant environmental aspects. On the other hand, Sectoral Permits (PS) cover non-environmental topics and need to be applied for separately with the corresponding government authority. Once the RCA is issued, the proponent can seek individual sectoral permits for construction and operation, some of which are an extension of a PAS.

A DIA for the Project was submitted by Marimaca for evaluation by the environmental authority in December 2024. As part of the DIA review process, in February 2025 the regulatory authorities commented and requested additional information and clarifications, which were received and reported by the Company to be resolved by Marimaca.

Currently the project is under a second round of information requests by the authorities, but according to the Company, most of the authorities have already declared compliance.

Sectoral Permits are granted by different government authorities. The ones associated with mining operations are granted by SERNAGEOMIN, and the most relevant ones, based on the engineering at this stage, are:

- Authorization to establish a waste rock storage facility or ore stockpile.
- Authorization of open-pit exploitation method.
- Mineral Treatment or Benefit Plants Project Approval.
- Authorization of the Project's Mine Closure Plan.

Several other permits and notifications are also required to be presented at the beginning of the construction or operation phases that do not relate to the design of infrastructure, deposits, or the mining process. These include permits and notifications for water diversion infrastructure, operation of waste storage, wastewater and drinking water facilities, waste transport, permits for minor support infrastructure like fuel tanks, electric systems, gas systems and roads and sanitary permits, among others. The list of the most relevant of these sectoral permits is shown in section 20.2.3.

It is worth noting that the permits required for the project must be in accordance with the latest engineering designs, considering the requests of the environmental authority in the current evaluation process, as well as the sectoral requirements for each work, installation, and/or activity.

The MOD Project was submitted for environmental permit evaluation by Marimaca in December 2024, through a Declaración de Impacto Ambiental (DIA). Marimaca will need to make sure during the detailed engineering stage that there are no significant variations between the final design of the MOD Project and the DIA, in order to avoid submitting a new environmental permit request. When modifications are identified, they must be evaluated by Marimaca through a Relevance Pertinence Analysis (Análisis de Pertinencia) to determine whether these changes are significant based on the current instructions required by the environmental authority.

1.16.4 Social Considerations

Social baseline studies were conducted as part of the 2024 DIA preparation. Based on this information, Indigenous associations related to the Chango Indigenous group have been identified in the proximity of the project but stated by the authorities to be outside the Influence Area of the project.

The communities make use of seawater for economic and traditional activities such as fishing. Currently, four different associations have been identified within the area of influence of the project, particularly in the town of Mejillones. As part of the Environmental Impact Statement process, the project has developed community relations within the framework of early citizen participation (ECP).

1.17 Capital and Operating Costs

1.17.1 Capital Cost Estimate

The estimate conforms to AACE Class 3 guidelines for a feasibility study cost estimate with an expected accuracy range of -10% to -20% on the low side of the range and +10% to +30% on the high side of the range.

Table 1-13 provides a summary of the estimate for the overall initial, expansion, sustaining, closure and post-closure capital cost. The costs are expressed in Q3 2025 are in USD, and include mining, process plant, infrastructure, project indirect, project delivery, Owner costs and contingency.

Table 1-13: Capital Cost Summary

Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Closure Cost (US\$M)	Total Cost (US\$M)
General	-	-	29	30	59
Mine	24	-	240	-	264
Crushing	141	17	-	-	158
Agglomeration	13	8	-	-	21
Leaching	90	26	91	-	206
SX/TF/EW	121	-	-	-	121
Power Supply	10	-	44	-	54
Water Supply and Reagents	35	8	95	-	139
Infrastructure, buildings and roads	4	1	1	-	6
Total Direct Costs	437	61	501	30	1,028
Owners Costs	17	1	5	1	24
Indirect Costs	80	6	10	4	100
Total Indirect Costs	97	7	15	6	124
Total Direct + Indirect Costs	533	68	516	35	1,152
Contingency	53	9	13	12	88
Total Capital Cost	587	77	529	47	1,240

Note: Values may not sum due to decimal rounding.

1.17.2 Operating Cost Estimate

The operating cost estimate (Opex) is at feasibility study level according to the requirements for a AACE Class 3 Estimate, with an expected accuracy range of -15% to +15%. The Opex captures costs associated with the mine, process plant, port and general and administrative (G&A) areas during the LOM. Costs are presented in US dollars (US\$) for Q3 2025.

Ausenco developed the costs for the plant area and Marimaca provided cost estimates for the port and G&A. NCL provided cost estimates for the mine. A Build-Own-Operate-Transfer (BOOT) contract is considered for seawater reception and transport to the seawater pond at the plant facilities. A BOOT contract is also considered for the 110 kV transmission from a tap-off at Mejillones to plant facilities, including the main electric room.

Table 1-14 summarizes the Opex per area. Phase 1 average cost is 12.40 US\$/t leached or 1.37 US\$/lb Cu and Phase 2 has an average cost of US\$11.60/t leached or US\$2.10/lb Cu.

Table 1-14: Operating Cost Estimate

Cost Area	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 Average (US\$/t leached)	Phase 2 Average (US\$/t leached)	Phase 1 Average (US\$/lb Cu)	Phase 2 Average (US\$/lb Cu)
General	27	39	0.46	0.33	0.05	0.06
Mine	173	325	3.00	2.69	0.33	0.49
Crushing	67	119	1.16	0.98	0.13	0.18
Agglomeration	192	415	3.34	3.43	0.37	0.62
Leaching	78	239	1.36	1.97	0.15	0.36
SX/TF/EW	122	173	2.12	1.43	0.23	0.26
Power Supply	4	7	0.07	0.06	0.01	0.01
Water Supply and Reagents	42	75	0.73	0.62	0.08	0.11
Infrastructure, Buildings and Roads	9	12	0.15	0.10	0.02	0.02
Total	714	1,404	12.40	11.60	1.37	2.10

1.18 Economic Analysis

1.18.1 Economic Summary

The results of the economic analysis to support Mineral Reserves represent forward-looking information that is subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

An engineering economic model was developed to estimate annual pre-tax and post-tax cash flows and sensitivities of the project based on an 8% discount rate. It must be noted, however, that tax estimates involve many complex variables that can only be accurately calculated during operations and, as such, the post-tax results are only approximations. Sensitivity analyses were performed to assess the impact of variations in copper prices, head grades, operating costs and capital costs.

1.18.2 Financial Model Parameters

The economic analysis assumes construction commencing in Year -2 with production ramp-up beginning in Year 1. All results are reported in real terms with 100% equity funding, no debt or price escalation, and revenues based solely on copper cathode sales. The flat long-term copper price used in the analysis is US\$4.30/lb, which is slightly below the current consensus long-term price. The economic analysis uses the following assumptions:

- The project has a planned mine life of 12.7 years.
- Initial capital costs of US\$587 million.

- LOM operating costs are estimated to be US\$2,119 million.
- Closure and reclamation costs are estimated to be US\$47 million.
- 100% ownership and equity funding, no debt assumed.
- A cathode premium of US\$250/t Cu is assumed.
- LOM sales and marketing costs are estimated to be US\$2.0 million.
- Royalties consist of multiple agreements across separate claims. These include the Atómica Royalty, Marimaca 1-23 Royalty and Osisko Royalty (1.0% NSR) for total estimated Royalty payments of \$73.0 million.

1.18.3 Financial Model Results

The pre-tax net present value (NPV) discounted at 8% (NPV8%) is US\$898 million, the internal rate of return (IRR) is 33.0%, and payback is 2.6 years. On a post-tax basis, the NPV8% is US\$709 million, the IRR is 30.9%, and the payback period remains 2.5 years. The economic results of the Project are summarized in Table 1-15.

Table 1-15: Summary Economics

General	Units	LOM Total / Avg
Copper Price	(US\$/lb)	4.30
Mine Life	year	12.7
Production		
Total Ore Sent to Heap Leach	Kt	178,635
Leach Head Grade Cu	%	0.42%
Leach Recovery Rate	%	72.2%
Total Copper Recovered	M lb	1,189
Operating Costs		
Mining Cost	US\$/t mined	\$1.5
Mining Cost	US\$/t Leached	\$2.8
Processing Cost	US\$/t Leached	\$8.8
G&A Cost	US\$/t Leached	\$0.3
Total Operating Costs	US\$/t Leached	\$11.9
Cash Costs*	US\$/lb Cu	\$1.84
All-in Sustaining Cost (AISC)**	US\$/lb Cu	\$2.29
Capital Costs		
Initial Capital	US\$M	\$587
Expansion Capital	US\$M	\$77
Sustaining Capital	US\$M	\$529
Closure Costs	US\$M	\$48
Salvage Value	US\$M	\$43
Financials – Pre-Tax		
NPV (8%)	US\$M	\$898
IRR	%	33.0%
Payback	year	2.6

Financials – Post-Tax		
NPV (8%)	US\$M	\$709
IRR	%	30.9%
Payback	years	2.5

* Cash costs consist of mining costs, processing costs, mine-level G&A, sales & marketing charges and royalties.

** All-in Sustaining Cost (AISC) includes cash costs plus sustaining capital, closure cost and salvage value.

1.18.4 Sensitivity Analysis

Sensitivity analyses were performed to assess the impact of variations in copper prices, operating costs, capital costs and leach recovery. Analysis revealed that the Project is most sensitive to changes in metal price, copper recovery, then, to a lesser extent, to operating costs and initial capital costs. Table 1-16 shows the results of the pre-tax and post-tax sensitivity analysis.

Table 1-16: Pre-Tax and Post-Tax NPV Sensitivity Analysis

Metal Price	Pre-Tax NPV (8%), US\$M	Initial Capex		Opex		Leach Recovery	
		-20%	+20%	-10%	+10%	-2%	+2%
-25%	\$188	\$304	\$71	\$299	\$76	\$143	\$232
-15%	\$614	\$730	\$497	\$726	\$502	\$560	\$667
-	\$898	\$1,014	\$782	\$1,010	\$786	\$839	\$957
+15%	\$1,182	\$1,298	\$1,066	\$1,294	\$1,070	\$1,117	\$1,247
+25%	\$1,608	\$1,724	\$1,492	\$1,720	\$1,496	\$1,534	\$1,682
Metal Price	Post-Tax NPV (8%), US\$M	Initial Capex		Opex		Leach Recovery	
		-20%	+20%	-10%	+10%	-2%	+2%
-25%	\$177	\$275	\$78	\$265	\$86	\$142	\$213
-15%	\$501	\$594	\$407	\$583	\$418	\$462	\$541
-	\$709	\$799	\$617	\$790	\$628	\$666	\$752
+15%	\$914	\$1,004	\$824	\$994	\$833	\$867	\$961
+25%	\$1,221	\$1,311	\$1,131	\$1,301	\$1,140	\$1,168	\$1,274

1.19 Conclusions and Recommendations

The financial analysis of this feasibility study demonstrates that the project has robust economics, and it is recommended to continue developing the project through engineering and de-risking, and into a construction decision. Analysis of the results and findings from each major area of investigation completed as part of this FS suggests recommendations for further investigations to mitigate risks and/or improve the base case designs.

A breakdown of the recommended work program for site preparation is shown in Table 1-17. Ongoing engineering and de-risking initiatives such as interim engineering, geotechnical characterization of plant area, geochemical studies, geometallurgical laboratory testing and materials handling testwork are included in these costs.

Table 1-17: Recommended Work Program Cost Summary

Program Component	Estimated Total Cost (US\$M)
Site mass earth works for process plant platforms & Cover preparation for Heap Leach Pad	\$35.3
Pioneer access Roads (Plant and Mine access for Pre-stripping)	\$10.9
Site administration buildings & Gatehouse	\$6.9
Temporary Facilities	\$6.8
Total	\$59.9

2 INTRODUCTION

2.1 Introduction

Marimaca Copper Corp. (Marimaca) commissioned Ausenco Chile Ltda. and Ausenco Sustainability ULC (collectively, Ausenco) to compile a feasibility study (FS) of the Marimaca Oxide Deposit (MOD) Project. The FS was prepared in accordance with the Canadian disclosure requirements of National Instrument 43-101 (NI 43-101) and in accordance with the requirements of Form 43-101 F1.

The responsibilities of the engineering companies who were contracted by Marimaca to prepare this report are as follows:

- NCL Ingeniería y Construcción SpA. (NCL) completed work related to geological setting, deposit type, exploration work, drilling, sample preparation and analysis, data verification, Mineral Resource Estimate, Mineral Reserve Estimate, open pit mine, ore stockpile, waste rock facility, mine production schedule, mine capital cost & mine operating cost.
- Ausenco managed and coordinated the work related to the report and developed FS-level design and cost estimate for the process plant, heap leach design, general site infrastructure, environmental, permitting and economic analysis.

2.2 Qualified Persons

The Qualified Person's for the report are listed in Table 2-1. By virtue of their education, experience and professional association membership, they are considered Qualified Person as defined by NI 43-10.

Table 2-1: Qualified Persons

Qualified Person	Professional Designation	Position	Employer	Independent of Marimaca
Scott C. Elfen	P. E.	Global Lead, Geotechnical and Civil Services	Ausenco Engineering Canada ULC	Yes
James Millard	P. Geo.	Director, Strategic Projects	Ausenco Sustainability ULC	Yes
Tommaso Roberto Raponi	P. Eng.	Senior Mineral Processing Specialist	Ausenco Engineering Canada ULC	Yes
Carlos Guzmán	FAusIMM	Principal Director	NCL Ingeniería y Construcción SpA.	Yes
Luis Oviedo	RM CMC	Consulting Geologist	NCL Ingeniería y Construcción SpA.	Yes

2.3 Terms of Reference

The purpose of this report is to present the results of the FS and to support Marimaca's disclosure responsibilities.

2.4 Site Visits and Scope of Personal Inspection

2.4.1 Site Inspection by Mr. Luis Oviedo, RM CMC.

Mr. Luis Oviedo conducted three site visits to the Project: a three-day visit in December 2016, a two-day visit in August 2019, and a three-day visit in February 2022. During the visits, Mr. Oviedo focused on geological topics, new surface mapping, review the historical underground workings, the associated sampling, continuity of the QA/QC procedures in sampling, storage, and sample care. Presentations were also received.

2.4.2 Site Inspection by Mr. Scott C. Elfen, P. E.

Mr. Scott Elfen visited the Project for one day on June 12, 2025. During the visit Mr. Elfen viewed the future locations of the mine open pit, mine waste dumps, processing plant, heap leach pad and ripios waste dumps. Mr. Elfen also visited the access road, seawater pipeline route and high voltage power line route.

2.5 Effective Dates

This technical report has a number of significant dates, as follows:

- Mineral Resource Estimate: August 25, 2025
- Mineral Reserve Estimate: August 25, 2025
- Financial Model: August 25, 2025

The overall effective date of this report is August 25, 2025.

2.6 Sources of Other Information

The QP responsible for the Mining Methods relied on information provided by INGEROC SpA (INGEROC) regarding geotechnical recommendations and stability analysis, and on SRK Consulting (Chile) SpA (SRK) regarding the hydrogeology analysis. Both firms are renowned consulting firms in Chile.

The QP reviewed the provided information and considered acceptable for the purposes of the Feasibility Study.

2.7 Currency, Units, Abbreviations and Definitions

All units of measurement in this report are metric and all currencies are expressed in United States dollars (symbol: US\$ or currency: USD) unless otherwise stated. Contained gold metal is expressed as troy ounces (oz), where 1 oz =

31.1035 g. All material tonnes are expressed as dry tonnes (t) unless stated otherwise. A list of abbreviations and acronyms is provided in Table 2-2, and units of measurement are listed in Table 2-3.

Table 2-2: Abbreviations and Acronyms

Abbreviation	Description
AA	atomic absorption spectroscopy
AAA	Andes Analytical Assay Laboratory
AAC	analytic acid consumption
AACE	Association for the Advancement of Cost Engineering
AFS	Atacama Fault System
AISC	all-in sustaining costs
ANF	Antofagasta airport
ARD	acid rock drainage
Au	gold
Az	azimuth
BIF	banded iron formation
BOOT	Build-Own-Operate-Transfer
BROC	Bronchantite
BV	Best value
BWi	bond ball mill work index
CAD:USD	Canadian-American exchange rate
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Definition Standards	CIM Definition Standards for Mineral Resources and Mineral Reserves 2014
CIP	carbon in pulp
CoG	cut-off grade
CP	Chalcopyrite
CRIS	Chrusocholla
CRM	certified reference material
CuCN	Cyanide soluble copper
CWi	bond crusher work index
DCF	Discounted cash flow
DCIP	direct current resistivity and induced polarization
DDH	diamond drill hole
DEM	Digital elevation model
DFS	Definitive Feasibility Study
DIA	Environmental Impact Statement (<i>declaración de Impacto Ambiental</i>)
E-GRG	extended gravity recoverable gold
EIA	Environmental Impact Statement
EM	electromagnetic

Abbreviation	Description
EN	Endangered
ENR	Enriched (sulphides)
EPCM	Engineering, Procurement and Construction Management
FA	fire assay
FBL	Fine blanks
FET	federal excise tax
FeT	total iron
FID	Final investment decision
FS	feasibility study
G&A	general and administration
GPR	gross production royalty
GQCV	greenstone-hosted quartz-carbonate vein deposits
GRAV	gravimetric finish method
HG	High grade
IA	influence area
ICP	inductively coupled plasma
ICP-OES	inductively coupled plasma - optical emission spectrometry
ID2	inverse distance squared
ID3	inverse distance cubed
ILS	intermediate leach solution
IOCG	iron oxide copper gold
IP	induced polarization
IRGS	intrusion-related gold system
ISO	International Organization for Standardization
LG	Low grade
JORC	Joint Ore Reserves Committee
LIDAR	light detection and ranging
LIX	Leached limonite
LOM	Life of mine
LUP	land use permit
MCAL	Minera Cielo Azul Limitada
MCF	mechanized cut and fill
MIX	mix of copper oxides and sulphides
MOD	Marimaca Oxide Deposit
MRE	mineral resource estimate
MZ	Mineral zone
NAD 83	North American Datum of 1983
NCF	Net cash flow

Abbreviation	Description
NI 43-101	National Instrument 43-101 (Regulation 43-101 in Quebec)
NN	nearest-neighbour
NSR	net smelter return
NT	Near threatened
NTS	national topographic system
OK	ordinary kriging
PEA	preliminary economic assessment
PFS	prefeasibility study
PLS	Pregnant leach solution
PGE	platinum group elements
QA/QC	quality assurance/quality control
QP	qualified person (as defined in National Instrument 43-101)
RC	Reverse circulation
RCA	Environmental Qualification Resolution (Resolución de Calificación Ambiental)
ROM	run of mine
RQD	rock quality designation
SAG	semi-autogenous grinding
SCC	Standards Council of Canada
SD	standard deviation
S _d -BWI	micro hardness or bond ball mill work index on SAG ground material
SEDEX	sedimentary exhalative deposits
SERNAGEOMIN	National Geology and Mining Service (Servicio Nacional de Geología y Minería), Chile
SG	specific gravity
SMU	Selective mining unit
SRM	Standard reference materials
SX/EW	Solvent extraction/electrowinning
TMF	tailings management facility
UG	underground
UTM	Universal Transverse Mercator coordinate system
UV	ultraviolet
VLF-EM	very low frequency electromagnetic
VMS	volcanogenic massive sulphide
WAD	black copper oxide assemblages
WRSF	Wast rock storage facility
ZOIT	Zones of tourists

Table 2-3: Units of Measurement

Abbreviation	Description
%	percent
% solids	percent solids by weight
CAD	Canadian dollar (currency)
C\$	Canadian dollar (as symbol)
\$/t	dollars per metric ton
°	angular degree
°C	degree Celsius
µm	micron (micrometer)
cm	centimeter
cm ³	cubic centimeter
ft	foot (12 inches)
g	gram
g/cm ³	gram per cubic centimeter
g/L	gram per liter
g/t	gram per tonne
h	hour (60 minutes)
ha	hectare
kg	kilogram
kg/t	kilogram per tonne
km	kilometer
km ²	square kilometer
kW	kilowatt
kWh/t	kilowatt-hour per tonne
L	liter
lb	pound
m, m ² , m ³	meter, square meter, cubic meter
M	million
Ma	million years (annum)
masl	meters above mean sea level
mm	millimeter
Moz	million (troy) ounces
Mt	million tonnes
MW	megawatt
oz	troy ounce

Abbreviation	Description
oz/t	ounce (troy) per tonne
oz/ton	ounce (troy) per short ton (2,000 lbs)
ppb	parts per billion
ppm	parts per million
t	metric tonne (1,000 kg)
ton	short ton (2,000 lbs)
t/d	tonnes per day
USD	US dollars (currency)
US\$	US dollar (as symbol)

3 RELIANCE ON OTHER EXPERTS

3.1 Introduction

The QPs have relied upon the following reports by other experts, which provided information regarding mineral rights, surface rights, property agreements, royalties and taxation for sections of this Report.

3.2 Property Agreements, Mineral Tenure, Surface Rights and Royalties

The QPs have not independently reviewed ownership of the project area and any underlying property agreements, mineral tenure, surface rights, or royalties. The QPs have fully relied on information derived from Marimaca and legal experts retained by Marimaca for this information through the following documents:

- Carey & Cía, January 13, 2025. Chilean Solicitor's report on Marimaca Copper Corp.'s Chilean subsidiaries' tenements, mining and exploration concessions, permits, and other relevant corporate considerations.
- Landman Service S.A., date: August 8, 2025, Informe de Concesiones Mineras "Proyecto Marimaca."

This information is used in Sections 4.2 to 4.6, 22.3.9 and 23 of this report.

3.3 Taxation

The QPs have fully relied on information supplied by experts retained by Marimaca related to taxation as applied to the economic model. The economic model was compiled by Ausenco and reviewed and approved by Marimaca's specialists as confirmed in the following communication:

- Harrison, S. (September 30, 2025) "Confirmation for reliance on other experts for the tax modelling - Marimaca Copper Corp" [Personal communication]

This information is used in Sections 1.18 and 22 of this Report.

3.4 Environmental, Permitting, Closure, and Social and Community Impacts

The QPs have fully relied upon information derived from Marimaca through the following documents that make up the 2024 Environmental Impact Statement Submission presented to the relevant authority "Servicio de Evaluación Ambiental":

- Jaime Illanes & Asociados (JIA). (2024). DIA Proyecto Minero de Cobre Óxidos Marimaca [Environmental Impact Statement for the Marimaca Oxide Copper Mining Project].

This information is used in Sections 1.16 and 20 of the Report.

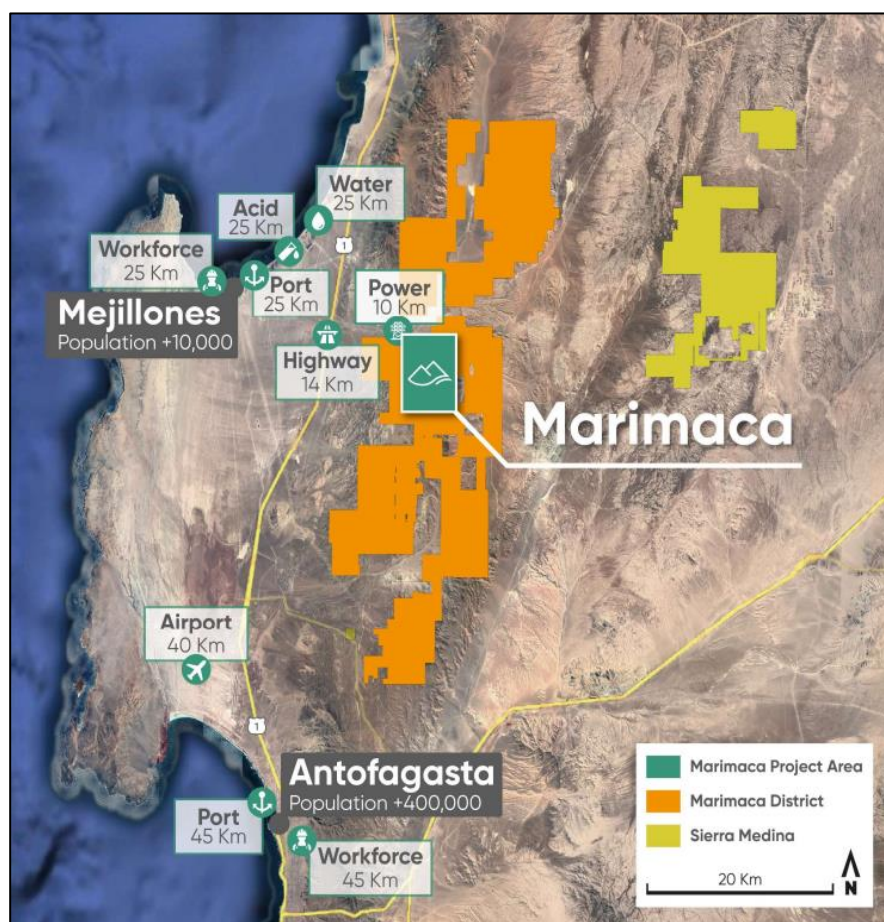
4 PROPERTY DESCRIPTION AND LOCATION

4.1 Introduction

The concessions that make up the Project and the surrounding Marimaca District concessions are located in Chile's Antofagasta Province, Region II, approximately 25 km east of the Port of Mejillones, 45 km north of the city of Antofagasta and 1,250 km north of Santiago, Chile. The project area is located at coordinates 374,820 E and 7,435,132 S (WGS84 UTM).

Figure 4-1 shows the project location, highlighting the proximity to first class utilities and infrastructure. The figure also summarizes Marimaca's mining property position.

Figure 4-1: Project Location Map



Source: Marimaca, 2025.

4.2 Property and Title in Chile

The Political Constitution of the Republic of Chile (Constitución Política de la República) provides that the Chilean State has absolute, exclusive, inalienable and imprescriptible property over all mines and mineral substances located within the national territory, with the exception of surface clays, notwithstanding the ownership of natural or legal persons over the superficial land in the interior of which they are located.

Private individuals may develop mining exploration and exploitation works on the basis of mining concessions granted by judicial resolution. In accordance with Chilean mining legislation, there are two types of mining concessions in Chile: exploration concessions and exploitation concessions. The main characteristics of each are the following:

- **Exploration Concessions:** The titleholder of an exploration concession has the right to carry out all types of mining exploration activities within the area of the concession. Exploration concessions can overlap or be granted over the same area of land; however, the rights granted by an exploration concession can only be exercised by the titleholder with the earliest dated exploration concession over a particular area.
- **Exploitation Concessions:** The titleholder of an exploitation concession is granted the right to explore and exploit the minerals, located within the area of the concession and to take ownership of the minerals that are extracted. Exploitation concessions cannot overlap or be granted over the same area of land.

4.3 Project Ownership

The Carey & Cía solicitors report dated January 13, 2025 details that Marimaca Copper Corp. (Marimaca) owns 100% of the Project through three subsidiaries in Chile that have rights over various mining properties that make up the Project:

- Compañía Minera Cielo Azul Limitada (MCAL),
- Inversiones Cielo Azul Limitada (ICAL), and
- Sociedad Contractual Minera Compañía Minera Newco Marimaca (Newco Marimaca).

4.4 Mineral Tenure and Royalties

The Project is comprised of 20 mining/exploitation concessions covering approximately 961 hectares. These concessions are listed in the Nonal Mining Claims Register, and are in the area of Sierra Naguayán, Commune of Mejillones, Province and Region of Antofagasta.

All other concessions held by entities within the Marimaca group currently form part of the wider Marimaca District or the area of Sierra de Medina.

4.4.1 Properties that Comprise the Marimaca Project

The Project is protected by the mining/exploitation concessions listed in Table 4-1 and as shown in Figure 4-2. These concessions are located in zones that are referred to as La Atómica, Marimaca 1-23, Atahualpa and certain parts of the zone referred to as Llanos/Mercedes. Each of these zones are made up of several mining/exploitation concessions.

Each of the mining/exploitation concessions that make up the Project are in good standing and all required annual claim fees (patented) have been made up to and including 2025, without interruption.

Compañía Minera Cielo Azul (MCAL), a Chilean subsidiary of the Company, originally held certain of the Company's interests in the mining/exploitation concessions via option agreements entered into. Most of the options held under these agreements have now been exercised, as summarized below.

Certain concessions that underpin the Project are held by other Chilean subsidiaries of the Company, namely Sociedad Contractual Minera Compañía Minera NewCo Marimaca (Newco Marimaca); and Inversiones Cielo Azul Limitada (ICAL).

In addition, certain net smelter return (NSR) royalty interests have been created over the concessions that make up the Project. These include the 1.0% NSR granted to Osisko Gold Royalties in September 2022, for which the Company received US\$15.5 million.

The following information sets out all of the additional NSR interests over the Project properties. Table 4-1 also provides further information on NSR interests that apply to individual concessions.

4.4.2 Marimaca 1-23 Claims

The Company acquired 100% of the Marimaca 1-23 claims for US\$12.2 million. A 1.5% NSR is payable on these claims, with the Company/MCAL retaining an option to purchase 1% of this interest within 24 months from commencement of commercial production from the claims.

The Osisko royalty terms require these buyback rights to be exercised prior to the commencement of commercial production.

4.4.3 La Atómica

The Company acquired 100% of the La Atómica property for US\$6.0 million, which was paid from 2017 to 2021. A 1.5% NSR is payable on this, with the Company/MCAL retaining an option to purchase 0.5% of the 1.5% NSR for US\$2.0 million at any time.

The Osisko royalty terms require these buyback rights to be exercised prior to the commencement of commercial production.

4.4.4 Atahualpa

Under the terms of a January 2018 Letter of intent (LOI), the Company acquired 100% of the Atahualpa, Tarso, Sierra and Sorpresa properties for US\$6.0 million. A 2% NSR was payable under the original option agreement. The Company acquired this interest for US\$2.2 million.

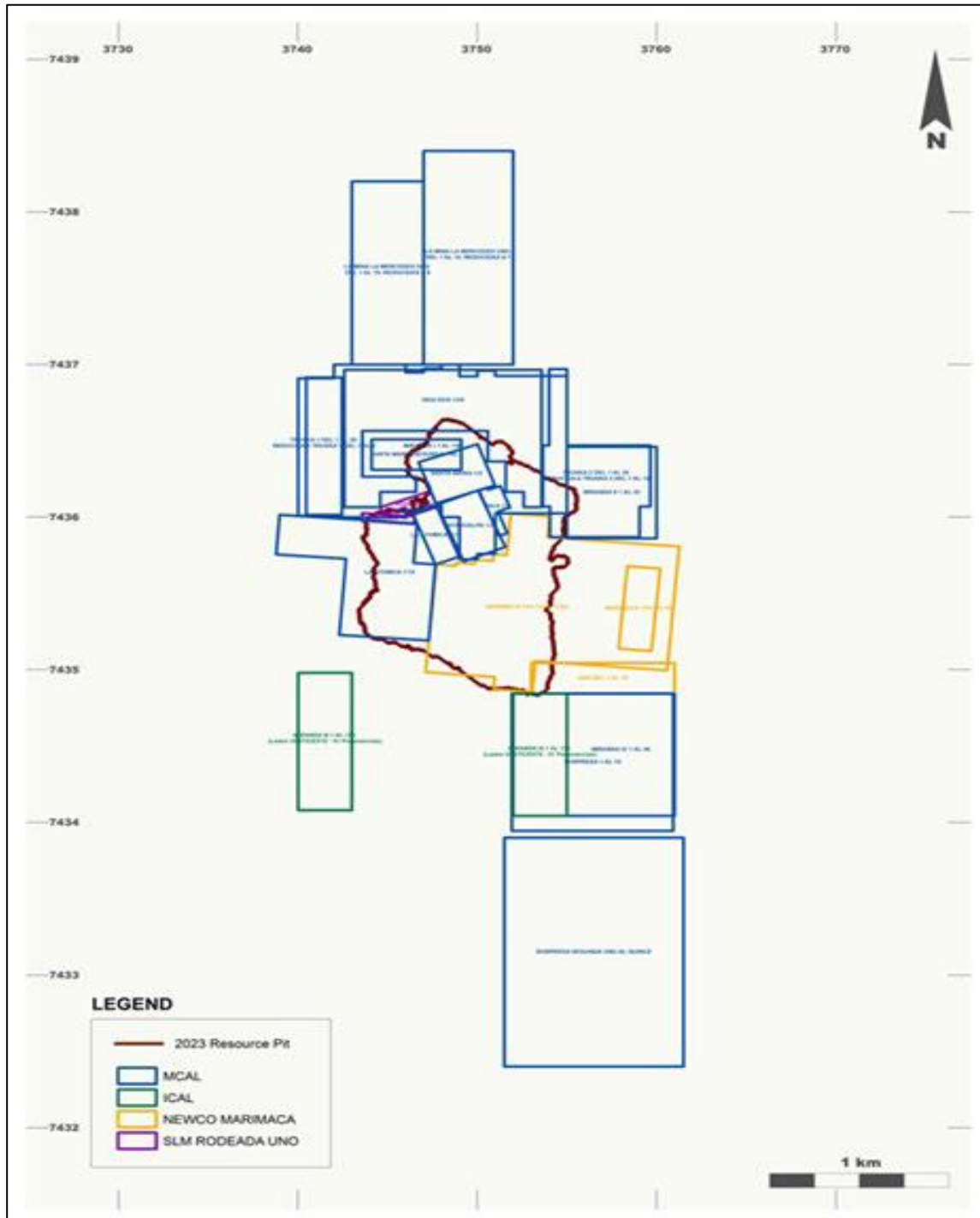
4.4.5 Olimpo y Cedro (Formerly Naguayán)

The Company acquired 100% of the Olimpo y Cedro properties for US\$6.5 million which was paid from 2018 to 2022. A 1.5% NSR is payable on the properties, with MCAL retaining an option to purchase 0.5% of the 1.5% NSR for US\$2.0 million within the first 12 months of commencement of commercial production from the properties.

4.4.6 Llanos/Mercedes

The Company/MCAL acquired the Llanos/Mercedes properties pursuant to the exercise of an option agreement for total consideration of US\$2 million payable between 2019 and 2023. In addition, the Llanos and Mercedes properties are subject to a 1% NSR. The Company/MCAL has an option to purchase this for US\$0.5 million within 24 months from commencement of commercial production from the properties.

Figure 4-2: Marimaca Project Concessions



Source: Marimaca, 2023.

Table 4-1: List of Concessions that form the Marimaca Claims

Marimaca Project Exploitation												
Quantity	Concession	National Role	Concessionaire	Surface	Type of Concession	Current Situation	Page	Number	Year	Mining Registrar	Commune Concession	Royalty Interest
20	Marimaca 1/23 (1/14 – 17/23)	02203-0273-3	Newco Marimaca	103	Exploitation	Granted	38 v	13	2017	Mejillones	Mejillones	1% NSR Osisko; 1.5% NSR original royalty
	Marimaca 1/23 (15-16)	02203-1440-5	Newco Marimaca	10	Exploitation	Granted	36	11	2017	Mejillones	Mejillones	1% NSR Osisko; 1.5% NSR original royalty
	SOR 1/16	02203-1441-3	Newco Marimaca	16	Exploitation	Granted	1172	260	2018	Mejillones	Mejillones	1% NSR Osisko; 1.5% NSR original royalty
	Miranda III 1 to 130 (West/East 51)	02203-1676-9	Inversiones Cielo Azul Ltda.	51	Exploitation	Granted	1	1	2020	Mejillones	Mejillones	1% NSR Osisko
	La Atómica 1/10	02203-0025-0	Cía. Mra. Cielo Azul Ltda.	50	Exploitation	Granted	856	170	2021	Mejillones	Mejillones	1% NSR Osisko; 1.5% NSR original royalty
	Miranda I 1 to 146	02203-1546-0	Cía. Mra. Cielo Azul Ltda.	146	Exploitation	Granted	650	108	2017	Mejillones	Mejillones	1% NSR Osisko
	Miranda II 1 to 30	02203-1545-2	Cía. Mra. Cielo Azul Ltda.	30	Exploitation	Granted	1191	263	2018	Mejillones	Mejillones	1% NSR Osisko
	Miranda IV 1 to 48	02203-1548-7	Cía. Mra. Cielo Azul Ltda.	48	Exploitation	Granted	642	107	2017	Mejillones	Mejillones	1% NSR Osisko
	Rodeada 1/3	02203-0064-1	SLM Rodeada Uno	4	Exploitation	Granted	1080	224	2018	Mejillones	Mejillones	1% NSR Osisko
	Atahualpa 1/2	02203-0001-3	Cía. Mra. Cielo Azul Ltda.	10	Exploitation	Granted	1132	249	2018	Mejillones	Mejillones	1% NSR Osisko
	Inca 1/2	02203-0161-3	Cía. Mra. Cielo Azul Ltda.	3	Exploitation	Granted	1129	246	2018	Mejillones	Mejillones	1% NSR Osisko
	Santa María 1/2	02203-0226-1	Cía. Mra. Cielo Azul Ltda.	10	Exploitation	Granted	1126	243	2018	Mejillones	Mejillones	1% NSR Osisko
	Santa María II One to Two	02203-0452-3	Cía. Mra. Cielo Azul Ltda.	10	Exploitation	Granted	1127	244	2018	Mejillones	Mejillones	1% NSR Osisko
	Sorpresa 1 to 10	02203-0448-5	Cía. Mra. Cielo Azul Ltda.	81	Exploitation	Granted	1130	247	2018	Mejillones	Mejillones	1% NSR Osisko
	Sorpresa II 1 to 15	02203-0486-8	Cía. Mra. Cielo Azul Ltda.	150	Exploitation	Granted	1131	248	2018	Mejillones	Mejillones	1% NSR Osisko
	Truska 1 of 1/19	02203-0938-K	Cía. Mra. Cielo Azul Ltda.	18	Exploitation	Granted	1133	250	2018	Mejillones	Mejillones	1% NSR Osisko
	Truska 2 of 1/12	02203-0939-8	Cía. Mra. Cielo Azul Ltda.	39	Exploitation	Granted	1134	251	2018	Mejillones	Mejillones	1% NSR Osisko
	Vida Two 1/20	02203-0593-7	Cía. Mra. Cielo Azul Ltda.	64	Exploitation	Granted	1128	245	2018	Mejillones	Mejillones	1% NSR Osisko
	La Mina La Mercedes One 1 to 7	02203-0850-2	Proyecta S.A.	70	Exploitation	Granted	386	65	2019	Mejillones	Mejillones	1% NSR Osisko; 1% NSR Llanos/ Mercedes Option
	La Mina La Mercedes Two 1 to 6	02203-0851-0	Proyecta S.A.	48	Exploitation	Granted	394	66	2019	Mejillones	Mejillones	1% NSR Osisko; 1% NSR Llanos/ Mercedes Option
20			Totals	961								

Notes: Section 4.4 summarizes the material terms of each royalty. The term ‘original royalty’ refers to the NSR interest created as part of the original purchase or option arrangements. Certain of these NSRs are subject to buyback rights. The buyback rights are summarized in Section 4.4. The Osisko royalty terms require the buyback rights in respect to Marimaca 1-23 Claims and under the La Atómica option agreement to be exercised prior to commercial production from these properties. Proyecta S.A. is the concession holder under the Llanos/Mercedes option agreement.

4.5 Surface Rights

Marimaca holds two legal mining easements that cover a substantial portion of the project area. Marimaca has been granted a provisional easement over the area designated for the construction of the water pipeline. The final award of this provisional easement, through a court resolution, is still pending but is anticipated in the coming months.

4.6 Water Rights

The Company does not hold any water rights or maritime concessions. However, MCAL entered into a sea water supply option agreement in October 2022 to secure the future water supply required for the Project. Under the agreement, one of Chile's largest energy suppliers will supply seawater following its use in cooling systems at an electricity generation plant in Mejillones. The option has a term of five years, with the ability to extend for two years. The option period will allow the Company to advance final project permitting and technical studies, including water pipeline studies that are already underway. The exercise of the option will trigger the execution of a water supply agreement priced on a take-or-pay basis for the Project's life of mine. The principal terms of the water supply agreement have been negotiated and agreed in the option documentation.

4.7 Environmental Considerations

MCAL first obtained an Environmental Qualification Resolution (RCA) in July 2018 to be able to produce 10,000 tonnes of cathodes annually from the Marimaca 1-23 claims. While this RCA still exists, it does not provide for the Project as envisaged in this report.

A further RCA, obtained in November 2020, authorizes exploration and prospecting campaigns across the Project and parts of the wider Marimaca District, and is valid for an indefinite period.

Currently, the Company is in the DIA approval process to obtain the environmental permit approval. The DIA was submitted in December 2024 and the Company has provided the required documents from the second round of questions by the authorities, but according to the Company, most of the authorities have already declared compliance.

4.8 Permitting Considerations

Permits required by any project are classified in two categories: Environmental Permits and Sectoral Permits. The Environmental Permits are granted for any project approved within the SEIA and comprise the Environmental Qualification Resolution (Resolución de Calificación Ambiental, RCA) and the Sectoral Environmental Permits (Permiso Ambiental Sectorial, PAS). All applicable PAS must be presented along with the Environmental Impact Study (Estudio de Impacto Ambiental, EIA) or Environmental Impact Statement (Declaración de Impacto Ambiental, DIA) and cover relevant environmental aspects.

On the other hand, Sectoral Permits (Permiso Sectorial, PS) cover non-environmental topics and need to be applied for separately with the corresponding government authority. Once the RCA is issued, the proponent can seek individual sectoral permits for construction and operation, some of which are an extension of a PAS. The most significant of these

are the water use and water diversion schemes from DGA, sanitary permits, archaeological permits, mining permits (waste rock storage facilities, authorization of open-pit exploitation method; mineral treatment or beneficiation plants project approval) and the closure plan approval and mining license from SERNAGEOMIN. Each of these can be initiated during the EIA or DIA review period, however they cannot be granted until the EIA or DIA review concludes with a favourable decision.

Further detail of these permits is presented on Sections 20.2.1, 20.2.2 and 20.2.3.

4.9 Social License Considerations

Human settlements and communities are sparse in the project area and it was determined by the SEA that there were no Indigenous groups present in the IA of the project. A preliminary approach to the Indigenous and local communities was conducted as part of the baseline campaign for the project, which determined that further development plans or communal obligations were not required for the project. Indigenous associations related to the Chango Indigenous group have been identified in the proximity of the project but stated by the authorities to be outside the Influence Area of the project. Currently, four different associations have been identified within the area of influence of the project, particularly in the town of Mejillones. As part of the Environmental Impact Statement process, the project has developed community relations within the framework of early citizen participation (ECP).

Further detail regarding social considerations is presented in Section 20.3.

4.10 Project Risks and Uncertainties

There are no other significant factors and risks that may affect access, title, the right or ability to perform work on the Project.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The project is connected to the well-maintained Chilean public road system (Figure 5-1) and is easily accessed from Mejillones (25 km west) and Antofagasta (45 km south) through paved highway Route 1. The Antofagasta Airport is located 40 km south of the project. The project can be accessed following the paved roads derived from Route 1. A network of unpaved roads connects the project area to Mantos Blancos and to the National Highway 5. Figure 5-1 shows the main access roads connecting Marimaca Project with the main neighbouring cities and mining operations.

Figure 5-1: Accessibility to Marimaca Project



Source: Marimaca, 2023.

5.2 Climate

The project is located approximately 39 km north of the Tropic of Capricorn. The minimum temperatures vary between 10 and 15°C, and the maximum temperatures are between 20 and 29°C, while the average relative humidity oscillates between 67 and 70%. The climate is extremely dry, and the average annual rainfall is 2-3 mm as an annual average of 24 hours.

In the region, rainfall is very rare and decade's events of rain, which can reach up to 12 to 30 mm over 24 hours, can occur. In the project area, however, they have no major impact because the project does not have high slope drainage from the coastal cliff, a feature that develops both to the south and north of the Mejillones Peninsula (the Mejillones Península is visible in Figure 5-1).

Towards the east, the Central Depression zone extends, and it is characterized by vast areas of low slope, the so called "pampas," where the weather conditions are extremely arid and with notable variations in temperature between day and night. These, in general, vary between 28°C (day) and 2°C (night) or less depending on altitude.

5.3 Local Resources and Infrastructure

Antofagasta and Mejillones are modern cities with all regular services, serving a combined population of approximately 570,000. Numerous mining-related businesses are located in the cities. Power lines and water supply intakes are located near the property. Both Antofagasta and Mejillones are relevant shipping ports, especially Mejillones, which is a mega-port for larger cargo. In addition, there are five thermoelectric plants in Mejillones and the port represents the most important sulphuric acid terminal in the north of the country. The installed capacity of electric production currently available at Mejillones is close to 900 MW, while the sulphuric acid storage facilities import more than 6 Mt/a.

While Mejillones is an industrial port and most of the labour force is specialized in this type of work, Antofagasta has the largest labour force dedicated to mining in northern Chile. Antofagasta's workforce serves both large and medium scale mining. The level of specialized mining knowledge is high. The city of Antofagasta is a "mining cluster," where research, education, technical training centers and the largest suppliers of equipment and services for mining in the country operate.

5.4 Physiography

The Project is in the Cordillera de la Costa (Coastal Cordillera), a relevant physiographic unit in the Northern Territory of Chile. Although this cordillera characteristically displays a western border consisting of a 0 to 700 m high cliff, in the Mejillones area the regularity is interrupted by the Mejillones Peninsula (Figure 5-2), and the Cordillera looks dissected by a series of valleys, most of them controlled by regional faults. Relief altitude varies between 0 and 1,000 m. Towards the east, the Cordillera grades to the Central Depression, and the landscape consists of flat lands or "pampas."

Vegetation is minimal outside of inhabited valleys where irrigation and the "Camanchaca," sea mist that comes from the nearby ocean, support very scarce to null vegetation that can withstand the desert environment.

Figure 5-2: Project Location



Notes: Project location, showing relevant physiographic elements (vertical 3x). View toward NE. (CCF coastal cliff; MP: Mejillones Peninsula). Source: Marimaca, 2022.

5.5 Seismicity

The project site is in Seismic Zone 3 (maximum effective acceleration $A_0=0.20g$) according to the official Chilean standard NCh2369.Of2003.

6 HISTORY

6.1 Regional History

The geological knowledge and exploration in the region have been a long and multifaceted process that has helped unravel the complex evolution of an area where tectonic, sedimentary, and volcanic processes converge. For decades, field expeditions and systematic campaigns—driven mainly by institutions such as SERNAGEOMIN—have led to the creation of detailed geological maps, including the Geological Map of Mejillones and the Mejillones Peninsula, which represent the most recent studies on the area's structure and evolution. However, despite its solid foundational knowledge, the vicinity of Marimaca in modern times has generally not been explored, primarily because its geological environment has not exhibited notable alterations or mineralization indicative of an attractive deposit. As a result, the area was relatively overlooked, except for minor operations, until the arrival of Marimaca Copper Corp.

6.2 Property Exploration History

No modern exploration took place before Coro Mining Corp. (Coro), a predecessor of Marimaca Copper Corp., began to assemble the project's land holdings. The Marimaca deposit was identified in 2016 following an RC drill program.

Coro later detailed geological surface mapping and rock chip sampling, as well as additional RC drilling, core drilling to support geotechnical and metallurgical studies, metallurgical test work, and mining studies. An initial resource estimate was completed in January 2017, and the first Mineral Reserves estimate was made in 2018.

Coro completed a feasibility study in June of 2018, that examined open-pit mining using conventional equipment to supply a refurbished processing plant, the Ivan plant, capable of producing 10,000 tonnes of copper cathode annually.

The 2018 Feasibility Study is currently not regarded as the preferred option for project development. Marimaca Copper does not consider the study to be relevant, and the mineral reserve estimates are also not up to date. However, some baseline information produced to support the 2018 Feasibility Study was used in the 2020 PEA. A DIA and the Mining Safety Regulations and RCA received approval on July 5, 2018. Mineral resources were revised in late 2019 (as reported in the 2020 MRE) and again in the 2022 Mineral Resource Estimate (2022 MRE) and the 2023 Mineral Resource Estimate (2023 MRE). These are considered historical resource estimates for the Project.

Coro changed its name to Marimaca Copper Corp. in May 2020.

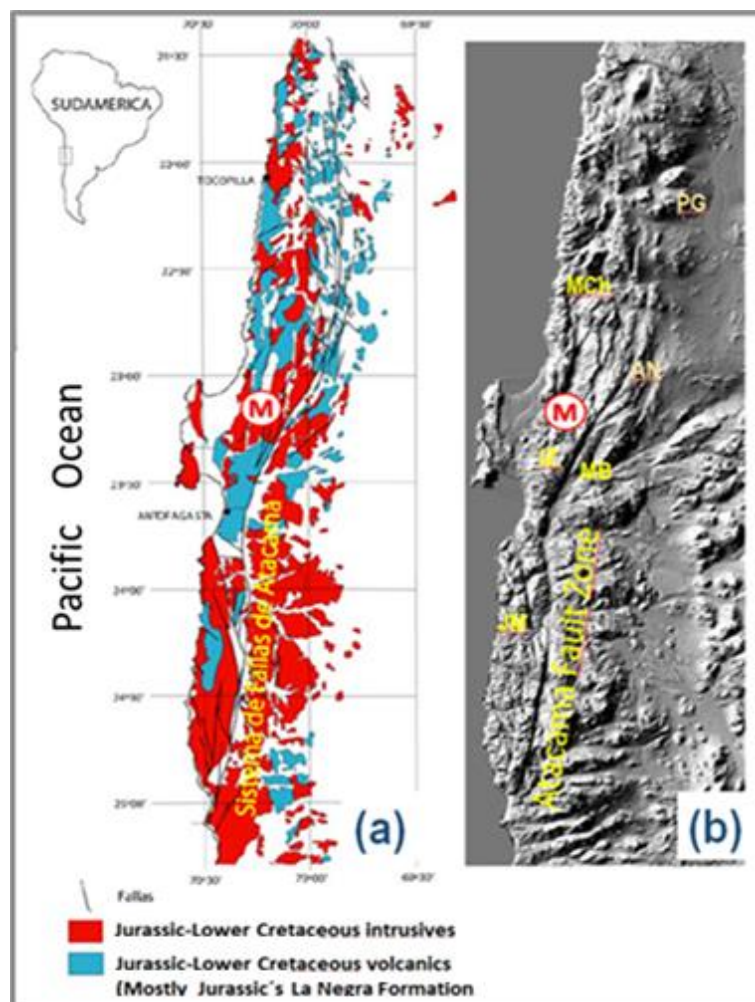
The historical 2022 MRE included 110,790 m drilled, distributed across 429 drill holes. In most of the south-central area of the MOD, the drill grid is spaced at 50 x 50 m, with holes oriented at 310° and 220°. In the northern part, hole distance is set at 100 m centers, primarily oriented to a 310° azimuth. This MRE comprised of drilling from the 2021 program and drilling completed from February 2022 to August 2022, representing an additional 28,374 m to the previous 110,790 m accounted for in the MRE filed in 2022 titled "Updated Mineral Resource Estimation for the Marimaca Copper Project, Antofagasta Region, Chile" (MRE, 2022). The 2023 MRE captured 139,164 m distributed across 554 drill holes. The 2025 MRE is based on the same 139,164 m distributed across 554 drill holes.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The region consists mainly of Jurassic volcanic and intrusive rocks and minor exposures of older Triassic acid volcanic and Paleozoic rocks. The main structural system is the Atacama Fault System (AFZS), which has been active since the Jurassic. These NS to NE-oriented faults formed the fabric of the Coastal Cordillera and especially control its eastern border. Figure 7-1 summarizes the main geological units for the area.

Figure 7-1: Regional Coastal Cordillera Geology

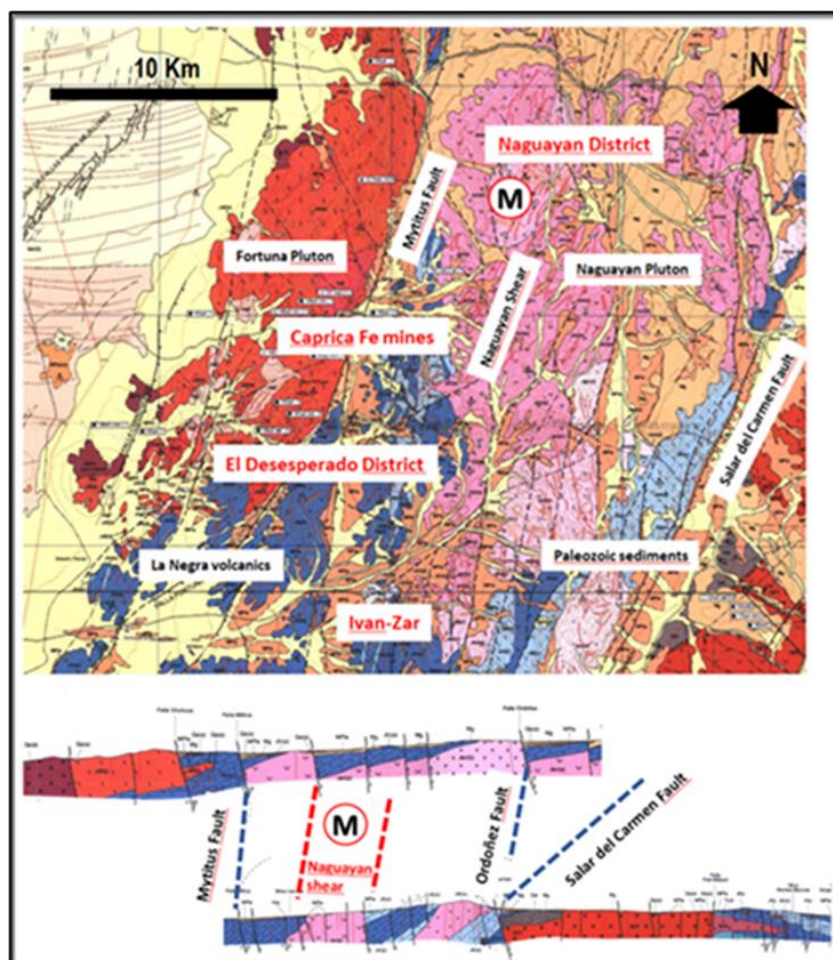


Source: Marimaca, 2023.

The oldest exposed rocks are late Paleozoic and Triassic in age, consisting of metasediments and intermediate intrusions. Intrusive stocks from Early Jurassic to lower Cretaceous characterize the area. These were dated at 155-154 Ma by Cortes et al (2007), but recently adjusted to the interval 174-169 Ma by Mpodozis, Cornejo, and Mora (2015) and Mpodozis and Cornejo (2019). The younger intrusive of this unit hosts the mineralization at Marimaca. The La Negra Formation volcanic, a LIPS like volcanic bimodal event dated in the interval 180-170 Ma (Mpodozis et al., 2015; Lopez et al, 2017; Mpodozis and Cornejo, 2019), extends to the south, north and east of the area (Figure 7-2).

A notable system of dyke assembly intrudes both the intrusive stocks and the volcanic. They are bimodal in composition, from gabbro to rhyodacite composition and extend for tens of kilometers (Cortes et al, 2007). As per previous (Scheuber and Gonzales, 1999; Cortes et al. 2007) and recent dating data (Mpodozis et al, 2015; Mpodozis and Cornejo, 2019), the age range for this dyke swarm, mostly based in K-Ar methods, is in the 148-145 Ma interval, which is coincident with the main event of “Manto-Type” copper mineralization (Mpodozis and Cornejo, 2019).

Figure 7-2: Regional Geology Plan



Source: Marimaca, 2023.

7.2 Project Geology

The dominant rock type is the “Naguayán Plutonic Complex,” an equigranular to porphyritic monzodiorite intruded by a de swarm system consisting of various bimodal dyke episodes ranging in composition from gabbro to rhyodacite. The system is oriented NS to NE, NW, and WNW and dips 45-50° to 60-75° towards east and south-east.

The main fabric consists of a sheeted-like fracture zone, including faults and dykes, oriented NS to NNE, that controls the mineralization at Marimaca and can be observed for kilometers beyond the project area limits.

Background rock alteration consists of Na-Ca metasomatism. The mineralization is associated with the alteration of albite, actinolite, chlorite, and iron oxides. The NS to NE parallel fracture and related veins control chalcopyrite-magnetite-rich primary mineralization.

Intense, extensive and pervasive events of supergene oxidation have produced the actual copper oxide blanket that forms the mineral deposit at Marimaca. The surface data indicate that copper oxides are controlled by a highly fractured host rock, resulting in a high-permeability background generated by the superposition of multiple fracturing events and dyke intrusions. The oxidation resulted from the alteration of a previous secondary sulphide-enriched blanket that produces zonation from Brochantite-Atacamite at cores immediately surrounding the secondary sulphides' remnant patches and successive external halos of predominant chrysocolla and further external wad.

Compared with other belt deposits, Marimaca is fully hosted by intrusive rock units that become extremely permeable thanks to intense fracturing. Thus, the mineralization style differs significantly from the neighbouring typical volcanic-hosted Manto-type copper deposits. At the same time, although the nature of primary mineralization is IOCG, developing a consistent secondary blanket makes a difference compared to the typical IOCG from the Coastal Cordillera (Espinoza et al., 1996; Kojima et al., 2009).

Table 7-1: Marimaca Project: Summary Characteristics of the Main Rock Type Units

EVENT	ROCK TYPE (CODE)	PHOTO	Mineralogy/Texture/Classification	Contact-Age Relationships/ Surface Distribution	Age Relationships/Regional Equivalent Unit
STAGE IV, NW Dykes	NW MICRODIORITE (MDINW)		Fine grained microdiorite, bearing plagioclase and amphibole. Some "gabroic" variation has been described showing clinopyroxene and olivine. Commonly altered to chlorite and epidote.	Late dyke event intruding all previous units. Distributed along main WNW to EW oriented structural system corridors. Controls copper oxide distribution and main structural domains.	Dyke units of different composition described by Vergara (1985) and by Cortes, et. al. (2015). Described as "Dyke Swarms" and linked to mineralization by Mpodozis, et. al. (2015)
STAGE III, Late NS Dykes	DACITE DYKE (PDI)		Porphyritic dacite to dacandesite, containing plagioclase, hornblende as "needles" and relicts pyroxene phenocrysts. Ground mass contains K-Spar and chlorite.	NS trending eastward dipping dykes, intruding all previous units. Intruded by NW late dykes systems. Has been observed towards the central part of Marimaca	Same as previous
	NS MICRODIORITE (MDINS)		Intergranular, fine to medium grained diorite to quartz diorite, composed of plagioclase and pyroxene strongly altered to chlorite, with abundant disseminated magnetite	NS trending dykes intruding DIO, PDI, MDI and OCO units. Intruded by NW trending dykes. Structural orientation is NS dipping 45-50 towards east.	Same as previous
STAGE II, NE Dykes	NE MICRODIORITE (MDINE)		Microgranular to weakly porphyritic diorite, scarce plagioclase and pyroxene phenocrysts and a fine amphibole, chlorite, magnetite matrix.	Intrudes OCO and PDI and is cross cut by late NS to NW dykes. Roughly parallel at the north side of the PDI NE dyke system. Distributed at the extreme NW of the area	Same as previous
	OCOITE (OCO)		Coarse porphyritic diorite. "Ocoite" is the common name given in Chile to this type of rock, characterized by + 5mm fresh plagioclase phenocrysts in a pyroxene and magnetite ground mass.	Post PDI but sometimes shows gradational contacts with PDI. Ocoite dykes are NE to NNE oriented, sub-parallel to MDINE and PDI dyke systems.	Same as previous
	DIORITE PORPHYRY (PDI)		Porphyritic fine grained ground mass bearing diorite. Mineralogy includes chiefly plagioclase and pyroxene phenocrysts; same with the groundmass, that also contains olivine relicts.	Intrudes NS dyke system and is clearly intruded by the late NS and NW dykes. This unit of dykes has been observed towards the NW, where a main single dyke extends for more than 1.5 km.	Same as previous
STAGE I, Early NS-NNE Dyke and Intrusions	DACITIC PORPHYRY (PDA)		Fine grained porphyritic dacite, containing plagioclase and scarce pyroxene phenocrysts. Ground mass contains K-Spar. Common amigdules filled by quartz, chlorite and sericite.	PDA dykes looks cross cut by NE and NW units of Stages II through IV. Occurs as NS oriented dipping eastward trends at the central part of the area. It can be traced for kms along the strike.	Same as previous
	DIORITE DYKE (DDI)		Porphyritic to glomeroporphyritic textured diorite to quartz monzodiorite rock. Characterized by the occurrence of pyroxene, hornblende and biotite, displaying alteration to a mixture of biotite and chlorite. Intergranular K-Spar, quartz, magnetite and sulphides is common in the ground mass.	Intrudes DIO and is clearly intruded by the main dyke systems. Discrete occurrences of NS trending dykes has been observed towards the central part of Marimaca and are related to the sulphide mineralization.	Same as previous
	DIORITE STOCK (DIO)		Inequigranular, medium to coarse grained quartz diorite, bearing pyroxenes partially replaced by amphibole. Pervasive to moderate secondary biotite alteration and fine chalcopyrite and pyrite dissemination.	Observed in isolated outcrops and mostly in drill holes, intruding MZD and intruded by the main NS to NW dyke system. Occurs as small stocks partially aligned NS in the central south part of Marimaca.	This is the early unit of NS dykes stage and is related to the hypogene mineralization
Naguan Plutonic Complex	MONZODIORITE PORPHYRY (PMD)		Porphyritic monzodiorite to quartz monzodiorite, containing lesser pyroxene, hornblende and a quartz-orthoclase rich matrix. Commonly pyroxenes are altered to amphibole and chlorite. Ground mass is characterized by interstitial graphitic textured quartz and K-Spar with chlorite and titanite.	Shows gradational contacts with MZD. It is intruded by all the younger set of dykes and similar intrusions. The PMD unit occurs mostly towards central and south part like NS elongated small stocks.	Recognized by Vergara (1985) as part of his UCENA unit and by Cortes et. al. (2015) as part of the "Naguan Plutonic Complex"
	MONZODIORITE (MZD)		Equigranular, medium to coarse grained pyroxene, hornblende and biotite bearing Quartz Monzodiorite - monzonite. Interstitial K-Sp and quartz.	Is the oldest rock unit. This unit is cross cut by all the dyke swarm system. Most common country rock in the project area.	U-Pb dating in the 169-173 Ma range. Defined as "Unidad Oriental Cerro Naguan (UCENA)" by Vergara (1985) and as "Naguan Plutonic Complex" by Cortes et. al. (2015). Also recognized as "Naguan Stock" by Mpodozis et. al (2015) and Mpodozis and Cornejo (2019)

Source: Marimaca, 2023.

7.3 Deposit Descriptions

The Marimaca deposit is located within the Coastal Copper Belt, a belt of Mesozoic-age copper deposits.

The host rock in Marimaca is the “Naguayán Stock,” an equigranular monzodiorite that grades to diorite in part, cut by monzodiorite porphyries and various systems of dacitic and dioritic dykes (NE, NS, NW, and WNW orientation).

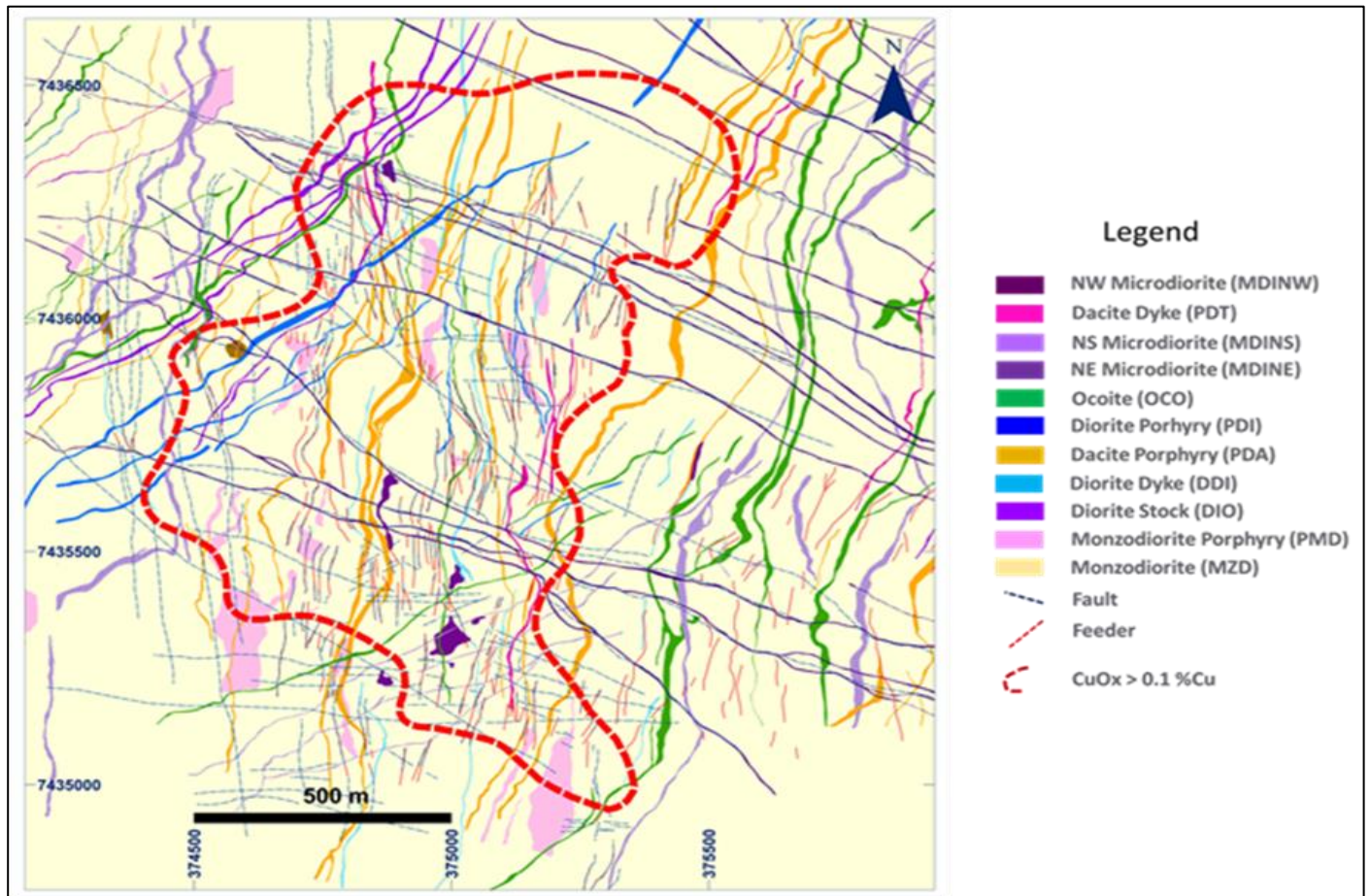
The most important structural feature of Marimaca is a system of sub-parallel, planar, pervasive, and persistent fractures occurring along an NS elongated structural belt. These fractures give the rock an appearance of “pseudo-stratification” composed of centimetric to decametric sub-parallel “sheeted-like” fractures. A WNW to NW system of late faults is important and creates additional permeability favourable for forming an oxide blanket.

The Marimaca deposits consist of a copper oxide blanket, exposed at the surface extending for approximately 1,600 m along the NNW direction, 400 m to 500 m wide and 200 m to 300 m thick (Figure 7-5). Two-thirds of the middle-upper part of the oxidized column corresponds to copper oxides, whereas the lower one-third corresponds to mixed and lesser chalcocite mineralization. Although general geometry is a blanket, the interpretation of the mineral zone was guided by structural control, especially the NS dipping east and the late NW to EW structural system.

The mineralogy of the oxide zone consists of Brochantite, Atacamite, Chrysocolla and was occurring as disseminations and impregnation of fractures in the parallel band system with an NS orientation, but also in diagonal fault systems with NE and NW orientations. The subjacent mixed zone consists of copper oxides and remnants of chalcocite and covellite, minor pyrite and chalcopyrite. The secondary sulphides carry mostly sooty chalcocite, replacing pyrite and covellite after chalcopyrite.

The Marimaca alteration consists of metasomatism with little evidence of destructive hydrothermal alteration. The calc-sodic (Na-Ca) metasomatism is background alteration, while albitization and chlorite are alteration minerals related to mineralization. Some K-spar and biotite are also observed. In the oxide zone, the limonite, mostly goethite, is associated with copper mineralization. Figure 7-3 illustrates the detailed geology conducted by Marimaca geologists during the exploration of the deposit.

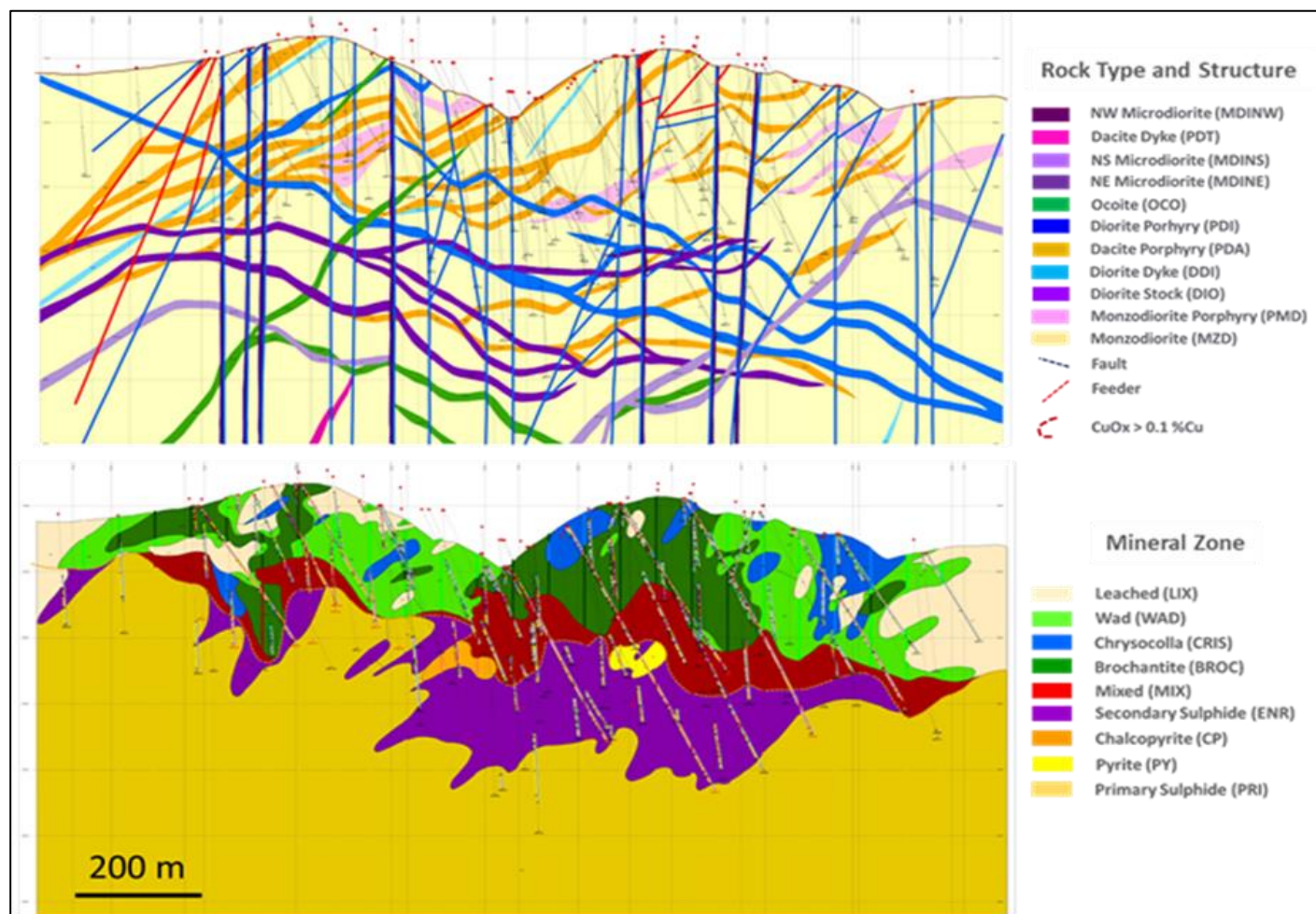
Figure 7-3: Marimaca Project Detailed Sub-surface Interpreted Geology



Source: Marimaca, 2023.

Figure 7-4 presents section NE100 (a,b), featuring the lithostructure and mineralization units that illustrate the deposit's complexity and variability.

Figure 7-4: Marimaca Project, Illustrative Litho-Structure (a) and Mineralization Section NE100 (b) Sections are 220° South-east



Source: Marimaca, 2023.

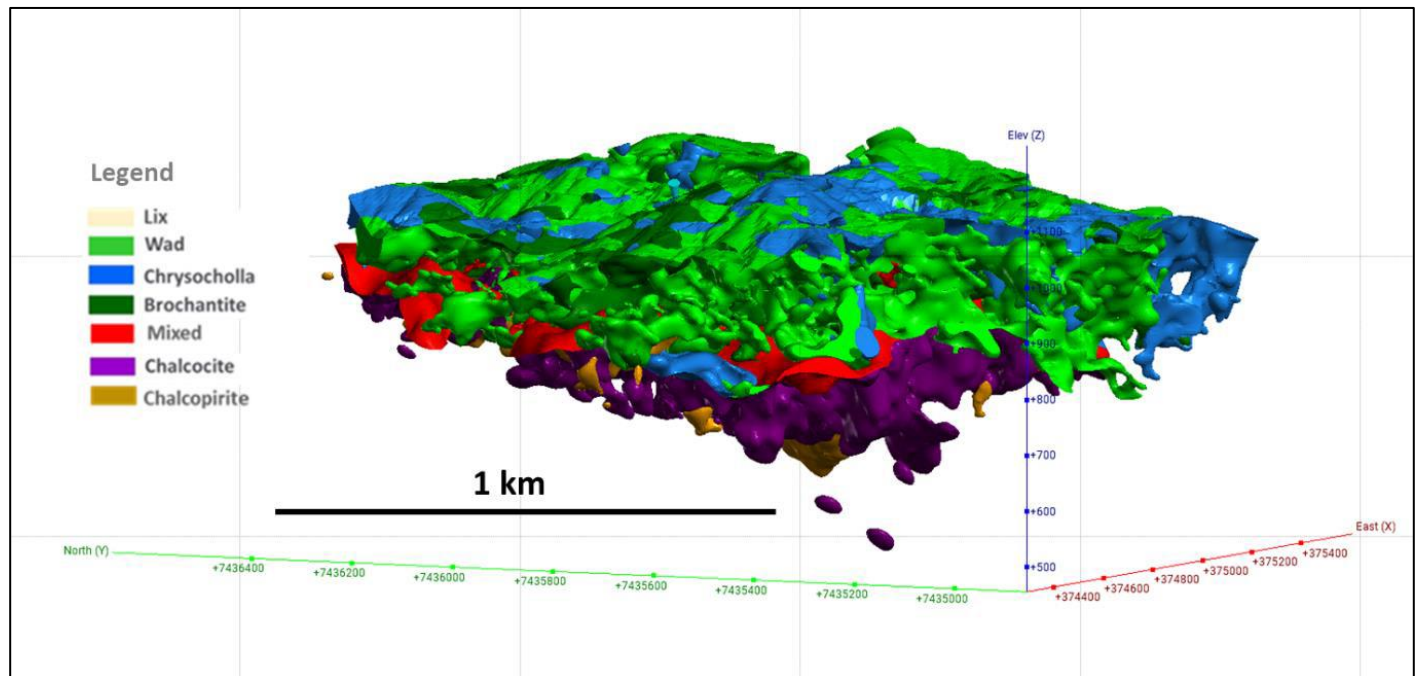
7.4 Comments on Geological Setting and Mineralization

Marimaca displays many characteristics of the IOCG mineralized system: primary mineralization consisting of low pyrite and chalcophyrite-magnetite, calco-sodic alteration; however, no Au occurrences are recorded or observed. Marimaca differs from typical coastal IOCG districts in terms of intense supergene alteration and mineralization.

The formation of the supergene blanket, such as that discovered and evaluated at Marimaca, has not been described in any other IOCG district. There is strong evidence that the actual oxide body was formed due to the oxidation of a previous sulphide blanket. Remnants of this blanket were encountered and consisted of chalcocite and covellite replacement of pyrite and chalcophyrite. The oxidation process can be evidenced in the Mixed zone, where green coppers and black copper oxides partially replace secondary sulphides. The blanket's mineralogic zoning and copper

grade distribution suggest repeated lateral migration and accumulation events. This process requires abundant pyrite to produce enough sulphuric acid, but as established, the IOCG system is low in pyrite. It is possible that a very rich and pervasive chalcopirite, stronger than pyrite primary mineralization and a long-lived process of oxidation, can explain the formation of the Marimaca's uncommon secondary blanket. See Figure 7-5.

Figure 7-5: 3D View of the Marimaca Oxide Blanket Looking Towards NE (Mineral Domains Modelled in Leapfrog)



Source: Marimaca, 2022.

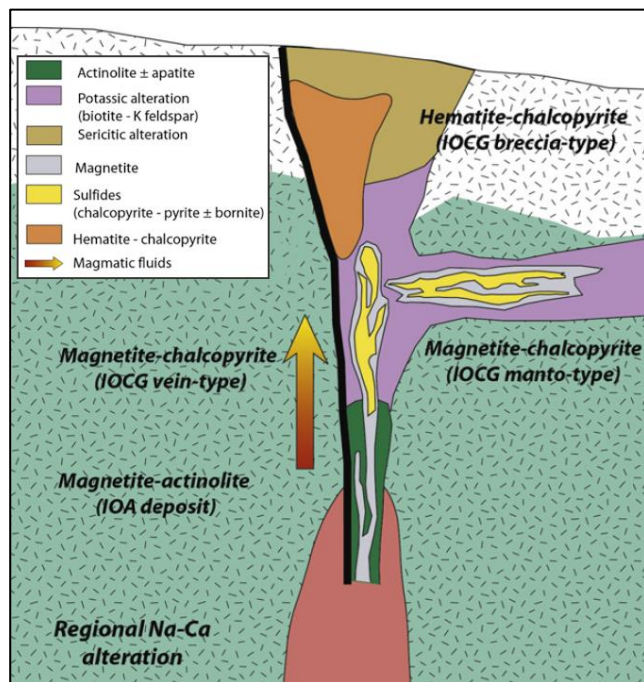
8 DEPOSIT TYPES

8.1 Deposit Model

The metallogenic setting the area consists of “manto-type” copper deposits hosted by La Negra Formation volcanics, as well as some IOCG-affiliated vein districts, hosted by Jurassic intrusive (Espinoza et al., 1997; Maksaev and Zentilli, 2002, Sillitoe and Perello, 2005). Towards the eastern border there are some porphyry-type copper systems of Late Jurassic to lower Cretaceous age. The recent discovery of the Cachorro copper deposit (Arriagada, 2021), described as like Mantos Blancos style mineralization is re-opening the ground for exploration of larger manto-type copper deposits in the region.

The “manto-type” copper deposits typically consist of sulphides and copper oxides hosted in volcanic rocks, especially in the brecciated and vesicular upper parts of lava flows, but also in crosscutting veins and breccia bodies. Rock alteration, usually albitization and K-feldspar replacement, is weak and hard to distinguish from diagenetic alteration (Sato, 1984). This is a geometrical definition and could relate to different origins; Figure 8-1 shows a generalized model of IOCG deposits from Barra et al. (2017). Note that in the model, the deposits could have vertical and/or horizontal orientation. The geometry of these deposits is very variable and sometimes quite complex.

Figure 8-1: Unraveling the Origin of the Andean IOCG Clan: A Re-Os Isotope Approach



Source: F. Barra et al., 2017.

IOCG veins districts are hosted by Jurassic intrusive (Espinoza et al, 1996) (Figure 7-1 and Figure 7-2). Marimaca, located at the old Naguayán District is an anomaly in the context of this type of IOCG mineralization occurrences. Marimaca is reasonably close enough to be assigned to this type of geology and mineralization, given their special structural and supergene mineralization features. Despite their economic importance, little is known about the IOCG mineralization.

Marimaca exhibits numerous characteristics of the IOCG mineralized system, including primary mineralization featuring chalcopyrite-magnetite, and calc-sodic alteration. Recent findings of potentially low Au and Ag occurrences in the MAD-22 sulphide-rich intercept confirm the deposit's affiliation. Marimaca is distinguished from typical coastal IOCG districts by its intense supergene alteration and mineralization.

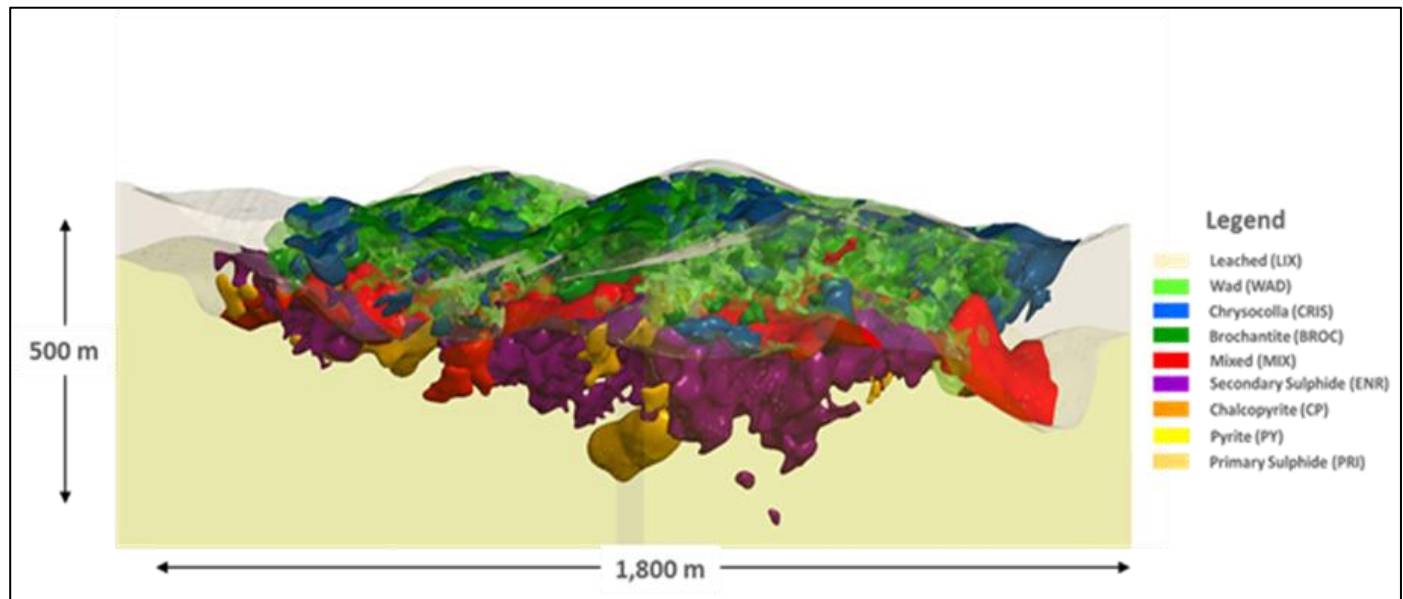
The formation of the supergene blanket, such as that discovered and evaluated at Marimaca, has not been documented in any other IOCG district. There is compelling evidence that the oxide body was created through the successive oxidation of a previous secondary sulphide mineralization. The lower sections of the oxide blanket, comprising Mixed and Secondary Sulphide mineral zones, highlight this characteristic of Marimaca compared to other northern Coastal Copper Belt deposits (Marimaca, 2023).

Described remnants of prior enrichment or secondary sulphide were noted as chalcocite and covellite replacement textures of pyrite and chalcopyrite. The oxidation process is evident in the Mixed zone, where green and black copper oxides partially replace the secondary sulphides. The blanket's mineralogic zoning and copper grade distribution suggest repeated lateral migration and accumulation events. This process demands a significant amount of pyrite to produce sufficient sulphuric acid; however, as established, the standard IOCG system tends to be low in pyrite. Nonetheless, as observed in the sulphide-rich intercept of MAD-22, both Cu and pyrite-rich sulphide phases characterize the primary mineralization at Marimaca, demonstrating yet another unique variation within the common theme of the IOCG mineral deposit spectrum.

Thus, as previously hypothesized, it is possible that a very rich and pervasive chalcopyrite, stronger than pyrite primary mineralization, coupled with a prolonged oxidation process, can account for the formation of Marimaca's exceptional secondary blanket.

Figure 8-2 shows a 3D view of the Marimaca oxide blanket, looking towards the NE Mineral domains modelled in Leapfrog (Marimaca, 2023).

Figure 8-2: 3D View of the Marimaca Oxide Blanket and Subdomains, Looking Northeast



Source: Marimaca, 2023.

8.2 Comments on Deposit Type

Marimaca may suggest a new type of IOCG deposit, which is still under characterization. This potentially new type of deposit could have significant exploration potential in the future. Additional data and studies are required to develop reliable models and to better understand the system's evolution.

9 EXPLORATION

9.1 Introduction

Exploration work, drilling, surface, underground sampling, and detailed geological mapping have substantially increased in the project area since 2018. At the same time, considering the area's expansion toward the west and north, the UAV image and topographic survey have been updated and enhanced. Structural and petrographic studies have also been completed, improving the geological understanding of mineralization controls.

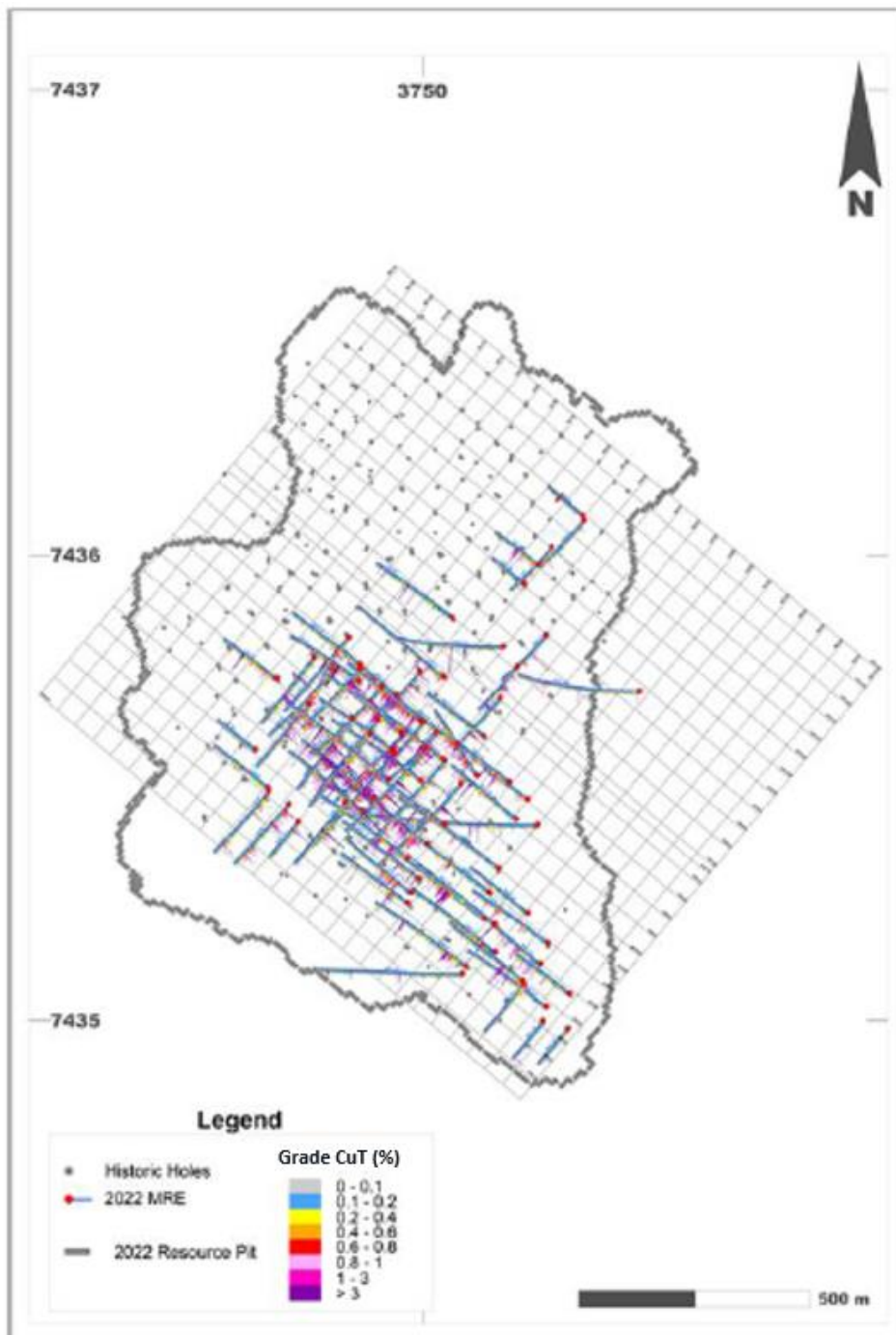
The information from the drilling campaigns was used to define the current base of updated and extended measured, indicated, and Inferred copper resources.

A new zone was delineated in the 2022 infill program, following the 2021 discovery of mixed and secondary sulphides beneath the MOD. Figure 9-1 illustrates the location of the new holes added for the 2022 MRE. Horizontal projection traces depict cut grades as histograms.

9.2 Grids and Surveys

Figure 9-1 shows the location of holes drilled in the campaign completed in 2022 for the 2022 MRE. A project local grid consisting of 50 m spaced sections in NE and NW directions is also demonstrated.

Figure 9-1: Location of Holes Drilled in Campaign Completed in 2022 MRE



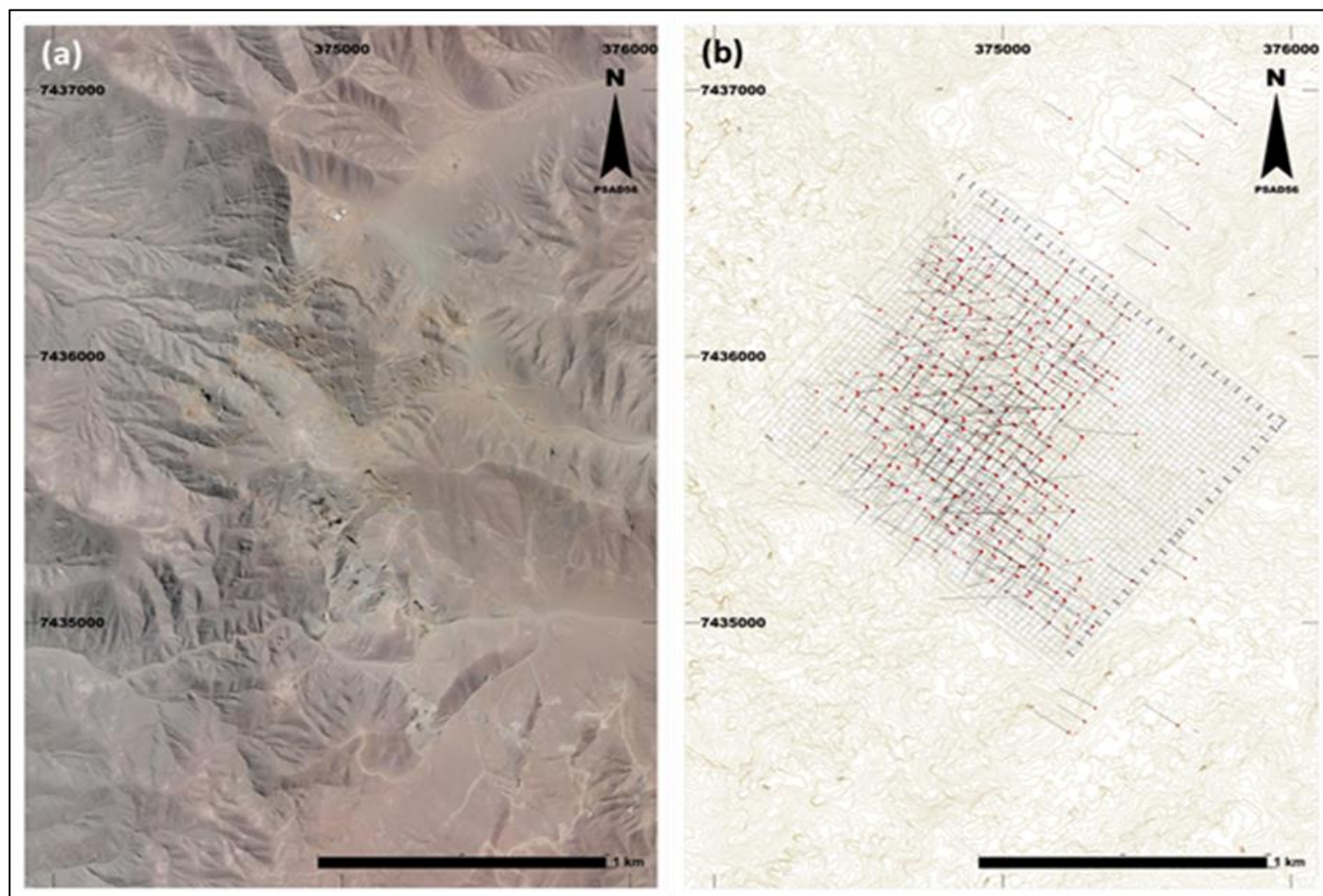
Notes: Horizontal projection traces show CuT grades as histograms. Project local grid consisting of 50 m spaced sections in NE and NW directions is also demonstrated. Source: Marimaca MRE 2022.

In addition to drilling since 2020, the following exploration activities have been continuously carried out:

- The drilling sample database has been completed with new assays (mostly CuCN) for all samples >0.1% Cu. Since the 2021 campaign, sequential copper has been the standard assay methodology for all samples.
- Re-logging previous drill holes to achieve a better definition of mixed and secondary sulphide mineralization, this work benefited from the new sequential copper assaying.
- Updating and checking of the topographic field bases.
- Completion of a new drone-driven imaging and topographic ortho-restitution.
- Re-interpretation of rock geochemistry.
- High-resolution magnetics and deep IP/R geophysics surveys provided additional information for the deep sulphide exploration.
- Detailed surface mapping of dyke system, emphasizing rock types and contact relationships.

The 2022 photogrammetric survey was updated using a new high-resolution UAV survey. The total district area, measuring 56 km², was surveyed along 302 flight lines spaced 55-70 m apart at an average altitude of 200 m above the surface (Figure 9-2). The flight resolution was 5 cm per pixel. A digital elevation model (DEM) was generated with interpolated level curves at 1 m for use at the 1:1,000 scale. Other products, such as RGB, lithology, limonite, and FeOx index images, were also produced. Conventional topography provided topographical support, which created a sufficient network of points from official bases to balance and orthorectify the UAV image and DEM. All topographic bases have been certified and coordinates reported in the UTM PSAD56 and WGS84 systems.

Figure 9-2: (a) Image, and (b) Topographic Contour Map



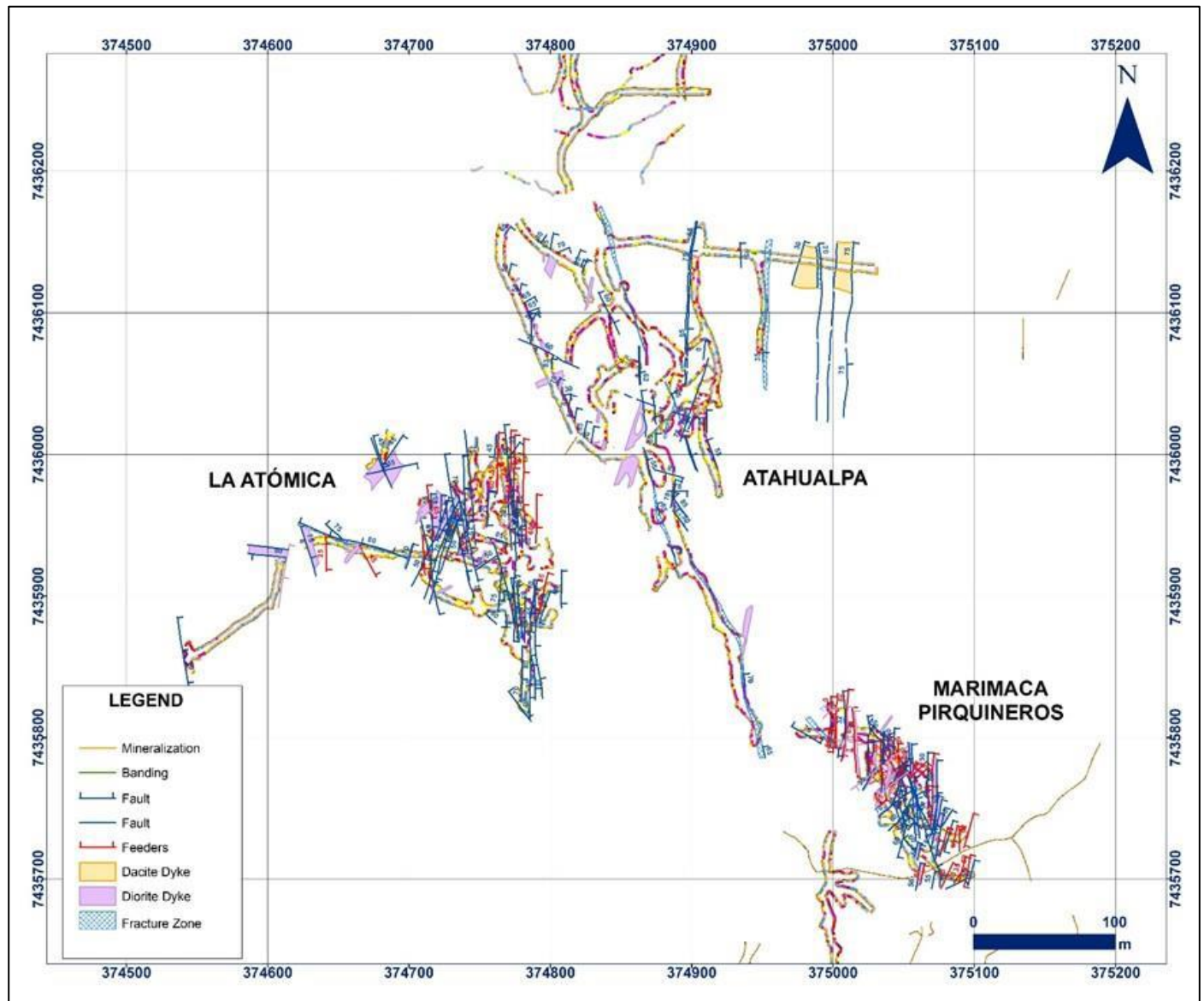
Notes: The UAV's special flight covers the contours for topographic restitution, controlled by base points and other key points, such as drill collars identified from the image. Source: Marimaca, 2023.

9.3 Geological Mapping

The 1:1,000-scale surface geological map (Kovacic, 2017) was updated. Emphasis was placed on the definition of dyke units, rock composition, and contact relationships; the same review focused on mineralized structures and late faults. The resulting updated map is shown in Figure 7-3.

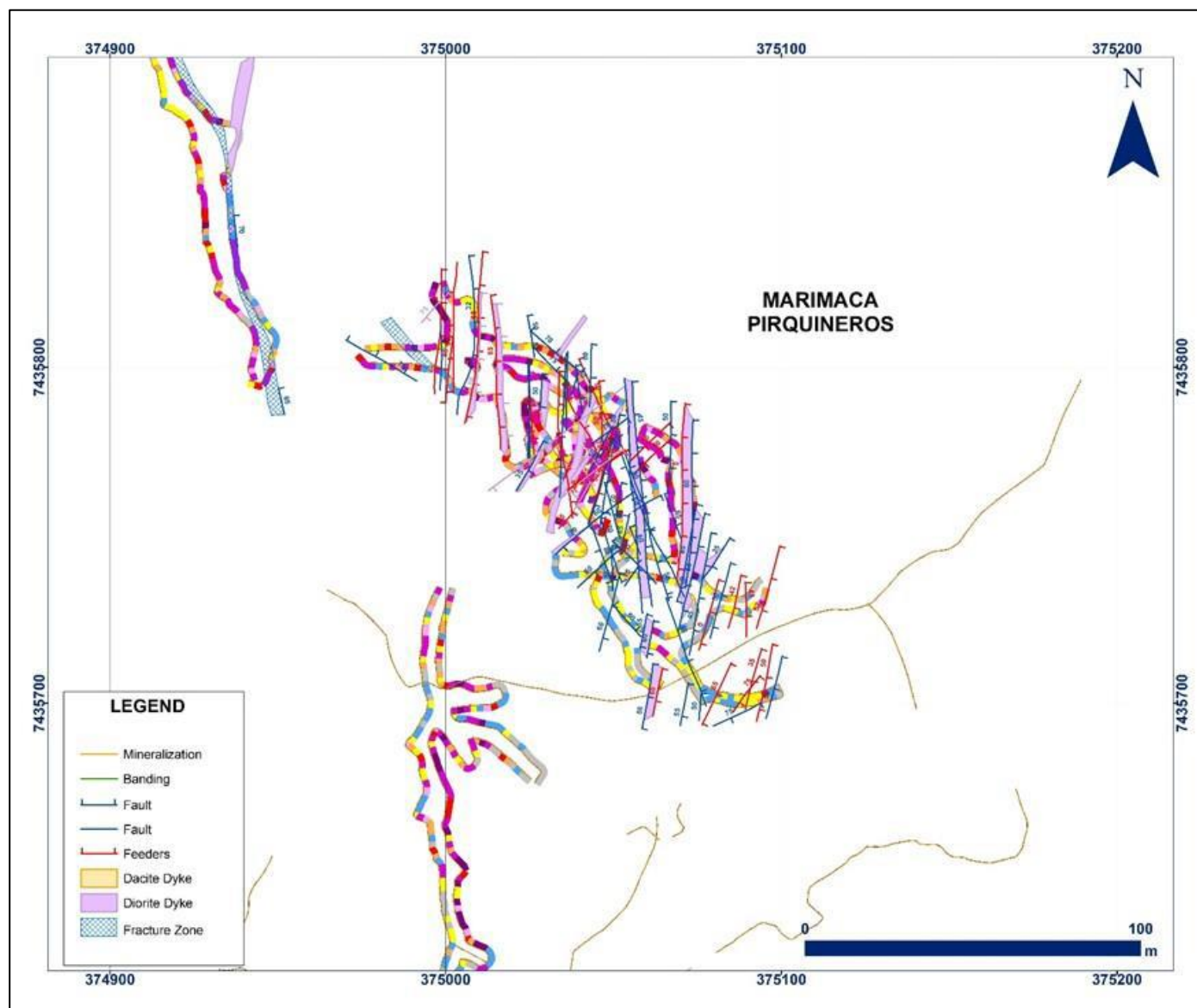
The underground mine workings were mapped, utilizing classical registration of geological attributes along lines tracing the walls. Additional efforts entailed reviewing the detailed mapping and sampling, augmented by graphic mapping (Figure 9-3 and Figure 9-4). This information contributed to the geological section's interpretation. However, assay samples from the underground workings were not used in the resource estimate due to their bias when compared to the drill samples.

