14 February 2024   **ASX Announcement**

Maiden Ore Reserves Show Value Of Mariposa Fe Project

HIGHLIGHTS

- Maiden Ore Reserves estimate demonstrates value of Admiralty's flagship Mariposa Fe Project, comprising **36.3 Mt at cut-off grade of 15 % TFe**

- **Total Fe concentrate** of approximately **14 Mt with grade of 65% TFe**, equivalent to total **weight recovery of 38%**

- **83.7%** of Ore Reserve tonnes in **Probable** category and **16.3% in Proved** category.

Admiralty Resources NL (ASX:ADY) ('Admiralty' or the 'Company') has enhanced the value of its Mariposa Fe Project, announcing a Maiden Ore Reserves estimate for its flagship Chilean project.

The Ore Reserves estimate comprises 36.3 million tonnes (Mt) at a cut-off grade of 15% TFe (total iron). Total Fe concentrate is approximately 14 Mt with a grade of 65% TFe, equivalent to a total weight recovery of 38%. A total of 83.7% of Ore Reserves are Probable and 16.3% are Proved, according to a JORC 2012 estimate by Chilean firm Geoinvest SAC E.I.R.L., effective 14 February 2024.

The maiden Ore Reserves estimate follows last year's updated Mineral Resource estimate (refer ASX announcement 4 October 2023), with the Mariposa project on track for first production in 2024.

Welcoming the latest update, Admiralty Managing Director, Susan Qing said: *"We are delighted to highlight the value of our flagship Mariposa project, with this latest update showing the value of its iron ore reserves. The JORC 2012 updates are an important step in demonstrating the economic significance of this emerging project to ASX investors.*

"Admiralty continues to advance the project towards first production in 2024, with iron ore's solid demand fundamentals underpinning the strong outlook for Mariposa as a significant driver of increased shareholder value."

A compiled report on the Estimation of Mineral Resources and Ore Reserves is also being lodged with the ASX as part of this announcement. The specific section on the Ore Reserves estimate is based on the previous report of Mineral Resources estimation dated 4 October 2023. Indicated and Measured Mineral Resources were converted to Probable and Proved Ore Reserves respectively, subject to Open Pit mine design, modifying factors and economic results derived from the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. (or "Feasibility Study", or "FS").

ORE RESERVES ESTIMATE

The total Ore Reserves estimate for the Mariposa Fe Project as of 29 January 2024 is shown in **Table 1** below:

Table 1. Summary of Ore Reserves Estimate elaborated by Geoinvest, as of 29 January 2024. TFe = Total iron.

Category	Million Tonnes	Average TFe %
Probable	30.4	27.9
Proved	5.9	25.3
Total	36.3	27.5

MATERIAL ASSUMPTIONS

The main material assumptions for the project arise from the economic analysis conducted in the FS, which has been reviewed and updated. The relevant economic parameters for the Ore Reserves estimation are presented in **Table 2**.

Table 2. Economic Criteria Used in the Evaluation.

Economic Criteria	Value	Unit
Ore Sale Price	110	US$/t concentrate
Ore Mining Cost	3.22	US$/t extracted
Waste Mining Cost	3.22	US$/t extracted
Additional Costs for each 1m Ore and Rock Transport Height Reduction	0.075	US$/t extracted
Waste Dump Rehabilitation Cost	0.12	US$/t treated
Process Cost (treatment plant)	8.27	US$/t concentrate
Tailings Disposal Cost	0.2	US$/t concentrate
Mine to Port Transportation Cost	4.88	US$/t concentrate
Energy Cost	10.53	US$/t concentrate
Interest Cost	0.42	US$/t concentrate
General and Administrative Cost	0.75	US$/t concentrate
Labour Cost	8.36	US$/t concentrate
Amortisation Cost	0.006	US$/t concentrate
Port Loading and Storage Cost	8.14	US$/t concentrate
Shipping and Insurance Cost	18.45	US$/t concentrate
Cut-off Grade	15	%Fe

CRITERIA USED FOR CLASSIFICATION

Indicated and Measured Mineral Resources were converted to Probable and Proved Ore Reserves respectively, subject to Open Pit mine design, modifying factors and economic results derived from the Feasibility Study. The Mineral Resources Estimate on which the Ore Reserves is based was prepared previously by Geoinvest and published by ADY (see ASX announcement 4 October 2023).

MINING METHOD

The Mariposa Fe project will be mined via Open Pit method, with movable haulage ways, being the optimal mining method for this deposit. The Mariposa Fe final pit considers an overall pit wall inclination of 50°, bench height of 10 m (20 m for double), bench angle of 75°, safety berm with of 10 m width and minimum bottom with of 30 m to ensure safe production, in accordance with guidelines provided in the Feasibility Study.

This is a common mining method, considering the type of deposit in question. No global dilution factor has been applied, and 38% of mining weight recovery is applied. A waste to ore ratio of 0.58 was estimated.

METALLURGICAL METHODS AND PARAMETERS

A comprehensive study was carried out by the Jianjian Institute of Mining and Metallurgy Co. Ltd. for the Mariposa Fe Project, by means of Davis Tube Tests, Low and Medium Intensity Magnetic Separation tests (LIMS & MIMS), Wet High Intensity Magnetic Separation test (WHIMS), grindability tests, mineralogical and chemical analyses. An optimised beneficiation flowsheet was developed, achieving a concentrate with TFe ≥ 67% and SiO_2 < 4%, for surface and underground samples.

CUT-OFF GRADES

The cutoff grade of 15% TFe has been included within the range deemed economically viable in the FS report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd.

ESTIMATION METHODOLOGY

The Mineral Resources were converted to ore reserves by open pit optimisation model, using Whittle software (with the Lerch-Grossman algorithm) which generated nested pit shells. Three pit shells were selected according to the production requirements and were used for the mine plan projection.

MATERIAL MODIFYING FACTORS

Mariposa Fe is a mining project under construction since 2023, with plans to commence its initial production in the first half of 2024. The Mariposa Fe Project has obtained the necessary environmental permits and other regulatory approvals. Additionally, the sectoral permits that need to be obtained after the aforementioned approvals have also been granted by the Ministry of Mining in Chile. This was completed prior to the preparation of the Mineral Resource and Ore Reserves estimation made by Geoinvest in 2023 and 2024, respectively.

The release of this announcement was authorised by the Board and released by the Company Secretary.

For more information:
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ABOUT ADMIRALTY

Admiralty Resources NL (ASX: ADY) is a public diversified mineral exploration company listed on the Australian Securities Exchange, with mineral interests in Chile and Australia.

Admiralty is advancing its flagship Mariposa Iron Ore Project in Chile towards production, targeting first production in 2024, with a view to increasing production capacity from 2025.

The Mariposa project contains Inferred Mineral Resources of 59.74 Mt, with Measured Mineral Resources of 6.65 Mt, Indicated Mineral Resources of 39.16 Mt and total Mineral Resources of 105.6 Mt (cut-off grade 15% TFe) – a JORC 2012 compliant resource (refer ASX Announcement 4 October 2023. Estimated Ore Reserves comprise 36.3 million tonnes (Mt) at a cut-off grade of 15% TFe, with Total Fe concentrate of approximately 14 Mt at a grade of 65% TFe (refer ASX announcement 14 February 2024).

The Mariposa project has favourable access to infrastructure, including being located just 6km from the railway line, 70km from port and 25km from the town of Vallenar, with access to road infrastructure and a high voltage power line.

Together with Mariposa, other exploration projects in the Company's Harper South district (2,498 ha) include La Chulula and Soberana, with potential for further growth in iron ore resources. Other exploration areas in Chile include the Pampa Tololo district (3,455 ha) and El Cojin (600 ha).

In Australia, Admiralty holds a 50% stake in the Pyke Hill Project, a cobalt and nickel project in Western Australia.

For more information, please visit https://ady.com.au/

References to Previous ASX Releases
- December Quarterly Activities Report – 31 January 2024
- Mariposa Construction Enters New Phase – 12 October 2023
- Updated Minerals Resources on the Mariposa Fe Project – 4 October 2023

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and all material assumptions and technical parameters continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Competent Person's Statement

The information in this announcement which relates to Mineral Resources is based on information provided to and compiled by Sergio Alvarado Casas, who is a full-time employee and sole Shareholder of Geoinvest SAC E.I.R.L., which is a registered member (N° 004) of the Chilean Mining Commission (a Recognised Professional Organisation or "RPO").

Mr Alvarado has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Alvarado consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Schedule of tenements

Tenement Reference	Registered Holder	% Held	Country	Project Group
M39/159	Pyke Hill Resources Pty Ltd	50%	Australia	Pyke Hill
HARPER SOUTH				
Negrita 1-4	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Negrita Group
Leo Doce, 1-60	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Negrita Group
Soberana 1-5	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Soberana Group
Phil Cuatro, 1-16	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Soberana Group
Leo 101, 1-30	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Soberana Group
Leo Cinco, 1-60	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
Leo Seis, 1-58	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
Leo Ocho, 1-60	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
Leo Nueve. 1-60	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
Leo Diez, 1-40	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
Leo Once, 1-40	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
Leo Trece, 1-60	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Mariposa Group
OTHER SECTORS				
Pampa Tololo 1-2475	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Pampa Tololo Group
Cerro Varilla 1-732	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Pampa Tololo Group
Leo 14, 1-40	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Other Tenements
Leo 105	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Other Tenements
Leo 106	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Other Tenements
Leo 107	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Other Tenements
Mal Pelo	Admiralty Minerals Chile Pty Ltd Agencia en Chile	100%	Chile	Other Tenements

Board

Executive Chair
Mr Bin Li
Managing Director
Mrs Qing Zhong
Executive Director
Mrs Jian Barclay
Non-Executive Director
Mr Gregory Starr

Company Secretary
Ms Louisa Ho

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Forward Looking Statements

This announcement contains forward looking statements, including statements of current intention, statements of opinion and predictions as to possible future events. Forward looking statements should, or can generally, be identified by the use of forward-looking words such as "believe", "expect", "estimate", "will", "may", "target" and other similar expressions within the meaning of securities laws of applicable jurisdictions, and include but are not limited to the expected outcome of the acquisition. Indications of, and guidance or outlook on, future earnings or financial position or performance are also forward-looking statements. Such statements are not statements of fact and there can be no certainty of outcome in relation to the matters to which the statements relate. These forward-looking statements involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual outcomes to be materially different from the events or results expressed or implied by such statements. Those risks, uncertainties, assumptions and other important factors are not all within the control of Admiralty and cannot be predicted by Admiralty and include changes in circumstances or events that may cause objectives to change as well as risks, circumstances and events specific to the industry, countries and markets in which Admiralty operates. They also include general economic conditions, exchange rates, interest rates, competitive pressures, selling price, market demand and conditions in the financial markets which may cause objectives to change or may cause outcomes not to be realised.

None of Admiralty or any of its subsidiaries, advisors or affiliates (or any of their respective officers, employees or agents) makes any representation, assurance or guarantee as to the accuracy or likelihood of fulfilment of any forward-looking statement or any outcomes expressed or implied in any forward-looking statements. Statements about past performance are not necessarily indicative of future performance.