Figure 9-3: Underground Geological Mapping – General Area



Source: NCL, 2020.

Figure 9-4: Underground Geological Mapping – Marimaca Pirquineros Area

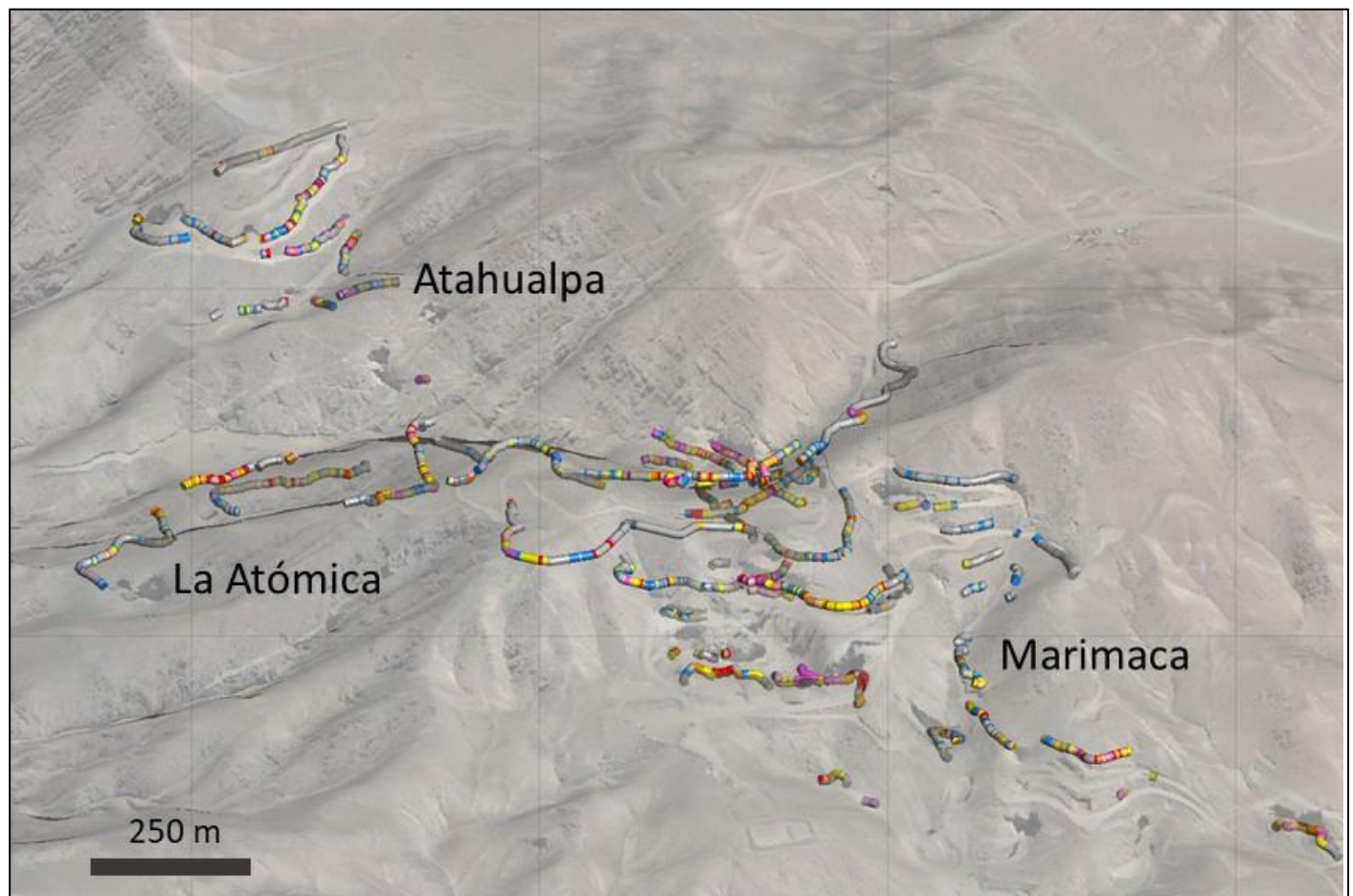


Notes: Underground Geologic Mapping. Details of Marimaca Pirquineros, showing chip-channel Cu assay, main rock units and structures.
Source: NCL, 2020.

The surface and underground mine workings involved continuous rock sampling along the road cuts, which was completed between 2018 and 2019. This work covered both older roads and new ones constructed by Coro. The method used included taking continuous chip-channel samples at 2-meter intervals. These samples were collected by Marimaca personnel, prepared, and tested (with laboratory quality controls, acknowledging the indicative nature of the samples) at Andes Analytical Assay (AAA) laboratories in Santiago, Chile. Sample preparation and assaying protocols

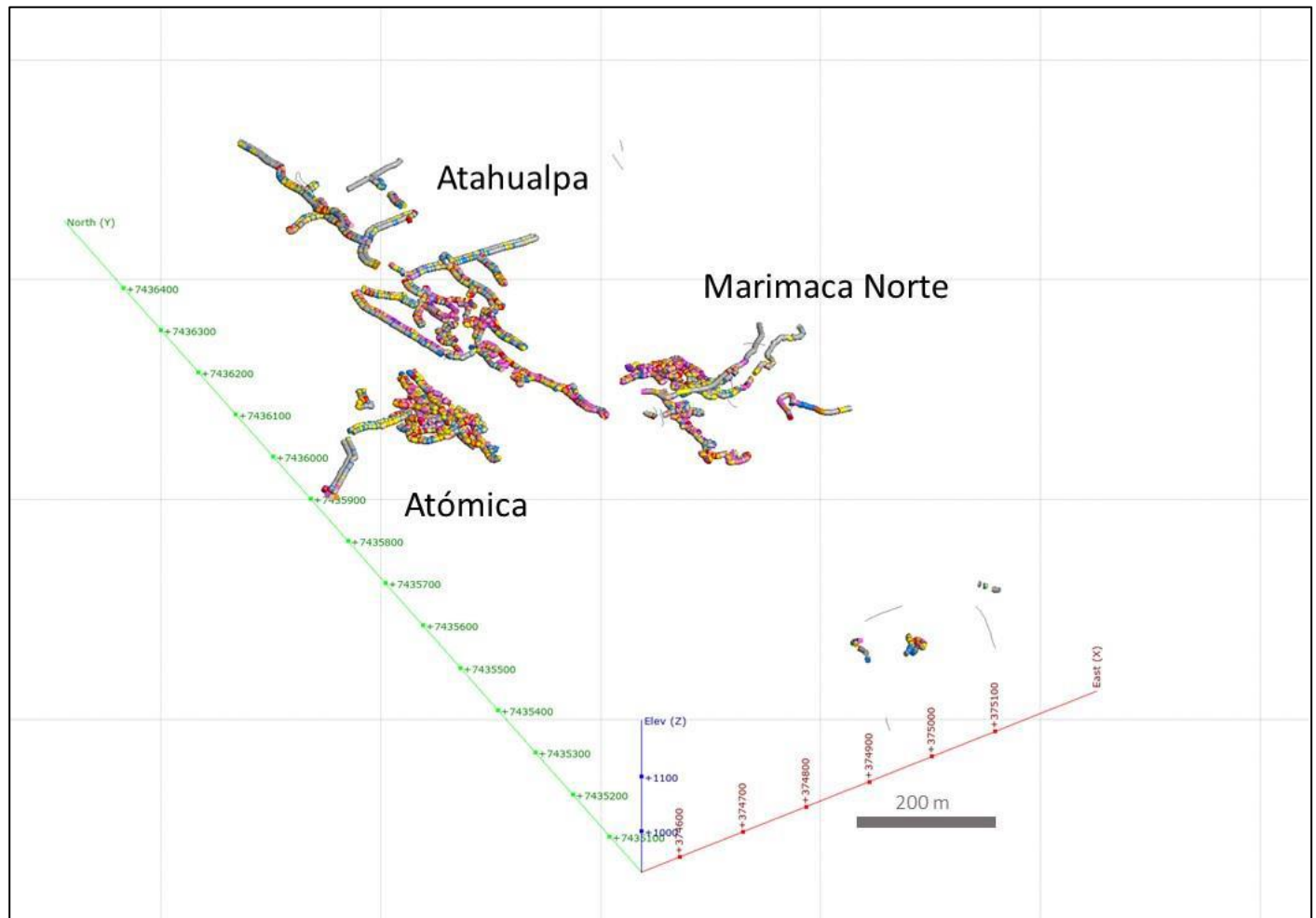
matched those used for drill samples. A total of 5,120 m were sampled. A summary of the sampled roads is shown in Figure 9-4. Systematic rock sampling was also extended to the underground mine workings, using the same criteria and methods as those employed in surface sampling. A total of 8,028 m were sampled from the mine workings. Figure 9-5 shows a view of the mine workings sampling from Atahualpa, La Atómica, and the northern part of Marimaca 1–23.

Figure 9-5: Surface Sampling



Notes: Surface Sampling. View looking northeast. Colours represent sample Cu grades, hot colours (reds and yellows) are higher Cu grades, cool colours (blues and greys) are lower or zero Cu grades. Views from Leapfrog TM model produced by Atticus Geo. Source: NCL, 2020.

Figure 9-6: Underground Workings Sampling



Notes: Colours represent sample Cu grades, hot colours (reds and yellows) are higher Cu grades, cool colours (blues and greys) are lower or zero Cu grades. Source: NCL, 2020.

9.4 Petrographic Studies

Marimaca conducted petrographic studies with specialist Paula Cornejo on samples taken from the La Atómica project to ensure their lithological and mineralogical classifications (Cornejo, P., 2019).

9.5 Drill Sample Re-Assaying and Logging

The discovery of significant mixed and secondary sulphide mineralization drew attention to a more precise definition of these mineral zones. This work necessitates detailed mapping of secondary sulphides supported by the Sequential

Copper assaying methodology. All samples with > 0.1% Cu from the historic database were assayed for CuCN, and all new drilling samples from the 2021 campaign are assayed using the Sequential Copper methodology.

Historical drill samples were re-logged, taking into account the updated assays. All new information was incorporated into the project database. Consequently, the mixed and secondary sulphide mineral domains below the MOD were more clearly defined.

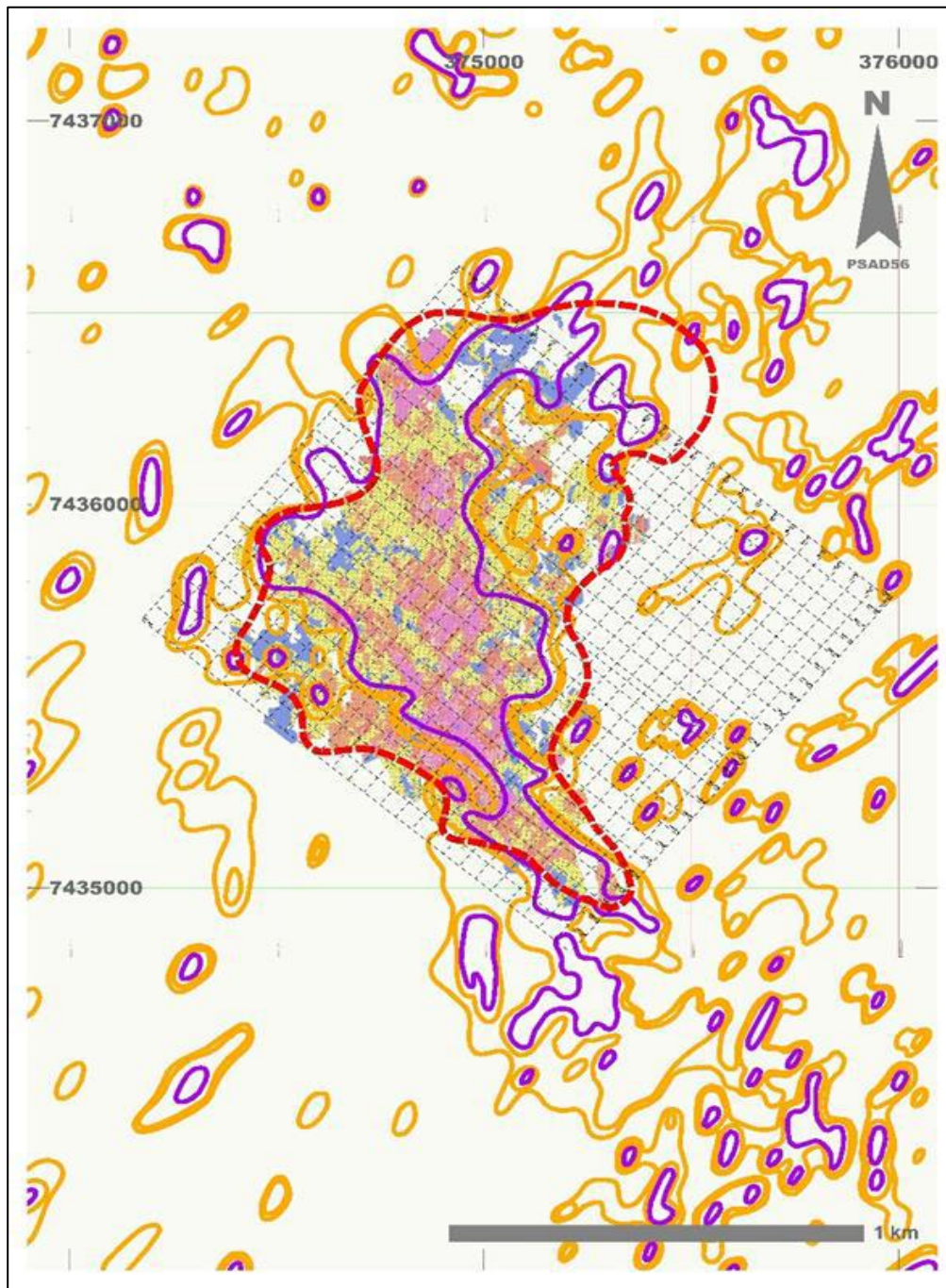
Marimaca's exploration drilling demonstrates the potential to extend the oxide zone north and to uncover new sulphide mineralization discoveries suitable for mining. The infill program shows promising results enhancing the exploration potential of Marimaca properties.

9.6 Geochemistry

As part of the district exploration, the previously sampled 100 x 100 m rock geochemistry sampled areas were detailed to 50 x 50 m, and all this new data, along with the previous copper results, were reinterpreted. An updated map is shown in Figure 9-7. The outer limit of > 0.1% copper coincides with >500 ppm rock geochemistry and the projected copper block model, which is projected to the surface.

Rock Geochem >500 ppm is a good indicator for Marimaca-style mineralized areas. In the map presented in Figure 9-7, extensions of mineralized structures toward the NE and SE are evident, suggesting the potential to extend the MOD.

Figure 9-7: Geochemical Sample Location Plan



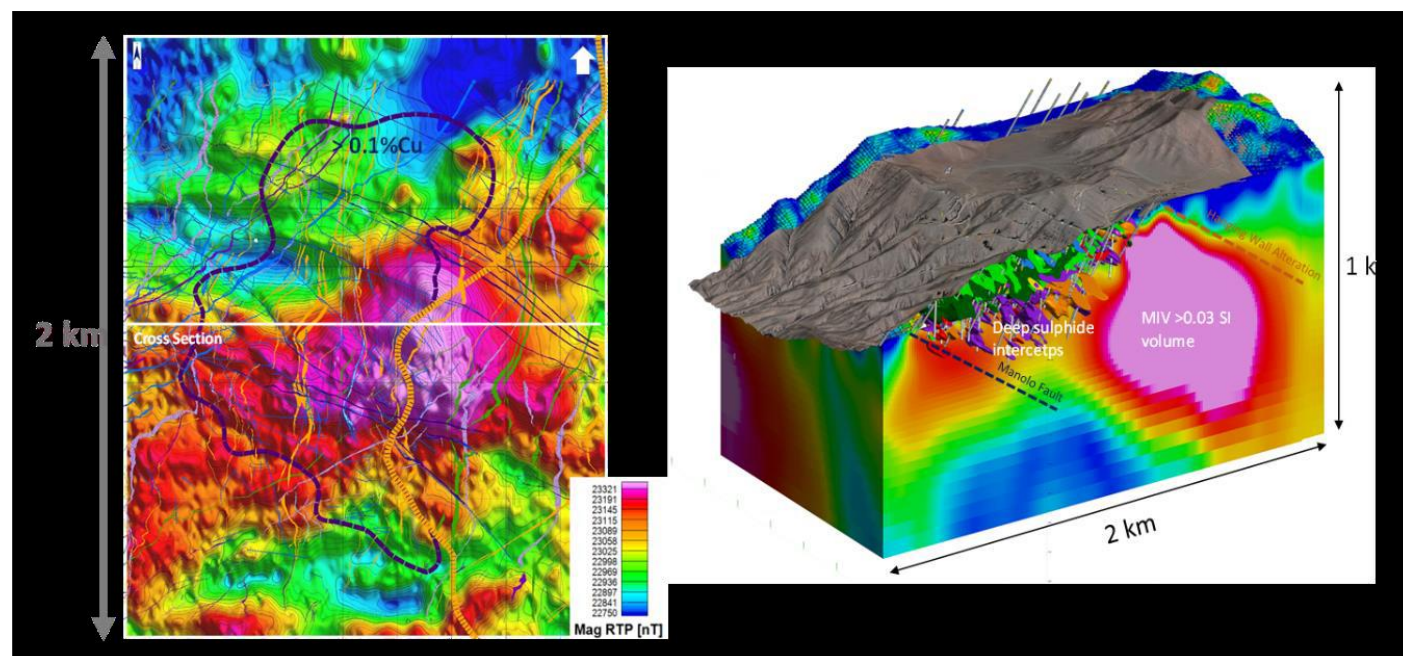
Notes: Purple colour lines indicate > 500 ppm and orange the >200 ppm Cu in rocks. Section grid and >0.1% Cu mineralization border is also shown. Source: Marimaca, 2022.

9.7 Geophysics

In July 2020, the Company released the results of a High-Resolution Mag Drone survey over the Marimaca deposit covering a 2km x 2km area. The objective was to model the deep extension of a high mag anomaly, considering the empirical relationship between copper sulphides and magnetite encountered in the systematic magnetic susceptibility measurements of drill samples. The high-resolution aeromagnetic survey was carried out using an updated GeoMagDrone™ technology in 2020. Flight lines spacing was 25 m, and average flight altitude 20 m, producing a total of more than 1,600 km of measured lines.

The modelled results show a relevant anomaly extending downward, east from the actual MOD, dipping 40-45° east. The oxide zone coincides with the demagnetized upper parts of the anomaly. Figure 9-8 illustrate the results of the magnetic survey and 3D modelling.

Figure 9-8: Geophysical Survey Location Plan

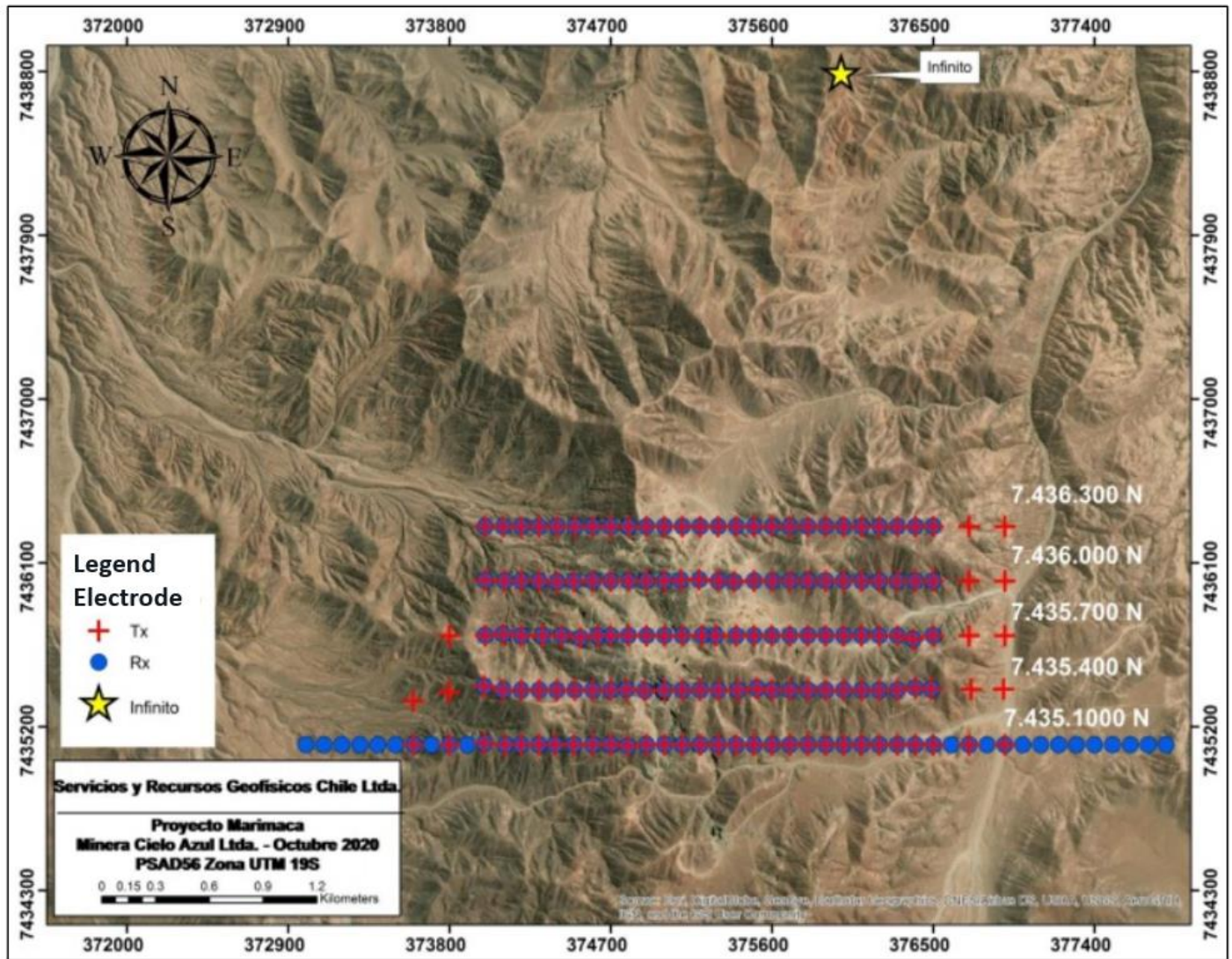


Notes: A mag anomaly extending at depth toward the east could represent the extension of the magnetite rich primary mineralization.
 Source: Marimaca, 2021.

An Induced Polarization survey was carried out to target sulphides below the MOD. A deep penetration method (MIMDAS) was used, and five lines were surveyed. The line spacing was wide and irregular, with an average distance of 250 m.

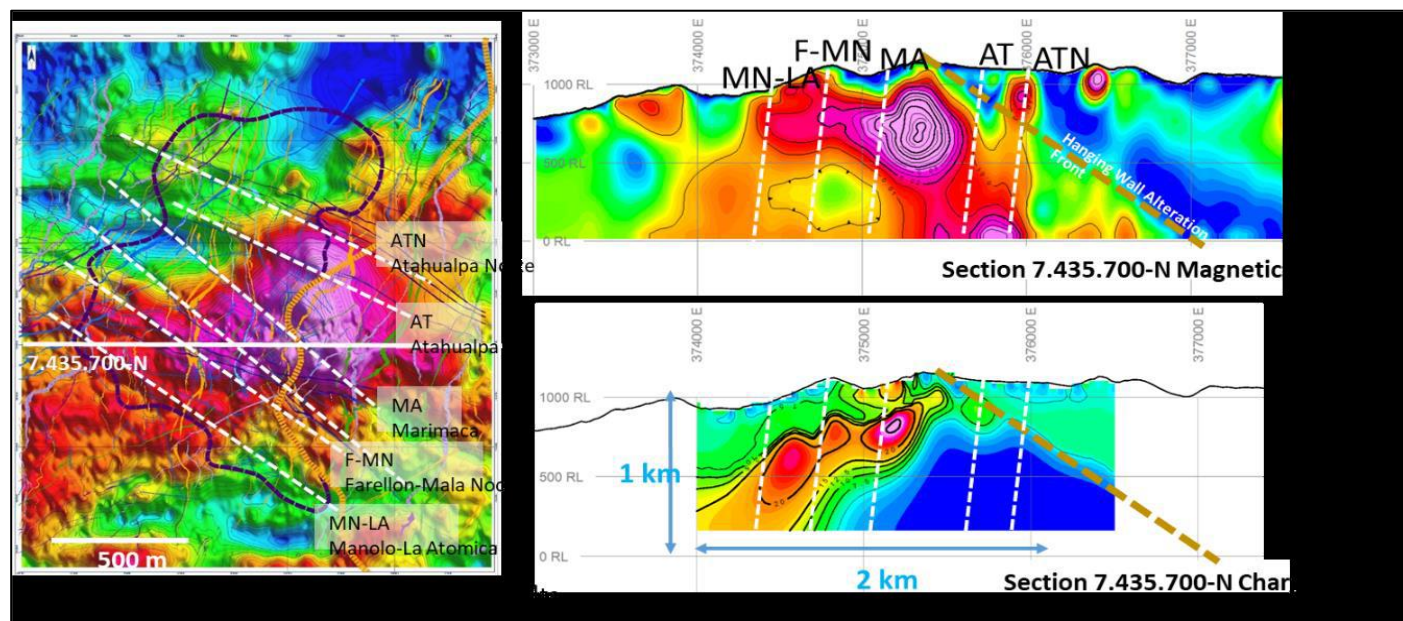
Results were released in February 2021. Figure 9-9 and Figure 9-10 shows the lines MIMDAS results by comparing the magnetic inverse model with the chargeability section.

Figure 9-9: Induced Polarization (IP) Lines



Source: Marimaca, 2023.

Figure 9-10: Induced Polarization (IP) Chargeability Results Compared with Magnetics



Notes: The probable effect of the NW faults on the IP anomalies is highlighted. Hot colours (purple and red) indicate IP anomalies. Source: Marimaca, 2021.

Data suggests that chargeability does not coincide with high mag signatures; however, it is pretty clear that magnetics represent a useful geologic vector. IP could respond better from the mixed and secondary sulphide mineralization rather than a more structurally controlled primary chalcopyrite-magnetite.

9.8 Exploration Status

The 2023 MRE update reflected an additional 28,374 m of drilling relative to the 2022 MRE.

The following exploration work has been carried out since 2020:

- Full assay of the drilling sample database with sequential copper assays (mostly CuCN) for all the samples greater than 0.1% Cu. Since the 2021 campaign, sequential copper has been the standard assay methodology for all samples.
- Re-logging previous drill holes to achieve a better definition of mixed and secondary sulphide mineralization, this work benefited from the new sequential copper assaying.
- Updating and verification of topographic field bases.
- Completion of a new drone-driven imaging and topographic ortho-restitution.
- Re-interpretation of rock geochemistry.

- High-resolution magnetics and deep IP/R geophysics surveys.
- Detailed surface mapping of dyke system, emphasizing rock types and contact relationships.

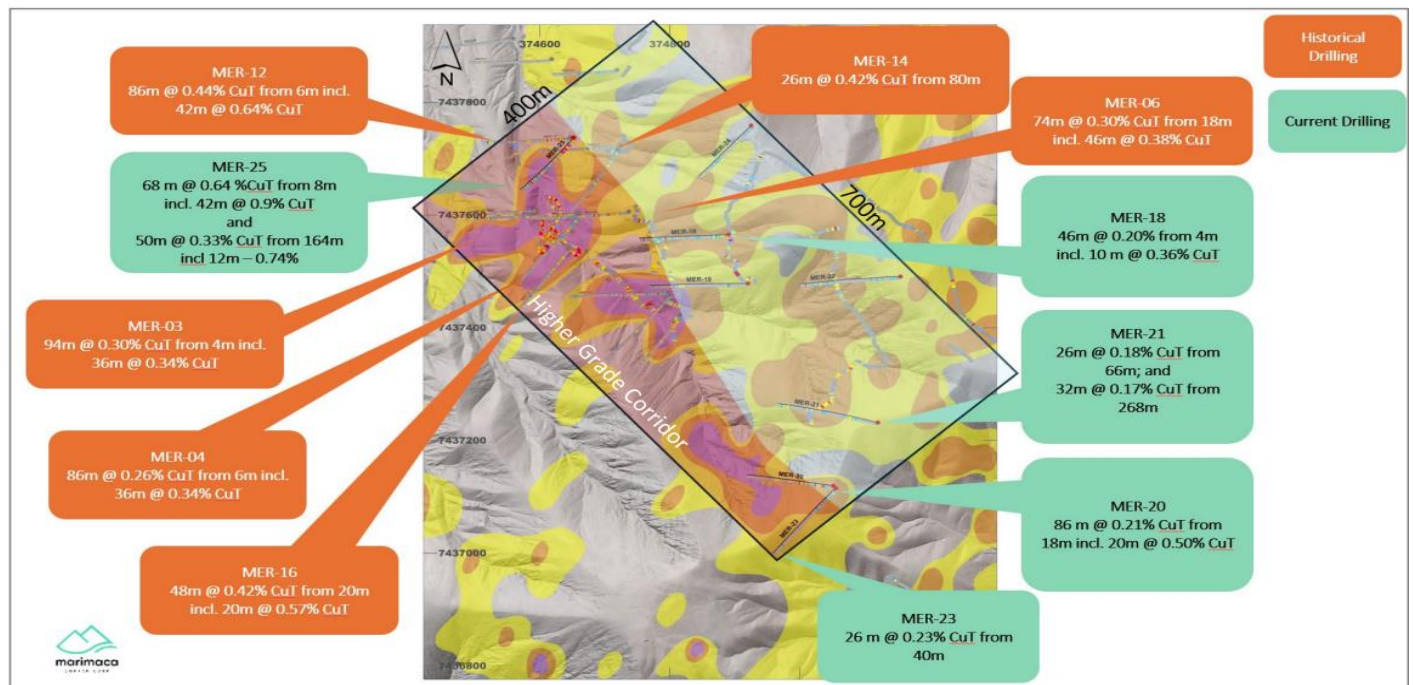
9.9 Targets for Further Exploration

9.9.1 Mercedes Shallow Oxide Potential at Mercedes Satellite Target

Reverse circulation (RC) drilling completed at the Mercedes Target (Mercedes) has extended the envelope of surface oxide copper mineralization to an area of interest measuring 700 m along strike and 400 m in width. A total of eight holes were completed, of which six intersected mineralization. Mercedes is located less than 500 m to the north of the northern edge of the Marimaca Oxide Deposit (MOD) and continues to provide clear potential to add to the Company's leachable resource base.

The initial drilling campaign at Mercedes (located less than 1 km to the north of the northern edge of the MOD), which was completed in 2021, consisted of 17 shallow RC drill holes targeting the anomalies identified in both the magnetic survey and surface geochemical sampling previously completed (refer to announcement from September 15, 2021). The Company has completed an additional 8 RC holes for 2,200 m to extend the mineralized envelope of the discovery (Figure 9-11 and Table 9-1).

Figure 9-11: Plan View of Selected Drill Holes at Mercedes



Source: Marimaca, 2024.

The eight drill holes were completed in various orientations with downhole depths of 250 m or 300 m. Six of the eight holes intersected broad zones of copper oxide mineralization of varying grades, from near the surface, all showing strong continuity across the reported intersections. The mineralization consisted of a mix of green oxides, including Atacamite, Brochantite (BROC), Chrysocholla (CRIS), and zones of WAD Oxide materials.

Mercedes is structurally influenced by pervasive sheeted fracturing of the intrusive host, which dips to the east at angles ranging from 45 to 60 degrees. Similar to the MOD, there is a zonation of mineralization that trends from more dominant green oxides at the top of the intersections to more mixed and copper wad types at the peripheries and towards the bottom of the intersections.

The grades were mixed, but the majority were above ore grade as defined by previous technical studies completed by Marimaca. There is a higher-grade zone at the surface northwest of the designated area of interest around the newly completed drill hole MER-25 and the historical drill holes MER-12 and MER-14.

Table 9-1: Table of Intersections

Hole	TD	From	To	m	%CuT
MER-18	250	4	50	46	0.20
		4	14	10	0.36
		20	44	24	0.20
		192	240	48	0.15
MER-19	290	52	60	8	0.33
		186	220	34	0.20
MER-20	260	18	104	86	0.21
		22	62	40	0.31
		22	42	20	0.50
MER-21	300	72	94	22	0.21
		82	92	10	0.29
		268	284	16	0.21
MER-22	300	No significant intercepts			
MER-23	300	40	66	26	0.23
MER-24	250	No significant intercepts			
MER-25	250	8	76	68	0.64
		28	70	42	0.89
		164	214	50	0.33
		202	214	12	0.74

Mercedes is less than 1 km from the northern edge of the MOD. It was initially identified through the results of a high-resolution drone-mounted magnetic survey (referenced in the news release dated September 23, 2020), which was followed by reconnaissance mapping and geochemical sampling (referenced in the news release dated December 9,

2020). In 2021, the Company conducted an initial drilling program at Mercedes, which encountered shallow oxide mineralization, defining an area of interest that extends 700 m by 400 m (Figure 9-11).

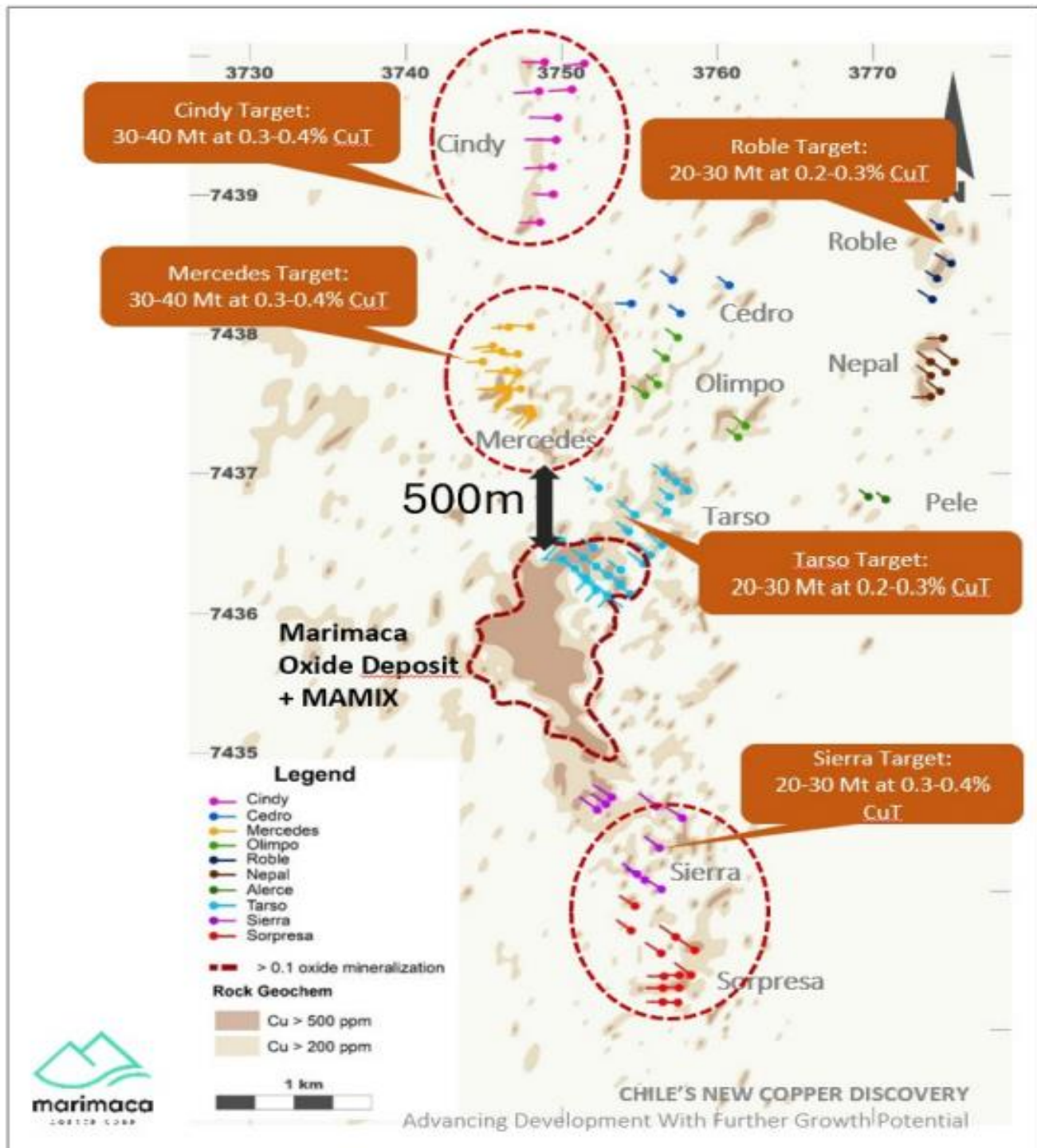
Mercedes is hosted in the same intrusive units as MOD. It shows pervasive fracturing striking north to south with an easterly dip of 45 to 60 degrees. The unit is cross-cut by various dykes and faults, all of which are important for the development of copper mineralization.

9.10 New Exploration Targets

Mercedes is the second of three new exploration targets drilled by the Company within a 5 km radius around the MOD. Each target presents a compelling opportunity to add shallow oxide resources to the MOD Project. Figure 9-12 show a map of the MOD Resource and the near MOD Exploration Target Range.

The potential quantity and grades shown in Figure 9-12 are conceptual in nature, given that there has been insufficient exploration to define a mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource. The estimates in Figure 9-12 relate to the potentially mineralized rock, based on geology, in-place, nearby, and surrounding drilling, sampling, alteration, and existing mineralization. Using the experience and geological judgment of the Marimaca team, a potential magnitude and grade are estimated.

Figure 9-12: Map of MOD Resource and Near MOD Exploration Target Ranges



Source: Marimaca, 2024.

10 DRILLING

10.1 Introduction

The drilling database contains data from a total of 139,164 m of drilling, including 52 Diamond Drill (DDH) holes totaling 11,978 m and 502 RC holes amounting to 127,186 m. Hole collars and deviations were surveyed. Samples were carefully logged and assayed for Total and Soluble Copper (CuT and CuS). The resource estimation focused on CuT and CuS.

For the previous 2023 MRE historical drill samples were re-logged, considering the updated assays. All new information was entered into the project database. Consequently, all mineral domains were better defined, and detailed mapping supported by Sequential Copper assaying methodology continued as established in the 2022 MRE. All > 0.1% Cu from the historic database were assayed for CuCN, and all new drilling samples since the 2021 campaign were assayed using Sequential Copper methodology.

10.2 Drilling Description

Table 10-1 summarizes the various drill campaigns conducted during exploration and resource estimation for the Project to date.

Table 10-1: Marimaca Drillholes Used in Resource Estimate

Marimaca Project			
Drilling Summary March-August 2016			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse Circulation	15	2,710
Resource 100x100 RCH Drilling	Reverse Circulation	39	8,910
DDH Metallurgy Column Test	Diamond Drilling HQ	6	2,008
Total RCH		54	11,620
Total DDH		6	2,008
Marimaca Project			
Drilling Summary September-December 2017			
Project	Type	Holes	Total Meters
Infill 50x50 m RCH Drilling	Reverse Circulation	59	11,928
DDH Geometallurgy	Diamond Drilling PQ	4	820
DDH Geotechnics	Diamond Drilling HQ3	6	1,230
Total RCH		59	11,928
Total DDH		10	2,050
Marimaca North-East			
Drilling Summary November 2017-January 2018			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse Circulation	11	2,950
Total RCH		11	2,950
La Atómica			
Drilling Summary November 2017-January 2018			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse circulation	14	3,220
Total RCH		14	3,220
Phase II La Atómica Project			
Drilling Summary August 2018-August 2019			
Project	Type	Holes	Total Meters
Exploration - Delineation	Reverse Circulation	55	12,980
EW Exploration	Reverse Circulation	6	1,050
Manolo Sector Exploration	Reverse Circulation	9	2,120
DDH Geometallurgy - La Atómica	PQ Diamond Drilling	9	2,203
Total RCH		70	16,150
Total DDH		9	2,203

Phase II Atahualpa - Tarso Projects			
Drilling Summary August 2018-August 2019			
Project	Type	Holes	Total Meters
Discovery and Exploration	Reverse Circulation	61	17,700
High Grade Exploration - Delineation	Reverse Circulation	16	4,200
EW Exploration	Reverse Circulation	32	7,266
Tarso Exploration	Reverse Circulation	29	7,200
DDH Geometallurgy - Atahualpa	PQ Diamond Drilling	14	2,715
Total RCH		138	36,366
Total DDH		14	2,715
Phase III Marimaca Deep Drilling, Marimaca Mixed Target (MAMIX)			
Drilling Summary February-September 2021			
Project	Type	Holes	Total Meters
Marimaca Sulphide	Reverse Circulation	4	2,772
Marimaca Re-entry (MAMIX)	Reverse Circulation	13	3,610
Total RCH		4	6,382
Phase IV Marimaca Infill - MAMIX			
Drilling Summary February - August 2022			
Project	Type	Holes	Total Meters
Marimaca Infill RCH Drilling	Reverse Circulation	150	33,952
Marimaca Infill DDH Drilling	PQ Diamond Drilling	6	1,600
Marimaca Re-entry (MAMIX)	Reverse Circulation	25	3,968
Marimaca (MAMIX)	Reverse Circulation	2	650
DDH Geotechnics	Diamond Drilling HQ3	7	1,402
Total RCH		152	38,570
Total DDH		13	3,002
Marimaca 2025 MRE	Reverse Circulation	502	127,186
	Diamond Drilling	52	11,978
TOTAL		554	139,164

The drilling companies Drillex and Major Drilling completed the RC drilling using diameters ranging from 5 3/4 to 5 5/8 inches.

The drill holes were spaced at 50 m intervals. Holes were drilled in two directions: 220° and 310°, with a -60° dip. As part of the MAMIX discovery and delineation campaign, 31 holes were re-entered, totaling 6,578 m. Most of these holes reach depths of up to 500 m.

Local contractors oversaw the drilling operation. An experienced topographer examined the collars. Datawell Services conducted the downhole surveys for the 2021 and 2022 campaigns.

Detailing the downhole surveying process, most of the initial measurements conducted by Wellfield, as reported in all previous MRE reports (Oviedo and Palma, 2017, 2018, 2020, 2022), were referenced to the Magnetic North orientation and included in the drill hole survey database. Since 2019, all measurements by Datawell have employed north-seeking orientation. The 2023 MRE updated the entire drill hole surveying database to the North standard. To ensure quality in this process, selected older holes previously surveyed by Wellfield were re-measured by Datawell. This database update does not affect the reliability of the geologic interpretation and resource estimation, as confirmed by NCL.

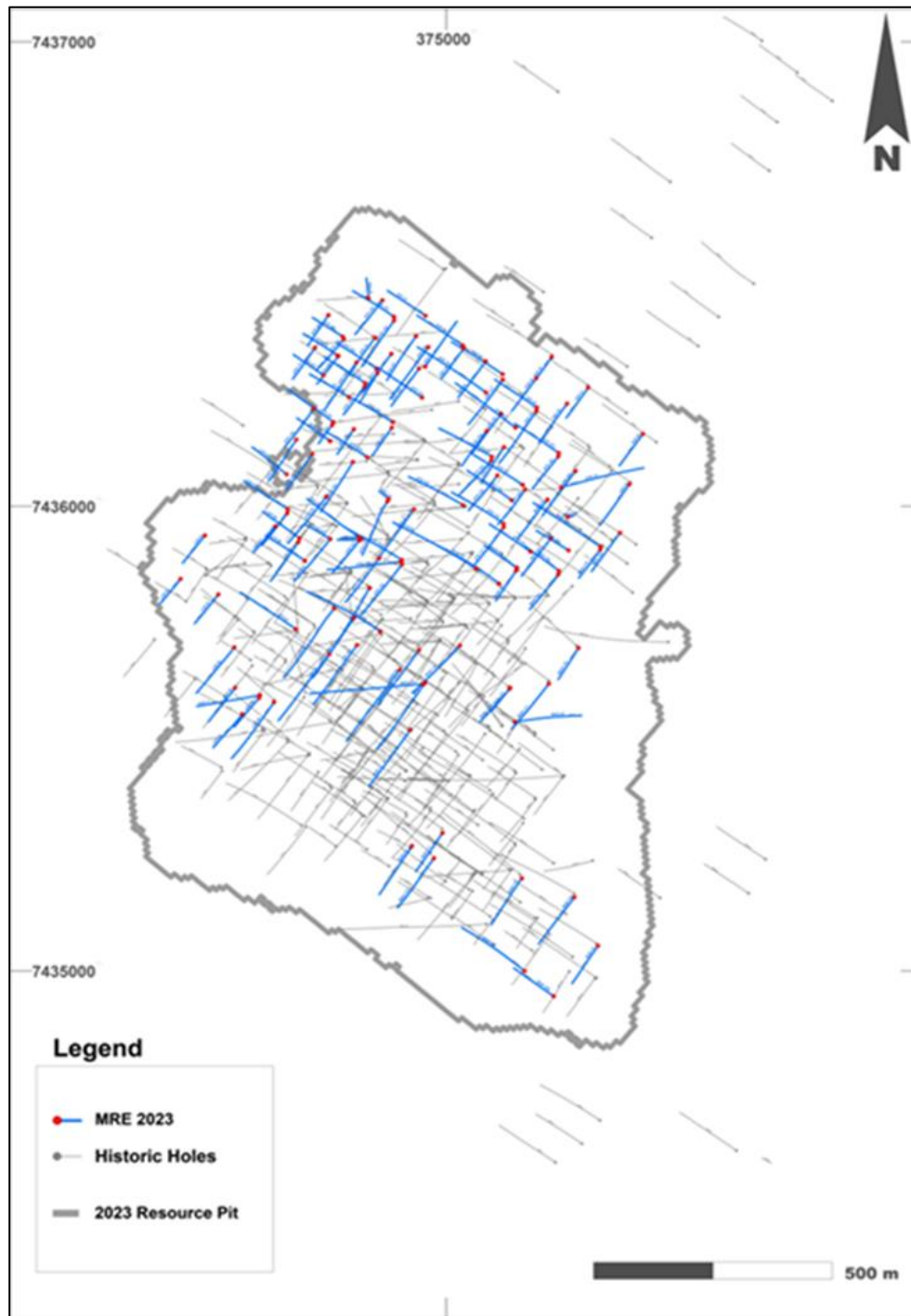
Samples were collected at each 2 m interval. Marimaca staff supervised all drilling and sampling activities. Recoveries were controlled by weighing samples, and accurate control was maintained throughout the division process, as realized at the drill location. The recoveries were measured as a percentage of the theoretical sample weight. Marimaca technical staff checked all the data. Measured recoveries exceed 95% for RC drilling, regardless of copper grades, with minimal variations.

All holes were geologically logged through digital data capture. The data includes rock types, structure, alteration, and mineralization based on drilling intervals, recoveries, and analytical results. After validation, the mineral and alteration zones were delineated. The results were entered into the database as a table containing all mapped data, and a consolidated drill log was produced. Most of this work was conducted by an experienced senior consultant geologist, with support from a junior geologist.

Drill cuttings from RCH were collected and cleaned for a geological description of the samples. A first log collected rock, structure (as the cutting allows), and alteration. Copper mineralogy was re-logged as chemical results were received.

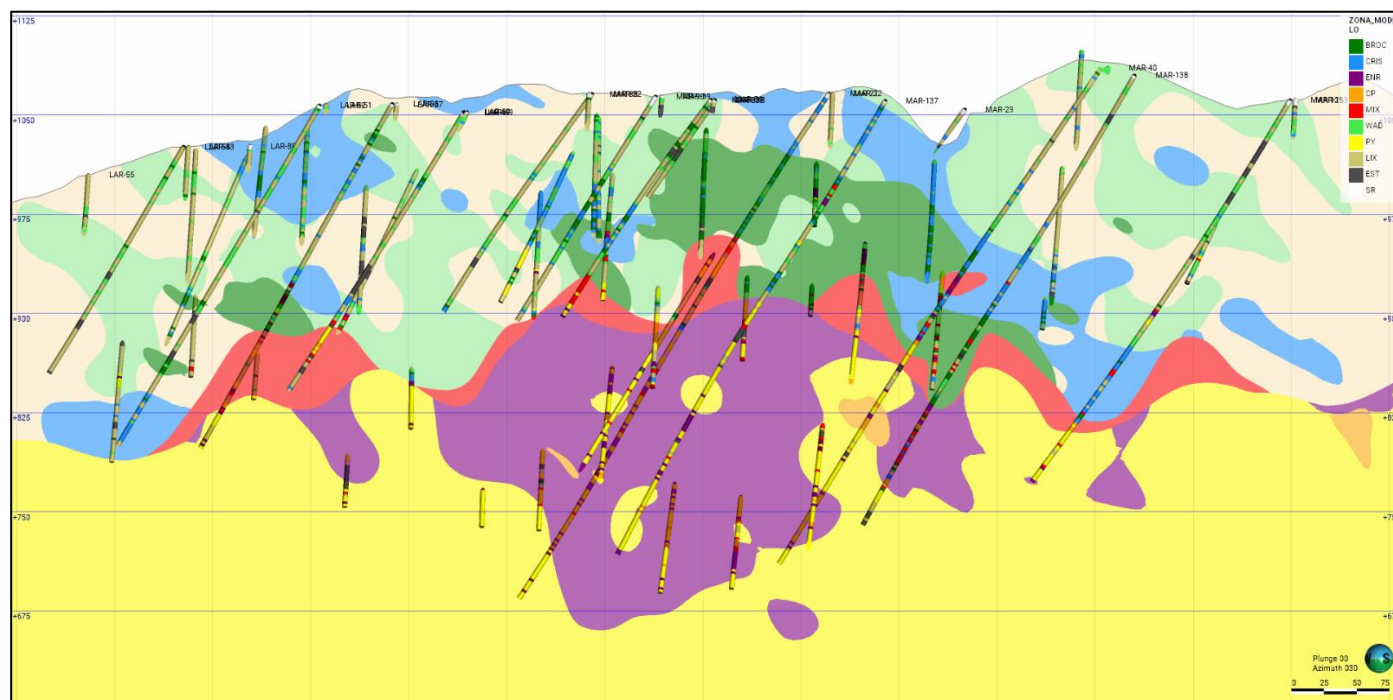
In addition to measuring deviations, most holes were surveyed using an optical televiewer (OPTV or BHTV) with structures and orientation measurements. This viewer continuously and thoroughly recorded the walls and measured structures. The structures were measured in ranks according to their width, and the results were reported and plotted on stereographic networks and rosette diagrams. This information was valuable for interpreting the structural model in the 2023 MRE exercise. Figure 10-1 shows a drill hole database plan view, 2022 drilling noted with blue drill traces. Figure 10-2 shows an oblique section looking North East.

Figure 10-1: Drill Hole Database Plan View, 2022 Drilling Noted with Blue Drill Traces



Source: Marimaca, 2023.

Figure 10-2: Drill Hole Database in an Oblique Section Looking NE



Source: Marimaca, 2023.

10.2.1 Recovery

Average recovery for DDH samples is 97.65% and for RC samples is 91.83%. The eventual presence of any bias in relation with CuT grades and recovery was analyzed and no anomalous values detected.

10.2.2 Sample Length/True Thickness

Marimaca has controlled systematically the sample recovery for both, DDH and RC drillholes, following industry-standard procedures: RC by weighting the 2 m sample obtained and, for DDH, by measuring the length of the core recovered for each drilling run and later corrected to 2 m intervals.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Historical Sampling

No historical records or knowledge of pre-Marimaca sampling.

11.2 Marimaca Sampling Methods

11.2.1 Drillhole Sampling

Assay samples for Marimaca Mineral Resources have been prepared at a laboratory site in Calama since 2017 and assayed by Andes Analytical Assay Ltd. (AAA) in Santiago. During earlier campaigns, samples were prepared at the project site and assayed by Geolaquim Ltd. in Copiapó, with AAA as the umpire laboratory. Marimaca only worked with an umpire laboratory during the first RC drilling campaign.

Laboratory personnel transfer samples from the project to Calama, and then the preparation pulps are returned to generate the analysis batches. Upon reception, sample details are logged, and insertion points for quality control samples in the sample flow are determined.

Laboratory results are loaded directly from digital assay certificates into the database to minimize error sources.

11.2.2 Sample Rejects and Pulps Storage

- RC cuttings are stored at appropriate facilities in the field (old adits), as are coarse rejects of about 8-9 kg, obtained from the third riffle split.
- The laboratory was also requested to store all the crushed rejects of DDH samples (-1/4") in appropriate project facilities, trays with backup half-cores and bags of 1 kg RC sample rejects.
- From metallurgical test cores, a representative 10-cm sample is left and stored in boxes systematically.

11.3 Marimaca Reverse Circulation Sampling

Marimaca RC holes are drilled on a continuous 2-m basis, and their samples are riffle split on site three times, up to one-eighth (12.5%) of their volume. The last split yields "Sample A", which is sent for preparation and assaying, and "Sample B", which is used to obtain drill cuttings (1 kg) and coarse/preparation duplicates and then stored in special facilities on site.

11.4 Marimaca Core Sampling

For diamond drill holes (DDH), samples are obtained every 2 m from a half-core, with the other half stored on site. Samples are prepared following a standard protocol: Drying (<5% humidity), crushing up to 80% to -10#Ty (10 Tyler mesh = 1.65mm), homogenizing, splitting and pulverizing a 400-gram subsample up to 95% to -150#Ty (150 Tyler mesh = 0.104mm). AAS assays all samples for total copper (CuT) and soluble copper (CuS). The latter was initially obtained from a specific CuS test and currently from a sequential copper (CuSec) routine.

11.5 Density Determinations

Specific gravity was measured systematically on core fragments taken from the deposit for density and geotechnical issues. Specific gravity is determined using a water displacement method with paraffin coating. The fragments sampled are 7 to 26 cm long. Measurements were done by Mecánica de Rocas Ltda. in Calama, Chile.

Test samples were taken from core samples to determine density measurements characterizing the Marimaca mineralized rocks. The sample selection criteria and laboratory tests are as follows; each selected piece was logged in detail and photographed. The samples were then sent to rock testing certified laboratories, based in Calama, for the corresponding unit weight assaying. The method was the weight-volume ratio, with previously waterproofed kerosene weighted in air and then weighed submerged in water.

Density samples were collected at approximately 20-m intervals. From the 2016 program, 58 samples were tested, and from the 2017 program, an additional 98 samples were tested. An additional 427 samples were tested in 2019, and a total of 72 samples were tested in 2022, resulting in 634 samples. Measurements were performed using standard protocols following the paraffin-coated Archimedes (water immersion) method.

11.6 Sample Security and Storage

All drilling assay samples are collected by company personnel or under their direct supervision. Samples from Marimaca were initially processed at the project site and then shipped directly to a laboratory facility for final preparation. Later, upon their return, they were returned to the laboratory for analysis.

Appropriately, qualified staff at the laboratories collect assay samples. Sample security involved two aspects: maintaining the chain of custody of samples to prevent unnoticed contamination or mixing, and making active tampering as difficult as possible.

During the site visit, the QP found no evidence of active tampering or contamination in the assay samples collected from the Marimaca properties.

11.7 Analytical and Test Laboratories

Since 2017, assay samples informing Marimaca have been prepared at a laboratory site in Calama and assayed by Andes Analytical Assay Ltd. (AAA) in Santiago. During earlier campaigns, samples were prepared at the project site and assayed by Geolaquim Ltd. in Copiapó, with AAA as the umpire laboratory. Marimaca only worked with an umpire

laboratory during the first RC drilling campaign. Samples are transferred by laboratory personnel from the project to Calama, and then the preparation pulps are returned to generate the analysis batches. Upon reception, sample details are logged and insertion points for quality control samples in the sample flow are determined. All laboratories are ISO certified (ISO IEC 17025:2017) and independent from Marimaca.

11.8 Sample Preparation and Analysis

Samples are prepared following a standard protocol: Drying (<5% humidity), crushing up to 80% to -10#Ty (10 Tyler mesh = 1.65mm), homogenizing, splitting and pulverizing a 400-gram subsample up to 95% to -150#Ty (150 Tyler mesh = 0.104mm). All samples are assayed by AAS for total copper (CuT) and soluble copper (CuS). The latter was initially obtained from a specific CuS test and currently from a sequential copper (CuSec) routine.

Laboratory results are loaded directly from digital assay certificates into the database to minimize error sources.

11.9 Quality Assurance and Quality Control

The analytical quality control programs implemented at Marimaca involve the use of coarse/preparation (PRD) and pulp (PUD) duplicates for precision analyses, standard reference materials (SRM), and, only since 2018, fine blanks (FBL) for contamination analyses. Check samples (CHD) were only used during the pilot exploration campaign.

Control samples are systematically inserted among regular samples and submitted for assaying to the primary laboratory, which is currently AAA, and previously Geolaquim (GLQ). Marimaca has protocols for handling analytical results that exceed acceptable limits (described further in this section), which can ultimately trigger re-assays of entire or portions of sample batches. Table 11-1 summarizes the evolution of Marimaca's QA/QC programs and their respective coverage.

Table 11-1: The Evolution of Marimaca's QA/QC Programs and Their Respective Coverage

Hole Type	Campaign	Period	Holes	Lab	Coverage				
					CHD	PRD	PUD	SRM	FBL
RC	MAR 01-16	2016	15	GLQ	19%	-	-	-	-
				AAA					
	MAR 17-54	2016	39	GLQ	-	-	6%	6%	-
	MAR 55-124	2017-2018	84	AAA	-	7%	7%	5%	1%
	LAR 01-14								
	LAR 15-84	2018	70	AAA	-	7%	7%	4%	3%
	AER 01-03	2018-2019	138	AAA	-	8%	8%	4%	4%
	ATR 01-109								
	TAR 01-26								
	MAR 125-178	2021-2022	156	AAA	-	7%	7%	3%	4%
	LAR 85-109								
	ATR 110-167								
	TAR 27-42								

Hole Type	Campaign	Period	Holes	Lab	Coverage				
					CHD	PRD	PUD	SRM	FBL
DDH	MAD 01-06	2016	6	GLQ	-	-	10%	8%	-
	MAD 07-16	2017	10	AAA	-	-	10%	7%	1%
	ATD 01-13	2019	22	AAA	-	-	11%	7%	2%
	LAD 01-09								
	ATD 14-18	2021-2022	18	AAA	-	-	10%	5%	5%
	LAD 10-11								
	MAD 17-22								

It is evident that Marimaca has improved and refined its QA/QC programs over time, following recommendations from earlier studies. Total coverage is around 20% in all cases, which exceeds industry standards, though with a slight excess of duplicate sample coverage for RC holes, mostly at the detriment of SRM sample coverage, which reached only 3% in the most recent campaign. Recommendations will be made in this and other regards in the following sections.

11.9.1 Standards

Two companies provided SRMs: Geostats Pty Ltd (Australia) during 2016-2018, with 966 samples of 17 materials, and Intem Ltd. (Chile) with 1,250 samples of six materials during 2018-2019, along with 738 samples of eight materials during 2021-2022. Geostats' SRMs originate from various sources, depending on the required grade. Meanwhile, Intem's SRMs are derived from the project's RC drilling rejects, which are homogenized and analyzed in a round robin program to determine their best value.

NCL's SRM review starts with a direct comparison of each material's average grade (AV) against its best value (BV) by calculating the bias $(AV/BV-1)$, which should not exceed $\pm 5\%$. Next, Shewhart control charts are constructed, plotting time series of the SRM values against acceptability (precision) windows of $BV \pm 2 \times SD / BV \pm 3 \times SD$ (round robin SD) for Geostats SRMs, or $BV \pm 5\% / BV \pm 10\%$ for Intem SRMs, as the latter do not have a suitable SD for quality control purposes. Values exceeding these windows (outliers) should remain below 5% of all samples (with an exceptional tolerance of 10%), particularly in the case of the outermost windows.

Table 11-2 summarize the SRM analysis of Geostats materials, while Table 11-3 and Table 11-4 summarize SRM analyses of Intem materials for the 2018-2019 and 2021-2022 periods, for comparison purposes. Results for the 2016-2018 period are provided irrespective of campaign or drill hole type, as there are no significant issues to point out when reviewing them separately, as detailed in NCL (2020). Results for the 2021-2022 campaigns were reviewed, separating DDH and RC drillholes, as shown in Table 11-4.

Table 11-2: SRM Analysis Summary for Geostats Materials in the 2016-2018 Campaigns

SRM Type	SRM Samples	SRM %CuT		Global Bias (<5%)	Outliers (<5%)			
		BV	AV		BV ±2SD		BV ±3SD	
					#	%	#	%
GBM 309-6	100	0.028	0.028	2.1%	0	0.0	0	0.0
GBM 999-4	41	0.103	0.105	2.2%	0	0.0	0	0.0
GBM 311-6	50	0.104	0.103	-0.9%	0	0.0	0	0.0
GBM 911-2	73	0.142	0.146	3.1%	1	1.4	0	0.0
GBM 311-2	135	0.227	0.226	-0.7%	0	0.0	0	0.0
GBM 304-5	46	0.229	0.227	-1.0%	0	0.0	0	0.0
GBM 913-6	66	0.321	0.308	-4.0%	1	2.1	0	0.0
GBM 995-4	108	0.350	0.351	0.3%	0	0.0	0	0.0
GBM 908-10	20	0.360	0.361	0.2%	0	0.0	0	0.0
GBM 304-3	38	0.364	0.368	1.2%	0	0.0	0	0.0
GBM 309-2	20	0.529	0.525	-0.8%	0	0.0	0	0.0
GBM 910-7	58	0.534	0.536	0.4%	4	9.8	3	7.3
GBM 301-7	20	0.558	0.559	0.3%	0	0.0	0	0.0
GBM 311-4	65	0.620	0.608	-1.9%	2	3.5	0	0.0
GBM 911-3	52	0.765	0.767	0.3%	0	0.0	0	0.0
GBM 907-14	18	0.817	0.812	-0.6%	0	0.0	0	0.0
GBM 905-12	56	2.185	2.132	-2.4%	2	4.2	0	0.0

Table 11-3: SRM Analysis Summary for Intem Materials in the 2018-2019 Campaigns

SRM Type	SRM Samples	SRM %CuT		Global Bias (<5%)	Outliers (<5%)			
		BV	AV		BV ±5%		BV ±10%	
					#	%	#	%
MRC-2	599	0.201	0.202	0.3%	13	2.5	0	0.0
MRC-3	211	0.301	0.302	0.4%	4	2.1	0	0.0
MRC-4	130	0.409	0.409	0.1%	0	0.0	0	0.0
MRC-5	141	0.594	0.593	-0.1%	1	0.8	0	0.0
MRC-6	65	0.827	0.831	0.4%	1	1.8	0	0.0
MRC-7	104	1.208	1.204	-0.3%	3	4.1	0	0.0

Table 11-4: SRM Analysis Summary for Intem Materials in the 2021-2022 Campaign

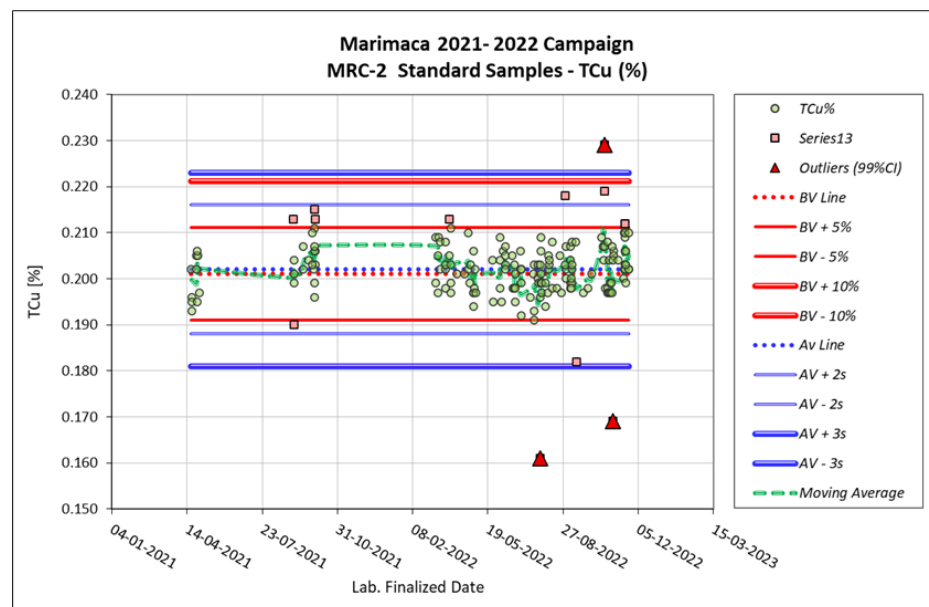
SRM Type	SRM Samples #	Best BV CuT (%)	Average AV CuT (%)	Global Bias (<5%)	RC Drillholes			
					Outliers (<5%)			
					BV ±5%		BV ±10%	
					#	%	#	%
MRC-2	173	0.201	0.202	0.5%	13	7.6	3	1.8
MRC-3	97	0.301	0.306	1.7%	9	9.5	2	2.1
MRC-4	49	0.409	0.413	1.0%	3	6.1	0	0.0
MRC-5	33	0.594	0.594	0.0%	2	6.3	1	3.1
MRC-6	19	0.827	0.821	-0.7%	3	15.8	0	0.0
MRC-7	25	1.208	1.180	-2.3%	2	8.3	1	4.2
MRC-9	240	0.148	0.149	0.7%	7	2.9	0	0.0
MRC-10	31	0.243	0.245	0.8%	2	6.5	0	0.0
TOTAL	667							

SRM Type	SRM Samples #	Best BV CuT (%)	Average AV CuT (%)	Global Bias (<5%)	DDH Drillholes			
					Outliers (<5%)			
					BV ±5%		BV ±10%	
					#	%	#	%
MRC-2	17	0.201	0.202	0.5%	0	0.0	0	0.0
MRC-3	12	0.301	0.304	1.0%	0	0.0	0	0.0
MRC-4	4	0.409	0.435	6.4%	1	25.0	1	25.0
MRC-5	6	0.594	0.591	-0.5%	1	16.7	0	0.0
MRC-6	2	0.827	0.823	-0.5%	0	0.0	0	0.0
MRC-7	5	1.208	1.220	1.0%	0	0.0	0	0.0
MRC-9	19	0.148	0.148	0.0%	1	5.3	0	0.0
MRC-10	6	0.243	0.244	0.4%	0	0.0	0	0.0
TOTAL	71							

Geostats materials (Table 11-2) demonstrate good accuracy and precision. However, some uncertainty exists in several cases due to their low coverage (<50 samples), which directly results from the wide variety of SRMs. The switch to in-house SRMs alleviated this issue by reducing the number of reference values to six and consequently increasing their coverage. As expected, Intem materials during 2018–2019 (Table 11-3) show improved results, with excellent accuracy and precision. During the 2021–2022 campaigns, the addition of two materials and reduced SRM coverage yielded results for RC holes indicating perfect accuracy and acceptable precision (outlier numbers mostly above 5% for the first window, but none surpassing the following window), while for DDH holes, results are generally satisfactory, though accompanied by relatively high uncertainty due to very low coverage in most cases.

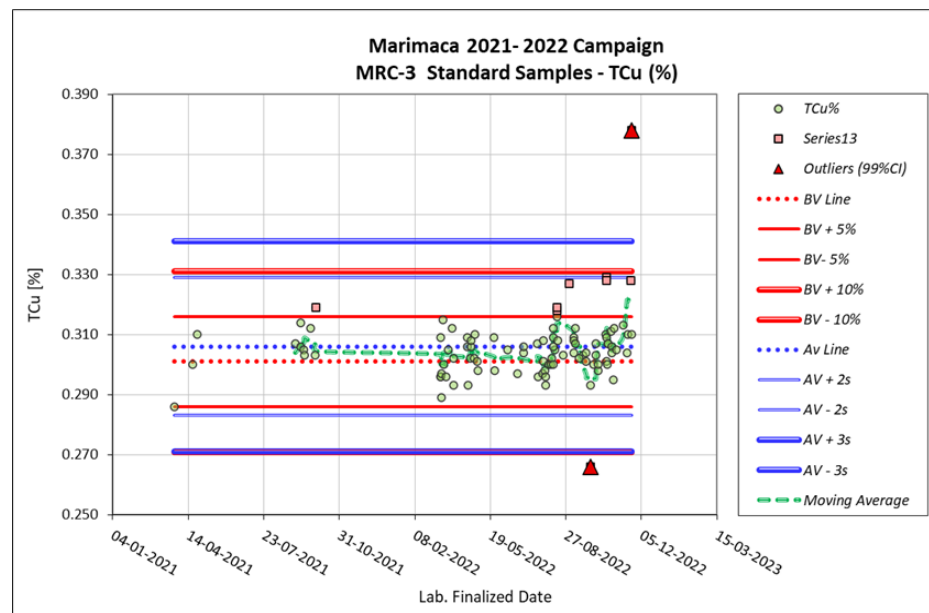
For this report, Shewhart charts for materials MRC-2 (Figure 11-1), MRC-3 (Figure 11-2), and MRC-7 (Figure 11-3) from the 2021–2022 RC campaign were selected as an example.

Figure 11-1: Shewart Chart for Material MRC-2 in the 2021-2022 RC Campaign



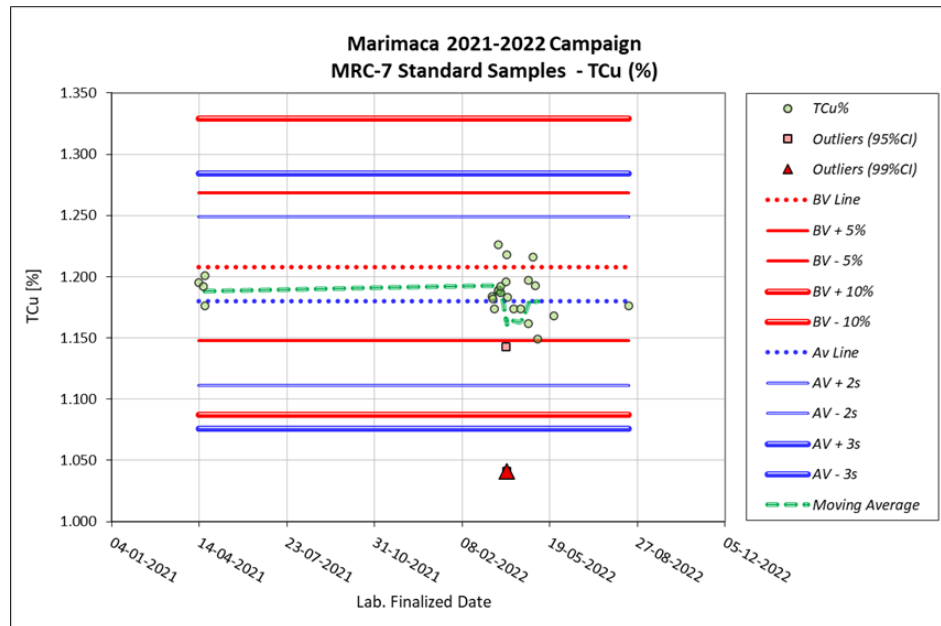
Source: Atticus, 2023.

Figure 11-2: Shewart Chart for Material MRC-3 in the 2021-2022 RC Campaign



Source: Atticus, 2023.

Figure 11-3: Shewart Chart for Material MRC-7 in the 2021-2022 Campaign



Source: Atticus, 2023.

In conclusion, the SRM analysis shows very good accuracy and precision, at almost all levels, with generally minor observations and some uncertainty in the case of recent DDH holes due to low coverage. The QP recommends at least doubling the total SRM coverage, and, to the extent possible, reducing the number of reference values to five or fewer.

11.9.2 Duplicates

Preparation (PRD) and pulp duplicate (PUD) samples were consistently inserted in every campaign, except for the discovery campaign, which included check samples (CHD) of pulp duplicates as the sole control measure.

NCL's duplicate review utilizes the hyperbolic method (Simon, 2006). It begins by calculating the relative error (RE) of the original assay (OA) in relation to its duplicate (DA), defined as the absolute percentage value of $2 \times (OA - DA) / (OA + DA)$, which should generally remain below 20% for PRD pairs and 10% for PUD pairs. Next, a practical detection limit (PDL) is established based on grade behavior near the reported detection limit (RDL), typically set at a slightly higher value to represent a more realistic limit, considering the reduced precision of analytical tests at lower grades. Finally, duplicate pairs are validated by plotting them against a hyperbolic function (dependent on constants calculated from the PDL and a maximum tolerable RE for each duplicate type), which serves as an acceptability boundary that adjusts for higher RE at lower grades. Failed pairs should account for less than 10% of all duplicate samples.

NCL's check sample review is conducted using reduced major axis (RMA) regression plots and their main parameters: the coefficient of determination (R^2), which should be close to one to be acceptable, and slope (RMAS), which enables

a bias percentage calculation (1-RMAS) that should be near zero to be satisfactory. Table 11-5 summarizes the duplicate analysis. Results for the 2016-2018 period are provided regardless of the campaign, as there are no significant issues to highlight when reviewing them separately, as detailed in NCL (2020). Table 11-6 presents the results for the pilot campaign's check samples.

Table 11-5: Duplicate Analysis Summary of All Drilling Campaigns

Period	Hole Type	Duplicate Type	Duplicate Pairs	Failed Pairs (<10%)		Average %CuT		Average Difference (<5%)
				#	%	OA	DA	
2016-2018	DDH	PUD	477	7	1.50%	0.478	0.479	0.20%
	RC	PUD	2936	58	2.00%	0.228	0.226	-0.80%
		PRD	3008	46	1.50%	0.224	0.224	0.30%
2021-2022	DDH	PUD	153	3	1.96%	0.225	0.227	0.64%
	RC	PUD	1555	37	2.38%	0.208	0.210	1.08%
		PRD	1554	71	4.57%	0.208	0.207	-0.10%

Table 11-6: Check Sample Analysis of 2016's Pilot Campaign

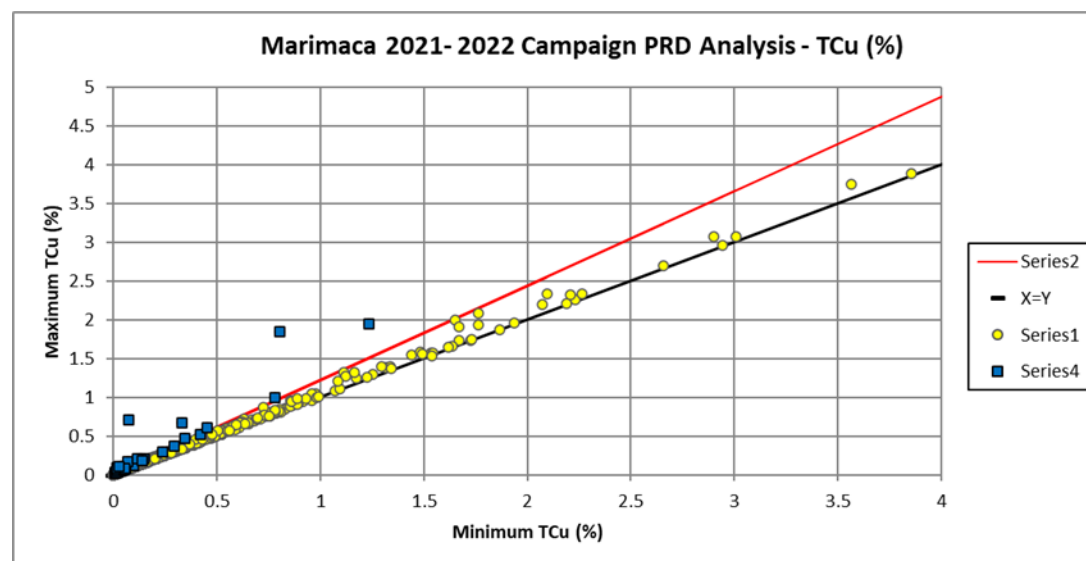
Duplicate Type	Duplicate Pairs	Average % CuT		Bias	R ²
		OA	DA		
CHD	240	0.816	0.819	0.01%	0.99

All drilling campaigns with duplicates demonstrate excellent precision in every test (Table 11-5), with slightly higher failure and mean RE percentages in the 2021-2022 campaign, although they remain within acceptable limits. Additionally, it is important to note that field duplicates (FID) have not been accounted for, meaning that the first split right after drilling is not adequately controlled. To mitigate this, the QP recommends decreasing the coverage of PRD and PUD samples in favour of FID samples.

The pilot drilling campaign demonstrates excellent accuracy in principle (Table 11-6). However, there is moderate uncertainty due to the absence of suitable control programs accompanying check samples to the main and especially the umpire laboratory. Nevertheless, the strong assay grade correlation between laboratories suggests good reproducibility.

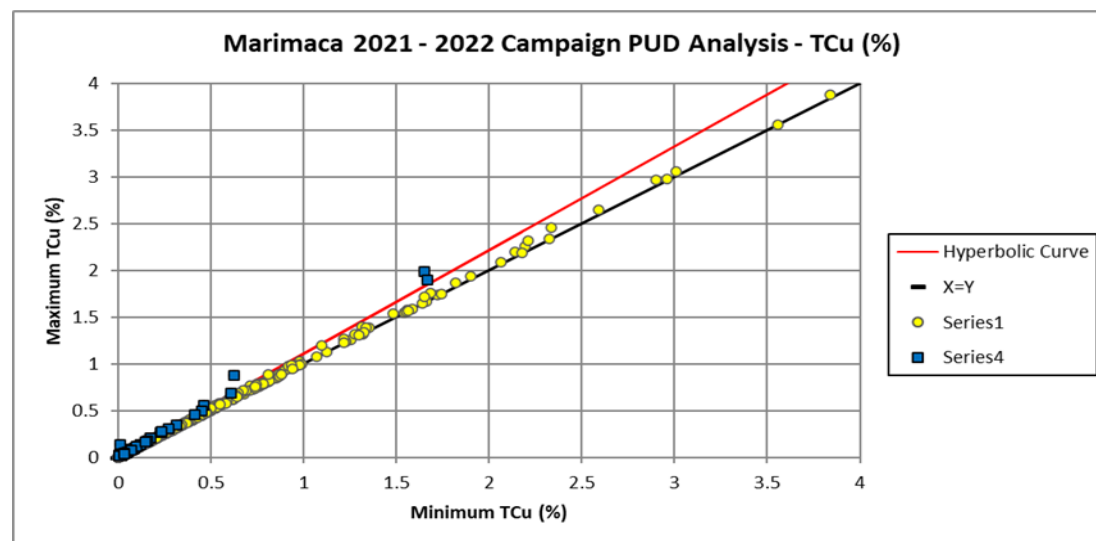
Additionally, validation charts for the 2021-2022 campaign's PRD (Figure 11-4) and PUD (Figure 11-5) samples were selected for this report due to their relevance.

Figure 11-4: Validation Plot for PRD Samples in the 2021-2022 Campaign – RC



Source: Atticus, 2023.

Figure 11-5: Validation Plot for PUD Samples in the 2021-2022 Campaign



Source: Atticus, 2023.

In conclusion, the duplicate analysis shows excellent precision with almost no observations, except for the limited control measures in the pilot drilling campaign. This issue is moderately alleviated due to the strong correlation among

check samples. It is recommended to consider the inclusion of FID samples in future campaigns and to reduce excessive duplicate coverage in favour of other control types.

11.9.3 Blanks

The information received by NCL did not include a database of blank samples for the 2016-2017 campaigns, and upon questioning, Marimaca confirmed that they did not use this type of control. Since 2018, fine blanks (FBL) have been inserted in the form of very low-grade SRMs provided by Intem Ltd. (prepared in the same manner as the rest of the materials), with values of 0.006% (MRC-1) and 0.003% (MRC-8) CuT. These are technically not blank because they do not have copper grades below the reported detection limit (RDL), usually 0.001% CuT in standard AAS tests. Still, they are considered sufficiently close to the RDL to treat them as such.

NCL's blank review begins by plotting a time series of blank assay values against an acceptability limit of 3-5 times the RDL. As with SRMs, outliers should remain below 5% of all samples. Since Marimaca uses slightly higher value "blanks," it seems reasonable to use the lower factor (3*RDL) and plot the acceptability limit as a window of ± 3 *RDL ($\pm 0.003\%$ CuT) from the best value (BV) of the SRMs. In case of elevated outlier percentages, blank values are plotted against their corresponding previous sample values in an RMA regression to look for a correlation that could imply systematic error and thus contamination.

Table 11-7 summarizes the blank analysis. Results for the 2016-2018 period are provided without regard to campaign or drill hole type, as detailed in NCL (2020), since no significant issues arise when reviewing them separately.

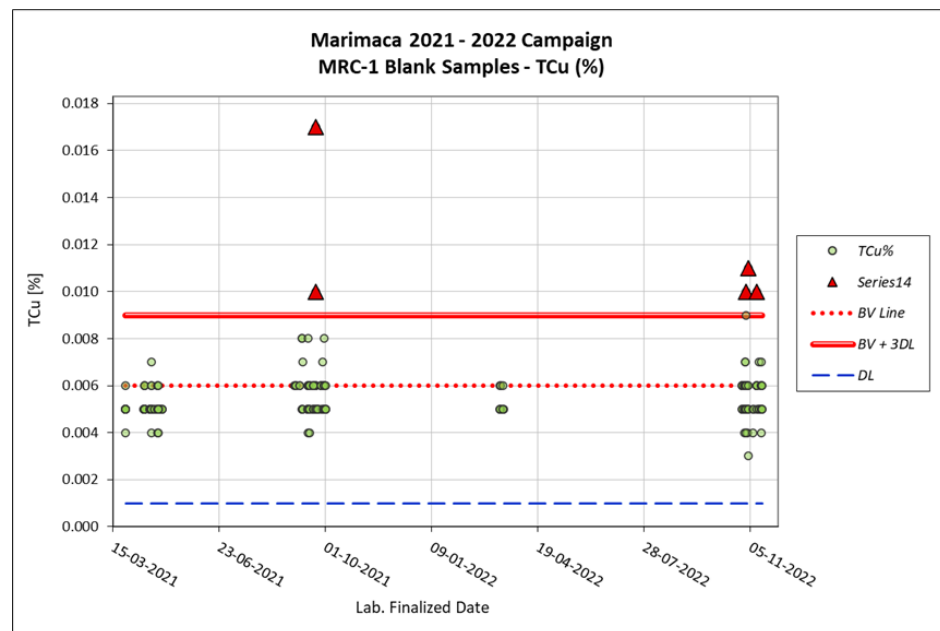
Table 11-7: Blank Sample Analysis of All Drilling Campaigns

Period	Hole Type	Blank Type (SRM)	SRM Samples	SRM %CuT	Outliers (<5%)		
				BV	AV	#	%
2016-2018	RC	MRC-1	991	0.006	0.005	6	0.60%
		MRC-1	254	0.006	0.005	5	1.97%
		MRC-8	683	0.003	0.003	9	1.32%
2021-2022	DDH	MRC-1	6	0.006	0.005	0	0.00%
		MRC-8	64	0.003	0.004	0	0.00%

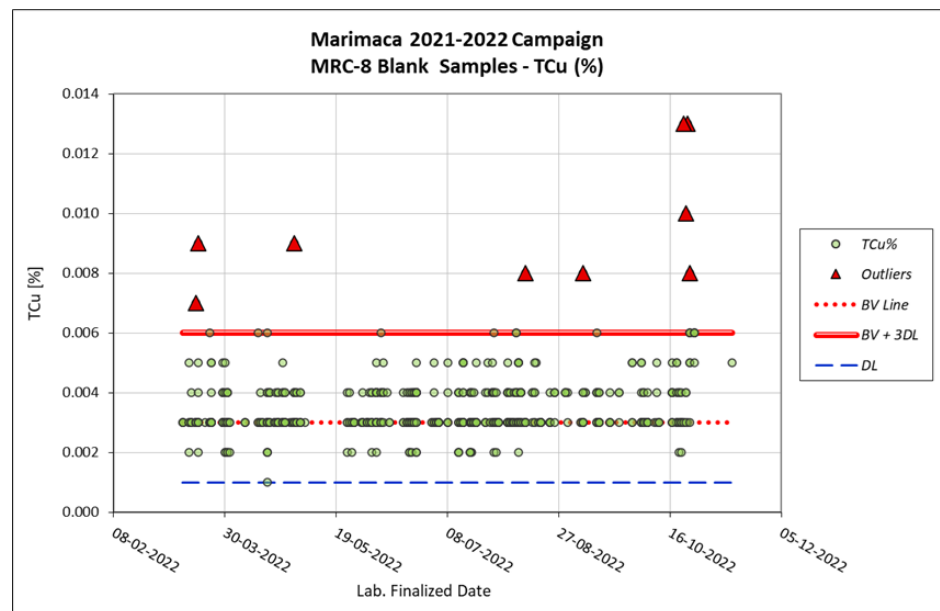
These campaigns demonstrate impressive results, with no signs of contamination and insertion rates that are more than reasonable. The lack of blanks in previous campaigns can be somewhat alleviated by examining the quality controls conducted and reported by the laboratory. The QA/QC protocols of GLQ and the reports from AAA indicate that both laboratories have well-organized quality control measures in place, including the inclusion of blank samples.

Additionally, it is important to note that coarse blanks (CBL) were not included in any campaign, meaning that potential contamination during sample preparation is not adequately controlled. To address this, it is recommended to reduce the coverage of FBL samples in favour of CBL samples.

Due to their relevance, control charts for the 2021-2022 campaign's blanks are shown in Figure 11-6 and Figure 11-7.

Figure 11-6: Control Chart for Material MRC-1 in the 2021-2022 Campaign

Source: Atticus, 2023.

Figure 11-7: Control Chart for Material MRC-8 in the 2021-2022 Campaign

Source: Atticus, 2023.

In conclusion, the blank analysis shows no evidence of contamination. While not irrelevant, the absence of blank samples in previous campaigns is of moderate to low concern, particularly after reviewing the quality controls reported by both laboratories. Given that the SRM and duplicate sample analyses performed extremely well, it is reasonable to infer a low probability of contamination in campaigns that lack blanks. The inclusion of CBL samples in future campaigns is recommended.

11.10 Sample Recovery

Marimaca has systematically controlled sample recovery for both DDH and RC drill holes, adhering to industry-standard procedures. For RC, this involved weighing the 2-m sample obtained. For DDH, the procedure included measuring the length of the core recovered for each drilling run and subsequently correcting it to 2-m intervals.

The RC recoveries are compared to a theoretical recovery calculated by multiplying the hole volume (drilling diameter determined by the drilling bit) by the unit weight factor (2.6 t/m³).

The sample recovery was analyzed to identify inconsistencies. The total number of records in the sample database is 70,300, with 69,683 having grade values. Only 35 have a recovery of 0, which represents 0.05% of the total population.

The average recovery for DDH samples is 97.65%, while for RC samples, it is 91.83%. The potential presence of bias regarding CuT grades and recovery was analyzed, and no anomalous values were detected.

The location of these 35 samples outside the geological solids model was verified. All samples within the geological model have adequate recovery values, so no further action was taken. The recovery values obtained for DDH and RC samples are considered reliable and acceptable by industry standards. The good recovery values observed are supported by favourable terrain characteristics, including the absence of underground water, the quality of the rocks, and the effective operations and control carried out by Marimaca.

11.11 Comment on Sample Preparation, Analyses, and Security

After three visits and carefully reviewing field protocols and procedures, the QP concludes that both company and laboratory personnel took care in collecting, managing, and assaying drill hole data. Thus, there is no reason to doubt the reliability of exploration and production information provided by Marimaca. Furthermore, an extensive review of reports and analytical results suggests that, apart from minor concerns that can be easily mitigated through recommendations, the resource database used by Marimaca is free of apparent bias.

12 DATA VERIFICATION

12.1 Verification Performed by Marimaca

Marimaca's exploration and evaluation work is conducted following documented procedures. It involves verifying and validating exploration and evaluation data before considering it for geological modelling and Mineral Resource estimation. During drilling, experienced geologists implemented industry-standard measures to ensure the consistency and reliability of the exploration data.

Quality control failures are investigated, and appropriate actions are taken when necessary, including requesting re-assaying of certain batches of samples.

12.2 Verification Performed by Mr. Luis Oviedo

In accordance with National Instrument 43-101 (NI 43-101), Mr Luis Oviedo, Geologist, RM CMC, a qualified person under NI 43-101, visited the Marimaca properties on December 6-7, 2016, on behalf of NCL. He was accompanied by Mr. Sergio Rivera, Vice President of Exploration at Marimaca. Mr. Oviedo conducted another site visit in August 2019 to verify the changes resulting from the latest drill program and again in February 2022. The most significant changes were in resource quality due to the densification of drilling, resulting in a substantial increase in Measured and Indicated resources, as well as the total volume of the resource.

During the visits, Marimaca staff reviewed all aspects that could materially impact the integrity of the drill hole and sampling databases (core logging, sampling, and database management). Mr. Oviedo interviewed the staff to ascertain exploration procedures and protocols.

Mr. Oviedo toured the Marimaca area, observing diamond and RC drill sites, collars, and the field status of the demarcations. He also examined core from several drill holes, finding that the logging information accurately reflects the actual core. The lithology and grade contacts he checked match the information reported in the core logs.

Mr. Oviedo, reviewed the drill hole databases in 2022 to prepare this technical report and concluded that they are adequate for producing block models, tonnage, and grade evaluations to a satisfactory degree.

Statistical comparisons were also completed of the block models' global grade against the informing drilling data. Additionally, they visually compared the block models with the informing samples on plans and sections to confirm that the estimations generally represent an adequate distribution of copper mineralization. The QP visited the properties in 2020 and 2022, subsequently reviewing the new data produced by Marimaca.

After three visits and a careful review of field protocols, reports, and QA/QC procedures, Luis Oviedo concludes that both company and laboratory personnel exercised diligence in collecting, managing, and assaying drill hole data. Therefore, there is no reason to question the reliability of the exploration and information provided by Marimaca. Moreover, an extensive review of reports and analytical results indicates that, aside from minor concerns that can be

easily addressed through Luis Oviedo's recommendations, the resource database used by Marimaca appears free of any obvious bias.

12.2.1 Luis Oviedo's Site Inspection

Mr. Luis Oviedo, visited the Project on three occasions: three days in December 2016, two days in August 2019, and three days in February 2022.

During these visits, the focus was on geological matters, including reviewing surface mapping, existing historical underground workings, associated sampling, QA/QC procedures, descriptions, sampling, storage, and sample care. Presentations were also provided.

12.3 Verification Performed by Mr. Carlos Guzmán

The QP responsible for the open pit mine planning and mining methods reviewed and verified the technical data used to support the mine design and production scheduling. The verification process included the review of topographic surfaces, resource block models, geotechnical inputs (e.g., slope angles), pit optimization parameters, and cost assumptions. Data were cross-checked for logical consistency, compared against industry norms where applicable, and confirmed to be suitable for use in preliminary mine planning. No material discrepancies were identified during the review. In the opinion of the QP, the data are adequate to support the open pit mining methods and mine planning work presented in this technical report.

12.4 Verification Performed by Mr. Scott Elfen

The geotechnical data was verified through a review of the field and laboratory test work, mine production schedule, and hydrology/hydraulics and geotechnical analyses used in the development of the dynamic leach pad, ponds, and ripos waste dumps. The verification process also included the review of topography and dynamic leach pad ponds, and ripos waste dump surfaces. No material discrepancies were identified during the review.

There have been no limitations on the QP on his verification of any of the data presented in this report. The QP's opinion is that all data presented in this report are adequate for the purposes of the development of the dynamic leach pad, ponds, and ripos waste dumps.

12.4.1 Scott Elfen's Site Inspection

Scott Elfen visited the Project for one day on June 12, 2025. During the visit, Mr. Elfen viewed the future locations of the mine open pit, mine waste dumps, processing plant, dynamic heap leach pad and ripios waste dumps. Mr. Elfen also visited the access road, seawater pipeline route and high voltage power line route.

12.5 Verification Performed by Tommaso Roberto Raponi

Metallurgical test data was verified through a review of previous studies and testwork reports and an analysis of the more recent results from the Geomet VI and VII metallurgical testwork programs. Metallurgical testing has been completed at specialist laboratories Geomet SpA and SGS Inc. Each laboratory has their own QA/QC procedures, which they adhere to in performing their testing on samples. All metallurgical data was verified and is adequate for this Technical Report as required by NI 43-101 guidelines.

There have been no limitations on the author on his verification of any of the data presented in this report. The author's opinion is that all data presented in this report are adequate for the purposes Mineral Resource Estimation of this report and is presented so that it is not misleading.

Inputs into operating costs were obtained through recent quotations or available data from other projects. Operations labour costs were provided by Marimaca and reviewed to ensure their currency.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

Marimaca has completed seven metallurgical testing campaigns between 2017 and 2024 (Geomet I, II, III, IV, V, VI and VII) to characterize the metallurgical response of samples collected from its Marimaca Copper Project. All testing was performed at Geomet SpA in Santiago, Chile. Testwork campaigns Geomet I to Geomet IV were reported in the previous stage of the project. Geomet V to VII programs have more recent results that were used in the FS. Table 13-1 shows a description of each Geomet campaign while Table 13-2 shows the mineral zone definitions used for sample selections.

Table 13-1: Metallurgical Testwork Summary Table

No.	Testing Campaign	Description	Year	Laboratory
1	Geomet I	Testwork with seven samples (Marimet 1 to 7) including ISO pH, sulphation, and column tests (1 m). Testwork was performed at crush sizes P ₉₀ of 12.7 mm and P ₉₀ of 19.0 mm, irrigation rate 10 L/h/m ² , without salt, raffinate (10 g/L H ₂ SO ₄ , Cu: 0.3 g/L).	2017	Geomet S.A
2	Geomet II			
3	Geomet III	Bottle rolls ISO pH tests	2018	Geomet S.A
4	Geomet IV	Two-phase testwork: <u>Phase 1:</u> Four samples (BROC, CRIS, WAD, MIX) including ISO pH tests, sulphation, and mini columns (30 cm). NaCl dosage in agglomeration (0 and 15 kg/t) and resting time (2 and 15 days) were analyzed. <u>Phase 2:</u> Three mixtures (OX, COMB, SU) including ISO pH test, sulphation, mini columns, and taller columns (1 and 1.5 m). Irrigation rates of 5 and 8 L/h/m ² , NaCl dosage in agglomeration (0, 15, and 25 kg/t), and resting time (2, 15, and 30 days) were analyzed. ROM leach tests (1 m ³ gabion baskets) Tests with seawater (H ₂ SO ₄ : 10 g/L, Cl ⁻ : 40 g/L) in both phases. Crush size P ₉₀ of 12.7 mm. ROM crush size of -75 mm.	2020	Geomet S.A
5	Geomet V	Testwork with five samples (BROC, CRIS, WAD, MIX, ENR) in mini columns (0.30 m dia.) and columns (4 m high). Crush size: P ₉₀ of 12.7 mm. ISO pH and sulphation tests were included. <u>Mini Columns:</u> Agglomeration acid dose: 20 and 30 kg/t Salt dose: 0 kg/t for BROC, CRIS, WAD and 15 kg/t for MIX and ENR Rest time: 3 days for BROC, CRIS, WAD and 30 days for MIX and ENR Irrigation rate: 12 L/h/m ² . Irrigation solution: synthetic raffinate based on seawater, adjusting impurities (H ₂ SO ₄ : 2.5 / 5 / 10 g/L, Cl ⁻ : 60 g/L, Cu: 0.2 g/L) <u>Columns:</u>	2022	Geomet S.A

No.	Testing Campaign	Description	Year	Laboratory
		Agglomeration acid dose: 20 and 25 kg/t Salt dose: 0 kg/t for BROCC, CRIS, WAD and 15 kg/t for MIX and ENR Rest period: Three days for BROCC, CRIS, WAD and 30 days for MIX and ENR Irrigation rate: 12–15 L/h/m ² Irrigation solution: Irrigation 1: synthetic ILS (H ₂ SO ₄ : 8–10 g/L, Cl ⁻ : 60 g/L, Cu: 1.5 g/L). Irrigation 2: seawater with adjusted impurities (Cl ⁻ : 60 g/L). Irrigation 3: synthetic raffinate based on seawater adjusting impurities (H ₂ SO ₄ : 2.5–10 g/L, Cl ⁻ : 60 g/L, Cu: 0.3 g/L)		
6	Geomet VI	Testwork with 50% BROCC / 50% CRIS sample in 1 m high columns to determine the impurity dissolution capacity. Testwork with five column leach tests in series. Seawater (H ₂ SO ₄ : 10 g/L, Cl ⁻ : 22 g/L) is used for columns 1 and 2. PLS from columns is fed to SX, generating raffinate that is fed to column 3. Crush size: P ₉₀ of 12.7 mm. Irrigation rate: 10 L/h/m ² . Agglomeration acid dosage: 20 kg/t, rest: 3 d. No salt added during curing. Irrigation cycle per stage: 10 d.	2023	Geomet S.A
7	Geomet VII	Testwork with five samples (BROCC, CRIS, WAD, MIX, ENR) in 4 m high columns. Crush size: P ₈₀ of 12.7 mm. ISO pH and sulphation tests were included. Crush sizes include P ₈₀ of 19 mm and 12.7 mm. Irrigation rates of 6-8-10 L/h/m ² for BROCC. Salt dose: 0 kg/t for BROCC, CRIS, WAD, and 15 kg/t for MIX and ENR Rest period: 3 days for BROCC, CRIS, WAD; 30 and 45 days for MIX and ENR. Irrigation solution: Raffinate specially prepared for the campaign. It contains 0.33 g/L Cu, 2.5 to 3.1 g/L FeT, 2.23 g/L Al, 1.59 g/L Mg, 21.3 to 24.2 g/L Cl ⁻ and 10 g/L H ₂ SO ₄ .	2024	Geomet S.A
8	Comminution	A comminution testing program for BROCC, CRIS, WAD, ENR and MIX UGS samples. A total of 13 samples were tested including bond crushing work index and Bond Abrasion tests.	2024	SGS

Table 13-2: Mineralization Zones Definitions

Mineralization Zone	Mineralogy	Zoning
Brochantite (BROC)	Associated with cores of higher grades of CuT and CuS. Domain of green crystalline minerals such as Brochantite , as well as Chrysocolla and black Cu oxides .	It is distributed over the Mixed zone and is surrounded by Chrysocolla on the upper part and wad areas towards the edges.
Chrysocolla (CRIS)	Second unit of better grades of CuT and CuS with a Chrysocolla domain, followed by the occurrence of black Cu oxides and Brochantite . Gerhardite and chenevixite have also been identified. Associated with hematite, goethite, and magnetite.	It is located on the Brochantite unit and surrounded by zones of black Cu oxides. It emerges in the Marimaca sector.
WAD	Different species of black Cu oxides. Tenorite , copper wad , limonites with Cu and occasional copper pitch occur.	It is distributed throughout the deposit , generally surrounding the chrysocolla areas.
Mixed (MIX)	Cu oxides and sulphides. Mainly Brochantite, Chrysocolla, calcosine, covellite, minor tenorite and occasional cuprite occur.	It occurs in the transition zone between secondary sulphides and Brochantite, in some cases just above the roof of primary sulphides mainly towards the margins of the mineralized body .
Enriched (ENR)	Secondary sulphides, calcosine and covellite . Presence of pyrite , Chalcopyrite , magnetite and minor hematite .	Associated with the presence of main structures (feeder and vein-faults).
Chalcopyrite (CP)	Chalcopyrite domain (>50%), minor pyrite, abundant magnetite and minor hematite.	It has been identified in deeper drillings mainly in the Atahualpa sector.
Leached (LIX)	Limonite domain (goethite>hematite).	It occurs on the sulphide roof and is mainly associated with main structures.

13.2 Comminution Testwork

Comminution testing was completed at SGS Chile. The test program included bond crushing work index (CWi) tests and Bond Abrasion (Ai) tests. The abrasion index is used to estimate steel consumption in the crusher linings. Results obtained for metallurgical units BROC, CRIS, WAD, ENR and MIX are shown in Table 13-3. Average CWi value for the BROC samples was 17.0 kWh/t, classified as difficult to crush. Average CWi for CRIS was 18.2 kWh/t, also classified difficult to crush. WAD samples have an average CWi of 14.2 kWh/t, considered medium difficulty to crush, while the ENR samples had an average CWi of 20.1 kWh/t, classified as very difficult to crush. For design purposes, the 75th percentile value of 23 kWh/t was used.

The abrasion index results are all classified as slightly abrasive.

Table 13-3: Crushing Work Index and Abrasion Index Test Results

Sample	Maximum Impact Work Index (kWh/t)	Minimum Impact Work Index (kWh/t)	Average Impact Work Index (kWh/t)	Standard Deviation	Bond Abrasion Index (g)
BROC-1	42.8	1.95	17.16	9.58	0.018
BROC-2	28.5	6.56	16.15	7.38	0.020
BROC-3	36.6	6.38	17.62	9.37	0.024
CRIS-1	32.9	5.35	17.52	6.88	0.020
CRIS-2	46.3	6.45	18.05	8.96	0.020
CRIS-3	39.9	7.89	19.06	8.70	0.020
WAD-1	31.2	2.96	15.07	8.67	0.022
WAD-2	29.9	1.05	12.85	7.74	0.018
WAD-3	33.8	4.60	14.57	7.85	0.022
ENR-1	32.3	9.68	20.02	6.06	0.021
ENR-2	30.7	5.32	20.16	7.32	0.021
MIX-1	32.5	19.57	25.26	4.47	0.021
MIX-2	32.5	19.27	25.49	4.31	0.026

13.3 Mineralogy

The mineralogical characterization was performed mainly using automated mineralogy QEMSCAN and TESCAN methods.

The modal mineralogy, as shown in Figure 13-1, is primarily influenced by feldspar across all datasets. Quartz is the second most abundant gangue mineral in Geomet I, II, and V, whereas limonite is the second most abundant in the Geomet IV samples. This distinction is significant because both silicates and limonite are known to consume sulphuric acid during the initial reaction with the acid. However, the by-products of these reactions can partially regenerate sulphuric acid in subsequent interactions, either with each other or with fresh ore. It is well-known that acid consumption is the most significant economic factor in heap leaching, following copper recovery and leach kinetics.

The copper deportment is shown in Figure 13-2. The influence of Atacamite and Chrysocolla is evident in most samples from the Oxide zone (BROC, CRIS WAD), while the MIX and ENR samples show the presence of chalcopyrite, covellite and wad (a variety of copper-bearing, manganese-rich mineraloids, often found as a black, earthy substance).