APPENDIX: JORC code 2012 TABLE 1, Section 4.

Section 1 (Sampling Techniques and Data), Section 2 (Reporting of Exploration Results) and Section 3 (Estimation and Reporting of Mineral Resources) have been reported previously, and are disclosed in the ADY's ASX announcement of the 4 October 2023 titled "Updated Mineral Resources on the Mariposa Fe Project".

SECTION 4: Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mariposa Fe Ore Reserves estimate is entirely based on the measured and indicated portion of the 2023 Mariposa Fe Project Mineral Resources Estimate. • The Mineral Resource is reported inclusive of the Ore Reserves estimate.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• All available information and results about site visits are described in Chapter 6 'Data Verification' within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The Mariposa Fe Mineral Resources and Ore Reserves estimate is based on the "*Australia ADY's Mining Construction Project of 2 million t/a Mariposa Iron Ore in Chile*". Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• An economic cut-off of 15% TFe was applied to the Mineral Resource model from which the Ore Reserves has been estimated.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The Mineral Resources were converted to Ore Reserves by open pit optimisation model, using Whittle software (with the Lerch-Grossman algorithm) which generated nested pit shells. Three pit shells were selected according to the production requirements and were used for the mine plan projection. • The Mariposa Fe project will be mined via Open Pit method, with movable haulage ways, being the optimal mining method for this deposit. • The Mariposa Fe final pit considers an overall pit wall inclination of 50°, bench height of 10 m (20 m for double), bench angle of 75°, safety berm with of 10 m width and minimum bottom with of 30 m to ensure safe production of mine, in accordance with guidelines provided in the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. • For the open pit optimisation, the economic parameters shown in the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT" were utilised and the considerations of a maximum mining movement of 4.4 Mt/year and a plant capacity of 2.4 Mt/year. • The pit design was selected and detailed in accordance with the production and projected plant capacity. • No global dilution factor has been applied, and 38% of weight recovery has been applied. A waste to ore ratio of 0.58 was estimated. • Only Indicated and Measured Mineral Resources were considered in the pit optimisation and the mine plan operationalisation. For the volumetric assessment, both Total Mineral Resources (including Inferred) and only Indicated+Measured Mineral Resources were assessed for the tonnage-grade curves. • Mining infrastructure includes the beneficiation plant, power and water supply facilities, external transportation of ore concentrate, internal transportation system, dewatering system, tailings system, and auxiliary facilities.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• All available metallurgical information is summarised in Chapter 7 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• All available environmental impact information and status of approvals tailings and waste dump emplacement is summarised in Chapter 10 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT". • The waste dump design information and characterisation is shown in Chapter 9.5.3 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• ADY has sufficient availability of land for an optimal emplacement for all mining and complementary infrastructures for Mariposa Fe. According to Chilean regulations, surface and subsurface rights must be duly notarised by the authorities, likewise power and water supply, and access. • Currently, Admiralty is in the construction stage with a focus on the commissioning of the Mariposa Fe Project. The main infrastructures are being utilised and maintained as part of the construction process, such as roads, beneficiation plant site, and accommodation site.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.*	• The operating costs are derived from the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018. • The detailed parameters are shown in Table 9-1. Table 9-8 shows the

Criteria	JORC Code explanation	Commentary
	• *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	economic results with and without initial investment. The cost base is summarised in Chapter 9.4.5 and economic results are summarised in Chapter 9.5.2 of the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Revenue assumptions are based on a long-term metal price of US$110 per tonne of Fe concentrate.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• There is a transparent market for the sale of iron and iron concentrate. • The forecasted value for the Fe concentrate was derived from previous studies and agreed upon with ADY. • The beneficiation process has been comprehensively conducted to meet the industry standards of the Fe and Fe concentrate market.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The detailed parameters are shown in Table 9-1. Table 9-8 shows the economic results with and without initial investment. The cost base is summarised in Chapter 9.4.5 and economic results are summarised in Chapter 9.5.2 of the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT". • Sensitivity to changes in construction investment, operating costs and sales revenues are shown in the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018; it showed that project benefits are most sensitive to changes in sales price, followed by operating costs and construction investment.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• For the projected exploitation of the Mariposa Fe deposit, ADY adheres to the commitments made to the Chilean environmental authority and the social and community agreements specified by ADY in its 'Declaración de Impacto Ambiental' (DIA) approved by the 'Servicio de Evaluación Ambiental' (SEA) of Chile. The evaluation records and

Criteria	JORC Code explanation	Commentary
		general project information are public in accordance with Chile's environmental regulations and laws (which includes social and community agreements). It is recommended that the reader refer to the direct information source at SEA https://seia.sea.gob.cl/expediente/ficha/fichaPrincipal.php?modo=normal&id_expediente=2132370779 where the records, general information, original reports, and documents submitted by ADY, as well as the corresponding environmental qualification resolution, are published.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• All naturally occurring risks are assumed to have adequate mitigation measures. • The environmental permits required by Chilean authorities have already been duly approved. Likewise, the so-called "sectoral permits" have also been approved by the National Geology and Mining Service of Chile (SERNAGEOMIN). All activities carried out in the Mariposa Fe project must comply with the legal framework and the voluntary agreements adopted by ADY before the competent authorities of the Ministry of the Environment and the Ministry of Mining of Chile.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The Ore Reserves consist of Proved and Probable reserves. • According to the author's opinion, the estimation of Ore Reserves has been conducted using procedures that adhere to the minimum standards and best practice accepted by industry.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No external reviews or audits have been completed.
Discussion of relative	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the*	• The mining and ore treatment methods considered for the present project are deemed typical for the type of deposit involved, specifically for the processing of iron ore and the production of iron concentrate. • In the corresponding sections of the report, the competent persons

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	*relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	(authors) provide proper statements regarding the suitability and effectiveness of the mineral resource estimation methods. The modifying factors used for the estimation of Ore Reserves, as determined by the competent persons responsible for this report, are considered appropriate for the evaluation, and the results align with the realities observed in other similar-scale projects in which the authors have participated in the past. • In Chapter 14 (Recommendations), necessary suggestions are provided to enhance the confidence and reliability of mineral resource estimates and Ore Reserve assessments.

Mariposa Fe Project, Vallenar, IIIrd Region, Chile

JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT

ADMIRALTY RESOURCES

Prepared by:

On behalf of:

Effective Date:	February 14th, 2024
Signature Date:	February 14th, 2024
Competent Persons (Authors):	Sergio Alvarado Casas, R.M. (Geology) of the C.M.C. (#004) Ricardo Muñoz González, R.M. (Mining) of the C.M.C. (#005) Carlos Puga Gómez, R.M. (Mining) of the C.M.C. (#180)

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1   SUMMARY

1.1   Introduction

This report was prepared by Geoinvest S.A.C. E.I.R.L. (Geoinvest) for Admiralty Resources NL (ADY). ADY is an Australian based, ASX listed company (ASX: ADY) with mineral interests in Australia and Chile, with focus on iron ore projects in Chile. ADY commissioned Geoinvest to undertake an updated mineral resource and ore reserves estimate for their Mariposa Iron Project (Mariposa Fe) in compliance with the JORC code 2012 guidelines.

The Mariposa Fe project is located 12.5 km south of the city of Vallenar, in the IIIrd Region of Atacama, Chile. The mineral resources estimated for Mariposa Fe are located in the mining exploitation concessions named Leo 6 1/58 and Daniela 1/20, both mining concessions (among other concessions) are duly registered with the registrar of mines of the city of Vallenar and are owned by the ADY's Chilean branch 'Admiralty Minerals Chile Pty. Ltd. Agencia en Chile' (AMC).

1.2   Exploration and history

The Mariposa Fe area has been subject of surficial exploitation in the past century and has been explored with the aim to be mined on a larger scale from at least the 1990 decade. Geophysical exploration (High-resolution ground magnetic survey), trenches construction and sampling (1,312 m sampled), reverse circulation (5,588 m drilled) and diamond drillhole (3,040 m drilled) campaigns have been conducted at Mariposa Fe. Two mineral resource estimates have been made for the Mariposa Fe, by SRK Consulting in 2008, and by Ingeniería REDCO in 2013, both compliant with the JORC code 2004. The aim of the present report is to conduct a mineral resource estimate compliant with the JORC code 2012.

Pre-feasibility and feasibility studies have been conducted for the Mariposa Fe project; however, these studies do not conform to the guidelines of the JORC Code 2012. Despite this, the reports have shed light on the technical and economic aspects of the project. For the purposes of this report, the information generated that impacts the current resource update, particularly that related to the geometallurgical aspects of the deposit, has been utilized.

Currently, ADY, in collaboration with Hainan Xinlei Mining Management Co. Ltd. (Hainan), is in the process of developing the future Mariposa mine.

1.3   Geology and mineralization

The Mariposa Fe Project is located in the Chilean Iron Belt (CIB), a regional structural feature related with the Atacama Fault Zone, which mainly hosts important IOA and IOCG deposits of Cretaceous age. The Mariposa deposit is composed by mineralized andesites and andesitic-breccias of the Punta del Cobre formation, forming mainly fault-veins, and minor lenses, veins and stratigraphically controlled mineralization.

The main mineralization in Mariposa Fe is composed by magnetite, with minor presence of hematite and limonite, among gangue minerals mainly composed by actinolite, chlorite and epidote, with minor quartz, alkali feldspar and apatite.

The dominant presence of magnetite and actinolite allow to associate the deposit with an IOA setting and considering the low relative presence of apatite as compared to actinolite the origin of Mariposa Fe could correspond to a magmatic-hydrothermal deposit generated at higher relative depth and temperature in comparison to other Chilean IOA deposits such as El Romeral or Los Colorados.

At surface, the main mineralized bodies correspond to vertical fault-veins system with a NW strike, which show a strong magnetism and presence of massive magnetite. These bodies have been modeled by Ingeniería REDCO (2013) and correspond to the main mineralized volumes. A solid mesh model was built by REDCO, taking into account the geological modeling of the mineralized structures and the distribution of mineralization surrounding these structures; this resulted in the modeling of two main geological-mineralogical volumes, the first composed by massive magnetite, and a second volume which surrounds the massive magnetite composed by magnetite in veins.

1.4   Data verification

A site visit was made by Mr. Sergio Alvarado to the Mariposa Fe project site. In field, the remaining drillhole collars were reviewed, the drill core storage and intervals of interest from diamond drillholes selected by the competent person (CP) were reviewed too.

For analysis of the integrity of database the location of the collar drillholes was measured by using handheld GPS, the drillholes intervals selected by the CP were compared with the assay table and the drillhole folders containing the original data which are kept in the project site.

No inconsistencies were found in the revision process conducted by Geoinvest at the site visit.

1.5   Sampling

There are no registries regarding the first RC Drilling campaign and the trenches survey., therefore, the author is not able to express an opinion on the adequacy of the procedures or quality assessment of the sampling.

Regarding the second drilling campaign (DDH), conducted in 2011-2012 period, the sampling procedures and security of samples were adequate, at least, by considering the goals for which the campaign was conducted, which was to validate the previous drilling campaign, the acquisition of specimens for physical and chemical analyses and the elaboration of a robust geological model.

1.6   Metallurgy and mineral processing

A comprehensive study was carried out by the Jianjian Institute of Mining and Metallurgy Co. Ltd. for the Mariposa Fe project, by means of Davis Tube Tests, Low and Medium Intensity Magnetic Separation tests (LIMS & MIMS), Wet High Intensity Magnetic Separation test (WHIMS), grindability tests, mineralogical and chemical analyses, a optimized beneficiation flowsheet was proposed, achieving a concentrate with TFe $\geq$ 67% and SiO_2 < 4%, for surface and underground samples.

1.7   Mineral Resource Estimate

For the update of mineral resources estimate at the Mariposa Project, a 3D geological model was employed, encompassing the estimation units of Massive Magnetite and Magnetite in Veins. The unmodelled background unit corresponds to Disseminated Magnetite. Grade information was obtained from RC drilling campaigns conducted between 2005 and 2007, and the 2011-2012 diamond drilling campaign.

Geoinvest has determined that the block model used in the mineral resource estimation reported by REDCO (2013) is appropriate, and its construction parameters have been retained. A regular block model of 5x5x5 meters was created, oriented according to the direction of the estimation units, Massive Magnetite and Magnetite in Veins, in order to adequately discretize the boundaries of the modeled units.

The resource estimation employed two methods: ordinary kriging and inverse square distance.

A visual, graphical, and drift-based validation was conducted on the Total Iron (TFe) resource model of the Mariposa Project. This reveals that the TFe estimation is reasonably robust and

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falls within an appropriate range of uncertainty for any strategic planning exercises aimed at the economically viable extraction of this resource.

The outcome of the categorized mineral resources obtained for the Mariposa Project is as follows:

Table 1-1. Grade-tonnage table for Measured, Indicated and Inferred Mineral Resources estimate for the Mariposa Fe Project, for TFe, Fe_{Mag}.

Cut-off	Measured Mineral Resources			Indicated Mineral Resources			Inferred Mineral Resources		
	Tonnes	TFe	Fe_{Mag}	Tonnes	TFe	Fe_{Mag}	Tonnes	TFe	Fe_{Mag}
40.00	563,749	46.52	29.77	4,374,875	46.98	29.96	3,502,399	44.15	32.05
35.00	969,847	42.69	28.92	7,075,473	43.37	29.10	6,772,074	40.87	31.75
30.00	1,676,559	38.31	28.57	11,198,533	39.24	28.42	12,044,199	37.06	29.76
25.00	2,665,104	34.23	27.25	17,672,045	34.89	27.26	19,869,073	33.25	25.81
20.00	4,186,369	29.85	25.63	25,544,276	31.03	25.66	33,345,313	28.80	20.34
15.00	6,654,594	25.20	22.62	39,160,928	26.18	20.85	59,738,240	23.68	13.76
10.00	9,879,791	21.02	20.60	61,256,955	21.30	15.78	109,656,121	18.48	8.82
5.00	13,112,174	17.72	18.50	81,728,955	17.85	13.10	175,018,901	14.30	6.68
0.00	14,488,376	16.31	18.13	89,682,782	16.57	12.51	207,890,702	12.66	6.25

1.8 Ore Reserve Estimate

The Mariposa Fe Ore Reserve estimate is fully based on the Mineral Resource Estimate model made by Geoinvest (with effective date of September 24th, 2023), which resulted in the block model named "mar02_rot".

Topography, density, and mineral resources categorization models were reviewed by the author and the operationalized mine plan including mining phases and final pit was updated, utilizing the existing information provided by ADY and the block model generated by Geoinvest mentioned above.

The economic criteria were derived from the existing Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018 and agreed upon ADY. For the conversion from Mineral Resources to Ore Reserves were considered only the Measured and Indicated Mineral Resources.

The designed mining plan spans 15 years and a few months, utilizing the maximum plant capacity of 2.4 Mt/year. The total processed ore reserves are of proven and probable quality.

The evaluation of the Mariposa project through open-pit mining, using the new mineral resource model, yields a total iron concentrate of approximately 14 Mt with a grade of 65% Fe, equivalent to a total weight recovery of 38%.

The Final Pit obtained results in an NPV of 124 M US$, considering an initial investment of 45 M US$ with a discount rate of 8.5%.

The designed waste dump has a capacity of 21 Mt, and stability analysis results demonstrate that the geometric configuration is stable.

2 INTRODUCTION

Admiralty Resources NL (ADY) has requested to Geoinvest Sergio Alvarado Casas E.I.R.L. (Geoinvest) to undertake a technical report and mineral resources update for the Mariposa Project, in compliance with the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012) published in 2012 by the 'Joint Ore Reserves Committee' (JORC).

ADY is an Australian based, ASX listed company (ASX: ADY) with mineral interests in Australia and Chile, with focus on iron ore projects in Chile. The Mariposa Iron project (Mariposa Fe) is ongoing under the subsidiary "Admiralty Minerals Chile Pty. Ltd. Agencia en Chile" (AMC), owned by ADY; on 2021 ADY entered into a Joint Venture Agreement with Hainan Xinlei Mining Management Co. Ltd (Hainan) to jointly develop the Mariposa Fe mine (refer to the ADY announcement at ASX 'Mariposa Co-Operation Agreement Revised', from 18 June 2021).

All the maps and figures shown in this report are in SIRGAS-Chile (UTM, zone 19S) projection unless otherwise specified

2.1 Sources of information

For this Mariposa Fe Project report, the primary source of information corresponds to the data provided to the consultants by ADY. This data includes technical information, such as drill hole and exploration trench databases, geological maps, geological cross-sections, various CAD format information mostly related to mine planning, and historical geological models. Additionally, various technical reports were provided, which, in general terms, summarize and utilize the same base information mentioned above. In the following chapters, when necessary, details are provided regarding the information presented to Geoinvest by ADY, especially concerning geological modeling, metallurgical studies, and historical mineral resource estimates associated with the Mariposa Fe project.

The historically significant reports provided to Geoinvest by ADY, which are referenced, are as follows:

- **Mineral Resource Estimation, Japonesita and Mariposa Iron Deposit, Region III, Chile.** Report prepared for Minera Santa Bárbara by SRK Consulting (Chile) S.A. in 2008. Public announcement related available at:

https://announcements.asx.com.au/asxpdf/20080710/pdf/31b366lsl3mnbq.pdf.
Authored by Even, George; & Jaramillo, Ernesto.

- **3D Magnetic Inversion Report, Harper South District, Mariposa Prospect (Chile).**
Report prepared for AMC by Quantec Geoscience LTD in 2012. Public report available
at: https://announcements.asx.com.au/asxpdf/20120628/pdf/427374jp0cpgkk.pdf.
Authored by Killin, Kevin; & Stephen, Jimmy.

- **Resource Evaluation Report, Mariposa Project.** Report prepared for ADY by
Ingeniería REDCO Ltda. in 2013. Public report available at:
https://announcements.asx.com.au/asxpdf/20130125/pdf/42clx60fm6vx94.pdf.
Authored by Rubio, Enrique; García, Marcelo; & País, Gabriel.

- **Pre-Feasibility Report, Mariposa Project**. Report prepared for ADY by Ingeniería
REDCO Ltda. in 2013. Public announcement related available at:
https://announcements.asx.com.au/asxpdf/20130506/pdf/42fqhdcpllgv7j.pdf.
Authored by País, Gabriel; Casali, Aldo; & García, Marcelo; reviewed by Rubio, Enrique.

- **Concentration test report of Admiralty Resources NL's Chilean Mariposa**. Report
prepared for ADY by Jianjian Institute of Mining and Metallurgy Co. Ltd in 2015. This
report was facilitated to the authors in a Spanish translated version, some words or
concepts could not be exactly the same as the original report. This is a non-public
report. Authored by Zhongwei, Zhang.

- **Construction Project for 2 mt/a Iron Ore of ADY Mariposa in Chile, Pre-feasibility
Study Report.** Report prepared for ADY by Jianjian Engineering Design Co. Ltd. in 2015
This is a non-public report. Authored by Qixuan, Li; Honghai, Zhang; & Wanfeng, Zhang.

- **Australia ADY's Mining Construction Project of 2 million t/a Mariposa Iron Ore in
Chile**. Feasibility Study report prepared for ADY by Ma Steel Group Design & Research
Institute Co. Ltd. in 2018. This is a non-public report. Authored by Liangui, Xuan;
Yinggui, Zhao; Jian, Shu; Chenxia, Cao; Qiang, Liu; Rong, Wang; Qun, Su; Feng, Li; Luhua,
He; Ruoxin, Zhang; Ying, Cheng; & Jinlong, Liu.

- **Test Study in Mineral Processing of Mariposa Iron Ore in Chile.** Report prepared
for ADY by Magang Group Design & Research Institute Co., Ltd. in 2018. This is a non-

public report Authored by Yechang, Sun; Jianhua, Liu; Bin, Jiang; Liping, He; Xiulan, Deng; Rui, Dang; Zhenke, Jin; Baozhang, Li; & Yantao, Wei.

All statements, opinions, and references presented in these reports are provided in an impartial manner, and Geoinvest trusts that such statements, opinions, and references therein are neither false nor misleading as of the date of this report.

It is worth noting that the term 'non-public reports' refers to those of an internal nature within ADY. Although they have not been directly published on a publicly accessible website, they contain relevant information regarding the project, and when appropriate, references will be made and presented in the relevant sections of this report.

In addition to all the information provided by ADY, Geoinvest also has information gathered on-site during the visit to the Mariposa Fe project facilities in Vallenar on July 11th and 12th, 2023.

2.2   Property description and location

The Mariposa Fe project is located 12.5 km south of the city of Vallenar, in the IIIrd Region of Atacama, Chile (Figure 2-1 & Figure 2-2). The city of Vallenar offers various types of services, including accommodation, fuel supply, emergency medical services, and medium-complexity healthcare facilities, among others.

2.2.1   Property title in Chile

Chile's legal mining framework is based on three pillars:

- The Constitution (1980)

- • The Constitutional Organic Law on Mining Concessions (1982)

- The Mining Code (1983)

The state owns all mineral resources, but exploration and exploitation of these resources by private parties is permitted through mining concessions, which are granted by the courts. The concessions grant both rights and obligations, as defined by the Constitutional Organic Law on Mining Concessions and the Mining Code.

Concessions can be mortgaged or transferred, and the holder has full ownership rights. An owner is also entitled to obtain rights-of-way. In addition, a concession holder has the right to

defend concession ownership against the state and third parties. A concession is obtained by filing a claim and includes all minerals that may exist within its area.