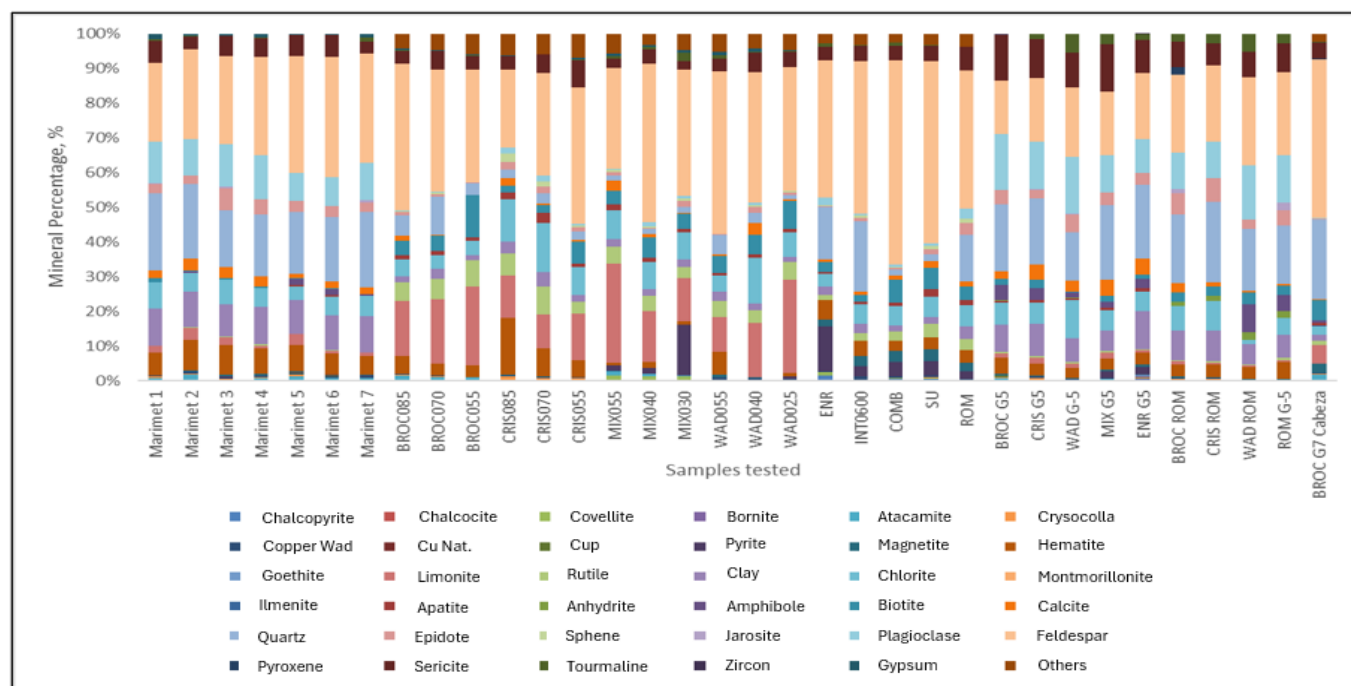
Understanding gangue mineralogy allows for addressing and incorporating potential major sources of acid consumption into the modelling, as this parameter is the most significant economic factor in heap leaching.

The mineralogy shows that limonite is the most significant gangue mineral for acid consumption present in the samples that needs to be addressed. Calcite is also present in most of the samples but in small amounts and only has a minor effect on acid consumption.

Gangue acid consumption occurs through three primary mechanisms:

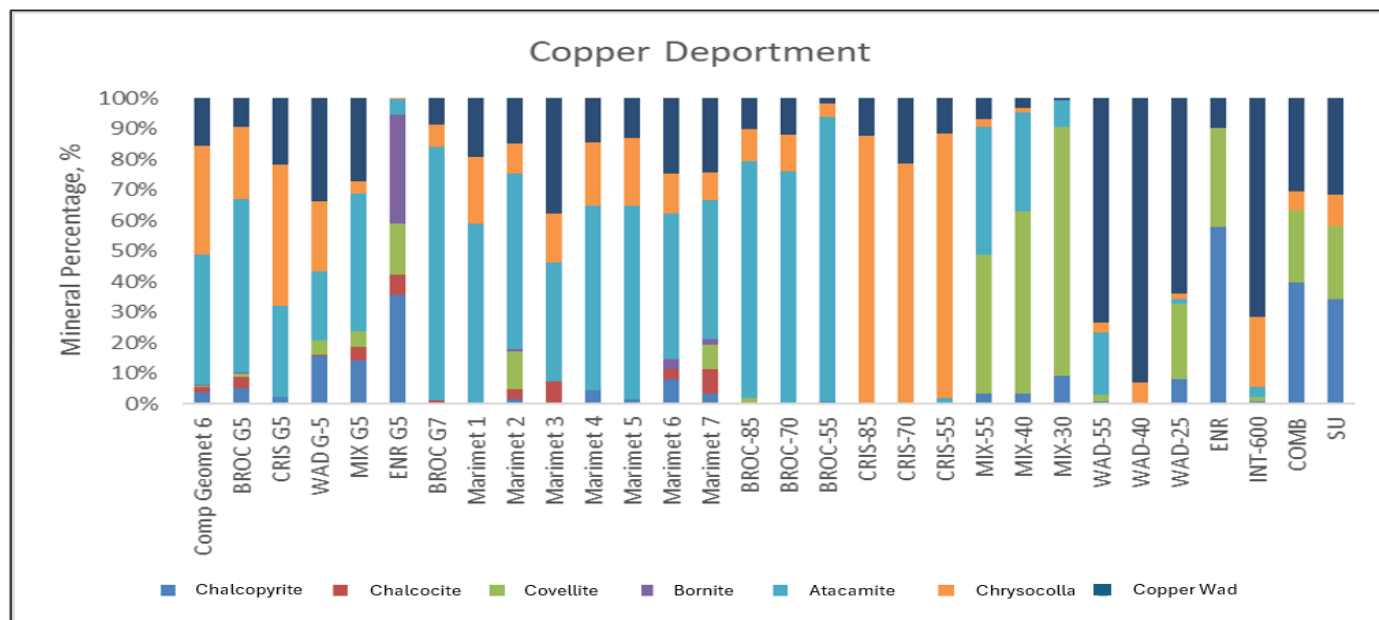
- Mineral dissolution, initial dissolution followed by the formation of a precipitate layer that restricts further leaching, or the transformation of gangue into secondary species.
- Carbonates, which react quickly in acid, can significantly impact the curing stage, where ore is left to rest after heap construction by decreasing pH and causing the precipitation of secondary minerals. Insufficient acid addition during agglomeration may lead to complete reagent consumption before irrigation, often resulting in lower metal recovery.
- Calcite dissolves faster than dolomite, which in turn dissolves faster than siderite, with dissolution kinetics varying based on factors like pH, solution composition, temperature, and morphological features such as grain size and surface area. However, the acid consumption from carbonates is finite, ceasing once all available carbonate minerals have dissolved.

Figure 13-1: Modal Mineralogy for Column Leach Test Samples



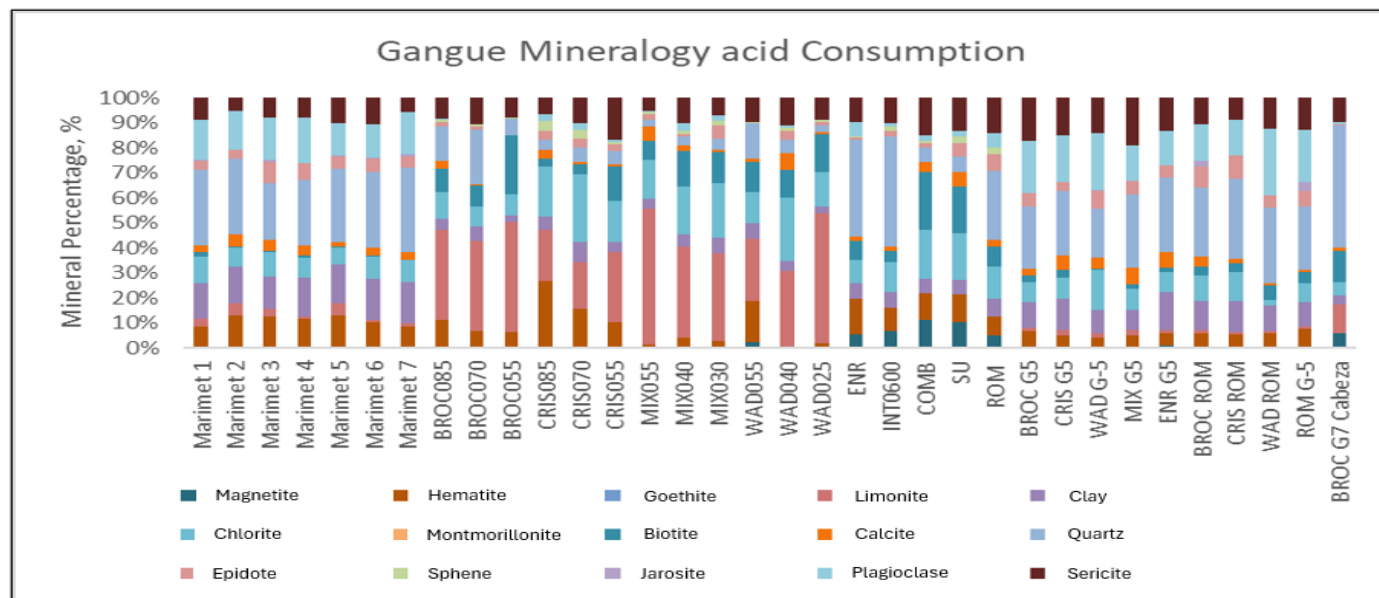
Source: Ausenco, 2025.

Figure 13-2: Copper Department Column Leach Test Samples



Source: Ausenco, 2025.

Figure 13-3: Gangue Mineralogy for Column Leach Test Samples



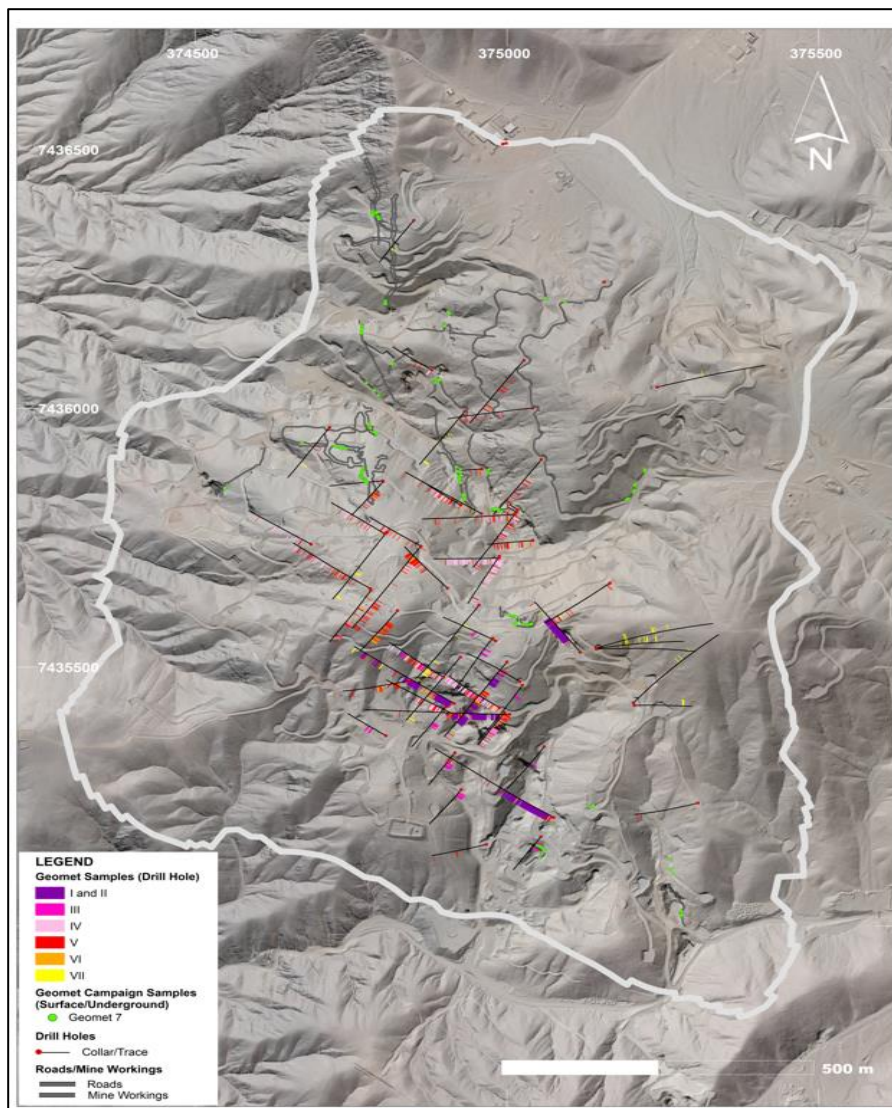
Source: Ausenco, 2025.

13.4 Metallurgical Testwork

This section provides summaries for each metallurgical testing program and key results.

Figure 13-4 shows the spatial location of the samples used in the seven metallurgical testing programs in plan view also showing the most recent pit shell outline.

Figure 13-4: Location of Samples for Geomet I to VII Metallurgical Testing Programs



Source: Marimaca Copper, 2025.

13.4.1 Geomet I and II

13.4.1.1 Samples

Seven samples were generated for column testing from mineralized zones defined during the 2016 drilling campaign. Sample selections were based on a matrix that links the spatial location with the mineral zones.

A portion of the samples correspond to monzodiorite (diorite with potassium feldspar) affected by an albite-chlorite-actinolite alteration; a minor part to the andesitic and dacitic dykes composition that cut the monzodiorite. Oxide mineralogy is Brochantite, Atacamite, Chrysocolla and wad. Most of the oxide mineralized material occurs as fracture impregnation and filling.

The samples used for this testing were named: Marimet (M) M1, M2, M3, M4, M5, M6 and M7. Table 13-4 shows the chemical characterization (CuT is total copper and CuS is acid soluble copper) of each sample and a simple description of its mineralogy and location.

13.4.1.2 Sample Assays

In April 2017, Geomet was commissioned for Phase 1 of the metallurgical program, which included samples from the three aforementioned metallurgical units and whose scope included the sample preparation, sample characterization, particle size analysis, sulphation tests, ISO-pH tests², and leaching tests at two crush sizes in seven columns of 150 mm diameter by 1 m high in duplicate including leach residue analysis.

Based on the Phase 1 results, Geomet commenced Phase 2 of the program in September 2017 using the same samples.

Table 13-4: Geomet I and II Samples Chemical and Mineralogical Characterization

Sample	CuT (%)	CuS (%)	Solubility Ratio (RS)* (%)	AAC** (kg/t)	Mineralogical Characterization (Location)
M1	0.88	0.71	80	49	Chrysocolla (Pit 2)
M2	1.47	1.17	79	32	Brochantite/Atacamite > Supergene sulphide (Pit 2)
M3	0.49	0.32	65	53	WAD dominant (Pit 2)
M4	0.81	0.71	87	39	Chrysocolla (Pit 1)
M5	1.14	0.97	85	39	Brochantite/Atacamite (Pit 1)
M6	0.62	0.47	75	30	WAD dominant > supergene sulphide (Pit 1)
M7	0.58	0.40	69	23	Mixed primary Sulphides-supergene > oxide (High Pit)

*Copper Solubility Ratio or RS defined as the ratio of CuS to CuT.

**Analytical Acid Consumption assay: 10 g of sample in 100 mL of 1N sulphuric acid solution for 2 hours.

² Iso-pH test corresponds to a leaching bottle test using a 1 kg sample 100% under #10 Ty, 33% solid concentration and controlling the pH at 1.5 for a total time of 72 hours.

13.4.1.2.1 Crush Size

The crush size for these tests was 90% passing (P_{90}) of 12.7 mm. All samples had very similar particle size distributions.

13.4.1.2.2 Irrigation Rate:

The initial tests were performed with an irrigation rate of 10 L/h/m². Subsequent tests included lower irrigation rates, of 8 L/h/m², to achieve a higher solution copper concentration. For the initial tests, an acid strength of 9.5 g/L was used, and in the subsequent tests a target sulphuric acid concentration of 10.5 g/L was used.

13.4.1.2.3 Agglomeration Acid Addition

In the first 1 m high column leach tests, almost all tests finished deficient in acid, with the column effluents having too high a pH to leach the copper. Consequently, a series of sulphation tests were completed to better define the amount of acid to be added to each sample in the agglomeration stage.

Each sample, M1 to M7, was subjected to sulphation tests using three different acid doses; low, mid and high.

13.4.1.2.4 Column Height

As stated above, most column leach tests were performed at column heights, between 1.6 m and 3 m. Table 13-5 shows the height for each column leach test.

Table 13-5: Geomet I and II Column Leach Test Heights

Sample	M1	M2	M3	M4	M5	M6	M7
Column Height (m)	2.7	2.2	1.6	3.0	2.5	3.0	2.8

13.4.1.2.5 Leaching Time, Solution Application and Acid Consumption:

Initially, a fixed leach solution to ore ratio of at least 2.5:1 to compensate for the variable column height was used.

However, all tests were terminated between 64 and 66 days, hence the leaching ratio varied for each one of the column tests due to the varying height. Therefore, the overall acid consumption was variable for each test, not only for acid addition during the agglomeration stage, but also because of the excess volume of leaching solution in the lower height columns which have higher solution to ore ratios.

13.4.1.3 Sulphation Test Results

Table 13-6 and Table 13-7 show the sulphation test results and graphs for samples M1 to M4 and M5 to M7 respectively.

Table 13-6: Geomet I and II M1 to M4 Sulphation Tests Results

Description	Marimet-1 P90 12.7 mm			Marimet-2 P90 12.7 mm			Marimet-3 P90 12.7 mm			Marimet-4 P90 12.7 mm		
Mass (kg)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CuT Grade (%)	0.87	0.87	0.87	1.50	1.50	1.50	0.45	0.45	0.45	0.85	0.85	0.85
Cut (g)	17.40	17.40	17.40	30.00	30.00	30.00	9.00	9.00	9.00	17.00	17.00	17.00
Acid Dosage (kg/t)	25	28	31	25	30	35	25	30	35	22	25	28
Washing Volume (L)	3	3	3	3	3	3	3	3	3	3	3	3
H ₂ SO ₄ (g/L)	0.00	0.00	0.00	0.00	0.00	0.00	2.10	2.38	2.70	0.00	0.00	0.00
pH	2.15	2.12	2.10	2.33	2.25	2.26	2.05	1.92	1.91	2.17	2.15	2.14
Cu (g/L)	2.59	2.80	2.93	2.87	3.32	3.39	1.03	1.08	1.14	2.15	2.38	2.51
Dissolved Cu (g)	7.77	8.40	8.78	8.62	9.97	10.16	3.09	3.24	3.42	6.46	7.13	7.54
CuT Extraction (%)	44.66	48.28	50.45	28.72	33.22	33.86	34.29	35.96	38.02	38.01	41.93	44.33
Added Acid (g)	52.08	58.33	64.58	52.08	62.50	77.92	52.08	62.50	72.92	45.83	52.08	58.33
Acid Consumption (kg H ₂ SO ₄ /kg Cu)	6.70	6.94	7.36	6.04	6.27	7.18	16.88	19.31	21.31	7.09	7.31	7.74

Notes: green and yellow represent the best sulphation results from a metallurgical point of view.

Table 13-7: Geomet I and II M5 to M7 Sulphation Tests Results

Description	Marimet-2 P90 12.7 mm			Marimet-2 P90 12.7 mm			Marimet-2 P90 12.7 mm		
Mass (kg)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CuT Grade (%)	1.16	1.16	1.16	0.61	0.61	0.61	0.63	0.63	0.63
Cut (g)	23.20	23.20	23.20	12.20	12.20	12.20	12.60	12.60	12.60
Acid Dosage (kg/t)	22	25	28	17	20	23	17	20	23
Washing Volume (L)	3	3	3	3	3	3	3	3	3
H ₂ SO ₄ (g/L)	0.00	2.43	1.75	1.75	1.89	2.29	1.30	1.44	1.73
pH	2.12	2.07	1.98	2.02	1.92	1.81	2.04	1.96	1.89
Cu (g/L)	3.17	3.28	3.29	1.53	1.67	1.67	1.25	1.27	1.31
Dissolved Cu (g)	9.52	9.83	9.86	4.59	5.00	5.01	3.74	3.80	3.94
CuT Extraction (%)	41.04	42.39	42.49	37.61	40.96	41.09	29.7	30.2	31.24
Added Acid (g)	45.83	52.08	58.33	35.42	41.67	47.92	35.42	41.67	47.92
Acid Consumption (kg H ₂ SO ₄ /kg Cu)	4.81	5.30	5.92	7.72	8.34	9.56	9.47	10.95	12.17

Notes: green and yellow represent the best sulphation results from a metallurgical point of view.

The best sulphation results, metallurgically speaking, are highlighted in yellow and green. The goal of these tests was to add sufficient acid, but not excessive, to achieve a pH of 1.8 to 2.1 in the wash water from the agglomerates.

For samples with the same or similar CuT grade, the sulphation result, at the same crush size, is a clear indicator of CuS.

The acid addition for each sample to add in agglomeration, resulting from these sulphation tests, is shown in Table 13-8.

Table 13-8: Geomet I and II Agglomeration Acid Addition per Sample

Sample	M1	M2	M3	M4	M5	M6	M7
Added Acid (kg/t)	28	32	27	27	25	21	21

13.4.1.3.1 Column Leaching Tests

Table 13-9 shows a summary of the results for samples M1 to M7 with a crush size of 90% -12.7 mm.

Table 13-9: Geomet I and II Column Leach Tests Results Summary

ID	Sample	Irrigation Rate (L/h/m²)	Height (m)	Solution to Ore Ratio	Head Grade (%)			Results						
					CuT	CuS	RS	Cu Extraction (%)			Account (%)	Acid Consumption (kg/t)		
								AQ Head	Calc. Head	Final Tail		Gross	Net or Gangue	
Col-29	Marimet-1	8	2.7	3.21	0.88	0.707	80.4	83.6	83.5	83.4	100.2	59.8	48.4	
Col-30	Marimet-1	8	2.7	3.15	0.88	0.707	80.4	79.4	82.7	83.4	96.1	60	49.3	
Col-31	Marimet-2	8	2.2	3.19	1.47	1.169	79.6	71.5	76.4	77.9	93.5	70.1	53.9	
Col-32	Marimet-2	8	2.2	3.21	1.47	1.169	79.6	70.4	76.2	77.9	92.5	69.8	53.8	
Col-33	Marimet-3	8	1.6	4.46	0.49	0.318	65.3	68.6	72.6	74.1	94.5	63.7	58.5	
Col-34	Marimet-3	8	1.7	4.41	0.49	0.318	65.3	70.5	72.6	73.3	97.2	65.7	60.4	
Col-35	Marimet-4	8	3	2.53	0.81	0.706	87.3	77	81.6	82.6	94.4	57	47.4	
Col-36	Marimet-4	8	3	2.54	0.81	0.706	87.3	75.9	80.7	81.9	94.1	56.7	47.2	
Col-37	Marimet-5	8	2.5	2.91	1.14	0.966	85	78.8	84.2	85.2	93.6	53.2	39.4	
Col-38	Marimet-5	8	2.5	2.91	1.14	0.966	85	80.5	83.9	84.5	96	53.7	39.7	
Col-39	Marimet-6	8	3	2.61	0.62	0.468	75.1	75.1	76.9	77.5	97.6	46.7	39.5	
Col-40	Marimet-6	8	3	2.62	0.62	0.468	75.1	73.3	77.2	78.3	95	46.8	39.8	
Col-41	Marimet-7	8	2.8	2.78	0.58	0.398	68.1	62.6	68.5	71.2	91.5	48.8	43.2	
Col-42	Marimet-7	8	2.8	3.05	0.58	0.398	68.1	62.8	71.2	74.6	88.3	47.7	42.1	

Columns have acceptable metallurgical accountability with half of the tests achieving $100 \pm 5\%$ on a CuT head assay compared to CuT calculated head grade. The balance of the tests achieved $100 \pm 10\%$ metallurgical accountability or better.

13.4.1.3.2 Sulphuric Acid Consumption

All the Geomet II columns (Table 13-9) and some of ISO-pH tests (Table 13-10) reached an acid consumption higher than the Analytic Acid Consumption (AAC) of the sample, which is usually referred as the maximum acid consumption achievable in a typical leaching process as is performed with samples pulverized to $-105 \mu\text{m}$ at a higher acid content (50 g/L acid).

This high acid consumption is partially explained due to the fact that the leaching solution does not have any impurities present, such as Fe, Al and Mg, which, if present in the leaching solution, might reduce their dissolution from the mineral.

Table 13-10: Geomet I ISO-pH Test

Sample	Head Grade				ISO pH Test Conditions		ISO pH Test Results		
	CuT (%)	CuS (%)	Soluble CuS/CuT %	AAC (kg/t)	pH	Time (h)	CuT Recovery %	Gross H_2SO_4 Cons. (kg/t)	Net H_2SO_4 Cons. (kg/t)
M1	0.937	0.732	78	49	1.5	48	85	44	32
M2	1.502	1.133	75	32	1.5	48	82	64	44
M3	0.456	0.272	60	53	1.5	48	66	42	37
M4	0.851	0.715	84	39	1.5	48	88	50	38
M5	1.157	0.977	84	39	1.5	48	86	35	19
M6	0.622	0.436	70	30	1.5	48	73	29	22
M7	0.626	0.402	64	23	1.5	48	65	44	37

13.4.1.3.3 Copper Extraction and Acid Consumption Profiles

The CuT extraction rate and profiles are typical of acid soluble oxide minerals. The initial dissolution, with most of the acid added in agglomeration, is rapid, followed by a slower leaching residual mineral. The results show that M1, M3 and M5, the samples with the highest acid consumption, continue to consume acid almost linearly and continues beyond the 1:1 solution to ore ratio. The M2 and M4 samples continue to consume acid almost linearly and continue beyond the 2:1 solution to ore ratio.

13.4.1.4 Geomet I and II Results Summary

The recoveries and the acid consumption estimated from the tests performed, for the indicated copper grades, are as follows:

- The M1 sample, corresponding to a CuT grade between 1.0% and 0.8% and a mineral-type description as Chrysocolla, has a recovery of 77% and a net (Gangue) acid consumption of 42 kg/t.
- The M3 sample, corresponding to a CuT grade between 0.4% and 0.5% and a mineral-type description as Wad - Chrysocolla – Brochantite/Atacamite, has a recovery of 62% and a net (Gangue) acid consumption of 52 kg/t.
- The M5 sample, corresponding to a CuT grade between 1.2% and 1% and a mineral-type of Brochantite/Atacamite, has a recovery of 76% and a net (Gangue) acid consumption of 37 kg/t.
- The M6 sample, corresponding to a CuT grade between 0.6% and 0.43% and a mineral-type of Wad and Supergene Sulphide, has a recovery of 70% and a net (Gangue) acid consumption of 38 kg/t.
- The M7 sample, corresponding to a CuT grade between 0.6% and 0.5% and a mineral-type of Mix of Primary Sulphide and Supergene-Oxides, has a recovery of 58% and a net (Gangue) acid consumption of 40 kg/t.
- The M2 sample, corresponding to a CuT grade between 1.5% and 1.3% and a mineral-type of mainly Brochantite/Atacamite with minor Supergene Sulphide, but which has a high sulphuric acid consumption, has a recovery of 67% and a net (Gangue) acid consumption of 50 kg/t.

The leaching kinetics for all samples is fast, at one-third of the leaching cycle achieving 70% to 80% recovery.

The expected net (Gangue) acid consumption is estimated to be between slightly below 40 kg/t and up to 60 kg/t.

13.4.2 Geomet III

13.4.2.1 Samples

In the Geomet III metallurgical testing program, the samples were of a higher proportion of Brochantite/Atacamite and chrysocolla mineral-type as these two mineral-types will be treated in the first years of production (5 to 10 m depth). Thirty-seven composites were obtained from 13 drill hole locations; ten were from reverse circulation drill holes (RC) and three were from diamond drill hole (DDH) core.

The methodology consisted of selecting drillholes with high and moderate acid consumption and CuT grades greater than 0.9%, between 0.5% and 0.9% or equal to 0.35%.sProgram Description

This test program included the head chemical characterization of the 37 composites (CuT, CuS, FeT, Al, Mg, CAA, CO₃, AIS, FeTS and MgS) and the completion of 42 ISO-pH 1.5 tests, 37 of them at 48 hours and five at 72 hours.

13.4.2.2 Key Results

The bottle-roll leach test results are shown in Table 13-11.

In these leach tests, copper recovery exceeded the soluble copper (acid soluble assay) content except for samples M-19, M-21, M-22 and M-23. This indicates that some insoluble secondary copper minerals were rendered soluble. This is consistent with this trend in the Geomet II column testing for oxide samples.

Table 13-11: ISO-pH Tests, CuT Recovery and Acid Consumption

Sample ID	Leach Time (h)	CuT A.Q. (%)	CuS (%)	Sol. Ratio (%)	Avg CuT Rec (%)	Ratio Leach Rec/CuS	Acid Consumption		Head	
							Gross (kg/t)	Net (kg/t)	CO ₃ (%)	CAA (kg/t)
M-4	48	1.01	0.81	80.00	84.7	1.06	35.8	22.9	0.15	28.8
M-5	48	0.74	0.48	64.73	74.8	1.16	30.4	22.1	0.15	35.5
M-6	48	0.37	0.26	70.05	82.0	1.17	44.3	39.8	1.10	48.1
M-7	48	0.87	0.55	63.35	74.9	1.18	33.3	23.3	0.05	37.8
M-8	48	1.66	1.36	81.64	84.6	1.04	40.8	19.4	0.05	40.2
M-9	48	1.13	0.87	77.10	84.7	1.10	40.3	26.0	0.45	50.3
M-10	48	0.67	0.53	79.54	86.5	1.09	39.9	31.2	0.40	37.5
M-10	72	0.67	0.53	79.54	87.7	1.10	42.3	34.0	0.40	37.5
M-11	48	0.61	0.47	76.78	83.7	1.09	39.4	31.6	0.60	34.6
M-12	48	1.05	0.96	90.93	93.3	1.03	42.2	27.0	0.10	48.2
M-13	48	0.65	0.56	86.27	88.7	1.03	33.5	24.8	0.40	52.2
M-13	72	0.65	0.56	86.27	89.9	1.04	40.4	32.4	0.40	52.2
M-1	48	0.50	0.43	85.03	83.7	0.98	45.3	39.6	0.82	36.8
M-2	48	0.46	0.37	81.08	86.9	1.07	44.7	38.8	0.86	37.5
M-3	48	0.62	0.48	77.56	82.9	1.07	47.0	40.1	1.05	35.3
M-14	48	1.77	1.63	91.90	95.8	1.04	75.9	52.7	1.90	83.0
M-15	48	1.32	1.09	82.39	91.4	1.11	71.7	54.2	2.48	69.2
M-16	48	0.83	0.63	75.55	76.7	1.02	64.7	56.4	2.62	70.7
M-17	48	0.38	0.28	74.84	80.5	1.08	81.9	77.8	3.86	75.0
M-17	72	0.38	0.28	74.84	82.9	1.11	85.3	81.0	3.86	75.0
M-18	48	0.78	0.68	87.42	88.9	1.02	39.3	29.6	0.32	61.1
M-19	48	0.54	0.45	82.54	81.0	0.98	57.7	52.2	1.65	58.1
M-20	48	1.14	0.90	78.78	80.0	1.01	78.1	65.7	2.57	68.4
M-21	48	0.82	0.72	88.46	87.5	0.99	18.5	8.8	4.34	30.5
M-22	48	1.18	1.09	92.83	90.5	0.97	66.7	52.4	2.13	44.5
M-23	48	1.65	1.58	95.62	93.9	0.98	97.7	76.9	3.96	86.5
M-23	72	1.65	1.58	95.62	93.9	0.98	104.6	83.9	3.96	86.5

Sample ID	Leach Time (h)	CuT A.Q. (%)	CuS (%)	Sol. Ratio (%)	Avg CuT Rec (%)	Ratio Leach Rec/CuS	Acid Consumption		Head	
							Gross (kg/t)	Net (kg/t)	CO ₃ (%)	CAA (kg/t)
M-24	48	1.62	1.41	86.82	89.8	1.03	51.9	32.0	0.31	37.3
M-25	48	0.40	0.31	77.70	82.8	1.07	33.0	28.1	0.59	18.1
M-26	48	1.05	0.87	82.83	82.7	1.00	41.8	29.1	0.36	49.4
M-27	48	0.54	0.43	80.36	82.1	1.02	35.4	29.2	0.63	33.2
M-28	48	0.43	0.33	78.32	79.7	1.02	43.1	38.2	1.37	38.9
M-29	48	0.57	0.50	88.88	88.7	1.00	60.2	52.9	1.97	46.8
M-30	48	0.85	0.62	73.90	84.2	1.14	48.5	39.2	0.20	38.6
M-31	48	0.59	0.36	62.26	78.3	1.26	32.5	26.4	0.58	38.9
M-32	48	0.72	0.52	72.55	82.8	1.14	40.0	31.6	0.74	27.0
M-33	48	0.47	0.34	71.52	77.6	1.09	48.1	43.0	1.71	71.0
M-34	48	0.76	0.57	74.71	80.4	1.08	51.6	42.7	1.66	41.8
M-35	48	1.04	0.61	58.81	72.5	1.23	46.2	35.5	0.74	12.3
M-35	72	1.04	0.61	58.81	71.0	1.21	52.3	42.1	0.74	12.3
M-36	48	0.42	0.34	80.79	82.4	1.02	59.1	54.1	2.16	46.1
M-37	48	1.84	1.56	84.63	87.2	1.03	79.8	56.8	2.39	71.2

Notes: Sol. Ratio = Soluble ratio, Rec = Recovery

The samples tested extracted an average of 4% more copper than their average copper solubility ratio. On average, the total Cu extraction was 84.13% and the average solubility ratio was 79.4%. It can be Inferred therefore that under the test conditions some acid insoluble copper was dissolved. The net acid consumption averaged 39.3 kg/t.

13.4.3 Geomet IV

13.4.3.1 Samples

Geomet IV used composite samples from the updated mineral subzones (BROC/ATAC, CRIS, WAD, MIX and ENR) with different levels of copper solubility.

The objective of the program was to advance the characterization of leachable Cu minerals. The program utilized 14 samples from drill core, representing the five main mineral zones with different solubility ranges and one sample of ROM material.

Sample selection was carried out based on a data matrix that links spatial location, mineral zones, ranges of CuT grades and solubility.

13.4.3.2 Program Description

Testing included chemical characterization of samples with sequential copper analysis, particle size characterization, 1.5 ISO-pH test with and without seawater, acid and chloride leaching tests in 0.30 m high column leach tests, four 1.5 m high columns and ROM leaching in 1 m³ ISO-containers of a WAD and ferrous oxide low-grade sample with lesser presence of chrysocolla, atacamite and sulphide minerals.

13.4.3.3 Key Results

13.4.3.3.1 Mini-Column Testing Preliminary Results

All samples were subjected to 0.30 m high column leach tests to identify total recovered copper and total acid consumption. Several different testing parameters were evaluated, including agglomeration with and without NaCl. The results were very favourable, indicating strong recoveries and relatively fast leach kinetics across all samples, relative to the acid soluble copper ratios for the samples. Virtually all samples recovered in excess of the acid solubility ratios, in the case of the Mixed mineral sub-zone, quite materially. This aligns with the results of the Geomet III program.-Several samples from the Brochantite, Chrysocolla and copper WAD zones had total copper recoveries exceeding the assayed soluble copper. This is likely from black oxides in these zones, which are acid soluble but have slower leach kinetics and, therefore, are not detected in the acid soluble copper test.

13.4.3.3.2 1.5 m High Column Testing Results

Testing was completed on three composite samples taken from a variety of areas across the Marimaca deposit. A total of four 1.5 m height column leach tests were completed. For oxide and combined samples (oxide and sulphides), no additional NaCl was added; for the combined and sulphide materials, 15 kg/t of NaCl was added during agglomeration.

Again, the results were favourable, with relatively fast leach kinetics and three of the four columns achieving total copper recoveries in excess of 70% within 60 days. One sample, which comprised primarily oxides, which are the dominant copper-bearing mineral species in the deposit, reached recoveries exceeding 80% within approximately 40 days.

It was noted that there is a linear relationship between time and acid consumption and that a higher column height produced a lower specific acid consumption while still achieving the recovery rates observed in the testing program. This should allow further optimization of design to lower overall acid consumption.

13.4.4 Geomet V

13.4.4.1 Samples

This program utilized the drill core samples from the Geomet IV program.

Five composite samples were assembled from available drill core represent the five mineral zones established in the 2020 PEA; Brochantite (BROC), Chrysocolla (CRIS), Enriched (ENR), Mixed (MIX), and WAD. For the BROC and CRIS

samples, representative samples from the first 5 years of operation were used. For WAD, MIX and ENR, representative samples of the second stage (6 to 12 years) were assembled. The samples included three oxide samples (BROC G5, CRIS G5, WAD, G5) and two sulphide samples (MIX G5 and ENR G5).

13.4.4.2 Program Description

Column leach test samples were crushed to 90% passing 12.7 mm. The program included chemical head characterization and mineralogy, ISO-pH bottle rolls tests, three acid level sensitivity bottle rolls tests, sulphation tests, mini-column leach tests (150 mm diameter by 300 mm high) and column leach tests (100 mm diameter by 4 m high).

A program to support ROM leach included four ROM composites BROC-ROM, CRIS-ROM, and WAD-ROM. A global composite, ROM-G5, representative of the production for ROM leach from the 2020 PEA (60.4% WAD-ROM, 19.8% BROC-ROM and 19.8% CRIS-ROM). The program included chemical head characterization and mineralogy, ISO-pH bottle rolls tests, three acid level sensitivity bottle rolls tests, and crushed (P_{90} of 12.7 mm) column leach tests (150 mm by 1 m high) to establish maximum leach extractions. The ROM leach portion of the program included leach tests in 1 m³ containers, that contained 1.8 t of each composite (BROC-ROM, WAD-ROM and CRIS-ROM) that were 100% passing 200 mm. Samples were leached without agglomeration. The ROM-G5 composite was used for sequential column leach tests incorporating 600 mm diameter by 3 m high columns with four in series.

Two different solution application rate conditions were tested in columns for the samples at Geomet V, 12 L/h/m² and 15 L/h/m².

13.4.4.3 Key Results

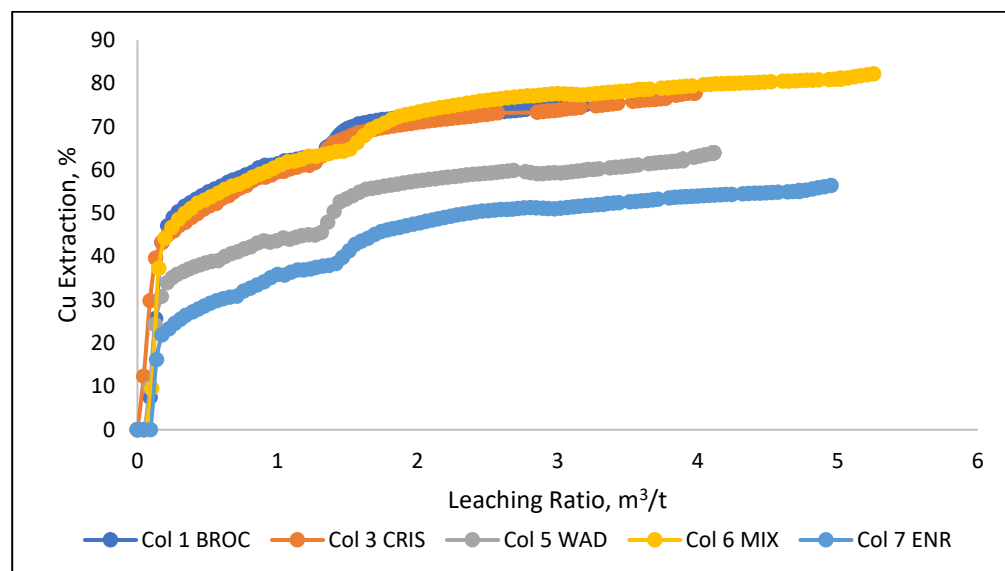
Table 13-12 shows main results for the Geomet V tests. Figure 13-5 to Figure 13-8 shows copper recovery and net acid consumption for the samples tested at both irrigation rates.

Figure 13-5 shows that the highest copper extraction was achieved by MIX with 82.2% in column 6 at a leach solution: ore ratio of over 5:1 m³/t. It is noted that BROC and CRIS also reach values over 77.6% under similar testing conditions. Like the other metallurgical results (Geomet I & II, IV) three clusters can be identified.

Table 13-12: Geomet V Columns Results

Sample	ID	Variable	Irrigation Rate (L/h/m ²)	CuT (%)	CuT (Calc.) (%)	CuS (%)	CuS (calc) (%)	Solubility Ratio (%)	Solution to Ore Ratio	Ext. CuT (Chemical Assays) (%)	Ext. CuT CC (%)	Gross acid Cons. (kg/t)	Net acid Cons. (kg/t)
BROC G5	Col-1	ILS-10 Y RF-10	12	0.670	0.66	0.518	0.573	77.3	3.15	75.67	76.74	44.66	36.86
CRIS G5	Col-3	ILS-10 Y RF-10	12	0.545	0.55	0.433	0.486	79.5	3.80	77.97	77.85	51.00	44.46
WAD G5	Col-5	ILS-10 Y RF-10	12	0.313	0.33	0.154	0.238	49.1	3.91	66.62	63.97	52.78	49.57
MIX G5	Col-6	ILS-10 Y RF-10	12	0.649	0.62	0.286	0.526	44.0	5.04	78.29	82.25	57.06	49.23
ENR G5	Col-7	ILS-10 Y RF-10	12	0.547	0.58	0.067	0.335	12.2	4.74	59.44	56.43	55.89	50.88
BROC G5	Col-8	ILS-8 Y RF-8	15	0.670	0.67	0.518	0.588	77.3	4.01	78.16	78.63	48.61	40.55
CRIS G5	Col-9	ILS-8 Y RF-8	15	0.545	0.57	0.433	0.508	79.5	3.99	82.03	78.50	49.88	43.00
WAD G5	Col-10	ILS-8 Y RF-8	15	0.313	0.33	0.154	0.242	49.1	4.42	68.56	64.62	49.76	46.46
MIX G5	Col-11	ILS-8 Y RF-8	15	0.649	0.64	0.286	0.535	44.0	4.98	79.83	80.97	46.92	38.94
ENR G5	Col-12	ILS-8 Y RF-8	15	0.547	0.57	0.067	0.335	12.2	5.05	59.54	56.66	46.97	41.96

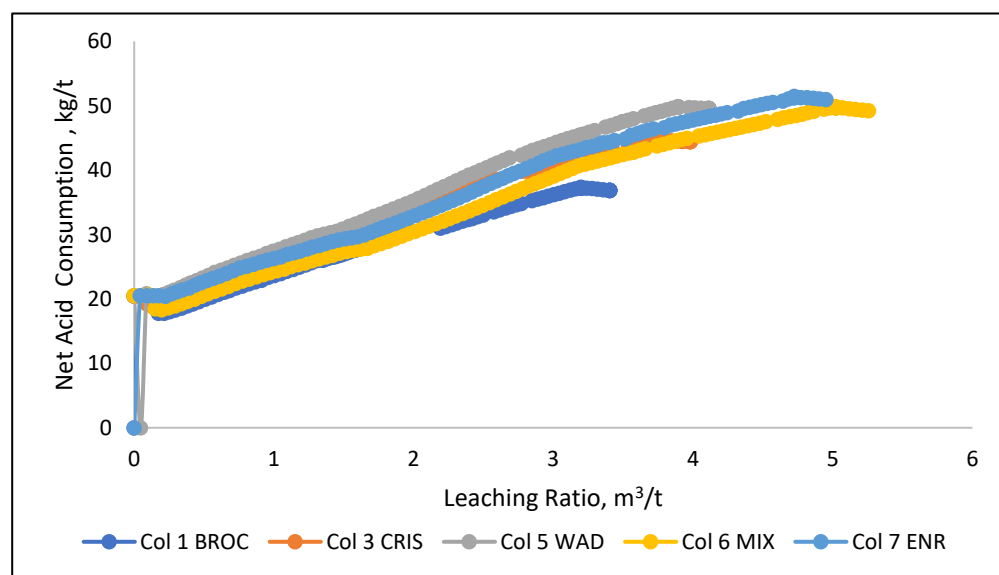
Figure 13-5: Geomet V, Copper Extraction as a Function of Solution Application at 12 L/h/m²



Source: Ausenco, 2025.

The ENR samples had the highest acid consumption at 50.8 kg/t, while the BROCC samples had the lowest acid consumption with 36.9 kg/t.

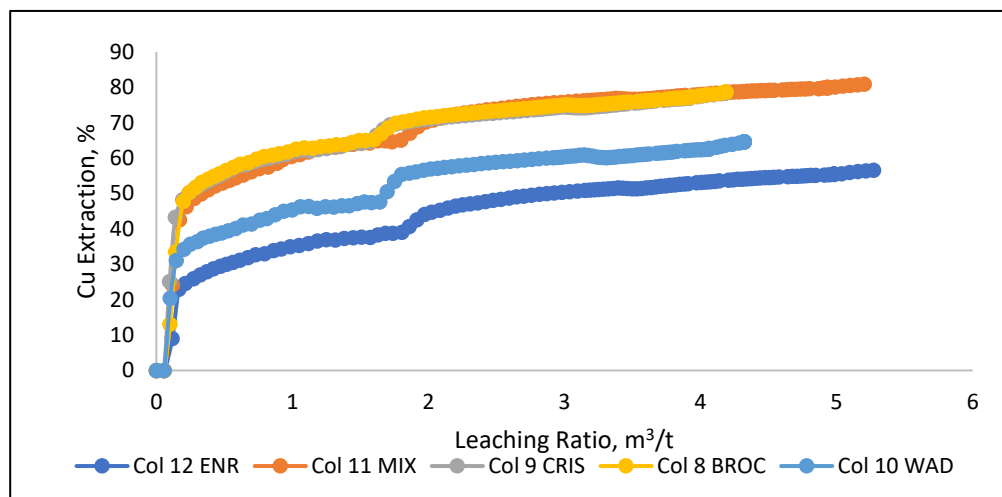
Figure 13-6: Geomet V, Net acid consumption as a Function of Solution Application at 12 L/h/m²



Source: Ausenco, 2025.

Figure 13-7 shows copper extraction at an irrigation rate of 15 L/h/m². Results show that the MIX sample achieves the highest leach extraction, at 81% of CuT, while the ENR sample has the lowest extraction at 56.7% CuT. Column C-7 showed signs of flooding during the leach test at irrigation rate of 12 L/h/m². This indicates that at irrigation rates to 12 L/h/m² or higher could generate flooding problems at full scale.

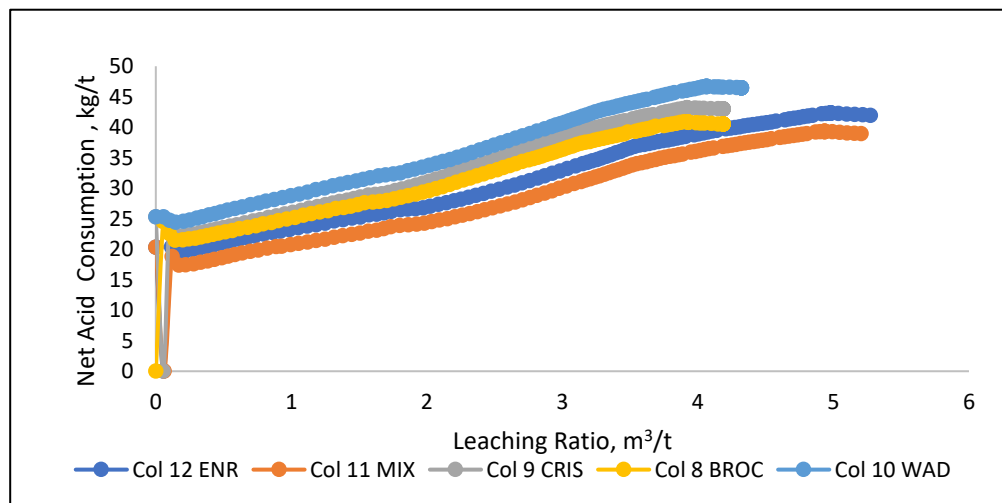
Figure 13-7: Geomet V, Copper Extraction as a Function of Solution Application at 15 L/h/m²



Source: Ausenco, 2025.

The WAD zone sample had the highest net acid consumption at 46.5 kg/t, while the MIX zone had the lowest consumption with 38.9 kg/t.

Figure 13-8: Geomet V, Net Acid Consumption as a Function of Solution Application at 15 L/h/m²



Source: Ausenco, 2025.

The results of Geomet V show that the BROC, CRIS and MIX samples have similar leach copper extraction. While WAD and ENR, shown a different behavior for copper extraction.

13.4.5 Geomet VI

13.4.5.1 Samples

The samples used for this program were from Geomet V, Phase I, made up of 50% Atacamite/Brochantite (BROC) and 50% Chrysocolla (CRIS).

13.4.5.2 Test Description

The program included carrying out leaching tests in 150 mm diameter by 1 m high columns, using acidulated seawater from Mejillones as an initial irrigation solution. This represents the same quality of water that will be used in the industrial process.

The objective of the Geomet VI testwork campaign was to determine the impurities dissolution capacity of the leach solutions as its ionic strength increased. The evolution of impurities was quantified by determining the concentration in the PLS solutions of the following elements: FeT (total iron), Al, Mg, Mn, Na, Cl⁻ and SO₄²⁻ and Cu. Copper was removed from the PLS solutions by solvent extraction (SX), at the end of each leaching cycle.

Column C-1 and Column C-2 were leached with seawater and acid in the first cycle, then the PLS obtained was treated by solvent extraction and the raffinate produced was used for the second cycle. Then, the PLS from the second cycle of each column was treated by solvent extraction and both raffinate produced were mixed, to be used as leaching solution for column C-3. Once the leaching of C-3 was completed, an SX operation was carried out on the resulting PLS, the resulting raffinate was used to leach column C-4. Finally, Raffinate from SX of PLS from Column C-4 was used to leach column C-5.

13.4.5.3 Key Results

The seawater used in the column leaching test corresponded to a sample that has the same origin as the water that will be used in the leaching industrial process. The irrigation solution used in the initial leaching of columns C-1 and C-2 was acidulated seawater. Their chemical characterization is shown in Table 13-13.

Table 13-13: Seawater and Initial Leaching Solution Characterization

Description	Cu ²⁺ (mg/L)	FeT (mg/L)	Al ³⁺ (mg/L)	Mg ²⁺ (g/L)	Mn ²⁺ (mg/L)	Na ⁺ (g/L)	Cl ⁻ (g/L)	H ₂ SO ₄ (g/L)	SO ₄ ⁼ (g/L)	pH
Seawater	0.00	0.90	1.70	1.44	ND	11.33	23.21	ND	2.10	7.60
Leach Solution	0.00	0.90	1.70	1.44	ND	11.33	22.10	9.38	9.94	0.75

Table 13-14 shows the final evolution of the concentration of impurities in each column test. The greatest amount of impurities that will remain in the leaching solution will be generated by the dissolution of the cations Fe_T (Fe²⁺ plus Fe³⁺),

Al^{3+} and Mg^{2+} . These cations represent 98.1% of the cations in solution and will be ionically associated mainly with the sulphate anion. The cation Ca^{2+} , generated in the reaction of the acid with the carbonate will precipitate as gypsum.

Table 13-14: Geomet VI, Column Leach Solutions Final Impurities Assays

Column	Fe^{+} (g/L)	Al^{3+} (g/L)	Mg^{2+} (g/L)	Mn^{2+} (g/L)	Na^{+} (g/L)	Cl^{-} (g/L)	$\text{SO}_4^{=}$ (g/L)
C-1	6.54	3.14	3.49	0.25	13.15	27.55	46.21
C-2	6.18	3.03	3.21	0.20	12.55	26.67	44.76
C-3	9.61	5.40	4.03	0.37	13.42	28.81	74.98
C-4	13.50	6.99	5.61	0.57	16.05	31.43	103.37
C-5	17.52	10.34	6.8	0.8	18.53	38.16	120.32

A summary of the main results is as follows:

- After each leaching cycle, the rate of dissolution of impurities tends to decrease when the raffinate obtained from the PLS of the previous column is used as a leaching solution.
- This decrease in the dissolution of impurities is because after each cycle, the leaching solution loses its dissolving capacity due to the increase in the concentrations of impurities in the previous stages.
- The concentration of sulphate anion results shows solid evidence that when the irrigation solution reaches a certain level of impurity concentrations, they precipitate as sulphate salts.
- The results from sulphate anion concentration by solutions balance have shown that after five cycle the sulphate concentration reaches 120 g/L. When projecting the experimental curve three additional cycles, it can be observed that the sulphate saturation level is around 147 g/L.
- The management of the three variables, acid addition in curing, leaching rate and acid concentration in the leaching solution allowed the net acid consumption to be reduced from 40.6 kg/t, declared in the PEA, to 30.63 kg/t. This is a reduction of 9.97 kg/t of acid or 24.6%.

13.4.6 Geomet VII

13.4.6.1 Samples

Samples used for the Geomet VII program were selected from the following:

- BROC samples come from underground workings, obtained through strip sampling.
- CRIS samples come from surface and underground workings.
- WAD samples come exclusively from the surface (road cuts).
- MIX samples come from diamond drill core samples.
- ENR samples come from diamond drill core samples.

13.4.6.2 Test Description

The Geomet VII campaign included 4 m high column leach tests with duplicates for metallurgical units BROCC, CRIS, WAD and 1 m high column for ENR and MIX. Operating conditions included a crush size P_{80} of 12.7 mm and 19 mm, solution irrigation rate of 10 L/h/m² and acid dosage in agglomeration according to each sample. For the metallurgical units ENR and MIX column tests were done with solution containing 90 g/L chloride and adding air at a specific flowrate of 0.3 Nm³/h/m². Other operating conditions were evaluated only for the BROCC sample including particle size of P_{80} of 19 mm (Columns 1 to 4) and irrigation rate of 6 and 8 L/h/m² (Columns 5 to 8).

13.4.6.3 Key Results

Table 13-15 shows a summary of the column leach tests results.

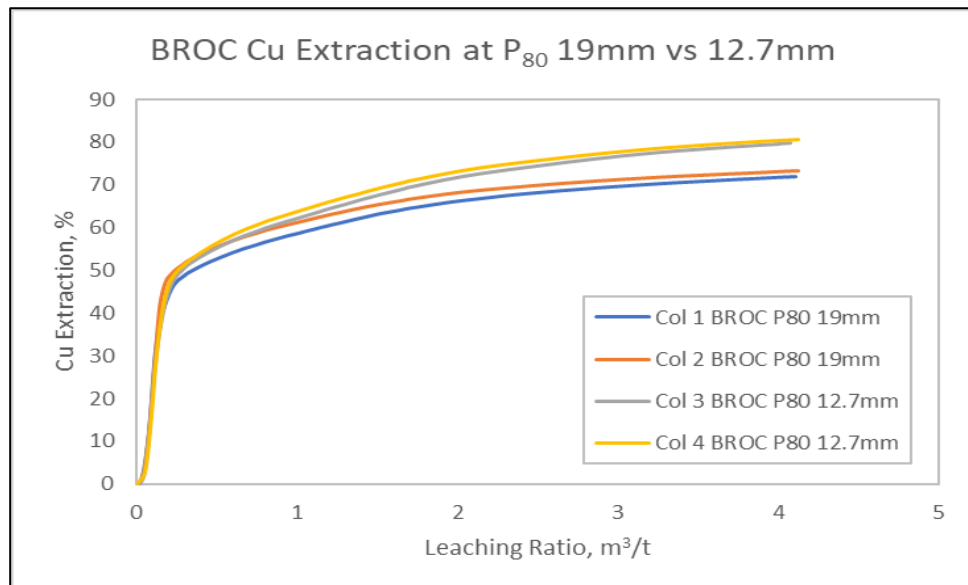
Figure 13-9 and Figure 13-10 shows that, decreasing the crush size from P_{80} of 19 mm to 12.7 mm, increases copper extraction by 6.8% (from 70.5% to 77.3%) but also increases net acid consumption by 0.7 kg/t at a solution to ore ratio of 3 m³/t.

Table 13-15: Geomet VII Column Leach Tests Results

Sample	ID	Variable	P_{80} (mm)	Irrig. rate (L/h/m ²)	Rest. time (d)	CuT (%)	CuS H+ (%)	CuS CN (%)	Cu Res (%)	PL (%)	LR (m ³ /t)	Ext.Cu CC (%)	Acid in agglom. (kg/t)	NAC (kg/t)
BROCC G7	C-1	Gran.	19	10	-	1.198	1.012	0.053	0.133	88.9	4.11	72.1	32.0	49.7
BROCC G7	C-2	Gran.	19	10	-	1.198	1.012	0.053	0.133	88.9	4.12	73.3	32.0	50.5
BROCC G7	C-3	-	12.7	10	-	1.198	1.012	0.053	0.133	88.9	4.08	79.9	32.0	51.4
BROCC G7	C-4	-	12.7	10	-	1.198	1.012	0.053	0.133	88.9	4.12	80.6	32.0	51.3
BROCC G7	C-5	Irrig. Rate	12.7	6	-	1.198	1.012	0.047	0.133	88.4	3.12	75.4	32.0	45.5
BROCC G7	C-6	Irrig. Rate	12.7	6	-	1.198	1.012	0.047	0.133	88.4	3.12	77.7	32.0	45.8
BROCC G7	C-7	Irrig. Rate	12.7	8	-	1.198	1.012	0.047	0.133	88.4	3.10	71.5	32.0	45.6
BROCC G7	C-8	Irrig. Rate	12.7	8	-	1.198	1.012	0.047	0.133	88.4	3.12	70.9	32.0	45.3
CRIS G7	C-9	-	12.7	10	-	1.138	0.953	0.02	0.164	85.5	3.10	76.1	35.0	51.1
CRIS G7	C-10	-	12.7	10	-	1.138	0.953	0.02	0.164	85.5	3.10	74.2	35.0	51.2
WAD G7	C-11	-	12.7	10	-	0.228	0.077	0.007	0.144	36.8	3.09	63.5	10.0	32.9
WAD G7	C-12	-	12.7	10	-	0.228	0.077	0.007	0.144	36.8	3.11	63.3	10.0	32.8
ENR G7	C-13	-	12.7	10	35	0.509	0.104	0.227	0.178	65.0	3.23	44.7	17.0	34.5
ENR G7	C-14	-	12.7	10	35	0.509	0.104	0.227	0.178	65.0	3.27	45.8	17.0	34.5
ENR G7	C-15	rest. time	12.7	10	45	0.509	0.104	0.227	0.178	65.0	3.44	42.6	17.0	31.6
ENR G7	C-16	rest. time	12.7	10	45	0.509	0.104	0.227	0.178	65.0	3.34	45.6	17.0	31.8
MIX G7	C-17	-	12.7	10	35	0.489	0.248	0.185	0.056	88.5	3.26	68.2	23.0	38.3
MIX G7	C-18	-	12.7	10	35	0.489	0.248	0.185	0.056	88.5	3.24	68.3	23.0	38.2
MIX G7	C-19	rest. time	12.7	10	45	0.489	0.248	0.185	0.056	88.5	3.39	68.5	23.0	36.4
MIX G7	C-20	rest. time	12.7	10	45	0.489	0.248	0.185	0.056	88.5	3.26	71.9	23.0	36.2

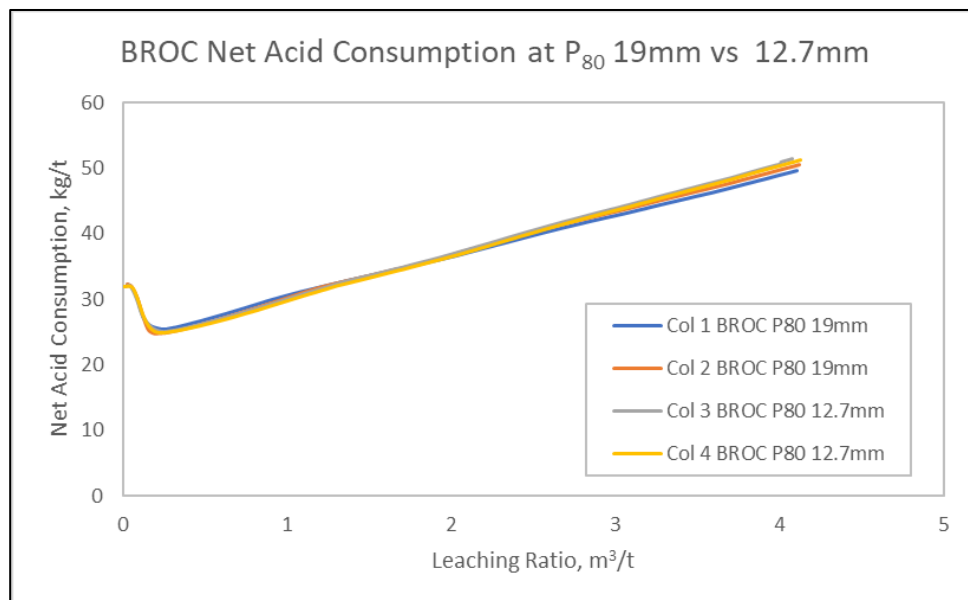
Notes: PL: Leaching potential, LR: Leaching ratio, NAC: Net acid consumption.

Figure 13-9: Geomet VII BROCC Comparison of Copper Extraction at Crush Sizes of P₈₀ 19 mm and 12.7 mm as a Function of Solution Application



Source: Ausenco, 2025.

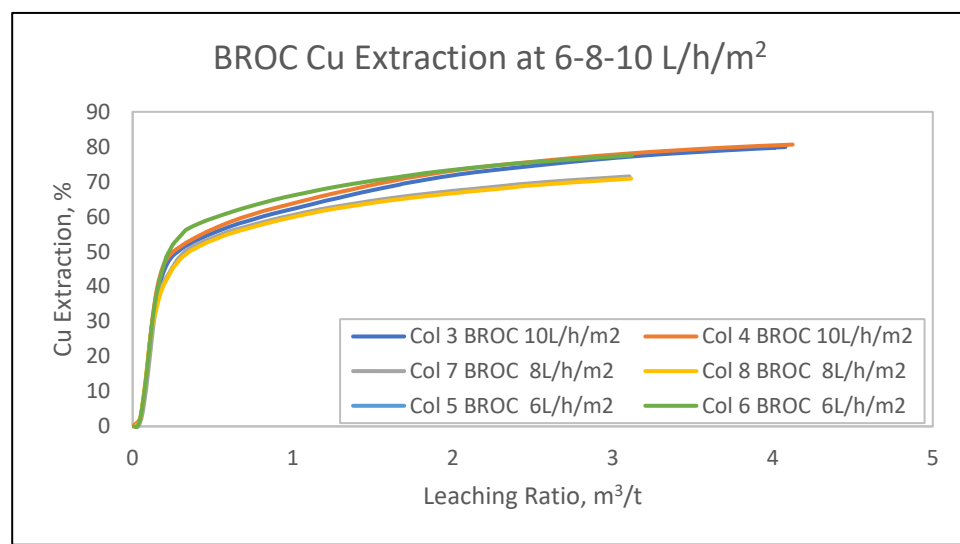
Figure 13-10: Geomet VII BROCC Net Acid Consumption at P₈₀ of 19 mm and 12.7 mm Crush Sizes as a Function of Solution Application



Source: Ausenco, 2025.

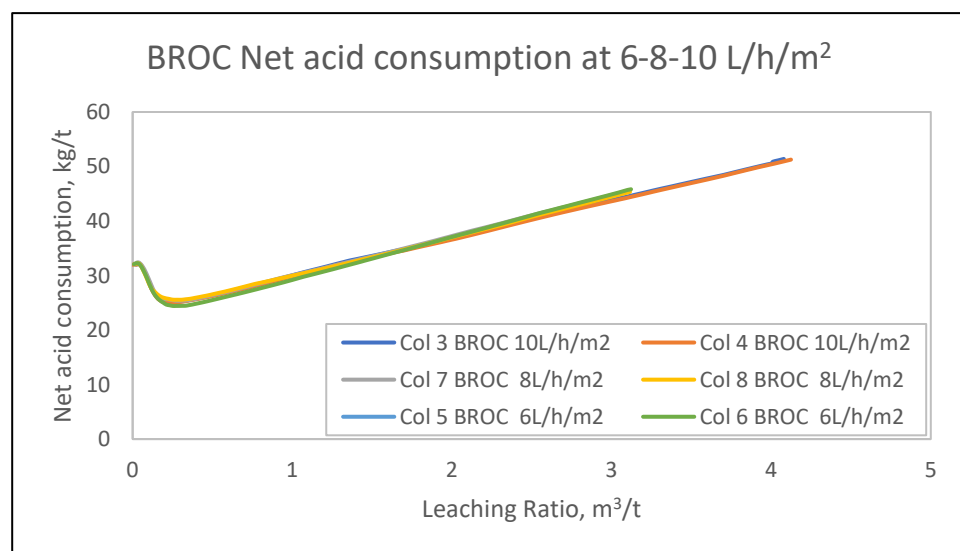
Figure 13-11 and Figure 13-12 shows that, at irrigation rates of 6, 8, and 10 L/h/m², the copper leach extractions are 76.1%, 70.9%, and 77.3% respectively with corresponding net acid consumptions of 44.7, 44.6, and 43.7 kg/t at a solution:ore ratio of 3:1 for all tests. At an irrigation rate of 10 L/h/m² the highest copper extraction is achieved. The irrigation cycle time for each irrigation rate corresponds to 88, 110 and 147 days to reach a solution to ore ratio of 3:1.

Figure 13-11: Geomet VII: BROC Copper Extraction as a Function of Solution Application at Three Irrigation Rates



Source: Ausenco, 2025.

Figure 13-12: Geomet VII: BROC Net Acid Consumption as a Function of Solution Application at Three Irrigation Rates

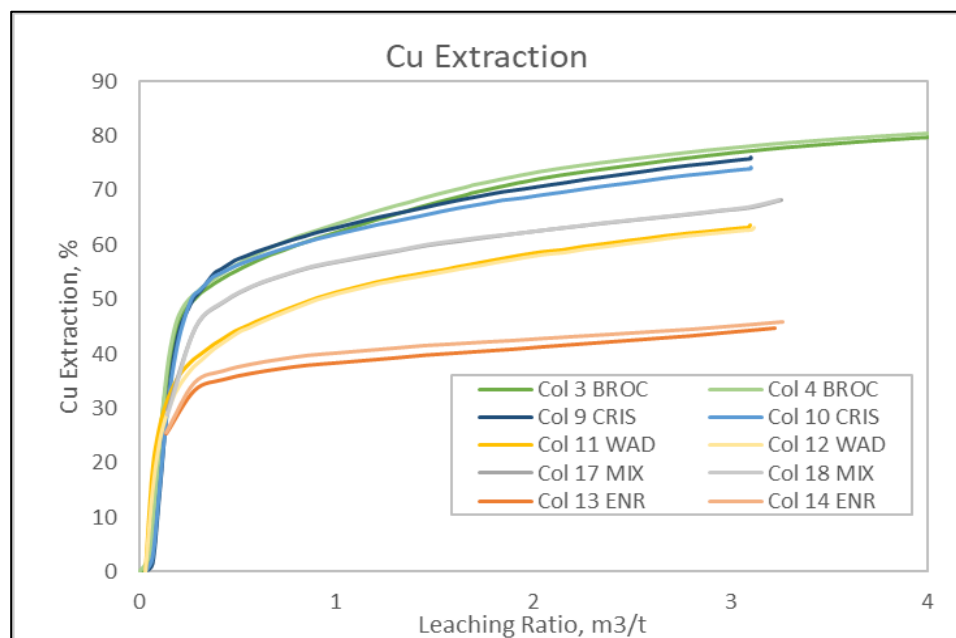


Source: Ausenco, 2025.

Based on the initial results, the testing was continued for the five UG samples (BROC, CRIS, WAD, MIX, ENR) with a crush size P_{80} of 12.7 mm, irrigation rate of 10 L/h/m², irrigation acidity of 10 g/L and acid dose in agglomeration depending on the UG sample between 10 and 35 kg/t. For the sulphide samples (MIX and ENR), tests were conducted with a salt dosage of 15 kg/t, chloride irrigation of 90 g/L and resting time of 35 days.

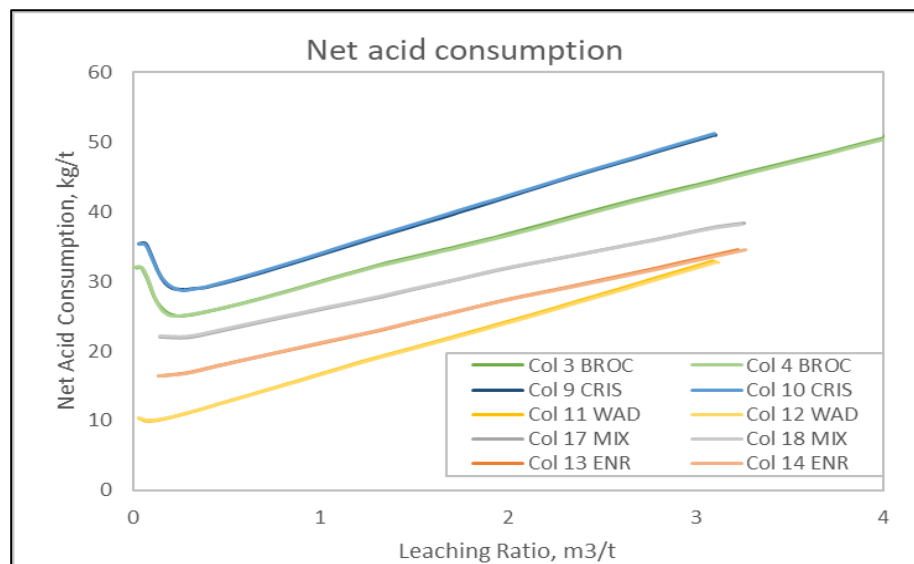
Figure 13-13 and Figure 13-14 show the copper extractions and net acid consumption of the different UG samples. Column tests were conducted in duplicate and showed good reproducibility. The copper extraction curves continued to rise until completion of the test. The Geomet V tests that showed a step change up in the middle of the tests. MIX G7 test show that copper extraction is lower than G5 MIX test that copper extraction was like BROC/CRIS G5 test.

Figure 13-13: Geomet VII: Copper Extraction as a Function of Solution Application at P_{80} 12.7 mm Crush Size and 10 L/h/m² Irrigation Rate



Source: Ausenco, 2025.

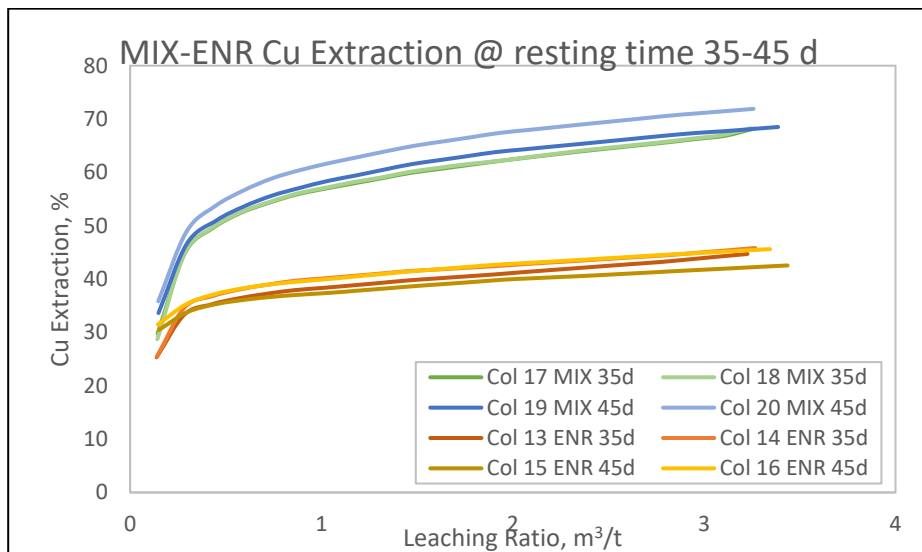
Figure 13-14: Geomet VII: Net Acid Consumption as a Function of Solution Application at a Crush Size P_{80} of 12.7 mm and 10 L/h/m² Irrigation Rate



Source: Ausenco, 2025.

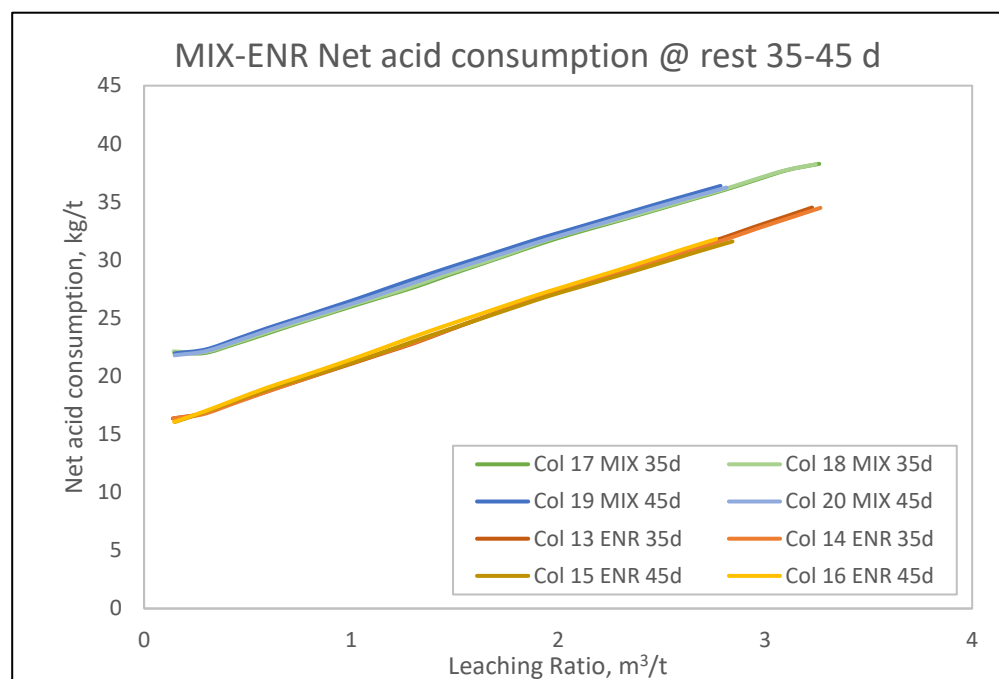
Figure 13-15 and Figure 13-16 shows that by increasing the resting time from 35 to 45 days for the MIX sample there is a leach extraction increase of 2.8% (from 66.5% to 69.3%) and a slight increase in acid consumption of 0.1 kg/t (from 37.2 to 37.3). However, for the ENR sample there is a leach extraction decrease of 1.2% (from 44.5% to 43.3%) and a decrease in acid consumption of 0.3 kg/t (from 33.1 to 32.7).

Figure 13-15: Geomet VII: Copper Leach Extraction as a Function of Solution Application with Resting Time of 35 and 45 Days



Source: Ausenco, 2025.

Figure 13-16: Geomet VII: Net Acid Consumption as a Function of Solution Application with Resting Time of 35 and 45 Days



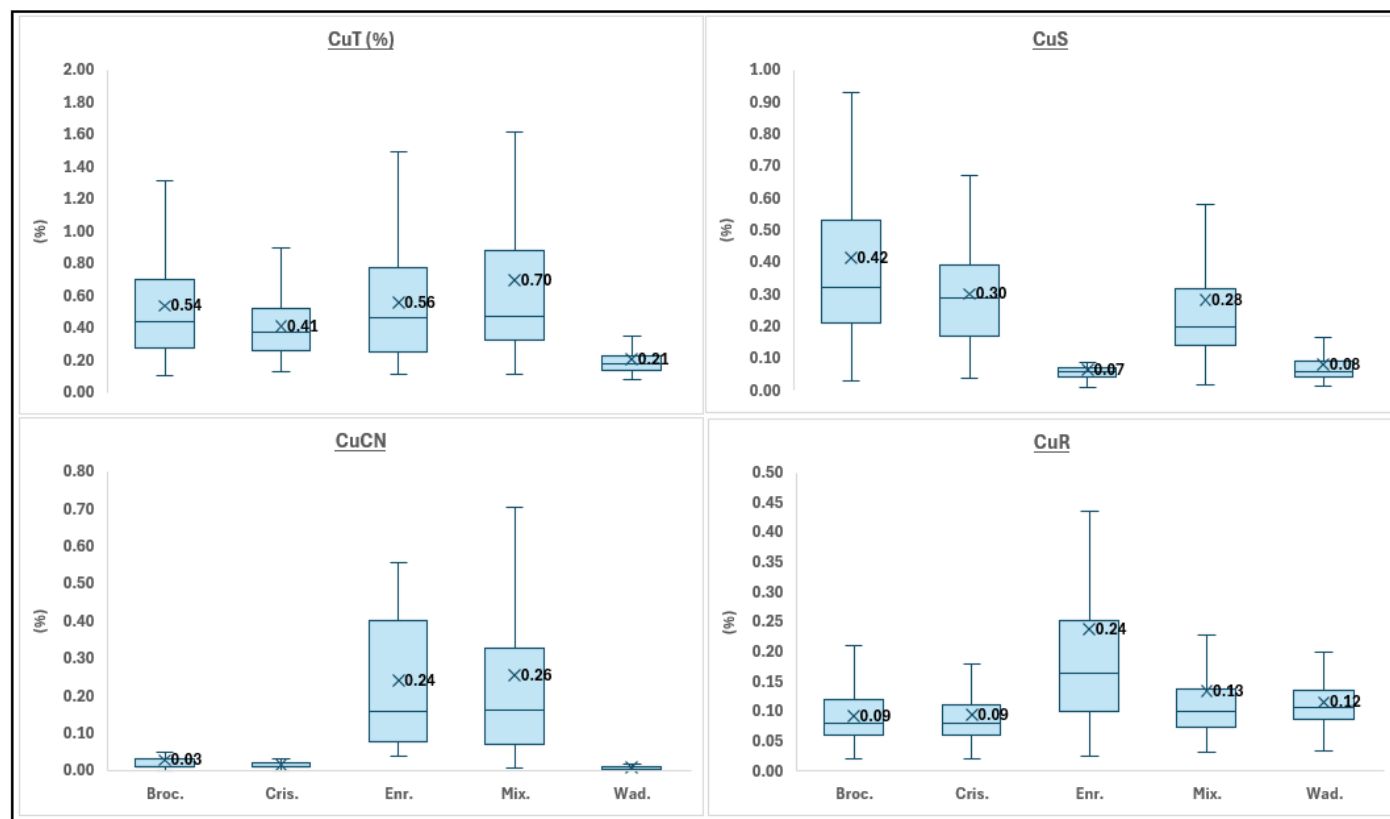
Source: Ausenco, 2025.

13.5 Metallurgical Variability

Metallurgical variability tests were done during 2020 in order to improve the knowledge about mineral characteristics based on chemical characterization and ISO-pH tests for sample composites of metallurgical units BROCC, CRIS, WAD, ENR and MIX. Chemical characterization included total copper head grade (CuT), acid soluble copper (CuS), cyanide soluble copper (CuCN), residual copper (CuR) and analytical acid consumption (CAA). ISO-pH tests included kinetics of copper dissolution up to 72 hours at a pH of 1.1. A total of 412 composite samples were tested.

Figure 13-17 shows boxplots where the CuT, CuS, CuCN and CuR grades of the variability samples were compared for the metallurgical units BROCC, CRIS, WAD, ENR and MIX. Table 13-16 shows the weighted average copper grades for each metallurgical unit for the LOM. Results show that variability tests adequately cover the LOM mine plan.

Figure 13-17: CuT, CuS, CuCN and CuR in Variability Tests per Metallurgical Units



Source: Ausenco, 2025.

Table 13-16: Weighted Average Grades LOM

UG	Weighted Average (%)			
	CuT	CuS	CuCN	CuR
BR	0.54	0.39	0.07	0.08
CR	0.39	0.27	0.04	0.08
EN	0.38	0.07	0.19	0.12
MX	0.41	0.11	0.18	0.11
W0	0.16	0.09	0.04	0.03
W1	0.28	0.15	0.05	0.08

13.6 Deleterious Elements

In Geomet VI testwork campaign the level of impurities dissolution was measured as described in Section 13.4.5. Table 13-14 shows the impurities measured showing that no deleterious elements are known from the processing perspective.

13.7 Recovery Estimates

A geometallurgical model was developed for estimating copper recovery and net acid consumption. The confidence level of these models, developed for the Marimaca deposit, is considered as a Proxies. They serve as proxy models based on available metallurgical data, spatial continuity of the deposit's mass representation, and the absence of a defined geometallurgical standard.

The model upgrade was completed using data from Geomet V (5 UGs) and Geomet VII BROCC data provided by the Marimaca and compared with remaining Geomet VII column tests. The following assumptions were considering for develop the modelling:

- Column testing results were used as Standard for geometallurgy for Marimaca at solution to ore ratios from 0.5:1 to 3:1.
- Geomet I, II, IV, V, VI and the available results for Geomet VII BROCC were used.
- Subset data of Geomet V was used for the final model of Copper Extraction and Net acid consumption, due to that has more representativity of the geological units for the development of the models, the other campaigns were carried out at other operating conditions where the model cannot be applied.
- Bootstrapping technique was used for ENR modelling.

13.7.1 Copper Extraction Models

The kinetic copper extraction model is the proxy model recovery that best suits for this parameter. It is based on data from columns from 0.3 m to 4 m height for all the model zones available, using the subset data from Geomet V.

The data used for ENR zone need to be developed with more representative samples as only one set of data is used to develop this model.

The optimization of the models was updated by Marimaca and considers:

- Scaling factor
- A new parameter called the leaching potential (LP) is considered which includes CuT, CuS and CuCN:

$$LP = \frac{CuS + CuCN}{CuT}$$

- These models are valid for leaching ratios between 2 - 3 m³/t at 4 m column height.

Table 13-17: Cu Extraction Models

Cluster	UG	Cu Extraction, %
C1	BROC/CRIS	$LP * 0.920 * \frac{1 - \text{EXP}(-1.74 * LR^{0.63})}{1 - \text{EXP}(-1.74 * 3^{0.63})}$
C2	WAD	$\frac{0.97 * CuS + 0.7 * CuCN + 0.202 * CuR}{CuT} * \frac{1 - \text{EXP}(-1.4 * LR^{0.62})}{1 - \text{EXP}(-1.4 * 3^{0.62})}$
C3	MIX	$LP * 0.875 * \frac{1 - \text{EXP}(-1.7 * LR^{0.66})}{1 - \text{EXP}(-1.7 * 3^{0.66})}$
C4	ENR	$LP * 0.738 * \frac{1 - \text{EXP}(-1.3 * LR^{0.7})}{1 - \text{EXP}(-1.3 * 3^{0.7})}$

Notes: LR - Leaching ratio (m³/t).

Table 13-18 shows the absolute error of copper extraction associated with the model fitting regarding the Geomet V and Geomet VII campaigns at 3 m³/t. Results show that for BROC/CRIS model is within 2.2 percentual points error in Geomet V and Geomet VII. For WAD the model overestimate Geomet V by 0.8 percentual points and significantly underestimates Geomet VII by 16.8 percentual points. For MIX the model slightly underestimates Geomet V by 3.2 percentual points and overestimate Geomet VII by 6.8 percentual points. For ENR the model overestimates Geomet V by 5.1 percentual points and overestimates Geomet VII by 6.2 percentual points.

Table 13-18: Cu Extraction Models – Absolute Error Modelling at 3:1 Solution to Ore Ratio

UG	Geomet V (p.p)	Geomet VII (p.p)	Average Error GV and GVII (p.p)
BROC	0.7	1.2	1.0
CRIS	1.5	2.2	1.9
WAD	0.8	16.8	8.8
MIX	3.2	6.8	5.0
ENR	5.1	6.2	5.7

Notes: p.p - Percentual points

According to this model the copper recovery expected for phase one will be in the range of 76.6% to 78.3% and for phase two it will be in the range of 61.4% to 75.2%.

13.7.2 Net Acid Consumption Models

The net acid consumption model was initially developed under the base of mineral properties. i.e. as a function of copper head grade, and the identified gangue minerals that consume acid and are identified through the statistical analysis developed in the previous section. However, an update of the model was developed to use only parameters that can easily use the information generated in the drill core campaigns. Therefore, the net acid consumption model (CAN) finally was developed under this recommendation made by Marimaca only using a set of data generated from GEOMET VII.

The net acid consumption model used is a function of “F1” as experimental value of the ratio CAB/CAA at a given leaching ratio (LR) and “F2” as experimental value of the leaching potential (LP) recovery at a given leaching ratio.

Table 13-19: Net Acid Consumption Models

Cluster	UG	Net Acid Consumption, kg/t
C1	BROC/ CRIS	$CAA * F1 - 0.154 * CuT * LP * F2$
C2	WAD	$CAA * F1 - 0.154 * CuT * LP * F2$
C3	MIX	$CAA * F1 - 0.154 * CuT * LP * F2$
C4	ENR	$CAA * F1 - 0.154 * CuT * LP * F2$

Notes: CAA: Analytical acid consumption. CuT: Total copper Grade. LP: Leach Potential.

The experimental values from Geometallurgical Model Final Report document 001-2ING-CI23002-0000-PRO-REP-00001 BY Ausenco are listed in Table 13-20.

Table 13-20: Experimental Values of Acid Consumption Model

RL (m ³ /t)	F1	F2
1.50	0.73	0.78
2.00	0.79	0.82
2.50	0.86	0.86
3.00	0.92	0.88

13.8 Comments on Mineral Processing and Metallurgical Testing

The copper recovery model and net acid consumption model are adequate for this level of engineering and testwork. However, it is recommended that additional testing be performed, focusing on further geometallurgical development in order to improve model accuracy. Metallurgical tests should consider the following operational design conditions:

- Heap height: 4 m
- Leaching ratio: 3.0 m³/t for oxides and 2.2 m³/t for sulphides
- Crushed product size P80: 12.7 mm
- Irrigation rate: 10 L/h/m²
- Irrigation in two stages using ILS in the first stage and raffinate in the second stage
- Air addition rate: 0.3 m³/h/m² (for sulphides)
- Salt addition in agglomeration – design: 15 kg/t (sulphides)
- Agglomerated ore moisture: 8% (wet basis)

It is recommended to update the net acid consumption model to consider unique values of the experimental factors F1 and F2 for each mineral subzone.

14 MINERAL RESOURCE ESTIMATES

14.1 Introduction

This report provides an updated MRE for the Marimaca Oxide Deposit (MOD) Project, located in the Antofagasta Province, Region II, northern Chile. Previous MRE results were reported in successive NI 43-101 compliance reports dated 2017, 2018, 2020, 2022 and 2023. Additionally, a FS report corresponding to the resource hosted by the Marimaca 1-123 concession was published in 2017, and a PEA report corresponding to the expanded resource of the MOD was published in 2020.

The effective date for the resource estimate is August 25, 2025.

Mineral Resources were estimated for the deposit situated within the limits of the Marimaca Oxide Deposit (MOD), as previously defined by Marimaca, and limited by the relevant mineral properties. The estimation was done using Micromine software.

In the QP's opinion, the resource evaluation presented herein reasonably represents the Mineral Resources found on the Project at the current level of sampling. The Mineral Resources have been estimated in accordance with the CIM "Estimation of Mineral Resources and Mineral Reserves: Best Practice Guidelines."

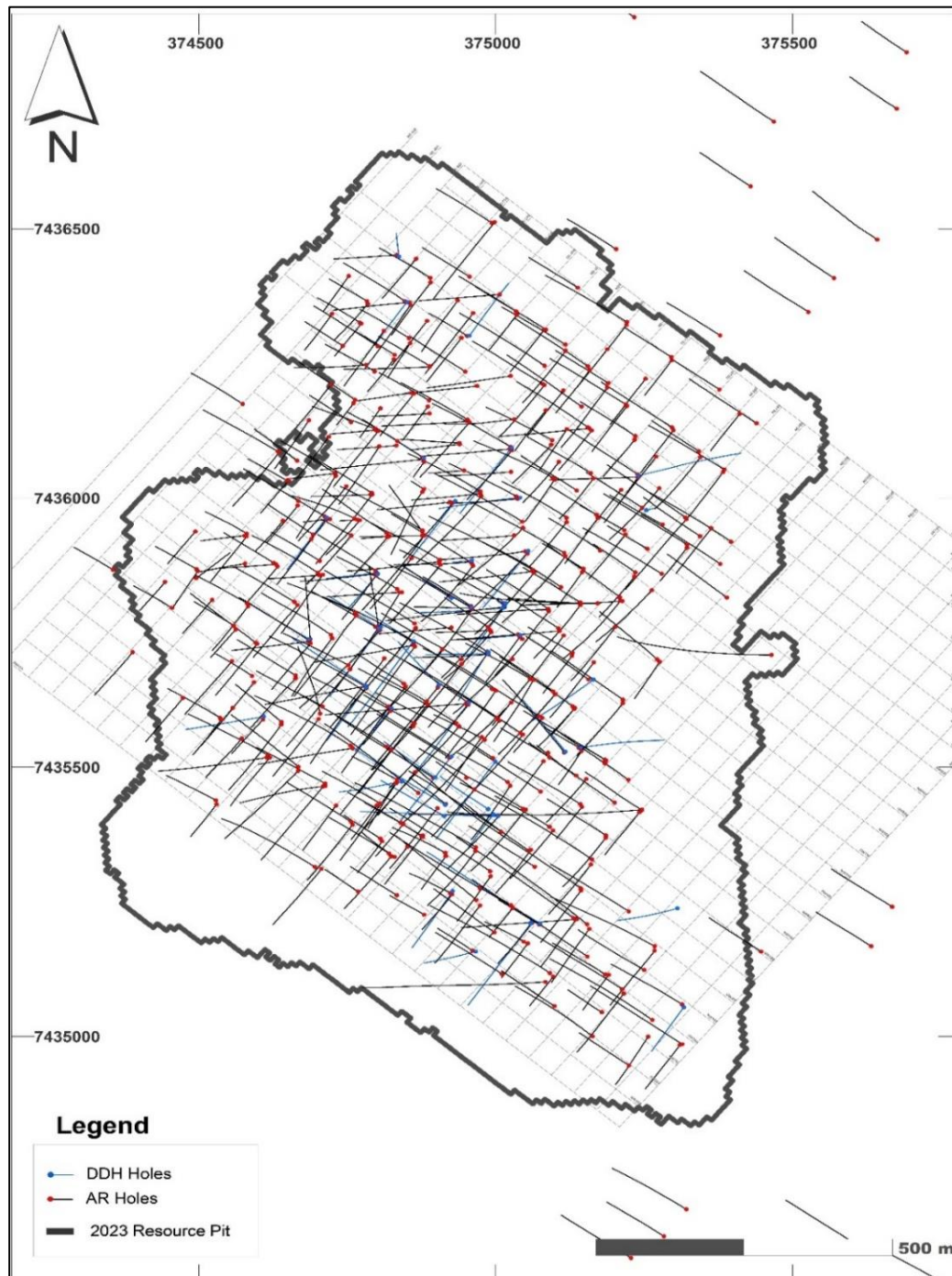
Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserves.

14.1.1 Exploration Status

This Mineral Resource Estimate captures all 554 drill holes, totaling 139,164 m of drilling completed to date in the Marimaca area, including the 2022 infill program. No additional exploration data have been added since 2023. Figure 14-1 and Table 14-1 present the types and distribution of all drill holes used for the current 2025 MRE. Exploration drilling was completed in 2023.

Details regarding the database and its development are provided later in this report.

Figure 14-1: Marimaca Project Drill Hole Location



Notes: Horizontal projections are shown on a local reference model grid consisting of 50 x 50 m spaced sections both NE and NW oriented.
Source: Marimaca, 2024.

The most recent exploration data update, with no additional data to the current 2025 Mineral Resource Estimate included the following:

- Full drilling sample database with sequential copper assays (mostly CuCN) for all samples containing more than 0.1% Cu. Since the 2021 campaign, sequential copper is the standard assay methodology for all samples.
- Re-logging previous drill holes for a better definition of mixed and secondary sulphide mineralization, this work was benefited by the new Sequential Copper assaying.
- Actualization and check of the topographic field bases.
- Completion of a new drone-driven imaging and topographic ortho-restitution.
- Re-interpretation of the rock geochemistry.
- High-resolution magnetics and deep IP/R geophysics surveys.
- Detailed surface mapping of dyke system, emphasizing rock types and contact relationships.

Table 14-1: Marimaca Project Drilling Summary 2016–2022

Marimaca Project			
Drilling Summary March-August 2016			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse Circulation	15	2,710
Resource 100x100 RCH Drilling	Reverse Circulation	39	8,910
DDH Metallurgy Column Test	Diamond Drilling HQ	6	2,008
Total RCH		54	11,620
Total DDH		6	2,008
Marimaca Project			
Drilling Summary September-December 2017			
Project	Type	Holes	Total Meters
Infill 50x50 m RCH Drilling	Reverse Circulation	59	11,928
DDH Geometallurgy	Diamond Drilling PQ	4	820
DDH Geotechnics	Diamond Drilling HQ3	6	1,230
Total RCH		59	11,928
Total DDH		10	2,050
Marimaca North-East			
Drilling Summary November 2017-January 2018			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse Circulation	11	2,950
Total RCH		11	2,950
La Atómica			
Drilling Summary November 2017-January 2018			
Project	Type	Holes	Total Meters
Discovery RCH Drilling	Reverse circulation	14	3,220
Total RCH		14	3,220

Phase II La Atómica Project			
Drilling Summary August 2018-August 2019			
Project	Type	Holes	Total Meters
Exploration - Delineation	Reverse Circulation	55	12,980
EW Exploration	Reverse Circulation	6	1,050
Manolo Sector Exploration	Reverse Circulation	9	2,120
DDH Geometallurgy - La Atómica	PQ Diamond Drilling	9	2,203
Total RCH		70	16,150
Total DDH		9	2,203
Phase II Atahualpa - Tarso Projects			
Drilling Summary August 2018-August 2019			
Project	Type	Holes	Total Meters
Discovery and Exploration	Reverse Circulation	61	17,700
High Grade Exploration - Delineation	Reverse Circulation	16	4,200
EW Exploration	Reverse Circulation	32	7,266
Tarso Exploration	Reverse Circulation	29	7,200
DDH Geometallurgy - Atahualpa	PQ Diamond Drilling	14	2,715
Total RCH		138	36,366
Total DDH		14	2,715
Phase III Marimaca Deep Drilling, Marimaca Mixed Target (MAMIX)			
Drilling Summary February-September 2021			
Project	Type	Holes	Total Meters
Marimaca Sulphide	Reverse Circulation	4	2,772
Marimaca Re-entry (MAMIX)	Reverse Circulation	13	3,610
Total RCH		4	6,382
Phase IV Marimaca Infill - MAMIX			
Drilling Summary February - August 2022			
Project	Type	Holes	Total Meters
Marimaca Infill RCH Drilling	Reverse Circulation	150	33,952
Marimaca Infill DDH Drilling	PQ Diamond Drilling	6	1,600
Marimaca Re-entry (MAMIX)	Reverse Circulation	25	3,968
Marimaca (MAMIX)	Reverse Circulation	2	650
DDH Geotechnics	Diamond Drilling HQ3	7	1,402
Total RCH		152	38,570
Total DDH		13	3,002
Marimaca 2025 MRE	Reverse Circulation	502	127,186
	Diamond Drilling	52	11,978
TOTAL		554	139,164

14.1.2 Twin Hole Analysis

As shown in Table 14-1, the database includes Reverse Circulation (RC) and Diamond Drilling (DDH) holes. Before grade estimation, a twin hole analysis was conducted to verify whether both types of holes could be treated as a single population for estimation. The details of this analysis are provided in Technical Note “Twin Hole Analysis for the Marimaca Copper Project, Antofagasta Province, Region II, Chile” (NCL, 2023), and its main conclusions are summarized here.

Marimaca provided thirty-eight pairs of twin holes, covering all areas of the deposit. Of these pairs, thirty-two correspond to RC vs DDH pairs and six to RC vs RC. Prior to the analyses, a check of the samples’ lengths was conducted. Nearly all samples measure 2.0 m in length, with only five out of 10,106 total samples being shorter (0.05%); consequently, no compositing was performed.

Based on the available data, the analysis considered three sets of twin holes for comparative purposes:

- All pairs (RC vs DDH plus RC vs RC)
- RCH vs DDH
- RCH vs RC

The software Getpairs was run for maximum distances of 4, 5, and 10 m between samples. Each run generated a set of sample pairs that were analyzed for comparative purposes. The 4 m separation was selected for a more detailed analysis. For this distance, a total of 4,113 pairs were obtained, of which 3,625 correspond to RC vs DDH pairs and 494 to RC vs RC.

The following conclusions can be drawn from the analyses:

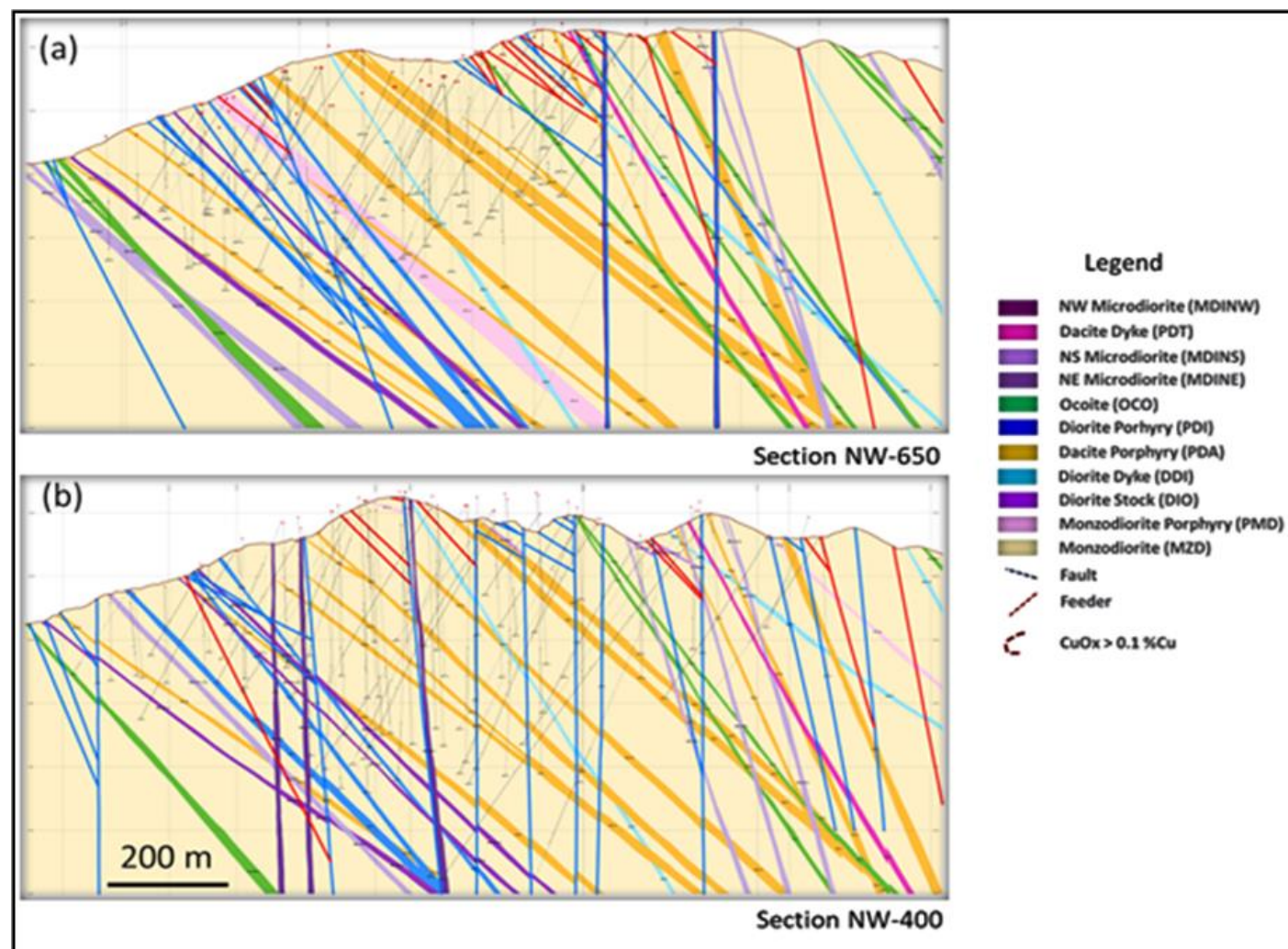
- The deposit exhibits an inherent grade dispersion, as reflected in the RC vs RC analysis. This dispersion is also noted in the RC vs DDH analysis.
- The grade distribution across the different populations is similar, as demonstrated by the prepared QQ Plots.
- The slight difference in the means of the compared populations consistently favours the RC samples, as anticipated from the earlier discussion regarding the chosen drilling method. This is typical of oxide deposits, where the influence of water in the DDH drilling results in some ore washing.
- The observed dispersion is characteristic of the deposit, as cross-validation with the nearest-neighbour shows the same pattern; therefore, it is concluded that using DDH and RC samples together does not introduce any bias in the data.

Based on the above, there is no valid reason to hinder the joint use of DDH and RC samples for resource estimation.