The Mining Code also grants general rights to an exploitation concession holder to establish a right-of-way, again subject to payment of reasonable compensation to the owner of the surface land. Rights-of-way are granted through a private agreement or legal decision which indemnifies the surface landowner. A right-of-way must be established for a particular purpose and expires after cessation of the activities for which the right-of-way was obtained. Exploitation easement owners must provide third parties with usage of the granted right-of-way, providing that this would not affect the mining easement owner's usage.
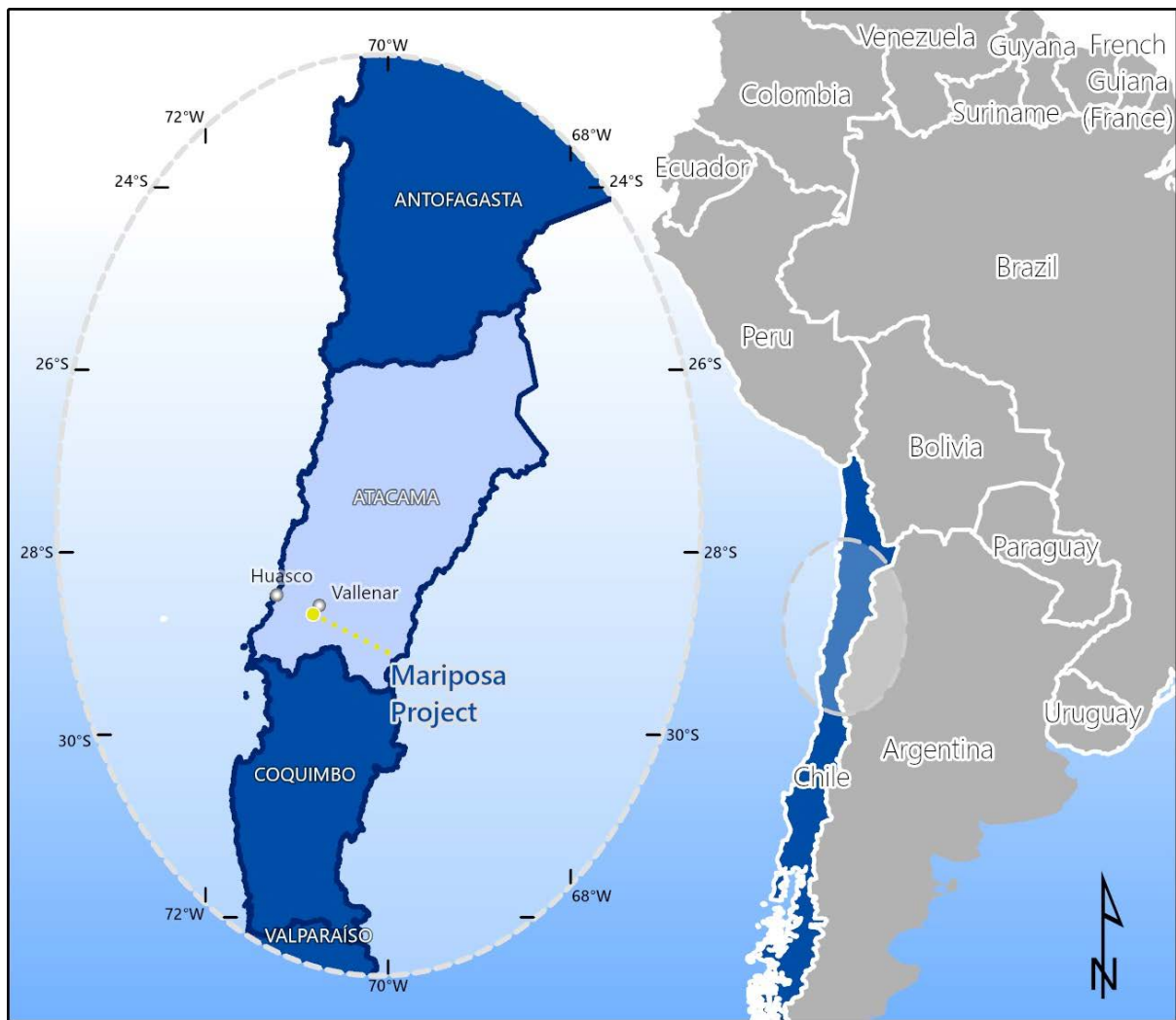
Figure 2-1. Regional location of the Mariposa project. Source: Geoinvest (2023).

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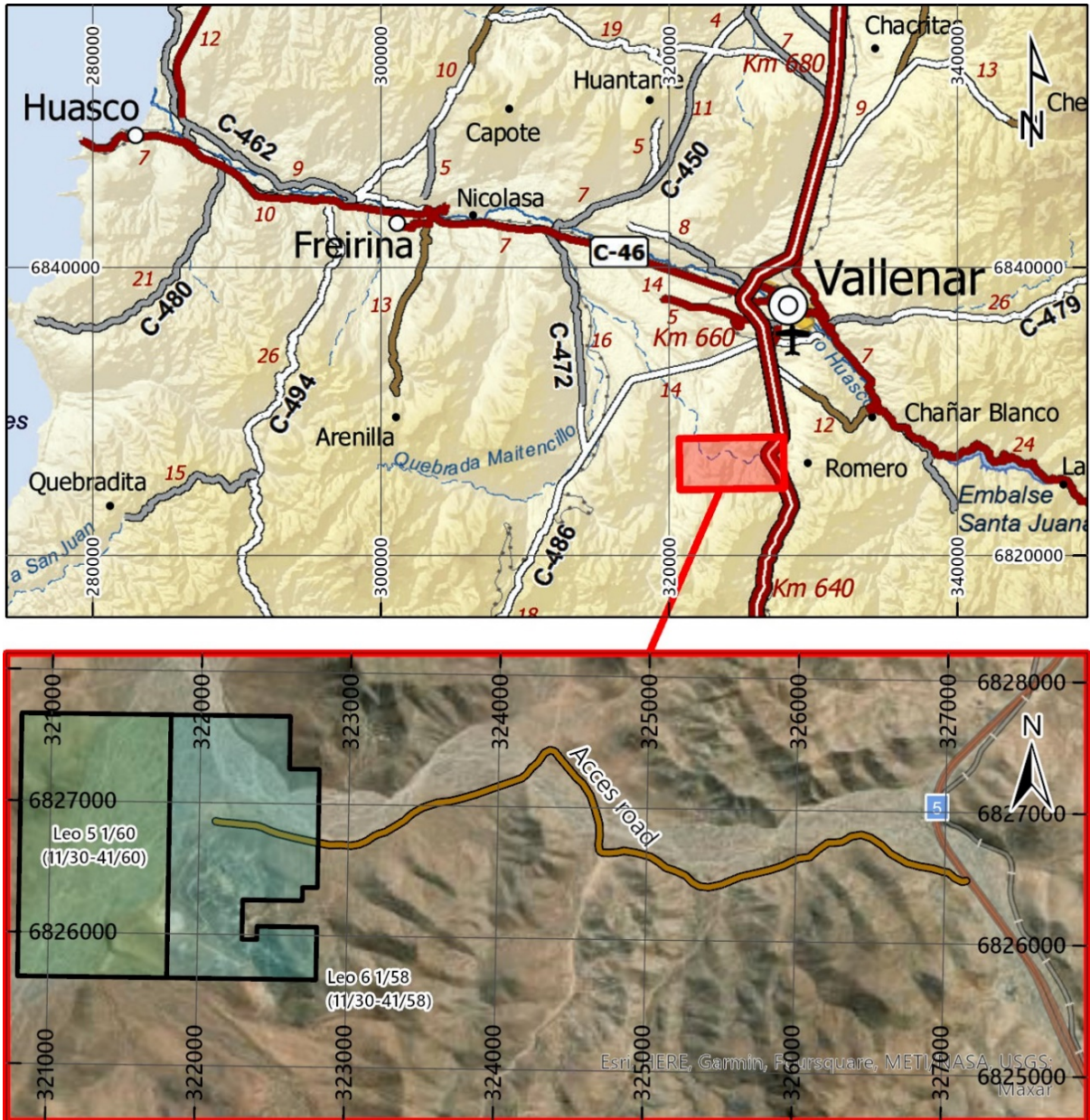
Figure 2-2. Specific location of the Mariposa Project. Source: Geoinvest (2023).

2.2.2 Project ownership and mineral tenure

ADY's AMC holds mining concessions throughout the territory of Chile in connection with several of its projects. Specifically, for the Mariposa Fe project, the list of concessions belonging to AMC within the 'Mariposa Group' is presented in Table 2-1. It is noteworthy that the operations related to the Mariposa Fe project are primarily focused on the extraction of iron ore within the Leo 6 1/58 and Daniela 1/20 mining concessions (see Figure 2-3). AMC owns 100% of the ownership of the concessions listed.

Table 2-1. List of mineral concessions of the Mariposa group (Data source: SERNAGEOMIN [2023]).

Mining Concession Name	Holder	Concession Type	Role No.	Status	Pages	Number	Year	Register	Registrar	HA
Leo 5 1/60	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4704-0	CONSTITUTED	0303	0137	2007	PROPERTY	Vallenar	200
Leo 6 1/58	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4705-9	CONSTITUTED	0356V	0156	2007	PROPERTY	Vallenar	180
Daniela 1/20	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-3893-9	CONSTITUTED	0016V	0004	2015	PROPERTY	Vallenar	21
Leo 8 1/60	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4066-6	CONSTITUTED	0336V	0141	2011	PROPERTY	Vallenar	271
Leo 9 1/60	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4067-4	CONSTITUTED	0344	0142	2011	PROPERTY	Vallenar	300
Leo 10 1/40	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4068-2	CONSTITUTED	0350	0143	2011	PROPERTY	Vallenar	200
Leo 11 1/40	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4069-0	CONSTITUTED	0279	0123	2011	PROPERTY	Vallenar	200
Leo 13 1/60	Admiralty Minerals Chile Pty. Ltd. Agencia en Chile	EXPLOITATION	03301-4071-2	CONSTITUTED	0849	0259	2011	PROPERTY	Vallenar	300

Geo INVEST S.A.C. E.I.R.L. , 100 Badajoz ST, OFC 526, Las Condes, RM 7560908 Chile