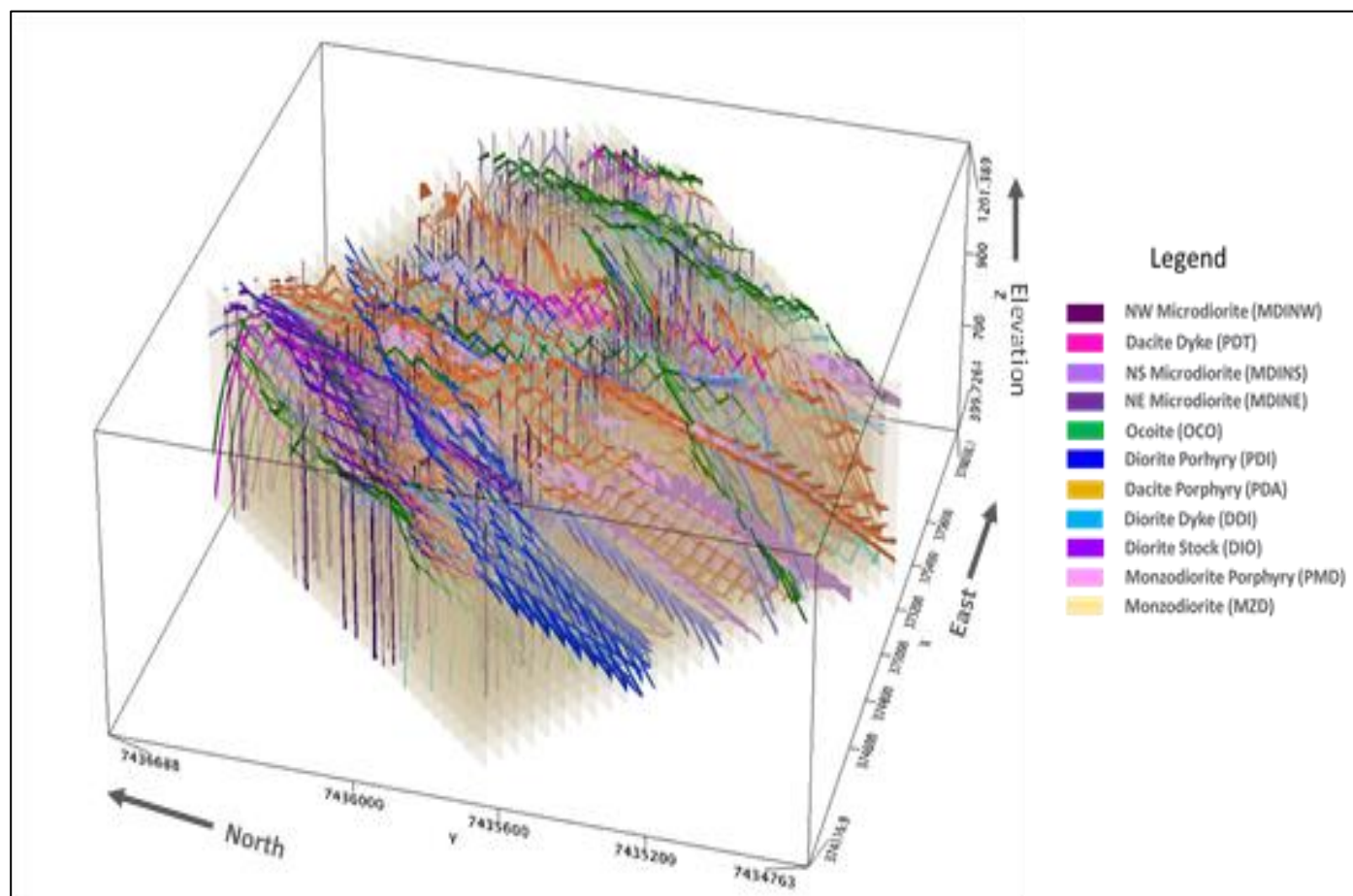
14.2 Geological Models

Marimaca geologists analyzed the rock structure and distribution of mineral zones using a traditional hand-drawn method on vertical cross-sections oriented northeast, northwest, and east-west at a 1:1,000 metric scale (see examples in Figure 14-2 and Figure 14-5). A set of sections 50-m apart covered most of the deposit area, which included 25 sections oriented northwest and 28 sections oriented northeast (Figure 14-2 and Figure 14-3).

Figure 14-2: Lithological and Structural Interpretation. (a) NW 400 Sections (b) NW 650 Sections

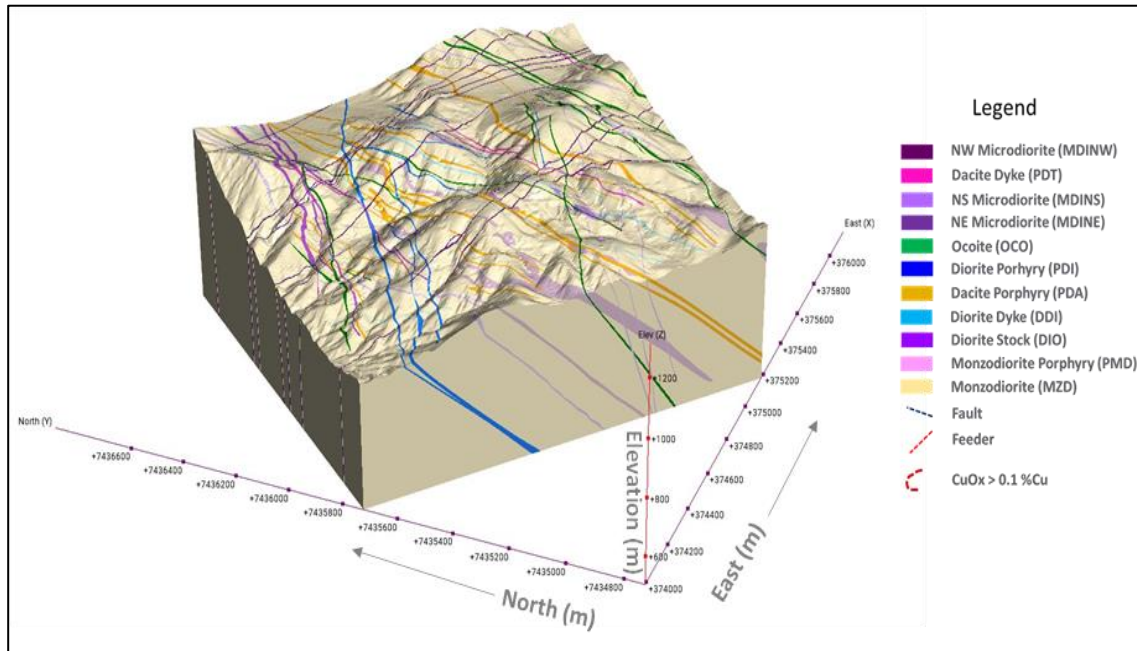


Source: Marimaca, 2023.



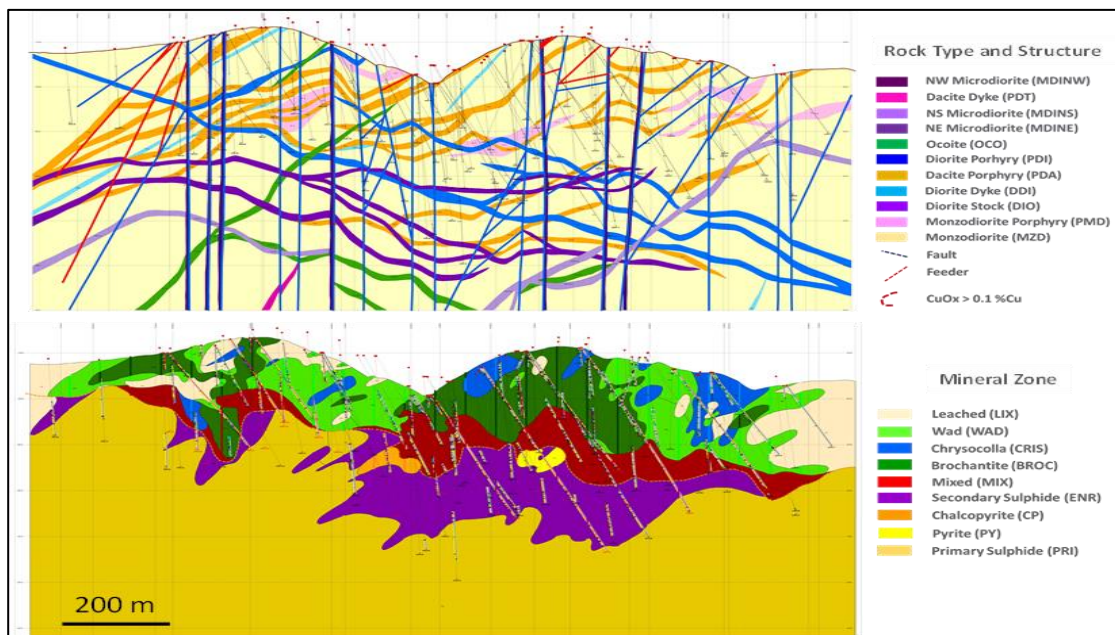
The interpretation order began with litho-structure, followed by the mineral zone using transparent overlays. The interpretations of the mineral zone were later used as MRE domains. The lithological units and structural interpretations were primarily informed by the detailed surface geology map and underground mine workings maps (Figure 14-4), as well as by drill hole logging which provides additional support on the anisotropies identified in structural analyses. The mineral zone interpretation was primarily based on detailed drill hole mineralogical logging (see Figure 14-4 to Figure 14-8).

Figure 14-4: Marimaca Project, 3D Lithological Model



Source: Marimaca, 2023.

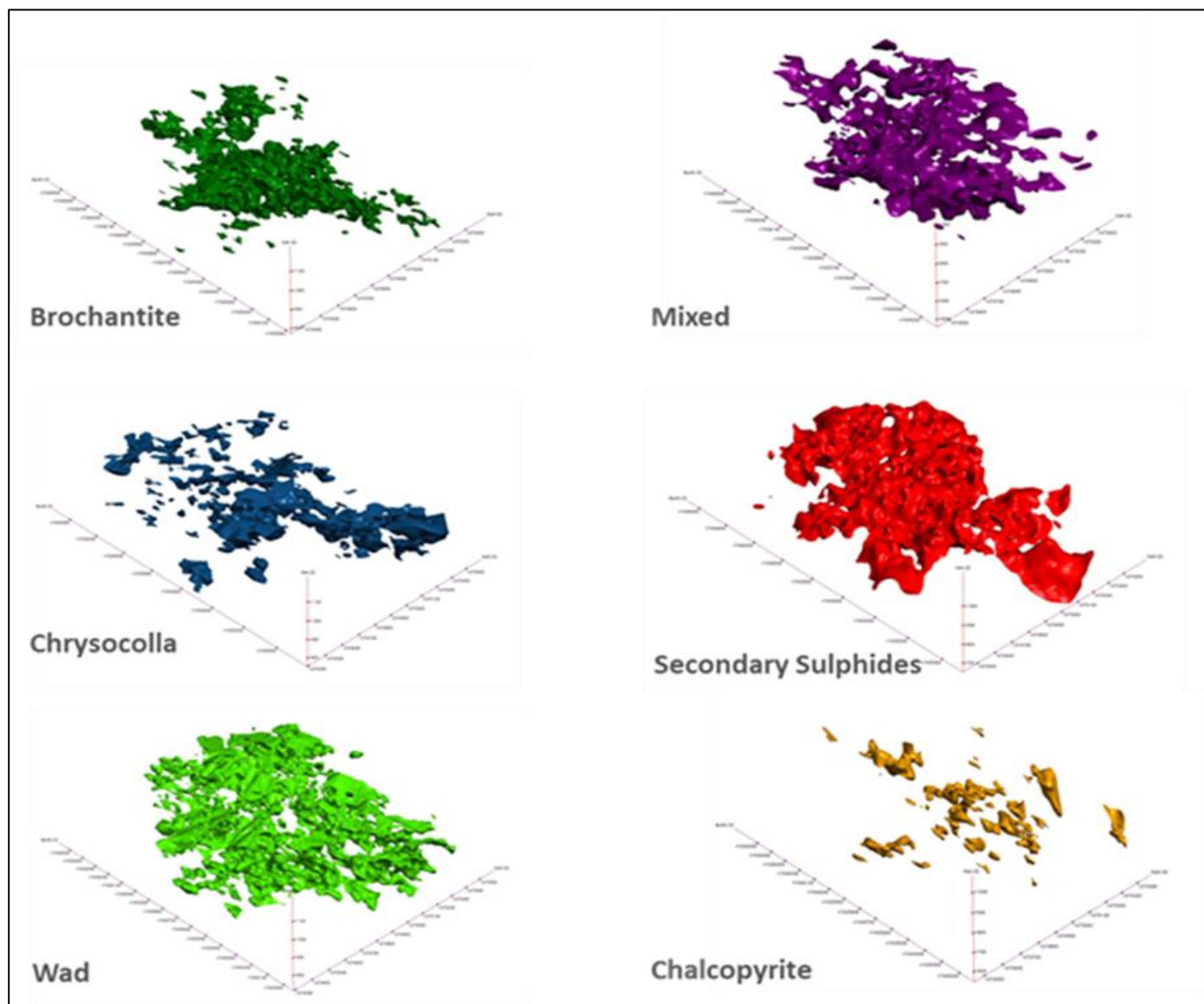
Figure 14-5: Marimaca Project, (a) Illustrative Litho-Structure, and (b) Updated Mineralization Section NE100.



Notes: Sections are 220°south-east. Source: Marimaca, 2023.

Figure 14-6 illustrates the various mineral zone views of the oxide blanket from the 2022 3D model of Atticus Geo, 2023.

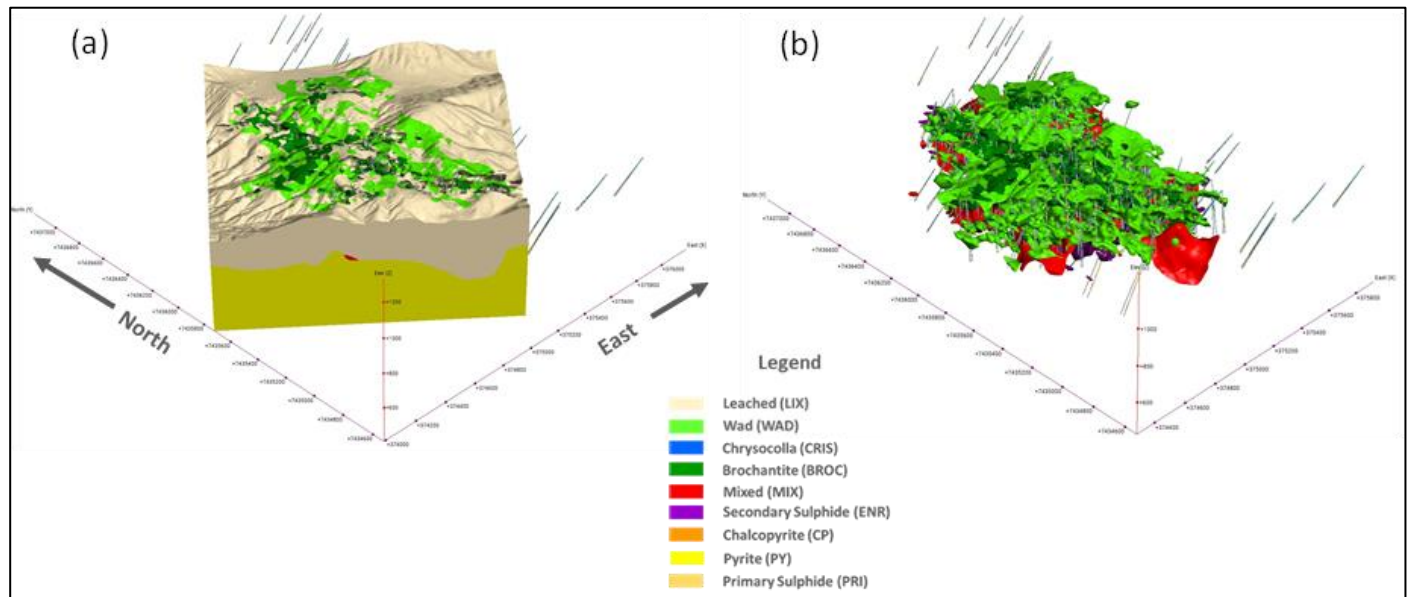
Figure 14-6: Mineral Zone Views of The Oxide Blanket



Source: Marimaca, 2023.

Figure 14-7 shows a 3D representation of the Mineral Zones that collectively form the blanket in Leapfrog Geo. (Marimaca, 2023).

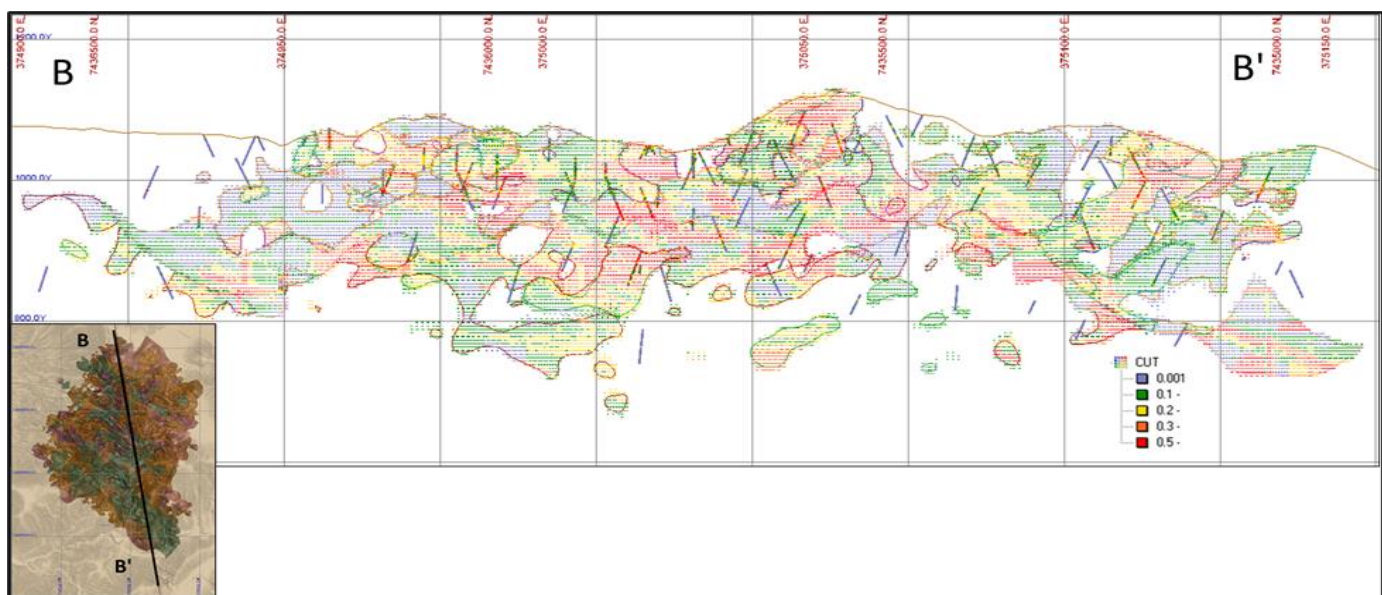
Figure 14-7: 3D Mineral Zones Model



Source: Marimaca, 2023.

The geometry of mineral solids does not present any issues when creating the block model, and the estimation was conducted accurately. Figure 14-8 illustrates the Block Model Showing domains of the Model of CuT – Section B-B'.

Figure 14-8: Block Model Showing Domains of the Model of CuT – Section B-B'



Source: Marimaca, 2022.

After comparing the Marimaca Mineral Resource model with the informing composites and the model's statistics, the QP concludes that the modelling approach has produced a reasonable and reliable model.

14.2.1 Definition and Generation of the Block Model

Considering the deposit's characteristics and the geological model developed, it was decided to utilize a block measuring 10 x 10 x 10 m, divided into sub-blocks of 2.5 x 2.5 x 10 m, to align the block model with the mineral zones as accurately as possible. This increase in block size compared to previous estimates is based on the deposit expansion associated with the findings from the new explorations.

Table 14-2 compares the volumes of the solids and the blocks represented in the block model. It is evident from the table that the volumes obtained from the block model accurately reflect the volumes of the solid model.

Table 14-2: Solid and Block Model Volumes per Mineral Zone

Mineral Zone	Volume		Difference	
	MZ Solid	Subblocks		
	m ³	m ³	m ³	%
BROC	26,548,777	26,552,625	3,848	0.01%
CP	8,983,066	8,984,250	1,184	0.01%
ENR	44,887,405	44,889,563	2,158	0.00%
MIX	36,321,765	36,324,875	3,110	0.01%
WAD01	16,208,485	16,212,688	4,203	0.03%
WAD	32,894,496	32,911,875	17,379	0.05%
CRIS	19,364,632	19,403,250	38,618	0.20%

During the grade estimation process, the grade for each Mineral Zone was estimated for each block/sub-block.

The block model is rotated 40° east of north (N40°E) to match the geological sections. Table 14-3 presents the geometric parameters of the model.

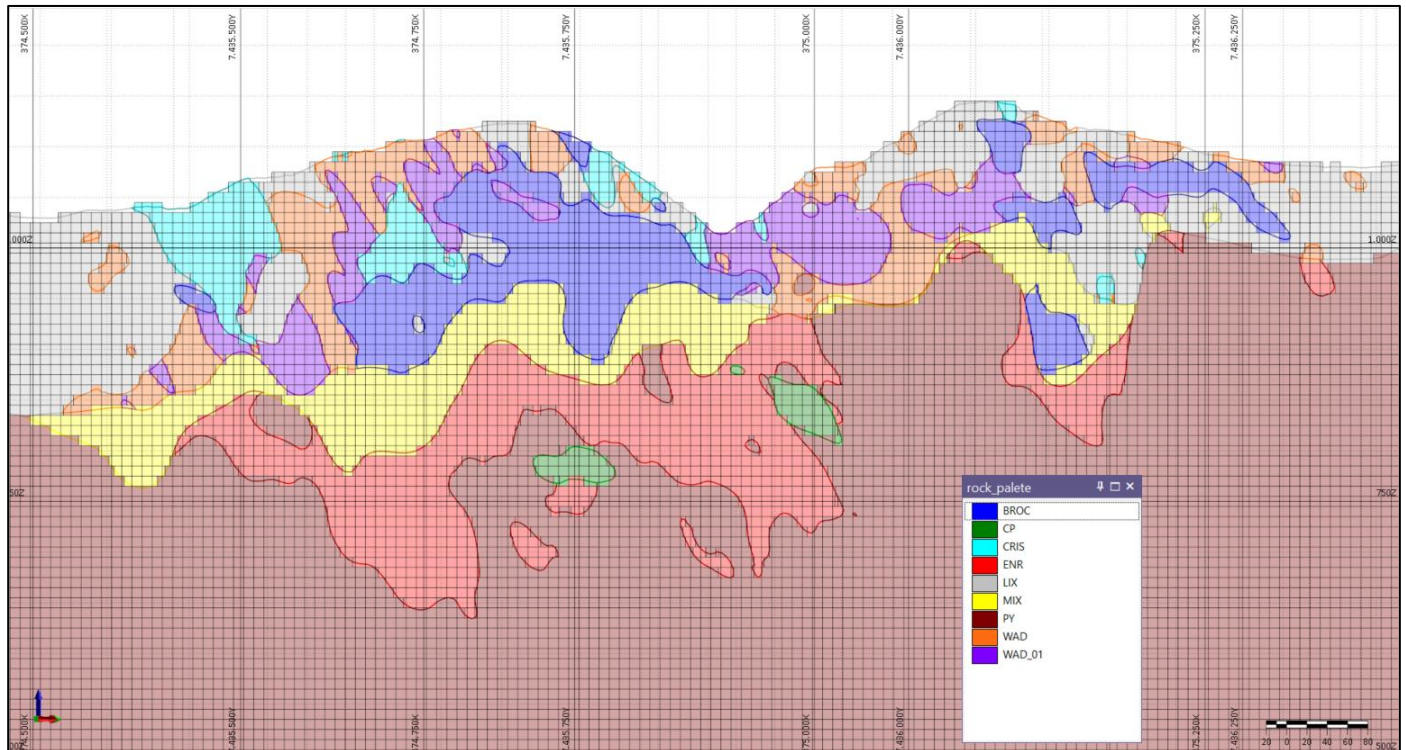
Table 14-3: Definition of the Block Model

Block Model Data					
Axis	coord botton left	block size (m)	subblock	n blocks	Rotation
X	373,982.20	10	2.5	156	Azm 40
Y	7,435,723.54	10	2.5	140	
Z	395	10	10	81	

14.2.2 Geological Model Coding

The remaining blocks beneath the surface topography, which are not included in the solid model, were classified as waste. To validate the accuracy of the rock coding, some sections and plans were reviewed on screen. Figure 14-9 displays a section illustrating the solid's contour alongside the block model.

Figure 14-9: Mineral Zone Solids and Blocks



Source: NCL, 2023.

14.3 Density Assignment

A total of 634 core samples from the DDH campaigns were analyzed to determine specific gravity.

The analytical results for specific gravity measurement are free of apparent bias. The sampling preparation, security, and analytical procedures are consistent with generally accepted industry best practices and are adequate to support Mineral Resource Estimation.

The average specific gravity of each estimation unit was calculated and assigned to each domain. Outliers were eliminated, as they were considered not representative of the corresponding populations. Table 14-4 presents the specific gravity and the number of samples for each mineralized zone.

Table 14-4: Mineral Zones Specific Gravity

Mineral Zone	N Samples	Mean Specific Gravity
BROC	160	2.639
CP	24	2.746
CRIS	110	2.665
ENR	39	2.681
MIX	42	2.695
WAD	67	2.628
LIX	84	2.657
PY	69	2.729
EST	39	2.642
Total	634	2.665

Source: NCL, 2023.

14.4 Grade Capping/Outlier Restrictions

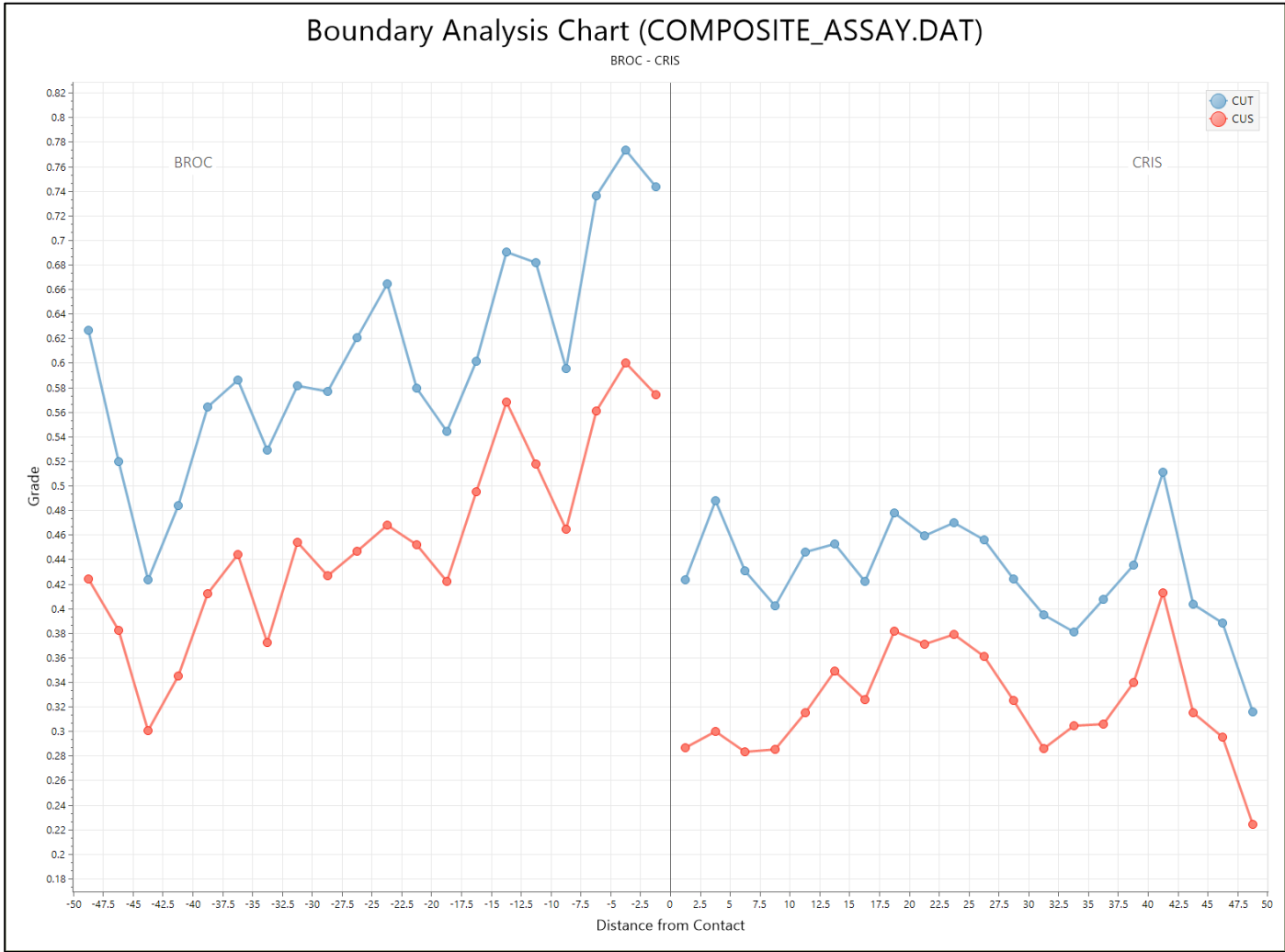
14.4.1 Contact Analyses

Before conducting the outlier analysis, a contact analysis was performed to define the estimation populations.

The contact characteristics between the Mineral Zone (MZ) units considered for this estimation were updated based on the mean sample grades relative to their distance from the contacts defined in the updated solids model. For this update, the CuT and CuS grades were analyzed independently using the Micromine software.

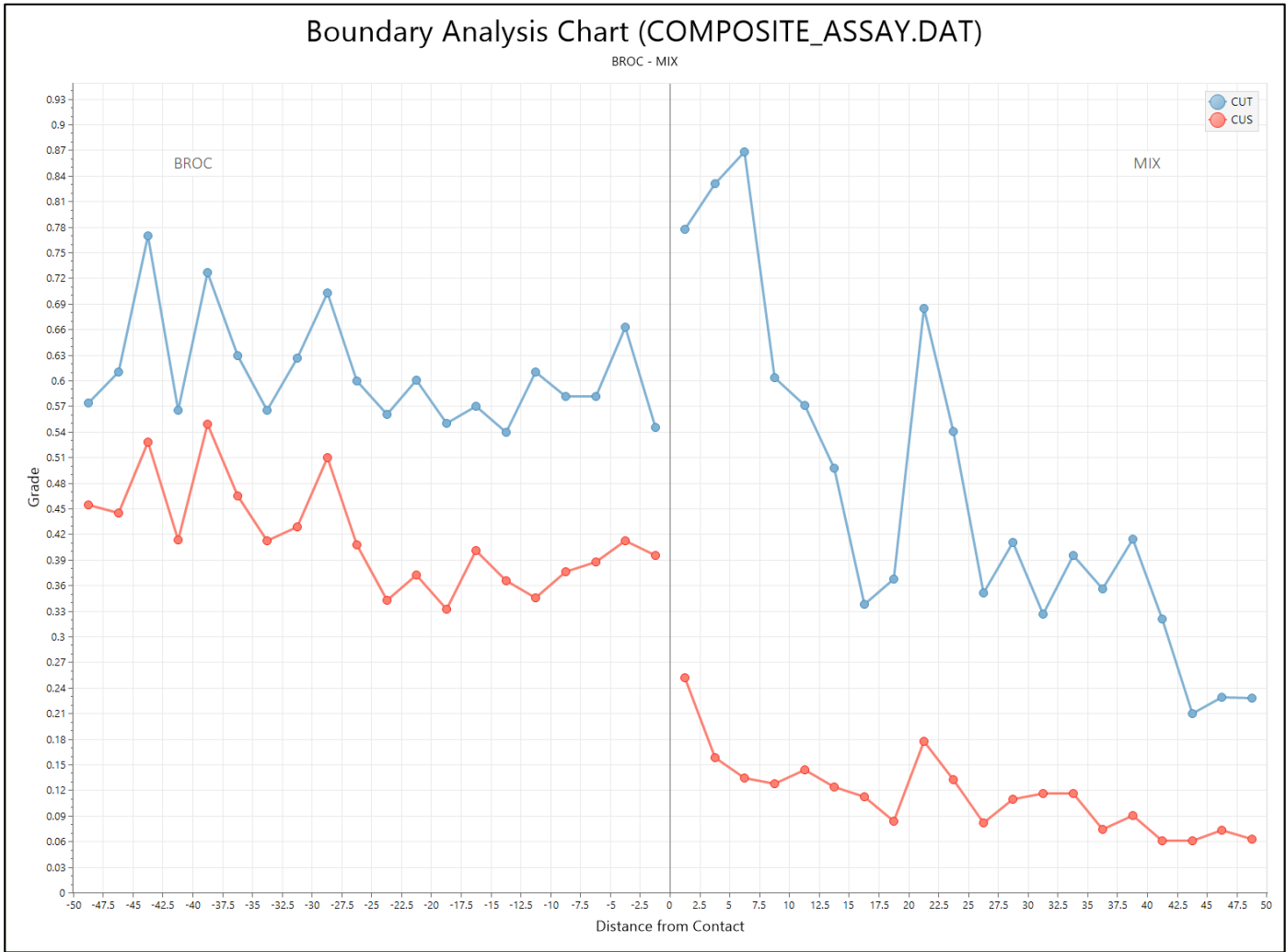
As an example of the analyses carried out, Figure 14-10, Figure 14-11 and Figure 14-12 illustrate the behavior of the CuT and CuS grades along the contact boundaries between the most relevant units.

Figure 14-10: Brochantite – Mixed Contact, CuT and CuS



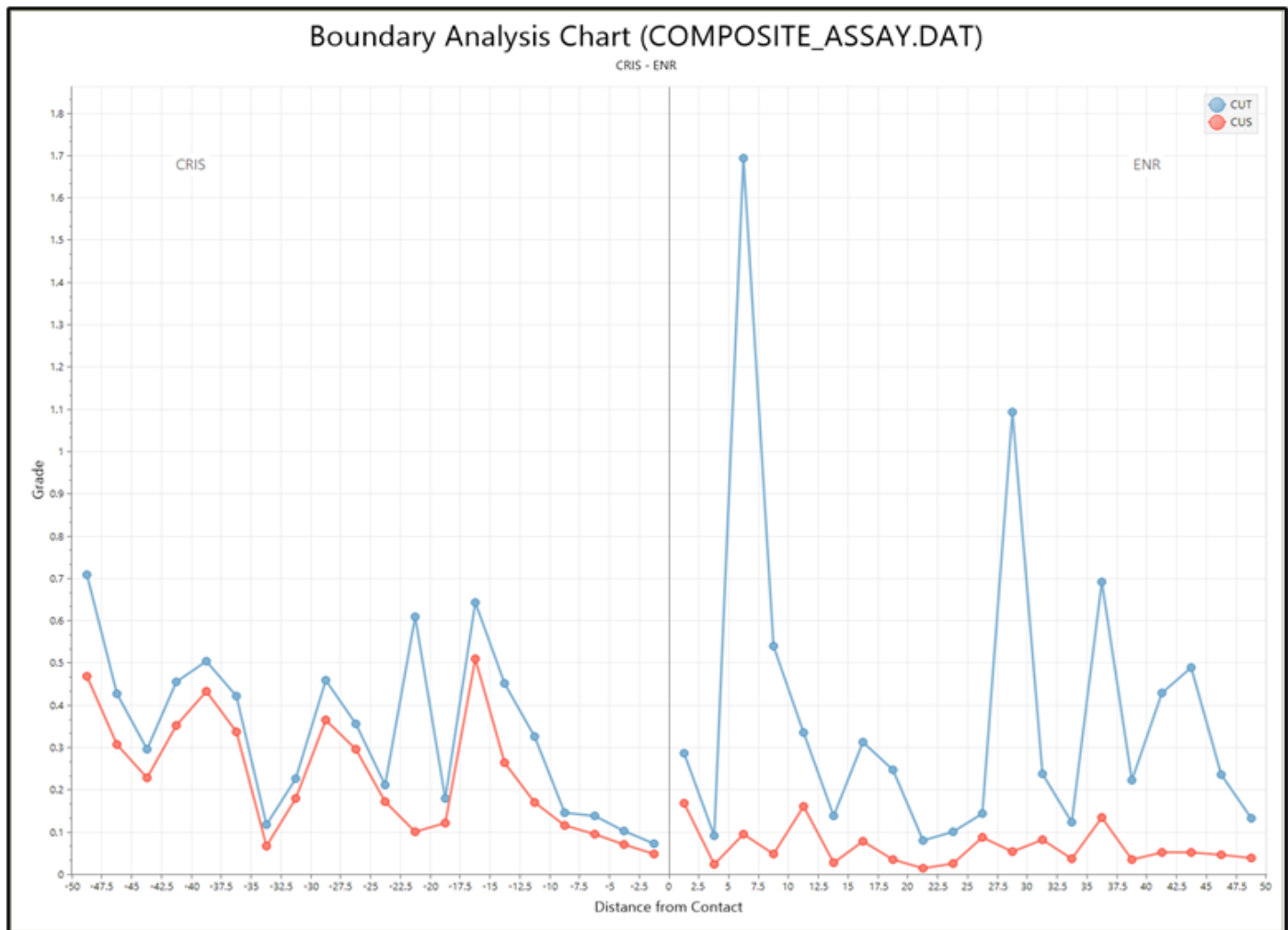
Source: NCL, 2023.

Figure 14-11: Brochantite – Mixed Contact, CuT and CuS



Source: NCL, 2023.

Figure 14-12: Enriched - Chrysocolla Contact, CuT and CuS



Source: NCL, 2023.

The results of the contact analysis were used independently for CuT and CuS to determine the type of contact between the different MZ domains. The results are summarized in the following Figure 14-13 and Figure 14-14.

Figure 14-13: Contact Analysis Results – CuT

	Broc	Cris	Enr	Mix	Wad 0.1	Wad	CP
Broc		HARD	SOFT	SOFT	HARD	HARD	HARD
Cris	HARD		SOFT	SOFT	SOFT	HARD	HARD
Enr	SOFT	SOFT		SOFT	SOFT	HARD	HARD
Mix	SOFT	SOFT	SOFT		SOFT	HARD	HARD
Wad 0.1	HARD	SOFT	SOFT	SOFT		HARD	HARD
Wad	HARD	HARD	HARD	HARD	HARD		HARD
CP	HARD	HARD	HARD	HARD	HARD	HARD	

Source: NCL, 2023.

Figure 14-14: Contact Analysis Results – CuS

	Broc	Cris	Enr	Mix	Wad 0.1	Wad	CP
Broc		HARD	HARD	HARD	HARD	HARD	HARD
Cris	HARD		SOFT	SOFT	SOFT	HARD	HARD
Enr	HARD	SOFT		SOFT	SOFT	HARD	HARD
Mix	HARD	SOFT	SOFT		SOFT	HARD	HARD
Wad 0.1	HARD	SOFT	SOFT	SOFT		HARD	HARD
Wad	HARD	HARD	HARD	HARD	HARD		HARD
CP	HARD	HARD	HARD	HARD	HARD	HARD	

Source: NCL, 2023.

Table 14-5 summarizes the samples used in the estimation of the different MZ for CuT and CuS.

Table 14-5: Samples Used to Estimate each Mineral Zone

CuT	
Mineral Zone	Samples To Use
BROC	BROC+ENR+MIX
CRIS	CRIS+ENR+MIX+WAD 0.1
ENR/MIX	ENR+MIX+CRIS+WAD 0.1+BROC
WAD 0.1	WAD 0.1+CRIS+MIX+ENR
WAD	WAD
CP	CP

CuS	
Mineral Zone	Samples To Use
BROC	BROC
CRIS	CRIS+ENR+MIX+WAD 0.1
ENR/MIX	ENR+MIX+CRIS+WAD 0.1
WAD 0.1	WAD 0.1+CRIS+MIX+ENR
WAD	WAD
CP	CP

Source: NCL, 2023.

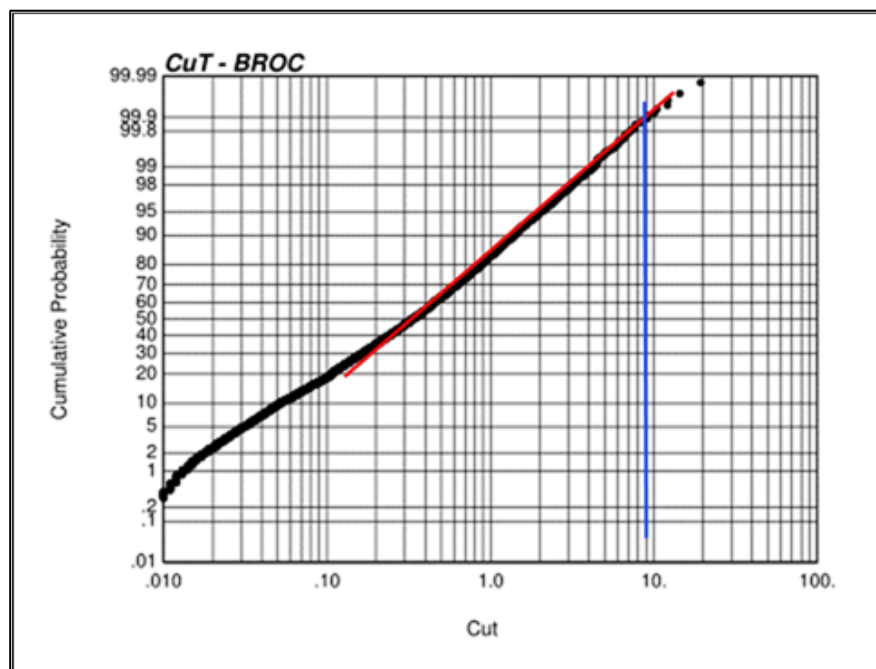
14.4.2 Outliers

An analysis of potential outliers in the estimation populations was carried out using the log-probability curves for each sample population defined previously. The curves were examined for singularities to identify possible outlier limits.

During estimation, samples with values exceeding the defined limits were constrained by a search ellipsoid with a 10 m radius, ensuring that the outliers contributed only to the block that contains them. Additionally, values above the outlier thresholds were capped at the defined limits, adding an additional restriction.

Figure 14-15 shows the log-probability plot of Brochantite as an example.

Figure 14-15: Log-Probability Plot CuT – Brochantite



Source: NCL, 2023.

Outlier limits for each population were defined based on the shape of the curves, as summarized in Table 14-6.

Table 14-6: Outliers Limits

Mineral Zone	CuT (%)	CuS (%)	Samples Capped
	Capping	Capping	
Brochantite	9	6	7
Chrysocolla	3.2	2.9	25
Enriched + Mixed	5.5	2.4	58
Wad CuT $\geq$ 0.1%	2.4	1.8	23
Wad CuT $<$ 0.1%	0.7	0.5	24
Chalcopyrite	4	0.18	0

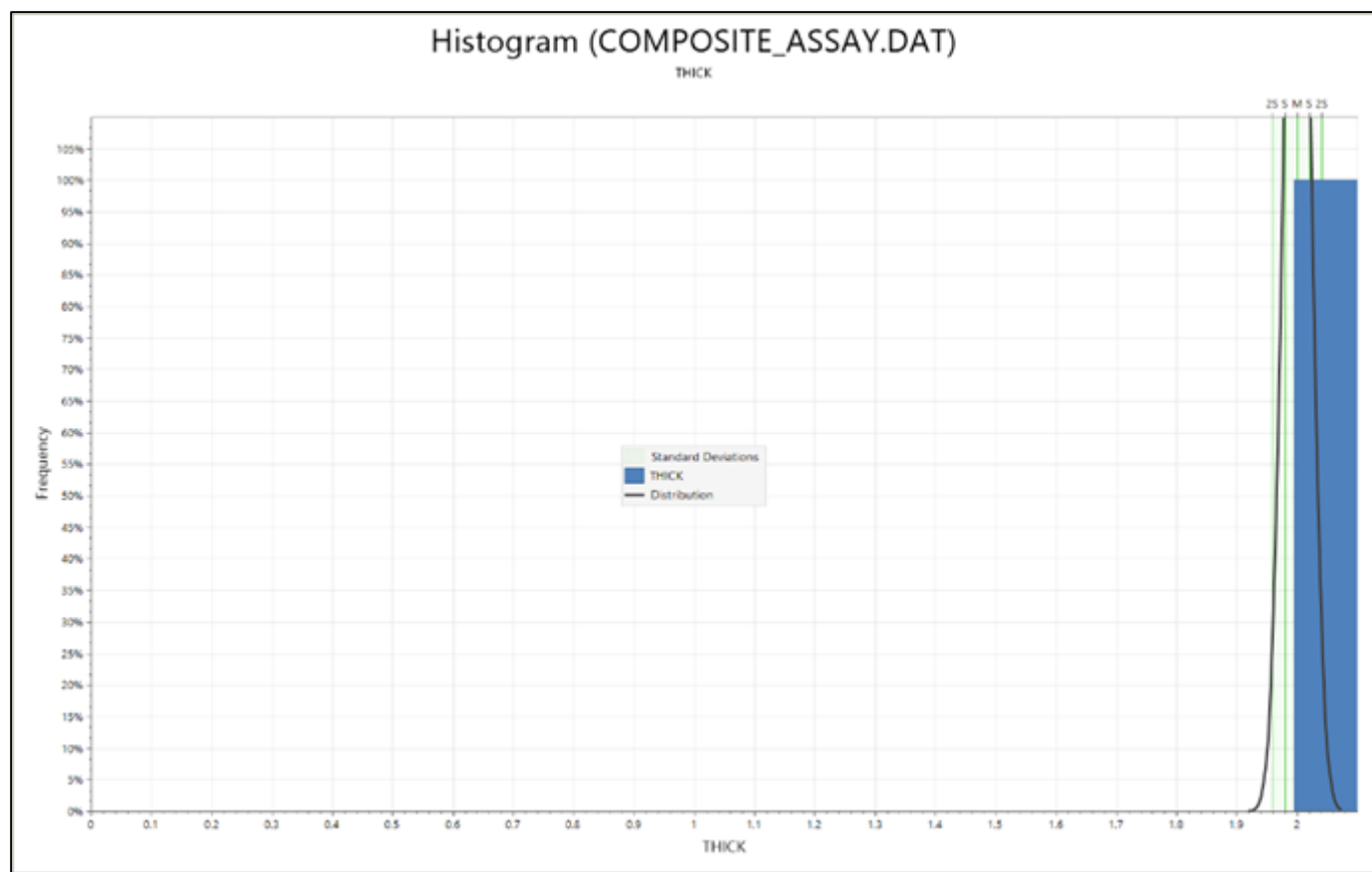
Source: NCL, 2023.

A total of 137 samples out of 50,168 were capped, representing 0.3% of the total population.

14.5 Composites

An analysis was conducted to evaluate the potential benefits of compositing the samples. As shown in the histogram Figure 14-16, approximately 99 % of the samples are 2 m long. so standardizing the sample length is not considered essential. Nevertheless, the potential advantages of compositing were still analyzed.

Figure 14-16: Sample Length Histogram

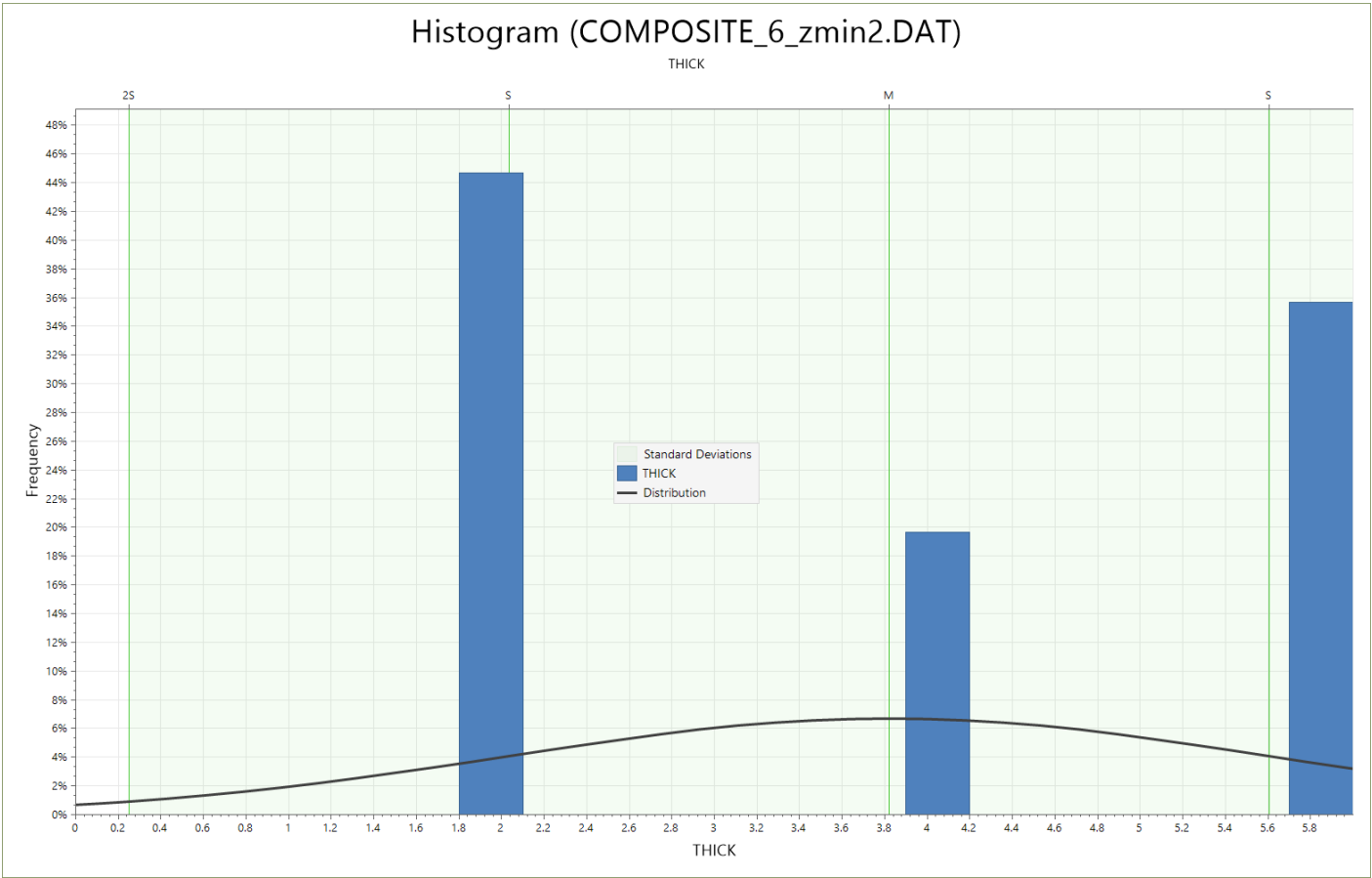


Source: NCL, 2023.

Composites of 6 and 10 m were analyzed considering sample length and block size. Two compositing approaches were studied: the first using the mineral zone codes from the database logs, and the second using the codes from the solid model.

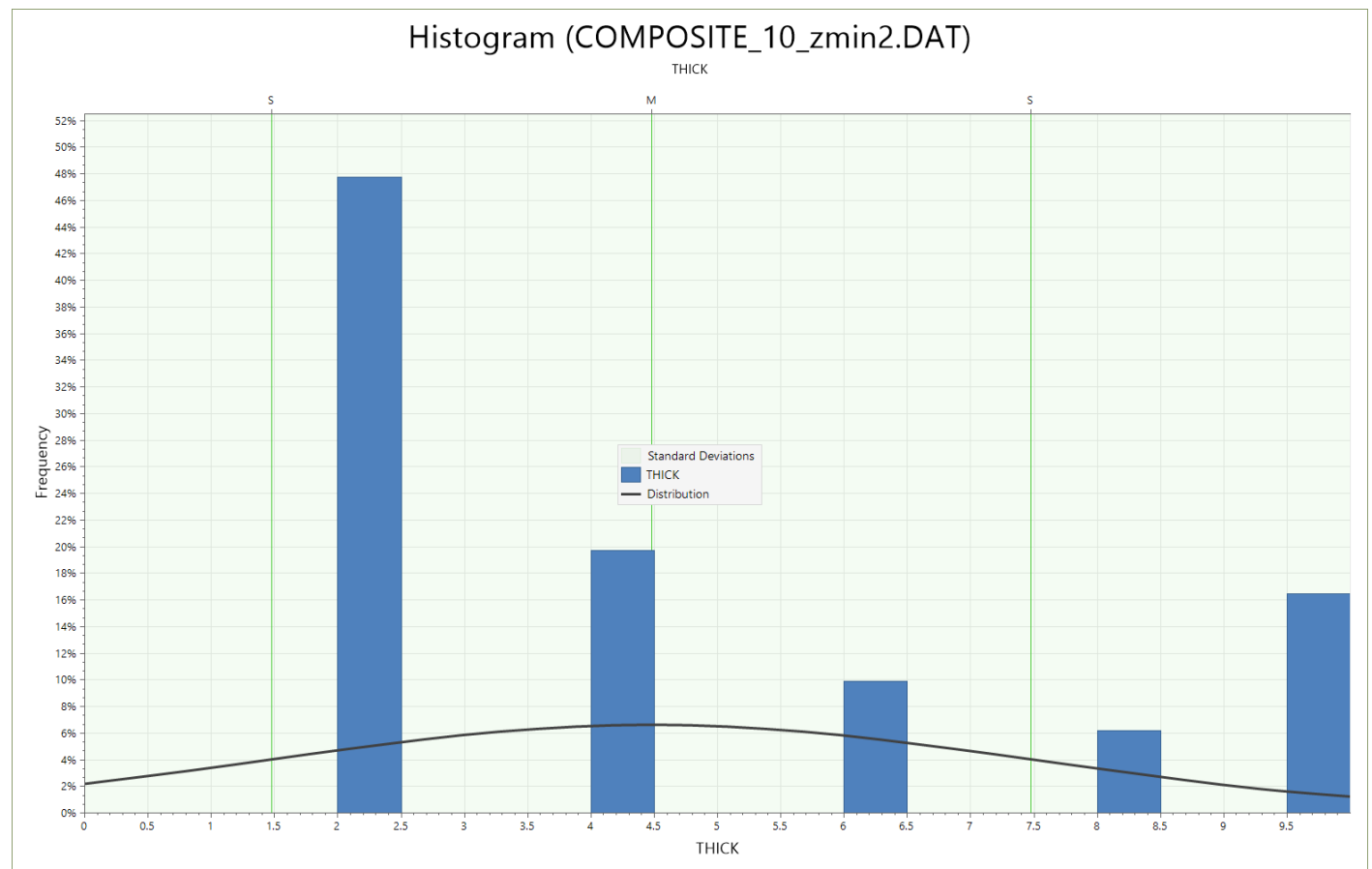
Figure 14-17 shows the composite lengths for the first approach (database log codes) at 6 m. Figure 14-18 shows the composite lengths for the same approach at 10 m.

Figure 14-17: Composite Lengths (Codes from the Database Logs) 6 m



Source: NCL, 2023.

Figure 14-18: Composite Lengths (Codes from the Database Logs) 10 m

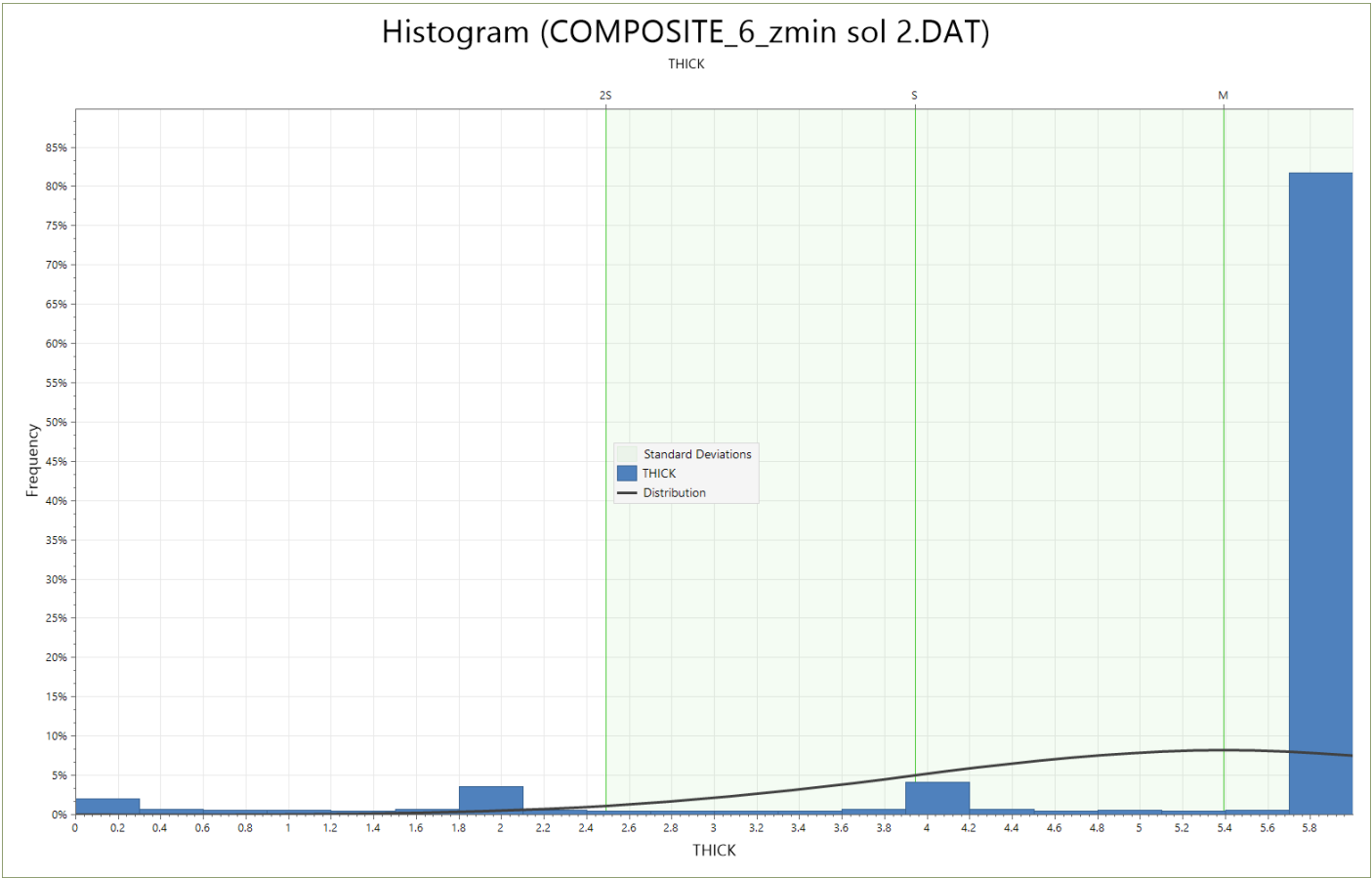


Source: NCL, 2023.

The figures indicate that, when compositing using the codes from the database, the composite lengths are poorly distributed, with most composites restricted to 2 m in both the 6-m and 10-m scenarios.

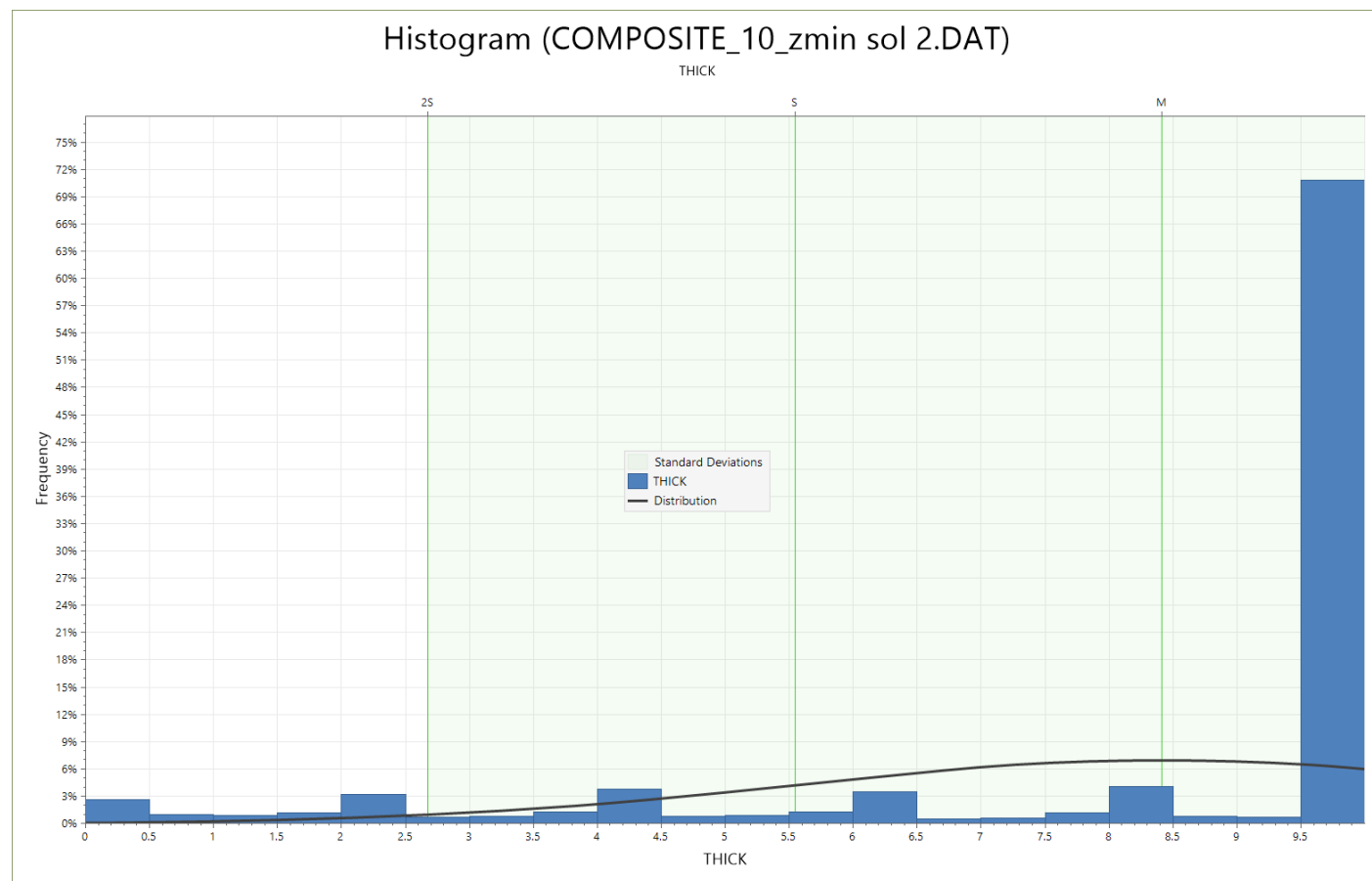
A similar pattern is observed when using the codes from the solid model, as illustrated in Figure 14-19 and Figure 14-20.

Figure 14-19: Composite Lengths (Codes from the Solid Model) 6 m



Source: NCL, 2023.

Figure 14-20: Composite Lengths (Codes from the Solid Model) 10 m



Source: NCL, 2023.

Table 14-7 presents the statistics for the composites generated under both approaches. It is worth noting that, in addition to the substantial loss in sampling support due to the composite length, there is also a loss of population variability, resulting in a significant reduction in variance compared to the original 2-m sample population.

Table 14-7: Statistics, Original Data, 6- and 10-m Composites (CuT & CuS)

Database	ORIGINAL	COMP_6	COMP_10	COMP_6	COMP_10
Composite Method	Solid Code	Solid Code	Solid Code	Log Code	Log Code
ROCK	ALL	ALL	ALL	ALL	ALL
GRADE	CUT	CUT	CUT	CUT	CUT
Minimum (%)	0.001	0.001	0.001	0.001	0.001
Maximum (%)	20.65	13.82	12.56	13.83	13.21
No. of Points	69,682	25,043	16,054	36,288	30,885
Mean (%)	0.23	0.24	0.24	0.25	0.26
Variance	0.32	0.21	0.18	0.26	0.26

Database	ORIGINAL	COMP_6	COMP_10	COMP_6	COMP_10
Composite Method	Solid Code	Solid Code	Solid Code	Log Code	Log Code
ROCK	ALL	ALL	ALL	ALL	ALL
GRADE	CuS	CuS	CuS	CuS	CuS
Minimum (%)	0.001	0.001	0.001	0.001	0.001
Maximum (%)	13.85	7.58	6.89	10.63	6.49
No. of Points	69,682	25,043	16,054	36,288	30,885
Mean (%)	0.12	0.12	0.12	0.12	0.13
Variance	0.12	0.08	0.07	0.09	0.08

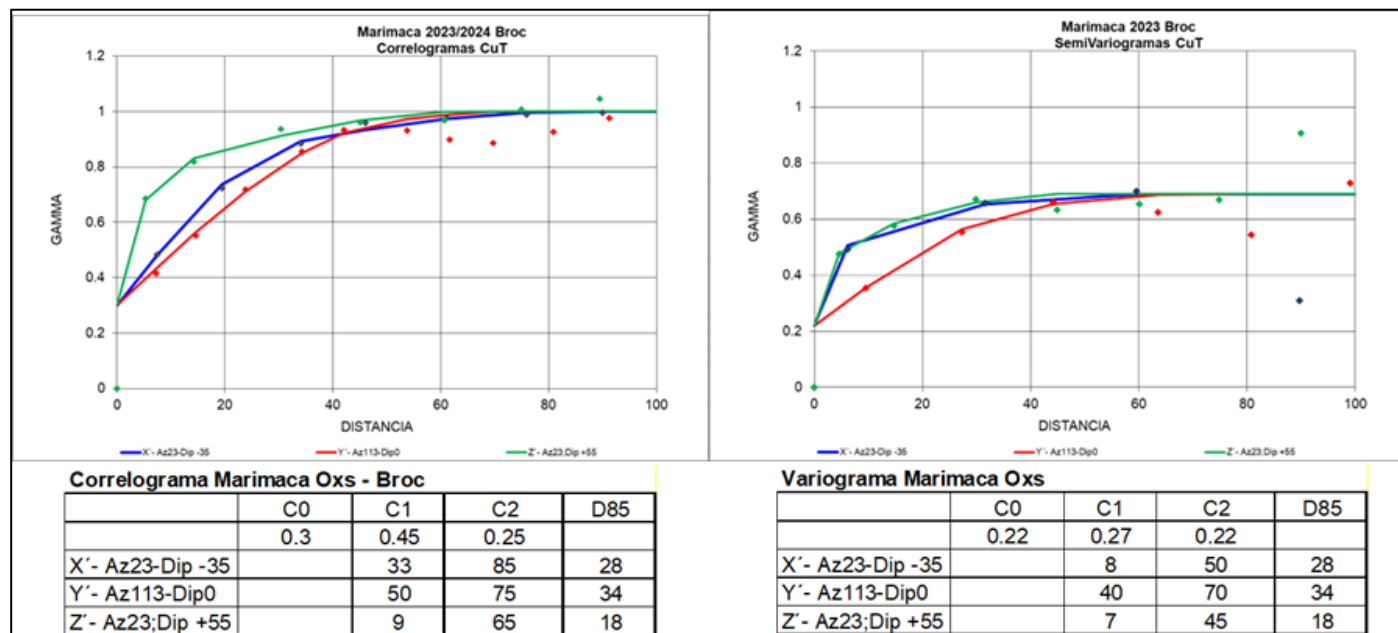
Source: NCL, 2023.

Following the analysis described, the decision was made to retain the original sample lengths without compositing and to increase the maximum number of samples in the estimation parameters.

14.6 Variography

Variograms and correlograms were calculated for the most relevant populations. The resulting correlograms obtained are considered more stable. Figure 14-21 shows the variogram and correlogram for CuT in Brochantite as a representative example of the analyses conducted.

Figure 14-21: CuT Correlogram vs Variogram Comparison – Brochantite



Source: NCL, 2023.

Variograms are less stable and exhibit shorter ranges than correlograms; therefore, correlograms were selected to define the cartographic estimation parameters.

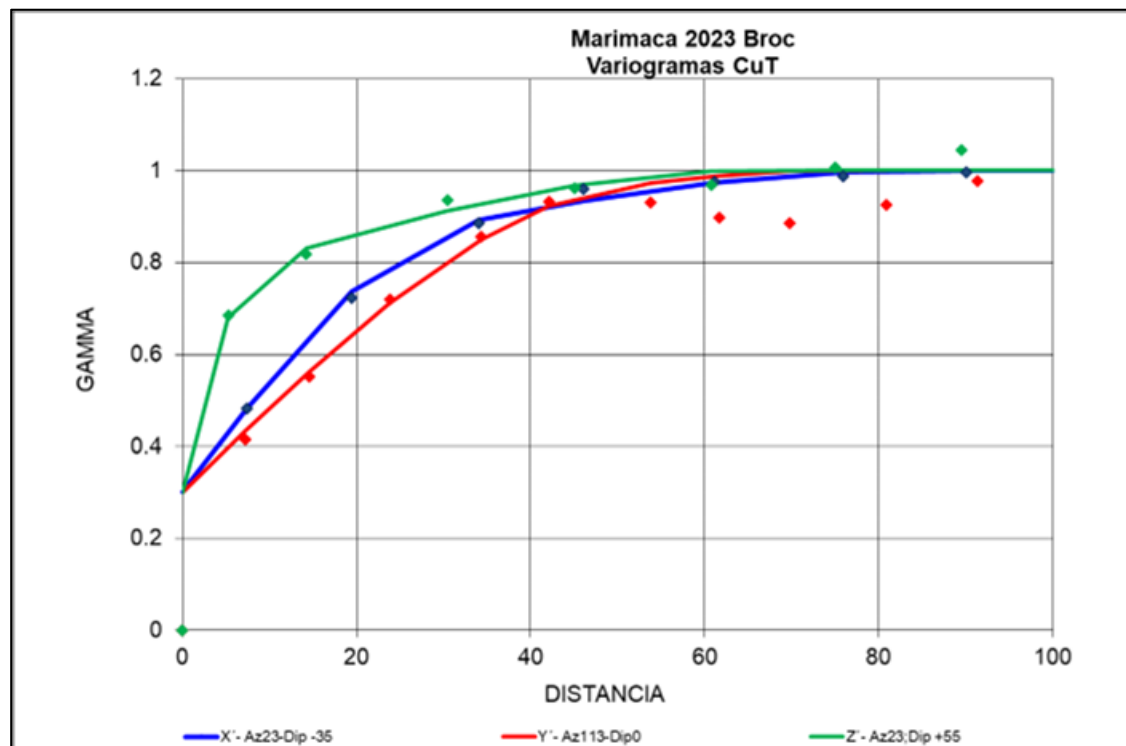
Correlograms were generated for all five Mineral Zones in the geological model.

Table 14-8 presents the parameters of the adjusted CuT Correlograms. Figure 14-22 illustrates the adjusted correlogram for Brochantite as an example.

Table 14-8: Correlograms, Adjusted Models, CuT

Mineral Zone	Principal Azimuth	Principal Dip	Intermediate Azimuth	Nugget	1 Structure			2 Structure			3 Structure		
					Sill 1	Range (m)			Sill 2	Range (m)			Sill 3
						X	Y	Z		X	Y	Z	
Brochantite	23	-35	113	0.3	0.45	33	50	9	0.25	85	75	65	-
Chrysocolla	150	-65	60	0.4	0.35	60	48	50	0.25	120	70	120	-
Enriched + Mixed	95	-45	5	0.35	0.15	10	48	6	0.4	48	48	42	0.1
WAD	90	-40	0	0.35	0.2	32	15	25	0.45	54	52	60	-
Chalcopyrite	100	-62	10	0.15	0.6	45	52	14	0.25	45	52	70	-

Figure 14-22: CuT Correlogram – Brochantite



Source: NCL, 2023.

It was decided to use the CuT Correlograms for the estimation of both CuT and CuS, to ensure that CuS grades do not exceed the CuT values.

14.7 Estimation/Interpolation Methods

Ordinary Kriging was selected as the method for grade interpolation based on the geological characteristics of the deposit and distribution of the available data. The estimate was performed using Micromine software.

The CuT and CuS grades were estimated in a single run, applying parameters derived from the correlograms and the boundary analysis, as summarized in Table 14-9.

Table 14-9: Kriging Plan Parameters

		X	Y	Z	Method	Range X	Range Y	Range Z	Min Samples	Max Samples	N Holes
CuT & CuS	1 pass	Variogram rotation*			OK	3* D85	3* D85	3* D85	6	24	2
	2 pass	Variogram rotation*			OK	1000	1000	1000	2	12	1

Notes: *Each domain has its own directions and ranges. Source: NCL, 2023.

Table 14-10, presents the D85 values applied to each population, indicating that an anisotropic search was used for all estimation units.

Table 14-10: D85 per Direction and Population (m)

ZMIN SOLID	D85 X	D85 Y	D85 Z
Brochantite	28	34	18
Chrysocolla	44	31	40
Enriched	30	28	22
Mixed	30	28	22
Wad	27	25	29
Chalcopyrite	29	31	19

The second run, which applied a very large search radius, was performed solely to ensure that all blocks within the solid model received an estimated grade and that the periphery of the deposit was covered. Blocks estimated in this run were assigned Category 4 and Chalcopyrite codes; for mine design purposes, these blocks must be considered as waste.

14.8 Block Model Validation

The following three validation exercises were performed:

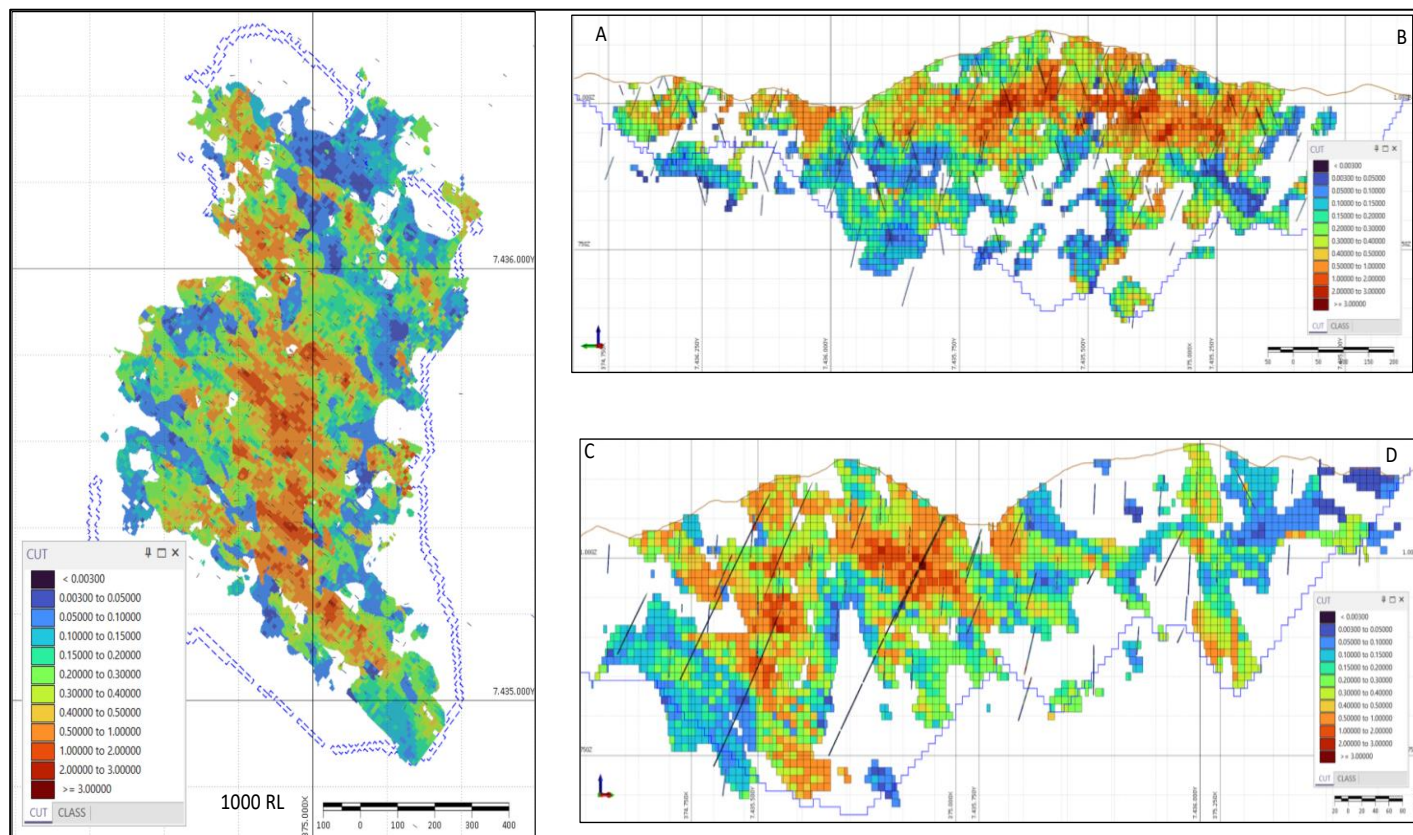
- Visual Validation
- Statistical Validation
- Swath plots and nearest-neighbour modelling

The results of these validations are presented below.

14.8.1 Visual Validation

Several plan views and vertical sections of the block model were prepared to compare the grades of the blocks and the drill holes. The results of this validation are presented in Figure 14-23.

Figure 14-23: Visual Revision of the Model of CuT from Micromine



Source: NCL, 2023.

14.8.2 Statistical Validation

Table 14-11 and Table 14-12 compare the basic statistics of composites and blocks per population. The declustered grades, obtained through the nearest-neighbour technique, are also included in the comparative table.

Table 14-11: Statistic Comparison, Blocks vs Composites – CuT

Rock	Block Model					Rock	Declusterized Database				
	BROC	CRIS	ENR + MIX	WAD	WAD 0.1		BROC	CRIS	ENR + MIX	WAD	WAD 0.1
Minimum (%)	0.019	0.029	0.010	0.031	0.009	Minimum (%)	0.008	0.004	0.003	0.014	0.002
Maximum (%)	4.95	2.22	0.43	1.57	3.77	Maximum (%)	5.87	4.61	0.87	3.77	6.03
No of Points	47,784	38,545	62,468	37,833	138,595	No of Points	1,946	1,202	1,743	1,466	3,347
Mean (%)	0.53	0.35	0.08	0.29	0.24	Mean (%)	0.56	0.37	0.08	0.27	0.29
Variance	0.13	0.04	0.00	0.02	0.04	Variance	0.43	0.15	0.01	0.07	0.32
Std. Deviation	0.36	0.19	0.03	0.13	0.21	Std. Deviation	0.66	0.39	0.08	0.27	0.57
Coeff. of Variation	0.68	0.54	0.43	0.47	0.87	Coeff. of Variation	1.16	1.05	0.98	0.99	1.93
Mode (Continuous)	0.30	0.25	0.06	0.21	0.11	Mode (Continuous)	0.17	0.11	0.04	0.11	0.02
Median	0.44	0.30	0.07	0.26	0.18	Median	0.35	0.25	0.06	0.20	0.12
Interquartile Range	0.38	0.22	0.04	0.15	0.18	Interquartile Range	0.50	0.37	0.06	0.18	0.23

Source: NCL, 2023.

Table 14-12: Statistic Comparison, Blocks vs Composites – CuS

Rock	Block Model					Rock	Declusterized Database				
	BROC	CRIS	ENR + MIX	WAD	WAD 0.1		BROC	CRIS	ENR + MIX	WAD	WAD 0.1
Minimum (%)	0.005	0.012	0.002	0.008	0.001	Minimum (%)	0.002	0.001	0.001	0.005	0.001
Maximum (%)	3.65	1.86	0.31	1.09	1.39	Maximum (%)	5.65	3.50	0.77	2.14	2.07
No of Points	47,782	38,545	62,468	37,833	138,595	No of Points	1,946	1,202	1,743	1,466	3,347
Mean (%)	0.39	0.23	0.03	0.15	0.06	Mean (%)	0.42	0.27	0.03	0.14	0.07
Variance	0.08	0.02	0.00	0.01	0.00	Variance	0.32	0.10	0.00	0.04	.02
Std Dev	0.28	0.15	0.02	0.10	0.06	Std Dev	0.56	0.31	0.05	0.21	0.14
Coeff. of Variation	0.70	0.65	0.67	0.65	0.99	Coeff. of Variation	1.35	1.14	1.56	1.44	2.11
Mode (Continuous)	0.21	0.09	0.02	0.09	0.02	Mode (Continuous)	0.13	0.03	0.01	0.03	0.01
Median	0.32	0.19	0.03	0.13	0.05	Median	0.24	0.17	0.02	0.08	0.03
Interquartile Range	0.29	0.17	0.02	0.11	0.05	Interquartile Range	0.40	0.30	0.03	0.11	0.05

Source: NCL, 2023.

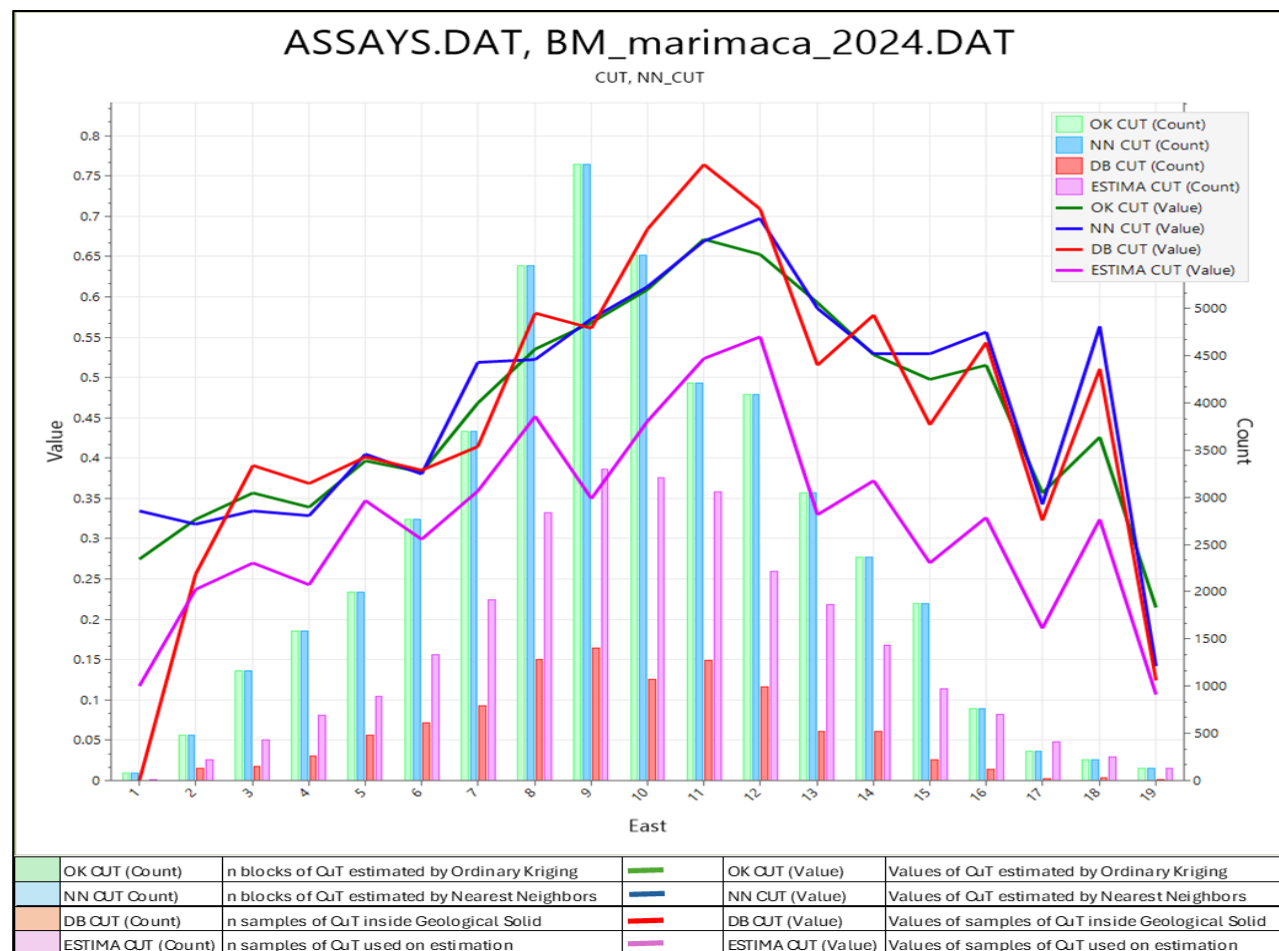
The data presented in the tables above indicate that the estimation demonstrates no global bias.

14.8.3 Swath Plots

For Swath plot validation, the mean and declustered mean of the samples were compared with the block model results as well as with a nearest-neighbour model. The comparison of block mean grades versus direct and declustered means of composites for each estimation domain are presented in the following pages. The graphs also include the number of composites per slice, represented in a bar graph. The results for Brochantite are presented in Figure 14-24, Figure 14-25, and Figure 14-26 as an example of this validation.

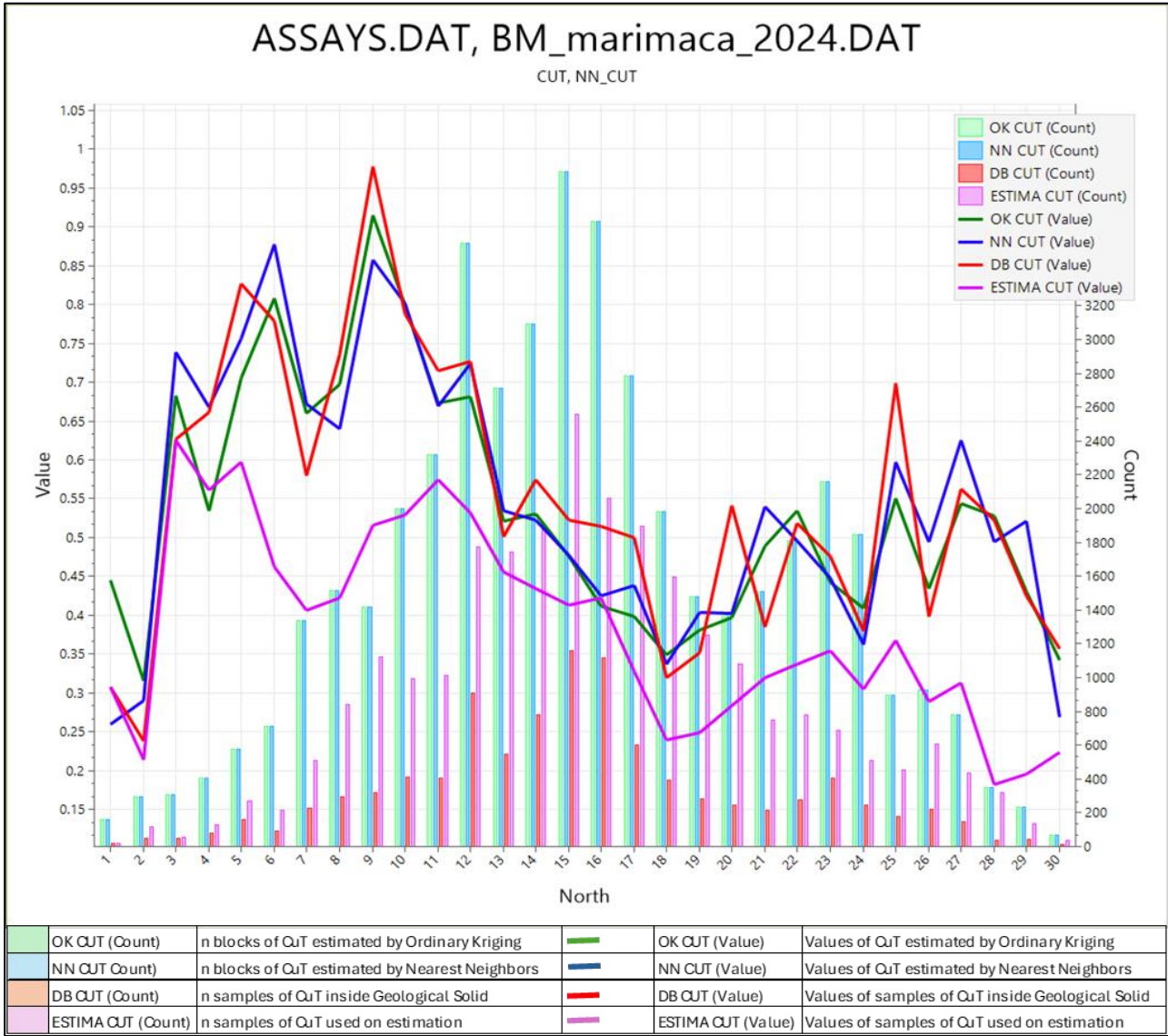
In the Swath plots, a line representing the mean of all the data used for the estimation has been added. This line does not align very well with the estimated blocks grades, and has been included only to check for potential noise introduced by data mixing. No anomalies were identified.

Figure 14-24: Swath Plot – Brochantite – East Direction (each 50 m)



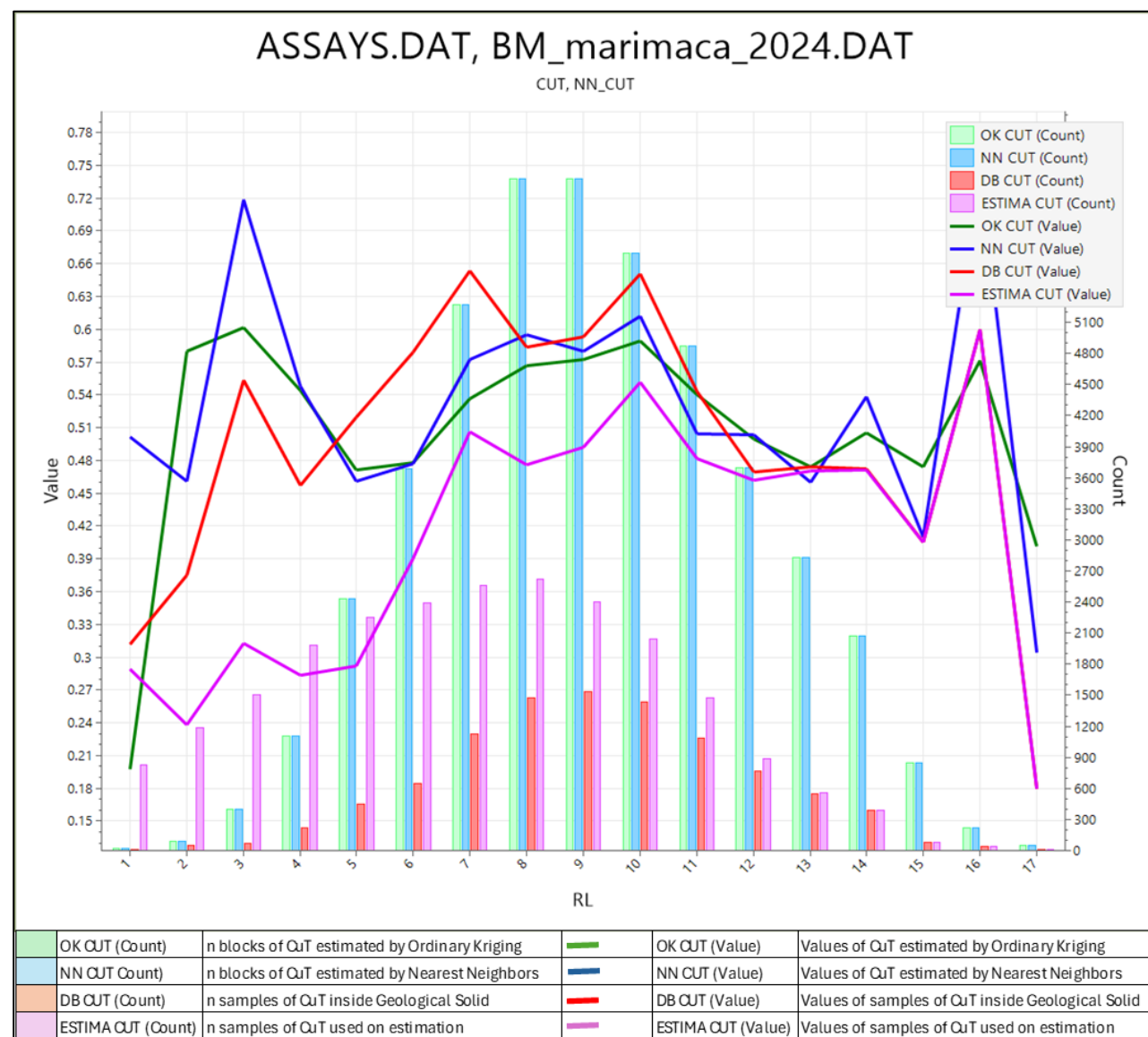
Source: NCL, 2023.

Figure 14-25: Swath Plot – Brochantite – North Direction (each 50 m)



Source: NCL, 2023.

Figure 14-26: Swath Plot – Brochantite – Elevation (each 20 m)



Source: NCL, 2023.

The same analysis was conducted for the remaining Mineral Zones, and the estimated mean shows satisfactory behavior, consistent with the declustered mean. No excessive smoothing was observed.

It is concluded that the estimated grade model preserves the characteristics of the mean grade, global variability, and tendencies of the original samples.

14.9 Classification of Mineral Resources

For the current 2025 MRE, the Resource Classification is based on the density of exploration data, representing a key change in the resource estimation criteria. The updated methodology complies with the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) and is summarized below in Table 14-13.

To establish resource categories, three Ordinary Kriging runs were performed, using all the samples in the database and the parameters listed in Table 14-13. These parameters are based on the drillholes grid, and the blocks estimated in runs 1, 2 and 3 are classified as Measured, Indicated, and Inferred respectively.

Table 14-13: Resource Classification Runs – Parameters

Resource Classification		X	Y	Z	Method	Range X	Range Y	Range Z	Nº Holes
	Measured	Horizontal			O. Krig	38	38	26	3
	Indicated	Horizontal			O. Krig	60	60	40	3
	Inferred	Horizontal			O. Krig	90	90	60	2

Source: NCL, 2023.

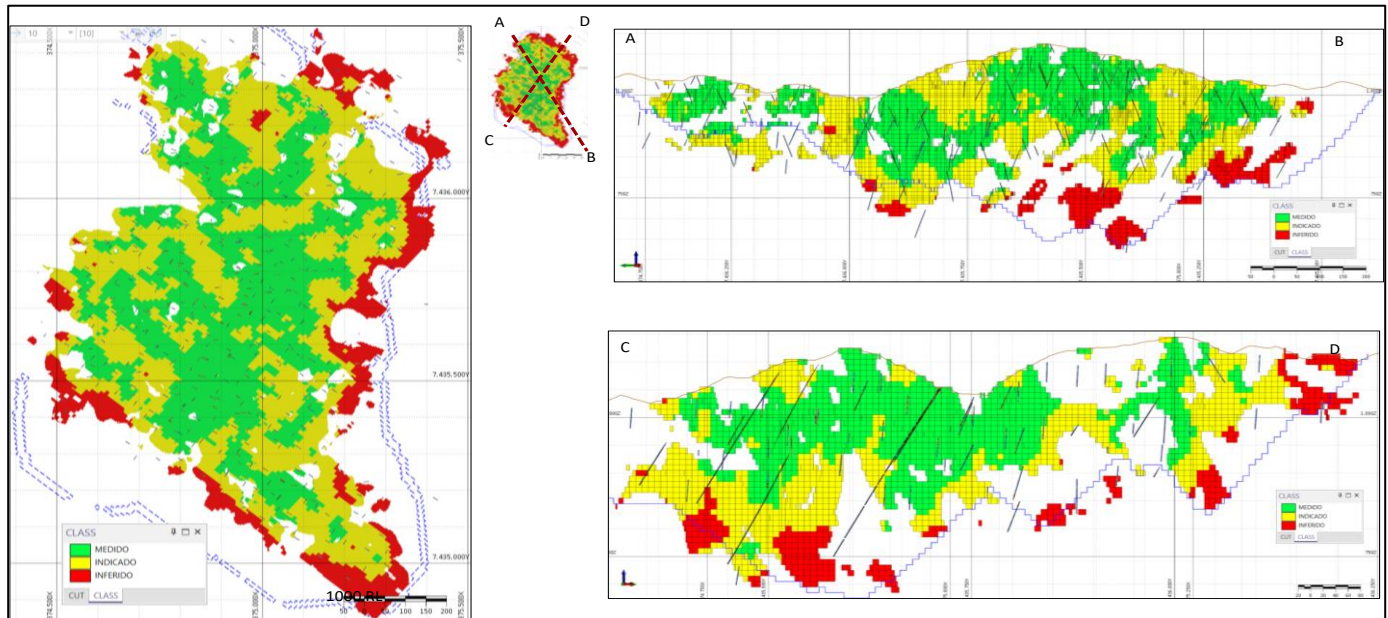
Following the three runs mentioned above, a smoothing process was applied to eliminate singularities, such as isolated blocks or “islands,” that required refinement. Smoothing is done using an inverse distance run, based on the block values obtained from the initial run. The run was conducted using a minimum of 20 and a maximum of 30 samples per block with an isotropic search radius of $40 \times 40 \times 40$ m.

The final smoothed classification was determined from the results of this inverse distance run using the following criteria:

- 1.5 – Measured
- 1.5 – 2.5 – Indicated
- 2.5 – 3.0 – Inferred

The results from the final classification model were visually inspected to confirm a good correlation between sample distribution and classification, as well as to verify the effective removal of isolated blocks or poorly classified block clusters. The following Figure 14-27 shows a plan view and two vertical sections illustrating the classification model and drill holes, showing a good relationship between classification and information density.

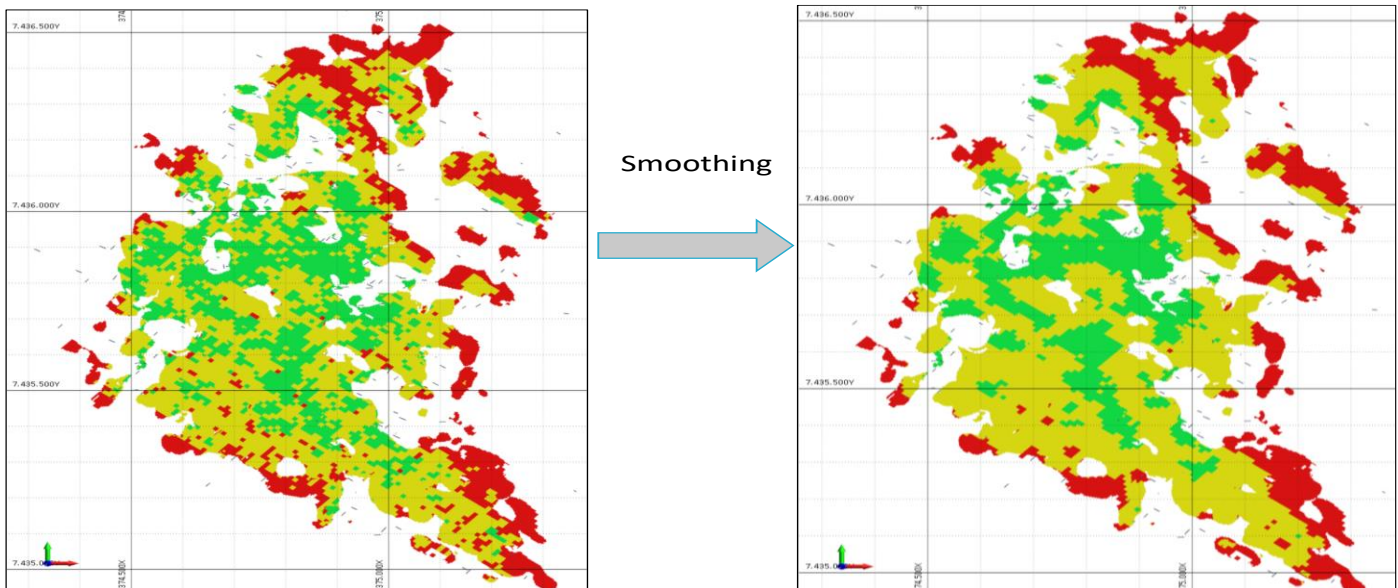
Figure 14-27: Classification Model vs Drillhole Data



Source: NCL, 2023.

Figure 14-28 shows, as an example, a plan view with the classification model before and after smoothing.

Figure 14-28: Classification Model, Before and After Smoothing – Elevation 1,000



Source: NCL, 2023.

14.9.1 Reasonable Prospects for Eventual Economic Extraction

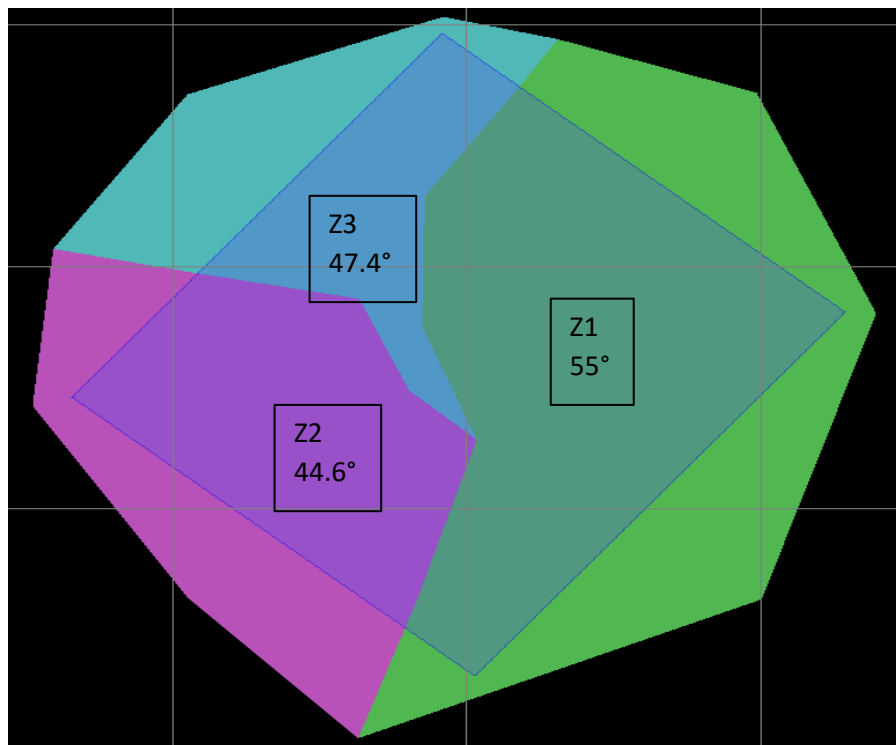
Once the block model was finished and validated, a Whittle pit was run using the technical parameters, provided by Marimaca and approved by NCL for resource estimation (Table 14-14).

Table 14-14: Technical and Economical Parameters for Whittle Run

Parameters	Unit	Value	Comments
Copper Price	US\$/lb	\$4.90	-
Mining Cost (Variable by Pit Depth)			
Average	US\$/t	\$2.01	Average
Processing Cost (Variable by rock type and Net Acid Consumption)			
BROC/CRIS/WAD	US\$/t	Net Acid Consumption (kg/t) x Acid Price (US\$/t)/1000 (kg/t) + 2.83 (US\$/t)	
MIX/ENR	US\$/t	Net Acid Consumption (kg/t) x Acid Price (US\$/t)/1000 (kg/t) + 2.83 (US\$/t)	
Acid price	US\$/t	\$100	-
Recoveries (Variable by Rock Type and Leachable Potential)			
BROC	%	LPx0.92x1	Leachable potential: LP=(CuS+CuCN)/CuT
CRIS	%	LPx0.92x1	Leachable potential: LP=(CuS+CuCN)/CuT
WAD	%	(0.97xCuS + 0.7xCuCN+ 0.202x CuR)/ CuTx1x1	Residual Copper: CuR=CuT-CuS-CuCN
MIX	%	0.736	Leachable potential: LP=(CuS+CuCN)/CuT
ENR	%	LPx0.738x0.95306	Leachable potential: LP=(CuS+CuCN)/CuT
Other Costs and Charges			
G&A	US\$/t	\$0.3125	US\$5.0M per year at a throughput of 16 Mt/a
Cathodes transport cost	US\$/t Cu	\$3.6	US\$0.12/t/km and 30 km route to port
SX/EW Selling Cost	US\$/lb Cu	\$0.25	-
Mining Parameters			
Pit Slope Overall Angles	°	45-37-32	-
Royalties			
Osisko	%	1.0	Across all claims
Marimaca 1-23	%	0.5	-
La Atómica	%	1.0	-

The slope angles applied are global angles, allowing for the inclusion of ramps and safety berms. These values were obtained from Ingeroc's report (2024). Figure 14-29 shows a plan view of the slope zones recommended by Ingeroc. The slopes used for the Whittle run correspond to the overall angles derived from a preliminary pit design.

Figure 14-29: Slope Angles



Source: INGEROC, 2024.

The Whittle run was conducted using a minimum cut-off grade (CoG) of 0.10% CuT, as agreed with Marimaca, to account for potential operational challenges associated with mining lower-grade material.

Considering the different recoveries of each Mineral Zone, the average CoG values for each zone were calculated based on the parameters in Table 14-14 and are summarized in Table 14-15.

Table 14-15: Resource Cut-off Grades per Mineral Zone

Mineral Zone	CoG (%CuT)
BROC	0.08
CRIS	0.09
WAD	0.09
WD01	0.10
MIX	0.09
ENR	0.12
AVG	0.09

Source: NCL, 2025.

Based on the values shown in Table 14-15, a CoG of 0.10 % CuT was selected for Resource reporting.

14.9.2 Other Considerations and Criteria for Optimization

Other considerations and criteria used for the optimization process include:

- All material outside the Mineral Zone solids is considered waste, at zero grade.
- The Chalcopyrite Mineral Zone is considered waste.
- Pit walls are not constrained by property boundaries, in accordance with Chilean regulations, providing that mining within the property is justified. However, the resulting pit remains entirely within the Marimaca claim.
- Measured, Indicated and Inferred categories were considered valuable material.
- In terms of the integration process of the block model, no further dilution was considered for the optimization process.

14.10 Mineral Resource Statement

Table 14-16 summarizes the in-pit resource by category, including all valuable mineral zones, for a cut-off grade of 0.10% CuT. It must be noted that the reported figures do not include non-leachable material (chalcopyrite). This mineral zone has been treated as waste for pit generation and reporting; nevertheless, some minor tonnage is included in the pit limits, which, as mentioned, is not reported as a resource.

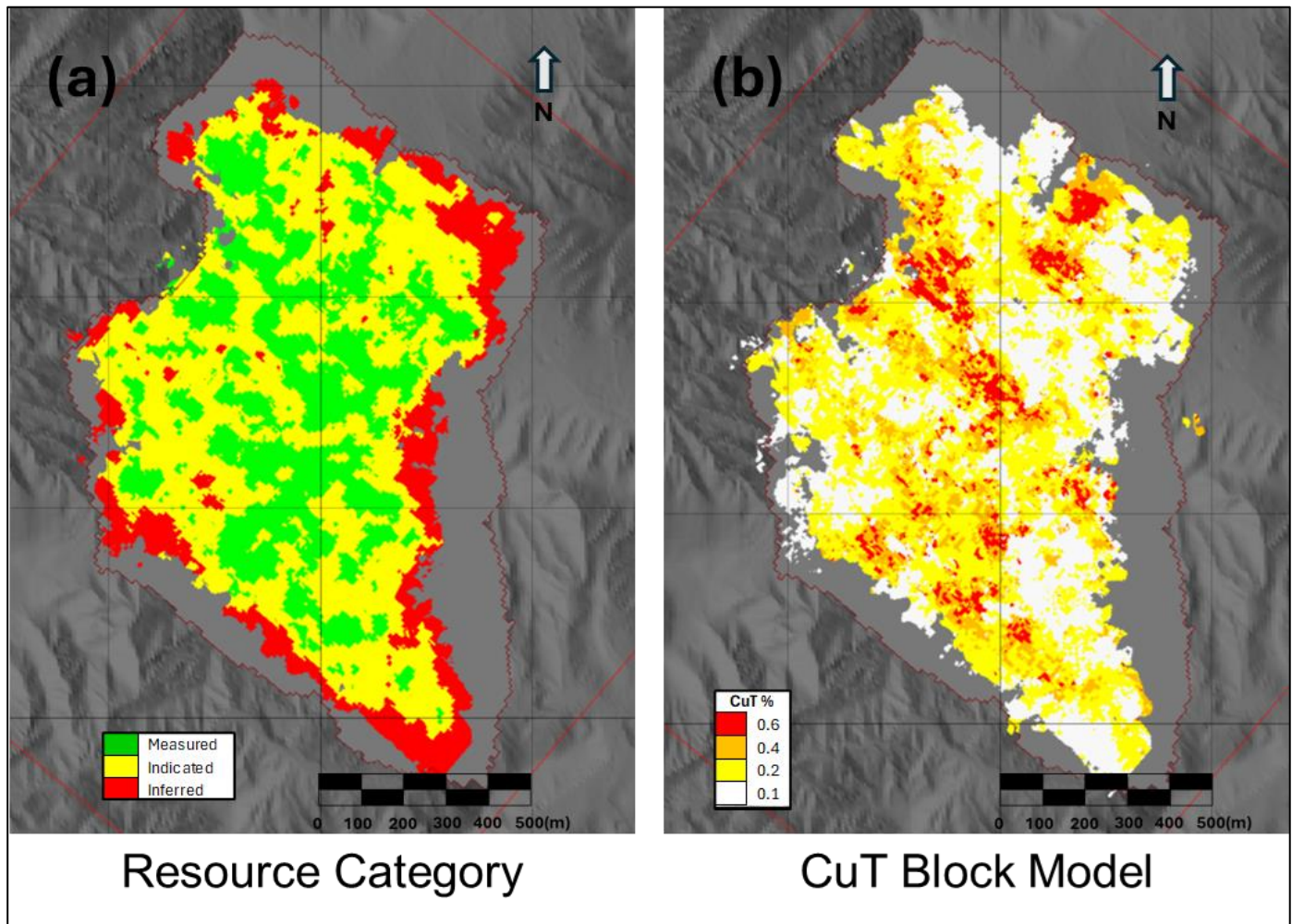
Table 14-16: In-Pit Consolidated Mineral Resource Statement, Marimaca, (CoG 0.10% CuT)

Mineral Resource Category and Type	Quantity (Mt)	CuT (%)	CuS (%)	CuT (t)	CuS (t)
Total Measured	103.4	0.45	0.27	466,041	278,165
Total Indicated	110.1	0.35	0.19	387,772	205,489
Total Measured and Indicated	213.5	0.40	0.23	853,813	483,654
Total Inferred	21.2	0.29	0.14	62,231	29,104

Notes: **1.** The independent and qualified person responsible for the mineral resource estimate, as defined by NI 43-101, is professional geologist Luis Oviedo, RM CMC, and the effective date is August 25, 2025. **2.** These mineral resources are not mineral reserves, as they do not demonstrate economic viability. The mineral resource estimate adheres to current CIM and JORC definitions and guidelines. **3.** The results are presented undiluted and are considered to have reasonable prospects of economic viability. **4.** Mineral Resources are reported at a copper price of US\$4.90/lb Cu. Assumes a variable Mining Cost by pit depth averaging US\$2.01/t, variable processing cost by mineral subdomain (see Table 14-14), variable recoveries by mineral subdomain (See Table 14-14Table 1-9), US\$0.31/t G&A, \$3.60/t cathode transport cost, US\$0.25/lb Cu SX-EW and selling costs. Pit slope angles range from 32-45 degrees.

Details for each Mineral Zone, including Tonnage-Grade Curves within the Resource pit, were calculated and are presented in Table 14-17. Figure 14-30 illustrates a plan view of the pit, showing the CuT grade model and the Classification model.

Figure 14-30: Resource Pit, CuT and Category Block Models



Source: NCL, 2025.

Table 14-17: Mineral Resource Estimate for the Marimaca Deposit, Base CoG of 0.10% CuT

				Contained Metal	
Classification	Quantity Tonnes (kt)	Grade		CuT Tonnes (t)	CuS Tonnes (t)
		CuT (%)	CuS (%)		
Measured					
Brochantite	39,399	0.59	0.43	232,454	169,416
Chrysocolla	18,417	0.42	0.3	77,351	55,251
Enriched	5,933	0.32	0.06	18,986	3,560
Mixed	21,938	0.41	0.11	89,946	24,132
Wad	2,489	0.13	0.06	3,236	1,493
Wad GT 0.1	15,196	0.29	0.16	44,068	24,314
Total Measured	103,372	0.45	0.27	466,041	278,165
Indicated					
Brochantite	26,962	0.5	0.36	134,810	97,063
Chrysocolla	20,334	0.34	0.23	69,136	46,768
Enriched	14,649	0.32	0.06	46,877	8,789
Mixed	23,211	0.32	0.09	74,275	20,890
Wad	6,072	0.13	0.06	7,894	3,643
Wad GT 0.1	18,890	0.29	0.15	54,781	28,335
Total Indicated	110,118	0.35	0.19	387,772	205,489
Measured and Indicated					
Brochantite	66,361	0.55	0.4	367,264	266,479
Chrysocolla	38,751	0.38	0.26	146,487	102,019
Enriched	20,582	0.32	0.06	65,862	12,349
Mixed	45,149	0.36	0.1	164,221	45,022
Wad	8,561	0.13	0.06	11,129	5,137
Wad GT 0.1	34,086	0.29	0.15	98,849	52,649
Total Measured + Indicated	213,490	0.40	0.23	853,813	483,654
Inferred					
Brochantite	918	0.37	0.26	3,397	2,387
Chrysocolla	6,705	0.28	0.18	18,774	12,069
Enriched	2,016	0.42	0.08	8,467	1,613
Mixed	6,079	0.31	0.12	18,845	7,295
Wad	1,721	0.13	0.05	2,237	860,5
Wad GT 0.1	3,754	0.28	0.13	10,511	4,880
Total Inferred	21,193	0.29	0.14	62,231	29,104

Notes: 1. The independent and qualified person responsible for the mineral resource estimate, as defined by NI 43-101, is professional geologist Luis Oviedo, RM, CMC and the effective date is August 25, 2025. 2. These mineral resources are not mineral reserves, as they do not have demonstrated economic viability. The mineral resource estimate follows current CIM definitions and guidelines. 3. The results are presented undiluted and are considered to have reasonable prospects of economic viability.

14.11 Factors That May Affect the Mineral Resource Estimate

The QP Luis Oviedo is not aware of any legal, political, environmental, or other risks that could materially impact the potential development of the Mineral Resources. Tonnage-grade calculations within the pit were performed to assess the sensitivity of the Marimaca Mineral Resource Estimate to variations in the CuT CoG. Table 14-18 shows the tonnage-grade curve per resource category, highlighting the CuT CoG of 0.1% as the base case.

Table 14-18: Sensitivity of the Mineral Resource to Changes in CuT CoG

All Material Inside Pit Shell												
Cut-off	Measured			Indicated			Measured + Indicated			Inferred		
	Mt	CuT(%)	CuS(%)	Mt	CuT(%)	CuS(%)	Mt	CuT(%)	CuS(%)	Mt	CuT(%)	CuS(%)
1.00	6.80	1.37	0.81	2.80	1.36	0.67	9.70	1.37	0.77	0.20	1.31	0.16
0.95	7.90	1.32	0.78	3.40	1.29	0.64	11.30	1.31	0.74	0.20	1.28	0.18
0.90	9.10	1.27	0.75	4.10	1.23	0.62	13.20	1.26	0.71	0.20	1.21	0.22
0.85	10.60	1.21	0.72	5.00	1.17	0.59	15.60	1.20	0.68	0.30	1.14	0.24
0.80	12.40	1.16	0.69	6.00	1.10	0.57	18.40	1.14	0.65	0.40	1.05	0.28
0.75	14.40	1.10	0.66	7.30	1.05	0.55	21.70	1.08	0.62	0.50	0.97	0.30
0.70	16.90	1.05	0.63	8.80	0.99	0.53	25.60	1.03	0.60	0.70	0.91	0.31
0.65	19.70	1.00	0.60	10.70	0.93	0.50	30.40	0.97	0.57	1.00	0.84	0.31
0.60	23.30	0.94	0.57	13.00	0.88	0.48	36.30	0.92	0.54	1.30	0.79	0.31
0.55	27.30	0.89	0.54	16.00	0.82	0.45	43.30	0.86	0.51	1.80	0.73	0.30
0.50	32.20	0.83	0.51	19.80	0.76	0.42	52.00	0.80	0.48	2.40	0.68	0.29
0.45	37.90	0.77	0.48	24.70	0.71	0.39	62.60	0.75	0.45	3.30	0.62	0.28
0.40	44.60	0.73	0.44	31.10	0.65	0.36	75.70	0.70	0.41	4.60	0.56	0.26
0.35	52.60	0.67	0.41	39.30	0.59	0.33	91.90	0.64	0.38	6.00	0.52	0.24
0.30	62.20	0.62	0.38	50.10	0.53	0.30	112.30	0.58	0.34	8.00	0.47	0.22
0.25	72.60	0.57	0.35	63.50	0.48	0.27	136.10	0.53	0.31	10.40	0.42	0.20
0.20	83.90	0.52	0.31	78.90	0.43	0.23	162.80	0.48	0.27	13.20	0.38	0.18
0.15	94.30	0.49	0.29	94.30	0.39	0.21	188.50	0.44	0.25	16.60	0.34	0.16
0.10	103.40	0.45	0.27	110.10	0.35	0.19	213.50	0.40	0.23	21.20	0.29	0.14
0.05	118.40	0.40	0.24	138.40	0.29	0.15	256.80	0.34	0.19	27.80	0.24	0.11
0.00	122.50	0.39	0.23	145.10	0.28	0.15	267.60	0.33	0.19	29.80	0.23	0.10

Notes: **1.** The independent and qualified person responsible for the mineral resource estimate, as defined by NI 43-101, is professional geologist Luis Oviedo, RM, CMC, and the effective date is August 25, 2025. **2.** These Mineral Resources are not mineral reserves, as they do not demonstrate economic viability. The mineral resource estimate follows current CIM definitions and guidelines. **3.** The results are presented undiluted and are considered to have reasonable prospects for economic viability. **4.** The highlighted row is the base case.

15 MINERAL RESERVE ESTIMATES

15.1 Introduction

A mine plan was developed for the Project to produce 50 kt/a of copper cathodes in two phases. Phase 1 considers a crusher feed of 12 Mt/a during an initial period of five years. Phase 2 starts in Year 6 and continues through the life of mine (LOM), at a crusher throughput of 16 Mt/a. The total material movement (ore and waste) required varies over the life of mine, fluctuating between 25 and 35 Mt/a during the 11-year mining period, plus two additional years of low-grade ore re-handling from the stockpile. The mine is scheduled to operate seven days per week, 365 days per year. Each day will consist of two 12-hour shifts per day and four mining crews required to sustain the operations.

The study assumes operation of the Marimaca mine using 29 m³ hydraulic shovels, supported by a 23 m³ front-end loader and 220 t capacity trucks. This equipment configuration can achieve the productivity required for maximum annual total material movement of 35 Mt, while also provide good mining selectivity as required for grade control. The final pit design reflects the decision to employ an Owner mining strategy for the life of the mine.

Pit optimization and mine planning were performed using the Mineral Resource Estimate, incorporating factors to account for dilution and ore losses. Because of the importance of the head grades to the processing plant, significant grade control efforts must be made during mining to minimize sub-grade material being fed to the crushing facilities.

Mineral Reserves are defined within an open pit mine plan considering diluted Measured and Indicated Mineral Resources.

Mineral Resources were converted to Mineral Reserves recognizing the level of confidence in the Mineral Resource Estimate and reflecting any modifying factors. The Proven Mineral Reserve is based on Measured Mineral Resources and Probable Mineral Reserve is based on Indicated Mineral Resources after consideration of all mining, metallurgical, social, environmental, statutory and financial aspects of the project.

The Mineral Reserve is that part of the Mineral Resource which can be economically mined by open pit mining methods. As stated above, dilution of the Mineral Resource model was included in the Mineral Reserve Estimate.

15.2 Block Model

The Reserve estimate considered 2024 updated resource block model. The original resource model considered the sub-blocks technique, with minimum block sizes is of 2.5 x 2.5 x 10 m RL. For mine planning purposes, this block model was standardized to 10 m x 10 m x 10 m RL, to represent a selective mining unit. The block model was constructed with sufficient variables to enable grade estimation and reporting.

Resource estimation was undertaken using Ordinary Kriging (OK) by zone type as the principal estimation methodology for copper.

The block model data includes the following variables:

- Zone code with kind of material (BRC, CRIS, WAD, MIX and ENR)
- Bulk density (t/m³)
- Total Copper grade (CuT%)
- Acid soluble Copper grade (CuS%)
- Cyanide soluble Copper grade (CuCN%)
- Analytical acid consumption (AAC)
- A class code to distinguish measured, indicated, and Inferred Resource blocks.

Marimaca personnel provided the initial topography which was added to the model by NCL. Mineral resources based on the models are tabulated at various cut-off grades in Sections 7 and 14 of this Technical Report.

The metallurgical recovery was calculated based in metallurgical recommendation.

The block model included resources classified as measured, indicated or Inferred. All the activities of pit optimization, mine design, mine planning and reserves estimate were carried out using this regularized block model and did not include the inferred resources as part of the available resources (only measured and indicated resources can be converted into mineral reserves). Inferred resources were treated as waste.

15.3 Parameters for Mine Design

15.3.1 Base Parameters

Table 15-1 summarizes the base case economic parameters used for Lerchs-Grossman economic shells analysis and mine design.

The mining cost estimate for the pit optimization process is based on studies developed by NCL in 2024 as part of the FS-DIA study. The estimated average project mining cost was separated into various components such as fuel, explosives, tires, parts, salaries and wages as at similar current operations in Chile and supported with a contractor quote.

This resulted in the mining cost estimate of approximately US\$2.01/t shown in Table 15-1. The metal price, processing costs, refining costs and processing recoveries were provided by Marimaca and Ausenco.

Table 15-1: Pit Optimization Parameters

Parameter	Unit	Value	Comments
Copper Price	US\$/lb	4.25	-
Mining Cost (Variable by Pit Depth)			
Average	US\$/t	2.01	-
Mining Cost at reference bench	US\$/t	1.39	Reference bench 995 mRL
Uphill	US\$/t-10m bench	0.157	-
Downhill	US\$/t-10m bench	0.079	-
Processing Cost (Variable by Rock Type and Net Acid Consumption)			
BROC/CRIS/WAD	US\$/t	Net Acid Consumption (kg/t) x Acid Price (US\$/t) / 1000 (kg/t) + 2.83 (US\$/t)	
MIX/ENR	US\$/t	Net Acid Consumption (kg/t) x Acid Price (US\$/t) / 1000 (kg/t) + 3.61 (US\$/t)	
Acid Price	US\$/t	100	-
Net Acid Consumption (NAC)	kg/t	$AAC \times F1 - 15.4 \times (\%CuT) \times LP \times F2$	AAC = Analytical acid consumption in block model F1=0.92 (BROC/CRIS/WAD) - 0.819 (MIX/ENR) F2=0.88 (BROC/CRIS/WAD) - 0.832 (MIX/ENR) Leachable potential: $LP = (CuS + CuCN) / CuT$ If NAC<10 then NAC=AACx F1
SX/EW	US\$/lb	0.25	-
Recoveries (Variable by Rock Type and Leachable Potential)			
BROC	%	LPx0.92	Leachable potential: $LP = (CuS + CuCN) / CuT$
CRIS	%	LPx0.92	Leachable potential: $LP = (CuS + CuCN) / CuT$
WAD	%	$(0.97 \times CuS + 0.7 \times CuCN + 0.202 \times CuR) / CuT$	Residual Copper: $CuR = CuT - CuS - CuCN$
MIX/ENR	%	LPx0.875x0.97181	Leachable potential: $LP = (CuS + CuCN) / CuT$
ENR	%	LPx0.738x0.95306	Leachable potential: $LP = (CuS + CuCN) / CuT$
Other Costs and Charges			
G&A	US\$/t	0.3125	US\$5.0M/a at a throughput of 16 Mt/a
Sustaining Capital	US\$/t	0.2581	US\$4.129M/a (3% of Opex) at a throughput of 16 Mt/a
Cathodes transport cost	US\$/t-Cu	3.6	US\$0.12/t/km and 30-km route to port
Cathodes premium	US\$/t-Cu	100	-
Royalties			
Osisko	%	1.0	Across all claims
Marimaca 1-23	%	0.5	-
La Atómica	%	1.0	-
Slope Angles			Overall slope angles as a result of a mine design
Z1	°	45	-
Z2	°	37	-
Z3	°	42	-

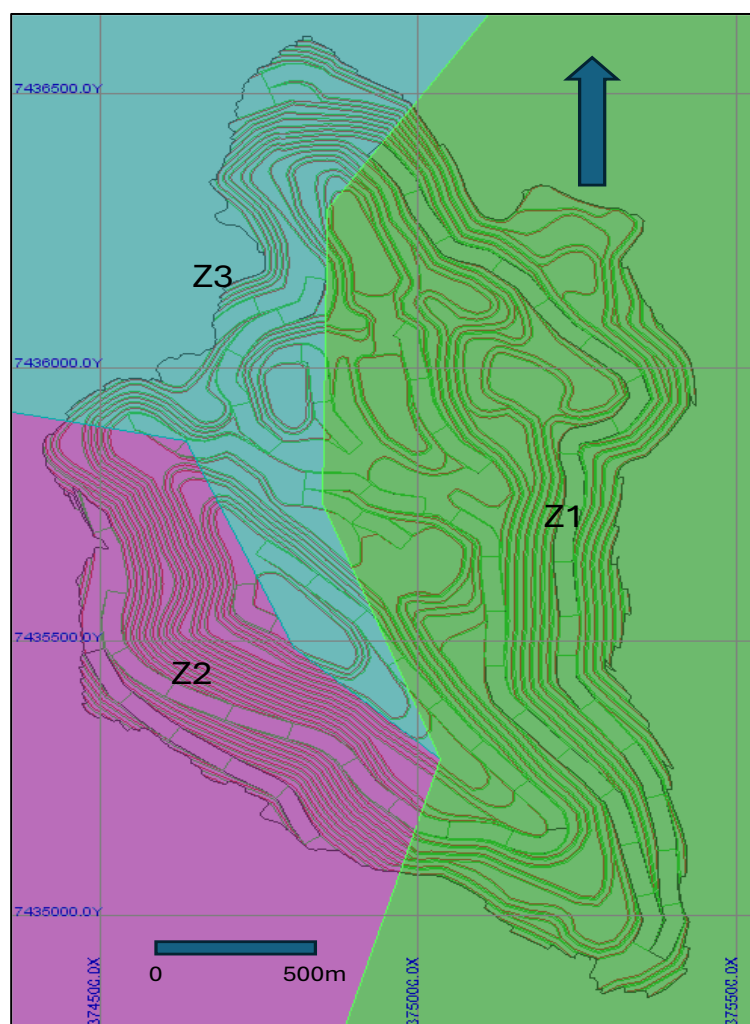
Pit shells were generated for several copper prices; from US\$1.275/lb to US\$6.375/lb. Measured and indicated mineral resources were used as only these can be converted into reserves. Inferred Mineral Resources are not converted to reserves and are instead treated as waste for mine planning purposes.

15.3.2 Slope Angles

Slope angles used for pit optimization were a result from an analysis performed on the pit design developed for this project. Several measurements were made in different directions, getting values between 37° and 45° for the overall angles, taking into account ramps and geotechnical catch berms. The total area of the pit was divided into three zones: Northwest (Z3), East (Z1) and Southwest (Z2), assigning overall angles for pit optimization of 42°, 45°, and 37°, respectively, as shown in Figure 15-1.

These values were later validated with the geotechnical study carried out by Ingeroc, a Chilean geotechnical consultancy company, based in Santiago (www.ingeroc.cl), developed for the Feasibility Study. NCL reviewed and agrees with the recommendation of this study.

Figure 15-1: Slope Domains for Pit Optimization



Source: Ingeroc, 2025.

15.3.3 Dilution and Ore Losses

The selected block size of the regularized block model of 10 m x 10 m x 10 m of the resource model is compatible with the loading mining equipment. Good selectivity is expected, therefore it can be considered as the selective mining unit (SMU).

The regularization process, at the Mineral Resource CoG of 0.1% CuT, increase the tonnage in 2% and decrease the grade in 4%, representing an overall contained copper loss of 2%. Table 15-2 shows a tonnage-grade distribution by cut-off for the resource and regularized block models.

The regularized block model was considered a fully diluted model for Reserve Estimate and mine planning purposes, without adding any additional factors.

Table 15-2: Dilution and Losses of Regularization Process

Cut-Off (%CuT)	Resource Model		Regularized Model		Dilution Factors		
	kt	(%CuT)	kt	(%CuT)	tonnage	grade	contained copper
1.00	9,818	1.37	9,116	1.36	0.93	1.00	0.93
0.95	11,427	1.31	10,675	1.31	0.93	0.99	0.93
0.90	13,423	1.26	12,558	1.25	0.94	0.99	0.93
0.85	15,842	1.20	14,844	1.19	0.94	1.00	0.93
0.80	18,804	1.14	17,599	1.13	0.94	1.00	0.93
0.75	22,214	1.08	20,865	1.08	0.94	1.00	0.94
0.70	26,358	1.03	24,744	1.02	0.94	1.00	0.94
0.65	31,396	0.97	29,651	0.96	0.94	0.99	0.94
0.60	37,592	0.91	35,418	0.91	0.94	1.00	0.94
0.55	45,068	0.86	42,657	0.85	0.95	0.99	0.94
0.50	54,394	0.80	51,620	0.80	0.95	1.00	0.94
0.45	65,961	0.74	62,882	0.74	0.95	0.99	0.95
0.40	80,280	0.69	76,823	0.68	0.96	0.99	0.95
0.35	97,976	0.63	93,878	0.63	0.96	0.99	0.95
0.30	120,247	0.57	115,575	0.57	0.96	0.99	0.96
0.25	146,575	0.52	141,481	0.51	0.97	0.99	0.96
0.20	175,996	0.47	171,447	0.46	0.97	0.99	0.96
0.15	205,168	0.43	204,168	0.42	1.00	0.97	0.97
0.10	234,683	0.39	238,954	0.37	1.02	0.96	0.98
0.05	284,594	0.33	283,709	0.33	1.00	0.98	0.98
0.00	297,389	0.32	303,529	0.31	1.02	0.95	0.97

Notes: The highlighted row corresponds to the dilution factors at the cut-off grade for the Mineral Reserves estimate.

The QP notes that careful grade control will need to be practiced during mining operations to avoid sending sub-grade material to the plant, because of the important effect of head grade on copper production. These efforts should include the following standard procedures:

- Implement an intense and systematic program of sampling, mapping, laboratory analyses and reporting.
- Utilize specialized in-pit, bench sampling drills for sampling well ahead of production drilling and blasting.
- Use of shovels to selectively mine ore zones.
- Maintain high quality laboratory staff, equipment and procedures to provide accurate and timely assay reporting.
- Utilize trained geologists and technicians to work with shovel operators in identifying, marking, selectively mining and dispatching ore and waste.

15.3.4 Cut-Off Grades

Considering the base parameters shown in Table 15-1, with variable recoveries as a function of ore types and sequential copper (%CuT, %CuS, and %CuCN), and variable processing costs as a function of ore type and acid consumption, the cut-off is not constant.

The results of the pit optimization process show an average recovery of 72% and an average processing cost of US\$6.25/t. Using these average values and the rest of the parameters of Table 15-1, the calculated cut-off is 0.1 % CuT.

The internal cut-off that is feeding to process plant was determined on a block by block basis and also imposing a minimum value of 0.1% CuT, aligned with the Mineral Resource cut-off.

Average operational cut-off grades varying between 0.10% and 0.43% CuT were used as a strategy to improve the grade of the plant feed during production.

The material with copper grades between the internal cut-off and the yearly operational cut-off was sent to the stockpile, for later re-handling during the last three years.

15.4 Mineral Reserves Statement

It is the opinion of the QP that the mine production schedule defines the Mineral Reserve for a mining project. Table 15-3 reports the mineral reserve of the Project based on the production schedule used for the FS study.

Mineral Reserves have an effective date of August 25, 2025. The Qualified Person for the estimate is Mr. Carlos Guzmán, Registered Member of the Chilean Mining Commission and FAusIMM, an NCL Principal and Project Director.

Table 15-3: Marimaca Mineral Reserve Estimate as of August 25, 2025

Reserve Category	Ore Type	Tonnage (kt)	Copper Grades			Contained Copper (kt)
			(%CuT)	(%CuS)	(%CuCN)	
Proven Mineral Reserves	BROC	39,456	0.58	0.41	0.08	227.5
	CRIS	17,607	0.42	0.30	0.04	73.8
	WAD	17,242	0.26	0.14	0.05	44.8
	MIX	17,298	0.44	0.12	0.19	76.7
	ENR	2,693	0.40	0.07	0.19	10.6
Total Proven Mineral Reserves		94,297	0.46	0.28	0.09	433.4
Probable Mineral Reserves	BROC	25,617	0.49	0.35	0.06	125.1
	CRIS	17,517	0.35	0.24	0.03	61.8
	WAD	20,650	0.25	0.13	0.04	51.9
	MIX	14,555	0.37	0.10	0.16	53.3
	ENR	6,000	0.37	0.07	0.19	22.1
Total Probable Mineral Reserves		84,339	0.37	0.21	0.08	314.2
Total Mineral Reserves (Proven and Probable)	BROC	65,073	0.54	0.39	0.07	352.6
	CRIS	35,124	0.39	0.27	0.04	135.7
	WAD	37,892	0.26	0.14	0.05	96.7
	MIX	31,853	0.41	0.11	0.18	130.0
	ENR	8,693	0.38	0.07	0.19	32.8
Total Mineral Reserves (Proven and Probable)		178,635	0.42	0.25	0.08	747.6

Notes: **1.** Mineral Reserves are reported as constrained within Measured and Indicated pit design and supported by a mine plan featuring a constant copper cathodes production rate. The pit design and mine plan were optimized with average overall slopes angles varying from 37° to 45°, ore and waste mining average cost of US\$2.0/t, average US\$6.25/t for process, US\$0.25/t for G&A, \$0.26 for sustaining capital, US\$0.25/lb for SX/EW, US\$3.6/t-cathodes for logistics and average US\$0.06/lb for royalties, copper price used was US\$4.25/lb and cathode premium of US\$100/t cathodes, as well as a variable recovery as function of solubility ratio. The average processing recovery is 72% and for this average, the CoG is 0.10% CuT. **2.** Mineral Reserves considers a fully diluted Resource model, representing 1% of mining dilution. **3.** Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content. **4.** %CuT corresponds to total copper grade, %CuS to acid soluble copper grade and %CuCN to cyanide soluble copper grade. **5.** Ore Types are defined in Table 13-2. **6.** Tonnage, grade measurements and contained copper are in metric units. **7.** Refer to Table 13-2 for ore types.

15.5 Comments on Mineral Reserves

The opinion of the QP is that the mineral reserves for the Marimaca deposit have been prepared using industry best practices and conform to the requirements of Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves - Definitions and Guidelines (2014).

The main factors that may affect the Mineral Reserve Estimate are metallurgical recoveries and operating costs (fuel, energy and labor) , as these variables affect the cut-off grade calculation, which in turn affects the Mineral Reserve Estimate. The base price of the copper, even though the most important factor for revenue calculation, has a lower impact on the Mineral Reserve estimation because the mine plan considers operational cut-offs higher than the internal cut-off for the life of mine.

Geotechnical parameters were defined conservatively; there is an opportunity to optimize slope angles where structural conditions are favourable, reducing stripping and increasing Mineral Reserves.

The QP is not aware of any known legal, political, environmental, or other risks that could materially affect the potential development of the Mineral Reserve.

16 MINING METHODS

16.1 Mining Design Overview

The study is based on the updated resource block model. Pit optimization, mine design and mine planning were carried out using this block model and Mineral Resources classified as Measured and Indicated. Inferred Mineral Resources were treated as waste.

A regularized block size of 10 m x 10 m x 10 m RL was selected for the block model. The selected block size was based on the geometry of the domain interpretation and the data configuration.

The study considered the utilization of innovative strategic mine planning tools based on mixed integer linear programming for establishing the production capacity, mining sequence and mining strategy. The results of these analyses were then validated with classical Lerchs–Grossmann (LG) runs for final pit limits.

The evaluation assumed that the SX/EW portion of the plant would produce 50,000 t of copper cathodes per year. Based on the grade distribution within the Marimaca deposit, two throughput rates (crushing, agglomeration, and leaching) are required. The initial period will be at a rate of 12 Mt/a for five years, treating the highest grade available material. This will be followed by eight years at a throughput rate of 16 Mt/a that will treat medium- and low-grade materials.

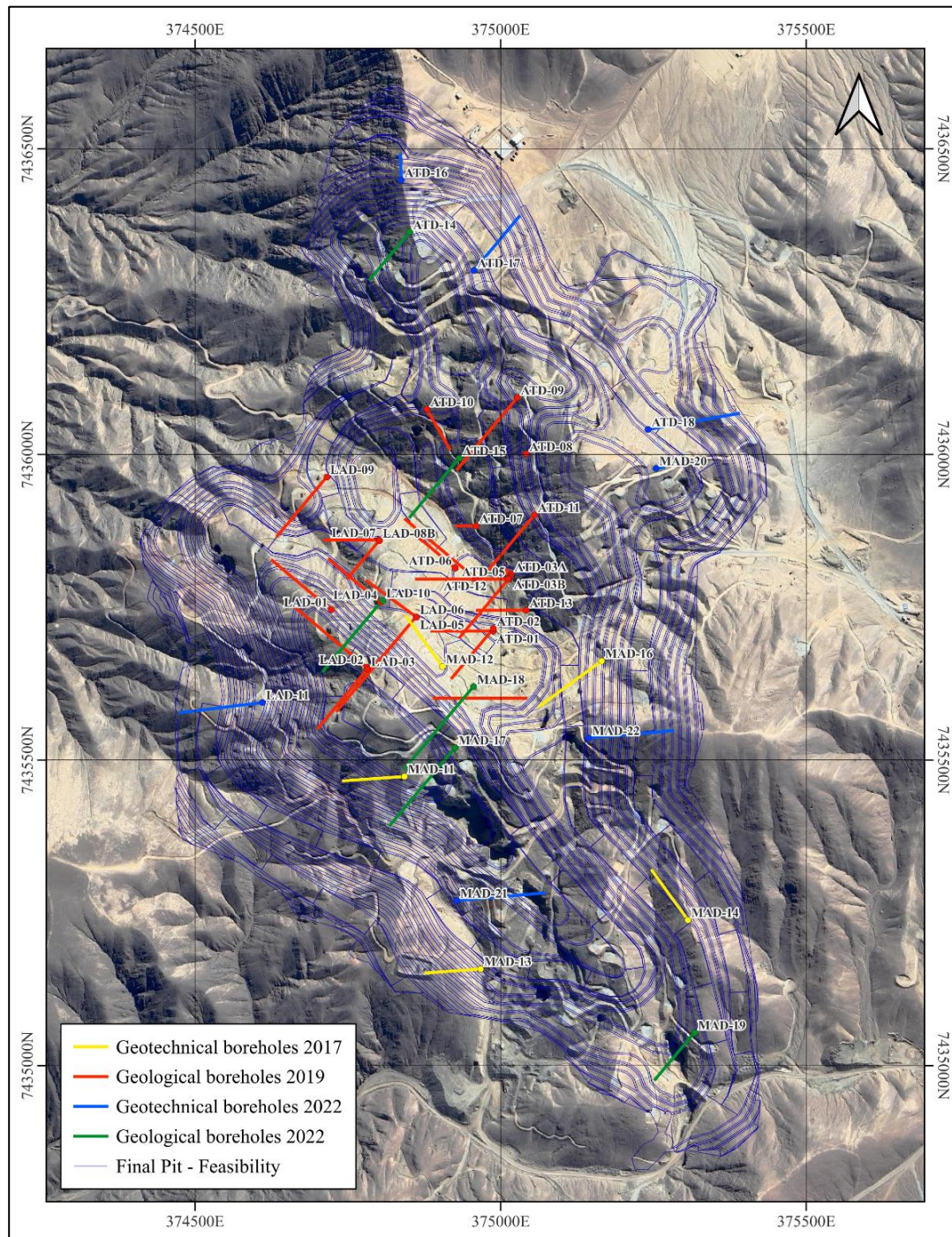
Initial pit design considerations are detailed in Section 15, including base parameters for pit optimization, dilution and ore losses, and cut-off grades.

16.2 Geotechnical Considerations

The Marimaca deposit consists of a copper oxide mantle (secondary or supergene), exposed at the surface, extending approximately 1800 m in an NNW direction, 500 to 700 m wide, and 200 to 350 m thick. Two-thirds of the upper-middle part of the oxidized column corresponds to copper oxides, while the lower third consists of mixed mineralization and minor secondary sulphides. Although the overall geometry is mantle-like, the interpretation of the mineralized zone was guided by structural control, with key structural orientations emerging, especially the NS structural system dipping to the east (defined as foliation) and the late NW to EW structural system. The intrusive unit, hosting the mineralization, is an intrusive body predominantly composed of coarse-grained monzodiorites to quartz diorites consisting of plagioclase.

For geotechnical characterization, the study relies on geotechnical drill holes oriented towards the main pit walls and geological drill holes located within the deposit. Table 16-1 indicates the DDH drillholes considered in the geotechnical modelling of the Marimaca deposit, while Figure 16-1 shows the location of these drillholes and the feasibility pit design. Each of these drill holes has been scanned using a Televue. Additionally, two campaigns of geotechnical cell measurements conducted in 2017 and 2022 were included in the rock mass surveys.

Figure 16-1: Projection of DDH Drill Holes Considered for the Geotechnical Characterization of the Marimaca Deposit



Source: Ingeroc 2025.

Table 16-1: DDH Drill Holes Considered for the Geotechnical Characterization of the Marimaca Deposit

Geotechnical Boreholes 2017	Geological Boreholes 2019			Geological Boreholes 2022	Geotechnical Boreholes 2022
MAD-11	ATD-01	ATD-08	LAD-03	ATD-14	ATD-16
MAD-12	ATD-02	ATD-09	LAD-04	ATD-15	LAD-11
MAD-13	ATD-03A	ATD-10	LAD-05	MAD-17	ATD-17
MAD-14	ATD-03B	ATD-11	LAD-06	MAD-18	ATD-18
MAD-16	ATD-04	ATD-12	LAD-07	MAD-19	MAD-20
	ATD-05	ATD-13	LAD-08B	LAD-10	MAD-21
	ATD-06	LAD-01	LAD-09		MAD-22
	ATD-07	LAD-02			

Rock mechanics laboratory tests have been conducted on samples from the DDH drill holes and rock fragments collected from the outcrops. A point load test campaign was also carried out on the available drill holes, totaling 7,526 tests. These tests help validate the strengths determined from the laboratory analyses.

Geological-geotechnical units have been defined based on lithology and the mineralized zone. Table 16-2 summarizes the geotechnical properties of these units, which were considered for the slope stability analysis. Table 16-3 presents the strength properties of the structures identified both on the surface and in the drill holes.

Table 16-2: Properties for Stability Analysis by Geological Geotechnical Unit

UG	mi	Sci (MPa)	GSI				D	mb	s	a	Tensile Strength (MPa)	UCS Rock Mass (MPa)	Erm (MPa)	Poisson's Ratio
			Prom	Desv Est	Max	Min								
MDI LIX	18.6	185.0	62	14	68	29	0.7	2.305	0.0041	0.502	-0.326	11.625	28800	0.235
MZD LIX	18.6	185.0	57	10	77	29		1.752	0.0020	0.504	-0.208	8.025	28800	0.235
PDI LIX	18.6	185.0	58	6	63	48		1.851	0.0023	0.503	-0.227	8.645	28800	0.235
MZD OX	22.2	127.5	54	10	77	33		1.757	0.0013	0.504	-0.092	4.419	26930	0.237
MZD MX	13.2	126.4	63	5	63	49		1.728	0.0047	0.502	-0.343	8.551	37147	0.218
DIO PRI	19.2	186.9	55	10	63	43		1.620	0.0015	0.504	-0.170	6.982	39799	0.220
MZD PRI	19.2	186.9	62	5	68	43		2.380	0.0041	0.502	-0.319	11.745	39799	0.220
PDI PRI	19.2	186.9	63	-	-	-		2.514	0.0047	0.502	-0.349	12.644	39799	0.220
MDI PRI	19.2	185.0	62	14	68	29		2.514	0.0047	0.502	-0.349	12.644	39799	0.220
Dyke Lix	18.6	185.0	58	6	63	48		1.861	0.0023	0.503	-0.227	8.645	28000	0.235
Dyke PRI	19.2	185.0	62	14	68	29		2.514	0.0047	0.502	-0.349	12.644	39799	0.220
Dykes MX/OX	13.2	185.0	58	6	63	48		1.851	0.0023	0.503	-0.227	8.645	26930	0.237

Table 16-3: Geotechnical Properties of Geological Structures

Type of Structure	Mohr-Coulomb Parameters	
	Friction (°)	Cohesion (MPa)
Joints	37.5	0.176
Rank 1 to 4 Televiewers	37.5	0.176
Minor Faults	32	0.150
Rank 5 to 6 Televiewers	32	0.150
Major Faults	25	0.050

The geotechnical domain model for the Marimaca Pit was based on work carried out by INGEROC in 2018, 2020, and 2023. This work included analyses using sections across different pit slopes, encompassing both static and pseudo-static circular and non-circular rotational analyses. Probabilistic structural analysis was also included to determine the potential for wedges. To generate the required slope designs, the pit was subdivided into geotechnical zones, each with different inter-ramp slope angles.

The main criterion for defining the geotechnical domains relates to the NS structural system dipping to the East, which predominates throughout the deposit. This system affects slopes that dip to the East, while slopes dipping to the West are not affected. Thus, geotechnical Zone Z1 considers double benches (slopes dipping to the West), whereas geotechnical Zones Z2 and Z3 primarily feature single benches (slopes preferably dipping to the East). Figure 16-2 presents the feasibility pit, including the design geotechnical domains, and provides design recommendations for inter-ramp angles, face angles, berm width, and bench height.

The slope design was carried out considering the acceptability criteria defined by Read and Stacey (2009), which are presented in Table 16-4. A "Moderate" consequence was considered for inter-ramp slopes and a "High" consequence for overall slopes.

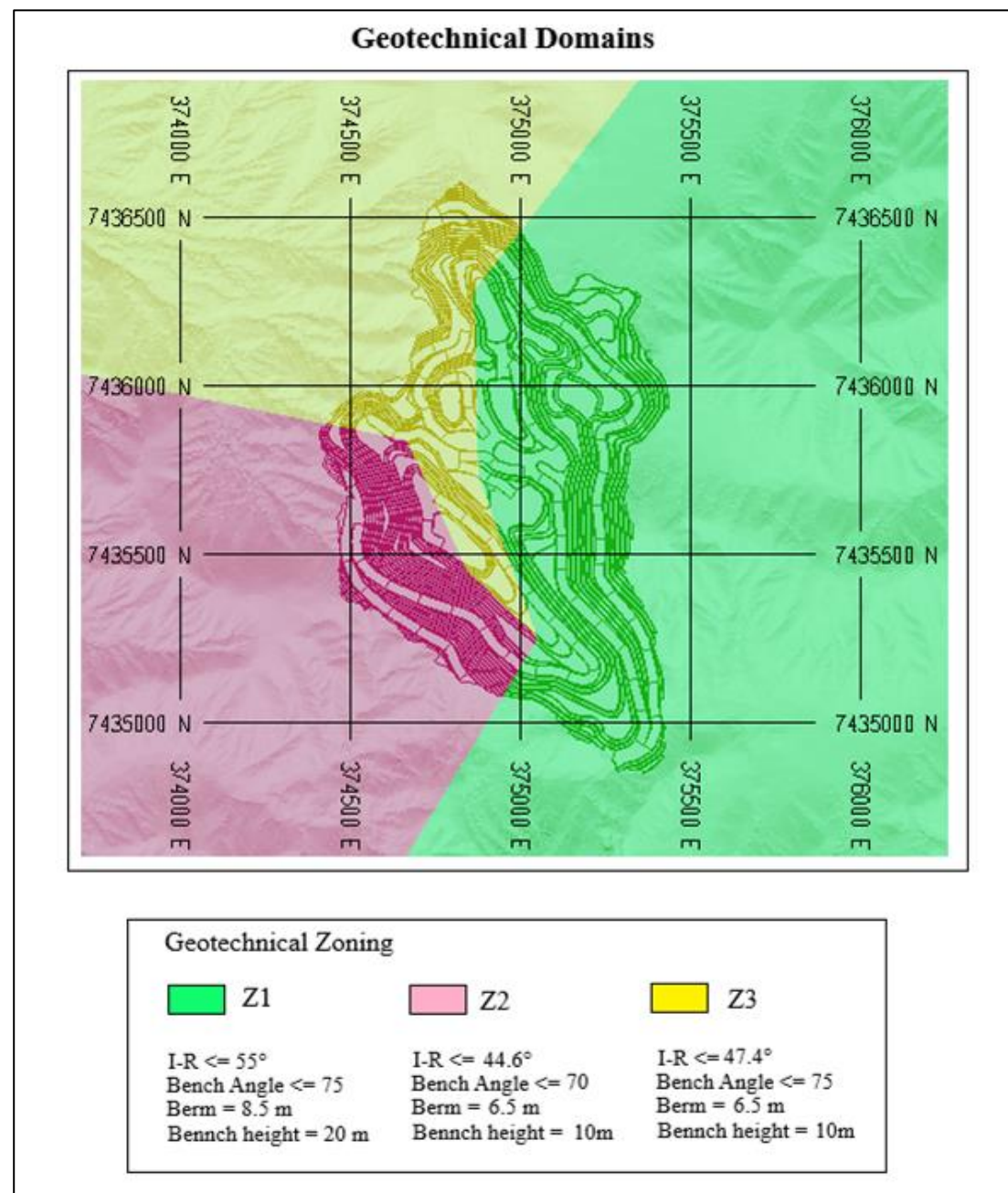
Table 16-4: Typical Values for FS and PF Acceptability Criteria for Open Pit Mines

Slope Scale	Consequences Of Failure ^b	Acceptance Criteria ^a		
		FoS (Min) (Static)	FoS (Min) (Dynamic) NA	PoF (Max) P[FoS _≤ 1]
Bench	Low-high	1.1	NA	25-50%
Inter-ramp	Low	1.15-1.2	1.0	25%
	Medium	1.2	1.0	20%
	High	1.2-1.3	1.1	10%
Overall	Low	1.2-1.3	1.0	15-20%
	Medium	1.3	1.05	5-10%
	High	1.3-1.5	1.1	<5%

Notes: **a.** Needs to meet all acceptance criteria. **b** Semi-quantitatively evaluated. Source: Read and Stacey, 2009.

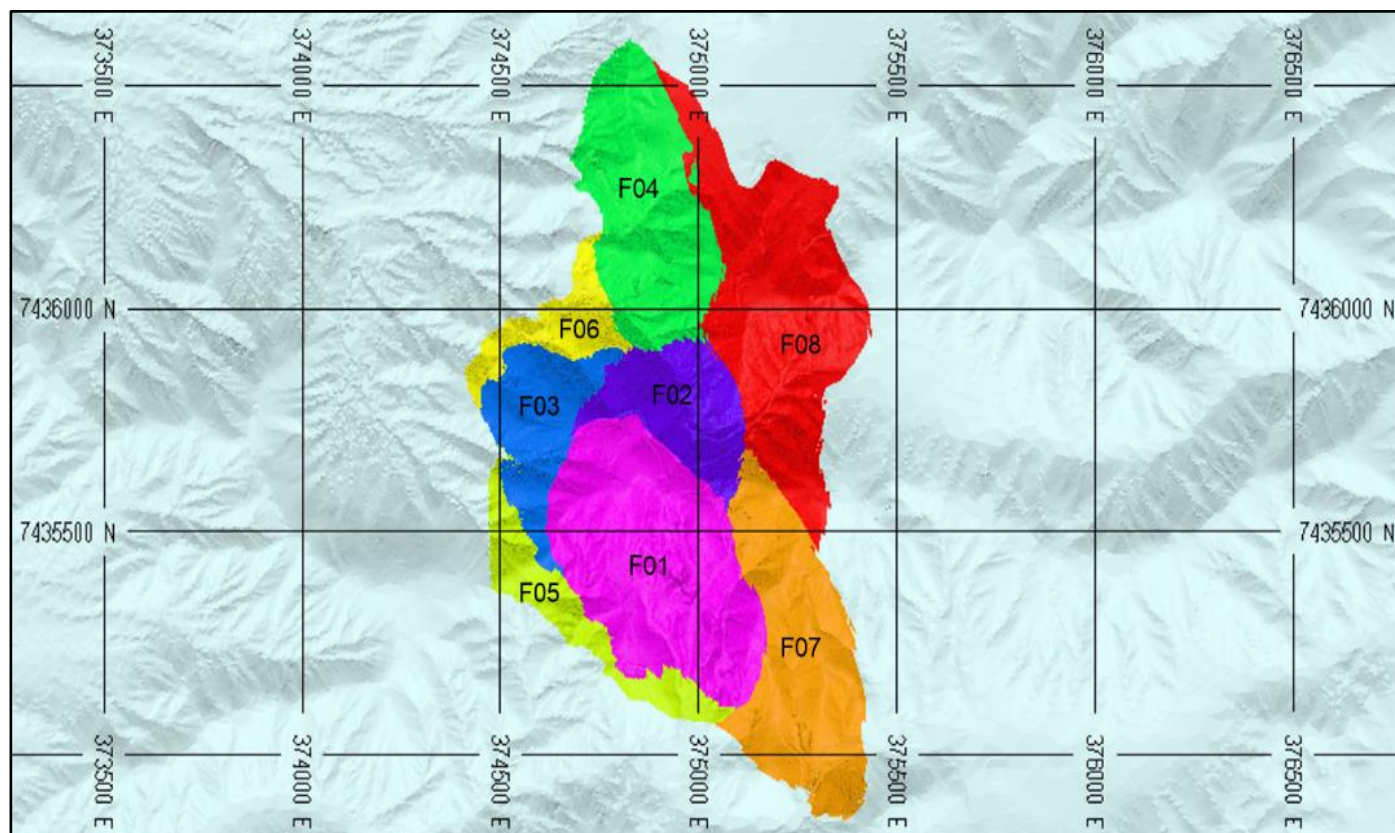
The analysis of the final feasibility open pit and its phases indicates that they comply with the design criteria and the geotechnical domains. Figure 16-3 presents the sequence of mining phases for the feasibility project.

Figure 16-2: Geotechnical Domains in Feasibility Pit, Marimaca Oxides Project



Source: Ingeroc, 2025.

Figure 16-3: Geotechnical Domains in Feasibility Pit, Marimaca Oxides Project



Source: Ingeroc, 2025.

16.3 Hydrogeological Considerations

The information reviewed for the preparation of this section consists mainly of the hydrological and hydrogeological baseline studies developed by SRK to support the Environmental Impact Declaration, as well as the studies contained in these reports. The sufficiency analysis was performed under the assumption that no additional information exists beyond what is included in these reports.

As general background, and from a hydrological and meteorological perspective, it can be stated that the Project area is characterized by cd desert climate (BWk) conditions according to the Köppen-Geiger classification. The area experiences maximum temperatures during the summer months of approximately 23°C, minimum temperatures around 12°C during the winter months and an average annual temperature of 16.5°C. The region also exhibits high daily evaporation rates ranging from 5.3 to 7.9 mm, which is equivalent to 1,950 to 2,900 mm of evaporation per year, and very low precipitation, with an average annual rainfall of 2.6 mm.

At a regional level, the study area is located within the Quebrada Chacaya and Quebrada Caracoles coastal sub-subbasins. However, based on topographic information obtained from the 1:50,000 scale hydrographic database of the Military Geographic Institute (IGM), field reconnaissance, and the location of the works, it was possible to delineate the local catchments. Figure 16-4 shows the local catchments with a general east - west direction. These catchments present intermittent streams, activated only by significant hydrometeorological events capable of generating surface runoff. Due to the arid conditions of the area and the fact that extreme precipitation events are infrequent, the watercourses remain dry most of the time, with no surface runoff.

From a geomorphological, geological, and structural perspective, the study area of the Project is located within the morphostructural domain of the Coastal Range, which is geologically characterized by extensive outcrops of volcanic and intrusive rocks. These include andesitic to basaltic lavas and rhyolitic to dacitic tuffs from the La Negra Formation (Jln), the Oficina Ercilla Batholith (Jg), the Cerro Fortuna Dioritoids (Jdf), the Fortuna Tonalite (Kitf), and the Naguayán Protone Complex (Jsn), which is where the Project and pit are located, as shown in Figure 16-4. These rock units belong to the Jurassic–Lower Cretaceous volcanic-magmatic arc, which ceased to exist when the volcanic front shifted eastward.

During this period, the Atacama Fault System (AFS) was also developed—an important structural feature along the Coastal Range extending over 1,000 km in length. The AFS is characterized by a series of strike-slip faults with predominantly N-S orientation and sinistral (left-lateral) displacement. In the project area, the AFS is expressed through four main structures. The Naguayán-Mititus, Bolacos, Viruca-Ordoñez, and the Salar del Carmen Fault System, which show evidence of activation during the late Pleistocene and whose traces can be observed in Figure 16-4.

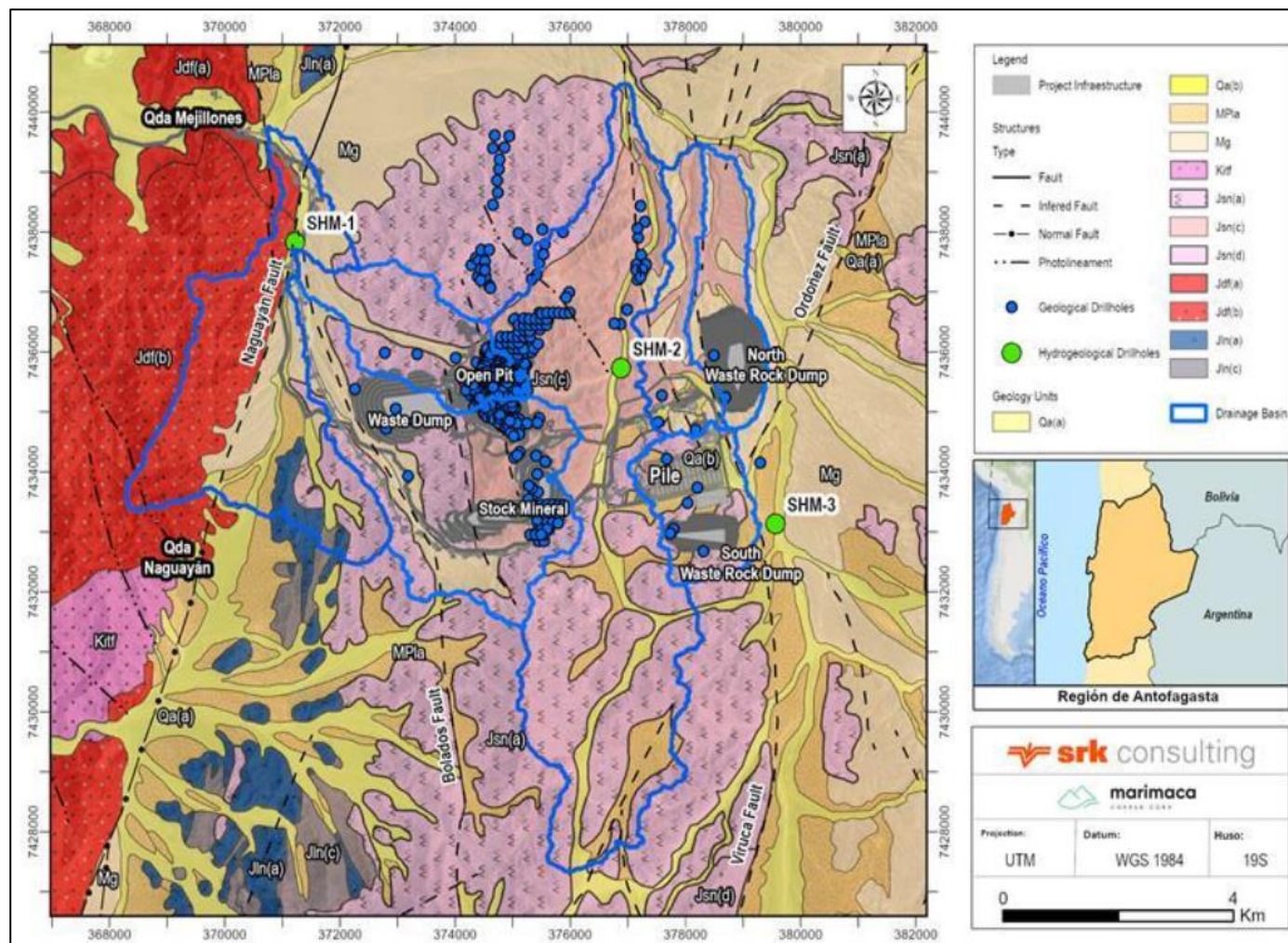
Neogene and Quaternary sedimentary deposits were placed over the Mesozoic rocks, filling the intramontane tectonic basins and alluvial valleys. These deposits are mainly composed of Ancient Gravels (Mg), consisting of sedimentary breccia and unconsolidated to slightly cemented conglomerates formed by gravels, sands, and silts. They are followed by Ancient Alluvial Deposits (MPla) and, to a lesser extent, colluvial deposits, which overlie the Ancient Gravels unit. Finally, there are Alluvial Deposits (Qa) composed of unconsolidated blocks, gravels, sands, silts, and clays, which are found at the bottom of active gorges, in alluvial fans, and on valley and hillside slopes, reaching maximum thicknesses of up to 40 m.

Therefore, in general terms, it can be stated that the Project site is characterized by low annual precipitation, high evaporation potential, and geological materials of virtually no hydrogeological significance.

This statement is supported by the information gathered during the drilling of 715 geological exploration boreholes carried out by Marimaca between 2016 and 2023. According to operational reports, none of these boreholes showed evidence of groundwater presence. Figure 16-4 shows the location of the geological exploration drill holes, where it can be observed that these boreholes were drilled primarily in the intrusive rock unit of the Naguayán Plutonic Complex (Jsn), reaching depths of up to 800 m.

Additionally, three hydrogeological exploration boreholes —SHM-01, SHM-02, and SHM-03— were drilled in the Quebrada Naguayán, Los Alerces, and Quebrada Ordoñez areas, respectively, as shown in Figure 16-4. The objective of these hydrogeological boreholes was to verify the presence of water in both sedimentary and rock layers, and to conduct hydraulic tests to characterize the properties of the different lithologies. Of these boreholes, only SHM-01 detected the presence of groundwater, with a piezometric level at a depth of 63 m.

Figure 16-4: Geology Map, Local Basins and Distribution of Geological and Hydrogeological Exploration Drill Hole in Marimaca Project Area



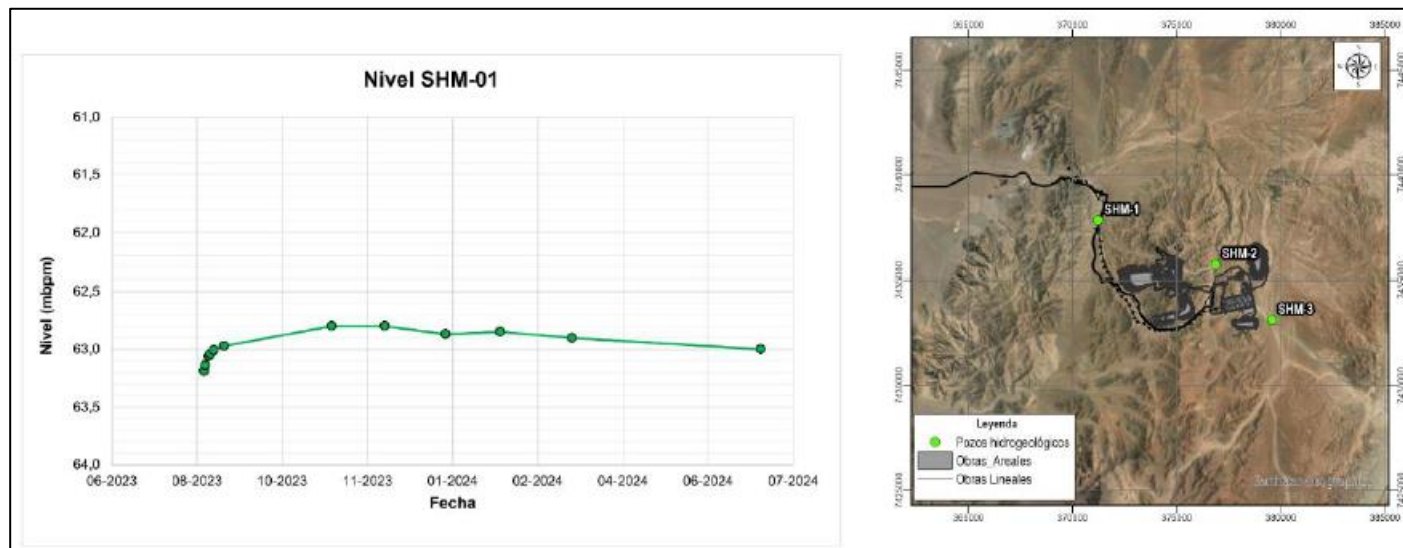
Source: SRK, 2025.

Based on the information gathered in the study area, it was observed that none of the boreholes drilled in intrusive rock recorded the presence of water during drilling or in subsequent level measurements. Therefore, it can be established that no groundwater level exists within the pit area in the rock mass up to elevations of approximately 300 meters above mean sea level (masl).

Of the three hydrogeological wells drilled in the project area, well SHM-01 located in Quebrada Naguayán, and well SHM-03, in Quebrada Ordoñez, intersected sedimentary layers of considerable thickness, exceeding 100 m. However, no water was found in well SHM-03 or well SHM-02 (the latter drilled in rock), with groundwater detected only in borehole SHM-01.

During the drilling of well SHM-01, the presence of water was detected, with the water level stabilizing at approximately 63 m below ground level, as shown in Figure 16-5. Since then, monthly water level monitoring has been conducted, showing that the levels remain stable at around 63 m deep. Based on the lithologies encountered, it can be stated that in this area, water is stored within sedimentary layers, and the piezometric level at this point is approximately 424 masl.

Figure 16-5: Location and Piezometric Level Of Well SHM-01



Source: SRK, 2025.

During the drilling of the hydrogeological wells, hydraulic tests were conducted to evaluate and hydrogeologically characterize the different lithologies found. Injection and Airlift tests were performed across the three hydrogeological wells —SHM-01, SHM-02, and SHM-03. The well SHM-02 had the fewest number of tests, as it was a shallower well (48 m deep) with no significant lithological changes at depth. In contrast, well SHM-01 had the highest number of tests, including both Injection and Airlift tests, due to the presence of water detected below 90 m.

A summary of the injection tests conducted in wells SHM-01, SHM-02, and SHM-03 for the geological units Naguayán Plutonic Complex (Jsñ), Ancient Alluvial Deposits (MPla), and Ancient Gravels (Mg), along with the hydraulic conductivity values obtained for each test, is presented in Table 16-5.

In this table, it can be observed that the tests conducted in well SHM-02 yielded hydraulic conductivity values on the order of $1\text{E-}09$ m/d, indicating impermeable materials, which correlates with non-fractured rock. In contrast, the tests performed in wells SHM-01 and SHM-03 reflect transitional zones between sedimentary layers and rock, as well as more fractured rock levels. As a result, the hydraulic conductivity values obtained are on the order of $1\text{E-}04$ m/d, associated with a degree of fracturing and the presence of gravel, which increases permeability. Consequently, an average hydraulic conductivity of approximately $3\text{E-}06$ m/d can be assigned to the Naguayán Plutonic Complex (Jsñ) unit. For the sedimentary units, the hydraulic conductivity values obtained from the tests conducted in wells SHM-01

and SHM-03 are presented. These results show conductivity values averaging 1E-02 m/d in the sedimentary layers, with minimum values around 6E-03 m/d and maximum values of 1E-01 m/d.

Table 16-5: Hydraulic Conductivity Value per Geological Unit

Test	Well	Geological Unit	From (m)	To (m)	K Mean (m/d)
Injection	SHM-02	Jsn	24	30	4.91E-09
	SHM-02	Jsn	30	48	6.39E-09
	SHM-03	Jsn	180	192	6.68E-03
	SHM-01	Jsn	186	200	7.15E-04
	SHM-01	Mpla / Mg	12	18	1.04E-02
	SHM-03	Mpla / Mg	12	18	2.43E-02
	SHM-03	Mpla / Mg	36	48	7.28E-02
	SHM-01	Mpla / Mg	60	66	6.22E-02
	SHM-03	Mpla / Mg	60	66	6.60E-02
	SHM-01	Mpla / Mg	72	84	3.00E-02
	SHM-03	Mpla / Mg	78	84	6.76E-03
	SHM-03	Mpla / Mg	90	102	6.35E-03
	SHM-01	Mpla / Mg	96	108	2.76E-02
	SHM-03	Mpla / Mg	108	120	7.97E-02
	SHM-03	Mpla / Mg	126	138	2.70E-02
	SHM-03	Mpla / Mg	144	156	1.73E-01
Airlift Recovery	SHM-01	Mpla / Mg	107	108	9.10E-03
	SHM-01	Mpla / Mg	143	144	1.00E-02
	SHM-01	Mpla / Mg	155	156	1.50E-02

Regarding the Alluvial Deposits unit (Qa), it was not possible to conduct tests in the shallower levels during the drilling due to operational issues such as low thickness of the unit and the installation of casing to prevent borehole collapse in the shallow part of the borehole. Therefore, hydraulic conductivity (K) values will be assigned based on literature sources.

Based on surface geological information and hydraulic tests conducted in the hydrogeological exploration wells, three hydrogeological units (UH) have been defined in the Project area. Their spatial distribution is shown in Figure 16-6 and their definitions are presented below.

- Hydrogeological Unit 1 (UH-1):** Formed by Quaternary Alluvial Deposits (Qa) consisting of gravel deposits in a matrix of sand and pebbles, forming meter-thick layers with interbedded sands of alluvial or aeolian origin. This unit also includes deposits that fill endorheic basins dominated by silts in the Laguna Seca area, where the processing plant sector is located. According to geophysical and drilling results, this unit correlates with high surface resistivity values, with thicknesses ranging from a few meters to a maximum of approximately 40 m, without

reaching saturation in the Laguna Seca area, and with some degree of moisture in the Quebrada Naguayán and Quebrada Ordoñez. This unit has thicknesses of less than 10 m in the Naguayán and Ordoñez gorges and in the Marimaca pit area, its thickness decreases to around 5 m. Its permeability is estimated between 5 and 50 m/d, based on literature values according to its described lithological characteristics.

- **Hydrogeological Unit 2 (UH-2):** This unit comprises Ancient Alluvial Deposits (Mpla) and Ancient Gravels (Mg), consisting of alluvial and colluvial gravel deposits with sands, silts, and volcanic ash, with varying degrees of consolidation and slightly cemented. In the project area, this unit is present southwest of the Marimaca pit, in the gorge formed by the Bolacos Fault, and in some gorges in the plant sector, Laguna Seca, and Quebrada Ordoñez. According to geophysical results, in the Laguna Seca area, this hydrogeological unit is associated with resistivity values between 30 and 100 ohm-m, located between high surface and deep resistivity zones, with variable thicknesses from a few tens of meters up to 300 m, near the surface expression of the Viruca Fault. These resistivity values may correspond to sediments with varying moisture levels, not necessarily saturated.
- In the Quebrada Naguayán area, this unit is associated with resistivity values between 10 and 50 ohm-m, and thicknesses between 40 and 160 m. Data from well SHM-01 shows that low resistivity values are associated with moist or saturated sedimentary layers below 90 m depth. The presence of water in this area could be linked to the Naguayán Fault, which may act as a conduit for flows along the gorge. Based on hydraulic test results from the drilling campaign, hydraulic conductivity values range from 0.001 to 0.01 m/d.
- **Hydrogeological Unit 3 (UH-3):** This unit consists of volcanic and intrusive rocks forming the basement. In the project area, it is mainly composed of the Naguayán Plutonic Complex intrusive (Jsn), which includes monzodiorites to quartz diorites and granodiorites to tonalites. Given the presence of faults in the area of interest (Naguayán, Bolacos, and Viruca), zones of fractured and weathered rock could allow for groundwater storage and transmission. However, according to borehole data from this unit, no water table has been recorded in the rock. Hydraulic tests conducted in this unit yield hydraulic conductivity values between 10^{-9} and 10^{-4} m/d, indicating an impermeable unit. The variations in conductivity are mainly related to the degree of rock fracturing.

Therefore, based on the background information described, it is possible to state that in the Project site area, the hydrogeological dynamics are dominated by a desert climate, in which the natural recharge of the hydrogeological system is estimated to be very low, and would occur during sporadic winter rainfall events, with rates on the order of 2.6 mm per year, under evaporation conditions ranging from 5.3 to 7.9 mm per day.

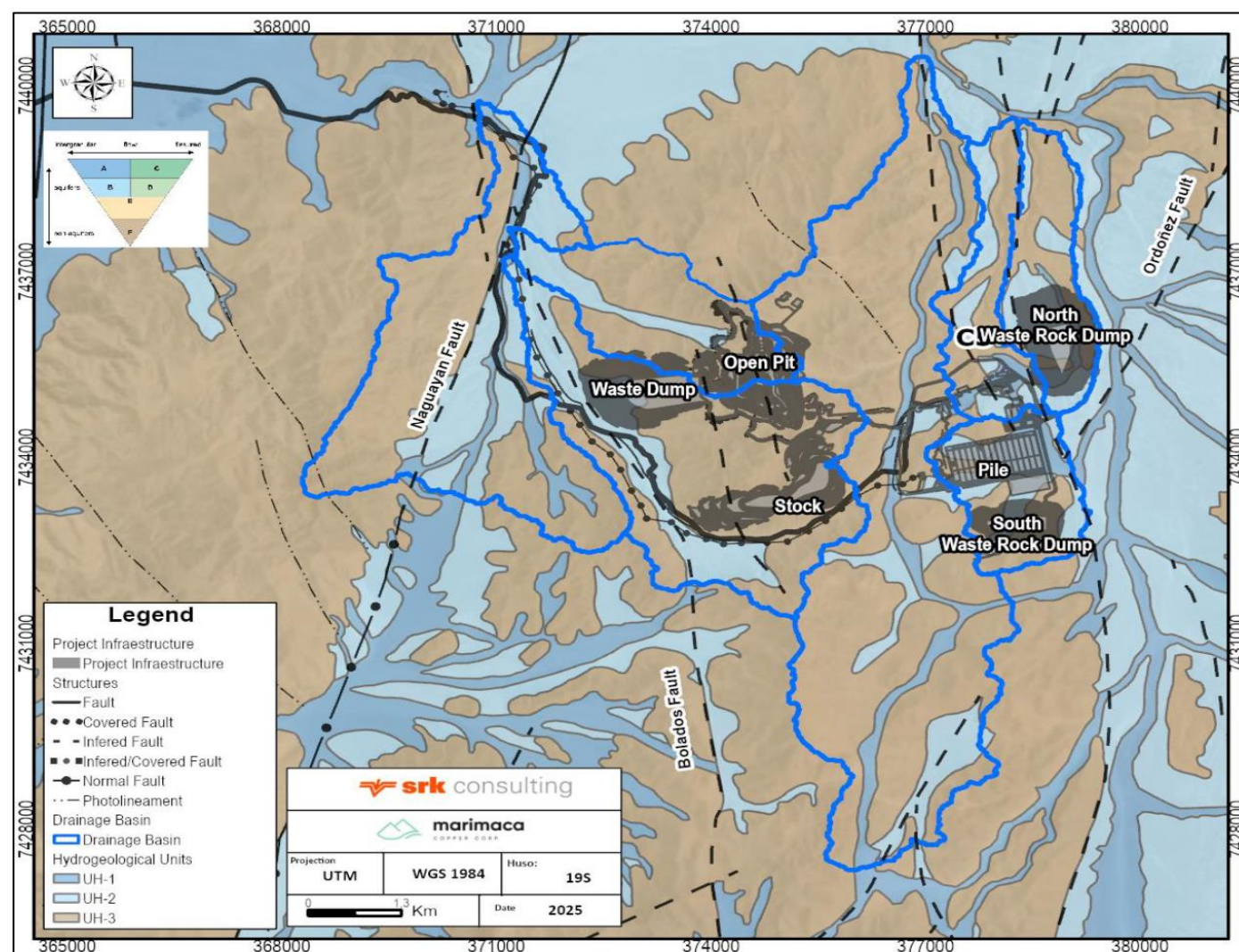
From the drilled boreholes, it can be indicated that the presence of groundwater is restricted to the Quebrada Naguayán sector, where water was detected in well SHM-01, with a water table at 63 m depth, at an approximate elevation of 424 masl. This groundwater is possibly associated with the presence of significant geological faults that may act as conduits for minor saturated flows moving from south to north through the Hydrogeological Unit 2 (HU-2), which exhibits hydraulic conductivities on the order of 10^{-3} to 10^{-1} m/d.

In the mne and plant areas of the project, there is no evidence of groundwater presence in rock in any of the boreholes drilled, and the surface sediments may contain some residual moisture related to the limited recharge of the system. In boreholes SHM-02 in the Los Alerces sector and SHM-03 in Quebrada Ordoñez, no water presence was detected either. Therefore, based on the analyzed hydrogeological information, it is estimated that the excavation of the Marimaca pit will not reach a potential regional water table, since its maximum depth of 470 mbgl, i.e., at approximate elevations of 600 masl, would be above the water table elevation detected in the Quebrada Naguayán.

Since the Marimaca pit does not intersect the piezometric level, it will be excavated under dry conditions. If a piezometric level is detected during pit excavation, certain hydrogeological aspects should be reviewed to determine the impact on slope stability, such as:

- Execution of hydraulic tests in the saturated zone near the slopes.
- Installation of piezometers and vibrating wire sensors to monitor pore pressure and water levels.

Figure 16-6: Hydrogeological Map



Source: SRK, 2025.

The main conclusions of SRK assessment are the following:

- The most relevant hydrogeological considerations for the Marimaca Oxide Deposit Copper Mining Project, where it has been concluded that the Marimaca pit, located in the Coastal Mountain Range of the Antofagasta Region, lies in an area of very low hydrogeological significance. The hydrogeological dynamics are dominated by a desert climate, in which recharge from precipitation is very low and would occur during sporadic winter rainfall events, producing at most some residual moisture content in the shallow sedimentary units.
- In addition, the volcanic and intrusive rocks of the La Negra Formation—particularly the Naguayán Plutonic Complex (Jsn), where the Marimaca pit will be excavated—show impermeable characteristics for sound rock and low permeability in zones with some degree of fracturing. Among all the geological and hydrogeological exploration boreholes drilled, the only one that showed a saturated level was the SHM-01 well, located in Quebrada Naguayán, with a piezometric level of around 420 m above sea level, more than 600 m below the project elevation.

Thus, it is estimated that the excavation of the Marimaca pit will be carried out under dry conditions.

16.4 Pit Optimization Results

Pit shells were generated with Whittle for several copper prices; from US\$1.275/lb to US\$6.375/lb. Measured and indicated mineral resources were used as only these can be converted into reserves. Inferred Mineral Resources are not converted to reserves and are instead treated as waste for mine planning purposes.

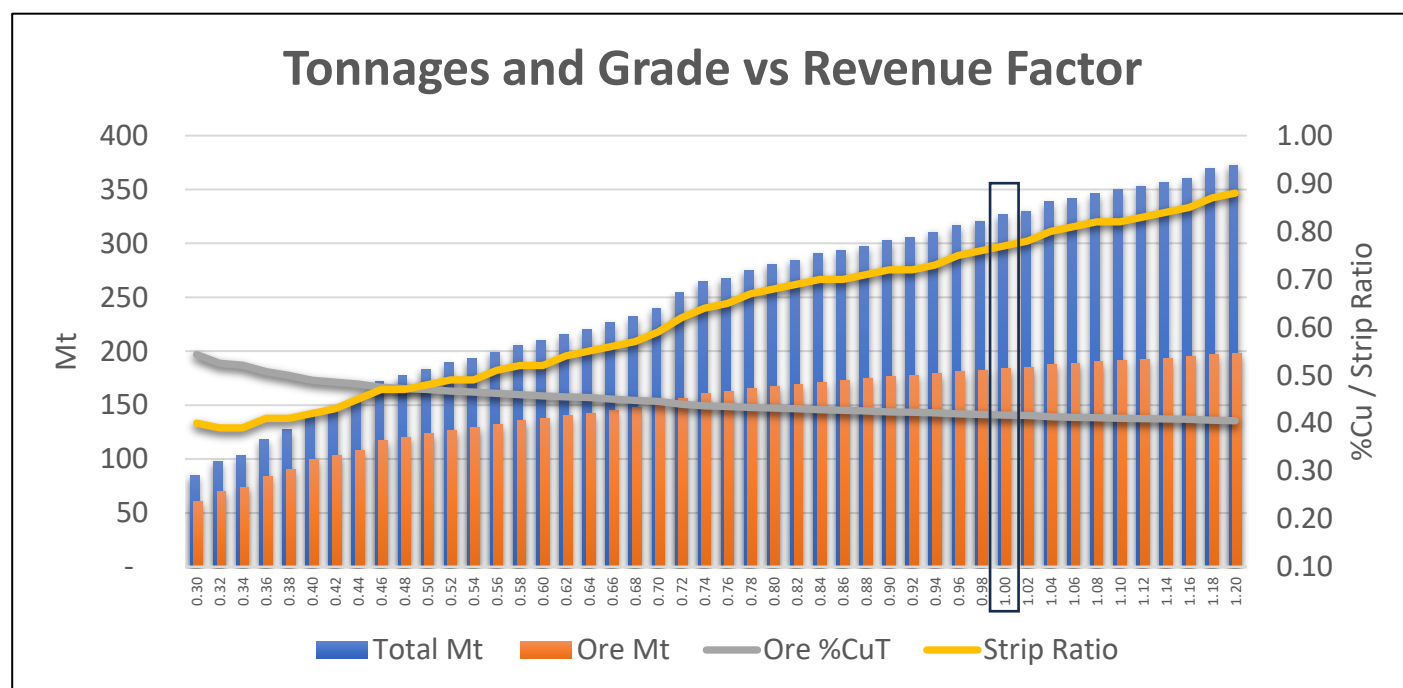
Table 16-6 shows the tabulated results of the pit optimization and Figure 16-7 shows those results graphically. Pit shell obtained at revenue factor 1.0 (for a copper price of US\$ 4.25/lb) was selected as the base for mine design.

Table 16-6: Pit Optimization Results

Pit	Revenue Factor	Total	Strip Ratio	Ore			Recovered Copper
		kt		kt	%CuT	Recovery	kt
1	0.30	84,659	0.40	60,307	0.54	76.9%	252
3	0.34	102,976	0.39	73,898	0.52	76.9%	296
5	0.38	127,181	0.41	90,304	0.50	76.4%	345
7	0.42	147,918	0.43	103,680	0.49	76.0%	383
9	0.46	171,851	0.47	117,122	0.47	75.2%	418
11	0.50	183,419	0.48	123,532	0.47	74.7%	434
13	0.54	192,824	0.49	129,015	0.47	74.4%	447
15	0.58	205,643	0.52	135,292	0.46	74.1%	461
17	0.62	215,532	0.54	140,188	0.45	73.9%	471
19	0.66	226,306	0.56	144,899	0.45	73.7%	481
23	0.74	264,232	0.64	160,765	0.44	73.0%	511
25	0.78	275,007	0.67	165,066	0.43	72.8%	520
27	0.82	284,611	0.69	168,705	0.43	72.5%	526
29	0.86	293,438	0.70	172,473	0.43	72.4%	533
31	0.90	302,775	0.72	176,401	0.42	72.2%	540
33	0.94	310,487	0.73	179,056	0.42	72.2%	544

Pit	Revenue Factor	Total	Strip Ratio	Ore			Recovered Copper
		kt		kt	%CuT	Recovery	
35	0.98	320,597	0.76	182,324	0.42	72.1%	549
36	1.00	326,537	0.77	184,114	0.42	72.0%	553
38	1.04	338,806	0.80	188,110	0.41	71.9%	559
40	1.08	345,946	0.82	190,457	0.41	71.8%	562
42	1.12	352,841	0.83	192,530	0.41	71.7%	566
44	1.16	360,220	0.85	194,658	0.41	71.6%	569
46	1.20	372,351	0.88	197,933	0.40	71.6%	574

Figure 16-7: Pit Optimization Results



Source: NCL, 2025.

16.5 Pit Design

16.5.1 Final Pit Design

The final pit design was based on the economic shells obtained at revenue factor 1.0. Table 16-7 shows the key open pit design parameters.

The road width of 30 m will accommodate the selected 220 t trucks. NCL used a 10% road gradient which is common in the industry for this type of trucks. The current mine plan is designed with 10 m benches stacked to 20 m at the (i.e. double benching) in the East zone. Mining costs for this report are based on blasting 10 m benches for ore and waste.

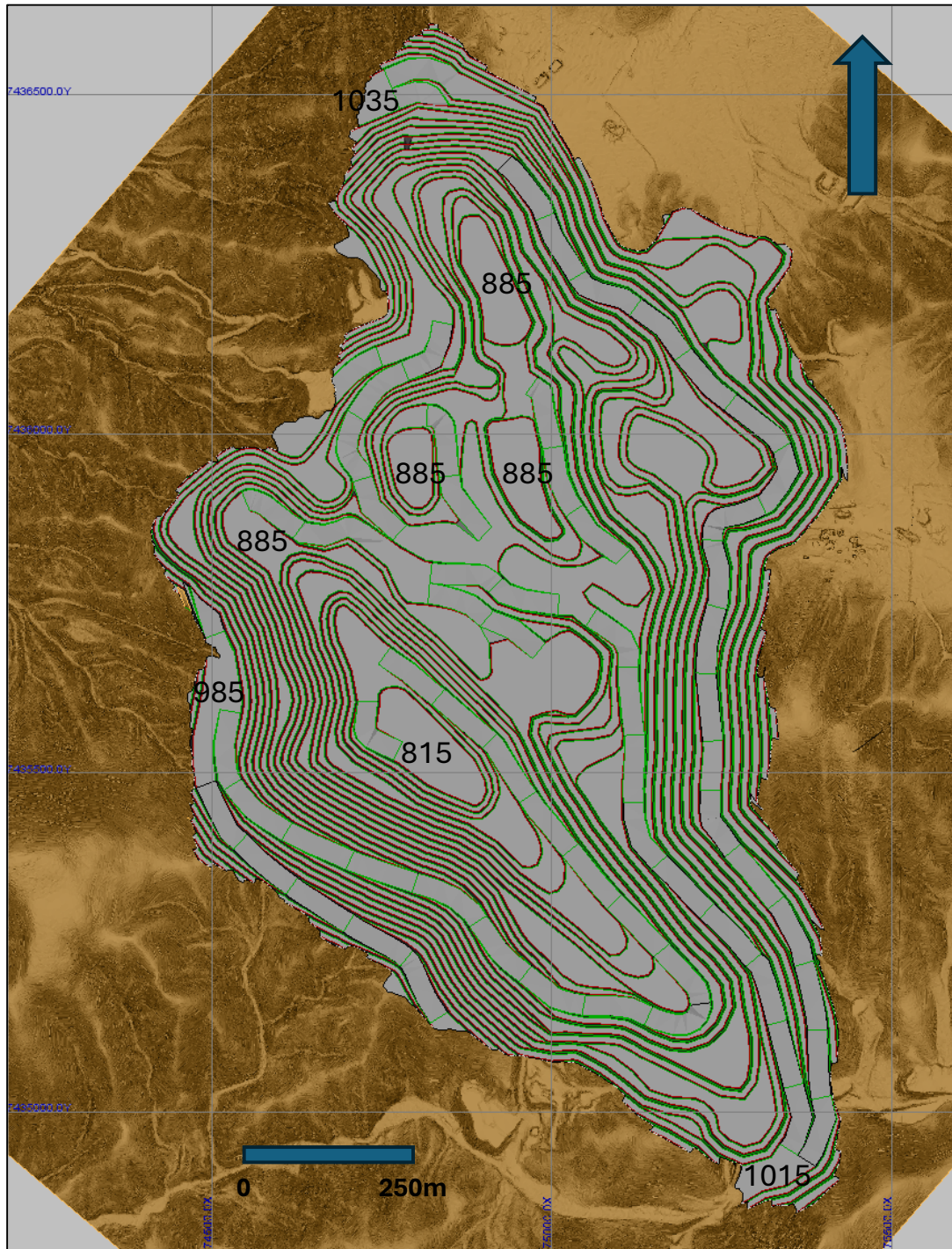
Table 16-7: Mine Design Parameters

Parameter	Unit	Value
Haul Road Width	m	30
Haul Road Grade	%	10
Bench Height		
East (Z1)	m	20
West (Z2)	m	10
North (Z3)	m	10
Nominal Minimum Mining Phase Width	m	70
Batter Angle		
East (Z1)	°	75
West (Z2)	°	70
North (Z3)	°	75
Berm Width		
East (Z1)	m	8.5
West (Z2)	m	6.5
North (Z3)	m	6.5
Inter-Ramp Angle		
East (Z1)	°	55.0
West (Z2)	°	44.6
North (Z3)	°	47.4

The Whittle® pit shell selected as basis for mine design was smoothed, and narrow bottoms were eliminated, adding ramps, to obtain an executable final pit with an overall slope angle between 37 to 45 degrees. Figure 16-8 shows the final pit design with two exits on the south of the pit which give access to the ore to the crusher and three exits to the west for access to the waste storage area.

The final pit is 1,800 m long in the SE-NW direction and up to 1,000 m wide in the NE-SW direction. Four pit bottoms can be identified, from south to north at 815 mRL and three at 885 mRL. The total area disturbed by the pit is about 108 hectares.

Figure 16-8: Final Pit Design



Source: NCL, 2025.

16.5.2 Mining Phases Design

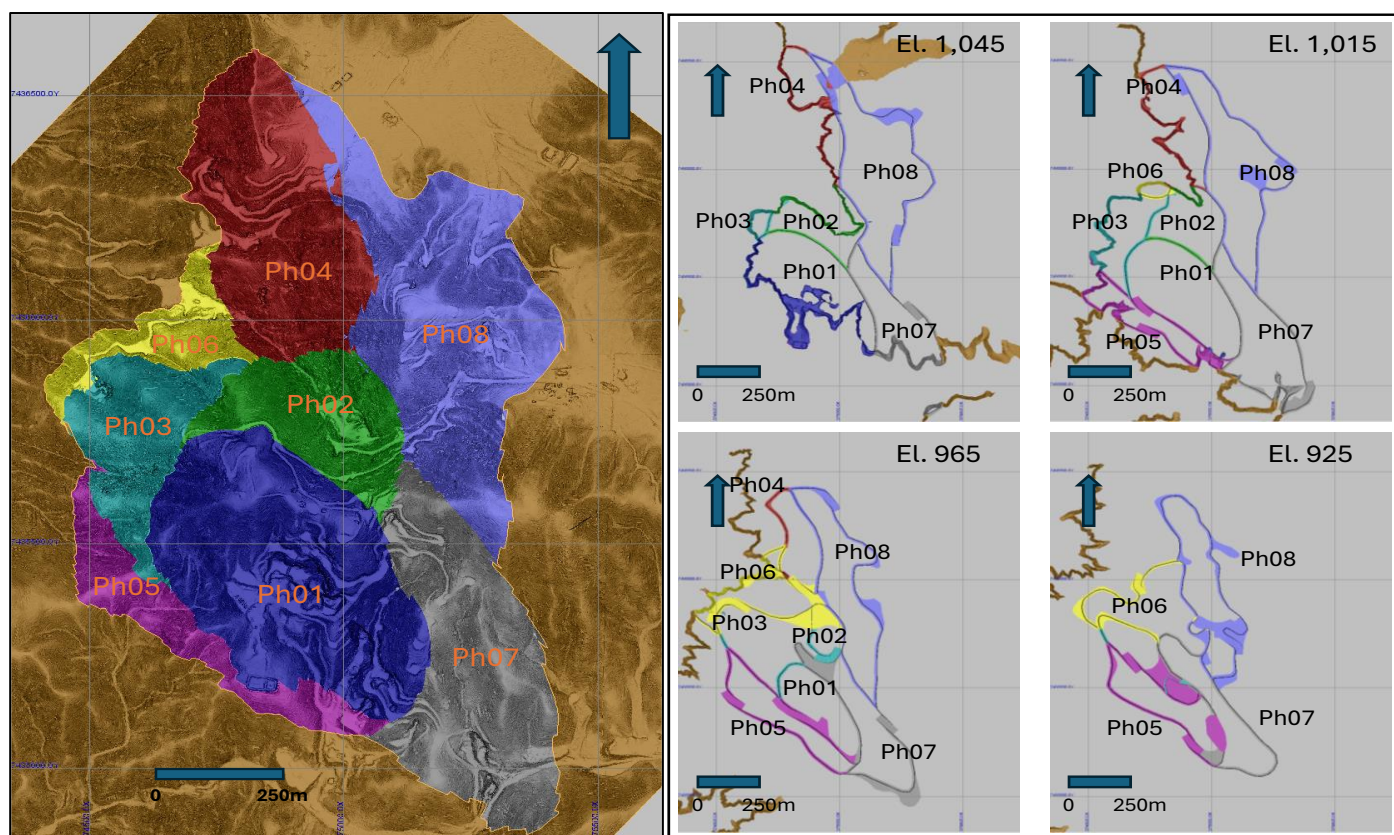
NCL designed a set of eight mining phases, or pushbacks analyzing the Whittle® series of nested shells. Pit bottoms were selected to project them to surface, applying recommended slopes. Figure 16-9 shows the general phases layout and outlines on benches 1045, 1015, 965 and 925.

The phases 1 to 4 were designed to obtain the first two years of production with minimum possible material movement thereby reducing pre-stripping cost.

Phase 1 targets the ore with the highest grade and lowest strip ratio in the south area, down to 925 masl elevation. Phase 2 corresponds to an expansion towards the north, down to 955 masl elevation. Phase 3 is another expansion towards the northwest, down to 905 masl elevation. Phase 4 is an independent pit to the north and down 945 masl elevation.

Phase 5 expands the central pit to the south and down to 875 masl elevation. Phase 6 joins together the central pit with Phase 4 and down to 885 masl elevation. Phase 7 corresponds to the last expansion of the central pit towards the southeast and down to 815 masl elevation. Phase 8 is the final expansion of the northern portion, towards the east and down to 885 masl elevation.

Figure 16-9: Mining Phases Design



Source: NCL, 2025.

16.5.3 Tabulation of In-Pit Mineral Reserves

Table 16-8 summarizes the pit mineral reserves by the individual mining phases. The table includes only Proven and Probable Reserves using the regularized block model (including the dilution criteria).

At a CoG of 0.10% CuT, the final pit contains 178.6 Mt at 0.42% CuT, 145.9 Mt of waste and 324.5 Mt of total material (ore + waste). Table 16-8 also includes a comparison with the Whittle® pit shell, with 97% of ore, 2% of additional waste and 99% of total material.

Table 16-8: In-Pit Mineral Reserves by Mining Phase

Phase	Ore		Waste (Kt)	Total (kt)	Strip Ratio
	(Kt)	(%CuT)			
Phase 01	34,337	0.53	15,045	49,383	0.44
Phase 02	14,305	0.54	3,557	17,862	0.25
Phase 03	19,404	0.38	5,961	25,364	0.31
Phase 04	12,679	0.40	10,692	23,371	0.84
Phase 05	14,537	0.43	15,480	30,017	1.06
Phase 06	13,710	0.32	7,437	21,146	0.54
Phase 07	28,783	0.40	35,713	64,496	1.24
Phase 08	40,881	0.35	52,005	92,886	1.27
Final Pit	178,635	0.42	145,889	324,525	0.82
Whittle Pit	184,114	0.42	142,423	326,537	0.77
	97%	100%	102%	99%	

16.6 Mine Production Schedule

A mine production schedule was developed to show the ore tonnes, copper grades, waste material and total material by year, throughout the life of the mine. The distribution of ore and waste contained in each of the mining phases was used to develop the schedule, ensuring compliance with criteria such as continuous ore exposure, mining accessibility, and consistent material movement.

NCL used Minemax Scheduler® for defining the mining strategy.

Minemax Scheduler® was configured with the following constraints:

- Input parameters detailed in Section 15.1: copper price, variable mining and processing costs, and variable recoveries by ore type.
- Maximum copper production of 50,000 t of copper cathodes per year.
- Maximum six mining benches per phase per year, considering a threshold of 200,000 t per bench.
- Ramp-up of 80% for first year, for tonnes and copper cathode production.

An initial pre-stripping period of 8.5 Mt was adjusted to be the source of waste material for construction purposes of the leach pad. This amount is also enough to expose sufficient mineralized material to start commercial production in Year 1. The ore mined during pre-stripping will be stockpiled in the stockpile area and will make up part of future years of plant production. The total stockpiled for later re-handling will amount to 929 kt, plus 3.2 Mt of low-grade material. The pre-stripping period will be approximately nine months.

Two separate mining rates will be used during commercial production. An initial three-year period will mine at a rate of 25 Mt/a and will be followed by a six-year period that will mine at a rate of 35 Mt/a. These mining rates will meet the initial plant throughput capacity of 12 Mt/a of the first five years and the expansion to 16 Mt/a from Year 7 (Year 6 was set as 14 Mt as the ramp-up of the expansion from 12 Mt to 16 Mt). The two last years of mining will be at lower mining rate as the strip ratio at that time will be lower than the average of the total pit.

The mine plan optimization indicated a variable cut-off grade, stockpiling and blending strategy should be followed for the LOM. Three stockpiles were defined based on copper grade ranges, as follows:

- **High-Grade Stockpile (HG):** Copper grade greater or equal to 0.43% CuT ($\geq 0.43\% \text{ CuT}$).
- **Medium-Grade Stockpile (MG):** Copper grade greater or equal to 0.25% CuT and lower than 0.43% CuT ($0.25\% \text{ CuT} \leq \% \text{CuT} < 0.43\% \text{ CuT}$).
- **Low-Grade Stockpile (LG):** Copper grade greater or equal to 0.10% CuT and lower than 0.25% CuT ($0.10\% \text{ CuT} \leq \% \text{CuT} < 0.25\% \text{ CuT}$).

NCL used an in-house software to transfer the results of the Minemax Scheduler® in terms of throughput constraints, and total mined annual profile by mining phases and variable cut-off profile. The required annual mineralization tonnes and user-specified annual total material movements were input to the system, which then calculates the mine schedule. It also provides the pit period geometry to ensure mining connectivity for all required destinations.

Mine plan, plant feed and copper cathode production schedules are shown in Table 16-9 through Table 16-12.

Table 16-9: Mine Production Schedule

Year	Mine to Plant		Mine to Stock		Waste	Total Mined	Stock to Plant		Total to Plant		Total Movement
	kt	(%CuT)	kt	(%CuT)	kt	kt	kt	(%CuT)	kt	(%CuT)	kt
Y00	-	-	4,170	0.33	4,330	8,500	-	-	-	-	8,500
Y01	9,600	0.50	5,080	0.22	10,320	25,000	-	-	9,600	0.50	25,000
Y02	11,440	0.53	4,710	0.31	8,850	25,000	560	0.58	12,000	0.53	25,560
Y03	11,705	0.53	5,386	0.29	7,909	25,000	295	0.72	12,000	0.53	25,295
Y04	11,603	0.53	4,072	0.37	19,318	34,993	397	0.73	12,000	0.54	35,390
Y05	11,564	0.53	4,536	0.28	18,509	34,609	436	0.73	12,000	0.54	35,045
Y06	13,418	0.46	2,249	0.50	19,218	34,884	582	0.73	14,000	0.48	35,466
Y07	16,000	0.44	4,351	0.23	14,650	35,000	-	-	16,000	0.44	35,000
Y08	11,713	0.43	5,277	0.19	16,295	33,285	4,287	0.60	16,000	0.48	37,572
Y09	11,340	0.41	7,783	0.18	15,878	35,000	4,660	0.44	16,000	0.42	39,660
Y10	16,000	0.45	1,997	0.18	9,503	27,500	-	-	16,000	0.45	27,500
Y11	3,586	0.53	1,055	0.19	1,112	5,753	12,414	0.19	16,000	0.26	18,167
Y12	-	-	-	-	-	-	16,000	0.18	16,000	0.18	16,000
Y13	-	-	-	-	-	-	11,035	0.18	11,035	0.18	11,035
TOTAL	127,969	0.48	50,667	0.26	145,889	324,525	50,667	0.26	178,635	0.42	375,191

Table 16-10: Mine to Stockpiles

Year	Mine to Stock HG		Mine to Stock MG		Mine to Stock LG		Total to Stockpiles	
	kt	(%CuT)	kt	(%CuT)	kt	(%CuT)	kt	(%CuT)
Y00	929	0.58	1,721	0.33	1,520	0.19	4,170	0.33
Y01	6	0.64	1,271	0.34	3,804	0.19	5,080	0.22
Y02	1,029	0.77	35	0.35	3,646	0.19	4,710	0.31
Y03	731	0.87	476	0.33	4,179	0.19	5,386	0.29
Y04	1,179	0.80	132	0.33	2,761	0.18	4,072	0.37
Y05	737	0.72	204	0.33	3,595	0.18	4,536	0.28
Y06	985	0.86	286	0.34	978	0.18	2,249	0.50
Y07	80	0.77	1,124	0.32	3,146	0.18	4,351	0.23
Y08	-	-	290	0.33	4,987	0.18	5,277	0.19
Y09	-	-	-	-	7,783	0.18	7,783	0.18
Y10	-	-	-	-	1,997	0.18	1,997	0.18
Y11	-	-	-	-	1,055	0.19	1,055	0.19
Y12	-	-	-	-	-	-	-	-
Y13	-	-	-	-	-	-	-	-
TOTAL	5,676	0.77	5,541	0.33	39,449	0.18	50,667	0.26

Table 16-11: Total Plant Feed

Year	Mine to Plant		Stock HG to Plant		Stock MG to Plant		Stock LG to Plant		Total to Plant	
	kt	(%CuT)	kt	(%CuT)	kt	(%CuT)	kt	(%CuT)	kt	(%CuT)
Y00	-	-	-	-	-	-	-	-	-	-
Y01	9,600	0.50	-	-	-	-	-	-	9,600	0.50
Y02	11,440	0.53	560	0.58	-	-	-	-	12,000	0.53
Y03	11,705	0.53	295	0.72	-	-	-	-	12,000	0.53
Y04	11,603	0.53	397	0.73	-	-	-	-	12,000	0.54
Y05	11,564	0.53	436	0.73	-	-	-	-	12,000	0.54
Y06	13,418	0.46	582	0.73	-	-	-	-	14,000	0.48
Y07	16,000	0.44	-	-	-	-	-	-	16,000	0.44
Y08	11,713	0.43	2,172	0.86	2,115	0.33	-	-	16,000	0.48
Y09	11,340	0.41	1,235	0.75	3,426	0.33	-	-	16,000	0.42
Y10	16,000	0.45	-	-	-	-	-	-	16,000	0.45
Y11	3,586	0.53	-	-	-	-	12,414	0.19	16,000	0.26
Y12	-	-	-	-	-	-	16,000	0.18	16,000	0.18
Y13	-	-	-	-	-	-	11,035	0.18	11,035	0.18
TOTAL	127,969	0.48	5,676	0.77	5,541	0.33	39,449	0.18	178,635	0.42

Table 16-12: Total Plant Feed by Reserves Category

Year	Proven Reserves		Probable Reserves		Total to Plant	
	kt	(%CuT)	kt	(%CuT)	kt	(%CuT)
Y00	-	-	-	-	-	-
Y01	6,405	0.51	3,195	0.47	9,600	0.50
Y02	8,159	0.58	3,841	0.44	12,000	0.53
Y03	8,125	0.57	3,875	0.45	12,000	0.53
Y04	7,526	0.58	4,474	0.47	12,000	0.54
Y05	7,126	0.55	4,874	0.51	12,000	0.54
Y06	7,457	0.53	6,543	0.41	14,000	0.48
Y07	8,589	0.48	7,411	0.40	16,000	0.44
Y08	6,981	0.54	9,019	0.42	16,000	0.48
Y09	7,717	0.43	8,283	0.40	16,000	0.42
Y10	6,567	0.50	9,433	0.42	16,000	0.45
Y11	6,831	0.24	9,169	0.28	16,000	0.26
Y12	7,499	0.18	8,501	0.18	16,000	0.18
Y13	5,318	0.18	5,718	0.18	11,035	0.18
TOTAL	94,297	0.46	84,339	0.37	178,635	0.42

16.7 Drilling and Blasting

The drilling equipment will consist of diesel units capable of drilling 7 7/8" diameter holes in all material types. Support units capable of drilling 6½" diameter holes for pre-splitting and one buffer line will also be used. One production unit will be required for pre-stripping and two from the start of commercial production through year 3 of the mine plan, then increased to three units. The support unit requirement is one through Year 3 and then increased to two units.

A general design for drilling and blasting patterns was carried out, using benchmark data from similar operations in Chile. According to the drill pattern specified, a blasting powder factor of 132 g/t for waste material, using an emulsion 30/70 and 193 g/t for ore, using an emulsion 50/50. Estimated values are common for fresh rock material.

16.7.1 Explosives Storage Facility

The explosives storage facility is conformed by an explosives magazine and a nitrate storage yard. The location selected for the facility is northeast of the pit, in a virtually flat area, approximately 550 m from the final pit rim and away from the rest of the facilities.

The construction of the facility and handling of explosives during operation will be carried out by a specialized contractor. The cost value assigned in Section 21.1.3 for the construction of the facility as capital was provided by Marimaca and obtained from quotes received from such contractors available in Chile.

16.8 Grade Control

Careful grade control will need to be practiced during mining operations to avoid sending sub-grade material to the plant, because of the important effect of head grade on copper production. These efforts should include the following standard procedures:

- Implement an intense and systematic program of sampling, mapping, laboratory analyses and reporting
- Utilize specialized in-pit, bench sampling drills for sampling well ahead of production drilling and blasting
- Use of shovels to selectively mine ore zones
- Maintain high quality laboratory staff, equipment and procedures to provide accurate and timely assay reporting
- Utilize trained geologists and technicians to work with shovel operators in identifying, marking and selectively mining and dispatching ore and waste.

The study considers the utilization of RC drilling in advance of production for grade control purposes. It has been considered to drill in a pattern of 20 x 20 m to take samples as inputs for a block model for short term planning purposes.