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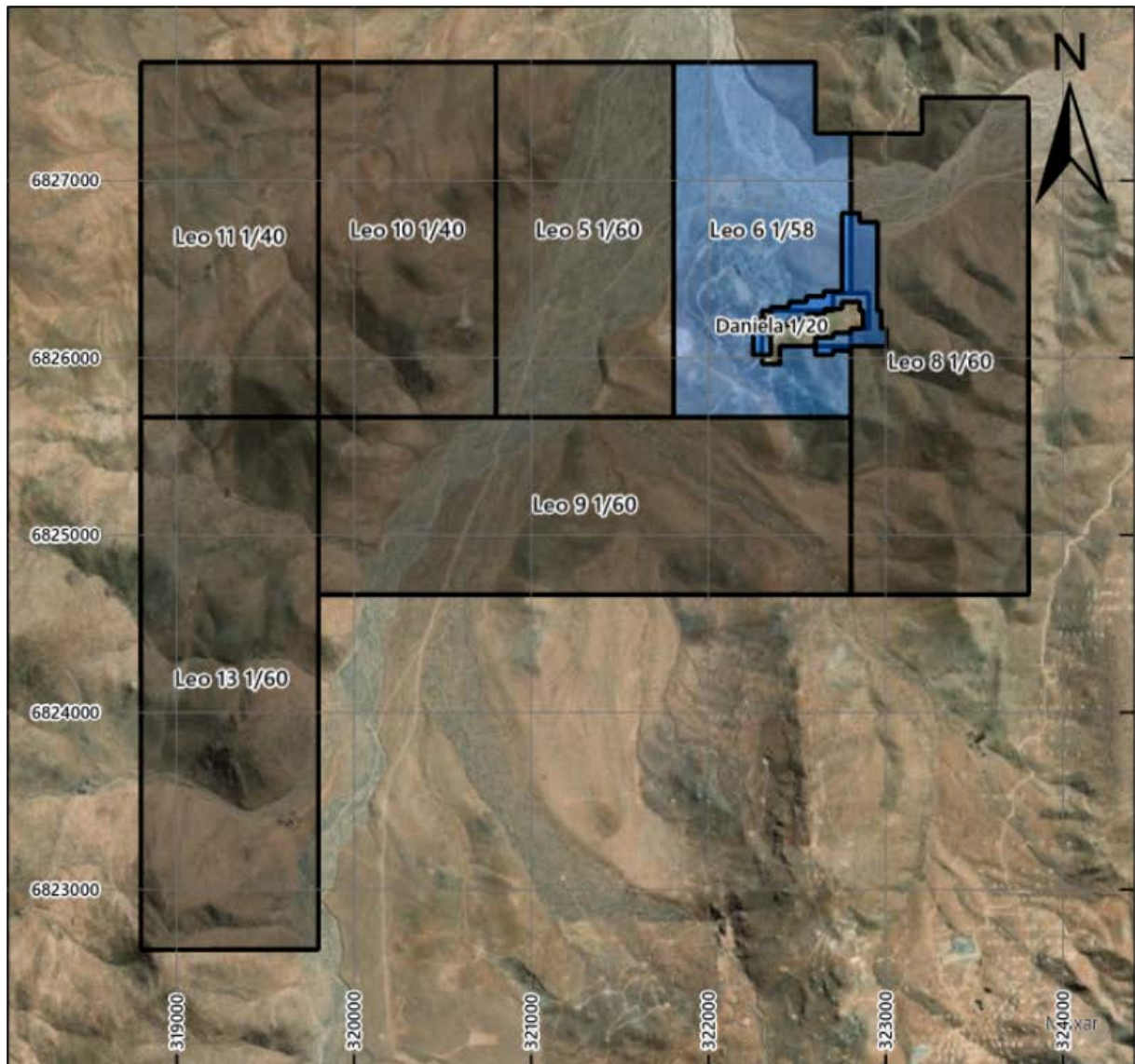
Figure 2-3. Map of mineral concessions of the Mariposa group. Mine concession Leo 6 is highlighted in blue, which corresponds to the main extractive projected site of Mariposa Fe. Source: Geoinvest (2023).

A legal report prepared by "Romero Izquierdo Abogados Ltda." (2024) for the present project has indicated that the legal status of the mining properties involved in the project is favorable, meaning they do not have issues such as mortgages, liens, prohibitions, interdictions, or legal disputes. All properties are duly registered with the Mining Registrar of Vallenar, under the regulatory framework of the Mining Code of 1983. There is also no information that any third party has filed any claims regarding the Mining Concessions that could affect the rights of the Company over them

2.3   History

There is evidence of ancient artisanal mining activities carried out on high-grade veins in the past century, specifically between the decades of the 1950s and 1970s (Even & Jaramillo, 2008).

1999: Reduced Pole-to-Pole aeromagnetic interpretation was conducted by Rio Tinto, from World Geoscience Survey data. Confirming strong anomalies to the north of Mariposa Fe.

2004: Wyndham Explorations S.A. and Fortune Global Holdings Corporation constituted "Minera Santa Barbara". During the year 2004, Minera Santa Bárbara staked and purchased mineral exploration and exploitation concessions.

2005: Admiralty Resources NL purchased Fortune Global Holdings Corporation which held a 49% equity interests in Minera Santa Bárbara from Wyndham Explorations S.A. In May 2005, Minera Santa Bárbara commissioned the Chilean firm Geodatos to undertake ground magnetic survey at the area immediately north of Mariposa; this survey allowed the planning of a first drilling phase (Reverse Circulation) covering the area mentioned above.

2006: Minera Santa Bárbara contracted SRK Consulting (Chile) S.A., to reinterpret the previous mentioned ground magnetic survey and design a second drilling phase, this time, the Mariposa Fe area was fully included, completing 36 drillholes (Reverse Circulation), totaling 5,588 m drilled between 2006 and 2007. More details about this drilling phase are given in the "Exploration" chapter of this report.

2007: Admiralty Resources NL purchased an additional 11% equity interests of Minera Santa Bárbara from Wyndham Explorations S.A., making ADY the major shareholder of Minera Santa Bárbara.

2008: The name of Minera Santa Bárbara was legally changed to "Sociedad Contractual Minera Vallenar Iron Company" or "SCM Vallenar Iron Company". *Is worth mentioning that "Sociedad Contractual Minera or SCM" stands for capital companies, with special mining purposes and whose capital is divided into shares*. On June 2008, SRK Consulting (Chile) S.A., conducted a mineral resource estimate for the Mariposa Fe deposit, the mineral resources statement is shown in the following table:

Table 2-2. Mineral Resource Statement* for the Mariposa Fe Project; resources as of June 2008. Extracted from the SRK report authored by Even & Jaramillo (2008) (p. 57).

Resource Classification	Tonnage (Million)	Iron Grade (Percent)
Measured	-	-
Indicated	39.8	23.5
Total Measured and Indicated	39.8	23.5
Inferred	48.1	23.1

* reported at a cut-off of 15 percent iron, not capped.

2009: ADY purchased Wyndham Explorations S.A.'s 40% equity interests in SCM Vallenar Iron Company, thus, making ADY the legal owner of 100% of the shares in SCM Vallenar Iron Company.

2010: ADY signed an agreement with Icarus Derivatives Ltd., which resulted in the separation of the formerly "Harper District" in north and south zones. The "Harper South" district was held by ADY, which, among other targets, includes the Mariposa Fe project area.

2011: Quantec Geoscience Ltd. completed a high-resolution ground magnetic survey over the Mariposa Fe area during August-September, a second phase was carried out during February-March 2012. A first diamond drilling phase was planned for the Mariposa Fe project in November, in order to sustain the construction of a geological model to support the estimate of mineral resources; the DDH campaign consisted in 11 drills with a total of 3,040 m drilled between 2011 and 2012.

2013: Ingeniería REDCO Ltda. conducted an update of the mineral resources of Mariposa Fe on behalf of ADY. The results are shown in the following table:

Table 2-3. Resource estimation results for the Mariposa deposit. As of January 2013. Extracted from REDCO report authored by Rubio, García & País (2013) (p. 07).

Cut-off grade FeT %	Measured Resources			Indicated Resources			Inferred Resources		
	Tonnage (Mt)	FeT (%)	FeMag (%)	Tonnage (Mt)	FeT (%)	FeMag (%)	Tonnage (Mt)	FeT (%)	FeMag (%)
40	7.3	46.5	41	0.7	44.8	38.7	2.6	46.7	38.5
35	12.7	42.7	36.1	1.2	41.5	32.0	4.0	43.5	35.5
30	19.2	39.1	32.2	1.8	38.4	28.1	16.7	35.1	27.9
25	27.8	25.6	28.7	2.9	34.4	25.3	35.9	31.1	24.2
20	36.5	32.4	25.5	4.4	30.1	21.6	60.7	27.7	21.1
15	43.4	30.0	23.0	7.6	24.5	16.5	123.5	22.6	16.4
10	53.1	26.8	19.8	14.4	18.8	11.2	445.9	15.0	9.4
5	62.3	24.0	17.2	22.4	14.9	7.8	979.3	10.9	5.7
0	68.7	22.1	15.7	27.1	12.9	6.6	1,416.1	8.8	3.9
Total	68.7	22.1	15.7	27.1	12.9	6.6	1,416.1	8.8	3.9

The results presented above gave a preliminary basis to ADY to perform a "Pre-Feasibility" study, which was conducted by Ingeniería REDCO Ltda. and was delivered in May 2013.

2018: The environmental authority of Chile, the SEA (Servicio de Evaluación Ambiental or Environmental Evaluation Service), approved the DIA (Declaración de Impacto Ambiental or Environmental Impact Declaration) presented by ADY to the Chilean authorities.

2021: ADY and Hainan Hainan Xinlei Mining Management Co. Ltd. (Hainan) signed a Joint Venture agreement to develop de Mariposa Fe Mine.

3 GEOLOGICAL SETTING AND MINERALIZATION

3.1 Introduction

The geological information and data available for the Mariposa project was revised and collected according to the availability of public data and internal documentation provided to Geoinvest by ADY.

The main available geological information provided to the author by ADY consists of:

- Plains and sections made by Minera Santa Bárbara (2006).

- 2005-2007 drilling campaign database.

- Report: "Mineral Resource Estimation. Japonesita and Mariposa Iron Deposits, Region III, Chile" (SRK Consulting (Chile) S.A., 2008).

- 2011-2012 drilling campaign database, geological and geotechnical data folders and diamond drillholes cores reviewed in field.

- Report "Pre-Feasibility Report Mariposa Project" (REDCO Mining Consultants, 2013).

- Surface maps elaborated by ADY, with no specific date.

The above-mentioned reports of SRK Chile [2008] & REDCO [2013] compile the geological information obtained by Minera Santa Barbara and ADY respectively, according to the performed drilling campaigns and surface exploration. Other important reports regarding the geological setting of the Mariposa project are the "Pre-feasibility study Report" made by Jinjian Engineering Design Co., Ltd. (2015) and the "Feasibility Study Report" made by Ma Steel Group Design & Research Institute Co. Ltd. (2018), both making a critical analysis on the available geological information but not generating new details or data.

3.2 Regional geology

The Mariposa project area lies in the Cretaceous iron belt of northern Chile. The Chilean Iron Belt (CIB) extends from 25°30'S to 31°S approximately and is a trench-parallel shear-zone related metallogenic sub-province of northern Chile (Ruiz, 1965).

The mineralization in the CIB is mainly hosted in volcanic rocks of andesitic and basaltic-andesitic compositions, such as lava flows and volcanic breccias, formed during the Neocomian and lately metamorphosed into hornfels (and to a lesser degree into skarns) at the end of the Lower Cretaceous (Menard, 1990).