16.9 Mining Equipment

Mine equipment requirements were calculated based on the annual mine production schedule, the mine work schedule and equipment annual production capacity estimates. This represents the equipment necessary to perform the following duties:

- The pre-production development required to expose material for initial production.
- Mine and transport material to the primary crusher and stockpiles.
- Mine and transport waste from the pit to the waste dump.
- Maintain all the mine work areas, in-pit haul roads and external haul roads; and maintain the waste dump and stockpiles.
- Re-handle the material (load, transport, and auxiliary equipment) from the stockpiles to feed the primary crusher.

The major equipment was selected based on the mine production schedule, 15 months of pre-production, 11 years of mining operations and final two years of low-grade ore re-handling from stockpiles to the plant. The pre-production will include an initial pioneering period estimated at six months for preparing initial roads, bench openings and storage material facilities, followed by a pre-stripping period estimated to be 9 months long. The total material mined during pre-stripping will be 8.5 Mt, including 4.3 Mt of waste rock that will be used for construction of the leach pad.

Variable dry bank density was used for ore and waste, averaging 2.65 t/m³. The density values are based on the resource block model values for the various materials tabulated from the mine production schedule. The material handling swell was estimated at 35%. NCL assumed a moisture content of 2%, which represents the weight percent of the wet weight of the material. The density of wet and loose material was used to calculate truck allowable payload limits.

A job efficiency factor (operational losses) of 87% for shovels and trucks, and 83% for front-end-loaders and drill rigs, to allow for operational losses, were used to estimate all major units of equipment and productivities; this corresponds to 52 and 50 minutes per operating hour, respectively.

This Report assumes that the mining operation will use 29 m³ hydraulic shovels, 23 m³ front-end-loaders and trucks with a capacity of 220 t. This type of equipment is able to achieve the required productivity for an annual total material movement of 35 Mt and will provide sufficient mining selectivity with the excavators as required for good grade control and mining flexibility with the front-end-loaders. The fleet will be complemented with drill rigs for material delineation. Auxiliary equipment will include track dozers, wheel dozers, motor graders and water trucks. The mine fleet will also include the necessary equipment to re-handle the material from the stockpiles to the primary crusher. This operation will be carried out using a front-end loader and the same 220 t trucks used in the open pit.

The peak equipment requirements for the pre-production and mine life are included as Table 16-9. Fleet requirements by year are included in Table 16-10.

Table 16-13: Peak Fleet Requirements for Pre-Production and Commercial Production

Equipment Type	Peak	Peak
	Pre-Production	Requirement
Hydraulic shovel 29 m ³	1	2
Front-end-loader 23 m ³	1	1
Haul truck 220 t	6	13
Diesel drill (7 ½")	1	3
Support drill (6 ½")	1	2
Bulldozer	2	5
Wheel dozer	2	2
Motor grader	2	2
Water truck	2	2
Backhoe	2	2
Lube truck	1	1
Support truck	1	1
Mobile crane	1	1
Lowboy truck	1	1
Tire handler	1	1
Lighting plant	6	8

Table 16-14: Fleet Requirements by Year

Equipment Type	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y10	Y11	Y12	Y13
Hydraulic excavator 29 m ³	1	2	2	2	2	2	2	2	2	2	2	1	1	1
Front-end-loader 23 m ³	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Haul truck 220 t	6	7	8	9	11	11	11	13	13	13	10	7	6	4
Diesel drill (7 ½")	1	2	2	2	3	3	3	3	3	3	2	1		
Support drill (6 ½")	1	1	1	1	2	2	2	2	2	2	2	1		
Bulldozer	2	3	4	4	5	5	5	5	5	5	4	2	1	1
Wheel dozer	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Motor grader	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Water truck	2	2	2	2	2	2	2	2	2	2	2	2	1	1
Backhoe	2	2	2	2	2	2	2	2	2	2	2	2		
Lube truck	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Support truck	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mobile crane	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lowboy truck	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tire handler	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lighting plant	6	6	6	6	8	8	8	8	8	6	6	4	2	2

Two hydraulic shovel and one front-end-loader are required from Year 1 throughout the LOM.

The number of truck units required was obtained by dividing the annual capacity of transport of a truck for each combination and period by the corresponding tonnage according to the defined assignment per loading unit. Truck operating hours were calculated per period, type of material and loading unit dividing the tonnage that has to be transported by the hourly productivity of each combination.

The total haulage weighted average distance during production varies from a minimum of 2.3 km to a maximum of 4.1 km. During pre-production the average distance corresponds to 5.2 km, as the waste is delivered at the location of the leach pad for construction. Truck speeds were determined using typical values obtained from supplier information and similar operations. The truck cycle assignments include fixed times for loading, dumping and queuing. Two minutes were added to every cycle for dumping and queuing.

Operational indices considered for the trucks were:

- Availability (MA): Variable profile according to vendor and fleet life
- Use of availability (UA): 85%
- Operational losses: 87% (accounting for operator factor, inspection and training)

The number of trucks required during pre-production is six. The requirement gradually increases from six units during pre-stripping to a maximum of 13 units in Years 7 to 9, then decreases to the end of the LOM as less material is mined.

The primary duties that will be assigned to the auxiliary equipment are as follows:

- Mine development including access roads, drop cuts, temporary service ramps and safety berms.
- Waste rock storage area control: this includes maintaining access to the dumping areas and maintaining the travel surfaces.
- Stockpile storage area control: this includes maintaining access to the stockpile areas and maintaining the travel surfaces.
- Maintenance and clean-up in the mine and waste rock facility (WRF) areas.
- Drilling for pre-splitting.

The auxiliary mine fleet includes the following equipment types:

- Trackdozer (700 hp)
- Wheel dozer (500 hp)
- Motor grader (290 hp)
- Komatsu water truck (75 m³)
- Support drill (6½")

In general, five track dozers, two wheel-dozers, two motor graders and two water trucks will be required.

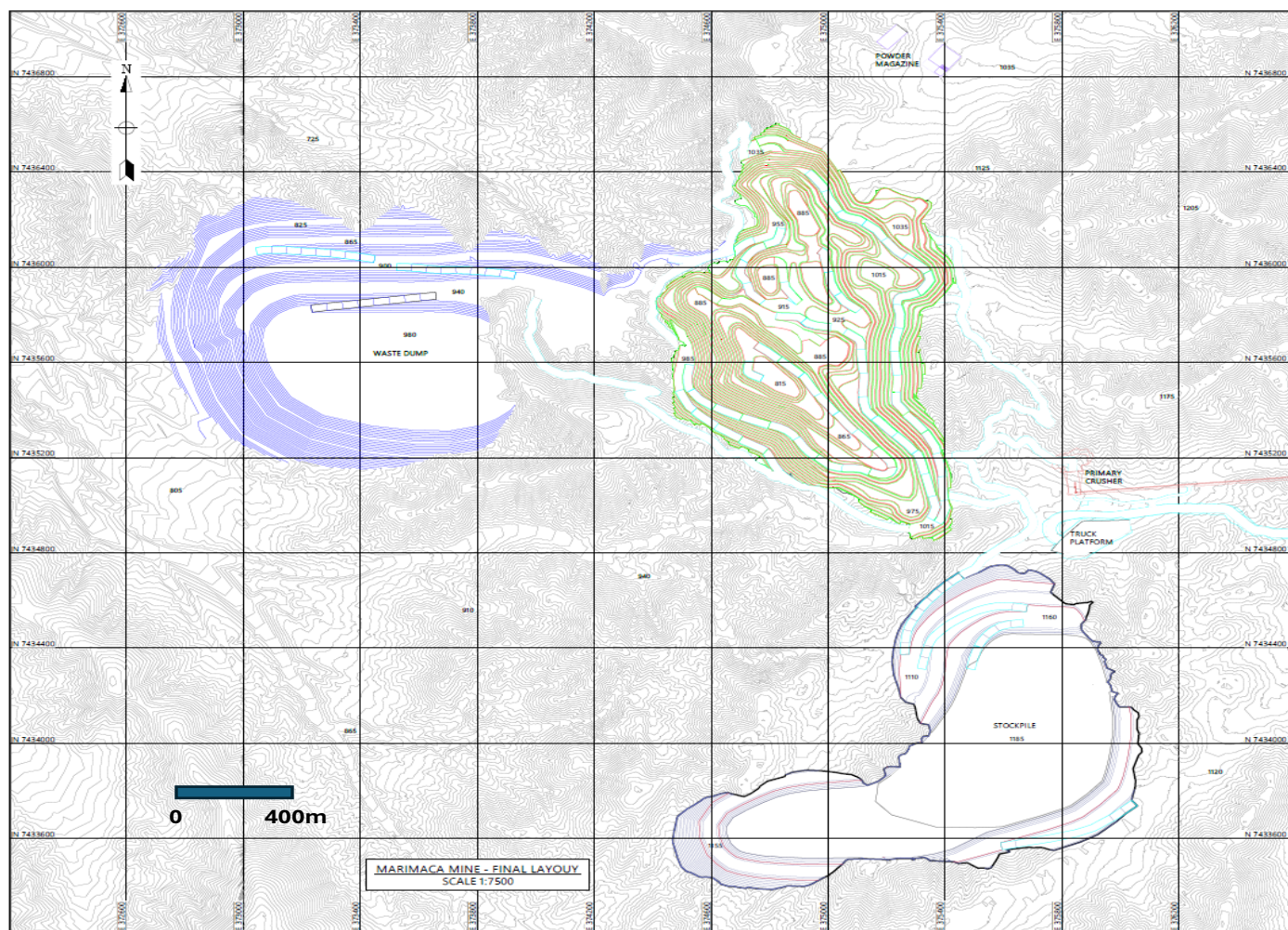
16.10 Mine Rotation Schedule

The mine is scheduled to work seven days per week, 365 days per year. Each day will consist of two 12-hour shifts. Four mining crews will rotate to cover the operation (two working and two on time off).

16.11 Waste Dump and Stockpile

One waste rock facility (WRF) and one low-grade stockpile were designed for the project. The final configuration is shown in Figure 16-10.

Figure 16-10: Final Pit Design



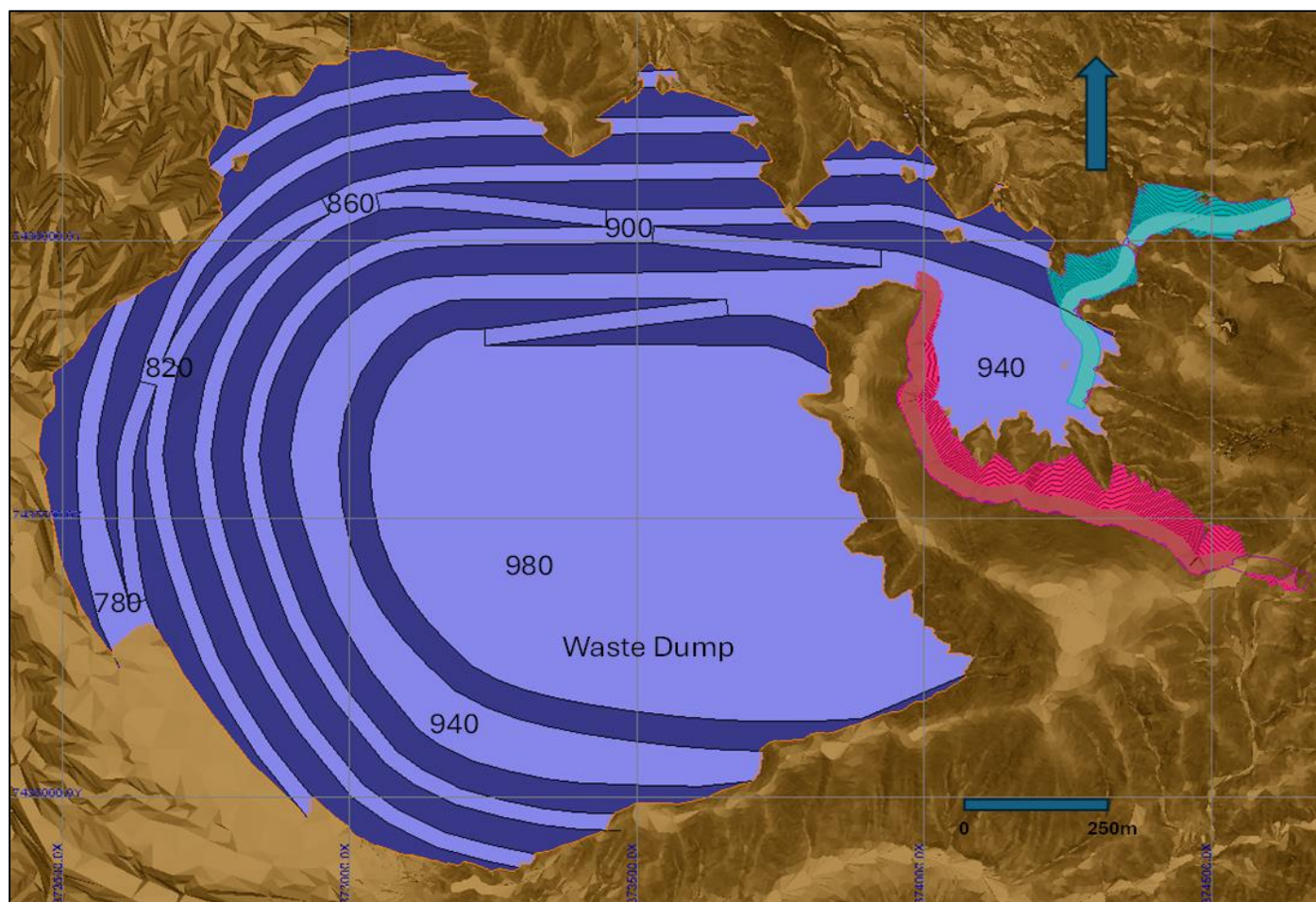
Source: NCL, 2025.

One waste rock facility (WRF), to be located to the west of the pit, was designed for the project. The final configuration is shown in Figure 16-11.

The facility was designed in 40 m lifts. Each lift will be constructed at an approximate angle of repose of 37°. A 30 m set-back between each lift will maintain the overall slope at 1.7:1 to facilitate reclamation and long-term stability. A constant 30% swell factor (after natural compaction) was assumed in the design. The facility was designed to support 230 Mt, 57% more additional capacity than the 146 Mt of waste scheduled in the mine plan.

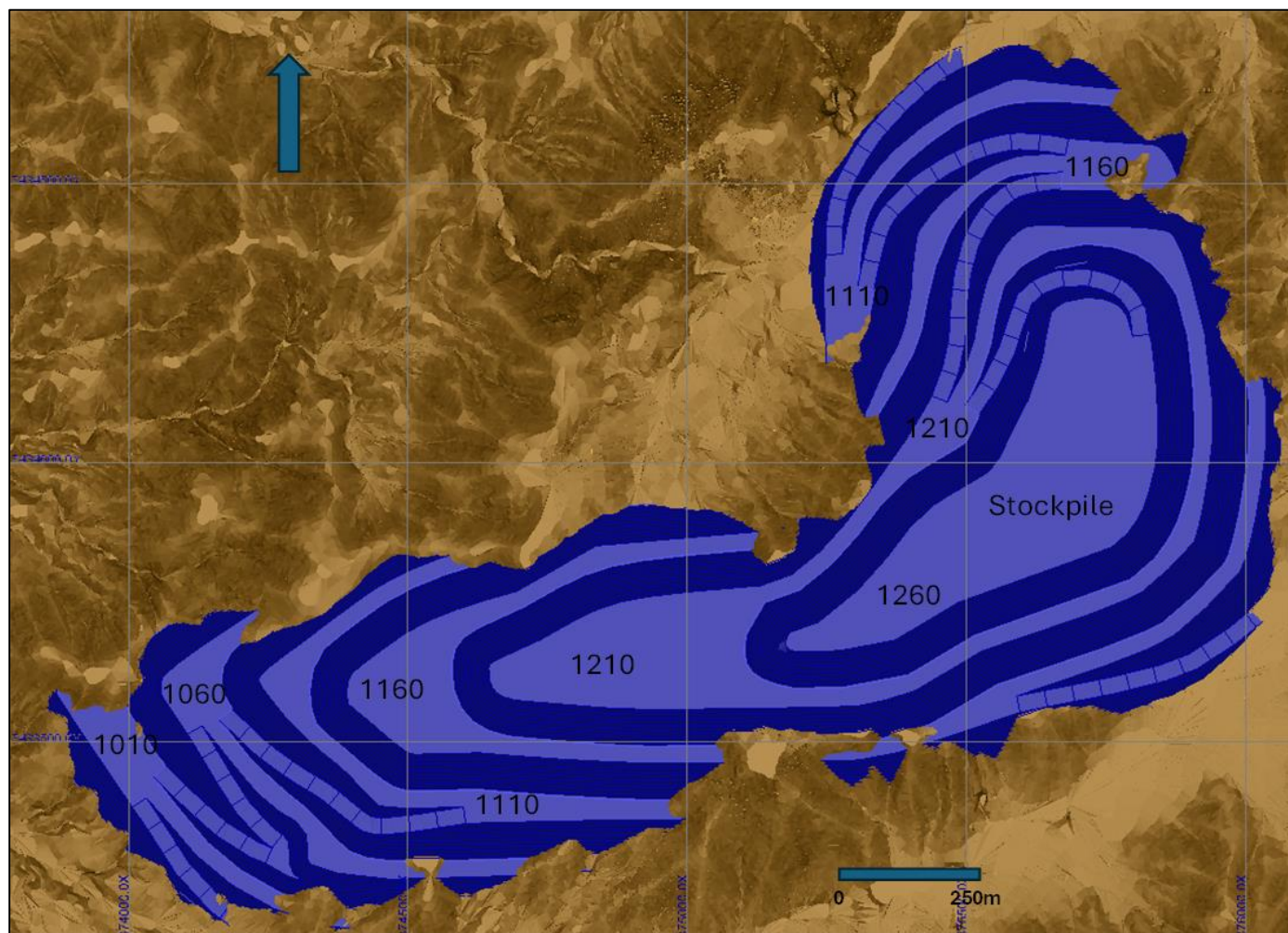
The low-grade stockpile will have a maximum capacity of 55.6 Mt of material. Low-grade material will progressively be stockpiled during the initial years of mine production, for subsequent processing during later years of the mine plan. The low-grade ore stockpile will be located to the south of the pit and primary crusher. The stockpile was designed with 50 m lifts and 30 m setbacks in order to facilitate later re-handling, as shown in Figure 16-12.

Figure 16-11: Final Waste Dump Layout



Source: NCL, 2025.

Figure 16-12: Final Low Grade Stockpile Layout



Source: NCL, 2025.

The construction sequence of the mine waste storage area and stockpile will be from bottom to top. The waste storage areas and stockpile were divided into modules, with the horizontal extension of the full areas and the capacity of each section calculated for every lift. The general strategy applied was to reduce long horizontal and uphill hauling distances within the waste storage area when mining occurs at greater depths in the pit. The destination assignment to the different mine waste modules was based on the minimum cycle time.

17 RECOVERY METHODS

17.1 Overview

Based on the metallurgical testing discussed in Section 13 and Ausenco's design expertise, the proposed recovery methods are based on well-proven unit operations in the industry. There are no unique or novel processing methods required for copper extraction and recovery. The process considers a three-stage crushing circuit with the product fed to an agglomeration stage, followed by heap leaching, solvent extraction and electrowinning obtaining Grade A copper cathodes at a production rate of 50 kt/a.

The key design criteria for the plant are:

- The project is divided into two phases. The first phase, from year one to five, considers the treatment of oxide ores at a rate of 12 Mt/a. The second phase, from year six to thirteen, considers the treatment of oxide and sulphide ores at a rate of 16 Mt/a.
- The process includes a three-stage crushing circuit with the product feeding an agglomeration stage, followed by dynamic heap leaching. Primary crushing considers an operating availability of 70% while from secondary crushing to heap leaching stacking has an operating availability of 75%.
- During Phase 2, salt (sodium chloride) is added to the agglomeration stage in order to improve copper extraction from sulphide minerals. For the leaching of sulphides, air is added in the heap using blowers.
- PLS from heap leaching is fed to the solvent extraction and electrowinning stages obtaining A-grade copper cathodes at a production rate of 50 kt/a. The operating availability of heap leaching solutions management, SX and EW is 98%.
- Phase 1 considers an average total copper head grade and recovery of 0.53% and 77.8% respectively. Phase 2 considers an average copper head grade and recovery of 0.37% and 68.3% respectively.

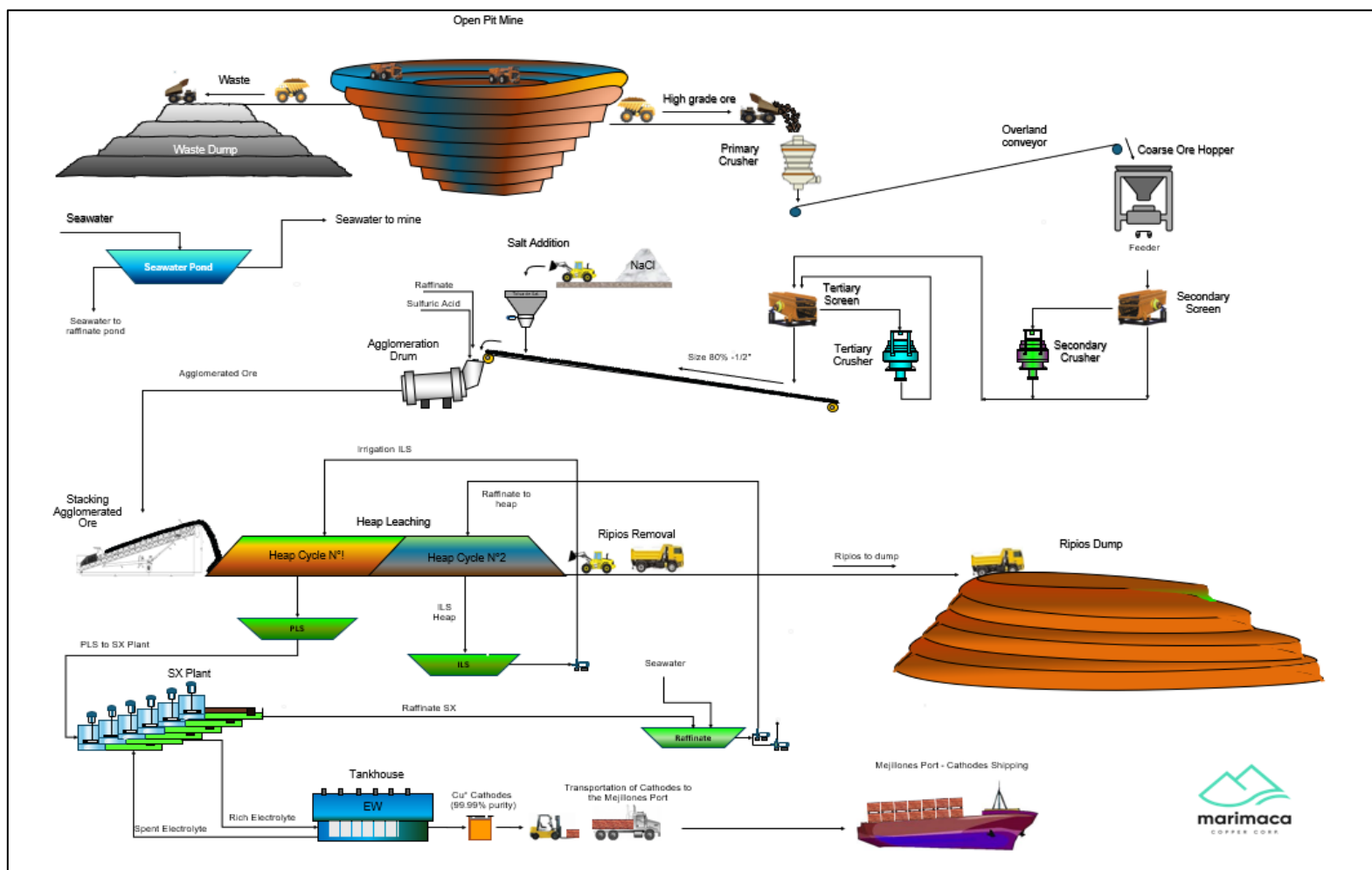
The total operating power for the process plant for Phase 1 and Phase 2 is 244 GWh/a (20.3 kWh/t ore) and 281 GWh/a (17.6 kWh/t ore) respectively. The project uses seawater. Seawater is pumped from Mejillones to the seawater pond located in the operational plant area. The process plant includes sulphuric acid storage and dosing, as well as reagent dosing for the solvent extraction (diluent and extractant), and electrowinning process (cobalt sulphate, guar and surfactant). In phase 2 the process plant includes salt (NaCl) storage and dosing.

17.2 Process Flowsheet

The general process flowsheet is shown in Figure 17-1. It illustrates the process in the following areas:

- Primary crushing
- Secondary crushing
- Tertiary crushing
- Agglomeration (salt addition is considered only for Phase 2)
- Stacking, leaching, leached ore removal and disposal
- Solvent extraction
- Tank farm and electrowinning

Figure 17-1: Process Flowsheet for Phase 1 and Phase 2



Source: Ausenco, 2025.

17.3 Plant Design

Key process design criteria listed in Table 17-1 form the basis of the process flowsheet design and selection of mechanical equipment.

Table 17-1: Process Design Criteria

Parameter	Unit	Phase 1 Value	Phase 2 Value
General Basis			
Plant throughput - nominal	t/d	32,877	43,836
Total copper head grade	%	0.50 – 0.54	0.18 – 0.48
Copper recovery	%	76.6 – 78.6	61.4 – 75.2
Crushing Plant			
Primary crushing production rate – design	t/h	2,870	2,870
Secondary crushing production rate – design	t/h	2,679	2,679
Tertiary crushing production rate – design	t/h	2,009	2,679
Primary crushing operating availability	%	70	70
Secondary/Tertiary operating availability	%	75	75
CWi (75 th percentile) - design	kWh/t	23	23
Crushing circuit P ₈₀ product size - design	mm	12.7	12.7
Agglomeration			
Agglomeration drum capacity -design	t/h	2,009	2,679
Agglomeration operating availability	%	75	75
Residence time	s	45 – 60	45 – 60
Acid dosage (95% w/w) – design	kg/t	40	40
Salt dosage - design	kg/t	-	15
Agglomerated ore moisture (wet basis)	%	8	8
Stacker			
Stacker capacity - design	t/h	2,679	2,679
Stacking operating availability	%	75	75
Maximum lift height per cycle	m	4	4
Heap Leaching			
Heap capacity - design	t/h	2,009	2,679
Net acid consumption – total	kg/t	31.1 – 36.1	30.5 -32.6
Rest time required for curing	d	3 (oxides)	3 (oxides) 30(sulphides)
Leaching cycle - total	d	123.8	113.5
Leaching cycle – loading	d	10.3	7.7

Parameter	Unit	Phase 1 Value	Phase 2 Value
Leaching cycle – rest time	d	0	Oxides: 0 sulphides: 20.6
Leaching cycle – ILS stage	d	41.3	Oxides: 51.6 Sulphides: 30.9
Leaching cycle – raffinate stage	d	41.3	30.9
Leaching cycle - drainage	d	10.3	7.7
Leaching cycle - unloading	d	10.3	7.7
Leaching cycle – dead time	d	10.3	7.7
Irrigation rate	L/h/m ²	10	10
Air addition rate	Nm ³ /h/m ²	-	0.3
PLS – copper concentration	g/L	2 – 4	2 – 4
PLS – acid concentration	g/L	< 1	< 1
PLS – chloride concentration	g/L	< 40	< 90
Solvent Extraction Plant			
Configuration	Stages	3 extraction / 1 Stripping / 2 washing	3 extraction / 1 Stripping / 2 washing
Plant capacity - design	m ³ /h	2,100	2,100
Solvent extraction operating availability	%	98	98
Extraction efficiency	% Cu	> 90	> 90
Electrowinning Plant			
Copper fine cathodes production - design	t/a	50,000	50,000
Number of cells	Unit	142	142
Cathodes per cell	Unit	60	60
Anodes per cell	Unit	61	61
Current density	A/m ²	320 -360	320 -360
Ponds			
Desanding pond – live volume	m ³	4,029	4,029
PLS pond - live volume	m ³	39,647	39,647
ILS pond - live volume	m ³	39,647	39,647
Raffinate pond - live volume	m ³	14,014	14,014
Seawater pond – live volume	m ³	42,518	42,518 + 20,000
Emergency pond – live volume	m ³	41,590	41,590 + 41,590

17.4 Process Description

17.4.1 Primary Crushing

The primary crushing plant processes ROM mineral feed in an open crushing circuit. Trucks (220 t) unload ROM ore into a 352 t live capacity dump hopper with two sided dumping. A rock breaker is provided for the management of oversized rocks.

Primary crushing is carried out with a 1270 mm x 1650 mm (50" x 65") gyratory crusher with 450 kW of installed power. Primary crusher product has an 80% passing (P_{80}) size of 148 mm, and discharges into a 352 t surge hopper. Crushed ore is reclaimed from the hopper with an apron feeder, which transfers the ore to the primary crushing discharge conveyor that feeds the overland stockpile feed conveyor and then discharges the crushed ore into a coarse ore hopper which has 30 minute live capacity.

A dust suppression system is included in the primary crushing area installed at the two truck discharge points, apron feeder discharge, discharge to the primary crushing discharge conveyor and the discharge to the overland stockpile feed conveyor.

17.4.2 Secondary Crushing

Coarse ore is reclaimed from the coarse ore hopper using an apron feeder, that feeds the secondary screen feed conveyor which has a belt scale to measure the ore flowrate. The coarse ore hopper has a dust collector system which collects the dust generated in its feed and in the discharge to the apron feeder.

Secondary screen feed conveyor discharges the ore to the mobile chute splitter which splits the ore into two streams feeding two secondary parallel crushing lines. Each line has a double deck banana screen and a standard cone crusher (type HP900) with 671 kW of installed power. Undersize from the banana screens and discharge from the secondary crusher (P_{80} of 49 mm for Phase 1 and 56 mm for Phase 2) are collected on the tertiary screen feed conveyor. The secondary crushing area has a dust collector system to collect the dust generated in the discharge to the screens, secondary crushers and the tertiary screen feed conveyor.

17.4.3 Tertiary Crushing

Tertiary screen feed conveyor discharges the ore to the tertiary screen hopper which has a live capacity of 5 minutes for Phase 1 and Phase 2. Primary crushing up to the tertiary screen hopper is designed for the 16 Mt/a capacity. Tertiary crushing circuit is designed initially for 12 Mt/a capacity. For Phase 2, a new third tertiary line including a double deck banana screen and tertiary crusher operating in closed circuit is added to the process.

The ore from the tertiary screen hopper discharges to two vibrating tertiary screen feeders during Phase 1. Each feeds a double deck banana screen. A third vibrating tertiary screen feeder is added for Phase 2. The undersize from the double deck tertiary banana screens has a P_{80} of 12.7 mm which feeds the agglomeration stage. Phase 1 tertiary screens oversize discharge to the tertiary crusher feed conveyor which discharges to the tertiary crusher feed hopper. Product

from this hopper discharges to three parallel belt feeders. Each belt feeder feeds a tertiary crusher, a short head cone crusher (type HP900) with 671 kW of installed power.

For Phase 2, a third vibrating tertiary screen feeder discharges the ore to a new double deck banana screen. The undersize from the double banana screen, the final product, with a P_{80} of 12.7 mm, which feeds to the agglomeration stage. The oversize from third tertiary screen discharges onto a new tertiary crusher feed conveyor which feeds a new tertiary crusher hopper. Product from this hopper discharges to a new belt feeder that feeds a tertiary crusher (duplicate of the phase 1 tertiary crushers).

Product from Phase 1 and Phase 2 tertiary crushers discharges to the tertiary screens feed conveyor.

17.4.4 Agglomeration

The agglomeration circuit consists of two parallel lines. The first line, installed for phase 1, has a capacity for 12 Mt/a and includes a feed conveyor with a belt scale to measure the ore flowrate that feeds the agglomeration drum. Concentrated sulphuric acid and raffinate solution are added to the agglomeration drum feed to agglomerate crushed ore.

The second line has a capacity for 4 Mt/a, will be added for Phase 2, and duplicates the Phase 1 equipment. During Phase 2, salt (sodium chloride) will be added to the agglomeration drum feed conveyors in both lines to improve sulphide copper dissolution kinetics. Chemical reactions in the agglomeration process between salt, raffinate and sulphuric acid will generate gases containing chlorohydric and sulphuric acid. The agglomeration drums are fitted with extraction and cleaning scrubbing systems to capture and neutralize these gases using caustic soda prior to discharge to the atmosphere.

In Phase 2, salt will be delivered in trucks (30 t) and will be unloaded into a storehouse which has a capacity of 3,507 t, equivalent to four days of residence time at operating throughput.

Agglomerated ore from each drum discharges onto a conveyor which feeds an overland conveyor for transfer to the leach pads.

17.4.5 Leaching

Agglomerated ore from the overland conveyor discharges to a tripper conveyor that feeds a series of seventeen grasshopper conveyors for Phase 1 and three additional grasshopper conveyors are added for Phase 2. From the last grasshopper conveyor, the agglomerated ore is transferred to a feed conveyor, horizontal conveyor, and finally to a radial stacker that spreads the agglomerated ore over the heap. During Phase 1 the heap will have a total of twelve cells and in Phase 2 the heap area will be increased to a total of fifteen cells. Agglomerated ore is stacked to a maximum lift height of 4 m.

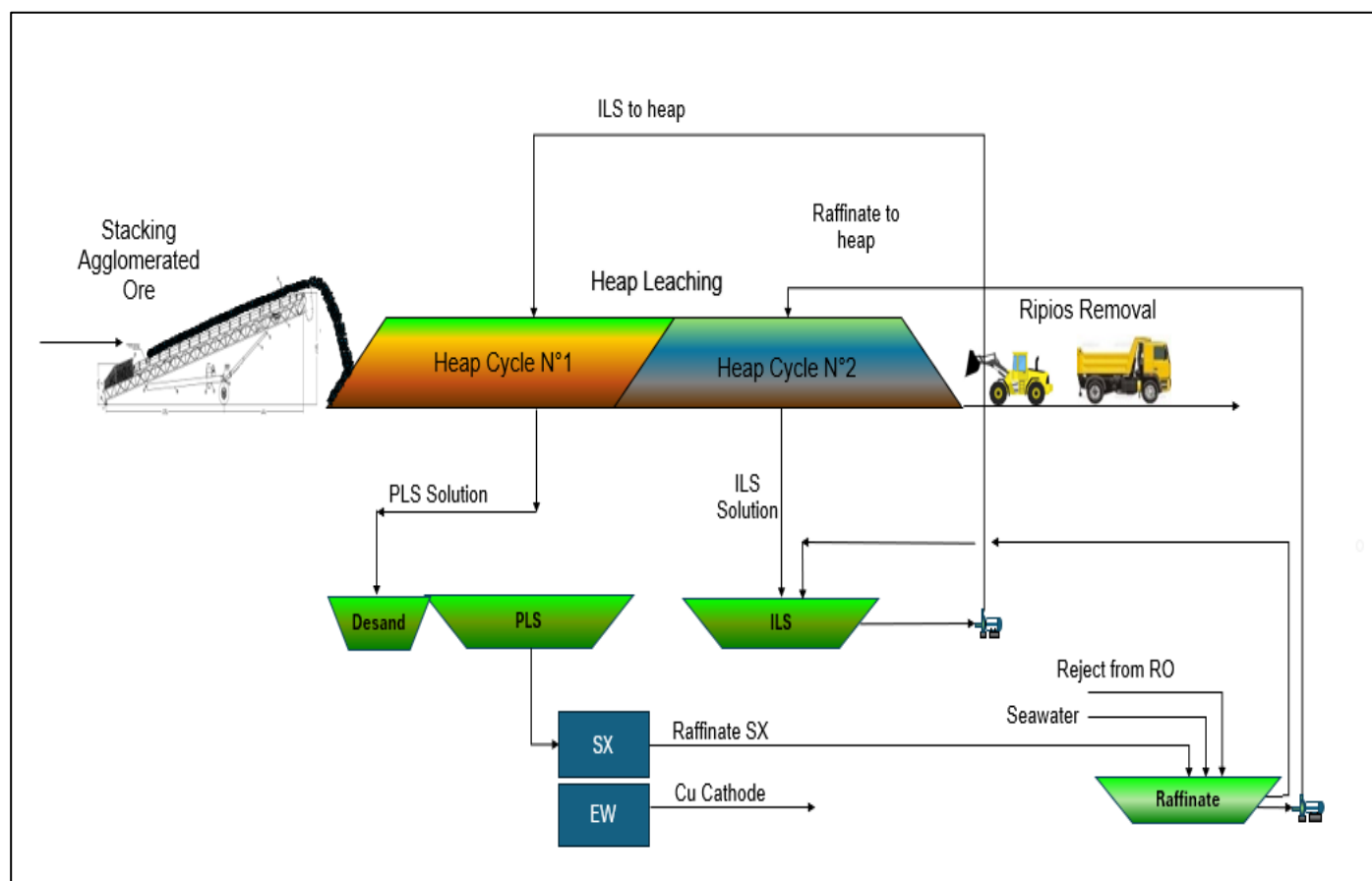
Dynamic heap leaching utilizes on-off operation. The leaching cycle consists of the following steps: loading, resting, solution irrigation, drain down and leach ore removal. Solution irrigation is done in two stages at an irrigation rate of 10 L/h/m², with a solution to ore ratio of 3.0:1 for oxides and 2.2:1 for sulphides. The first irrigation stage uses intermediate leach solution (ILS) while the second irrigation stage, raffinate solution is used. Leaching solution flows

through the stacked ore dissolving the copper. Solution from the first irrigation stage is PLS that is collected in the PLS pond and then pumped to the solvent extraction plant. Solution from the second irrigation stage is ILS solution that is collected in the ILS pond and then used for first stage leaching.

During Phase 1 only oxide ore will be processed. During Phase 2, oxide and sulphide ores will be processed. Oxide and sulphide ores have different cycle times, so the stacking plan is based on processing oxide separately from sulphide ores. For the leaching of sulphides, air is added in the heap using blowers. During Phase 1 copper extraction will vary between 76.6% and 78.6% depending on the mineralogy. During Phase 2 copper recovery will vary between 61.4% and 75.2%.

Leached ore (ripios) is removed using trucks (100 t capacity) that transport the leached ore to one of the two ripios dump areas located both north and south of the heap leach pad.

Figure 17-2: Leaching Stage Diagram



Source: Ausenco, 2025.

17.4.6 Solution Management

Heap leach solutions are stored in and pumped from ponds. The process design includes one pond for the raffinate, one pond for the ILS, and two ponds for the PLS. Raffinate pond capacity is based on six hours of operating capacity equivalent to 14,014 m³ for both phases of the project. This pond has no additional volume reserved as emergency capacity. Seawater and reject water from reverse osmosis plants are added to this pond.

The ILS pond has a live volume of 39,647 m³. A total of six hours is considered operating capacity equivalent to 12,588 m³ for Phase 1 and 20,969 m³ for sulphides in Phase 2. The additional live volume of the ILS pond is reserved as emergency capacity.

In the case of the PLS, the solution drained from the heap first flows to the desanding pond which overflows to the PLS pond. The desanding pond considers a total of two hours as operating capacity equivalent to 4,029 m³ for both phases of the project. The PLS pond has a useful volume of 39,647 m³. A total of six hours is considered operating capacity equivalent to 11,385 m³ for Phase 1 and 11,199 m³ for sulphides in Phase 2. The additional volume is reserved as emergency capacity.

Process design considers an emergency condition corresponding to a 24-hour period without electric power, together with one in 100 year rain event. To contain this emergency volume, one emergency pond is considered in Phase 1 with a useful capacity of 41,590 m³. This volume together with the emergency capacity of PLS and ILS ponds can handle part of the emergency volume. To handle the rest of the emergency volume an electric power backup is considered for the ILS pumps to recirculate 1,419 m³/h of ILS to the heap (Figure 17-3). During Phase 2 a second emergency pond is added with the same capacity as the first emergency pond. As in Phase 1, an electric power backup is considered for the ILS pumps to recirculate 1,855 m³/h of ILS to the heap during the oxide ore processing in Phase 2.

Figure 17-3: Solution Management During an Emergency Condition



Source: Ausenco, 2025.

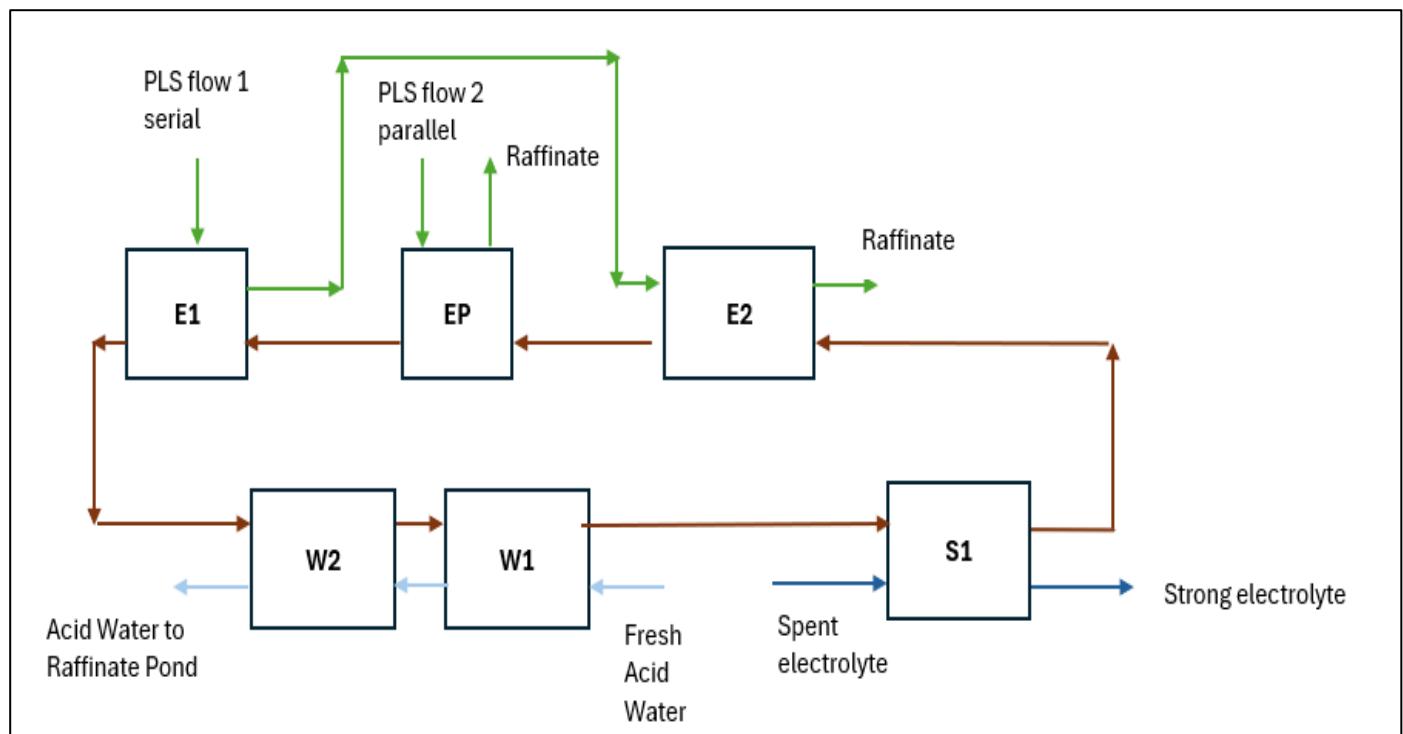
17.4.7 Solvent Extraction

A block diagram of the solvent extraction (SX) stage is shown on Figure 17-4. The solvent extraction process consists of three extraction stages, two washing stages, and one stripping stage. The organic phase contains an extractant concentration of 22-24% v/v, comprising a mixture of aldoxime and ketoxime compounds. The extraction efficiency exceeds 90%.

PLS is divided into two streams where each one feeds the extraction Stages E1 and EP. During the extraction stages, copper is transferred from the aqueous to the organic phase by mixing the PLS and organic phase and then separating both phases in the settler. Mixing is done in three consecutive agitated tanks. Semi-raffinate from E1 is fed to series extraction Stage E2. Raffinate from EP and E2 are recirculated back to the raffinate pond. Unloaded organic coming from the stripping stage is fed to extraction Stage E2. Organic product from this stage is fed afterwards to extraction Stage EP and then E1 generating the loaded organic.

Loaded organic is fed to two series washing stages where impurities (chloride, iron) are removed to minimize their transfer to the electrowinning stage. Impurities are removed by mixing the acid water and organic phase and then separating both phases in the settler. Fresh acid water is added to the washing stage W1. Washed loaded organic from Stage W1 is fed to stripping Stage S1. During the stripping stage copper is transferred from the organic to the aqueous phase by mixing the spent electrolyte and organic phase and then separating both phases in the settler. The strong electrolyte from Stage S1 is fed to the tank farm and the unloaded organic is recirculated to the extraction Stage E2.

Figure 17-4: Solvent Extraction Block Diagram



Source: Ausenco, 2025.

17.4.8 Solvent Extraction Block Diagram

Strong electrolyte from stripping stage is fed to a set of two coalescers and three filters to remove organic entrainment from the strong electrolyte. Strong electrolyte is heated in a set of strong electrolyte-spent electrolyte and strong-electrolyte-water heat exchangers before it is fed to the recirculating electrolyte tank. This tank has two compartments: one for the strong electrolyte and the other for the spent electrolyte. In the strong electrolyte compartment, the reagents cobalt sulphate, guar and surfactant are added to control anode corrosion, improve cathode quality and control acid mist respectively.

Strong electrolyte from the recirculating tank is pumped to the electrowinning cell house which contains 142 cells and has a fine copper production capacity of 50,000 t/a. Each cell is composed of 60 cathodes and 61 anodes. Electric current at a current density of 320 A/m² is used to electrowin the copper cathodes. Cathodes are harvested with an overhead crane.

Spent electrolyte from the electrowinning cell house is sent back to the spent electrolyte compartment of the recirculating tank. Acid is added in this compartment is added to adjust the acid concentration. Spent electrolyte is pumped back to the stripping stage previous passing to the heat exchanger. Part of the spent electrolyte is purged to control impurities in the electrowinning circuit. This purge is sent to the raffinate pond.

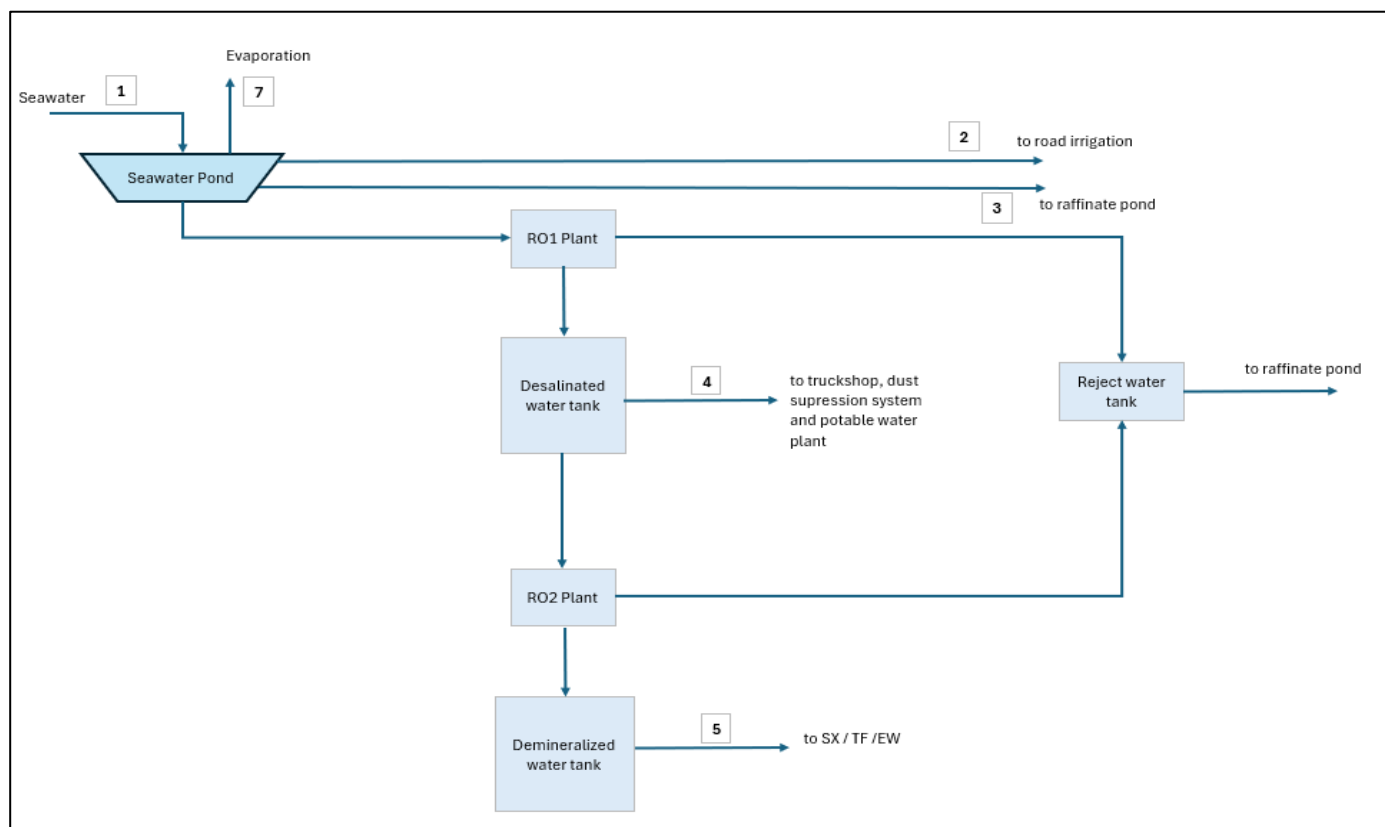
17.5 Energy, Water, and Process Materials Requirements

17.5.1 Water Distribution System

The project includes the usage of seawater. Seawater is pumped from Mejillones to the seawater pond located in the operational plant area using a pipeline with a design capacity of 700 m³/h. Phase 1 considers one pond with a live volume of 42,518 m³ which corresponds to a residence time of five days. During Phase 2 a second pond is added with a live volume of 20,000 m³ which corresponds to a residence time of six days considering both ponds.

Seawater is pumped to three consumption points (**Figure 17-5**). The first one is the loading truck system located near the truckshop where seawater is used for mine road dust suppression. The second is the raffinate pond where seawater is added as makeup water. The third point is the reverse osmosis plant N°1 where desalinated water is generated. The desalinated water is distributed to the truckshop, primary crusher dust suppression system, to the potable water plant and to the reverse osmosis plant N°2 where demineralized water is produced. Demineralized water is distributed to solvent extraction, tank farm and electrowinning plants.

Figure 17-5: Water Distribution System Diagram



Source: Ausenco, 2025.

Water consumption is summarized in Table 17-2.

Table 17-2: Water Consumption

Stream	Item	Phase 1		Phase 2	
		m ³ /h	m ³ /t	m ³ /h	m ³ /t
1	Fresh Seawater	476.8	0.35	570.0	0.31
2	Seawater to Road Irrigation	150.0	0.11	150.0	0.08
3	Seawater to Raffinate Pond	90.4	0.07	178.8	0.10
4	Desalinated Water	12.0	0.01	12.6	0.01
5	Demineralized Water	77.5	0.06	77.5	0.04
6	Reject RO Water	139.7	0.10	140.4	0.08
7	Seawater Pond Evaporation	7.3	0.01	10.7	0.01

17.5.2 Acid

The 95% w/w sulphuric acid will be delivered by trucks and will be stored in two acid storage tanks located in the agglomeration area with a 3,600 m³ capacity for each tank which corresponds to a 7-day storage capacity. The storage system will send the required acid to the consumption points: agglomeration, ILS irrigation line, raffinate irrigation line, SX and EW plants.

17.5.3 Salt

In Phase 2, Sodium chloride will arrive in trucks (30 t) and will be unloaded in a storage warehouse which has a capacity of 3,507 t, equivalent to four days of residence time at operation flowrate. Sodium chloride will be added to the agglomeration drum feed conveyor.

17.5.4 Specific Reagents

The following specific reagents will also be used in the process:

- Extractant will be provided by the supplier in 1 m³ capacity IBC totes. The extractant will be pumped to the loaded organic tank.
- Diluent will be provided by the supplier in trucks that will unload the diluent in the diluent storage tank that has a capacity of 25 m³. The diluent will be pumped from this tank to the loaded organic tank.
- Cobalt sulphate is delivered in 25 kg bags. It is dissolved and diluted (1.5% w/v) with demineralized water in the preparation tank (5 m³) and then transferred to the storage tank which has a capacity of 9 m³. The diluted cobalt sulphate will be pumped to the strong electrolyte compartment of the recirculating electrolyte tank.
- Guar is delivered in 25 kg bags. It is dissolved and diluted (0.15% w/v) with demineralized water in the preparation tank (20 m³) and then transferred to the storage tank which has a capacity of 41 m³. The diluted guar will be pumped to the strong electrolyte compartment of the recirculating electrolyte tank.
- Surfactant is delivered by trucks in 1 m³ capacity IBC totes that are stored in the SX/EW area. The surfactant will be pumped to the strong electrolyte compartment of the recirculating electrolyte tank.
- Caustic soda is delivered by trucks as a 50% w/w solution and is stored in a storage tank that has a capacity of 35 m³ and is located in the agglomeration area. From this tank it will be pumped to the scrubber.
- Diesel will be provided by the supplier in trucks which will unload the fuel into the diesel storage tank from where it will be pumped to the hot water boilers.

17.5.5 Reagents and Consumables Consumption

Reagents consumption is shown in Table 17-3.

Table 17-3: Reagents Consumption

Reagent	Unit	Value
Sulphuric Acid (95% w/w) Phase 1	kg/t	34.6
Sulphuric Acid (95% w/w) Phase 2	kg/t	32.5
NaCl (Salt)	kg/t minSu(*)	15
Caustic Soda (50%)	kg/t min	0.11
Extractant	Kg/t Cu	5.5
Diluent	kg/t Cu	21.3
Clay for SX	kg/t Cu	0.3
Antracite for TF/EW	kg/t Cu	0.033
Granate for TF/EW	kg/t Cu	0.25
Diesel for EW	L/m ³ electrolyte	2
Cobalt Sulphate	kg/t Cu	1.5
Guar	kg/t Cu	0.4
Surfactant	kg/t Cu	0.06
Acid mist sphere	L/t Cu	0.43

Notes: *t minSu = tonnes of sulphide ore.

Table 17-4 presents the consumables consumption.

Table 17-4: Consumables Consumption

Consumable	Unit	Value
Primary crusher mantle	Set/equipment/a	1
Secondary crusher mantle	Set/equipment/a	2
Secondary crusher liners	Set/equipment/a	2
Tertiary crusher mantle	Set/equipment/a	2
Tertiary crusher liners	Set/equipment/a	2
Secondary screen panel	Set/equipment/a	2
Tertiary screen panel	Set/equipment/a	2
Agglomeration drum liners	Set/equipment/a	1
Irrigation mesh	m ² /t	0.15
Electrowinning consumables (Edge Strips, Strapping, Clips, Buffing Pads)	kg/t Cu	0.6
Cathodes pallets	Set/t Cu	0.5
Cathodes reposition	%	10
Anodes reposition	%	8

17.5.6 Electrical Power

Electrical power consumption is shown in Table 17-5.

Table 17-5: Plant Power Consumption

Area	Phase 1 (MWh/a)	Phase 2 (MWh/a)
General	-	-
Mine	-	-
Crushing	57,138	64,169
Agglomeration	18,484	24,510
Leaching	32,290	56,084
SX / TF / EW	114,001	114,001
Power Supply	954	954
Water Supply and Reagents	12,259	12,312
Infrastructure, Buildings and Roads	8,808	8,808
Indirect	-	-
Total	243,934	280,837

18 PROJECT INFRASTRUCTURE

18.1 Introduction

Marimaca is a greenfield project. The minimal infrastructure that is currently on site is related to mineral exploration activities and site management of project study work activities.

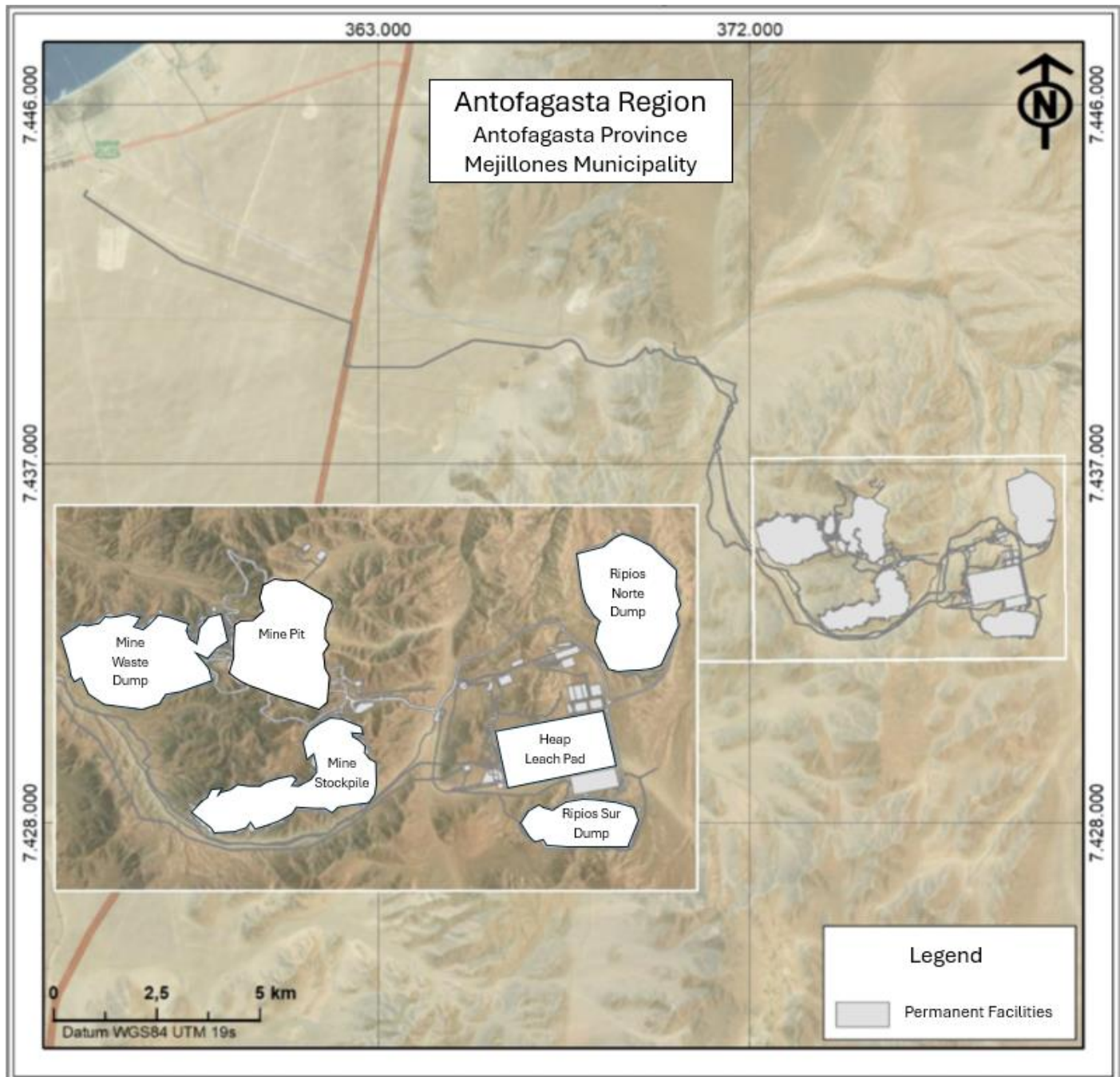
This Section 18 describes the project infrastructure, complimenting the mine infrastructure described in Section 16, and the process plant equipment facilities described in Section 17 of this Technical Report.

The Project will be constructed in two phases. Phase 1 will be for an initial processing capacity of 12 Mt/a during years 1 to 5, Phase 2 will add 4 Mt/a to expand total processing capacity to 16 Mt/a from Years 6 to 13. Most project infrastructure will be constructed for Phase 1. For Phase 2, infrastructure will be expanded in tertiary crushing, agglomeration, heap leaching and pond areas, as well as the addition of salt storage and heap leach air blowers. Ripios dump construction will progressively continue during the initial years of operation. Figure 18-1 shows the overall project infrastructure layout from the coast to the project site. Figure 18-1 inset shows the location of the larger infrastructure items for the mine and process plant.

Figure 18-2 shows the Phase 1 infrastructure site plan, while Figure 18-3 shows the site plan following the Phase 2 expansion for operation in Years 6 to 13. The following areas expanded or added in Phase 2 are shown in Figure 18-3:

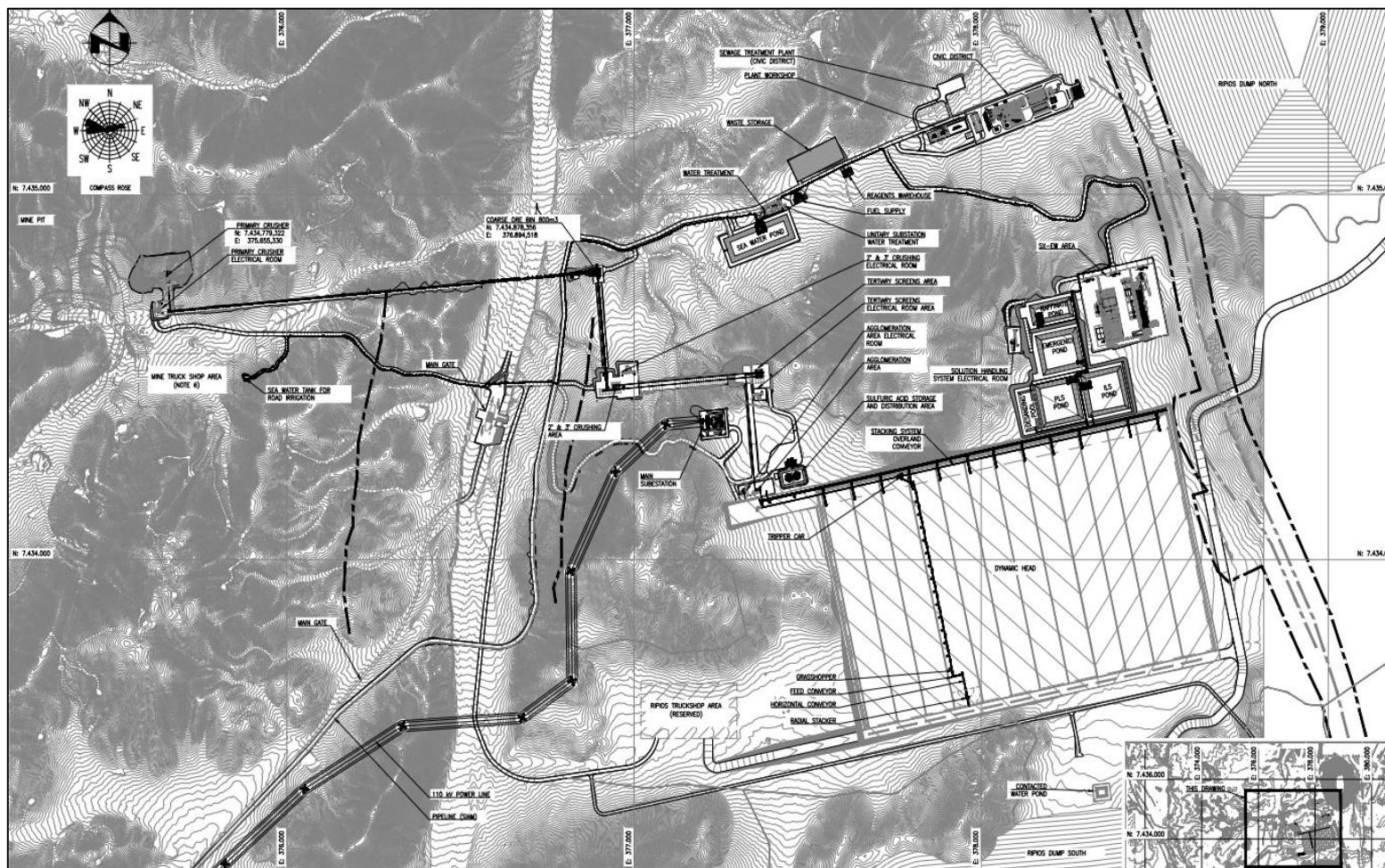
- Tertiary crushing: a third tertiary crushing line including a double deck banana screen and tertiary crusher operating in closed circuit is added.
- Agglomeration: duplicate agglomeration line added with a capacity of 4 Mt/a.
- Salt (Sodium Chloride) storage area added.
- Heap Leach:
 - 3 dynamic heap cells are added, bringing the total to 15 cells.
 - Air blowers are added to inject air into each cell for sulphides leaching.
 - A second emergency pond is added.
- Seawater stoage: A second seawater pond is added.

Figure 18-1: Infrastructure Layout



Source: Ausenco, 2025.

Figure 18-2: Phase 1 Site Plan



Source: Ausenco, 2025.

This topographic map illustrates the Rio Pinos Mine site, featuring a variety of industrial and support facilities. Key locations include the Sulfate Treatment Plant, Plant Workshop, Waste Area, and various storage ponds (Sea Water Pond, Tertiary Screen, Sodium Chloride Area, and Ammonia Pond). The map also shows the Mine Truckshop Area, Mine Gate, and a large Dynamic Heap. Infrastructure elements like roads, railroads, and a water treatment plant are clearly marked. The map includes a compass rose in the upper left corner and a detailed inset map in the lower right corner showing the site's location within a larger regional context. Elevation contours and grid coordinates (e.g., N 7 435 000, E 376 000) are provided for precise location reference.

Marimaca Oxide Deposit
NI 43-101 Technical Report and Feasibility Study

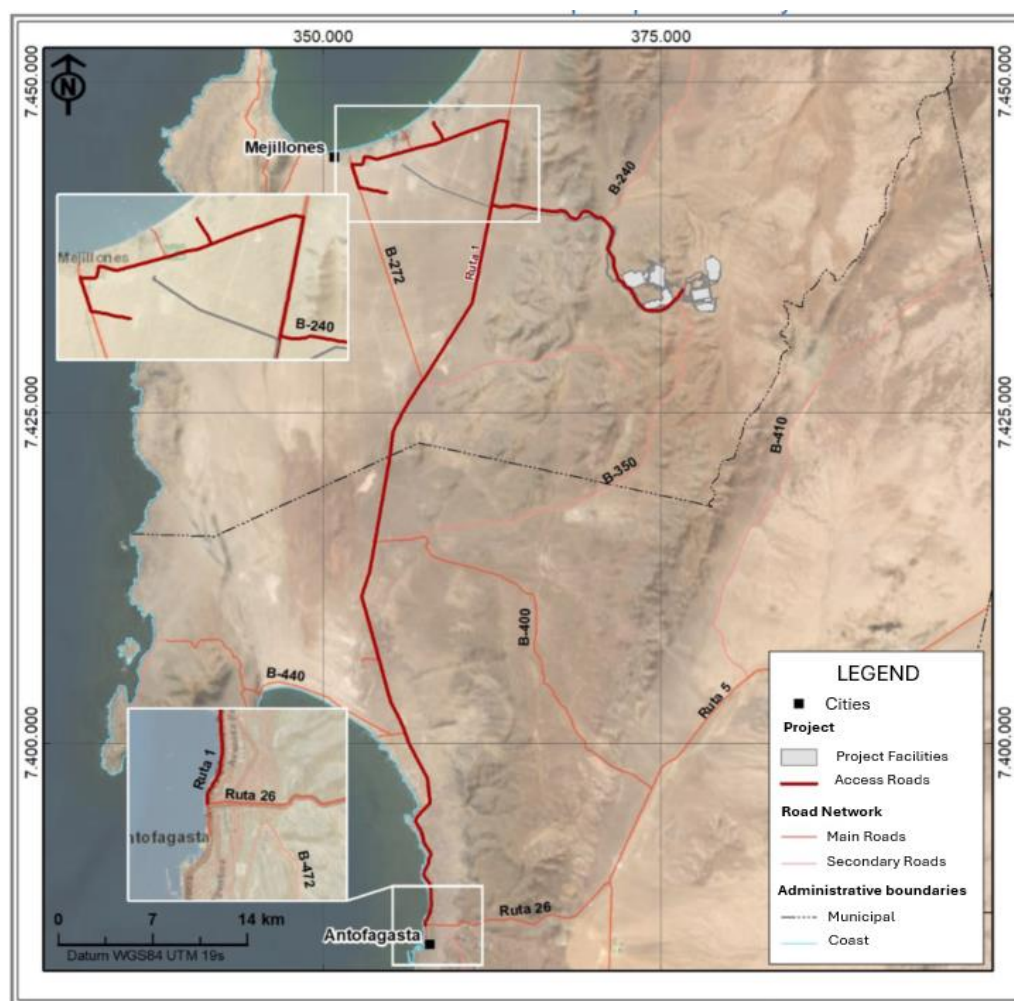
18.2 Site Access

Public roads currently connect the Project site with the Port of Mejillones and city of Antofagasta. From Antofagasta, the project site is accessed via Route 1, then Route B-12 (formerly Route B-240). From Mejillones, access is via the North Mejillones access route, Route B-262, then Route 1, then connecting to Route B-12, and finally Route Camino Quebrada Mejillones.

The Mejillones port will be used to ship Marimaca's production of copper cathodes. Mejillones port will also serve as an arrival port for project equipment and supplies.

The nearest commercial airport is Antofagasta (ANF), which has numerous daily commercial flights to Santiago.

Figure 18-4: Access Routes



Source: Ausenco, 2025

18.3 Built Infrastructure

18.3.1 General Support Facilities

The general support facilities for the project include the following key buildings and infrastructure:

- Site access gatehouse
- Plant equipment maintenance workshop - 50 m long x 25 m wide
- Kitchen and dining room - 67 m long x 33 m wide
- Auditorium - 22 m long x 12 m wide
- Change rooms - 45 m long x 12 m wide
- Administration building - 52 m long x 25 m wide. Includes offices, meeting room, workstations, bathrooms
- Emergency response headquarters - 18 m long x 9 m wide
- Control room - 14 m long x 12 m wide
- Laboratory - 29 m long x 23 m wide
- First aid room
- Wastewater treatment plant
- Fenced waste storage yard - 150 m long x 64 m wide, including a hazardous waste area - 30 m long x 27 m wide

18.3.2 Chemical and Reagent Storage Facilities

The chemical and reagent storage facilities for the project are summarized as follows:

- Sulphuric acid storage tanks (2 tanks, each with a storage capacity of 3,600 m³)
- Solid cobalt sulphate storage area (25-kg bags), mixing tank (5 m³) and storage tank (9 m³)
- Solid guar storage area (25-kg bags), mixing tank (20 m³) and storage tank (41 m³)
- Liquid extractant storage area (for 1 m³ tote tanks)
- Liquid diluent storage tank (25 m³)
- In Phase 2, a caustic soda storage tank will be constructed (35 m³)
- In Phase 2, a sodium chloride storage area will be constructed, with a capacity of 3,507 t

18.3.3 Truck Shops

The project will have two separate truck shop facilities :

- Mine truck shop, initially with one bay to support the maintenance of the mine mobile equipment. It includes a truck washing facility, tyre repair station, lubricant storage and warehouse and hazardous waste storage enclosure.
- Ripios removal truck workshop and truck parking area.

18.3.4 Accommodation

Due to the proximity of the site to population centers, the project does not consider the establishment of an on-site camp to accommodate workers. Therefore, it has been determined that accommodation will be provided in Mejillones (40 km away) and Antofagasta (70 km away). Hotels in Mejillones will be used from the beginning of the construction phase, requiring hotel capacity for approximately 1,300 workers. This accommodation capacity required by the project will be primarily available at the Promet Hotel, located south of the city of Mejillones, and additionally at nearby hotels in the same city. Once the hotel capacity is exceeded, the excess accommodation required by the project will be covered by other hotel accommodation in Mejillones and/or available accommodations in Antofagasta. This strategy will allow approximately 75% of the workforce to be concentrated in Mejillones, thus optimizing logistics and services in this area.

When the project enters production, operational staff will be accommodated in Mejillones or Antofagasta, with daily bus transport between their accommodation and their operational project work location.

18.4 Heap Leach Pad and Ponds

The heap leach facility is a dynamic heap, with a rectangular base footprint as shown in Figure 18-2 and

Figure 18-3. In Phase 1 the heap leach pad base will have a width of 709 m and a length of 1,049 m. In Phase 2 the width will be maintained at 709 m, an additional 252 m of length will be constructed, giving a total Phase 2 length of 1,301 m.

The agglomerated ore will be stacked using a belt system consisting of an approximately 1,200 m overland conveyor with a triper, which will discharge to a group of grasshopper conveyors (15 for Phase 1 and 19 for Phase 2) that feed a horizontal belt and a stacker to reach a cell height of 4 m. Each cell will have a crown width of 84 m, a crown length of 612 m and a height of 4 m. Phase 1 will utilize 12 cells. In Phase 2 the heap leach pad will be expanded by three cells, to a total of 15 cells.

The heap leach Pad base will be constructed from placed and compacted mine pre-stripping material. The final meter of pad base constructed from compacted selected fill.

For impermeabilization, the following geomembranes and geotextiles will be placed on the base of the heap leach pad:

- 2.0 mm double-textured HDPE geomembrane (for all sections exposed to the sun).

- 1.5 mm single-textured LLDPE geomembrane (inside the entire interior of the heap leach pad platform).
- 400 g/m² geotextile (for the protection and placement of the pipes in all main collectors).

The solutions in each leach pad cell are collected through a drainage system made of 100 mm double-wall corrugated HDPE perforated pipes. These pipes convey the solutions to a 315 mm double-wall corrugated HDPE perforated secondary collector, which in turn directs the flow to the main solution collector.

The main collector conveys the solutions from all cells by gravity to the lowest point of the leach pad, where the flow enters two drop-box chambers (structural HDPE, 1.5 m in diameter and 2.7 m in height). From there, the solutions are transferred to the process ponds. This main collector includes two solution intake pipes with a valve system that allows operators to separate PLS and ILS solutions. Depending on the measured concentration, the solutions are routed to either the PLS or ILS ponds.

In Phase 2 blowers will be installed on the north side of the heap leach pad to inject air into each cell.

Table 18-1: Heap Leach Pad Design Criteria

Parameter	Unit	Phase 1 Value	Phase 2 Value
Stacker capacity - design	t/h	2,679	2,679
Maximum lift height per cycle	m	4	4
Heap capacity - design	t/h	2,009	2,679
Leaching cycle - total	d	123.8	113.5
Number of cells	-	12	15
Cell width	m	84	84
Cell length	m	612	612
Irrigation rate	L/h/m ²	10	10
Air addition rate	Nm ³ /h/m ²	-	0.3

Refer to Section 17.4.5 “Leaching” for a summary of the parameters used in heap leach cell loading, resting, irrigation, drainage and removal. Spent leached ore (ripios) will be removed by front-end-loaders and trucks that transport the ore to the ripios storage facilities.

18.4.1 Process and Emergency Ponds

Heap leach solutions will be handled via a set of ponds shown in Figure 18-5.

- Desanding pond with a section of 110 m x 40 m and live volume of 4,029 m³
- PLS Pond with a section of 120 m x 120 m and live volume of 39,647 m³
- ILS Pond with a section of 120 m x 120 m and live volume of 39,647 m³

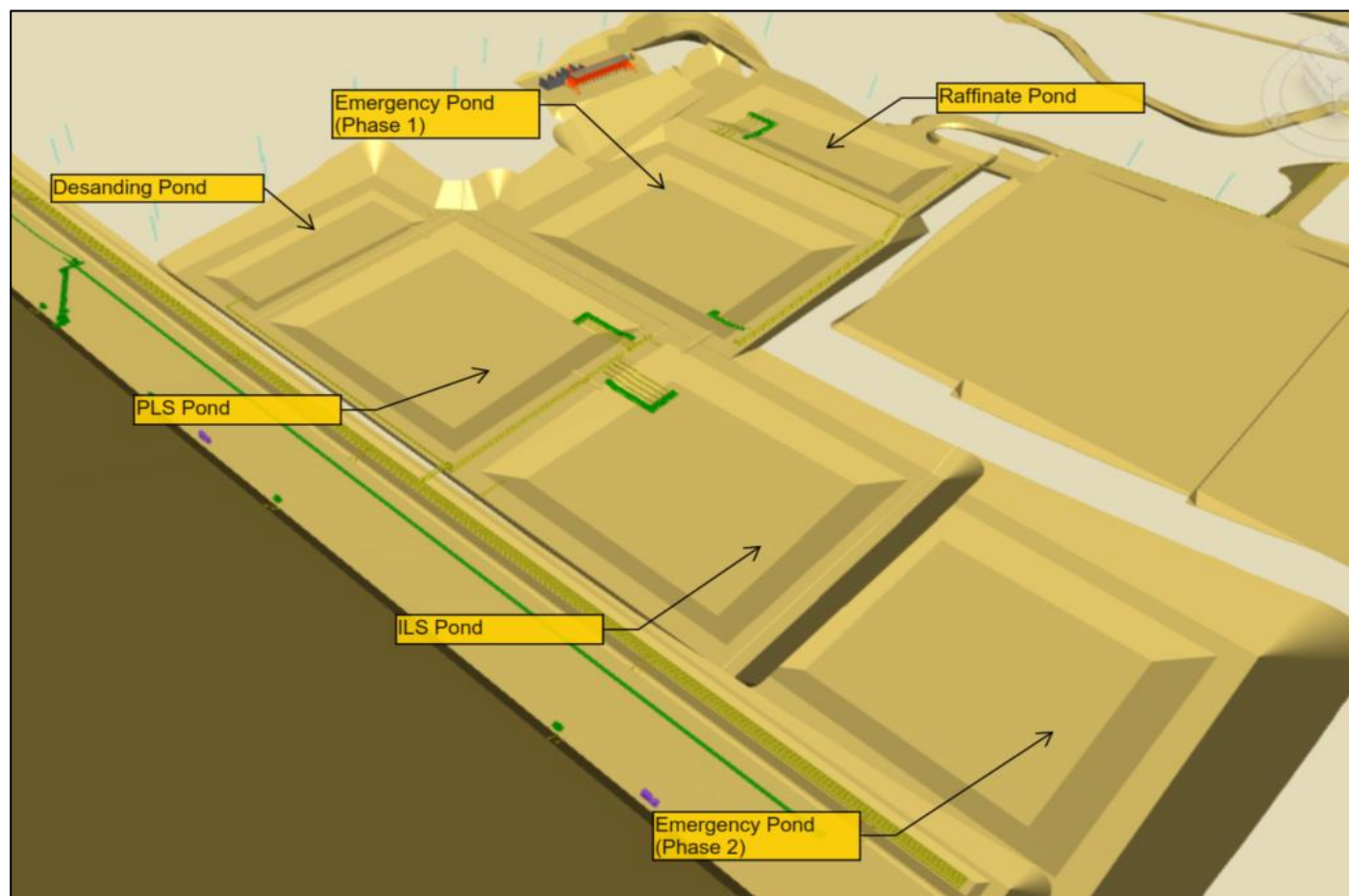
- Raffinate Pond with a section of 50 m x 120 m and live volume of 14,014 m³
- Emergency Pond with a section of 110 m x 120 m and live volume of 41,590 m³ for Phase 1.

All ponds are interconnected and also connected to the emergency ponds to prevent any solution spill in the event of the critical design scenario, which considers a one-hundred-year storm combined with a 24-hour blackout.

Flows from the heap will pass through the desanding pond, where solids are settled out, and then the solutions will be directed either to the PLS pond (Pregnant Leach Solution) or to the ILS pond (Intermediate leach solution), as appropriate.

The raffinate pond collects all solutions coming from the SX plant. For Phase 2 a second emergency pond is added with a section of 110 m x 120 m and live volume of 41,590 m³.

Figure 18-5: Solution Handling Ponds



Source: Ausenco, 2025.

18.5 Spent Leached Ore (Ripios) Storage Facilities

The spent leached ore dumps (ripios dumps) are designed to store the residues resulting from the heap leach process throughout the LOM. The project contemplates the construction and operation of two separate facilities: the South Ripios Dump, which will be used during the initial years of operation, and the North Ripios dump, which will be developed once the southern dump reaches its full capacity. Combined, these facilities provide a total storage capacity of approximately 113.5 Mm³ (wet basis), sufficient to accommodate the 198 Mt of ripios generated over the LOM.

The spent leached material (ripios) will be removed by a front-end loader and haul trucks (100 t capacity).

During the first years of operation, ripios will be stored in the South Ripios Dump, while from year 5 onward placement will continue in the North Ripios dump.

Both dumps incorporate containment, drainage, and seepage collection systems, and have been designed considering the site's seismic conditions and topography. The global slope configuration of the dumps corresponds to 2.5H:1V, and stability analyses were performed under both static and seismic conditions, including evaluation under the Maximum Credible Earthquake (MCE). The base of each dump includes a 2 mm HDPE geomembrane liner to minimize seepage, above which a network of drainage pipes captures residual process solutions and stormwater. These fluids are conveyed to dedicated storage ponds located adjacent to the facilities.

18.5.1 South Ripios Dump

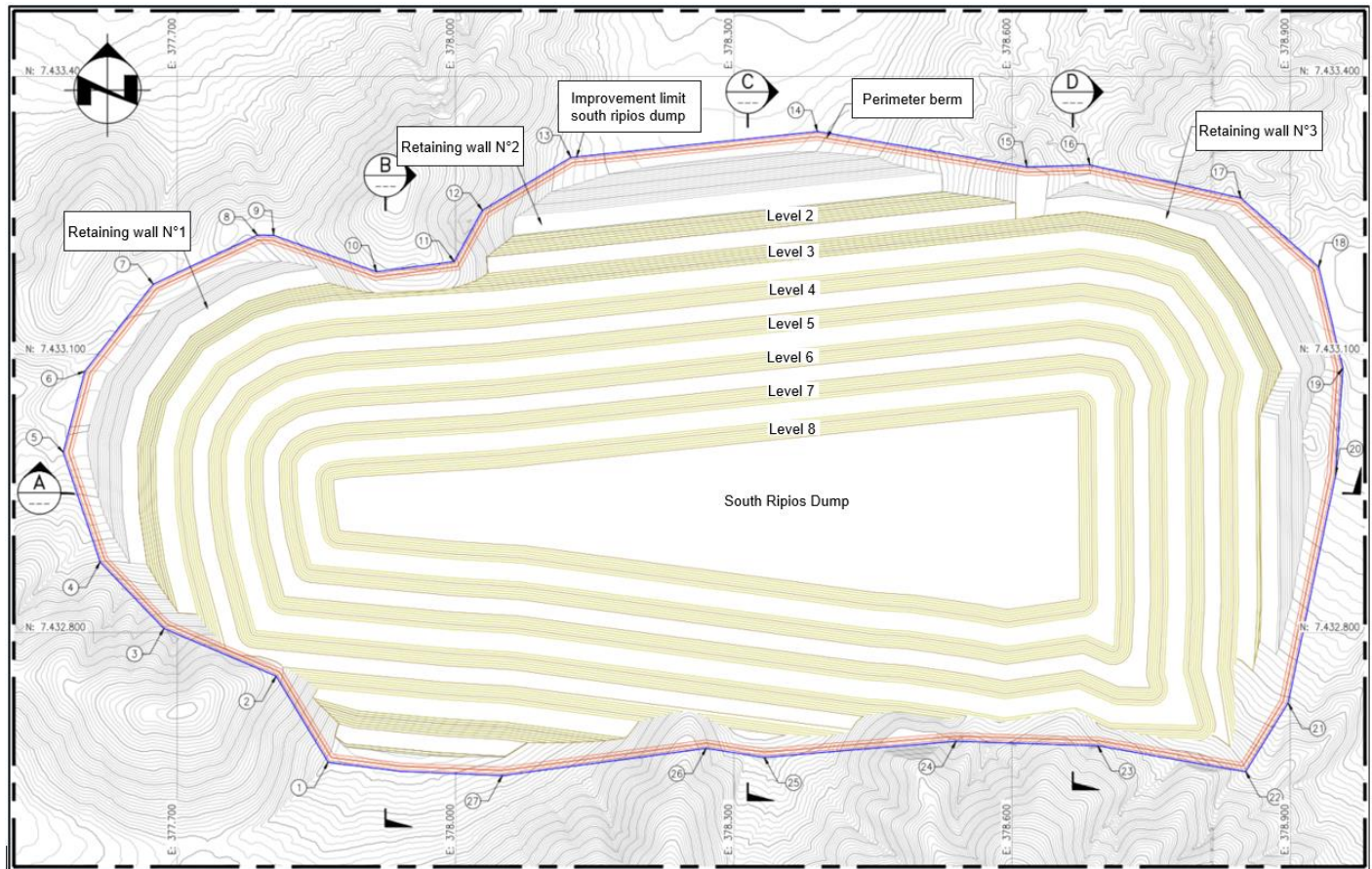
The South Ripios Dump is located immediately south of the heap leach pad. It has a total storage capacity of 38.6 Mm³, developed in eight lifts and reaching an approximate maximum height of 100 m.

Due to the steep topography of the placement area and the high seismicity of the region, the design includes three containment berms (pretiles) to control potential sliding masses in the event of slope instability, thereby reducing the risk of overall facility failure. The dump configuration follows a global slope angle of 2.5H:1V.

The dump is underlain by a 2 mm HDPE geomembrane liner that provides base impermeabilization. On top of the liner, a system of drainage pipes will be installed to collect both residual leach solutions and stormwater infiltration. These fluids are directed to two storage ponds, one located to the north and another to the east of the facility.

Figure 18-6 presents a plan view of the South Ripios Dump and its associated infrastructure.

Figure 18-6: South Ripios Dump



Source: Ausenco, 2025.

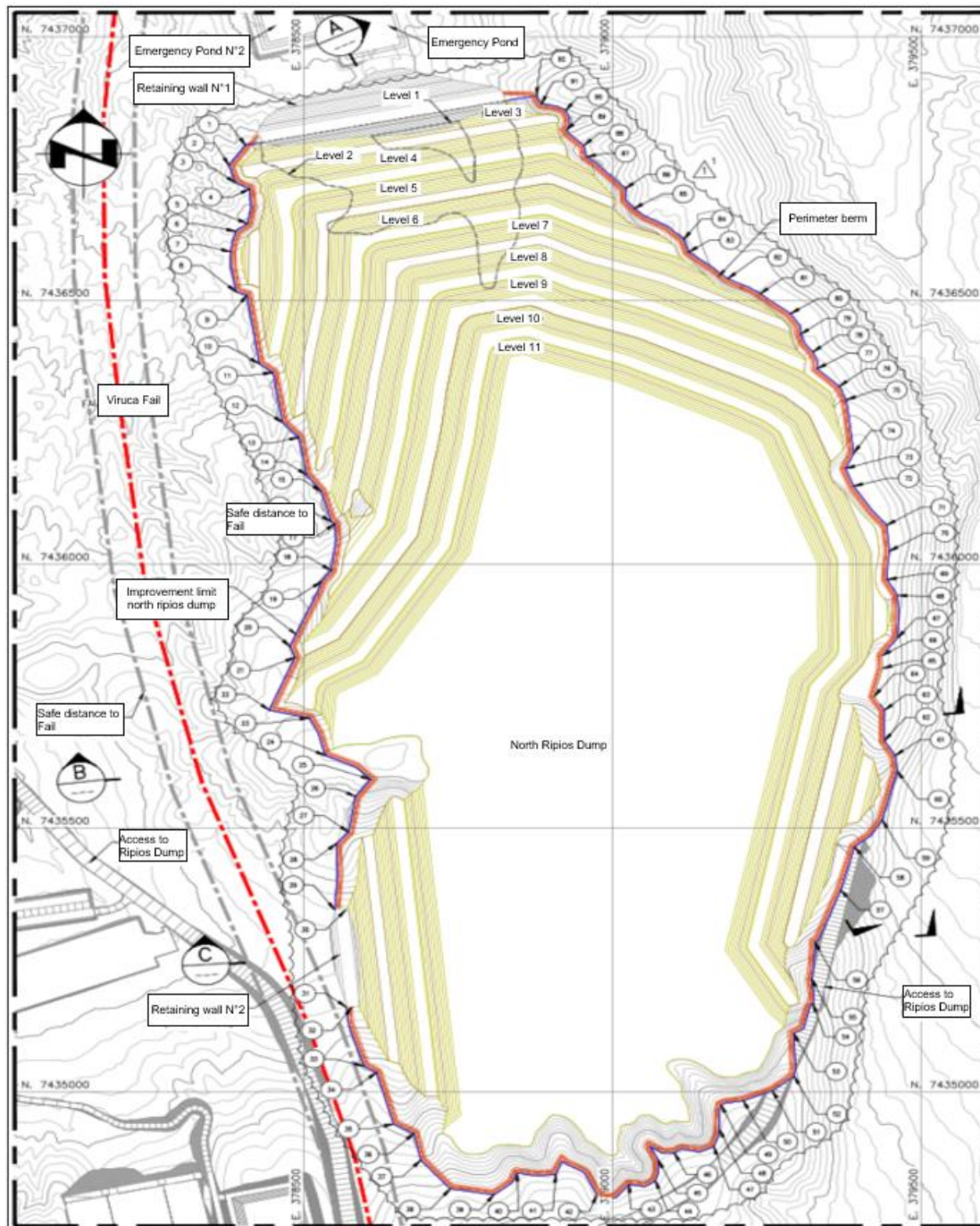
18.5.2 North Ripios Dump

The North Ripios Dump is located northeast of the heap leach pad and is planned for operation after the South Dump reaches its full capacity. It has a total storage capacity of 74.9 Mm³, distributed in 11 lifts, and will reach an approximate height of 130 m.

The North Dump incorporates two containment berms, designed to provide stability and control of sliding masses in case of seismic or geotechnical events. Like the South Dump, the facility base is lined with a 2 mm HDPE geomembrane liner, with a drainage system to capture residual solutions and stormwater. In this case, all collected fluids are directed to a single storage pond located north of the facility. The dump configuration also follows a global slope angle of 2.5H:1V, supported by stability analyses under static and MCE seismic conditions.

Figure 18-7 presents a plan view of the North Ripios dump and its associated infrastructure.

Figure 18-7: North Rípios Dump



Source: Ausenco, 2025.

18.6 Power and Electrical

The power supply will be developed under BOOT contract. This infrastructure will consist of a 12.45 km, 110 kV overhead power line. The electrical interconnection will be achieved through a tap-off substation, which will connect to the existing 110 kV Mejillones line and transmit power to the plant's primary substations. This arrangement ensures a secure and long-term power solution for the facility.

18.6.1 Power Substation-23 KV Power Line

The primary distribution for the plant's internal power supply will be carried out through 23 kV overhead power lines, which run through the plant to the process areas.

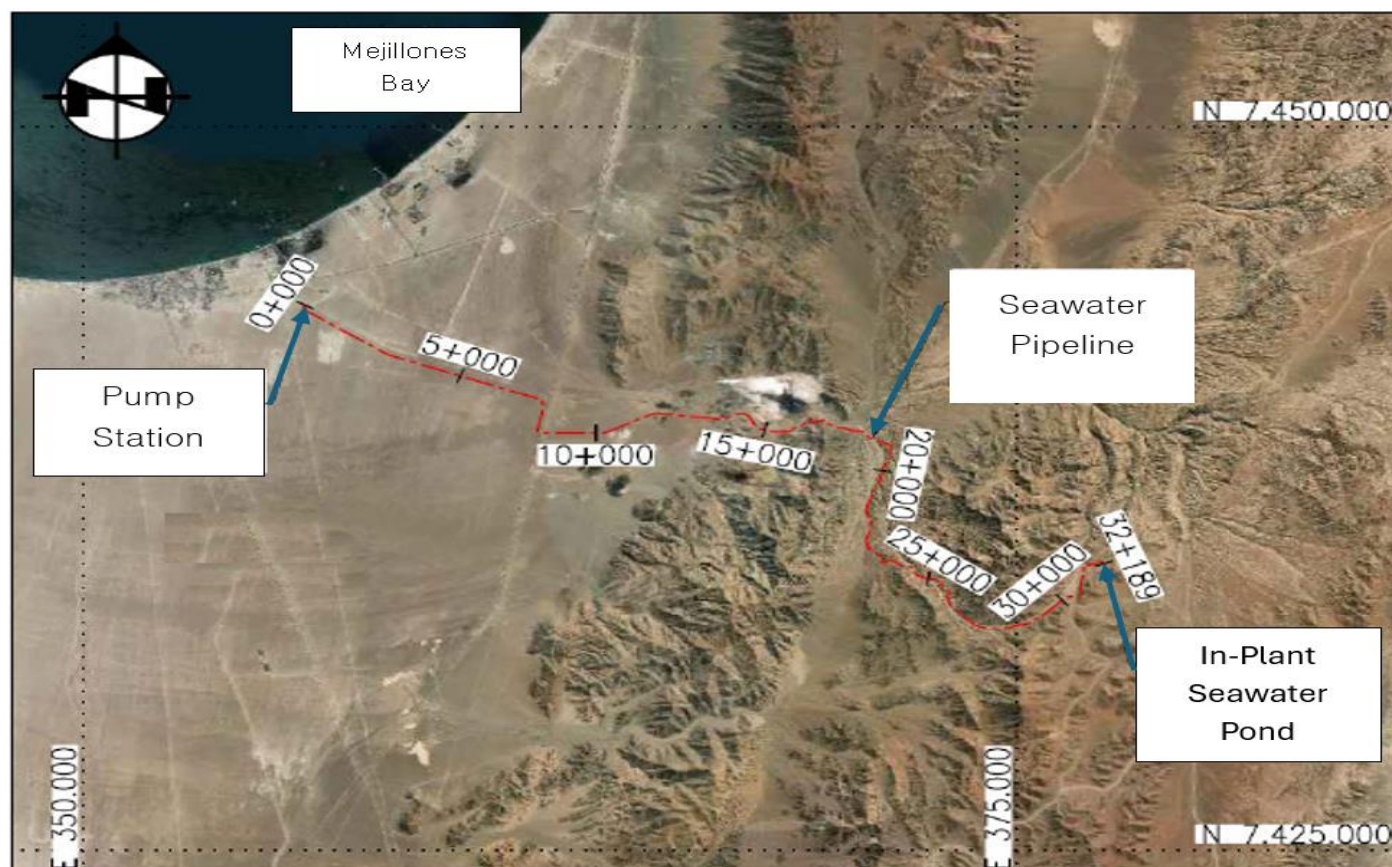
18.7 Fuel

The fuel supply for mine trucks and light vehicles inside the plant will be managed as a service contract.

18.8 Seawater Supply

The seawater supply will be managed as a BOOT contract which involves supplying seawater from a pond located at large utility company's thermoelectric plant in Mejillones to the pump station feed tank at a design flow rate of 700 m³/h. From this pump station, a 32km long DN450 buried pipeline transports the seawater to the seawater pond at the plant. See Figure 18-8 for the seawater pipeline route.

Figure 18-8: Seawater Pipeline



Source: Ausenco, 2025.

18.8.1 Reverse Osmosis Plant

The main consumption of water in the plant is the seawater directly from the in-plant pond for leaching and roads irrigation. A reverse osmosis plant is considered to produce industrial water for the process at a rate of 150 m³/h which is distributed to the following areas:

- Dust suppression system tank located in the primary crusher area
- Wash water in solvent extraction area
- Potable water plant
- Cathodes and filter wash water in EW area

The reject brine from the reverse osmosis plant will be discharged into the raffinate pond to be used in the leaching process.

18.9 Management and Disposal of Surface Runoff and Contact Water

The project considers the management of both contact and non-contact waters. Non-contact waters are those produced by precipitation, either directly on an area or by runoff that has not come into contact with potential acid drainage generating materials, such as pit, waste rock deposits, ripios dump, stockpiles or leach pad. Contact waters, on the other hand, are those generated by direct precipitation on the aforementioned infrastructure or by runoff that comes into contact with it.

To determine the flow rates and/or volumes of water to be managed, a hydrological characterization of the study area was performed, estimating the maximum daily rainfall for different return periods. Based on these results, floods are estimated for return periods of 100 and 150 years, for design and verification purposes, respectively and are used to determine the sizing of the necessary management works. The non-contact water features include:

- Contour channels for the wasterock dump
- Contour channels for the North Ripios dump
- Contour channels for the South Ripios dump
- Contour channels for the Heap Leach
- Contour channels for the Stockpile
- Storage pond, discharge pipe and discharge structure

These contour channels follow the philosophy of capturing, diverting and redirecting runoff downstream of the infrastructure, returning it to a natural stream. In the case of the stream that flows into the pit, its runoff is captured by a storage pond from which a pipeline extends, transporting the flow downstream of the pit, discharging the water into the same stream. The channels have been designed as excavated and lined with rock riprap.

The contact water management infrastructure includes:

- Contour channels, discharge pipes and (4) storage ponds for the Wasterock Dump.
- Contour channels, discharge pipes and (1) storage pond for the North Ripios dump.
- Contour channels, discharge pipes and (2) storage ponds for the South Ripios Dump.
- Contour channels, discharge pipes and (3) storage ponds for the Stockpile.

The contact water operating philosophy is to store water in storage ponds for evaporation. The storage ponds have been designed to contain more than one day's worth of flood waters resulting from maximum rainfall in 24 hours. To prevent leaks, the ponds will be waterproofed using 1.50 mm thick HDPE geomembrane.

18.10 Seismic Rating

The project site is in Seismic Zone 3 (maximum effective acceleration $A_0=0.20g$) according to the official Chilean standard NCh2369.Of2003.

19 MARKET STUDIES AND CONTRACTS

19.1 Summary

The project is expected to produce a high purity, >99.99% copper cathode which aligns with the London Metal Exchange Grade A copper specifications. The Company assumes it will sell the cathode produced FOB Mejillones, which is a large export terminal for copper cathode and concentrates. No contracts for the transportation or off-take of the copper cathode are in place but are expected to be in line with industry norms.

This study uses a copper price of US\$4.30/lb, which is slightly lower than the long-term consensus copper price of US\$4.36/lb, provided by 26 major banks. Copper market price assumptions and payment terms were based on a review of public information, market forecasts, and comparable operations globally.

Sulphuric acid is a primary consumable in the processing of the copper ore in the Project. As such, the Company completed a review of the sulphuric acid market in Chile using external consultants and reviewing the long-term supply and demand forecasts as provided by the Comision Chilena del Cobre ("Cochilco"). The assumed acid price for the study is US\$90/t CFR Mejillones over the life of the project, aligning with the projected decline in sulphuric acid consumption towards the end of the decade.

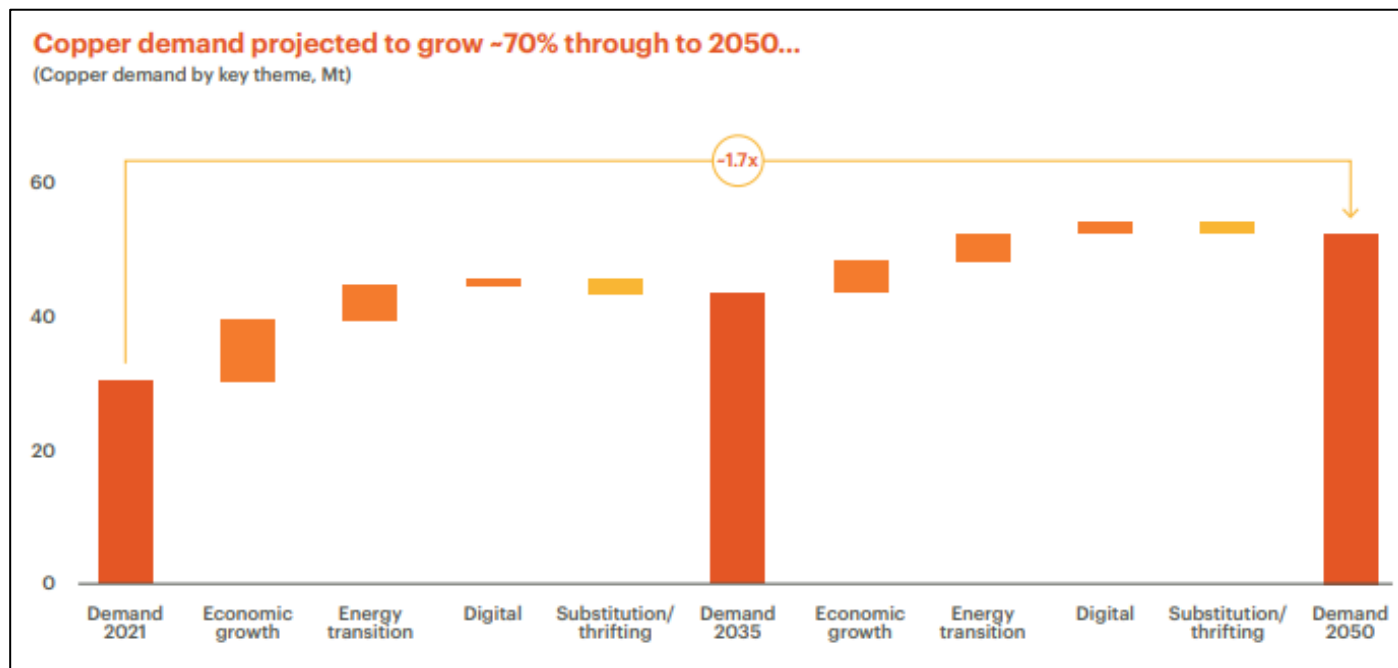
19.2 Market Studies

19.2.1 Copper

Total copper demand in FY2023 was approximately 31 Mt. Approximately 25 Mt or 81% of that in refined copper cathode and 6 Mt or 19% in scrap recycled copper (BHP, 2024).

Demand for copper is estimated to reach 50 Mt per annum by 2050 (growth of approximately 2% per annum), largely via traditional economic growth in primarily developing nations, the energy transition and electrification of the grid, and the expansion of digital technologies including data centers, as shown in Figure 19-1.