In the Vallenar-Domeyko area the main formation that hosts the mineralization of the CIB corresponds to Punta del Cobre, whose Fe deposits are distributed around the Retamilla and La Higuera plutonic complexes (Arévalo, Mourgues, & Chávez, 2009). The Punta del Cobre formation age (in the study area) is probably Late-Hauterivian (*Paracrioceras cf. Andinum*, defined by Covacevich [1978] & *Crioceratites sp.* defined by Mourgues [2009] & U-Pb 129.8±0.1 Ma reported by Fox [2000] and reinterpreted by Arévalo, Mourgues & Chávez [2009]). On the other hand, the age of regional Fe mineralization within the Vallenar-Domeyko area ranges between 124-122 Ma and is estimated by the occurrence of Fe deposits spatially related with the La Higuera plutonic complex (such as Elicena, Chillán Viejo, Viviana, La Japonesa, and La Negrita).

3.2.1 Structural geology

The CIB is closely related to the Atacama Fault System (AFS), this is a N-S trending shear zone which extends 1,000 km along the coastal block (Oyarzún et al, [2003]; Scheuber et al. [1994]). From north to south, the Atacama Fault System is subdivided in three main segments, the Salar del Carmen segment between Iquique and Antofagasta, the Paposo segment between Antofagasta and Taltal, and the southern and largest El Salado segment which extends from Taltal to La Serena (through Vallenar) (Figure 3-1). Deformation along the El Salado segment is related to the activity of the Coastal Cordillera magmatic arc between 140 and 110 Ma, with sinistral displacements of about 54±6 km which occurred between ca. 133 and 110 Ma (Seymour et al., 2021) estimated for the northern part of the El Salado segment in a sinistral trans-tensional environment which accommodated the oblique subduction of the Aluk oceanic plate at the Jurassic-Cretaceous boundary (Scheuber & Andriessen, 1990).

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Figure 3-1. The Lower Cretaceous Chilean Iron Belt (CIB) along the southern segment of the Atacama Fault System (AFS). Boquerón Chañar (BO), Los Colorados (CO), Algarrobo (AL), Cristales (CR), and El Romeral (RO). Lower Cretaceous Cu–(Fe) deposits/districts: Talcuna (TAL), Candelaria (CAN), Punta del Cobre (PC), Manto Verde (MV). The Domeyko Fault System (DFS) and the southern segment of the Late Eocene–Early Oligocene porphyry copper belt (PCB) can be observed on the upper right of the figure. Porphyry copper deposits: El Salvador (ES), Potrerillos (PO). Modified from Oyarzún el al., (2003).

3.3   Local geology

The Mariposa deposit is composed by mineralized andesites and andesitic-breccias of the Punta del Cobre formation, forming mainly fault-veins, and minor lenses, veins, and mantos (?).

The main lithologies in the Mariposa project consist of metamorphosed (metasomatized) and brittle deformed andesites of the upper member of the Punta del Cobre formation (JKpc3) (Arévalo, Mourgues, & Chávez, 2009), formerly known as a northern extension of the Arqueros formation which was considered the Lower member of the currently redefined Bandurrias group (Moscoso, Nasi, & Salinas, 1982). This redefinition is relatively recent in comparison to the geological chapters of the SRK (2006) and REDCO (2013) reports on the Mariposa Fe project. The peripheral zones of the project are dominated by the presence of dioritic intrusives and strongly silicified units. According to the research by Arévalo, Mourgues, & Chávez (2009), the dioritic intrusives would correspond to dacitic domes rather than intrusions. Other studies,

such as Fox (2000), geological maps generated by ADY during the first decade of the 2000s, and the most recent study by Escolme et al., (2020), consider these lithological bodies as intrusive formations (Figure 3-2). Regardless of the interpretation of this unit, it does not exhibit the same amount of mineralization, appearing only with some millimetric veins of magnetite-actinolite that cut across this unit.
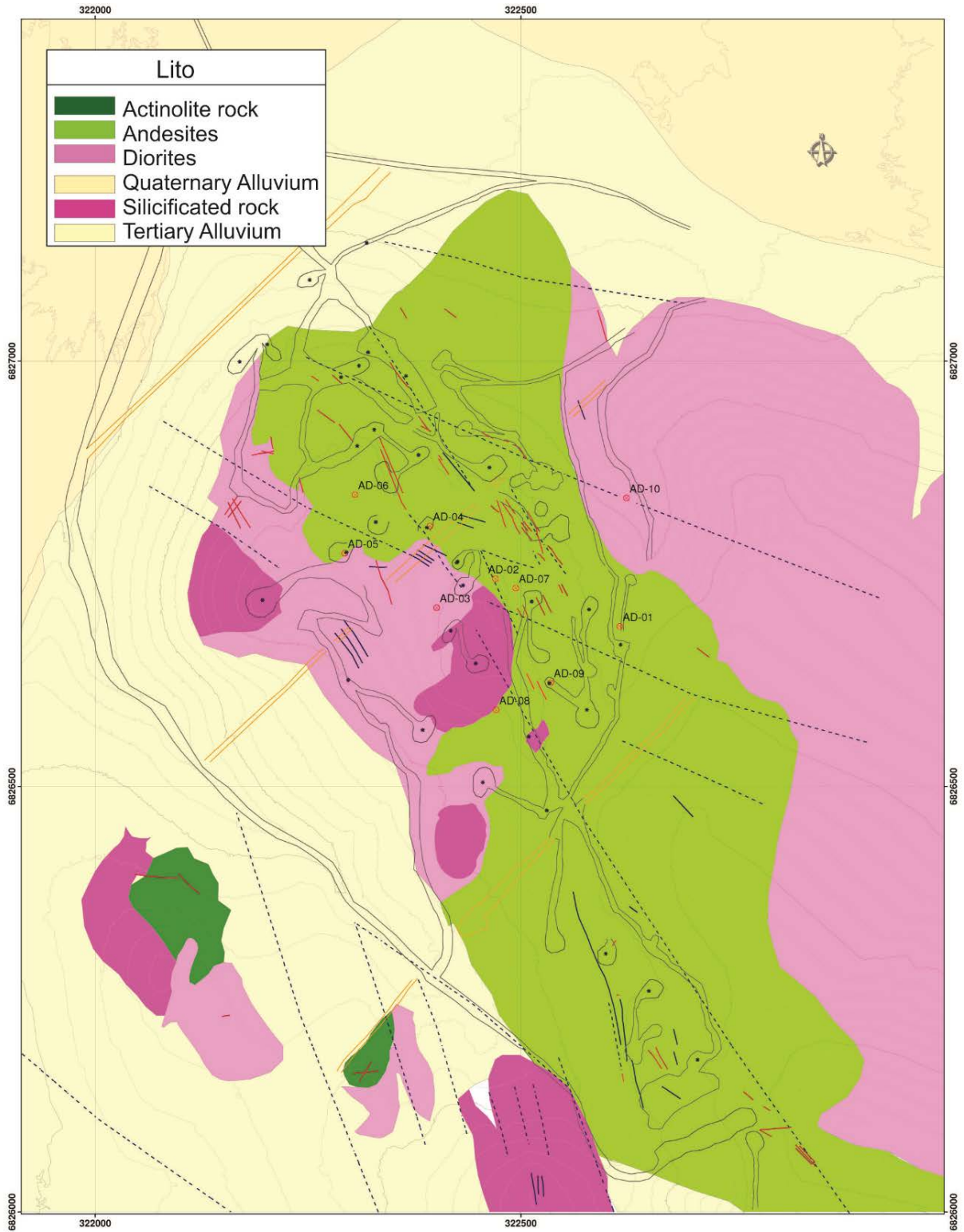
Figure 3-2.. Geological map of the Mariposa project. Source: REDCO (2013). Coordinates system UTM PSAD-56.
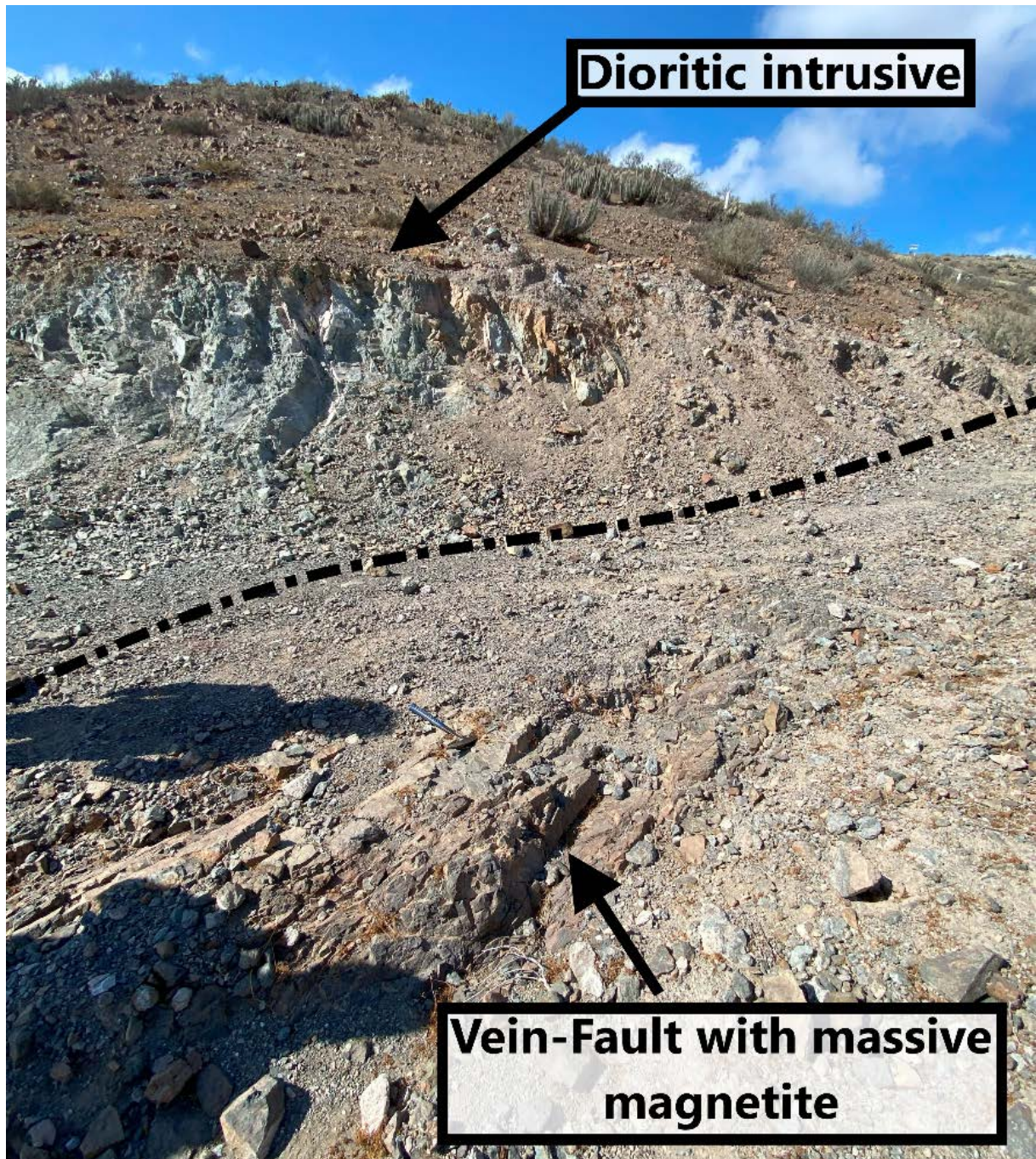
Figure 3-3. Dioritic intrusive and mineralized Vein-Fault contact. Looking at east. Waypoint 508. Source: Geoinvest (2023).

Subsidiary structures associated with the Atacama Fault System control the emplacement of the mineralization along Mariposa project and the surrounding deposits. These structures in the Mariposa Fe area exhibit a vertical disposition with a general NW direction. They display fault striations with a rake of 0°, indicating that only transverse movement has been observed thus far, ruling out any evidence of normal and/or reverse movements. On the surface, these structures have a thickness ranging between 6-7 meters in some sectors.

Figure 3-4. Fault-vein outcrop at Mariposa Fe. Massive magnetite slickensides along the NW strike; with a rake of 0°. Source: Geoinvest (2023).

3.4   Mineralization

The mineralization in the Mariposa Fe Project is primarily composed of magnetite. Other iron ores with lower (or virtually no) magnetism include limonite, hematite, iron carbonates, and iron silicates. Magnetite is distributed between and around the vein-faults, which have a significant amount of magnetite at their centers. Magnetite is present in massive form, forming massive bodies that follow the trend and dip of the structure, and it appears strongly striated in some areas of the deposit. Generally, it is believed that the other iron-bearing mineral phases are later and are associated with hydrothermal alteration and weathering processes.

In addition to the massive magnetite units present in faults, magnetite also occurs in veins and veinlets within the surrounding rock bodies near the fault centers. These vein and veinlet bodies do not exhibit striations indicating relative movement between blocks, as seen in the faults. They penetrate into the host rocks, which mainly consist of various andesite facies, characterized as volcanic with different textures.

In one of the historically exploited areas, the mineralization is observed to follow stratigraphic contacts, particularly forming magnetite-rich layers (Figure 3-5)..
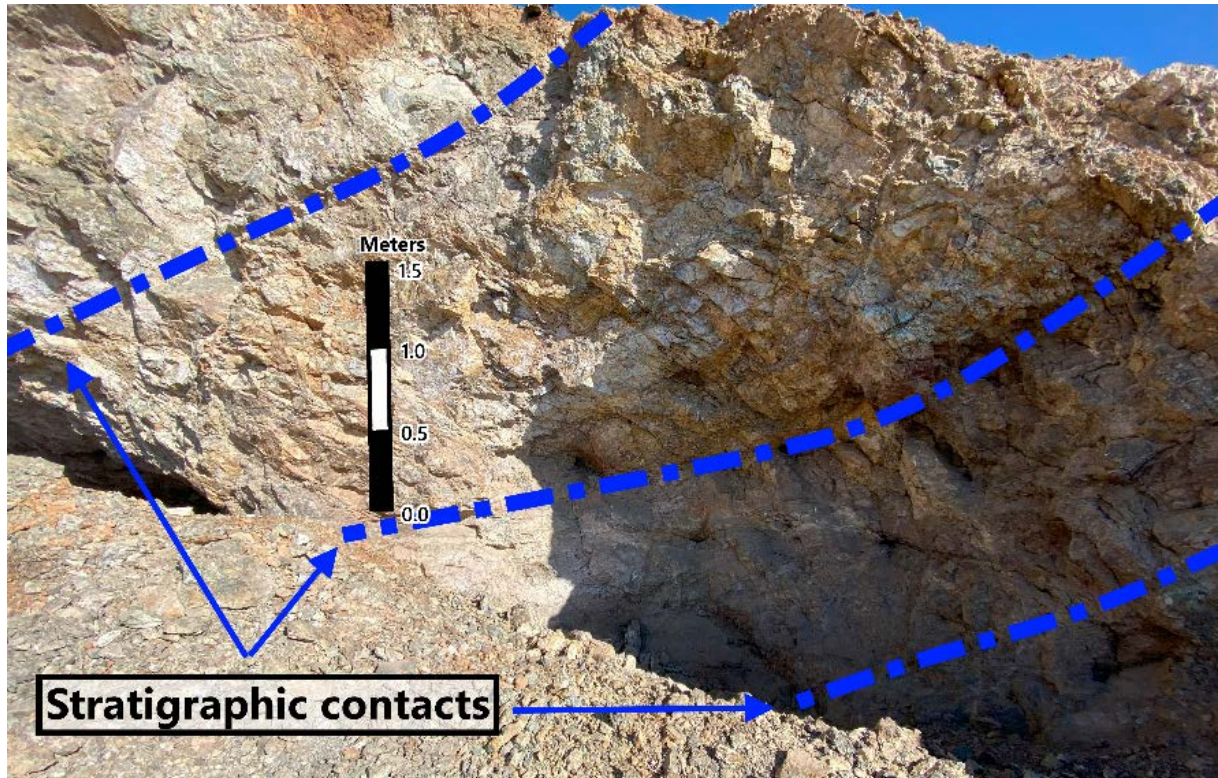
Figure 3-5. Rock outcrop in a former mining sector, at waypoint #509. Source: Geoinvest (2023).

Magnetite is found throughout the Mariposa sector, often associated with a significant presence of actinolite. Actinolite occurs as crystals that grow from external zones, where centimeter-sized crystals are evident. In some cases, these actinolite crystals are heavily altered to chlorite, which appears as a pseudomorphic form of actinolite.
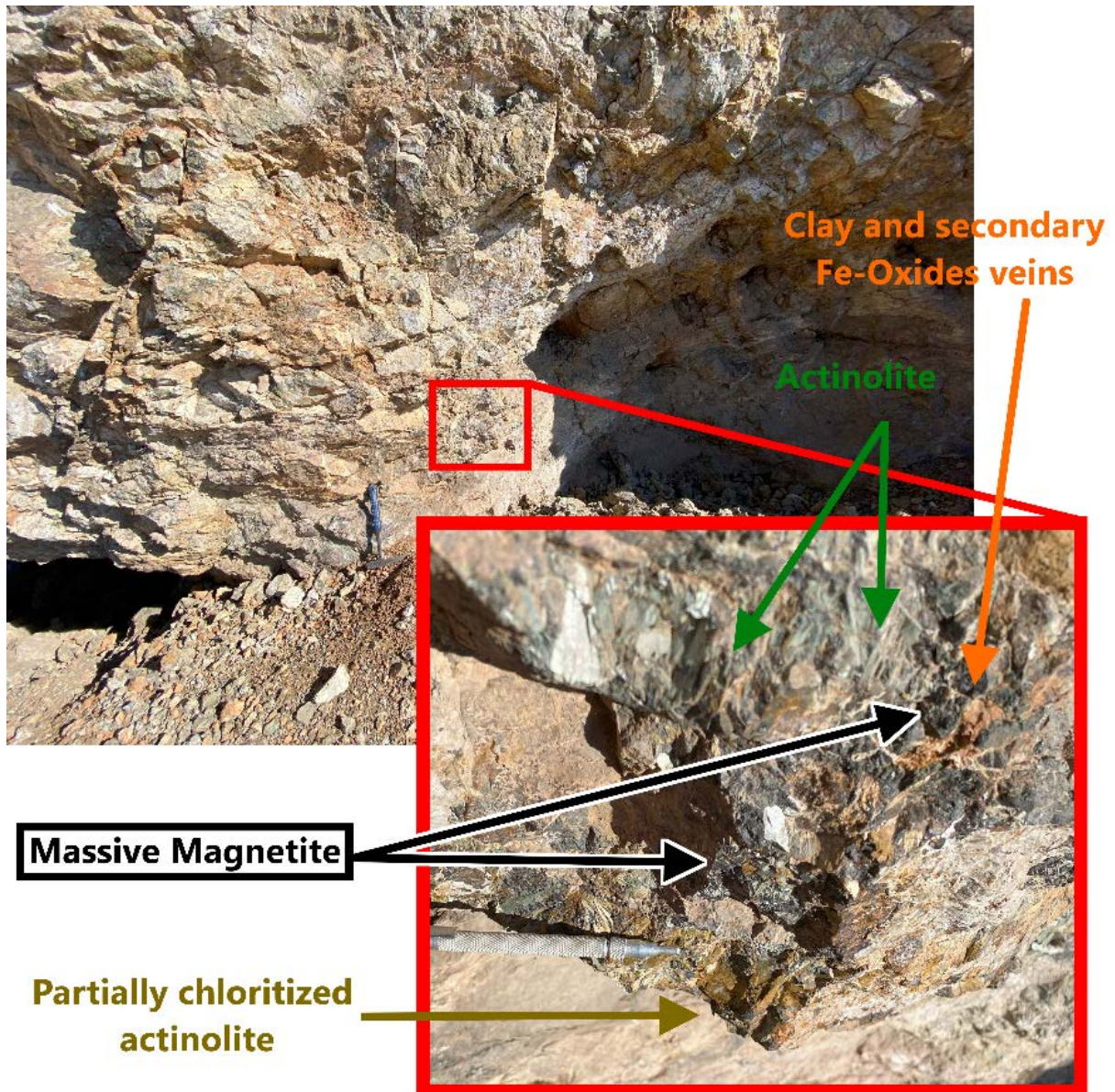
Figure 3-6. Close-up towards the outcrop of the Figure 3-5. Mineralogy is emphasized. Source: Geoinvest (2023).

3.5   Deposit type and genesis

The iron deposits within the metallogenic belt of northern Chile are generally of the IOA (Iron Oxide-Apatite) and IOCG (Iron Oxide-Copper-Gold) types, equivalent to Kiruna and Olympic Dam types, respectively.

Kiruna-type deposits are characterized by their mineralogical association with significant contents of magnetite, apatite, and actinolite, with a low presence of copper in the system (which distinguishes them from IOCG deposits).

In the case of the Mariposa Fe deposit, it is characterized by the almost absence of apatite (further evidenced by the low phosphorus [P] content in the system). There is a significant predominance of actinolite and magnetite over other mineral phases and strong chloritization of the actinolites. Chlorite is observed as pseudomorphs after actinolite. The distribution of magnetite mineralization (with actinolite as gangue) is primarily associated with local structures related to the Atacama fault system. Mineralization also occurs in specific sectors along stratigraphic contacts fed by the aforementioned structures.