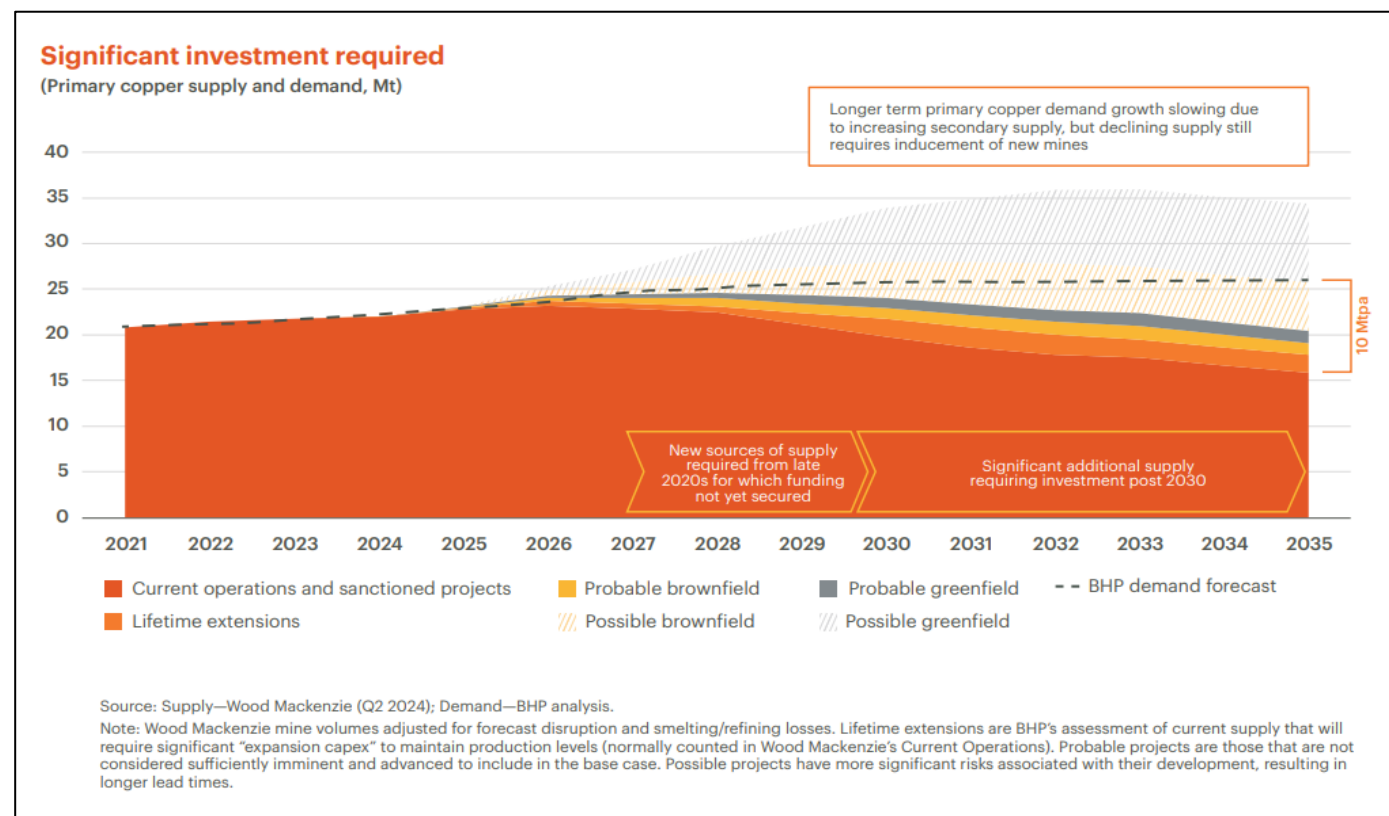
Figure 19-1: Copper Demand Changes 2021 to 2050



Source: BHP, 2024.

While recycled copper is expected to be an important source of supply to meet the large copper demand growth over the next 30 years, the availability of recycled scrap will mean new mine supply is essential to meeting copper demand growth. BHP and Wood Mackenzie estimate that the world will require approximately 10 Mt of new mine supply over the next 10 years in order to meet mid-term demand forecasts (BHP, 2024). As a result, there is expected to be a significant supply gap to 2035 copper demand which should drive positive price momentum for copper to incentivize new mine supply, as shown in Figure 19-2.

Figure 19-2: Projected Copper Demand 2021 to 2035



Source: BHP, 2024.

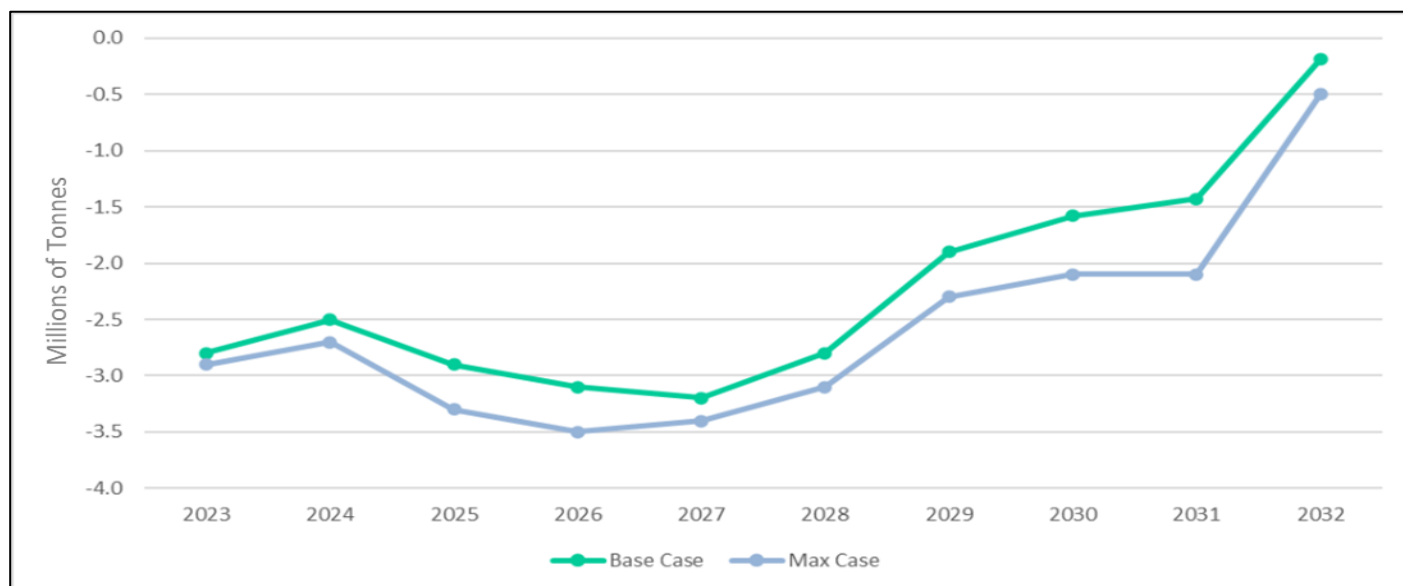
19.2.2 Sulphuric Acid

The Company has completed a review of the market for sulphuric acid in Chile using external consultants, including reviewing supply/demand forecasts in Chile and commencing strategy development around sourcing and storage of sulphuric acid for the project. Mejillones is a key center for the import of sulphuric acid to Chile and is also a significant production hub from local smelters and a dedicated sulphur burner. A significant proportion of acid imported into Chile comes from the Chinese market, which is currently impacted by historically elevated shipping costs due to repurposing of fleet previously used for sulphuric acid transport. It is reported that new fleet is under construction, which is expected to impact the shipping rates favourably from 2026 onwards.

The Comision Chilena del Cobre ("Cochilco") provides long-term supply and demand and price forecasts for the Chilean acid market out to 2033, which was completed in September 2023 and updated in September 2024.

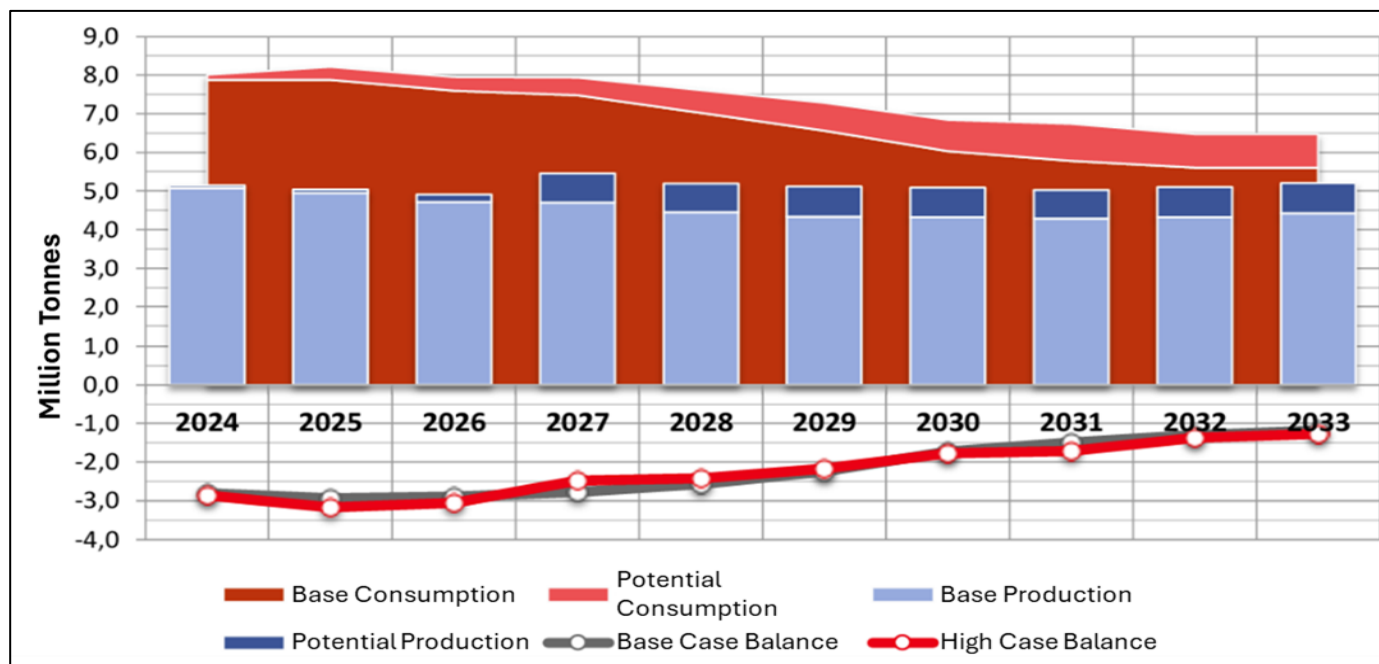
From 2028, Cochilco forecasts a material reduction in the local acid supply deficit to Chile caused by declining consumption in combination with a projected increase in the base level of supply in the region. Cochilco expects this to have a material positive impact on the acid price in the Chilean market.

Figure 19-3: Chilean Sulphuric Acid Market Balance – Historical and Projected



Source: Cochilco, 2024.

Figure 19-4: Chilean Sulphuric Acid Market Projected Consumption and Production to 2033



Source: Comisión Chilena del Cobre (Cochilco), 2024.

Marimaca is expected to enter production towards the end of the decade, which coincides with the improvement in market dynamics for acid. Cochilco's long-term forecast, based on its detailed market analysis, for the traded CFR Mejillones price at US\$95/t through 2033.

In addition, the Company has completed a detailed analysis of the cost differential between buying acid delivered to Mejillones relative to producing its own acid via burning of elemental sulphur at a site in Mejillones. This shows a clear cost advantage based on elemental sulphur prices, delivered to Mejillones from the Port of Vancouver. The Company is in early discussions with respect to the installation of its own dedicated sulphuric acid plant and with a local sulphuric acid plant.

Table 19-1: Operating Cost Estimate For 100 kt/a Sulphuric Acid Plant

Cost Center	Unit	Rate	Total (US\$M)
Element Sulphur (CFR Mejillones)	US\$/t	160.00	5.13
Cooling Water	US\$/m ³	0.02	0.02
Boiler Feed Water	US\$/m ³	2.02	0.28
Demineralized Water	US\$/m ³	2.00	0.07
Instrument Air	US\$/m ³	0.200	0.07
Plant Air	US\$/m ³	0.03	0.1
Fuel for Start-up	US\$/kg	0.40	0.01
Electrical Power	US\$/kWh	0.08	0.41
Operator Salary	US\$/a	15,000	0.06
Maintenance Costs	US\$/a	240,000	0.24
Total Operating Cost	US\$M	-	6.39
Production H ₂ SO ₄	Kt/a	-	100
Acid Cost	US\$/t	-	63.90

Source: Company Analysis, P&P, 2025.

Other market price assumptions, including diesel, were based on a review of public information, industry consensus, standard practices and specific information from comparable operations in the region.

19.3 Commodity Price Projections

19.3.1 Copper

The 12-month price range for copper included a high of US\$5.894/lb and a low of US\$4.14/lb.

As of August 2025, the long-term consensus copper price was US\$4.36/lb, which represents the average from 19 independent and global investment banks provided in Table 19-2. Over the last three years, the long-term consensus copper price has increased significantly as analysts factor in higher capital and operating costs as well as other sector specific and macro factors that have impacted incentive pricing.

Table 19-2: Long-term Consensus Copper Price Breakdown

Copper (US c/lb)	Date of Report	2025	2026	2027	2028	2029	LT/LT (2025 real)	Report
BoA – Merrill Lynch	22-Apr-25	402	462	544	517	489	408	European Metals & Mining Weekly
Barclays	16- Apr-25	388	400	450	-	-	500	European Metals & Mining
BMO Capital	28-Jul-25	430	444	443	460	475	431	Metals & Mining
BNP Exane	23-Apr-25	431	465	499	-	-	408	Mining
Canaccord	28-Jul-25	431	450	450	-	-	450	Global Metals & Mining
Citi	29-Jul-25	420	454	-	-	-	454	Commodities Dashboard
Deutsche Bank	03-Aug-25	435	445	-	-	-	454	Metals & Mining
Goldman Sachs	01-Aug-25	438	454	488	-	-	457	Global Investment Research
HSBC	28-Jul-25	408	405	-	-	-	355	Metals & Mining
JP Morgan	29-Jun-25	438	461	473	-	-	450	Asia Pacific Equity Research
Jefferies	26-Jul-25	444	475	500	550	600	425	Metals & Mining
Liberum	21-Jul-25	425	365	311	314	315	291	Commodity Snapshot
Morgan Stanley	31-Jul-25	427	438	445	447	454	483	Metals & Mining Tracker
National bank of Canada	27-Jul-25	434	440	475	475	450	420	Weekly Base Metal
TD Securities	28-Jul-25	434	440	475	450	-	425	Weekly Metal & Mining
Raymond James	03-Apr-25	432	425	-	-	-	425	Mining
RBC	29-Jul-25	431	450	500	500	500	400	Industrial Metals Weekly
Scotiabank	05-Aug-25	435	450	450	475	-	500	Materials – Gold & Precious Minerals
UBS	11-Aug-25	424	468	500	525	550	500	Miner's Price Review
Average	-	430	444	470	471	479	436	-

Source: UBS, 2025.

Project economics were estimated based on long-term flat metal prices of US\$4.30/lb Cu slightly below the long-term consensus price of US\$4.36/lb.

Marimaca is expected to produce an LME-registered Grade A copper cathode (>99.99% Cu) and cathode is assumed to be sold at the Port of Mejillones. There are no treatment and refining charges (TCRC) associated with producing Grade A copper cathode and there are no penalties associated with the quality of product expected. Copper cathodes are widely traded with significant optionality regarding the ultimate customer base. The Study assumes a cathode premium of US\$250/t (US\$0.11/lb) which is in line with recent and historical premiums observed in the market. Chilean cathode premiums for LME-registered quality delivered to the USA reached as high as US\$550/t in 2025.

The copper price is summarized in Table 19-3.

Table 19-3: Copper Price Summary

Description	Unit	Total
Copper	US\$/lb	4.30
Copper Cathode Premium	US\$/lb	0.11
Total	US\$/lb	4.41

19.3.2 Sulphuric Acid

The Company has engaged external acid market consultants to assist with developing its sulphuric acid strategy for operations. The Company has conducted initial meetings with local and international sulphuric acid producers and traders, reviewed Cochilco forecasts and completed technical and economic analysis of producing acid via the burning of elemental sulphur. This work is outlined in Section 19.2.2.

The assumed acid price for the study is US\$90/t flat over the life of the Project.

19.4 Contracts

The Company has an option agreement in place with a large utility company for the supply of water to the project with confirmed pricing and a range of quantities to allow for full operations of the MOD contemplated in the Definitive Feasibility Study and to allow for future expansions at the MOD and from Sierra de Medina. The Company can exercise this option to convert to a water supply agreement at any time.

There are no contracts currently in place supply of equipment, reagents, other utilities, or bulk commodities required to construct and operate the project.

Similarly, no contracts for transportation or off-take of the copper cathode are currently in place. When negotiated, they are expected to be within the industry norms. Copper pricing is assumed to include a US\$250/t premium for cathode, which is less than the average reported by Codelco in its 2024 premiums offered between Chinese and European customers.

The Company assumes it will sell its cathodes FOB Mejillones, which is large export terminal for copper cathode and concentrate with significant export capacity. Numerous traders and copper customers purchase product through the Port of Mejillones. Cathode is an easily marketable product when compared to concentrate.

The Company currently has an option agreement to acquire a used sulphuric acid plant in Chile from CEMIN Holding Minero ("CEMIN") for supply of up to 150,000 t of sulphuric acid, representing approximately 25% of the Company's peak acid consumption. Based on the initial discussions, this facility provides acid prices well below the typical traded acid price observed in Mejillones, although actual pricing is commercial in confidence. This provides additional support for the Company's assumption of a long-term acid price of US\$90/t, and indications are, based on current cost estimates, that these may be conservative in the long run.

19.5 Comments on Market Studies and Contracts

The qualified person has reviewed the relevant reports and analyses and is of the opinion that the marketing and commodity price information is suitable to be used in cashflow analysis to support this Feasibility Study and its Technical Report. There are currently no firm contracts in place for the execution of the project (i.e. equipment, labor, power supply), however this is appropriate for the project in feasibility study phase.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Considerations

The Marimaca property is located approximately 25 km to the east of Mejillones and 40 km north of Antofagasta. The mining property is in Region II (Antofagasta) in the Province of Antofagasta and Mejillones commune.

The project is in the desertic area of the Antofagasta Region, which is characterized by extreme environmental conditions for biotic development, particularly in the form of high temperatures and a general desertic climate (JIA, 2024). Human settlements are also scarce, due to the lack of available water resources and the hostile climatic conditions during the winter, with the exception of lands used by Indigenous communities.

The site is located outside protected areas or environmental safeguards; there are no national buildings or monuments on the surface, nor does it interfere with places or sites where the community's cultural or folklore activities are carried out. The main environmental considerations come from the presence of the plant species *Nolana onoana* (endangered) and multiple archaeological findings within the the influence area of the Project.

20.1.1 Baseline and Supporting Studies

Environmental baseline studies were conducted within the project area of influence and were presented in the Environmental Impact Statement (DIA, 2024) submission in 2024. The information that is presented in the following sections has been extracted from this document, which includes baseline information collected between 2022 and 2024.

20.1.1.1 Air Quality

Air quality monitoring was conducted during the period from January 2021 to December 2023 with three stations (Juan José Latorre, Subestación and Bomberos) installed in the town of Mejillones measuring for PM₁₀, PM_{2.5}, SO₂ and NO₂, while a fourth station was placed within the project area (Marimaca Station) that gathered information from January 2024 to July 2024, measuring Settling Particulate Matter (SPM), shown in Figure 20-1.

Figure 20-1: Air Quality Monitoring Stations Locations



Source: JIA, 2024.

With regard to the results obtained to evaluate the daily primary standard for PM₁₀, it can be concluded that the daily concentration limits for PM₁₀ (130 µg/m³N) are not exceeded at the stations considered, with the highest concentrations evaluated being at the Juan José Latorre station reporting at 25% of the standard. In the case of the annual statistic (50 µg/m³N), the stations do not exceed the standard, with the highest value at the Juan José Latorre

station with 44% of the standard in 2023. For the MP2.5 primary standard parameter, the Juan José Latorre station did not exceed the daily standard ($50 \mu\text{g}/\text{m}^3$), with a percentage of 44% of the standard. In the case of the annual statistic, it was concluded that the average MP2.5 value for the monitored period did not exceed the annual limit at the station, with a percentage of 65% in 2022. Regarding MPS, the concentration in the months analyzed remain well below the regulatory limit of $200 \text{ mg}/\text{m}^2\text{-day}$, suggesting that there are no critical episodes of particulate matter during the period analyzed. However, the month of October of 2024 has a higher concentration compared to the other months monitored, which could suggest seasonal conditions or particular sources of emissions in that month. Regarding compliance with the primary hourly standard for SO_2 , it can be concluded that the stations are below the established standard within the periods analyzed, with concentrations below 10% of the standard value ($350 \mu\text{g}/\text{m}^3\text{N}$). In the case of the daily 99th percentile, the records are below the standard ($150 \mu\text{g}/\text{m}^3\text{N}$), as is the annual average ($60 \mu\text{g}/\text{m}^3\text{N}$), with percentages ranging between 13% and 7% of the standard. For the secondary standard for SO_2 , it can be concluded that the values are well below the standard in the case of the hourly 99.73 percentile ($1,000 \mu\text{g}/\text{m}^3\text{N}$) with a maximum value of 6% of the standard for the Mejillones Substation station. In the case of the daily 99.7 percentile at the Mejillones Substation station, the value is in the range of $31 \mu\text{g}/\text{m}^3\text{N}$, representing 8% of the standard for 2021 (JIA, 2024).

It is worth noting that due to the scope of the baseline studies, measurements were taken primarily on stations close to human settlements to account for possible effects on the health and safety of the population. These should be complemented in the future with information from the project site.

20.1.1.2 Flora & Vegetation

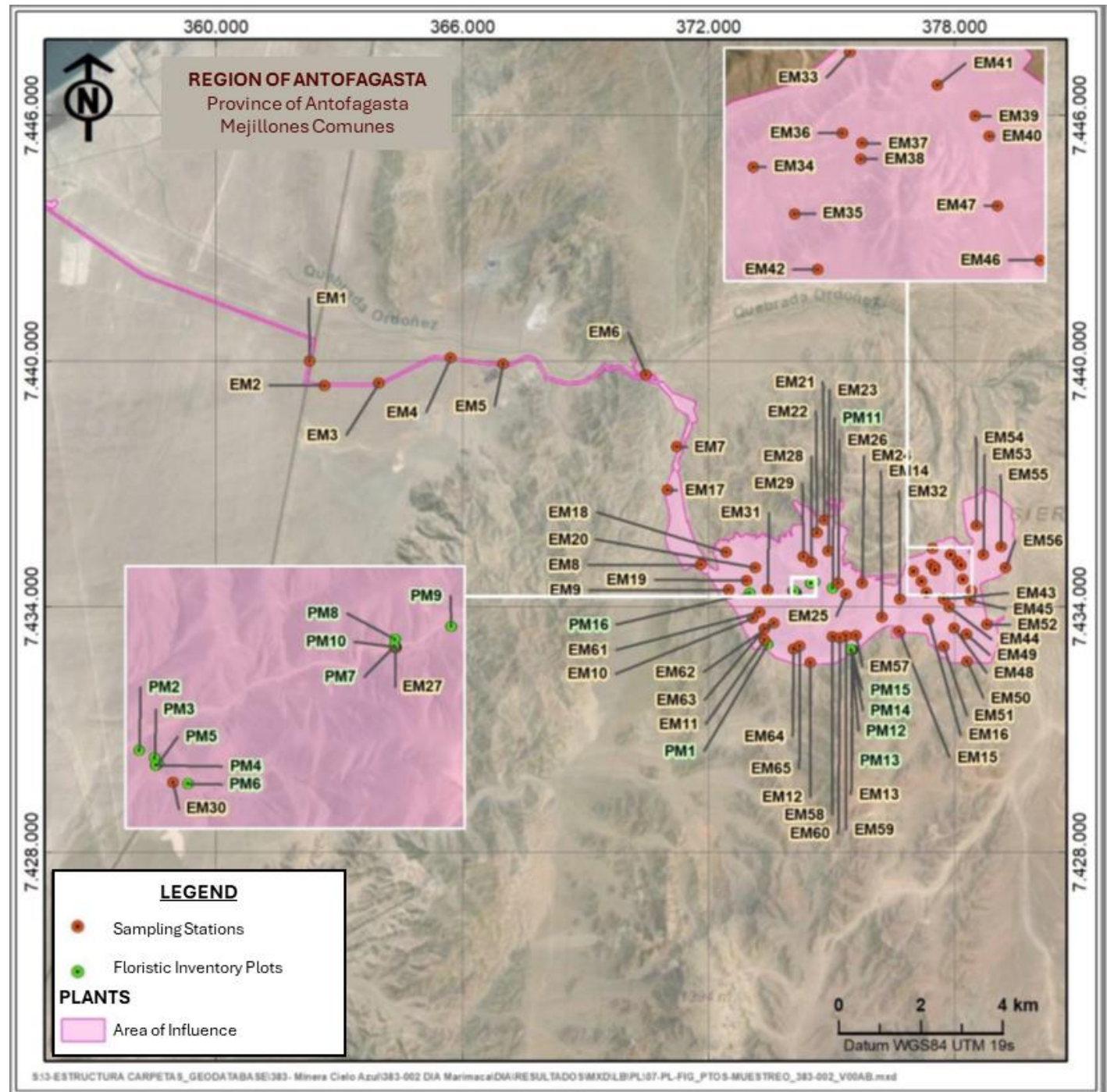
The project's Influence Area (IA) is located in the commune of Mejillones, Antofagasta Region and covers an area of 2,136.21 ha, where the following physiographic ecozones were identified: sparsely vegetated area (without vegetation), *Nolana onoana* grassland, roads, industrial area and disturbed area.

Regarding plant formations in the area, only the plant formation Herbazal de *Nolana onoana* was identified in the IA during the campaigns, which is consistent with secondary sources on the vegetation of the area, and represents 0.01% of the IA. The floristic richness is of two species, corresponding to *Nolana onoana* and *Schinus areira*. Among the singularities identified is the species *Nolana onoana* endemic to the Antofagasta Region and classified according to its conservation category as Endangered (EN) (D.S. N°10/2023 MMA) and *Schinus areira*, which corresponds to a tree species listed in D.S. N°68/2009, which is a native species and is not in any of the conservation categories.

Finally, regarding the evolution of the component without considering the implementation of the project, the effects of climate change were evaluated, determining that the risk of flora loss due to changes in precipitation is classified as High, while the risk associated to temperature changes was determined as Very low. In addition to the above, the project is located in areas of "Low" relevance, i.e., it has a Low conservation priority³. The sampling points and parcels used to determine the species that are present in the IA of the project are shown in Figure 20-2 below.

³ The conservation status of the terrestrial vascular flora recorded in the IA was determined in accordance with the guidelines set forth in Law 19,300 (amended by Law 20,417), the SEIA Regulations (D.S. No. 40/2012 of the MMA, amended by D.S. No. 30/2023 of the MMA) and the Species Classification Regulations (D.S. No. 29/2012 of the MMA).

Figure 20-2: Flora Sampling Points



Source: JIA, 2024.

20.1.1.3 Fauna

A total of seven campaigns were conducted throughout the IA of the project, between 2022 and 2024, covering seasonal variation from Spring 2022 to Winter 2024.

Through the results obtained throughout the IA of the project, campaigns conducted and sampling efforts, it was possible to record a total of 13 species of vertebrate fauna. Corresponding to eight birds, three reptiles and two mammals, of which two species are endemic (both reptiles); ten species are native (eight birds, one mammal and one reptile) and one is introduced (mammal). No amphibians were recorded within the project IA.

The identified species and their conservation status are shown in Table 20-1.

Table 20-1: Identified Species

O	Scientific Name	EC	CP	OB
Birds				
Aguilucho	Geranoaetus polyosoma	S/C	B-E	Native
Chirihue verdoso	Sicalis olivascens	S/C	S	Native
Gaviota garuma	Leucophaeus modestus	VU	S	Native
Gaviotín chico	Sternula lorata	EN	S	Native
Golondrina bermeja	Hirundo rustica	S/C	S	Native
Jote de cabeza colorada	Cathartes aura	S/C	B	Native
Minero chico	Geositta marítima	S/C	B	Native
Pequén	Athene cunicularia	S/C	B-E	Native
Mammals				
Perro	Canis familiaris	S/C	-	Introduced
Zorro Chilla o Gris	Lycalopex griseus	LC	B	Native
Reptiles				
Corredor de Tarapacá	Microlophus tarapacensis	LC	S-E	Endemic
Salamanqueja del norte grande	Phyllodactylus gerrhopygus	LC	S-E	Native
Iguana chilena	Callopistes maculatus	NT	S-E	Endemic

Notes: **EC:** Conservation status, as defined in Decree No. 5/1998 and in the decrees covered by the Species Classification Regulations (RCE). **EN:** Endangered; **VU:** Vulnerable; **NT:** Near Threatened; **LC:** Least Concern; **S/C:** Not classified. **CP:** Protection criterion D.S. No. 5, **B:** species classified as beneficial for forestry and agricultural activities; **S:** species classified as having low population densities; **E:** species classified as beneficial for maintaining ecosystem balance. **OB:** Biogeographical origin.

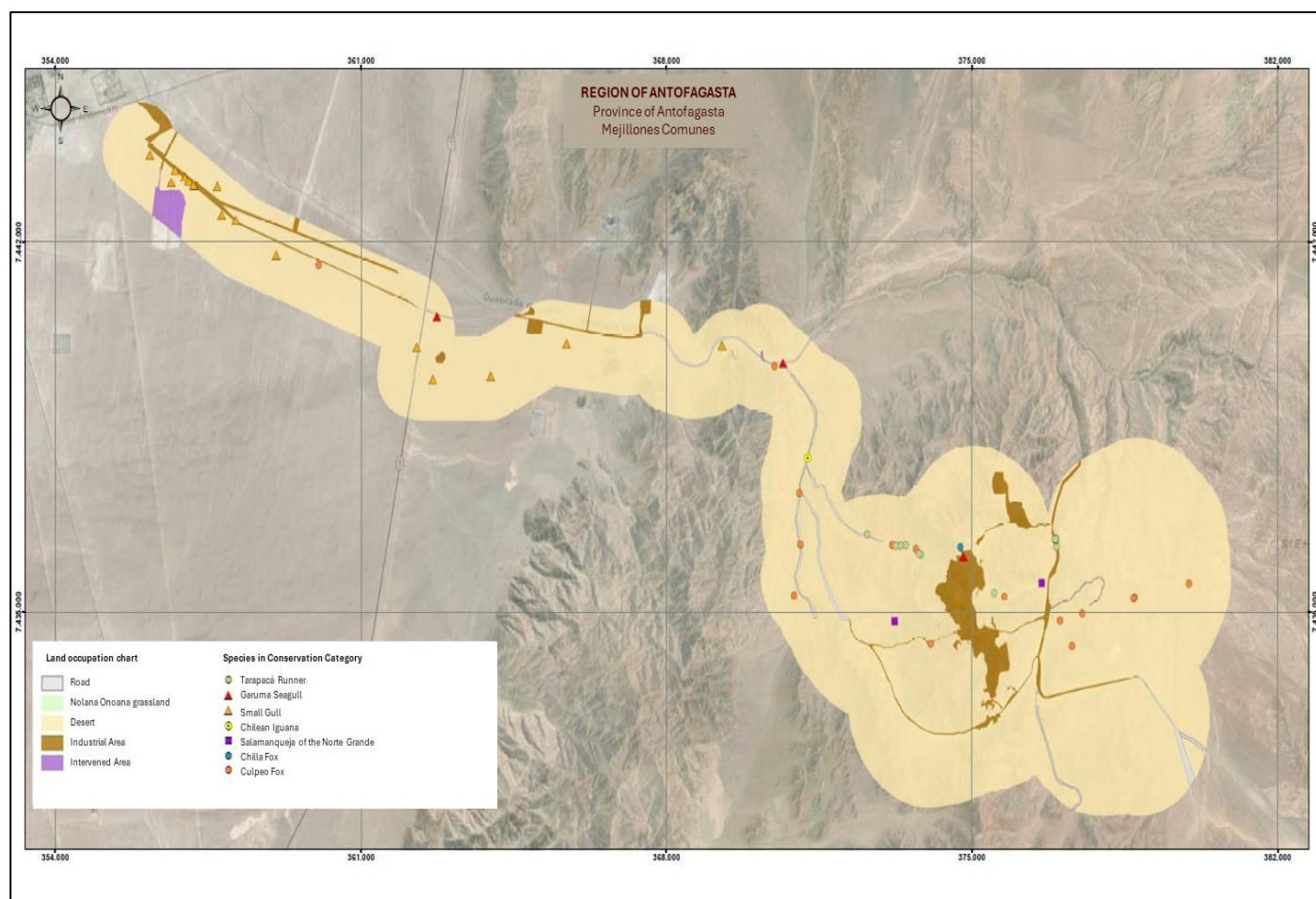
Based on the above results, of the total number of species, six have some conservation status. Of these, two are in the threatened category, with *Sternula lorata* (little tern) classified as Endangered (EN) and *Leucophaeus modestus* (kittiwake) as Vulnerable (VU). On the other hand, one species has the category of Near Threatened (NT): *Callopistes*

maculatus (Chilean iguana); and three have the category of Least Concern (LC): *Lycalopex culpaeus* (culpeo fox), *Microlophus tarapacensis* (Tarapacá racer) and *Phyllodactylus gerrhopygus* (northern gecko).

The records corresponding to desert nesting birds, such as *S. lorata* and *L. modestus* occurred within the IA of the project, being able to identify nesting of *S. lorata* outside the works of the project through the presence of two adult specimens with two eggs, where only one hatched. *L. modestus* was recorded through vocalization in three sectors of the IA, so it was not possible to determine abundance or densities of the species.

In relation to invertebrates, sixteen species recorded correspond to species of native biogeographic origin, and one is of endemic origin. Regarding the conservation category, none of these species has a species conservation category. Figure 20-3 presents the study area for wildlife baseline studies.

Figure 20-3: Wildlife Baseline Studies



Source: JIA, 2024.

20.1.1.4 Cultural Heritage and Archaeology

The area of influence is made up, in geographic terms, of the city of Mejillones, an extension of territory of the Bonanza Rural Entity and the city of Antofagasta.

The city of Mejillones constitutes a socio-spatial unit framed by the urban limits of the settlement.

As for the Bonanza rural entity, the limits were defined in contrast to the urban boundaries of the city and establishing a delimitation associated with the use of the rural territory, in terms of roads and productive activities. The rural entity of Bonanza is characterized by a rural settlement made up of plots of land for agricultural and livestock use and the Mejillones Industrial District, made up of port and energy industries. Both are located in a large area of unpopulated desert pampa. Thus, a polygon was considered that covers, from the south, Route B-272 and its connection with Route 1, continuing north along Route 1, covering the Industrial District to the northernmost road in that sector.

In demographic terms, the city of Mejillones has a total of 12,784 inhabitants, of which a greater proportion corresponds to men with 59.14%, while women represent 40.86%, so that the masculinity index is 144.76 men for every 100 women and the femininity index is 69.08 women for every 100 men, according to the data from 2017's Census.

The city of Antofagasta has a population of 354,104 people, of whom 174,940 are men and 179,164 are women, representing 49.40% and 50.60%, respectively. The masculinity index is 97.6. The femininity index is 102.4.6

The Anthropological Dimension highlights the importance of the history of both the city and Bonanza, associated with the different productive activities that predominated in the past and some that continue.

Such is the case of fishing, which was practiced by the Changos Indigenous people along the coastline at the time of the formation of the republic, an activity that continues on an artisanal and industrial scale to the present day.

The main productive activities in Mejillones are artisanal fishing, agricultural and livestock production, and commercial production chains due to mining. However, the project does not affect these production activities because no facilities need to be built to execute the project that could affect any productive activities related with artisanal fishing, agricultural or livestock production.

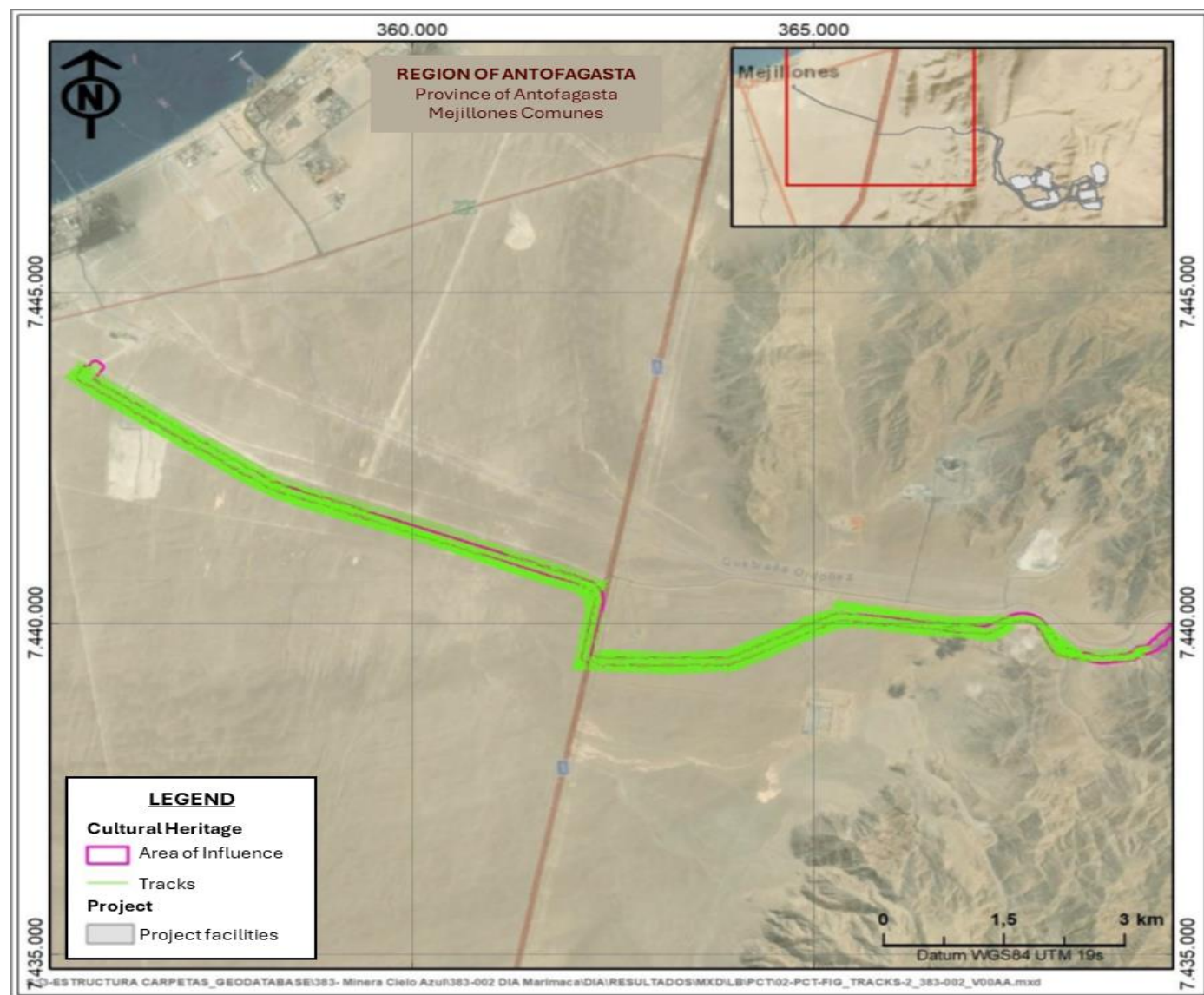
During the visual inspection carried out in the area of influence of the cultural heritage component of the project, 39 heritage elements were identified. Of these, 31 correspond to the category of archaeological sites (SA) and eight correspond to isolated findings (HA). Of the archaeological sites, 21 correspond to the typology of linear features of uncertain and historical chronology; they correspond to the typology of garbage dump or historical camp with movable elements on the surface (fragments of glass, earthenware, metal containers and wooden elements); three correspond to pyramid structures; and four to carving events that include cores and carving debris, of pre-Hispanic chronology. As for the isolated finds, the eight correspond to fragments of historic glass bottles.

The bulk of the identified heritage elements are found in the interior sector of the project works, registering 87.2% of the total finds, while the coastal sector registered 12.8% of the finds.

As mentioned above, the heritage elements recorded in the project show the high circulation between the city of Mejillones and the inland areas, since the city is a strategic point for the shipment of guano and minerals exploited between the 23°S and 25°S parallels in historical times (Donoso, 2021; Quiroz, 2021).

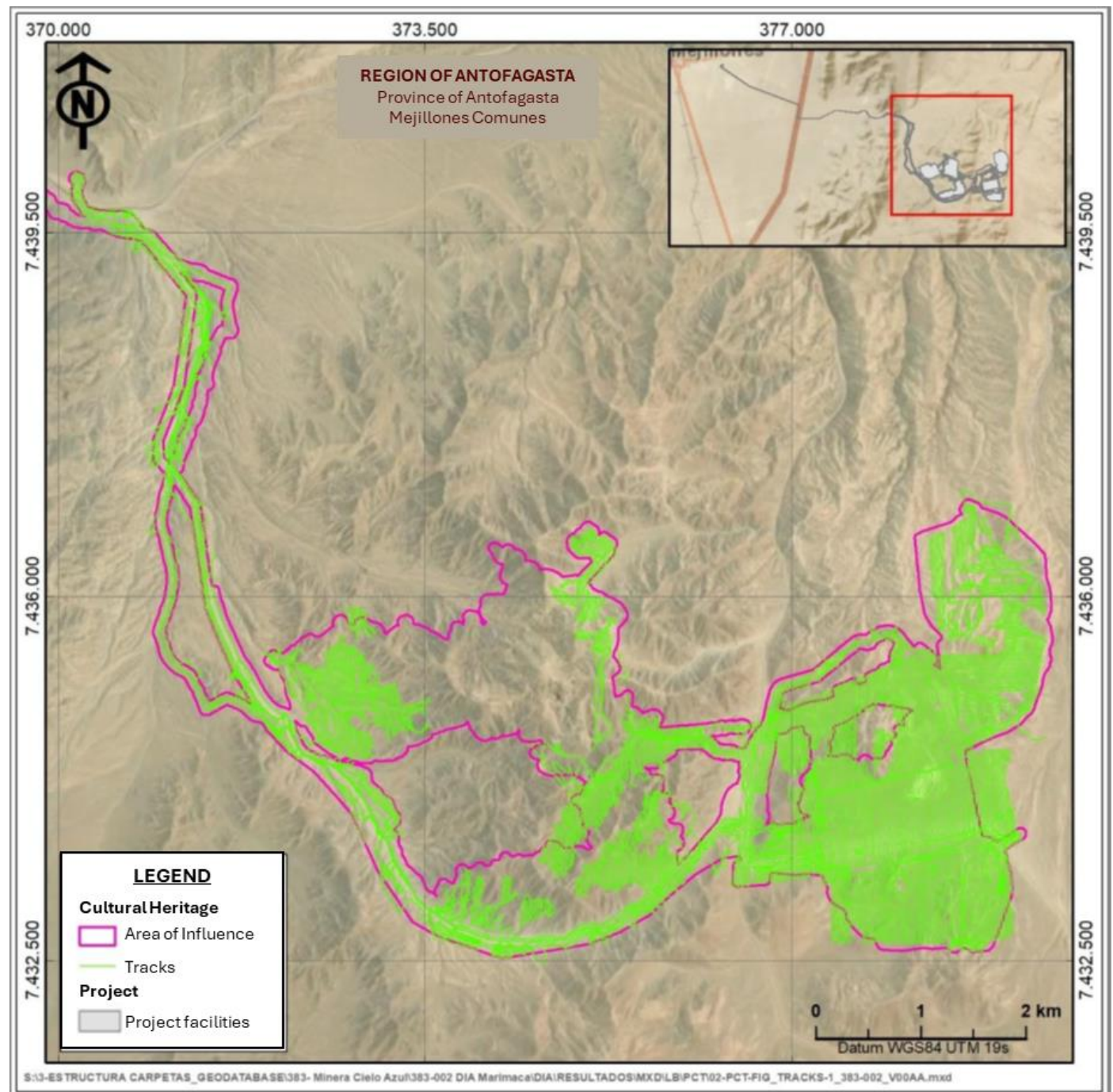
On the other hand, the pre-Hispanic finds recorded (carving events) reflect the relevance of lithic technology for the societies that inhabited and travelled through the Atacama Desert, being the production and use of lithic tools a fundamental part of the subsistence and mobility dynamics of human groups. Figure 20-4 and Figure 20-5 show the inspection tracks for the archaeological baseline.

Figure 20-4: Coastal Sector Visual Inspection Track



Source: JIA, 2024.

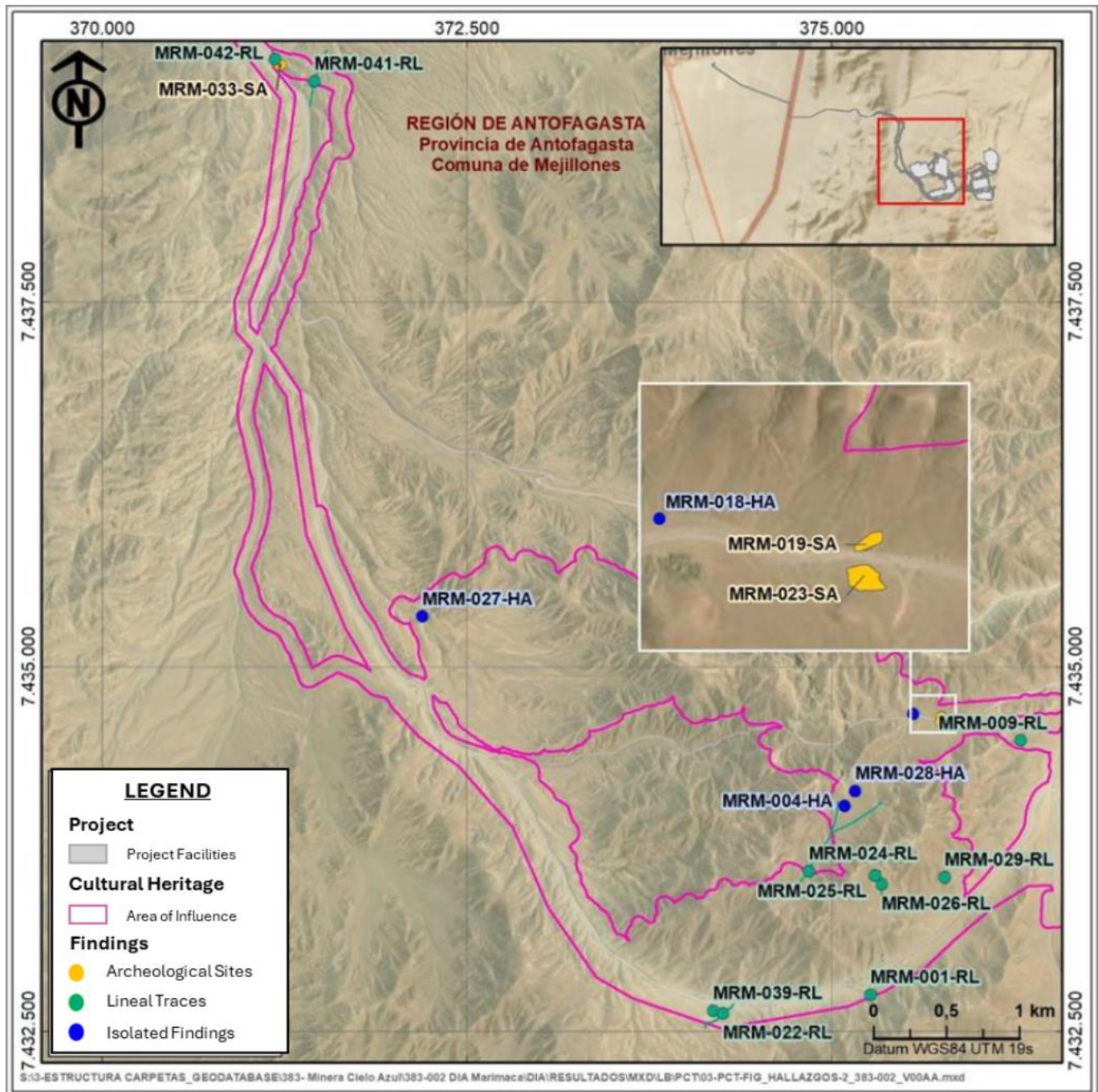
Figure 20-5: Interior Sector Visual Inspection Track



Source: JIA, 2024.

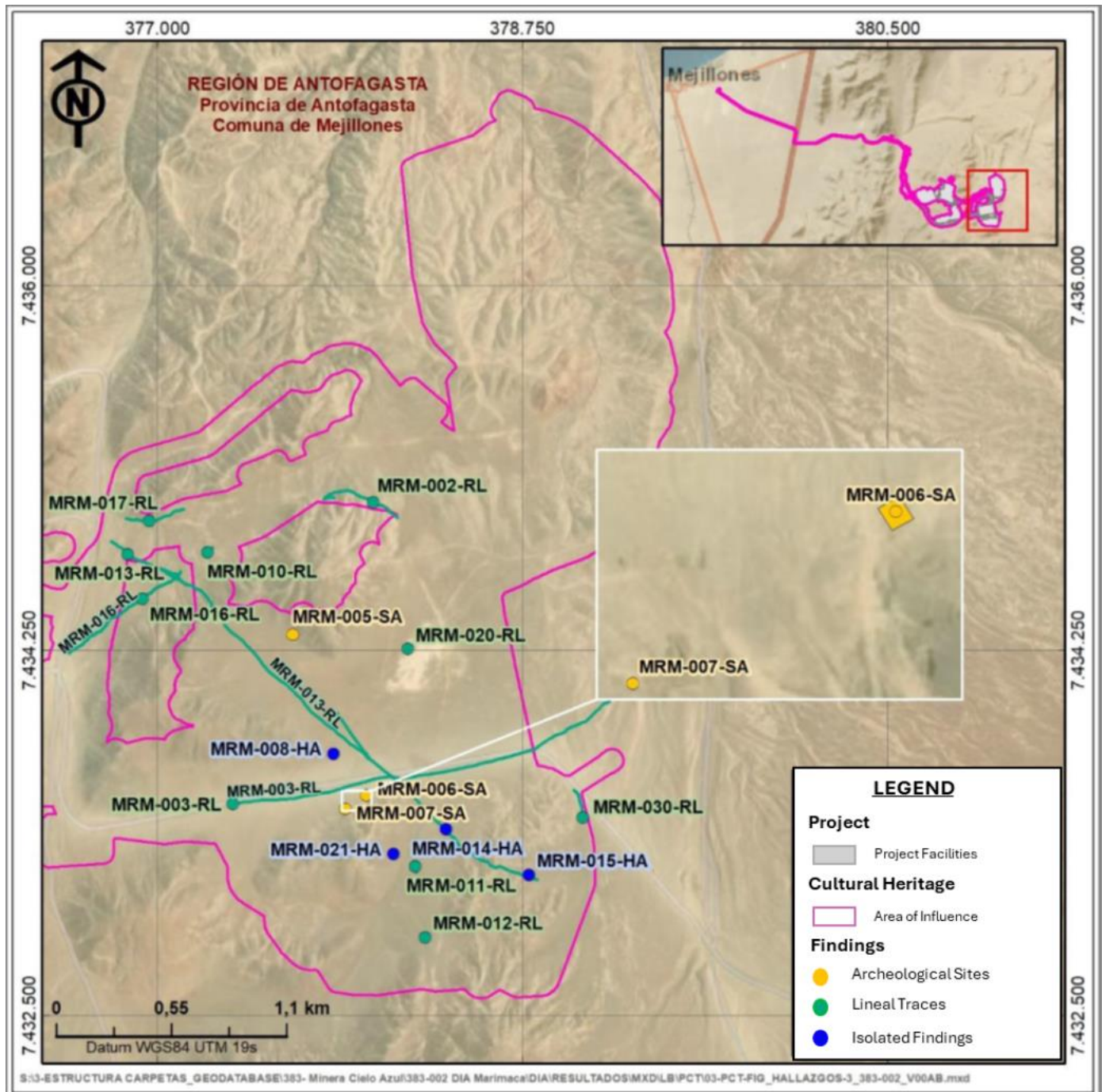
The main archaeological finds are presented in Figure 20-6 and Figure 20-7.

Figure 20-6: Archaeological Findings, West Area



Source: DIA, 2024.

Figure 20-7: Archaeological Findings, East Area



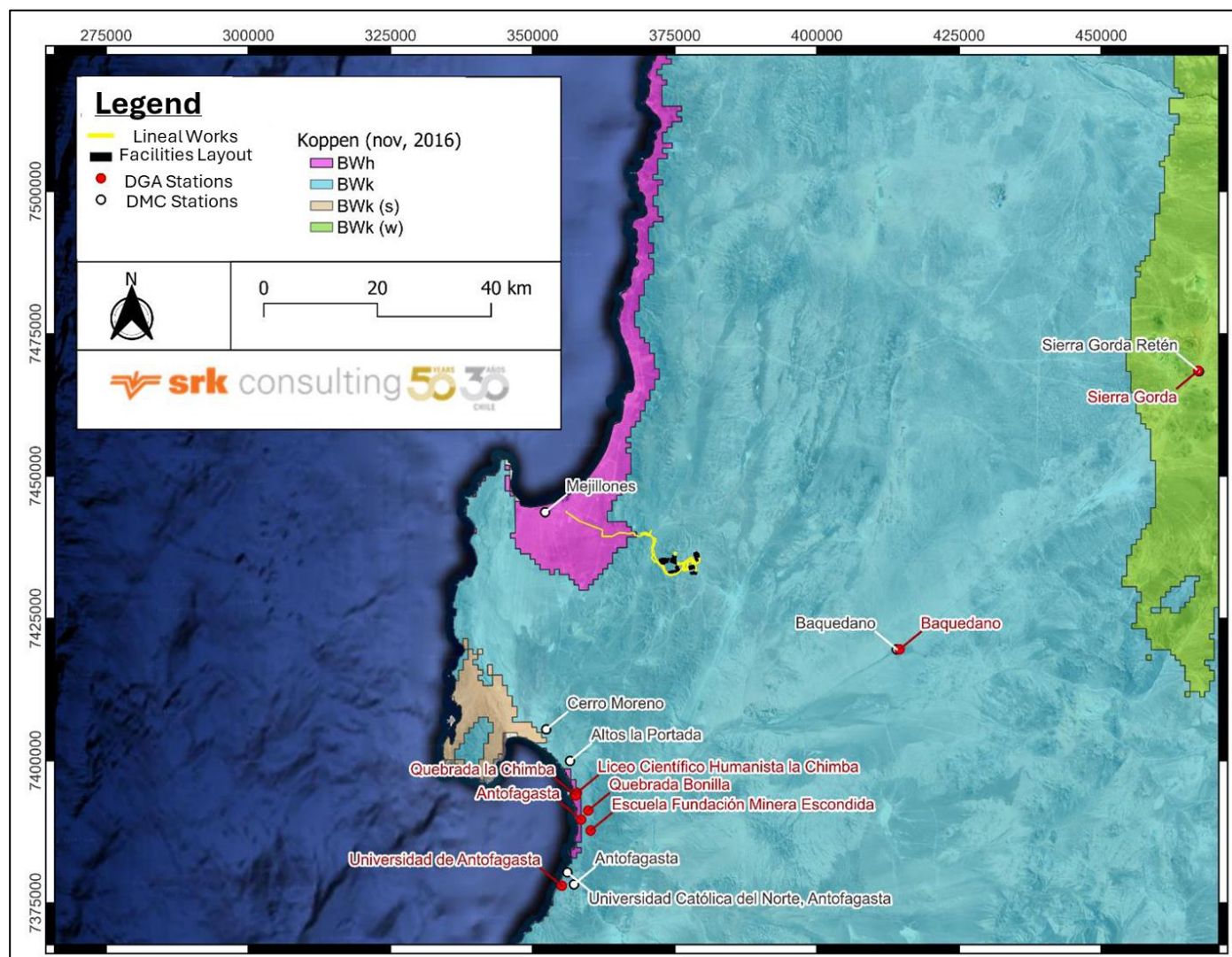
Source: DIA, 2024.

The pre-Hispanic finds recorded (carving events) reflect the importance of lithic technology for the societies that inhabited and travelled through the Atacama Desert, with the production and use of lithic tools being fundamental to the subsistence and mobility dynamics of human groups. It must be noted that Chapter two of the DIA notes that, about the impact on the archaeological component, of the 1,914 ha covered by the area of influence of this component, 88.5% were reviewed, leaving 11.5% unreviewed, due to steep ground slopes (over 25% gradient), which was accepted by the national related authorities. Finally, there are 47 heritage elements that will be affected during the construction phase of the project, as they are located ≤ 10 m from the project facilities. However, the MOD Project has adjusted its layout of some facilities to distance themselves over 50 meters of five archaeological sites (MRM-005-SA, MRM-006-SA, MRM-019-SA, MRM-023-SA y MRM-033-SA indicated in previous figures) in agreement with the related authorities ("Consejo de Monumentos Nacionales"- CMN) avoiding the necessity to execute retrievals of these archaeological sites. For the rest of the heritage elements identified in the DIA and which are located into Project facilities area, activities will be executed to retrieve these sites before the start of construction works. These isolated findings are included in the Sectoral Environmental Permit No. 132 (PAS 132), complying with the various prevention and mitigation measures in agreement with the related authorities.

20.1.1.5 Hydrology and Water Balance

The area where the project is located has a cold desert climate and a hot desert climate. These climates are characterized by their extreme aridity, with almost no rainfall, which occurs mainly in winter. There are no permanent surface flows in the vicinity of the project; however, there are streams that can be activated in extreme precipitation events. To characterize meteorological variables, data from the Cerro Moreno station is used due to its proximity. This station has a robust data record and is located less than 35 km from the project, in the same climate zone, and is therefore considered representative of the area. Figure 20-8 shows the monitoring stations used for determining the meteorological conditions of the site.

Figure 20-8: Meteorological Monitoring Stations



Source: JIA, 2024.

According to the information gathered, minimum, average, and maximum annual temperatures are expected to be on average 14.9°C, 16.5°C, and 19°C, respectively, with minimum temperatures occurring in the winter months and maximum temperatures in the summer months. Records from the stations were taken from 1980 to 2023.

Average annual evaporation is between 1,951 mm and 2,900 mm, being higher in the summer months with rates between 242 and 360 mm per month and in the winter months with rates of 89 to 133 mm per month.

In terms of precipitation, the annual average is estimated to be 2.6 mm, with practically no precipitation in summer. The events are concentrated in the winter season with precipitation not exceeding 0.81 mm per month. The estimated maximum 24-hour precipitation for a 10-year return period without climate change is 7.4 mm, while in the climate change condition it is 7.61 mm and 14.73 mm for P_{25} and P_{75} . It is noted that no information regarding larger return period precipitation events (100 and 200 years) was presented in the baseline studies.

20.1.1.6 Hydrogeology

The area where the project is located is characterized by a desert climate, with an average annual temperature of 16.5°C, with high evaporation rates throughout the year, with a 1,950 mm/a total amount of and little rainfall, with an annual amount that does not exceed 3.0 mm.

Exploration drill holes in the pit sector, which reach depths of up to 800 m, did not identify the presence of groundwater. On the other hand, the hydrogeological drillings, particularly SHM-01 located in Quebrada Naguayán, show a water table at 63 m depth. These waters are characterized by being sodium chloride type, with high electrical conductivity and pH close to neutral, showing high residence times.

By means of Electromagnetic Transient (TEM) geophysics, it is identified that in the Laguna Seca area and in Quebrada Ordoñez, the sediments could contain some degree of moisture, while in Quebrada Naguayán the groundwater is confirmed by a saturated level in sediments related to the conduction of flows through the Naguayán Fault. Three hydrogeological units associated with Quaternary and Miopliocene sediments (UH-1 and UH-2) and basement rock (UH-3) have been identified. The sedimentary units have variable permeabilities (0.001–10 m/d) and medium to low hydrogeological significance. The basement rock, on the other hand, is practically impermeable.

Hydrogeological dynamics are conditioned by the scarce recharge from the residual moisture in the sediments, contributing about 0.5 L/s to the system. The only significant subsurface flow is observed in the Quebrada de Naguayán, associated with regional faults and with a flow of approximately 0.7 L/s.

20.1.1.7 Protected Areas

There are no protected areas within the project area that interact directly with the project's area of influence. The nearest protected areas include the Morro Moreno National Park (30 km away), the La Chimba National Reserve (34 km away), the La Portada Natural Monument (33 km away), the Itata Gualguala Nature Sanctuary (26 km away), the Bahía Moreno - La Rinconada Marine Reserve (32 km away), and the A.M.P. Punta Morro - Copiapó River Mouth - Isla G (447 km away). The Punta Morro - Copiapó River mouth - Isla G aquifer (447 km away), the aquifers that sustain meadows and wetlands (more than 150 km away), and protected national assets such as the Mejillones Peninsula (10 km away) and Santa María Island (34 km away), are also located outside the project's area of influence, justifying their exclusion from the environmental value analysis.

With respect to the Areas Placed Under Official Protection, it is possible to identify that there are no RAMSAR Sites, Historic Monuments, Typical Zones, Historic Conservation Zones and Properties, Zones of Tourist Interest (ZOIT), or priority wetlands that interfere with the project's area of influence. The nearest RAMSAR site is the Soncor Hydrological System (221 km away). The nearest historic monuments, such as the Muelle de la Ex Compañía de Salitre de

Antofagasta and the Providencia Detention Center, are 48 km away. The historical zone “Historic Center of Antofagasta” is also 48 km away. The nearest historic properties are in Mejillones (6 km away), and the María Elena-Pedro de Valdivia ZOIT is 100 km away. None of these elements influence the definition of the environmental value of the project's area of influence.

Regarding the Priority Sites for conservation, it is possible to conclude that they are not identified within or near the area of influence of the project, according to Instructions N°103.008 and N°100.143. The closest is the Mejillones Peninsula, 10 km to the west, which justifies its exclusion from the analysis of the environmental value of the area of influence.

The Project’s IA also covers a zone covered under the RECOGE plan for petrels, the petrels included in this plan comprise four species of seabirds classified as threatened by the Species Classification Regulation. These are: the black petrel (*Hydrobates markhami*), classified as Endangered (EN) (D.S. No. 79/2018 MMA), the Hornby's petrel (*Hydrobates hornbyi*) and the Peruvian petrel (*Hydrobates tethys*), both classified as Vulnerable (VU) (D.S. No. 16/2020 MMA) and, finally, the little storm petrel (*Oceanites gracilis*), classified as Data Deficient (DD) (D.S. No. 79/2018 MMA). The process of developing the plan began with Exempt Resolution No. 1113 (September 11, 2019). The drafting group was made up of public services, universities, independent researchers, and private entities. The proposal was submitted for public consultation for a period of 30 working days, from May 5 to June 17, 2021. The approved plan was published in the Official Gazette on April 26, 2022 (enacted January 11, 2022).

20.1.2 Environmental Monitoring

An environmental monitoring plan was developed and presented along with the DIA for the project. It includes different monitoring activities for each of the major components presented on the study. A summary of these measures is presented in Table 20-2.

Table 20-2: Environmental Monitoring Measures

Variable	Summary	Applicable Phases
Archaeology	Implementation of continuous archaeological monitoring during activities involving soil movement (scarping, excavation, etc.) for the early detection of possible archaeological elements existing in the project area, through visual inspection. Monitoring will be carried out by an archaeologist and/or archaeology graduate(s). An induction lecture on archaeology and paleontology will be given at the project site prior to the start of construction and during this phase to train all those involved in works involving land intervention. The physical protection of the heritage elements that will not be affected by the project and are less than 50 m away from the works will be carried out through the installation of temporary fences and their respective signage. For the installation of the fences, a perimeter and a buffer of at least 10 m will be defined for the element, at whose vertices supports (steel fence posts) of at least 1.2 m in height will be installed, which will support mesh to	Construction

Variable	Summary	Applicable Phases
	prevent passage to them. This perimeter will be defined by an archaeologist or archaeology graduate; the same professional will supervise the fencing activity. In addition, signs will be installed indicating the regulations that protect the fenced property and prohibit the passage of people and machinery.	
Paleontology	Preparation of a monthly paleontological monitoring report, including construction site plans, construction site book and monitoring record table. In addition, a record of the visit must be kept in a construction logbook, which must be signed by the paleontologist conducting the monitoring and by the construction foreman.	Construction
Flora	- Report to SMA with a photographic record of properly installed perimeter fences. - Verification of the 30-meter exclusion buffer distance. - Requirements established in the RCA on permanent monitoring of the protection areas associated with the <i>Nolana onoana</i> species and report content.	Construction
Fauna	The parameters that will be monitored during the environmental release are related to community attributes associated with the vertebrate assemblage most sensitive to the works of the project. In this sense, an active search for specimens will be carried out through various field methodologies such as transects, camera traps, among others, in order to verify the following information: - Presence or absence and abundance of low mobility individuals within the project works. - Presence or absence and abundance of adult specimens, chicks or eggs of <i>Sternula lorata</i> (little tern) or <i>Leucophaeus modestus</i> (kittiwake). - Presence or absence and abundance of active and inactive nests of <i>S. lorata</i> or <i>L. modestus</i>. - Training and environmental awareness talks. - Installation of flight deterrents or anti-collision devices. - Monitoring of collided birds and removal of carcasses.	Construction, Operation & Closure
Human Environment	During the construction phase, face-to-face activities will be held quarterly, with the possibility of increasing the frequency according to the community's needs. - During the operation phase, activities will be carried out according to community demand, guaranteeing at least a semi-annual meeting. - For the closing phase, activities will be organized according to what was agreed with the community during the last year of operation.	Construction, Operation & Closure

Variable	Summary	Applicable Phases
	Regarding suppliers: - Preparation of a list of companies that provide services and products of interest to the project. - Delivery of a list of local companies to the project contractors. - Invitation to participate in the bids made by the project. - Regarding the social investment fund: Preparation and signing of the Cooperation Agreement during the first year of construction. - Generation of Governance during the first year of construction. - Implementation of the Fund from the second year of construction, through a first installment and fifteen successive installments starting that year. Regarding Good Relationship Plan: - Training in cultural respect and diversity Orientation on the history, culture and customs of Mejillones and its Human Groups Belonging to Indigenous Peoples. - Promotion of gender equity: Ensure respectful treatment of women, both in the community and in the workplace, through inclusive policies and behaviors. - Good environmental practices: Instruction to minimize impacts on the environment, with a focus on the protection and preservation of local flora and fauna.	
Water Resources	Monitoring of physical and chemical parameters and groundwater levels Well SHM-01	Operation

It must be noted that during the review process of the Environmental Impact Statement, the authority has called into question the sufficiency of the monitoring measures, particularly for the ripios deposits to assure no environmental impacts on groundwater due to acidic rock drainage.

As the project is also located in an area designated as a region with scientific and research value for astronomy, it must take additional measures regarding lighting sources in order to comply with the regulations.

20.1.3 Water Management

20.1.3.1 Water Supply

The Company has submitted a contract with an external contractor, providing an approved supply of approximately 3.8 Mm³/a for the first five years of operation with a pumping rate of 4.7 Mm³/a. This seawater will be delivered by a pipeline originating in the Mejillones port and represents the only water source for the project, as no wells are

projected to be installed at the site that would involve a groundwater extraction permit. The water will be stored in the proposed ponds on-site.

20.1.3.2 Surface Water, Runoff and Pit Water Management

During the project's life, potential impacts on water quantity and quality will be minimized by diverting "non-contact" water and the managing of "contact" water, based on the implementation of the following measures:

- Maximizing the capture, containment, and reuse of contact and process waters used in mineralized material processing on the heap leach pads, thereby minimizing the use of external clean water sources and the potential for contaminant impact to surface waters generally.
- Providing adequate protection to internal infrastructure, personnel, and downstream receiving waters from the uncontrolled effects of surface water runoff during storm events.
- Preventing sediment entry to receiving waters and preventing erosion discharge points.
- Installing diversion ditches around the waste rock storage facilities, pit, and heap leach facilities to convey clean or non-contact surface water around these mine facilities and preventing the discharge of surface water that could have adverse environmental impact.

Contour channels will be installed around mine areas, waste rock deposits and infrastructure. Collection channels have been designed at the base of non-contacted areas to pass clean surface runoff water to discharge points downstream of the property. These channels will be designed based on a runoff derived from the maximum 24-hour rainfall over a 100-year return period with a verification period of 1,000 years. The drainage channels are designed with a trapezoidal cross-section and consist of an excavated channel lined with low permeability backfill soil, which is then protected with a tightly packed layer of riprap rock. These channels must be maintained during the closure and post-closure phases to maintain chemical and physical stability.

For the management of "contact" mine waters with low risk of contamination, these waters will be directed to settling ponds to allow for sediments to settle and to provide the opportunity to monitor water quality and eventually evaporate. Along the roads, runoff water will be captured in constructed ditches and directed to settling ponds where it is also designed to evaporate. Where runoff water from the project interacts with facilities potentially resulting in contact water that is contaminated such as pits, ore material stockpiles and waste rock storage facilities, each of these facilities will have a designed ditching system that will capture and direct contact water and to collection ponds where it can be appropriately managed. Potentially impacted water will be monitored and treated at the evaporation ponds, not being released to the environment.

20.1.4 Emissions and Wastes

The activities that will take place during the construction, operation, and closure phases of the Project will generate different types of wastes and emissions.

Table 20-3 presents the different types of wastes and emissions currently expected for the project and general management and mitigation measures to be utilized. More specific measures will be established during the

Environmental Impact Statement process. Most of these emissions are subject to specific permits to be issued as part of the DIA approval process.

Table 20-3: Waste and Emissions of the Marimaca Project

Type of Waste/Emission	Management
Atmospheric emissions	Must be mitigated with dust control strategies, including special covers for roads and irrigation for compliance with air quality standards.
Domestic and industrial non-hazardous wastes	Solid waste will be stored temporarily and trucked to an authorized sanitary landfill located outside the project area. Sewage treatment systems will be installed to service the camp area, the process area, the mine truck workshop and explosives storage area to treat wastewater generated on the site. Treated wastewater will be used for road irrigation as a means of dust control. Water from the truck wash bay will be treated by means of a silt trap and an oily wastewater treatment system and then reinjected into the process.
Hazardous waste	Hazardous waste will be stored temporarily and trucked to an authorized disposal site located outside the project area.
Mining wastes	Mining wastes include low-grade mineralized material and sterile rock (waste rock). Both of these will be managed at specially designed storage facilities located in the proximity to the open pit area.
Acid Rock Drainage (ARD)	Studies developed during the DIA phase and FS phase indicate that the waste rock material has a moderate to high potential for ARD generation, as well as the leached rubble deposits. However, acid generation and subsequent metal leaching will only occur if materials are exposed to water. Given the hyper-arid condition of the project location, the interaction between the material and natural waters will be minimal and will be further reduced by the installation of contour channels at waste rock storage facilities. Any contacted waters will be collected and evaporated.

20.2 Permitting Considerations

Permits required by any project are classified in two categories: Environmental Permits and Sectoral Permits. The Environmental Permits are granted for any project approved within the SEIA and comprise the Environmental Licence (RCA for its abbreviation in Spanish) and the Sectoral Environmental Permits (PAS for its abbreviation in Spanish). All applicable PAS must be presented along with the Environmental Impact Study (EIA) or Environmental Impact Statement (DIA) and cover relevant environmental aspects.

On the other hand, Sectoral Permits (PS) cover non-environmental topics and need to be applied for separately with the corresponding government authority. Once the RCA is issued, the proponent can seek individual sectoral permits for construction and operation, some of which are an extension of a PAS. The most significant of these are the water use and water diversion schemes from DGA, sanitary permits, archaeological permits, mining permits (waste rock storage facilities) and the closure plan approval and mining license from SERNAGEOMIN. Each of these can be initiated

during the EIA or DIA review period, however they cannot be granted until the EIA or DIA review concludes with a favourable decision.

The following subsections outline the Environmental Permits (Section 20.2.1) and Sectoral Permits (Sections 20.2.2 and 20.2.3) required for the execution of the project, in its construction, operation and closure phases.

20.2.1 Environmental Permits

In Chile, mine developments similar to the size of the MOD Project, and near protected areas, will typically trigger the requirements for an EIA or DIA. The steps that are included in the process to develop the DIA include baseline studies, predictive modelling, social and Indigenous peoples assessments, management plans, risk assessments, mitigation plans and emergency response plans. Community consultation is required as inputs for the social assessment, in the form of community meetings.

A DIA for the Project was submitted by Minera Cielo Azul for evaluation by the environmental authority in December 2024. As part of the DIA review process, in February 2025 the regulatory authorities commented and requested additional information and clarifications, which were received by Minera Cielo Azul.

Previously, a project called “MCAL Prospecting” was presented, favourably qualified by means of RCA N°0279 of the Evaluation Commission of the Antofagasta Region, which contemplates a total of 365 drilling platforms, where 374 RC drill holes (97,896 m) and 44 diamond drill holes (13,104 m) will be carried out.

The purpose of this prospecting project was to reduce geological uncertainties, dimension the mineral resource and generate the necessary information to develop eventual mining development and exploitation plans in the future. It is currently in the operation stage, considering its useful life until 2025.

In accordance with the requirements of Article 18 of the SEIA Regulation (D.S. N°40/2012), the DIA must also contain the technical and formal contents to comply with the requirements for each of the PAS, which are associated with a particular article of the SEIA Regulation. The following are the PAS that were presented alongside the DIA of the project:

- Article 132 – Permission to conduct archaeological, anthropological, and paleontological excavations.
- Article 136 – Permission to establish a mineral waste dump or mineral accumulation.
- Article 137 – Permission for approval of the closure plan for a mining site.
- Article 138 – Permission for any public or private work for the evacuation, treatment or final disposal of drains, sewage of any nature.
- Article 139 – Permission for any public or private work for the evacuation, treatment, or final disposal of industrial or mining wastes.
- Article 140 – Permission for the installation of any place intended for the accumulation, selection, industrialization, trade or final disposal of garbage and waste of any kind.
- Article 142 – Permission for any site for the storage of hazardous waste.

- Article 156 – Permission to make channel modifications.
- Article 160 – Permission to subdivide and urbanize rural land.

Additionally, during the consultation process, the authorities pointed out the need to present the following additional permits:

- Article 157 – Permission to carry out regularization or defense works⁴ of natural channels.

At the moment the project is still under evaluation, and the consultation process has underlined the need to update or modify several of the presented permits.

It is worth noting that the permits required for the project must be in accordance with the latest engineering designs, taking into account the requests of the environmental authority in the current evaluation process, as well as the sectoral requirements for each work, installation, and/or activity.

20.2.2 Mining Permits

Sectoral Permits associated with mining operations are granted by SERNAGEOMIN. At this stage, several permits are considered applicable to the project, but the most relevant ones, based on the engineering requirements and processing times, are:

- authorization to establish a waste rock storage facility or ore stockpile (related to PAS 136);
- authorization of open-pit exploitation method;
- mineral treatment or benefit plants project approval; and
- authorization of the project's Mine Closure Plan (related to PAS 137).

Depending on the level of engineering and the amount of information provided, these permits can have extended processing times (up to one year) and need to be obtained before construction. Several other permits and notifications are also required to be presented at the beginning of the construction or operation phases, such as the notification for starting the construction works on the waste deposit or the approval for the Occupational Accident and Illness Prevention Program, among others, but none of them relate to the design of infrastructure, deposits, or the mining process.

20.2.3 Additional Permits and Authorizations

Other sectoral permits are granted by different government authorities. At this stage, the following permits are considered applicable to the project, with the most relevant ones, based on their engineering requirements and processing times, listed below.

⁴ According to the legal definition, regularization works are defined as those aimed at directing the current in a natural channel (or returning it to it) by altering its section, slope, layout, or the materiality of the riverbed bed and/or the banks. Defense works are those located in a natural channel whose purpose is to protect the adjacent land, population or infrastructure from flooding and/or channel erosion.

Table 20-4: Identified Sectoral Permits

Name of the Permit	Competent Authority
Authorization for Open Pit Mining Method	SERNAGEOMIN
Approval of Leaching Plant Project Approval of Leaching Plant Project	SNGM
Permits for Approval of Mining Site Closure Plan	SNGM
Permit for Tailings Dump and Ore Accumulation	SNGM
Approval of projects to modify natural or artificial watercourses	DGA
Permit to carry out works to regulate or protect natural watercourses	DGA
Regulations	SNGM
Notice of Commencement or Resumption of Works or Activities	SNGM/SEA
Permit to carry out archaeological, anthropological, and paleontological excavations	CMN
Authorization for access to public and/or concessioned roads	DV

The approval times for these permits vary, but they all need to be obtained before construction starts. For that reason, the project has identified the critical sectoral permits and has started the preparation of all folder documents and information that will be required for submission to the authorities. Once the RCA is granted, the approval of the critical permits aligned with the construction plan will be sought. Several other permits are required and presented during construction or at the start of the operation. Most of these additional permits relate to the authorization for the operation of waste storage, wastewater and drinking water facilities, waste transport, permits for minor support infrastructure like fuel tanks, electric systems, gas systems and roads.

20.3 Social Considerations

Due to the geographical and climatic conditions, the Project area has a low population density. The project has identified stakeholders related to the indigenous community of Changos, alongside other organizations mostly related to traditional activities like fishing, however these communities are out of the Project Influence Area (IA). It is worth noting that the identified communities are not directly in the IA of the project, as stated by the SEA, however relevant information about these communities are presented in the following sections.

20.3.1 Community Identification

According to secondary sources, in the Municipality of Mejillones, processes of ethnogenesis have begun in which human groups have started to rebuild their ethnic identity associated with the Chango Indigenous people. As a result, organizations have been formed that seek to highlight the characteristics that distinguish them as such. Specifically, according to the Addendum to the Environmental Impact Statement for the “Michilla Development Plan” Project (Minería y Medio Ambiente Ltda., TecoGroup, 2023), four functional Indigenous organizations registered with the Municipality of Mejillones have been identified in the commune, all of which identify with the Chango people. According to the same source, of the organizations mentioned, one declared that it was in the process of becoming an Indigenous Community in accordance with the Indigenous Law before CONADI, and all identify themselves as belonging to the Chango people. The four organizations mentioned above are located outside the city (urban area) of Mejillones

and outside the area of influence defined in Section 3 of this document. Specifically, three are located in the Hornitos sector, 25 km north of the city of Mejillones in a straight line, and one in the Punta Cuartel sector, 8 km south of the city in a straight line. Table 20-5 shows the Changos' organizations in the Mejillones commune.

Table 20-5: Indigenous Changos Organizations in the Mejillones Commune

Organization Name	Type	Location	Formalization Type	Formalization Registry	No. of Associates
Changos Tierra del Sol Hornitos	Agrupation	Hornitos, Mejillones	Indigenous group	Current legal status No. 332308 dated May 13, 2022, registered with the Municipality of Mejillones.	17
Ancestral de Changos de Hornitos con carácter indígena	Agrupation	Hornitos, Mejillones	Indigenous group	In process	25
Changos de la Península	Agrupation	Punta Cuartel, Mejillones	-	Not Established	~15
Los Castillos	Indigenous Community	Hornitos, Mejillones	Indigenous Community	In Process	32

Source: JIA, 2024.

As noted above, one aspect that stands out about the population in the Municipality of Mejillones is the presence of human groups belonging to the Chango Indigenous peoples.

In this context, secondary information regarding the existence of Changos GHPPIs has been reviewed; however, field research provided new information about the current situation of these human groups. Based on the updated and reliable data presented, the updated information obtained in interviews with GHPPIs during field campaigns (2024) is considered.

According to information from primary sources, there are three Changos groups in the Municipality of Mejillones, two of which are located in the town of Hornitos and the third in the town of Punta de Cuartel. All of these groups are out of the project's IA. Figure 20-9 shows the location of the organizations mentioned.

Figure 20-9: Indigenous Organizations Locations, Mejillones Commune



Source: JIA, 2024.

A Citizen Participation Process was carried out in February 2025 and the final report of the participation process was submitted in June 2025, concluding with a favourable outlook for the project.

20.3.2 Community Relations Plan or Stakeholder Communication Strategy

A Community Relations Plan has been presented alongside the DIA of the project that presents different compromises to minimize impacts to the communities. The compromises are the following:

- Employment of local labor
- Technical-Professional Internship Plan for Students
- Hiring local suppliers
- Social Investment Fund for Mejillones
- Participatory Environmental Monitoring
- Community Relations Plan and Consultation System
- Plan for good employee relations with the community and the environment

20.4 Closure and Reclamation Planning

In Chile, Law 20.551 requires that a closure plan and accompanying cost estimate be submitted to and approved by the National Geology and Mining Service (SERNAGEOMIN). This ensures the protection of life, health and safety of people and the environment, mitigates any negative environmental effects, ensures physical and chemical stability of the areas where mining has occurred and establishes guarantees for the effective closure of mining facilities.

Guidance on closure costing and bonding under Law 20.551 was updated in 2018. The SERNAGEOMIN approval of a closure plan and cost follows both the successful resolution of the EIA or DIA (which includes a summary version of the closure plan to comply with the corresponding sectoral environmental permit) and the sectoral permit processes required before the start of construction.

20.4.1 Closure and Reclamation Plans

The closure plan will be developed and designed to ensure long-term stability of both physical and chemical properties of the site, and to blend with the high-altitude, rocky environment. The closure measures presented to the authority alongside the DIA are as shown in Table 20-6.

Table 20-6: Closure Measures for the Project Facilities

Facility	Facility Type	Closure Measures
Mining pit	Remaining	Slope stabilization. Access closure. Signage. Dismantling of facilities. Handling of non-hazardous waste materials. Handling of hazardous waste materials. General cleaning.
Waste Dump	Remaining	Slope stabilization of the landfill Delimitation and signage of site areas
North and South gravel dumps	Remaining	Closing off access points Dismantling facilities Handling non-hazardous waste materials Handling and disposing of hazardous waste materials Signage General cleaning
Emergency pond	Remaining	Access closure Signage
Access and internal roads	Remaining	Access closure Signage
Works for the management of contacted and uncontacted water	Remaining	Maintenance of runoff diversion channels (non-contact water). Maintenance of contact water collection channels.
Primary crusher and feed belt	Non-Remaining	Dismantling of facilities. Land leveling. Removal of materials and spare parts. Handling of non-hazardous waste materials. General cleaning.
Coarse ore storage	Non-Remaining	Dismantling of facilities. Land leveling. Removal of materials and spare parts. Handling of non-hazardous waste materials. General cleaning.
Secondary and tertiary crushing building	Non-Remaining	Dismantling of facilities. Land leveling. Removal of materials and spare parts. Handling of non-hazardous waste materials. General cleaning.
Screening building	Non-Remaining	Dismantling of facilities. Land leveling. Removal of materials and spare parts. Handling of non-hazardous waste materials. General cleaning.

Facility	Facility Type	Closure Measures
Agglomeration facilities	Non-Remaining	Dismantling of facilities. Land leveling. Removal of materials and spare parts. Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.
Dynamic Heap Leach	Non-Remaining	Closing off access points. Heap rinsing Dismantling facilities. Leveling cover. Signage. Handling non-hazardous waste materials. Handling and disposing of hazardous waste materials.
SX/EW plant	Non-Remaining	Removal of materials and spare parts. Dismantling of facilities. Land leveling. Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.
Process Ponds: Raffinate, ILS and PLS	Non-Remaining	Dismantling of facilities. Removal of geosynthetics. Filling of ponds. Land leveling. Handling of non-hazardous waste materials. General cleaning.
Electrical substation	Non-Remaining	De-energization of facilities. Removal of materials and spare parts. Dismantling of facilities. Land leveling. Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.
Seawater pond and reverse osmosis plant	Non-Remaining	Dismantling of facilities. Removal of geosynthetics. Filling of ponds. Land leveling. Handling of non-hazardous waste materials. General cleaning.
Reagent and compressor area	Non-Remaining	Dismantling of facilities. Land leveling. Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.
Support facilities	Non-Remaining	Dismantling of facilities. Land leveling.

Facility	Facility Type	Closure Measures
		Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.
Pipeline and pumping station	Non-Remaining	Dismantling of facilities. Land leveling. Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.
Power line	Non-Remaining	Dismantling of facilities. Land leveling. Handling of non-hazardous waste materials. Handling and disposal of hazardous waste materials. General cleaning.

Source: JIA, 2024.

20.4.2 Closure Cost Estimates

A preliminary estimate of closure costs is presented in Section 21.

20.5 Comments on Environmental Studies, Permitting and Social or Community Impact

The Project does not hold an Environmental License (RCA) presently. A DIA was presented to the authorities in December 2024, which presented baselines studies as well as several mitigation, reparation and compensation measures related to the impacts of the project. The project is currently on the final stages of evaluation by the authorities.

Based on the currently available information, the relevant environmental aspects of the Project are as follows:

- Water quality and downstream potential impacts to sensitive habitat can be mitigated by the design and construction of effective water management infrastructure, practices, and contingency plans. This requirement of the project should be emphasized during the next phase of project design. Further studies that review the long-term potential effects of ARD and metal leaching should be undertaken in consideration of episodic rainfall events and potential downgradient transport of contaminants in surface and groundwater. Final project designs should take the results of these studies into account.
- Current baseline studies focus on discarding possible negative effects on human settlements nearby (Mejillones) and therefore rely on data from stations on these populated nuclei, air quality studies should be conducted to determine effects on the immediate proximity of the project grounds.
- Human population is sparse around the area of influence of the project, concentrating mainly on the town of Mejillones, outside of the main area of the mine, as well as Indigenous communities in the form of the Chango community, also outside of the project's IA. For that reason, an Indigenous Consultation Process was not presented

alongside the DIA and was not requested by the authority. Several communication plans and social considerations were included in the DIA and presented to the authority.

- Due to the hyper-arid conditions of the project location, the project considers utilizing sea water extracted from an existent Power Generator Plant located in Mejillones. The Company already has a commercial agreement with the company that owns this plant.
- The MOD Project was submitted for environmental permit evaluation by Marimaca in December 2024, through a Declaración de Impacto Ambiental (DIA). Marimaca will need to make sure during the detailed engineering stage that there are no significant variations between the final design of the MOD Project and the DIA, in order to avoid submitting a new environmental permit request. When modifications are identified, they must be evaluated by Marimaca through a Relevance Pertinence Analysis (Análisis de Pertinencia) to determine whether these changes are significant based on the current instructions required by the environmental authority.

21 CAPITAL AND OPERATING COSTS

21.1 Capital Costs

21.1.1 Overview

The overall capital cost estimate was developed by Ausenco with some contributions from Marimaca and NCL.

The capital cost estimate is based on mechanical, electrical and instrumentation equipment lists, material take-offs for mass earthworks, leach pads and ripios dumps, concrete, structural buildings, electrical and instrumentation bulk materials. It also includes mine initial and sustaining capital that included provisions for pioneering roads, pre-stripping, mining equipment, and other mine capital costs.

Unit rates and pricing were based on quotes for the project, and information from projects in the region with similar technology within the Ausenco database.

The project contemplates open-pit ore extraction, as well as ore leaching and subsequent production of up to 50,000 t of copper cathodes per year. Two phases of operation are planned: the first (Phase 1) contemplates a treatment rate of 12 Mt/a over a five-year period; and the second phase (Phase 2) contemplates a treatment rate of 16 Mt/a over an eight-year period.

In accordance with this, the cost estimates include the initial investment (Phase 1) for open-pit mining, crushing circuit, agglomeration, heap leaching area, solvent extraction and electrowinning. The infrastructure required for the project consists of an access road, a seawater pipeline, and an electrical line to the site. The latter two projects will be executed through BOOT contracts managed by Marimaca.

The Engineering, Construction Integration - Management Service Cost was estimated considering the delivery model selected in the FS and market research developed during this stage by Marimaca. For the contingency, a value of 10% was assigned, corresponding to the lower range of Class 3 AACE estimate.

All the capital estimation are split into direct costs, indirect costs and contingency.

The estimate conforms to AACE Class 3 guidelines for a feasibility study cost estimate with an expected accuracy range of -10% to -20% on the low side of the range and +10% to +30% on the high side of the range.

The total initial capital cost is US\$587 million. During Phase 2 of the project, an additional 4 Mt/a of tertiary crushing will be added to reach the total throughput of 16 Mt/a. The total expansion cost is US\$77 million.

Sustaining capital was based in investments that allow maintaining the production of the plant, as well as deferred stripping, mine equipment leasing, investment amortization and interest for the power line and seawater supply pipeline BOOT contract infrastructure. The total sustaining cost is US\$529 million.

An estimate for the closure and post-closure costs of the project is also included with an estimated value of US\$47 million. This estimate conforms to AACE Class 5 guidelines for an order of magnitude estimate with an expected accuracy range of -20% to -50% on the low side of the range and +30% to +100% on the high side of the range.

The next Table 21-1 provides a summary of the estimate for the overall initial, expansion, sustaining, closure and post-closure capital cost. The costs are expressed in Q3 2025, in USD, and include all mining, process plant, infrastructure, project indirect, project delivery, Owner costs and contingency.

Table 21-1: Capital Cost Estimate

WBS (Level 1)	Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Closure Cost (US\$M)	Total Cost (US\$M)
0000	General	-	-	29	30	59
1000	Mine	24	-	240	-	264
2000	Crushing	141	17	-	-	158
3000	Agglomeration	13	8	-	-	21
4000	Leaching	90	26	91	-	206
5000	SX/TF/EW	121	-	-	-	121
6000	Power Supply	10	-	44	-	54
7000	Water Supply and Reagents	35	8	95	-	139
8000	Infrastructure, buildings and roads	4	1	1	-	6
Total Direct Costs		437	61	501	30	1,028
9000	Owners Costs	17	1	5	1	24
9000	Indirect Costs	80	6	10	4	100
Total Indirect Costs		97	7	15	6	124
Total Direct + Indirect Costs		533	68	516	35	1,152
10000	Contingency	53	9	13	12	88
Total Capital Cost		587	77	529	47	1,240

Note: Values may not sum due to decimal rounding.

21.1.2 Basis of Estimate

21.1.2.1 Economic Base

The base currency for capital cost estimates is US dollars (USD). The third quarter of 2025 (Q3 2025) was defined as the base date for the estimate.

The economic indexes and exchange rates used for cost estimation were indicated by Marimaca. These indexes and exchange rates used are presented in Table 21-2.

Table 21-2: Exchanges Rates

Base Currency	Exchange Rate	Description
USD 1.00	USD 1.00	United States Dollar (USD)
USD 1.00	EUR 0.92	Euro (EUR)
USD 1.00	CLP 950	Chilean Peso (CLP)
USD 1.00	UF 0.02	Chilean Unit of Account (UF) ⁵

21.1.2.2 Quantity Basis

Ausenco estimated the quantities of the physical works to be executed in the process plant and infrastructure for Phase 1, Phase 2 and sustaining operations. These quantities were incorporated into the equipment list and material take-off (MTO). All quantities provided by engineering represent net values and do not include material take-off allowances or growth factors, which were accounted for separately.

Quantities for the mine scope were determined by NCL.

Quantities for closure and post-closure were based on estimates from Phase 1 and Phase 2 engineering and were aligned with information provided in the relevant sectoral permit (PAS138) included in the DIA documents.

21.1.2.3 Procurement Pricing Basis

Estimate has been developed with budgetary quotes for different equipment and materials. All critical materials and equipment were considered as procured by Owner.

The price included in the Capex meets the technical requirements, and the offer considered was defined by Marimaca and Ausenco. These values consider growth factors in the price, which were included separately.

Equipment supply cost, equipment engineering, and factory tests were incorporated as direct costs. The costs of freight, vendor representatives, and spare parts were included in the project indirect costs.

Table 21-3 shows the quoted packages for Phase 1.

⁵ The “Unidad de Fomento” (UF) is an inflation-indexed unit of account, calculated and published by the Central Bank of Chile (BCCh). It is authorized for pricing credit operations in national currency by banks and credit and savings cooperatives. The BCCh calculates the value of the UF for each calendar day between the tenth day of the current month to the ninth day of the subsequent month. These values are derived from the CPI month-on-month percentage change, as published by the National Statistics Institute (NSI), or the institution who replaces it, of the month preceding the month in which the UF is calculated and published.

Table 21-3: Budget Quotes Packages Phase 1

Package Number	Package Name
RFQ-001	Primary Crusher
RFQ-002	Secondary - Tertiary Crushers (Cone Crusher)
RFQ-003	Vibratory Screen
RFQ-004	Agglomerator
RFQ-005	Conveyors
RFQ-006	Apron Feeders
RFQ-007	Stacking System
RFQ-008	SX/TF/EW Plant
RFQ-010	Unit Substations
RFQ-011	Electrical Rooms
RFQ-012	Harmonic Filters
RFQ-016	Vertical Refining Pumps/PLS/ILS
RFQ-017	Horizontal Water Pumps
RFQ-018	Horizontal Pumps Solutions
RFQ-EST	Structural Steel
RFQ-CALD	Platework
RFQ-GEO	Geosynthetics

The quotes from Table 21-3 were used for Phase 1, Phase 2 and sustaining. For those equipment and materials for which no quote was available, their price was taken from the Ausenco database.

Table 21-4 shows what percentage of the main supply prices were quoted.

Table 21-4: Budget Quotes Incidence (Procured Supplies)

Description	Phase 1	Phase 2	Sustaining	Closure
Budget Quote	86%	45%	45%	0%
Data Base	14%	55%	55%	100%
Total	100%	100%	100%	100%

The database values come from recent quotes made for other projects, and their values were checked with benchmarking.

21.1.2.4 Construction and Installation Costs

Construction and installation costs were quoted in contract packages. For those items or contracts not quoted, the following criteria were used:

- The assembly hours (direct labour hours) were taken from information in the Ausenco database, which contains labour productivity for different disciplines and types of items in industrial construction and assembly projects in Chile.
- The direct hours that conform the base productivities are neutral with respect to climatic conditions, geographic location, and times of internal transport. These base productivities were adjusted by a correction factor to reflect the specific characteristics of the project. The correction factor or productivity factor (PF) was calculated to be 1.38, which means approximately eight effective hours per day of a total of 12 available hours.
- For direct labour costs, construction equipment rate, quotes rates were considered.
- Contractor distributable costs were calculated.

Other costs come from NCL's estimate for mine and some unit prices were provided by Marimaca for incorporation into the estimate.

Table 21-5 shows a summary of the Phase 1 contract packages, their cost, and the source of information for their estimation.

Table 21-5: Construction Work Package Information

Code	Description	Total Construction Phase 1 (US\$M)	Basis Estimate
WP-02	Mass Earthworks	30	Budget Quotation
WP-03	Electromechanical (Crushing and Agglomeration)	109	Budget Quotation
WP-04	Leach Pad, Dumps, Ponds	31	Budget Quotation
WP-05	Stacking System	9	Estimated
WP-06	EPC SX/TF/EW Plant	53	Budget Quotation
Mine	Mine	24	By NCL
WP-MCAL	Estimation Cost with MCAL Unit Prices	1	By MCAL
Total		257	

It should be noted that the total construction costs exclude the purchase of supplies under Marimaca's responsibility (US\$180 million). Adding construction (US\$257 million) and Owner purchases (US\$180 million), results in a total direct cost of Phase 1 of US\$437 million (Table 21-1).

For Phase 2 and sustaining capital costs, the unit prices quoted for Phase 1 were used. If a quoted price was not available, unit prices were calculated using the quoted labour and equipment values plus labour hour construction rates from the Ausenco database. Other unit prices were provided by Marimaca.

For closure and post-closure, updated unit prices from the Ausenco database were considered. Table 21-6 shows what percentage of construction costs were quoted.

Table 21-6: Cost Construction Quotes Incidence

Description	Phase 1	Phase 2	Sustaining	Closure
Budget Quote	77%	69%	66%	0%
Data Base	13%	10%	5%	100%
Mine	9%	0%	0%	0%
Marimaca	0.3%	21%	29%	0%
Total	100%	100%	100%	100%

21.1.2.5 Project Indirect Cost

Indirect costs correspond to activities that are required for the execution and completion of the project, which are considered non-permanent and cannot be accurately allocated to a direct cost. The indirect costs of the project depend heavily on the project execution plan and the master schedule.

21.1.2.6 Owner Cost

The Owner's costs for Phase 1 were indicated by Marimaca for incorporation into the cost estimate. Owner's costs for Phase 2, sustaining, closure and post-closure were factored.

21.1.2.7 Contingency

For Phase 1, a contingency factor of 10% was applied to the total direct, indirect, and Owner costs. For Phase 2 and sustaining phases, deterministic contingencies of 12.8% and 12.5%, respectively were used.

For closure and post-closure costs, a deterministic contingency of 35% was used, in accordance with the Class 5 AACE estimate.

21.1.3 Mine Capital Costs

The total estimated mining capital costs are summarized in Table 21-7.

Table 21-7: Mine Capital Cost Estimate Summary

WBS (Level 1)	Cost Area	Initial Capital (US\$M)	Mine Sustaining Capital (US\$M)	Total Capital (US\$M)
1000	Pre-stripping	16	-	16
1000	Workshop	2	-	2
1000	Explosives Magazine	1	-	1
1000	Other Investments	4	-	4
1000	Deferred Stripping	-	64	64
1000	Mine Equipment Leasing	-	176	176
Total		24	240	264

Note: Values may not sum due to decimal rounding

The description of the cost areas contained in Table 21-7 are the following:

- Pre-stripping: Corresponds to the operating cost of the pre-stripping of the required 8.5 Mt during the first nine months before commercial production.
- Other investment: Corresponds to the acquisition of mining and geology software, dispatch system, geotechnical system, geological equipment, radio equipment and a crew bus.

21.1.4 Process Capital Costs

Process plant initial, expansion and sustaining direct cost are presented in Table 21-8.

Table 21-8: Process Plant Direct Cost Estimate

WBS (Level 1)	Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Total Cost (US\$M)
2000	Crushing	141	17	-	158
3000	Agglomeration	13	8	-	21
4000	Leaching	90	26	91	206
5000	SX/TF/EW	121	-	-	121
Total Direct Costs		363	51	91	505

Note: Values may not sum due to decimal rounding.

21.1.5 Infrastructure Capital Costs

Infrastructure initial, expansion and sustaining direct cost are presented in Table 21-9.

Table 21-9: Infrastructure Direct Cost Estimate

WBS (Level 1)	Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$ M)	Total Cost (US\$ M)
6000	Power Supply	10	-	44	54
7000	Water Supply and Reagents	35	8	95	139
8000	Infrastructure, Buildings and Roads	4	1	1	6
Total Direct Costs		49	10	140	199

Note: Values may not sum due to decimal rounding.

21.1.6 Indirect Capital Costs

Indirect cost for initial, expansion, sustaining, closure an post-closure cost are presented in Table 21-10.

Table 21-10: Indirect Cost Estimate

WBS (Level 1)	Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Closure Cost (US\$M)	Total Cost (US\$M)
9000	Engineering, Construction Integration and Management Service	24	2	2	-	28
9000	Temporary Facilities	1	-	-	-	1
9000	Support Services (Fuel and Construction Water)	4	1	1	-	6
9000	Third-Party Services	5	-	-	-	5
9000	Catering, Accommodation, and Transport (Direct and Indirect Staff)	20	1	4	-	26
9000	Freight & Logistics	8	1	1	-	10
9000	Vendor Representatives	3	1	1	-	4
9000	First Fills	8	-	-	-	8
9000	Spare Parts	4	-	-	-	4
9000	Commissioning & Start-up	2	0.4	0.3	-	3
9000	Operational Readiness Plan	1	-	-	-	1
9000	General				4	4
Total Indirect Cost		80	6	10	4	100

Note: Values may not sum due to decimal rounding.

The basis of estimate for project indirect cost of Phase 1 is presented in the following Sections, 21.1.6.1.1 to 21.1.6.1.11.

21.1.6.1.1 Engineering, Construction Integration and Management Service

The delivery model selected during the FS considers a main contractor EPCM-IC (IC = Commissioning Integration), which will act as Marimaca's agent (and will manage various EPC contracts in the respective areas and specialties).

This cost was estimated considering this delivery model selected and cost estimation based in market research developed by Marimaca during the FS stage.

21.1.6.1.2 Temporary Facilities

An estimate was developed for a series of works required for the operation of the project:

- Improvement of the access road to the access control booth (from Route N1 to the booth).
- CM/Owner Main Office Facilities. The construction of temporary works is considered until the administration area facilities are operational.
- First aid room for the entire construction period.
- Generators until the power supply is enabled in the administration area.
- Modular bathrooms until the administration area is enabled.
- Temporary warehouse until the project warehouse is completed.
- Temporary gate and access control until the construction of the definitive gate.
- Temporary lighting towers.

21.1.6.1.3 Support Services (Fuel and Construction Water)

Fuel and construction water will be provided by the Owner. Costs were estimated using rates obtained in market research developed by Marimaca during the FS.

21.1.6.1.4 Third-Party Services

Considers the following construction support service contracts:

- Security Service and Access Control Service: Valued with rates quoted by Marimaca and master plan.
- Permit Consulting: Valued with rates from the Ausenco database and master plan.
- Factory Inspection: Factored with benchmarking values.
- First Aid: Valued with rates quoted by Marimaca and master plan.
- Waste Management: Waste quantities calculated and valued with rates from the Ausenco database.

- Other Service Contracts: Provision for other unidentified services, factored as 5% of the calculated services.

21.1.6.1.5 Catering, Accommodation and Transportation

The catering, accommodation and transportation of all project personnel (direct and indirect) will be provided by Marimaca. The estimate cost for these services were based on prices included in current agreements for catering and lodging and budget quotes for personnel transportation. The information for these cost was provided by Marimaca.

21.1.6.1.6 Freight & Logistics

To estimate this cost, what was indicated in the quotes was considered. For those elements that were not quoted or for which the freight was not quoted, benchmarking values were used.

21.1.6.1.7 Vendor Representatives

This item considers the cost of vendor personnel required for the supervision of installation, commissioning, start-up and testing of electromechanical equipment. Training services for operation and maintenance personnel are also included in this cost. To determine this concept, the quoted values were considered, when a quote was not available, benchmarking values were used.

21.1.6.1.8 First Fill

Includes the necessary elements for the first fills and lubricants required in the start-up stage of the project. This cost was estimated by Ausenco.

21.1.6.1.9 Spare Parts

The spare parts to be considered were determined taking into account benchmarking of similar projects and future commercial strategy for Vendors by Marimaca. To determine this item, the quoted values were considered, when a quote was not available, benchmarking values were used.

21.1.6.1.10 Commissioning & Start-up

Considers the costs of the direct crews, as well as the construction equipment and materials required for commissioning and start-up activities. To estimate its cost, the execution schedule and project labour rates were considered.

21.1.6.1.11 Operational Readiness

Considers the consultant who will train the plant staff for their operation. Valued with rates from the Ausenco database. The execution schedule was also taken into account.

21.1.6.1.12 Phase 2, Sustaining, Closure and Post-Closure Indirect Costs

The following indicates how the indirect costs of the project were estimated for Phase 2 and sustaining.

- Engineering, Construction Integration and Management Service: Engineering costs were estimated using a factor from Ausenco's benchmarking. It was defined that the construction management will be carried out by the Owner.
- Temporary Facilities: Not required, existing facilities will be used.
- Support Services (Fuel and Construction Water): An estimate of consumption was made and valued with the rates provided by Marimaca.
- Third-Party Services: Not required. It is assumed that existing services contracts will be used during the mine's operation.
- Catering, Accommodation and Transport (Direct and Indirect Staff): Estimated with man-hours and the rates provided by Marimaca.
- Freight & Logistics: These costs were estimated with factors from the Ausenco database.
- Vendor Representatives: These costs were estimated with factors from the Ausenco database.
- Spare Parts: Cost is included in Opex.
- Commissioning & Start-up: These costs were estimated with factors from the Ausenco database.

As required by a Class 5 - AACEI estimate, closure and post-closure costs were factored using values from the Ausenco database. A factor of 15% was used.

21.1.7 Owner's (Corporate) Capital Costs

Owner's costs were estimated by Marimaca and delivered to Ausenco for integration into the cost estimate.

Table 21-11: Owner's Costs Estimate

WBS (Level 1)	Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Closure Cost (US\$M)	Total Cost (US\$M)
9000	Owner's Team Cost	12	-	-	-	12
9000	Insurance	1	-	-	-	1
9000	Owner's Provision	2	-	-	-	2
9000	Project Warehouse (Includes Management)	2	-	-	-	2
9000	General	-	1	5	1	8
Total Owner Cost		17	1	5	1	24

Note: Values may not sum due to decimal rounding.

21.1.8 Contingency

Table 21-12 summarizes the total contingency as detailed in Section 21.1.2.7.

Table 21-12: Contingency

WBS (Level 1)	Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Closure Cost (US\$M)	Total Cost (US\$M)
10000	Total Contingency	53	9	13	12	88

Note: Values may not sum due to decimal rounding

21.2 Operating Costs

21.2.1 Overview

The operating cost estimate (Opex) is at feasibility study level according to the requirements for a AACE Class 3 Estimate, with an expected accuracy range of -15% to +15%. The Opex captures costs associated with the mine, process plant, port and general and administrative (G&A) areas during the LOM.

The operating costs are reported in the following areas:

- General
- Mine
- Crushing
- Agglomeration
- Leaching
- Solvent extraction (SX)/Tank Farm (TF)/Electrowinning (EW)
- Power Supply
- Water Supply and Reagents
- Infrastructure, Buildings and Roads

Ausenco developed the costs for the plant area and Marimaca provided cost estimates for the port and G&A. NCL provided the cost estimates for the mine.

A Build-Own-Operate-Transfer (BOOT) contract is considered for seawater collection and transport to the seawater pond at the plant facilities. The seawater BOOT operating costs and sustaining capital costs are shown in Table 21-28.

A BOOT contract is also considered for the 110 kV transmission from a tap-off at Mejillones to plant facilities, including the main electric room. The 110kV BOOT operating costs and sustaining capital costs are shown in Table 21-19.

21.2.2 Basis of Estimate

The overall assumptions for operating costs that apply to all areas are:

- Costs are based on an exchange rate of CLP967 to USD1.00 (Q3 2025).
- Operating costs were based on the Mine Plan delivered on June 2025 by Marimaca which considers an ore processing of 12 Mt/a for Phase 1 and 16 Mt/a for Phase 2.
- Port cost is divided in two items: transportation from the plant to the port in Mejillones (US\$15/lb Cu) and storage and shipping in the port (US\$5/lb Cu). This cost is included in the Infrastructure, Buildings and Roads area.

Main reagent prices and their source are presented in Table 21-13.

Table 21-13: Main Reagents Price

Reagent	Unit	Price	Source
Sulphuric Acid	US\$/t	90.0	Marimaca
Salt (NaCl)	US\$/t	32.5	Quotation from CONSA
Caustic Soda (50%)	US\$/kg	0.75	Quotation from Oxiquim
Extractant	US\$/L	7.6	Quotation from Pochteca
Diluent	US\$/L	1.4	Quotation from Oxiquim
Diesel for EW	US\$/m ³	100.0	Ausenco database
Cobalt Sulphate	US\$/kg	9.1	Quotation from Pochteca

21.2.3 Summary of Operating Cost Estimate

The summary of the operating cost estimate by area is shown in Table 21-14.

Table 21-14: Operating Cost Summary

Cost Area	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 Average (US\$/t leached)	Phase 2 Average (US\$/t leached)	Phase 1 Average (US\$/lb Cu)	Phase 2 Average (US\$/lb Cu)
General	27	39	0.46	0.33	0.05	0.06
Mine	173	325	3.00	2.69	0.33	0.49
Crushing	67	119	1.16	0.98	0.13	0.18
Agglomeration	192	415	3.34	3.43	0.37	0.62
Leaching	78	239	1.36	1.97	0.15	0.36
SX/TF/EW	122	173	2.12	1.43	0.23	0.26
Power Supply	4	7	0.07	0.06	0.01	0.01
Water Supply and Reagents	42	75	0.73	0.62	0.08	0.11
Infrastructure, Buildings and Roads	9	12	0.15	0.10	0.02	0.02
Total	714	1,404	12.40	11.60	1.37	2.10

21.2.4 Mine Operating Cost

The mine operating cost was developed by NCL. The costs are summarized in Table 21-15.

Table 21-15: Mine Cost

Cost Area	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 Average (US\$/t leached)	Phase 2 Average (US\$/t leached)	Phase 1 Average (US\$/t mined) (*)	Phase 2 Average (US\$/t mined) (*)
Labour	42.1	70.3	0.73	0.58	0.29	0.41
Maintenance	31.7	86.9	0.55	0.72	0.22	0.51
Fuel	39.7	74.1	0.69	0.61	0.27	0.43
Lubricants and Greases	1.1	2.1	0.02	0.02	0.01	0.01
Structure and Tracks	3.6	5.6	0.06	0.05	0.03	0.03
Gets Eq. Aux and Support	0.9	1.4	0.01	0.01	0.01	0.01
Tires	9.2	19.3	0.16	0.16	0.06	0.11
Rims	1.1	2.3	0.02	0.02	0.01	0.01
Body	1.5	3.1	0.03	0.03	0.01	0.02
Bucket & Gets	3.9	6.6	0.07	0.05	0.03	0.04
Drilling Steel	1.8	2.5	0.03	0.02	0.01	0.01
Explosives	10.6	14.9	0.18	0.12	0.07	0.09
Blasting Accessories	1.8	2.5	0.03	0.02	0.01	0.01
Blasting Services	8.4	11.9	0.15	0.10	0.06	0.07
Ore Control	1.7	3.4	0.03	0.03	0.01	0.02
Owner Cost (G&A)	13.8	18.3	0.24	0.15	0.10	0.11
TOTAL	172.8	325.3	3.00	2.69	1.20	1.90

Notes: * Tonnes mined do not include re-handle material, only tonnes directly mined from the pit.

Mining Opex costs were estimated by building up the cost estimate over the 13-year LOM (excluding pre-stripping) and presents an average annual cost of US\$34.8 million during the first five years of Phase 1, which is equivalent to US\$ 3.0/t leached, and an average annual cost of US\$46.9 million during the eight years of Phase 2, representing US\$2.7/t leached. The basis of the estimate is that the open pit operation will be an owner-operated mine.

21.2.5 Process Operating Costs

A summary of the process operating costs divided by WBS and Area are shown in Table 21-16 and Table 21-17 respectively. These costs include the plant, water supply, G&A and port.

Table 21-16: Process Operating Cost by Area

Cost Area	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
General	US\$/t	0.56	0.45	0.45	0.45	0.45	0.38	0.33	0.33	0.33	0.33	0.27	0.27	0.36	0.37
Crushing	US\$/t	1.31	1.13	1.13	1.13	1.13	1.06	0.98	0.98	0.98	0.98	0.98	0.98	0.94	1.04
Agglomeration	US\$/t	3.56	3.54	3.33	3.24	3.08	3.25	3.33	3.28	3.55	3.57	3.44	3.48	3.55	3.40
Leaching	US\$/t	1.37	1.28	1.28	1.28	1.59	2.06	2.02	2.02	2.02	2.02	2.02	2.02	1.48	1.77
SX/TF/EW	US\$/t	2.26	2.09	2.09	2.09	2.09	1.79	1.57	1.57	1.50	1.48	1.16	1.08	1.25	1.65
Power Supply	US\$/t	0.08	0.07	0.07	0.07	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.06
Water Supply and Reagents	US\$/t	0.86	0.71	0.71	0.71	0.71	0.69	0.61	0.61	0.61	0.61	0.61	0.61	0.62	0.66
Infrastructure, Buildings and Roads	US\$/t	0.14	0.15	0.15	0.15	0.15	0.12	0.11	0.11	0.11	0.11	0.08	0.08	0.08	0.12
Total	US\$/t	10.12	9.42	9.21	9.12	9.27	9.41	9.00	8.95	9.16	9.15	8.62	8.57	8.35	9.07

Table 21-17: Process Operating Cost by Category

Cost Area	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Labour Process Plant	US\$/t	0.67	0.54	0.54	0.54	0.54	0.51	0.44	0.44	0.44	0.44	0.42	0.42	0.41	0.48
Maintenance	US\$/t	1.29	1.03	1.03	1.03	1.03	1.11	0.97	0.97	0.97	0.97	0.97	0.97	0.97	1.02
Energy	US\$/t	1.85	1.93	1.93	1.93	1.93	1.75	1.66	1.66	1.61	1.59	1.35	1.28	1.29	1.65
Seawater Supply (*)	US\$/t	0.59	0.47	0.47	0.47	0.47	0.48	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.44
Sulphuric Acid	US\$/t	3.32	3.32	3.11	3.02	2.86	2.85	2.92	2.80	2.96	2.81	2.98	3.00	2.84	2.97
Third-Party Services	US\$/t	0.56	0.56	0.56	0.56	0.87	1.20	1.20	1.20	1.20	1.20	1.20	1.20	0.65	0.98
Reagents and Consumables	US\$/t	1.32	1.13	1.13	1.13	1.13	1.12	1.05	1.13	1.23	1.39	1.04	1.05	1.43	1.17
Port	US\$/t	0.08	0.08	0.08	0.08	0.08	0.07	0.06	0.06	0.06	0.06	0.03	0.03	0.03	0.06
G&A	US\$/t	0.45	0.36	0.36	0.36	0.36	0.31	0.27	0.27	0.27	0.27	0.21	0.21	0.30	0.30
Total	US\$/t	10.12	9.42	9.21	9.12	9.27	9.41	9.00	8.95	9.16	9.15	8.62	8.57	8.35	9.07

Notes: * Seawater supply cost considers labour, energy, maintenance and third-party services.

21.2.5.1 Labour

Labour cost was estimated by a breakdown of staffing positions including a total of 128 workers for Phase 1 and 146 workers for Phase 2. Costs are all-in, including salary, company costs and statutory costs.

Table 21-18: Labour Cost Breakdown

Position	Number of Employees Phase 1	Number of Employees Phase 2	Annual Cost per Employee (US\$/a)
Plant Manager	1	1	198
Superintendents	3	3	177
Operation Supervisors	1	1	86
Operation Engineer	9	9	80
Operators A	29	29	53
Operators B	46	54	36
Operators C	0	4	33
Operation Supervisors	1	1	86
Maintenance Engineers	6	6	80
Maintainers A	0	0	53
Maintainers B	32	38	33
Total	128	146	-

21.2.5.2 Energy

Energy cost was estimated based on mechanical equipment and energy consumption for the plant facilities considering an electric energy price of US\$93/MWh and a diesel cost of US\$0.68/L for the LOM.

A BOOT contract is considered for the 110 kV transmission from a tap-off at Mejillones to plant facilities including the main electric room. The contract considers the financing, design, development, operation, maintenance and administration of this transmission system. The BOOT contract is divided into two items: Investment annual cost and operation, maintenance and administration cost as is shown in Table 21-19. Only operation, maintenance and administration costs are included in the Opex.

Table 21-19: Energy BOOT Contract Cost Breakdown

Description	Unit	Value
Investment annual cost (sustaining capital)	US\$/a	3.38
Operation, maintenance and administration cost (Opex)	US\$/a	0.44

A summary of the energy cost is presented in Table 21-20. BOOT contract is included under Electrical Energy Supply.

Table 21-20: Energy Costs

Description	Phase 1 MWh/a	Phase 2 MWh/a	Phase 1 US\$/a	Phase 2 US\$/a
Mine	-	-	-	-
Crushing	57,138	64,169	5.31	5.97
Agglomeration	18,484	24,510	1.72	2.28
Leaching	32,290	56,084	3.00	5.22
SX / TF / EW	114,001	114,001	10.60	10.60
Electrical Energy Supply	954	954	0.53	0.53
Water and Reagents Supply	12,259	12,312	1.14	1.14
Infrastructure Buildings and Roads	8,808	8,808	0.82	0.82
Total	243,934	280,837	23.13	26.56

21.2.5.3 Maintenance

Maintenance costs were estimated as a percentage (7%) of the equipment costs. These costs are shown in Table 21-21 and consider spare parts and contracts for mechanical, piping, electrical, instrumentation and structural maintenance.

Table 21-21: Maintenance Costs

Cost Area	Phase 1 (US\$/M)	Phase 2 (US\$/M)	Phase 1 Average (US\$/t leached)	Phase 2 Average (US\$/t leached)	Phase 1 Average (US\$/lb Cu)	Phase 2 Average (US\$/lb Cu)
Crushing	20.8	39.4	0.36	0.33	0.04	0.06
Agglomeration	2.9	8.1	0.05	0.07	0.01	0.01
Leaching	8.2	24.3	0.14	0.20	0.02	0.04
SX / TF / EW	23.2	35.6	0.40	0.29	0.04	0.05
Power Supply	1.6	2.5	0.03	0.02	0.00	0.00
Water Supply and Reagents	5.0	9.7	0.09	0.08	0.01	0.01
Infrastructure, Buildings and Roads	0.01	0.02	0.00019	0.00014	0.00002	0.00002
Total	62	120	1.07	0.99	0.12	0.18

21.2.5.4 Reagents and Consumables

Sulphuric acid is the main reagent in the process and is shown separately in Table 21-22. Consumables costs are shown in Table 21-23 and reagents costs are shown in Table 21-24.

Table 21-22: Sulphuric Acid Cost

Description	Phase 1 Value	Phase 2 Value
Average Net Acid Consumption (kg/t)	33.9	31.5
Average Cost (US\$/M/a)	36.1	44.4
Total Cost (US\$/M)	179.5	350.7
Average Unit Cost (US\$/t)	3.12	2.90
Average Unit Cost (US\$/lb Cu)	0.34	0.53

Table 21-23: Consumables Average Cost

Item	Phase 1 (US\$/M/a)	Phase 2 (US\$/M/a)
Primary Crusher Mantle	0.93	0.89
Secondary Crusher Mantle	0.14	0.13
Secondary Crusher Liners	0.15	0.14
Secondary Screen Panel	0.22	0.21
Tertiary Crusher Mantle	0.21	0.27
Tertiary Crusher Liners	0.22	0.29
Tertiary Screen Panel	0.22	0.31
Agglomeration Drum Liners	0.15	0.20
Drip Emitters	2.52	3.26
Electrowinning Consumables (Edge Strips, Strapping, Clips, Buffing Pads)	0.08	0.06
Cathodes Pallets	0.36	0.29
Cathodes Reposition	0.76	0.62
Anodes Reposition	0.46	0.37
Reverse Osmosis 1 Consumables (Membranes, Chemicals, Filters, Antifouling)	0.30	0.30
Reverse Osmosis 2 Consumables (Membranes, Chemicals, Filters, Antifouling)	0.02	0.02
Total	6.74	7.36

Table 21-24: Reagents Average Cost

Item	Phase 1 (US\$M/a)	Phase 2 (US\$/a)
Salt (NaCl)	0.00	2.47
Caustic Soda (50%)	0.00	1.37
Chemical Analysis	0.20	0.20
Extractant	2.59	2.59
Diluent	1.77	1.77
Clay for SX	0.03	0.03
Anthracite for TF/EW	0.003	0.003
Garnet for TF/EW	0.02	0.02
Diesel for EW	1.00	1.00
Cobalt Sulphate	0.68	0.68
Guar	0.08	0.07
Surfactant	0.04	0.04
Acid Mist Control Spheres	0.29	0.24
Total	6.71	10.48

21.2.5.5 Ripios Disposal

The cost for the leached ore (Ripios) disposal system is shown in Table 21-25. This cost considers Ripios removal using trucks, its transport and deposition in the dump.

Table 21-25: Ripios Disposal Annual Costs

Description	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 Average (US\$/t leached)	Phase 2 Average (US\$/t leached)
Ripios removal, transport and deposition	36	137	0.62	1.13

21.2.5.6 Port

The cost for the port is shown in Table 21-26. This cost includes the transport from the plant to the port in Mejillones and the storage and handling in the port.

Table 21-26: Port Annual Costs

Description	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 (US\$/t)	Phase 2 (US\$/t)
Cathodes Transport to Port	3.55	4.54	0.062	0.038
Port Cost	1.18	1.51	0.021	0.013
Total	4.73	6.06	0.082	0.050

21.2.5.7 Seawater Supply

The cost for seawater supply is divided into two items: purchase of seawater and a BOOT contract. Purchase of seawater has a different cost for each phase, and it considers a value up to the maximum water consumption (Phase 1: 2,850,000 m³/a and Phase 2: 3,525,000 m³/a) and a higher cost for the differential of seawater consumption as is shown in Table 21-27.

Table 21-27: Purchase of Seawater Cost

Description	Unit	Description
Purchase of seawater Phase 1	US\$/m ³	0.36 if consumption ≤ 2.85 Mm ³ /a 0.40 if consumption > 2.85 Mm ³ /a
Purchase of seawater Phase 2	US\$/m ³	0.36 if consumption ≤ 3.525 Mm ³ /a 0.40 if consumption > 3.525 Mm ³ /a

The BOOT contract is divided into two components: an investment payment and an operation and administration cost, as is shown in Table 21-28. Only the operation and administration costs are considered in the Opex. This component covers seawater treatment, as well as operation, administration, and maintenance of the pipeline from Mejillones to the seawater pond of the plant facilities. The total cost for seawater supply is shown in Table 21-29.

Table 21-28: Seawater Supply BOOT Contract Cost Breakdown

Description	Unit	Value
Investment payment cost (sustaining capital)	US\$/m ³	1.53
Operation and administration cost (Opex)	US\$/m ³	0.90
Total BOOT Contract Cost	US\$/m³	2.43

Table 21-29: Seawater Supply Operating Costs

Description	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 (US\$/m ³)	Phase 2 (US\$/m ³)
Purchase of seawater	8.26	15.03	0.37	0.37
BOOT contract	19.87	36.25	0.90	0.90
Total	28.13	51.28	1.27	1.27

21.2.6 General and Administration Costs

General and administration (G&A) costs were estimated by Marimaca and are shown in Table 21-30. The G&A costs include general management; administration and finance; legal, property and permits; health and safety; catering, transport, systems; security and insurance.

Table 21-30: General and Administration Annual Cost

Item	Y1 to Y10 (US\$M/a)	Y11 to Y13 (US\$/a)	Y1 to Y10 (US\$/t leached)	Y11 to Y13 (US\$/t leached)	Y1 to Y10 (US\$/lb Cu)	Y11 to Y13 (US\$/lb Cu)
General Management	0.34	0.31	0.025	0.022	0.003	0.007
Administration and Finance	1.28	0.89	0.094	0.062	0.012	0.020
Legal, Property and Permits	0.36	0.36	0.027	0.025	0.003	0.008
Health and Safety	0.56	0.45	0.042	0.031	0.005	0.010
Catering	0.22	0.16	0.017	0.011	0.002	0.003
Transport	0.29	0.21	0.022	0.014	0.003	0.004
Systems	0.47	0.33	0.035	0.023	0.004	0.007
Security	0.71	0.57	0.053	0.040	0.007	0.012
Insurance	0.08	0.08	0.006	0.005	0.001	0.002
Total G&A	4.33	3.36	0.319	0.234	0.041	0.073

The project considers 35 persons for their G&A personnel. The distribution is shown in Table 21-31.

Table 21-31: General and Administration Personnel

Staffing	Quantity	Annual Wages (US\$M/a)
Human Resources	5	0.26
Health and Safety	4	0.19
Environment	2	0.06
Finance	3	0.15
Contracts and Purchasing	8	0.41
Warehouse	9	0.25
IT	3	0.12
Security	1	0.06
Total	35	1.50

22 ECONOMIC ANALYSIS

22.1 Forward-Looking Information Cautionary Statements

The results of the economic analyses discussed in this section represent forward-looking information as the results depend on inputs that are subject to known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here. Forward-looking information includes:

- Mineral Reserve estimates.
- Assumed copper prices and exchange rates.
- The proposed mine production plan.
- Projected mining and process recovery rates.
- Assumptions as to mining dilution and ability to mine using open-pit mining methods as envisaged.
- Sustaining costs and proposed operating costs.
- Assumptions as to closure costs and requirements.
- Assumptions as to environmental, permitting, and social risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what was assumed.
- Unrecognized environmental risks.
- Unanticipated reclamation expenses.
- Unexpected variations in the quantity of mineralized material, grade, or recovery rates.
- Geotechnical or hydrogeological considerations during mining being different from what was assumed.
- Failure of mining methods to operate as anticipated.
- Failure of plant, equipment, or processes to operate as anticipated.
- Changes to assumptions in the availability of electrical power, and the power rates used in the operating cost estimates and financial analysis.
- Ability to maintain the social licence to operate.
- Accidents, labour disputes, and other mining industry risks.

- Changes to interest rates.
- Changes to tax rates.

Calendar years used in the financial analysis are provided for conceptual purposes only.

22.2 Methodologies Used

The project was evaluated using an 8% discounted cash flow (DCF) analysis on a non-inflated, post-tax basis. The cash flows consist of two years of pre-production costs and 13 years of operations. Cash inflows consist of annual revenue projections for the mine. Cash outflows include capital costs, operating costs, royalties, and taxes, which are subtracted from the inflows to arrive at the annual cash flow projections.

To reflect the time value of money, annual net cash flow (NCF) projections are discounted back to the beginning of the project execution, using an 8% discount rate. The discount rate was determined using several factors, including the type of commodity and the level of risks. The discounted present values of the cash flows are summed to obtain the net present value (NPV) of the project.

In addition to the NPV, the internal rate of return (IRR) and payback period were also calculated. The IRR is defined as the discount rate that results in an NPV equal to zero. Cash flows are assumed to occur on an average mid-year basis of each annual period.

22.3 Financial Model Parameters

22.3.1 Assumptions

The financial model was developed based on the following assumptions:

- Mineral Reserves outlined in Section 15, the mining rates and assumptions discussed in Section 16 and the recovery and processing rates and assumptions discussed in Section 13 and Section 17, respectively.
- Construction starts in year -2. All cash flows discounted to beginning of construction in a mid-year convention.
- Ramp-up production start-up in year 1.
- Mine life of 12.7 years.
- Exchange rates presented in Table 21-2.
- No price inflation or escalation factors were considered.
- Results are based on 100% ownership.
- All copper cathodes are assumed sold in the same period they are produced.
- Project revenue is derived from the sale of copper cathodes.

- No contractual arrangements currently in place.
- A NSR Royalty payment equivalent to 2.5% on net smelter return.

22.3.2 Capital and Operating Costs

Initial capital costs are estimated to be US\$586.6 million. Expansion capital costs and LOM sustaining capital are estimated to be US\$77 million and US\$529 million respectively.

LOM operating costs are estimated to be US\$2,119 million.

The capital and operating cost estimates are presented in Section 21 of this Report in Q3 2025 US dollars (USD).

22.3.3 Sales and Marketing Costs

Sales and Marketing charges are estimated to be US\$2.0 million.

22.3.4 Copper Price Forecast

As stated in Section 19, the copper price is based on the analyst consensus copper price and assuming a constant price of US\$4.30/lb Cu for the long term.

A cathode premium of US\$250/t Cu was assumed.

22.3.5 Taxes

The project was evaluated on an post-tax basis to assess the potential economic returns. The economic model was developed by Ausenco, while the tax model was provided by Marimaca with assistance from a third-party tax consultant. The analysis reflects the tax legislation in effect as of the date of the study. The tax model incorporated tax loss carryforwards, anticipate VAT recoveries, and the treatment of depreciable assets, as provided by Marimaca.

At the effective date of this report, the project was assumed to be subject to the following tax regime:

- The Chilean corporate income tax system consists of 27% income tax.
- An ad-valorem component, which is a sales-based tax applicable exclusively to copper production above 50 kt/a of fine copper. This is not included in this project.
- A component based on operational mining profitability, applied progressively from 8% to 26%, depending on the operating margin.

Total undiscounted total tax payments are estimated to be US\$380 million over the LOM.

22.3.6 Working Capital

A high-level estimation of working capital was incorporated into the cash flow based on accounts receivable (30 days), accounts payable (45 days) and inventory (0 days).

22.3.7 Closure Costs

Closure costs are applied at the end of the life of mine. Closure costs were estimated to be US\$47 million as detailed in Section 21.

22.3.8 Salvage Value

The mine fleet and process plant salvages values were included as shown in Table 22-1.

Table 22-1: Mine Fleet Salvage Value

Year	Mine Fleet Salvage Value (US\$M)
1	--
2	--
3	--
4	--
5	0.001
6	0.
7	--
8	0.002
9	5.7
10	8.4
11	11.5
12	2.1
13	14.9
14	--
15	--
Total	42.6

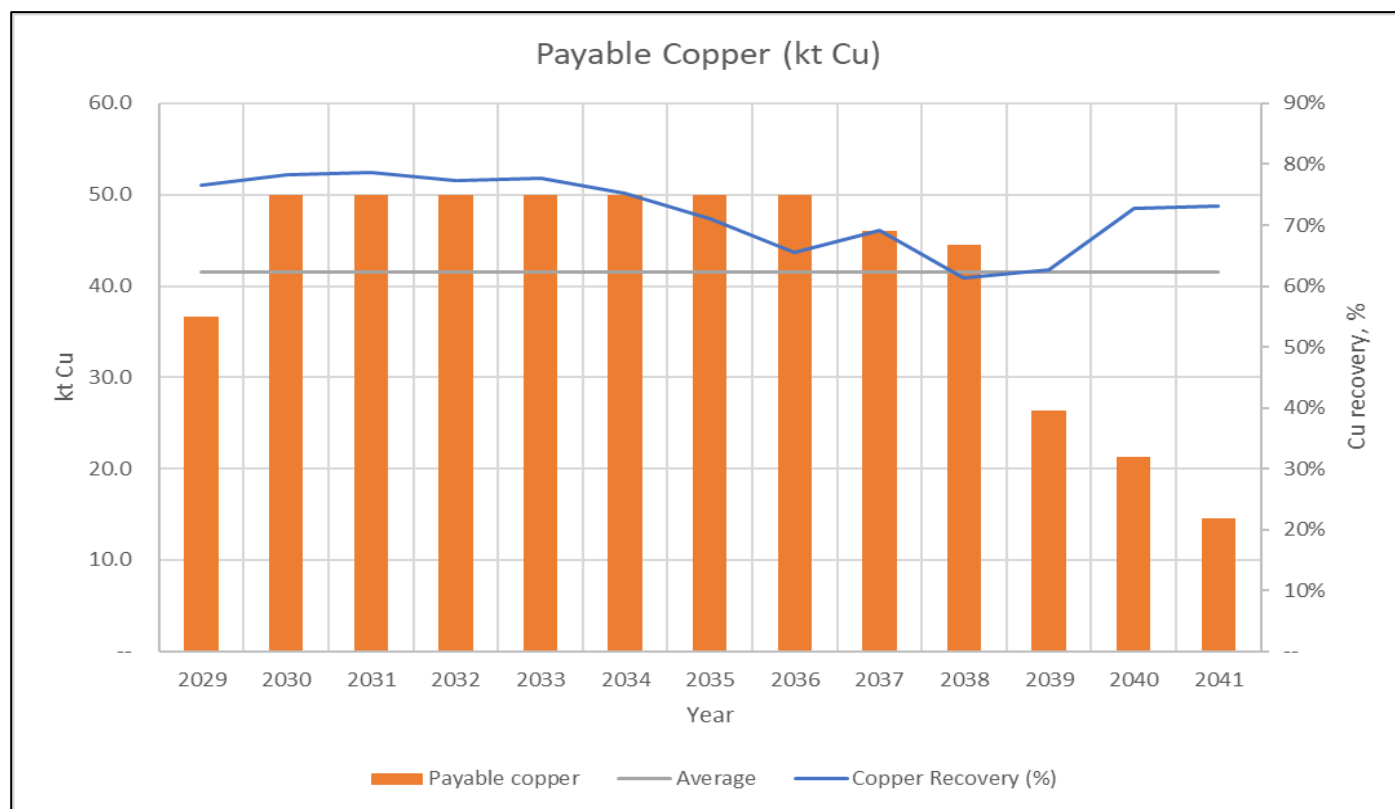
22.3.9 Royalties

Royalties are payable to third parties on the copper production from various claims within the MOD Project, including a 1.0% NSR royalty payable to Osisko on all claims where mineral reserves are present. The LOM royalty payments are estimated to be US\$73 million.

22.3.10 Copper Production

Project revenue is derived from the sale of copper cathodes. Copper cathode production profile is shown in Figure 22-1. Payability has been assumed as 100%.

Figure 22-1: Payable Copper (kt Cu)



Source: Ausenco, 2025.

22.4 Economic Analysis

The economic analysis was performed assuming an 8% discount rate. Cash flows have been discounted to the beginning of construction in Year -2.

The pre-tax net present value (NPV) discounted at 8% (NPV8%) is US\$898 million, the internal rate of return (IRR) is 33.0%, and payback is 2.6 years. On an post-tax basis, the NPV8% is US\$709 million, the IRR is 30.9%, and the payback period is 2.5 years.

A summary of the Project economics is included in Table 22-2 and is shown graphically in Figure 22-2. The cashflow on an annualized basis is provided in Table 22-3.

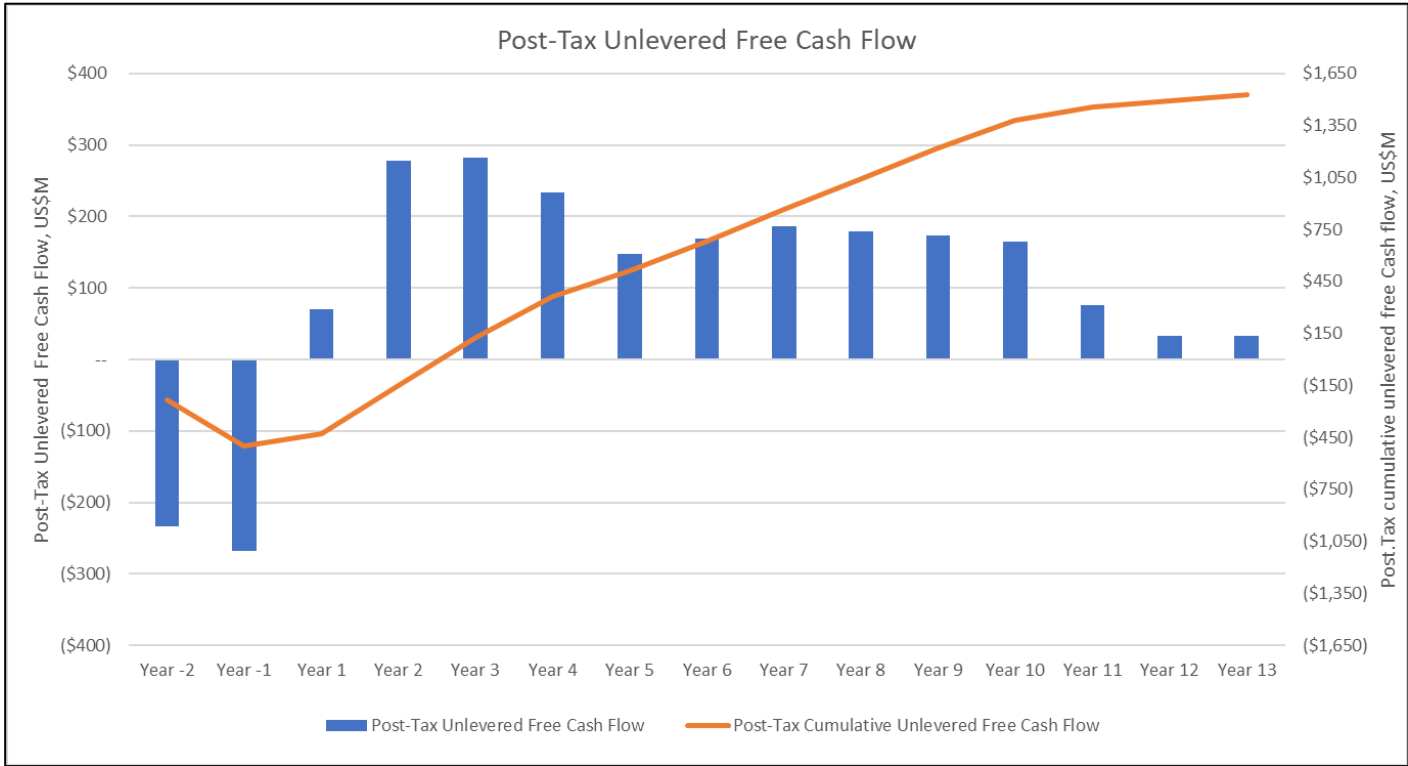
Table 22-2: Summary Economics

General	Units	LOM Total / Avg
Copper Price	(US\$/lb)	4.30
Mine Life	year	12.7
Production		
Total Leach Feed Tonnes	Kt	178,635
Leach Head Grade Cu	%	0.42%
Leach Recovery Rate	%	72.2%
Total Copper Recovered	M lb	1,189
Operating Costs		
Mining Cost	US\$/t mined	\$1.5
Mining Cost	US\$/t Leached	\$2.8
Processing Cost	US\$/t Leached	\$8.8
G&A Cost	US\$/t Leached	\$0.3
Total Operating Costs	US\$/t Leached	\$11.9
Cash Costs*	US\$/lb Cu	\$1.84
All-in Sustaining Cost (AISC)**	US\$/lb Cu	\$2.29
Capital Costs		
Initial Capital	US\$M	\$586.6
Expansion Capital	US\$M	\$77.0
Sustaining Capital	US\$M	\$529.1
Closure Costs	US\$M	\$47.5
Salvage Value	US\$M	\$42.6
Financials – Pre-tax		
NPV (8%)	US\$M	\$898
IRR	%	33.0%
Payback	year	2.6
Financials – Post-tax		
NPV (8%)	US\$M	\$709
IRR	%	30.9%
Payback	year	2.5

* Cash costs consist of mining costs, processing costs, mine-level G&A, sales & marketing charges and royalties.

** All-in Sustaining Cost (AISC) includes cash costs plus sustaining capital, closure cost and salvage value.

Figure 22-2: Post-tax Unlevered Free Cash Flow



Source: Ausenco, 2025.

Table 22-3: Annual Cashflow Statement (Years -2 to 6)

	Unit	LOM	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mining Summary										
Total Resource Mined	kt	178,635	--	4,170	14,680	16,150	17,091	15,675	16,100	15,667
Total Waste Mined	kt	145,889	--	4,330	10,320	8,850	7,909	19,318	18,509	19,218
Strip Ratio	w:o	0.82x	--	1.04x	0.70x	0.55x	0.46x	1.23x	1.15x	1.23x
Production Summary										
Resource Sent to Leach	kt	178,635	--	--	9,600	12,000	12,000	12,000	12,000	14,000
Cu Contained in Feed	t	747,628	--	--	47,817	63,865	63,617	64,621	64,268	66,518
Head Grade	%	0.42%	--	--	0	0	0	0	0	0
Cu Recovery	%	72.15%	--	--	76.63%	78.30%	78.59%	77.38%	77.79%	75.16%
Cu Recovered	t	539,424	--	--	36,643	50,004	49,996	50,000	49,996	49,997
Cu Recovered	MIbs	1,189.2	--	--	80.8	110.2	110.2	110.2	110.2	110.2
Macro Assumptions										
Cu Realization Price	US\$/lb	\$4.41	--	--	\$4.41	\$4.41	\$4.41	\$4.41	\$4.41	\$4.41
Revenue										
Gross Revenue	US\$M	\$5,249	--	--	\$357	\$487	\$486	\$486	\$486	\$486
Operating Costs										
Total Operating Costs	US\$M	(\$2,119)	--	--	(\$125)	(\$146)	(\$149)	(\$144)	(\$150)	(\$171)
Mine Operating Costs	US\$M	(\$498)	--	--	(\$28)	(\$33)	(\$38)	(\$35)	(\$39)	(\$40)
Leach Processing Costs	US\$M	(\$1,567)	--	--	(\$93)	(\$109)	(\$106)	(\$105)	(\$107)	(\$127)
G&A Costs	US\$M	(\$53)	--	--	(\$4)	(\$4)	(\$4)	(\$4)	(\$4)	(\$4)
Sales & Marketing										
Sales & Marketing	US\$M	(\$2)	--	--	(\$0.1)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)
Royalty										
Royalty	US\$M	(\$73)	--	--	(\$7)	(\$8)	(\$8)	(\$8)	(\$8)	(\$8)
Capital Expenditures										
Initial Capital	US\$M	(\$587)	(\$253)	(\$268)	(\$66)	--	--	--	--	--
Expansion Capital	US\$M	(\$77)	--	--	--	--	--	--	(\$41)	(\$36)
Sustaining Capital	US\$M	(\$529)	--	--	(\$70)	(\$43)	(\$42)	(\$58)	(\$84)	(\$57)
Closure Cost	US\$M	(\$47)	--	--	--	--	--	--	--	--
Salvage Value	US\$M	\$42.6	--	--	--	--	--	--	\$0	\$0
Change in Working Capital										
Change in Working Capital	US\$M	--	--	--	(\$14)	(\$8)	\$0	(\$1)	\$1	\$3
Pre-Tax Unlevered Free Cash Flow										
Pre-Tax Unlevered Free Cash Flow	US\$M	\$1,857	(\$253)	(\$268)	\$75	\$281	\$288	\$276	\$205	\$217
Pre-Tax Cumulative Unlevered Free Cash Flow	US\$M	--	(\$253)	(\$521)	(\$446)	(\$165)	\$124	\$400	\$604	\$821
Unlevered Cash Taxes										
Cash Taxes	US\$M	(\$380)	\$20	--	(\$5)	(\$4)	(\$5)	(\$42)	(\$57)	(\$47)
Post-Tax Unlevered Free Cash Flow										
Post-tax Unlevered Free Cash Flow	US\$M	\$1,478	(\$233)	(\$268)	\$70	\$277	\$283	\$234	\$148	\$170
Post-tax Cumulative Unlevered Free Cash Flow	US\$M	--	(\$233)	(\$501)	(\$431)	(\$153)	\$129	\$363	\$511	\$681

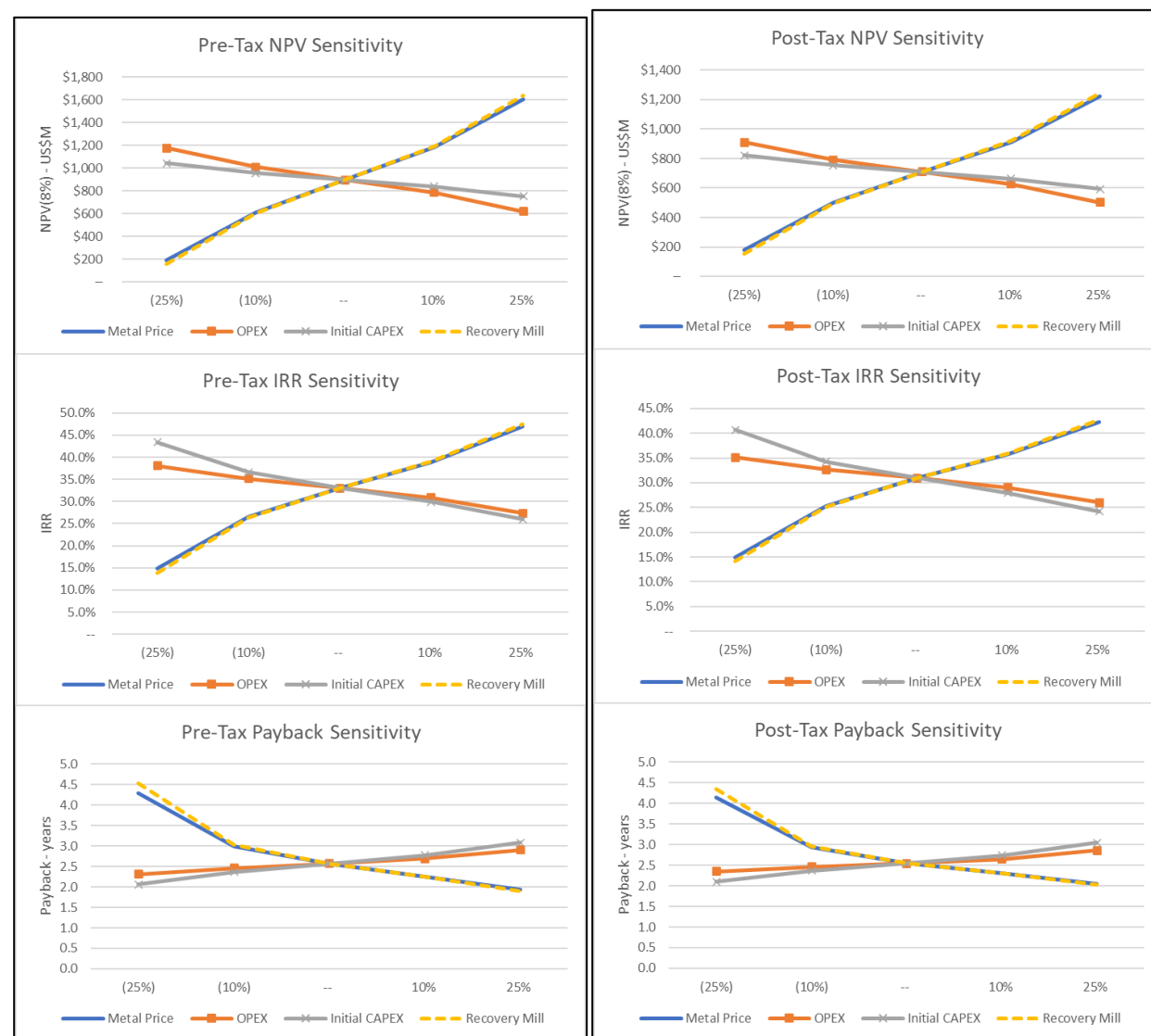
Table 22-4: Annual Cashflow Statement (Years 7 to 14)

	Unit	LOM	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Mining Summary										
Total Resource Mined	kt	178,635	20,351	16,990	19,122	17,997	4,641	--	--	--
Total Waste Mined	kt	145,889	14,650	16,295	15,878	9,503	1,112	--	--	--
Strip Ratio	w:o	0.82x	0.72x	0.96x	0.83x	0.53x	0.24x	--	--	--
Production Summary										
Resource Sent to Leach	kt	178,635	16,000	16,000	16,000	16,000	16,000	16,000	11,035	--
Cu Contained in Feed	t	747,628	70,283	76,251	66,564	72,548	42,088	29,309	19,878	--
Head Grade	%	0.42%	0	0	0	0	0	0	0	--
Cu Recovery	%	72.15%	71.14%	65.58%	69.16%	61.36%	62.61%	72.76%	73.22%	--
Cu Recovered	t	539,424	49,996	50,004	46,037	44,519	26,351	21,326	14,555	--
Cu Recovered	MLbs	1,189.2	110.2	110.2	101.5	98.1	58.1	47.0	32.1	--
Macro Assumptions										
Cu Realization Price	US\$/lb	\$4.41	\$4.41	\$4.41	\$4.41	\$4.41	\$4.41	\$4.41	\$4.41	--
Revenue										
Gross Revenue	US\$M	\$5,249	\$486	\$487	\$448	\$433	\$256	\$207	\$142	--
Operating Costs										
Total Operating Costs	US\$M	(\$2,119)	(\$195)	(\$204)	(\$207)	(\$198)	(\$170)	(\$156)	(\$103)	--
Mine Operating Costs	US\$M	(\$498)	(\$51)	(\$60)	(\$60)	(\$51)	(\$32)	(\$19)	(\$10)	--
Leach Processing Costs	US\$M	(\$1,567)	(\$140)	(\$139)	(\$142)	(\$142)	(\$135)	(\$134)	(\$89)	--
G&A Costs	US\$M	(\$53)	(\$4)	(\$4)	(\$4)	(\$4)	(\$3)	(\$3)	(\$3)	--
Sales & Marketing										
Sales & Marketing	US\$M	(\$2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.1)	(\$0.1)	(\$0.1)	--
Royalty										
Royalty	US\$M	(\$73)	(\$8)	(\$6)	(\$5)	(\$6)	(\$2)	(\$0)	(\$0)	--
Capital Expenditures										
Initial Capital	US\$M	(\$587)	--	--	--	--	--	--	--	--
Expansion Capital	US\$M	(\$77)	--	--	--	--	--	--	--	--
Sustaining Capital	US\$M	(\$529)	(\$51)	(\$43)	(\$20)	(\$18)	(\$16)	(\$16)	(\$13)	--
Closure Cost	US\$M	(\$47)	--	--	--	--	--	--	--	(\$47)
Salvage Value	US\$M	\$42.6	--	\$0.002	\$5.704	\$8.401	\$11.500	\$2.062	\$14.900	--
Change in Working Capital										
Change in Working Capital	US\$M	--	\$3	\$1	\$4	\$0	\$11	\$2	(\$1)	(\$1)
Pre-Tax Unlevered Free Cash Flow										
Pre-Tax Unlevered Free Cash Flow	US\$M	\$1,857	\$234	\$235	\$225	\$220	\$91	\$39	\$40	(\$48)
Pre-Tax Cumulative Unlevered Free Cash Flow	US\$M	--	\$1,056	\$1,291	\$1,516	\$1,736	\$1,827	\$1,866	\$1,906	--
Unlevered Cash Taxes										
Cash Taxes	US\$M	(\$380)	(\$49)	(\$57)	(\$53)	(\$54)	(\$15)	(\$6)	(\$6)	--
Post-Tax Unlevered Free Cash Flow										
Post-Tax Unlevered Free Cash Flow	US\$M	\$1,478	\$186	\$179	\$173	\$165	\$76	\$33	\$34	(\$48)
Post-Tax Cumulative Unlevered Free Cash Flow	US\$M	--	\$866	\$1,045	\$1,218	\$1,383	\$1,459	\$1,493	\$1,526	\$1,478

22.5 Sensitivity Analysis

A sensitivity analysis was conducted on the base case pre-tax and post-tax NPV, IRR, and payback of the project, using the following variables: metal price, leach recovery, initial capital costs, and operating costs. Analysis revealed that the project is most sensitive to changes in metal price and leach recovery, then, to a lesser extent, to operating costs and initial capital costs. Figure 22-1 shows the pre-tax and post-tax sensitivity analysis figures, the Table 22-5 shows the pre-tax sensitivity results and the Table 22-6 shows the post-tax sensitivity results.

Figure 22-3: Sensitivity Analysis



Source: Ausenco, 2025.

Table 22-5: Sensitivity Pre-Tax

Pre-Tax NPV (US\$M) Sensitivity To Opex							Pre-Tax IRR (%) Sensitivity To Opex							Pre-Tax Payback (years) Sensitivity To Opex						
Opex	Metal Price						Opex	Metal Price						Opex	Metal Price					
		(25%)	(10%)	--	10%	25%			(25%)	(10%)	--	10%	25%			(25%)	(10%)	--	10%	25%
	(20.0%)	\$411	\$837	\$1,121	\$1,406	\$1,832		(20.0%)	21.0%	31.2%	37.1%	42.6%	50.3%		(20.0%)	3.6	2.7	2.4	2.1	1.8
	(10.0%)	\$299	\$726	1,010	\$1,294	\$1,720		(10.0%)	18.1%	28.9%	35.1%	40.8%	48.6%		(10.0%)	3.8	2.8	2.5	2.2	1.9
	--	\$188	\$614	\$898	\$1,182	\$1,608		--	14.9%	26.6%	33.0%	38.9%	46.9%		--	4.3	3.0	2.6	2.3	1.9
	10.0%	\$76	\$502	\$786	\$1,070	\$1,496		10.0%	11.1%	24.1%	30.8%	36.9%	45.1%		10.0%	5.1	3.2	2.7	2.4	2.0
	20.0%	(\$36)	\$390	\$674	\$958	\$1,384		20.0%	6.3%	21.3%	28.5%	34.8%	43.3%		20.0%	6.1	3.4	2.8	2.5	2.1
Pre-Tax NPV (US\$M) Sensitivity To Capex							Pre-Tax IRR (%) Sensitivity To Capex							Pre-Tax Payback (years) Sensitivity To Capex						
Initial Capex	Metal Price						Total Capex	Metal Price						Total Capex	Metal Price					
		(25%)	(10%)	--	10%	25%			(25%)	(10%)	--	10%	25%			(25%)	(10%)	--	10%	25%
	(20.0%)	\$304	\$730	\$1,014	\$1,298	\$1,724		(20.0%)	21.0%	33.7%	40.9%	47.5%	56.6%		(20.0%)	3.4	2.5	2.2	1.9	1.6
	(10.0%)	\$246	\$672	\$956	\$1,240	\$1,666		(10.0%)	17.7%	29.9%	36.6%	42.8%	51.3%		(10.0%)	3.8	2.8	2.4	2.1	1.8
	--	\$188	\$614	\$898	\$1,182	\$1,608		--	14.9%	26.6%	33.0%	38.9%	46.9%		--	4.3	3.0	2.6	2.3	1.9
	10.0%	\$129	\$556	\$840	\$1,124	\$1,550		10.0%	12.5%	23.7%	29.9%	35.5%	43.1%		10.0%	5.0	3.3	2.8	2.4	2.1
	20.0%	\$71	\$497	\$781	\$1,066	\$1,492		20.0%	10.3%	21.3%	27.2%	32.5%	39.8%		20.0%	5.7	3.5	3.0	2.6	2.2
Pre-Tax NPV (US\$M) Sensitivity To Leach Recovery							Pre-Tax IRR (%) Sensitivity To Leach Recovery							Pre-Tax Payback (years) Sensitivity To Leach Recovery						
Leach Recovery	Metal Price						Leach Recovery	Metal Price						Leach Recovery	Metal Price					
		(25%)	(10%)	--	10%	25%			(25%)	(10%)	--	10%	25%			(25%)	(10%)	--	10%	25%
	(2.0%)	\$143	\$560	\$839	\$1,117	\$1,534		(2.0%)	13.4%	25.3%	31.7%	37.6%	45.5%		(2.0%)	4.6	3.1	2.6	2.3	2.0
	(1.0%)	\$165	\$587	\$868	\$1,149	\$1,571		(1.0%)	14.2%	25.9%	32.4%	38.2%	46.2%		(1.0%)	4.5	3.0	2.6	2.3	2.0
	--	\$188	\$614	\$898	\$1,182	\$1,608		--	14.9%	26.6%	33.0%	38.9%	46.9%		--	4.3	3.0	2.6	2.3	1.9
	1.0%	\$210	\$640	\$927	\$1,214	\$1,645		1.0%	15.6%	27.2%	33.6%	39.5%	47.5%		1.0%	4.1	2.9	2.5	2.2	1.9
	2.0%	\$232	\$667	\$957	\$1,247	\$1,682		2.0%	16.3%	27.8%	34.3%	40.1%	48.2%		2.0%	4.0	2.9	2.5	2.2	1.9

Table 22-6: Sensitivity Post-Tax

Post-Tax NPV (US\$M) Sensitivity To Opex						Post-Tax IRR (%) Sensitivity To Opex						Post-Tax Payback (years) Sensitivity To Opex								
Opex	Metal Price					Opex	Metal Price					Opex	Metal Price							
	(25%)	(10%)	--	10%	25%		(25%)	(10%)	--	10%	25%		(25%)	(10%)	--	10%	25%			
	(20.0%)	\$350	\$665	\$870	\$1,075		\$1,382	(20.0%)	20.4%	29.3%	34.3%		38.8%	45.0%	(20.0%)	3.5	2.7	2.4	2.2	2.0
	(10.0%)	\$265	\$583	\$790	\$994		\$1,301	(10.0%)	17.9%	27.4%	32.6%		37.3%	43.7%	(10.0%)	3.8	2.8	2.5	2.2	2.0
	--	\$177	\$501	\$709	\$914		\$1,221	--	15.0%	25.3%	30.9%		35.7%	42.3%	--	4.1	2.9	2.5	2.3	2.0
	10.0%	\$86	\$418	\$628	\$833		\$1,140	10.0%	11.7%	23.1%	29.1%		34.1%	40.8%	10.0%	4.9	3.1	2.6	2.4	2.1
	20.0%	\$21	\$332	\$546	\$753		\$1,060	20.0%	7.0%	20.7%	27.0%		32.4%	39.3%	20.0%	5.9	3.3	2.8	2.5	2.2
Post-Tax NPV (US\$M) Sensitivity To Capex						Post-Tax IRR (%) Sensitivity To Capex						Post-Tax Payback (years) Sensitivity To Capex								
Initial Capex	Metal Price					Total Capex	Metal Price					Total Capex	Metal Price							
	(25%)	(10%)	--	10%	25%		(25%)	(10%)	--	10%	25%		(25%)	(10%)	--	10%	25%			
	(20.0%)	\$275	\$594	\$799	\$1,004		\$1,311	(20.0%)	21.0%	32.4%	38.3%		43.7%	51.2%	(20.0%)	3.3	2.5	2.2	2.0	1.8
	(10.0%)	\$226	\$548	\$754	\$959		\$1,266	(10.0%)	17.8%	28.5%	34.3%		39.4%	46.3%	(10.0%)	3.7	2.7	2.4	2.2	1.9
	--	\$177	\$501	\$709	\$914		\$1,221	--	15.0%	25.3%	30.9%		35.7%	42.3%	--	4.1	2.9	2.5	2.3	2.0
	10.0%	\$128	\$454	\$663	\$869		\$1,176	10.0%	12.7%	22.6%	28.0%		32.6%	38.8%	10.0%	4.8	3.2	2.7	2.5	2.2
	20.0%	\$78	\$407	\$617	\$824		\$1,131	20.0%	10.6%	20.2%	25.4%		29.9%	35.9%	20.0%	5.5	3.5	2.9	2.6	2.3
Post-Tax NPV (US\$M) Sensitivity To Leach Recovery						Post-Tax IRR (%) Sensitivity To Leach Recovery						Post-Tax Payback (years) Sensitivity To Leach Recovery								
Leach Recovery	Metal Price					Leach Recovery	Metal Price					Leach Recovery	Metal Price							
	(25%)	(10%)	--	10%	25%		(25%)	(10%)	--	10%	25%		(25%)	(10%)	--	10%	25%			
	(2.0%)	\$142	\$462	\$666	\$867		\$1,168	(2.0%)	13.7%	24.2%	29.8%		34.6%	41.2%	(2.0%)	4.5	3.0	2.6	2.4	2.1
	(1.0%)	\$159	\$482	\$688	\$891		\$1,195	(1.0%)	14.4%	24.8%	30.4%		35.2%	41.7%	(1.0%)	4.3	3.0	2.6	2.3	2.1
	--	\$177	\$501	\$709	\$914		\$1,221	--	15.0%	25.3%	30.9%		35.7%	42.3%	--	4.1	2.9	2.5	2.3	2.0
	1.0%	\$195	\$521	\$731	\$937		\$1,247	1.0%	15.6%	25.9%	31.4%		36.2%	42.8%	1.0%	4.0	2.9	2.5	2.3	2.0
	2.0%	\$213	\$541	\$752	\$961		\$1,274	2.0%	16.3%	26.4%	32.0%		36.7%	43.3%	2.0%	3.9	2.9	2.5	2.3	2.0

22.6 Comments on Economic Analysis

Based on the assumptions and parameters presented in this Report, the Project shows positive economics.

23 ADJACENT PROPERTIES

Marimaca has acquired all the properties that it considers of interest for the project. It is the qualified person's understanding that the existing property in the hands of Marimaca ensures that the Resource reported in this document is not affected by adjacent properties.

24 OTHER RELEVANT DATA AND INFORMATION

24.1 Project Execution Strategy

The Project Execution Strategy is based on Marimaca directly administering the Project Engineering, Procurement, Construction, and Commissioning activities, with some support from an engineering contractor to provide integration services.

A main EPCM-IC contractor (IC = Integration & Commissioning) has been defined, which will act as an agent of Marimaca and manage various EPC contracts across the respective areas and disciplines.

The EPCM-IC will manage all assigned responsibilities within the parameters of the agreed scope of work, taking into account the approved project schedule and budget. The EPCM-IC contractor will be responsible for:

- Developing the engineering within its scope.
- Managing all assigned responsibilities within the parameters of the contractual agreement, the approved project schedule, and the project Capex, subject to Marimaca's approval.
- Integrating information from third-party engineering participants, ensuring completeness of the assigned scope.
- Enhancing operational efficiency, enabling the achievement of organizational objectives effectively.
- Integrating engineering and procurement related to packages WP01/02/03/04/05/06/07/08.
- Integrating the commissioning of packages WP01/03/04/05/06/07/08.

The Project Execution Strategy considers grouping the activities into ten work packages, as outlined below:

- **WP-SPW Site Preparation Works:** This package covers all scope defined under the Owner's responsibility. Site Preparation works will be executed pre-FID.
- **WP-SPW1 Administration Area:** Construction of facilities and infrastructure required to initiate construction (guardhouse, administration area offices, wastewater treatment plant, first aid clinic, fuel stations, water supply facilities, IT infrastructure, and other works that enable the start of construction). This includes all scope originally defined under WP01 Administration Area.
- **WP-SPW2a Platforms and Roads:** Includes scope transferred from the package originally considered WP02. Covers mine roads and access roads.
- **WP-SPW3 Truckshop.**
- **WP00 Mine:** This package includes the Pre-stripping works.
- **WP01 Administration Area:** Transferred to WP-SPW.

- **WP02 Earthworks:** This package groups construction activities for access roads, platforms, and ponds. Some of these activities, including their cost, some are expected to be executed prior to the project FID.
- **WP03 Dry Area Construction:** This package groups the activities required to develop the crushing plant, which includes primary, secondary, tertiary, and agglomeration crushers.
- **WP04 Construction of Heap Leach Pad Liner, Ponds, Waste Dumps, and Piping.**
- **WP05 Conveyor and Stacking System.**
- **WP06 SX/EW Plant Construction.**
- **BOOT1 (original WP07):** Construction of the High Voltage Line, MV Substation, Tap-Off Substation, and Main Substation. Considered as a BOOT contract delivery model according with the Project Contracting Strategy.
- **BOOT2 (original WP08):** Seawater Pumping system, which includes pumping station, seawater transport pipeline, and associated infrastructure. Considered as a BOOT contract delivery model according with the Project Contracting Strategy.

Figure 24-1 shows the Project Execution Strategy or delivery model defined by Marimaca.

Figure 24-1: Project Execution Strategy Diagram

Package ID	WP00	WP SPW	WP01	WP02	WP03/05	WP04	WP06	WP07 (BOOT 1)	WP08 (BOOT 2)		
Package Name	Mine	Site Preparation Works	Ancillary Facilities	Mass Earthwork	Dry Area(Crushing, Aglom and Stacking)	Leach Pad & Ponds	Wet Area	Power Supply	Water Supply		
Project Administration	Owner										
Engineering & Field Engineering	Owner	EP Specialist	EP Specialist	EP Specialist	Engineering Procurement Management Const&Precomm Mgmt (EP-CM-IC)			EPC/Lump Sum/TK	BOOT	BOOT	
Integration Engineering		Owner	Eng. & Procure Mgmt.					Eng. & Procure Mgmt.			
Procurement Management		Owner	Owner	Owner				EPC/Lump Sum/TK	BOOT Contractor	BOOT Contractor	
Contracts Management								Owner			
Construction Management (QA)								EPC/Lump Sum/TK	BOOT Contractor	BOOT Contractor	
Precomm. Management		Owner	Owner	Owner				Owner	Eng. & Procure Mgmt.		
Control System Integration											
Fire protection System											
Comm. Integration											
Start Up Management											

Source: Ausenco, 2025.

24.2 Project Execution Schedule

The project schedule begins with the Final Investment Decision (FID), and considers approximately 27 months of construction, pre-commissioning and commissioning to produce the first copper cathode. Ramp-up will follow with full Phase 1 Copper Cathode production anticipated to be achieved approximately 29 months after the FID. To meet the project schedule, Marimaca will complete pre-FID engineering and the following site preparation activities:

- Approval of DIA and Sectoral Permits.
- Development of early works for platform preparation, access roads, buildings for offices, change house, mess hall, and a laboratory.
- Start of Interim Engineering.

24.3 Key Project Milestones

The developed master plan presents the activities to be carried out along with their respective start dates. The key activities are presented in Table 24-1.

Table 24-1: Project Milestones

Activities	Date
Start of Site preparation works	Q3 Year -4
Award of BOOT Contract 110kV Transmission Line	Q3 Year -3
Approval of Funds for Execution	Q3 Year -3
Completion of Mine Pre-Stripping	Q3 Year -2
Permanent Power Supply at Process Plant Substation	Q1 Year -1
Sea Water available at Process Plant	Q1 Year -1
Completion of Process Plant Construction	Q3 Year -1
Completion of Process Plant Commissioning	Q4 Year -1
Start of Ramp-Up	Q4 Year -1
First Cathode	Q4 Year -1

24.4 Engineering, Procurement and Construction Management Approach

The stages for project development, applicable to each work package, are as follows:

24.4.1 Engineering

24.4.1.1 Interim Engineering

The objectives of the interim engineering stage are:

- Consolidate the process definition (mine plan, process criteria, mass balance) to be used at the start of detailed engineering during the execution phase.
- Update the feasibility design for the following items:
 - Value engineering to close design opportunities.
 - Advanced Basic engineering development for the SX/EW plant.
 - Mine/plant access roads.
 - Mass earthworks platforms.
 - Facilities (Guardhouse, Administration Area, Wastewater Treatment Plant, and others).
- Pre-award main long-lead process equipment to accelerate detailed engineering during the execution phase.
- Define and award vendor engineering and acquisition of Long Lead Items through a Limited Notice to Proceed (LNTP) for critical-path vertical packages (EPC and/or BOOT).
- Develop all necessary engineering for project infrastructure, achieving the same level of detail and maturity as the main process plant.

24.4.1.2 Detail Engineering

It is planned that detail engineering will be at least 30% complete before tendering the main procurement packages, and 50% complete for the main contracts, excluding earthworks. This level of progress will allow:

- improved accuracy of the project capital cost estimate up to the Definitive Estimate level (AACE Class 2).
- provision of the necessary information to construction contractors to enable a progressive combination of lump-sum and unit-price contracts for construction and installation.

24.4.2 Procurement

The selected EPCM-IC contractor will provide procurement services to purchase, manage, and deliver all equipment required to complete the project. The scope of procurement services includes:

- Develop a procurement and contract plan for the project, aligned with the plant schedule and Commissioning Plan.
- Prepare and issue Requests for Quotation (RFQs) for all required items.
- Prepare and issue RFQs for all construction services and contracts.
- Conduct commercial evaluations of all bids submitted by suppliers and contractors, and issue award recommendations.
- Award purchase orders and manage the provision of suppliers' technical documentation, as well as equipment and material deliveries (as applicable at this stage).

- Award and manage on-site and construction service subcontracts.
- Manage the activation of national and international procurement (including transportation, deconsolidation, customs clearance, on-site warehouse management, among others).

24.4.3 Construction

The EPCM-IC contractor (IC = Integration & Commissioning) will provide Construction Management resources to oversee all on-site activities. These activities include:

- Provide engineering input by consolidating the layout design and service platforms.
- Manage all on-site subcontractor activities and administer construction subcontracts.
- Update and control subcontractor construction schedules.
- Update and control costs of each subcontractor contract.
- Audit construction quality and initiate corrective actions.
- Manage the on-site QA/QC plan and document control.
- Establish, manage, and implement on-site systems including safety, occupational health, and environmental management.
- Establish, manage, and implement temporary construction facilities and related infrastructure.
- Provide logistical support, such as on-site storage, material control, local transport, accommodation management and freight.
- Provide support and infrastructure to credential contractors (personnel/equipment), conduct inductions, control site access, and industrial surveillance, among others.
- Integrate the engineering of WP01/02/03/04/05/06/07/08 packages.
- Integrate the Commissioning of WP01/03/04/05/06/07/08 packages.

This stage covers civil works, structural, mechanical, piping, electrical, and instrumentation tasks. Additionally, project commissioning is included within this stage.

24.4.4 Pre-Commissioning and Commissioning

24.4.4.1 Pre-Commissioning

The EPCM contractor's pre-commissioning team is responsible for ensuring that outcomes align with the objectives of the commissioning management plan:

- Ensure that pre-commissioning (C1) and (C2) is carried out in an orderly manner.

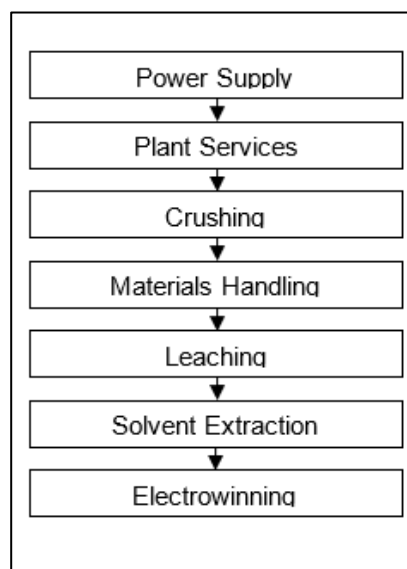
- Clarify and define the different delivery phases, the various parties involved, and their responsibilities at each stage.
- Achieve the acceptance criteria for stage C2, demonstrated through protocols conducted during testing and the relevant documentation.

Early identification of the commissioning plan includes scheduling and resource planning, as well as the documentation required by Operations for handover, so that it is incorporated into construction contracts. Early involvement of Operations personnel during the pre-commissioning stages, both dry and wet, is a valuable training tool before the first ore feed.

24.4.4.2 Commissioning

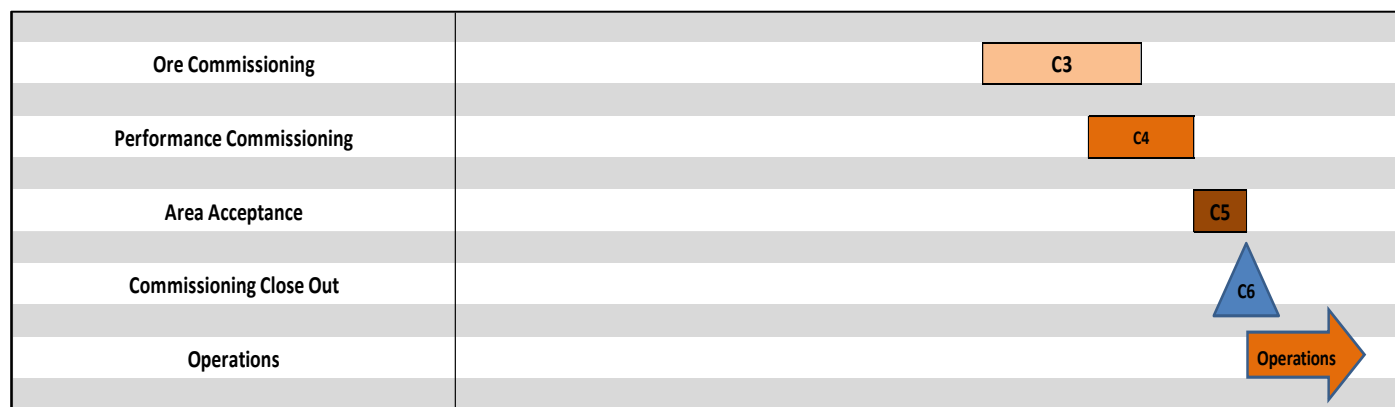
The activities corresponding to the commissioning and/or start-up of the plant (stages C3 to C6) will be carried out by the Marimaca Operations team, as previously indicated in Section 15.2, where the scope of Pre-Commissioning (stages C1 and C2) was defined. Figure 24-2 provides a breakdown by area for the start-up.

Figure 24-2: Start-up Area



Source: Ausenco, 2025.

Figure 24-3 shows the sequence of stages for the plant start-up.

Figure 24-3: Stages of Plant Start-up


Source: Ausenco, 2025.

The commissioning stages are described as follows:

- **Ore Start-Up (C3):** Initial introduction of ore and process fluids, and testing of one or more integrated process start-up modules to demonstrate stable operation under predetermined operating parameters. The ore start-up will be carried out by the Marimaca start-up team with support from Marimaca Operations and the EPCM contractor.
- **Performance Verification (C4):** Operation of the plant to demonstrate that it can achieve the required performance.
- **Area Acceptance (C5):** Area acceptance by Marimaca confirms that the plant has met the required performance for the start-up area and that the commissioning documentation handover has been completed.
- **Commissioning Close-Out (C6):** Completion of commissioning activities and preparation and issuance of the commissioning close-out report.

25 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

The QPs note the following interpretations and conclusions in their respective areas of expertise, based on the review of data available for this Report.

25.2 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The MOD Project's mining/exploitation concessions are in good standing, and all required annual fees have been paid in full through 2025 without interruption.

Certain NSR royalty interests have been established on the concessions comprising the Project.

Marimaca holds two legal mining easements that cover a substantial portion of the project area. Marimaca has been granted a provisional easement over the area designated for the construction of the water pipeline. The final award of this provisional easement, through a court resolution, is still pending but is anticipated in the coming months.

The Company does not hold any water rights or maritime concessions. However, MCAL entered into a sea water supply option agreement in October 2022 to secure the future water supply required for the Project.

25.3 Geology and Mineralization

The discovered and evaluated supergene blanket in Marimaca has not been described in any other IOCG district. Substantial evidence indicates that the oxide body formed due to the oxidation of a prior sulphide blanket. The oxidation process is evident in the Mixed zone, where green and black copper oxides partially replace secondary sulphides. The blanket's mineralogical zoning and copper grade distribution suggest repeated lateral migration and accumulation events. This process requires abundant pyrite to produce sufficient sulphuric acid; however, as established, the IOCG system is low in pyrite. It is possible that rich and pervasive chalcopyrite-pyrite primary mineralization, combined with a long-lived oxidation process, can explain the formation of Marimaca's uncommon secondary blanket.

The geological and mineral observations, along with mapping, logging, and geological interpretations adhering to comprehensive geological criteria, have been conducted with quality and thoroughness, providing a solid foundation for the subsequent phases of the Project.

25.4 Exploration and Drilling

The project area is well-known and has been studied with various tools. There is no risk associated with exploration or drilling, allowing for a focus on the potential for sulphur mineralization beneath the known deposit and the three targets located within 5 km of Marimaca as mentioned in Section 9. It is highly recommended that Marimaca continue to explore and drill deep into the deposit and its surroundings.

25.5 Analytical Data Collection in Support of Mineral Resource Estimation

The management of samples and the complete procedures ensure compliance with CIM Mineral Exploration Best Practice Guidelines (November 23, 2018) and CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019).

25.6 Metallurgical Testwork

Marimaca completed seven metallurgical testing campaigns between 2017 and 2024 (Geomet I, II, III, IV, V, VI and VII) to characterize the metallurgical response of samples collected from its Marimaca Copper Project.

Metallurgical variability tests were done during 2020 in order to improve the knowledge about mineral characteristics based on chemical characterization and ISO-pH tests for sample composites of metallurgical units BROCC, CRIS, WAD, ENR and MIX. Chemical characterization included total copper head grade (CuT), acid soluble copper (CuS), cyanide soluble copper (CuCN), residual copper (CuR) and analytical acid consumption (CAA). ISO-pH tests included kinetics of copper dissolution for up to 72 hours at a pH of 1.1. A total of 412 composite samples were tested. Results indicate that variability tests provide adequate coverage of the LOM plan.

Testwork campaigns permitted to determine copper extraction and acid consumption for the mineral subzones: BROCC, CRIS, WAD, MIX and ENR under different operating conditions. The testwork program provided information to define process operating conditions for each mineral subzone and to develop a geometallurgical model for copper recovery and net acid consumption.

The copper recovery model and net acid consumption model are adequate for the level of this engineering and testwork done. However, it is recommended to perform additional testing, focusing on further geometallurgical development in order to improve model accuracy. Metallurgical tests should consider the following operational design conditions:

- Heap height: 4 m
- Solution to ore ratio: 3.0:1 for oxides and 2.2:1 for sulphides
- Crushed product size P₈₀: 12.7 mm
- Irrigation rate: 10 L/h/m²
- Irrigation in two stages using ILS in the first stage and raffinate in the second stage

- Air addition rate: 0.3 m³/h/m² (for sulphides)
- Salt addition in agglomeration – design: 15 kg/t (sulphides)
- Agglomerated ore moisture: 8 % (wet basis)

It is recommended to update the net acid consumption model to consider unique values of the experimental factors F1 and F2 for each mineral subzone.

25.7 Mineral Resource Estimate

The QP Luis Oviedo, of NCL, believes that the Resource Estimate carried out is adequately supported by a sound database and geological knowledge of the deposit. The figures obtained are reliable and in accordance with international standards for resource disclosure. Further exploration may improve the data density and therefore the Resource Classification, but it is not expected that the overall geological interpretation will suffer any substantial change that may lead to significant changes.

25.8 Mineral Reserve Estimate

- Proven and Probable Mineral Reserves total 178.6 Mt grading 0.42 % CuT. Mineral Reserves are reported as constrained within Measured and Indicated pit design, and supported by a mine plan featuring a constant copper production rate.
- Average operational CoGs varying between 0.10% and 0.43% CuT were used as a strategy to improve the grade of the plant feed during production.
- A total of 84% of the estimated Measured + Indicated Mineral Resources were converted into proven + probable mineral reserves.
- During the first 5 years of the min plan, 66% of the ore is in the category of proven and 34% is probable. During the LOM period, 53% of the reserves are in the proven category.
- Mineral Reserve estimated could be most affected by changes in metallurgical recoveries and operating costs.

25.9 Mining Methods

A mine plan was developed for the MOD to produce 50,000 t/a of copper cathode. The total mining rate starts at 25 Mt (Year 1) and peaks at approximately 35 Mt (Year 4 through Year 9).

The final pit design has two exits on the south of the pit which give access to the ore to the crusher and three exits to the west for access to the waste storage area. The final pit is 1,800 m long in the SE-NW direction and up to 1,000 m wide in the NE-SW direction.

One waste rock storage area at the west of the pit was designed for the life of the Project. The ore extracted from the mine will be transported to the primary crusher or to the low-grade stockpile, both located southeast of the pit.

The drilling equipment will consist of diesel units capable of drilling 7½" diameter holes in all material types. Support units capable of drilling 6½" diameter holes for pre-splitting and one buffer line will also be used. One production unit will be required for pre-stripping and two from the start of commercial production through Year 3 of the mine plan, then increased to three units. The support unit requirement is one through Year 3 and then increased to two units.

Two 29-m³ hydraulic shovel and one 23-m³ front-end-loader are required from Year 1 throughout the LOM. During the pre-production phase, six size 220 t trucks are required. The number of haul trucks required gradually increases to a maximum of 13 units utilized in Years 7 to 9, then gradually decreases as less material is mined toward the end of the LOM. In general, five track dozers, two wheel dozers, two motor graders and two water trucks will be required in the auxiliary mine fleet.

25.10 Recovery Plan

The proposed recovery methods are based on well-proven unit operations in the industry. There are no unique or novel processing methods required for copper extraction and recovery. The process considers a three-stage crushing circuit with the product fed to an agglomeration stage, followed by heap leaching, solvent extraction and electrowinning obtaining Grade A copper cathodes at a production rate of 50 kt/a.

The project is divided into two phases. The first phase, from year one to five, considers the treatment of oxide ores at a rate of 12 Mt/a. The second phase, from year six to thirteen, considers the treatment of oxide and sulphide ores at a rate of 16 Mt/a. During Phase 2, salt (sodium chloride) is added to the agglomeration stage in order to improve copper extraction from sulphide minerals.

PLS from heap leaching is fed to the solvent extraction and electrowinning stages obtaining A-grade copper cathodes at a production rate of 50 kt/a.

The project includes the use of seawater. Seawater is pumped from Mejillones to the seawater pond located in the operational plant area. The process plant includes sulphuric acid and salt supply, as well as reagent dosing for the solvent extraction, which includes diluent and extractant, and electrowinning process, which includes cobalt sulphate, guar and surfactant.

25.11 Infrastructure

Marimaca is a greenfield project. The minimal infrastructure that is currently on site is related to mineral exploration activities and site management of project study work activities.

Most project Infrastructure will be constructed for Phase 1. For Phase 2, infrastructure will be expanded in tertiary crushing, agglomeration, heap leaching and pond areas, as well as the addition of salt storage and heap leach air blowers. Ripios dump construction will progressively continue during the initial years of operation.

Offsite infrastructure that will be constructed for the project includes the high-voltage power line and Industrial Sea Water delivery pipeline.

On-site infrastructure for the project includes the mine open pit, mine stockpile, mine waste dump, primary crusher, secondary crusher, tertiary crusher, agglomeration, heap leach pad, SX/TF/EW plant & dedicated ripios waste dumps for the disposal of spent ore from the dynamic heap leaching operation.

The design of the heap leach pad, process ponds, and leached ore dumps is essential to ensure that leaching extraction processes are carried out safely and efficiently. Their structural earthwork design, developed in accordance with national and international standards and aligned with best practices in the mining industry, ensures that all operations optimize metallurgical recovery and promote responsible and efficient performance. Furthermore, these designs enable controlled operations and help prevent both environmental and safety risks, directly contributing to operational sustainability and environmental protection.

25.12 Markets and Contracts

The project is expected to produce a high purity, >99.99% copper cathode which aligns with the London Metal Exchange Grade A copper specifications. The Company assumes it will sell the cathode produced FOB Mejillones, which is a large export terminal for copper cathode and concentrates. No contracts for the transportation or off-take of the copper cathode are in place but are expected to be in line with industry norms.

Copper market price assumptions and payment terms were based on a review of public information, market forecasts, and comparable operations globally. This study uses a copper price of US\$4.30/lb, which is slightly lower than the long-term consensus copper price of US\$4.36/lb, provided by 26 major banks. The Company completed a review of the sulphuric acid market in Chile using external consultants and reviewing the long-term supply and demand forecasts as provided by the Comision Chilena del Cobre (“Cochilco”). The assumed acid price for the study is US\$90/t CFR Mejillones over the life of the project, aligning with the projected decline in sulphuric acid consumption towards the end of the decade.

25.13 Environmental, Permitting and Social Considerations

The project will take place in the Antofagasta Region, near the town of Mejillones. This region is characterized by extreme environmental conditions for biotic development, namely hyper-arid conditions, intense solar radiation and high wind speeds all constitute adverse conditions for ecosystems. The area of influence of the project is also characterized by scarce human settlements, mostly due to the harsh environmental conditions.

The main environmental considerations for the project are its demand for sea water and its proximity to protected flora species.

Waste rock materials and pit walls are likely to be potentially acid generating (PAG) but potential impacts of acid rock drainage and metal leaching (ARD/ML) is assumed to be mitigated by the extremely arid conditions present at the site. During the very occasional and episodic rainfall events, there is the potential of some limited impact to downgradient surface and groundwaters. This needs to be further studied to inform the development of detailed water management designs.

A DIA for the Project was submitted by Marimaca for evaluation by the environmental authority in December 2024. As part of the DIA review process, in February 2025 the regulatory authorities commented and requested additional information and clarifications, which were received and resolved by Marimaca. Currently the project is under a second round of questions by the authorities, but according to the Company, most of the authorities have already declared compliance.

Social baseline studies were conducted as part of the 2024 DIA preparation. Based on this information, Indigenous associations related to the Chango Indigenous group have been identified in the proximity of the project but stated by the authorities to be outside the Influence Area of the project.

25.14 Capital Cost Estimate

The estimate conforms to AACE Class 3 guidelines for a feasibility study cost estimate with an expected accuracy range of -10% to -20% on the low side of the range and +10% to +30% on the high side of the range.

Table 25-1 provides a summary of the estimate for the overall initial, expansion, sustaining, closure and post-closure capital cost. The costs are expressed in Q3 2025 are in USD, and include all mining, process plant, infrastructure, project indirect, project delivery, Owner costs and contingency.

Table 25-1: Capital Cost Summary

Description	Phase 1 Cost (US\$M)	Phase 2 Cost (US\$M)	Sustaining Cost (US\$M)	Closure Cost (US\$M)	Total Cost (US\$M)
General	-	-	29	30	59
Mine	24	-	240	-	264
Crushing	141	17	-	-	158
Agglomeration	13	8	-	-	21
Leaching	90	26	91	-	206
SX/TF/EW	121	-	-	-	121
Power Supply	10	-	44	-	54
Water Supply and Reagents	35	8	95	-	139
Infrastructure, buildings and roads	4	1	1	-	6
Total Direct Costs	437	61	501	30	1,028
Owners Costs	17	1	5	1	24
Indirect Costs	80	6	10	4	100
Total Indirect Costs	97	7	15	6	124
Total Direct + Indirect Costs	533	68	516	35	1,152
Contingency	53	9	13	12	88
Total Capital Cost	587	77	529	47	1,240

Note: Values may not sum due to decimal rounding

25.15 Operating Cost Estimate

The operating cost estimate (Opex) is at feasibility study level according to the requirements for a AACE Class 3 Estimate, with an expected accuracy range of -15% to +15%. The Opex captures costs associated with the mine, process plant, port and general and administrative (G&A) areas during the LOM. Costs are presented in US dollars (US\$) for Q3 2025.

Ausenco developed the costs for the plant area and Marimaca provided cost estimates for the port and G&A. NCL provided the estimates for the mine. A Build-Own-Operate-Transfer (BOOT) contract is considered for seawater collection and transport to the seawater pond at the plant facilities. A BOOT contract is also considered for the 110 kV transmission from a tap-off at Mejillones to plant facilities, including the main electric room.

Table 25-1 summarizes the Opex per area. Phase 1 average cost is US\$12.4/t leached or US\$1.37/lb Cu and Phase 2 has an average cost of US\$11.60/t or US\$2.10/lb Cu.

Table 25-2: Operating Cost Estimate

Cost Area	Phase 1 (US\$M)	Phase 2 (US\$M)	Phase 1 Average (US\$/t leached)	Phase 2 Average (US\$/t leached)	Phase 1 Average (US\$/lb Cu)	Phase 2 Average (US\$/lb Cu)
General	27	39	0.46	0.33	0.05	0.06
Mine	173	325	3.00	2.69	0.33	0.49
Crushing	67	119	1.16	0.98	0.13	0.18
Agglomeration	192	415	3.34	3.43	0.37	0.62
Leaching	78	239	1.36	1.97	0.15	0.36
SX/TF/EW	122	173	2.12	1.43	0.23	0.26
Power Supply	4	7	0.07	0.06	0.01	0.01
Water Supply and Reagents	42	75	0.73	0.62	0.08	0.11
Infrastructure, Buildings and Roads	9	12	0.15	0.10	0.02	0.02
Total	714	1,404	12.40	11.60	1.37	2.10

25.16 Economic Analysis

The project was evaluated using a discounted cash flow (DCF) analysis based on an 8% discount rate. Cash inflows consisted of annual revenue projections. Cash outflows consisted of capital expenditures, including pre-production costs; operating costs; treatment, and transport costs; taxes; and royalties. These were subtracted from the inflows to arrive at the annual cash flow projections. Cash flows were taken to occur at mid-year of each period. The economic analysis was run on a constant dollar basis with no inflation.

A sensitivity analysis was conducted on the base case pre-tax and post-tax NPV, IRR, and payback of the project, using the following variables: metal price, metal recovery, total operating cost and initial capital costs. Analysis revealed that the project is most sensitive to changes in metal prices and recovery and then, to a lesser extent, to operating costs and capital costs. The economic analysis is considered current and suitable to be included in this Report.

25.17 Risks and Opportunities

25.17.1 Risks

25.17.1.1 Metallurgical Testwork

- Unexpected variations in grade or recovery rates (higher or lower).
- Unexpected variations in acid consumption (higher or lower).
- Slower or faster leach kinetics than indicated in metallurgical testing.

25.17.1.2 Mineral Reserve Estimate

- Unexpected variations in quantity of tonnage, grade or recovery rates.
- Geotechnical considerations during mining being different from what was estimated.

25.17.1.3 Infrastructure

- Based on the information obtained from additional geotechnical studies to be provided as engineering progresses, there may be a need for excavation or fill adjustments in the foundation areas of project infrastructure.
- Excavations related to the process ponds may require localized replacement with structural fill material in areas where soluble salts are present.
- The leached ore dumps must maintain a geometric configuration in accordance with the design, in order to minimize physical instability risks and ensure safe and sustainable operation.

25.17.1.4 Environmental, Permitting and Social Considerations

- The closure plan will be presented as part of the sectoral permit after DIA approval. As part of the FS a Class 5 closure plan cost estimate was prepared. Potentially the allocated resources for the scope of closure activities could change.
- The MOD Project was submitted for environmental permit evaluation by Marimaca in December 2024, through a Declaración de Impacto Ambiental (DIA). Marimaca will need to make sure during the detailed engineering stage that there are no significant variations between the final design of the MOD Project and the DIA, in order to avoid submitting a new environmental permit request. When modifications are identified, they must be evaluated by Marimaca through a Relevance Pertinence Analysis (Análisis de Pertinencia) to determine whether these changes are significant based on the current instructions required by the environmental authority.

- Water management designs should take into consideration the occasional episodic rainfall events and the potential downgradient transport of contaminants in surface and groundwater.

25.17.1.5 Capital and Operating Costs

- Pre-FID site preparation works must be successfully executed prior to project execution. Any works that transfer from site preparation to execution phase will increase Capex.
- The OPEX is particularly sensitive to sulphuric acid price. Unexpected increases in sulphuric acid pricing will increase OPEX. The option agreement currently in execution process by MCAL, to acquire an existing sulphuric acid plant to produce about 150 kt/a of concentrated sulphuric acid, represent a potential reduction in acid cost relative to current long-term forecast and normal historical spot and contract acid prices delivered to Mejillones.

25.17.1.6 Economic Analysis

- The economic model is based on the assumption that the majority of initial capital costs are concentrated in the first 2 years of project execution. If the construction schedule extends and the initial capital is expended over a longer duration, project NPV will be negatively impacted.

25.17.1.7 Project Execution Strategy and Schedule

- The commencement of project construction depends upon successful completion of site preparation works. Any delays in the execution of site preparation works are a risk for the start of the project construction schedule.
- The project construction schedule depends on early award of the fabrication of major equipment, to ensure that delivery durations meet the construction schedule requirements. Any delays to awarding fabrication are a risk for the project construction schedule.
- The Project Execution Strategy adopts a traditional EPCM-IC approach (IC = Integration & Commissioning). This will require significant direct participation from the Marimaca execution team. Inadequate Marimaca participation is a risk for successful execution.
- The Project's first cathode production date depends on the timely completion of the seawater delivery pipeline & electrical HV powerline BOOT contracts. Appropriate contractual arrangements & tight ongoing monitoring will be required to mitigate risk of delayed delivery of seawater or HV power.

25.17.2 Opportunities

25.17.2.1 Mineral Reserve Estimate

- Significant increase in reserves, as further exploration activities are conducted nearby the current deposit and in the district.
- Geotechnical parameters were defined conservatively; there is an opportunity to optimize slope angles where structural conditions are favourable, reducing stripping and increasing Mineral Reserves.

25.17.2.2 Infrastructure

Advancements in engineering studies and the completion of additional investigations could allow for the optimization of the required leaching area, resulting in a reduction in the volume of pre-stripping material needed for the construction of the heap leach pad.

This optimization would not only contribute to improving the project's construction efficiency, but could also generate economic and environmental benefits by reducing earthworks and minimizing the impact associated with site preparation activities.

25.17.2.3 Environmental, Permitting and Social Considerations

- Conduct additional baseline campaigns to complete the available information regarding the different environmental components of the project.
- Maintain environmental monitoring systems for key variables, such as air, archaeology, and flora species such as *Nolana onoana*, to ensure that the baseline conditions are preserved as assessed in the DIA.
- Maintain a stakeholder communication plan with Mejillones residents to report on compliance with the committed CAVs, in order to maintain engagement and ensure compliance with the commitments the Company has established.
- Create and maintain an environmental compliance system to guarantee compliance with environmental regulations according with the approved DIA and sectoral permits.
- Third parties for sea water supply available in Mejillones present opportunities, considering that other existing providers in Mejillones could be used as back up of the current sea water supplier already included in MOD Project. These alternative suppliers would need to obtain the appropriate permits, and Marimaca will verify that all environmental commitments associated with this supply are met.

25.17.2.4 Operating Cost Estimate

- The OPEX is particularly sensitive to sulphuric acid price. Unexpected reductions in sulphuric acid pricing will reduce OPEX.

26 RECOMMENDATIONS

26.1 Recommended Work Program Cost Summary

The financial analysis of this feasibility study demonstrates that the project has robust economics, and it is recommended to continue developing the project through engineering and de-risking, and into a construction decision. Analysis of the results and findings from each major area of investigation completed as part of this FS suggests recommendations for further investigations to mitigate risks and/or improve the base case designs.

A breakdown of the recommended work program for site preparation is shown in Table 26-1. Ongoing engineering and de-risking initiatives such as interim engineering, geotechnical characterization of plant area, geochemical studies, geometallurgical laboratory testing and materials handling testwork are included in these costs.

Table 26-1: Recommended Work Program Cost Summary

Program Component	Estimated Total Cost (US\$M)
Site mass earth works for process plant platforms & Cover preparation for Heap Leach Pad	\$35.3
Pioneer access Roads (Plant and Mine access for Pre-stripping)	\$10.9
Site administration buildings & Gatehouse	\$6.9
Temporary Facilities	\$6.8
Total	\$59.9

26.2 Exploration and Drilling

The QP recommends executing a drill campaign to assess identified targets and primary mineralization. Future campaign are recommended to include more control samples.

The drill grid's density, directions, inclinations, and depth are adequate. Due to the variability of mineralization in some areas, it has not been ruled out that in the future, it may be required to fill some sectors with a higher density of drilling. In the opinion of the QP, this phenomenon should be addressed in conjunction with exploitation, which is a common occurrence in mining.

26.3 Infrastructure

To date, Marimaca has developed geotechnical characterization information for future project infrastructure areas by carrying out six geotechnical drill holes and 93 test pits in various site campaigns. To complement the current geotechnical characterization of the project area, additional test pits and geophysical profiles are recommended to be

executed pre-FID. The estimated cost for these activities is included in the costs shown in Table 26-1. Details of this recommended work are as follows:

- Increase the number of test pits across the site to more precisely delineate soil and rock zones, considering the large extent of the area.
- Additional to the sampling and testing developed during the FS, it is recommended to obtain more soil samples and carry out more laboratory testing, including: soil classification (grain-size distribution and Atterberg limits), strength testing (triaxial and direct shear, with priority on the heap leach area), determination of wet and dry densities, consolidation tests, and chemical analyses (soluble salts, sulphates, and pH).
- To increase the availability of detailed information, is recommended to carry out complementary investigations such as geotechnical boreholes with Standard Penetration Tests (SPT) to characterize the soil at depth, and seismic refraction surveys to estimate excavability and the depth to bedrock.
- Identify the depth and thickness of potential soil strata with high salt content in zones where high soluble salt content has been detected, in order to plan appropriate remediation measures.

26.4 Mineral Processing and Metallurgical Testing

The copper recovery model and net acid consumption model are adequate for the level of this engineering and testwork done. However, it is recommended to perform additional testing, focusing on further geometallurgical development in order to improve model accuracy. It is recommended to update the net acid consumption model to consider unique values of the experimental factors F1 and F2 for each mineral subzone.

Materials handling testwork is recommended on crushed material for design of bins, chutes and conveyors.

The estimated cost for these activities is included in the costs shown in Table 26-1.

26.5 Environmental, Permitting and Social Considerations

The Marimaca Oxide Deposit project is currently under environmental evaluation by the environmental authority. As such, several consultation processes with the authorities are required before the project is granted an environmental license (RCA) that grants the required permissions to start construction and operation for the Project. At the current stage of the Project and considering that the last consultation (ICSARA 2) was answered by the authorities on October 6, 2025, the following recommendations are provided:

- A gap analysis should be conducted by subject matter experts on existing baseline socio-environmental data that will inform whether additional baseline data collection is required to support the next project phase.
- Environmental monitoring and compensation plans should be developed further and updated to comply with current environmental regulations, and the environmental requirements of the DIA which is currently under evaluation.

- Conduct an early assessment of the corresponding environmental permit that will be submitted for Authority's approval as soon as the RCA is granted to facilitate an early construction phase.
- Evaluate other possible water sources for the project to guarantee a steady sea water supply. These alternative suppliers would need to obtain the appropriate permits, and Marimaca will verify that all environmental commitments associated with this supply are met.
- Retain a geochemical expert to review the sufficiency of the current geochemical data base, especially in regard to long-term potential effects of ARD and metal leaching from episodic rainfall events and potential downgradient transport of contaminants in surface and groundwater. Final project designs should take the results of these studies into account. The estimated cost for these activities is included in the costs shown in Table 26-1.
- Further develop monitoring measures to minimize potential environmental effects from any of the project phases.
- When modifications are identified, they must be evaluated by Marimaca through a Relevance Pertinence Analysis (Análisis de Pertinencia) to determine whether these changes are significant based on the current instructions required by the environmental authority.

26.6 Project Execution

It is recommended to continue developing the project through engineering and de-risking, and into a construction decision. The estimated cost for these activities is included in the costs shown in Table 26-1.

27 REFERENCES

- Arriagada, I. (2022). Growth Opportunities. 2021 Preliminary Results. Antofagasta Minerals. Presentation. BMO Meeting.
- Ausenco. (2025). Caracterización geotécnica de suelo de fundación pila y botaderos (Doc. 001-2ING[1]CI23002-4000-GEO-IN-20001). Internal document prepared for Marimaca.
- Barra, F., Reich, M., Rojas, P., Selby, D., Simon A.C., Salazar E., Palma, G. (2017). Unraveling the origin of the Andean IOCG Clan: a Re-Os isotope approach. *Ore Geol Rev* 81:62–78.
- BHP. (2024). How copper will shape our future. https://www.bhp.com/-/media/project/bhp1ip/bhp-com-en/documents/news/2024/240930_bhpinights_howcopperwillshapeourfuture.pdf
- Cornejo, P. (2019). *Informe Petrográfico. Muestras M-002 a M-0022*. Unpublished Internal Report, 125 p.
- Coro Mining Corp. (2018). DFS – Definitive Feasibility Study for Marimaca 1-23 Claim, Project Antofagasta, II Region, Chile. Technical Report prepared on June 13, 2018.
- Cortes, J. Marquardt, C., Gonzalez, G., Wilke, H.G., & Marinovic, N. (2007). Cartas Mejillones y Península de Mejillones, Región de Antofagasta [Mejillones and Mejillones Peninsula maps, Antofagasta Region], National Geological and Mining Service: Geological maps of Chile Nos. 103 and 104 (63 pp.). Servicio Nacional de Geología y Minería.
- Donoso Rojas, C. (2021). *Depredando Bolivia: El caso del ferrocarril de Mejillones a Caracoles*. *Diálogo andino*, (66), 231-247.
- Espinoza, S., Véliz, H., Esquivel, J., Arias, J., & Moraga, A. (1997). *The cupriferous province of the coastal range, northern Chile*. In F. Camus, R.H. Sillitoe, and R. Petersen (Eds.), *Andean copper deposits: New discoveries, mineralization, styles and metallogeny* (pp. 19–32). Society of Economic Geologists, Special Publication No.5. DOI:<https://doi.org/10.5382/SP.05.02>
- Espinoza, S., Véliz, H., Esquivel, J., Arias, J., & Moraga, A. (1996). *The Cupriferous Province of the Coastal Range, Northern Chile*. In F. Camus, R.H. Sillitoe, and R. Petersen (Eds.), *Andean copper deposits: New discoveries, mineralization, styles and metallogeny* (pp. 19–32). Society of Economic Geologists, Special Publication No.5. DOI:<https://doi.org/10.5382/SP.05.02>
- IMG. (2019). Minera Cielo Azul Ltda. Distrito Naguayán. Marimaca-La Atámica-Atahualpa Mapa Integrado. Litología Integrada 1k+5k. Unpublished document.
- Jaime Illanes & Asociados (JIA). (2024). *DIA Proyecto Minero de Cobre Óxidos Marimaca* [Environmental Impact Statement for the Marimaca Oxide Copper Mining Project]. Environmental Impact Statement Submission.

Servicio de Evaluación Ambiental.

<https://infofirma.sea.gob.cl/DocumentosSEA/MostrarDocumento?docId=2024%2F12%2F27%2Fd87e-1e9d-4e3c-ab27-c3aa1caa0bd5>.

Jaime Illanes & Asociados (JIA). (2024). *Antecedentes para determinar que el proyecto no requiere presentar un estudio de impacto ambiental* [Background information to determine that the project does not require the submission of an environmental impact study] (Chapter 2 in DIA Proyecto Minero de Cobre Óxidos Marimaca). Servicio de Evaluación Ambiental.

<https://infofirma.sea.gob.cl/DocumentosSEA/MostrarDocumento?docId=2024%2F12%2F27%2Fd87e-1e9d-4e3c-ab27-c3aa1caa0bd5>.

Jaime Illanes & Asociados (JIA). (2024). *Plan de seguimiento de las variables ambientales relevantes* [Follow-up plan for relevant environmental variables] (Chapter 3 in DIA Proyecto Minero de Cobre Óxidos Marimaca). Servicio de Evaluación Ambiental.

<https://infofirma.sea.gob.cl/DocumentosSEA/MostrarDocumento?docId=2024%2F12%2F27%2Fd87e-1e9d-4e3c-ab27-c3aa1caa0bd5>.

Jaime Illanes & Asociados (JIA). (2024). *Monitoreo participativo* [Participatory monitoring] (Chapter 4 in DIA Proyecto Minero de Cobre Óxidos Marimaca). Servicio de Evaluación Ambiental.

<https://infofirma.sea.gob.cl/DocumentosSEA/MostrarDocumento?docId=2024%2F12%2F27%2Fd87e-1e9d-4e3c-ab27-c3aa1caa0bd5>.

Kojima, S., Tristá-Aguilera, D., & Hayshi, K. (2009). Genetic aspects of the manto-type copper deposits based on geochemical studies of North Chilean deposits. *Resource Geology*, 59(1), 87–89.

<https://doi.org/10.1111/j.1751-3928.2008.00080.x>

Kovacic, P. (2017). *Informe Geológico Proyecto Marimaca*. Reconocimiento geológico 1:5000 y 1:1000. Comuna de Mejillones, Region de Antofagasta. Unpublished document prepared for Marimaca.

Lopez, C., Riquelme, R., Martínez, F., Sanchez, C., and Mestre, A. (2017). Zircon U-Pb geochronology of the mesozoic to lower Cenozoic rocks of the Coastal Cordillera in the Antofagasta region (22°30'–23°00' S): Insights to the Andean tectono-magmatic evolution, *Journal of South American Earth Sciences*, Vol 87, pp 113–138.

Maksaev, V., & Zentilli, M. (2002). Chilean strata-bound Cu-(Ag) deposits: An Overview. In Porter T.M. (Ed.), *Hydrothermal iron oxide copper-gold & related deposits: a global perspective*, (Vol. 2; pp. 185–205). PGC Publishing. Adelaide, Australia.

Marimaca Copper Corp. (2024). *Marimaca extends shallow oxide potential at mercedes satellite target*. [Press release]. <https://marimaca.com>

Marimaca Copper Corp. (2025). *Annual information form for the year ended December 31, 2024*.

https://marimaca.com/wp-content/uploads/2025/03/MARI-2023_AIF.pdf

Minería y Medio Ambiente Ltda. (2023). *Michilla Development Plan*. TecoGroup. Unpublished internal document.

- Mpodozis, C., & Cornejo, P. (2019). Evolving active margin magmatism, tectonics and mineralization in the Northern Chilean Andes: a short review [Conference abstract]. In SEG Meeting 2019, Santiago.
- Mpodozis, C., Cornejo, P., & Mora, R. (2015). Evolving copper mineralization styles linked to the changing Jurassic-Early Cretaceous tectonic regime along the coastal range of Northern Chile (Antofagasta-Tocopilla region). In *Actas del XIV Congreso Geológico Chileno*, La Serena. (pp.1033–1040). Servicio Nacional de Geología y Minería (SENAGEOMIN). <https://repositorio.sernageomin.cl/handle/20.500.14001/1064>.
- NA. (2023). *Fallas_peligrosas_ peligro sismico_Inf Consolidado_AURUM_17.05.2023 (Rev0).pdf*. Internal document.
- NCL. (2020). *Updated and Expanded Resource Estimate for the Marimaca Copper Project, Antofagasta Province, Region II, Chile*. Internal report prepared for Marimaca Copper Corp.
- NCL. (2025). *Twin Hole Analysis for the Marimaca Copper Project, Antofagasta Province, Region II, Chile*. Unpublished report prepared for Marimaca Copper Corp.
- Oviedo, L. & Palma, R. (2017). Technical report for the Marimaca Copper Project, Antofagasta Province, Region II, Chile (99 p.). SEDAR. <https://www.sedar.com>
- Oviedo, L., & Palma, R. (2018). Updated resource estimate for the Marimaca Copper Project, Antofagasta Province, Region II, Chile (130 p.). SEDAR. <https://www.sedar.com>.
- Oviedo, L., & Palma, R. (2020). Updated and expanded resource estimate for the Marimaca Copper Project, Antofagasta Province, Region II, Chile (217 p.). SEDAR. <https://www.sedar.com>.
- Oviedo, L., (2022). Updated resource estimate for the Marimaca Copper Project, Antofagasta Province, Region II, Chile (146 p.). SEDAR. <https://www.sedar.com>.
- Quiroz, D. (2021). Artilugios y mecanismos para la carga/descarga del guano en mejillones durante el siglo XIX.
- Ramírez, L. (2007). *Metalogénesis, petrogénesis y tectónica del Distrito Minero de Mantos Blancos, Cordillera de la Costa, Norte de Chile*. Doctoral Thesis in Science. Unpublished document. University of Chile, 178 p.
- Sato, T. (1984). *Manto type copper deposits in Chile: A review*. Bulletin of the Geological Survey Japan, Vol 35, pp. 565–582.
- Scheuber, E. & Gonzales, G. (1999). *Tectonics of the Jurassic-Early Cretaceous magmatic arc of the north Chilean Coastal Cordillera (22°-26°S): A story of crustal deformation along a convergent plate boundary*. Tectonics Vol 18, pp. 895-910.
- Sillitoe, R.H., & Perelló, J. (2005). Andean copper province: Tectonomagmatic settings, deposit types, metallogeny, exploration, and discovery. In J. Hedenquist, J.F.H. Thompson, R.J. Goldfarb, J.P. Richards, (Eds.), *Economic Geology One Hundredth Anniversary Volume 1905-2005* (pp.845–890), Littleton.
- Simon, A. (2019). Diagramas de sondajes y superficie. Unpublished Report, 41 p.