For the Los Colorados and El Romeral deposits, a relative increase in actinolite, at the expense of other mineral phases, has been identified with increasing depth (Figure 3-7) (Lagas, 2016) (Rojas et al, 2018).
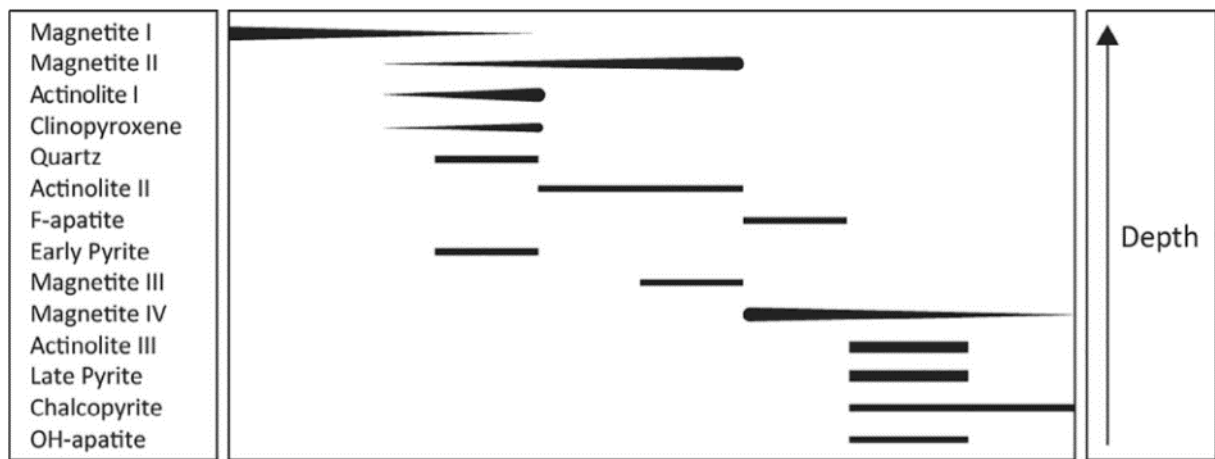
Figure 3-7. Paragenetic sequence of the main mineralization events conforming the iron ore bodies from El Romeral deposit. Obtained from Rojas et al, (2018).

Considering the mineralogy of the deposit, the geometry, and emplacement of magnetite and actinolite mineralization, and through a comparative analysis with other well-studied iron deposits in academia such as El Romeral or Los Colorados, taking into account the thermal evolution models for these deposits described by Palma et al. (2021) (Figure 3-8), it is estimated that the Mariposa Fe deposit could correspond to a magmatic-hydrothermal deposit, formed at depth and at relatively high temperatures. However, in the author's opinion, it is not ruled out that some subsequent hydrothermal alteration effect may have affected the deposit rocks. This consideration is based on the recorded presence of mineral phases such as chlorite and epidote, which, together with actinolite, quartz, and alkali feldspar, could indicate the presence of high pH, medium-high temperature associated alteration assemblage, with possible recrystallization of actinolite.

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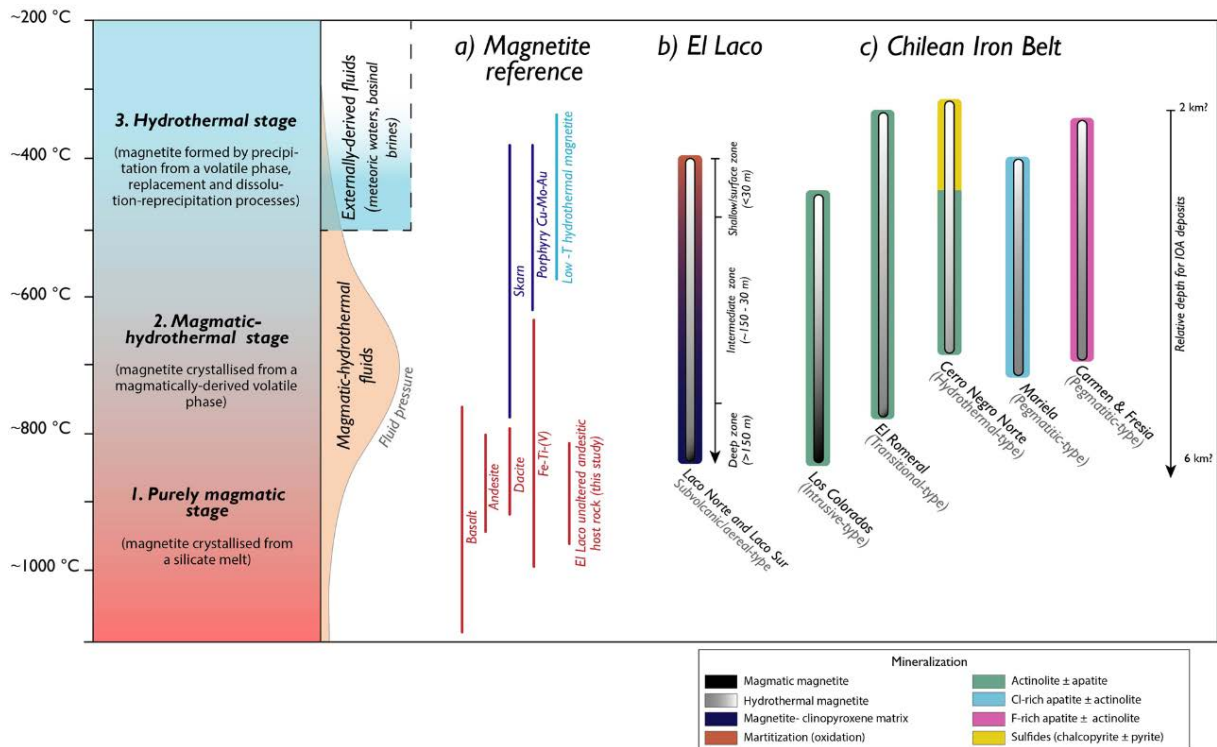
Figure 3-8. Thermal evolution of the Andean IOA deposits unraveled by magnetite thermometry data. Stages range from purely magmatic to purely hydrothermal. (a) Reference temperatures of magnetite for igneous rocks (basalt, andesite, dacite), and magmatic/magmatic-hydrothermal (Fe–Ti, V, skarn, porphyry Cu–Mo–Au) ore deposits, and low-temperature (T) hydrothermal magnetite (replacement and disseminated); (b,c) thermal evolution of El Laco (b) and IOA deposits from the Chilean Iron Belt (c). Obtained from: Palma et al, (2021).

3.6   Geological interpretation and modeling

3.6.1   Volumes modelling by REDCO

Geoinvest has relied in the geological interpretation made by REDCO (2013), this means that the geological interpretation was validated and according to the author's opinion, the solid mesh modeling previously made by REDCO (2013) is compliant with the industry best practices.

For defining the lithological volumes, REDCO (2013) modeled three main units, which are as follows:

- Bounding box: This unit encapsulates the model boundaries and contains sterile rock, referred to as **disseminated magnetite or waste**.
- Main faults-veins bodies: These were modeled based on the correlation between the high-grade **massive magnetite** logged in the drill cores of both drilling campaigns and surface trenches.
- Offsets of the main faults-veins: These volumes were modeled as bounding volumes that enclose the aforementioned high-grade solids, interpreted as medium-grade **magnetite in veins**.

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The solid mesh modeling performed by REDCO (2013) is depicted in Figure 3-9. The red-fuchsia colored mesh corresponds to the main fault-veins bodies, while the green colored mesh represents the offset modeled around these mineralized faults-veins.
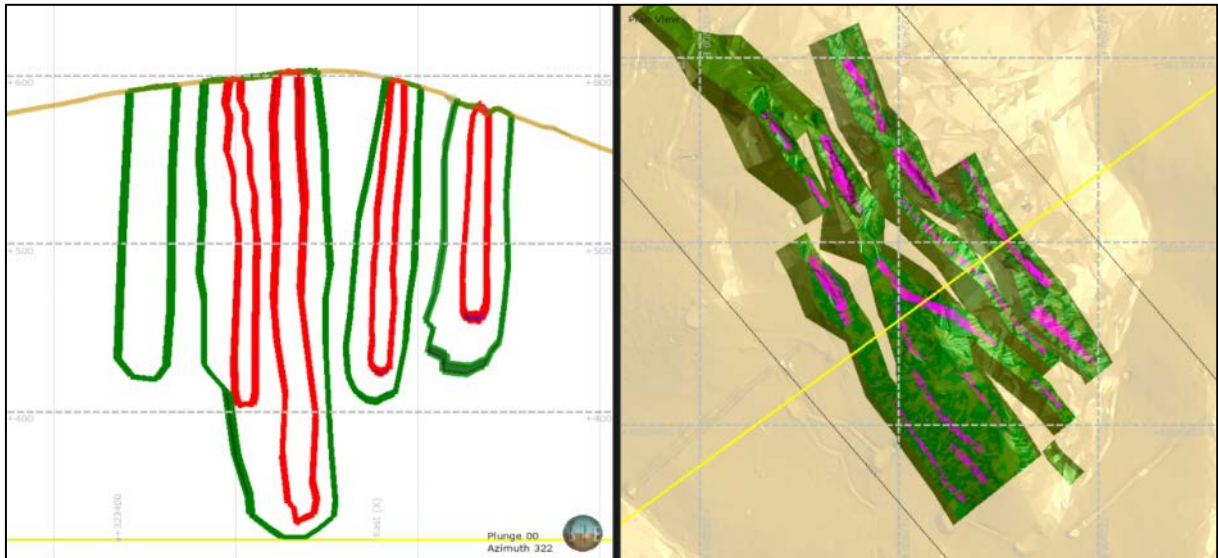
Figure 3-9. Solid mesh modeling. Red-fuchsia mesh: massive magnetite body; Green mesh: magnetite in veins body. The yellow line in plain view shows the left section location. Information source: REDCO (2013). Figure elaborated by Geoinvest (2023).

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4   EXPLORATION

The Mariposa Fe sector and its surroundings have been the subject of exploration for at least three decades, with more intensive efforts. This area stands out for the presence of IOA (Iron Oxide-Apatite) and IOCG (Iron Oxide-Copper-Gold) type deposits distributed along the Coastal Iron Belt (CIB). The earliest exploration records date back to those conducted by Rio Tinto to the north of Mariposa. Previous exploration records, distinct from historical surface mining operations, have not been reported. Geoinvest has also not found any other evidence of historical geological exploration in the area.

4.1   2005-2007 Drilling campaign

For the earliest drillings conducted in the area, at least three different series can be distinguished, conducted in chronological order and recorded in the SRK report (2008) and the maps prepared by Minera Santa Bárbara. The drillings carried out during this stage of exploration were all of the Reverse Circulation type.

Figure 4-1 displays the locations of the drill collars found in the database provided to Geoinvest by ADY, categorized by the year of construction. The first series of drillings recorded for the Mariposa project corresponds to those conducted by Minera Santa Bárbara in 2005. These drillings involved the vertical drilling associated with the main geophysical anomalies detected in previous years. This set of drillings, referred to as the 'L' series, was carried out between 2005 and 2006. The drillings identified as 'L-###' are vertical drillings conducted in the first phase of district-scale exploration reported by Even & Jaramillo (2008), totaling 8 vertical drillings. Following this are the 'L06' and 'L07' series, primarily distinguished by their length and inclination, totaling 7 drillings. Finally, the last series in this first group of drillings is the 'MP07' series, with a similar extension and inclination as the L06 and L07 series, but comprising the highest number of drillings, totaling 21 in all. The drill collar table for this initial campaign is detailed in Table 4-1.

Another series that can be observed corresponds to the 'ZM' series, which actually identifies segments of exploration trenches, which will be discussed in the following section.
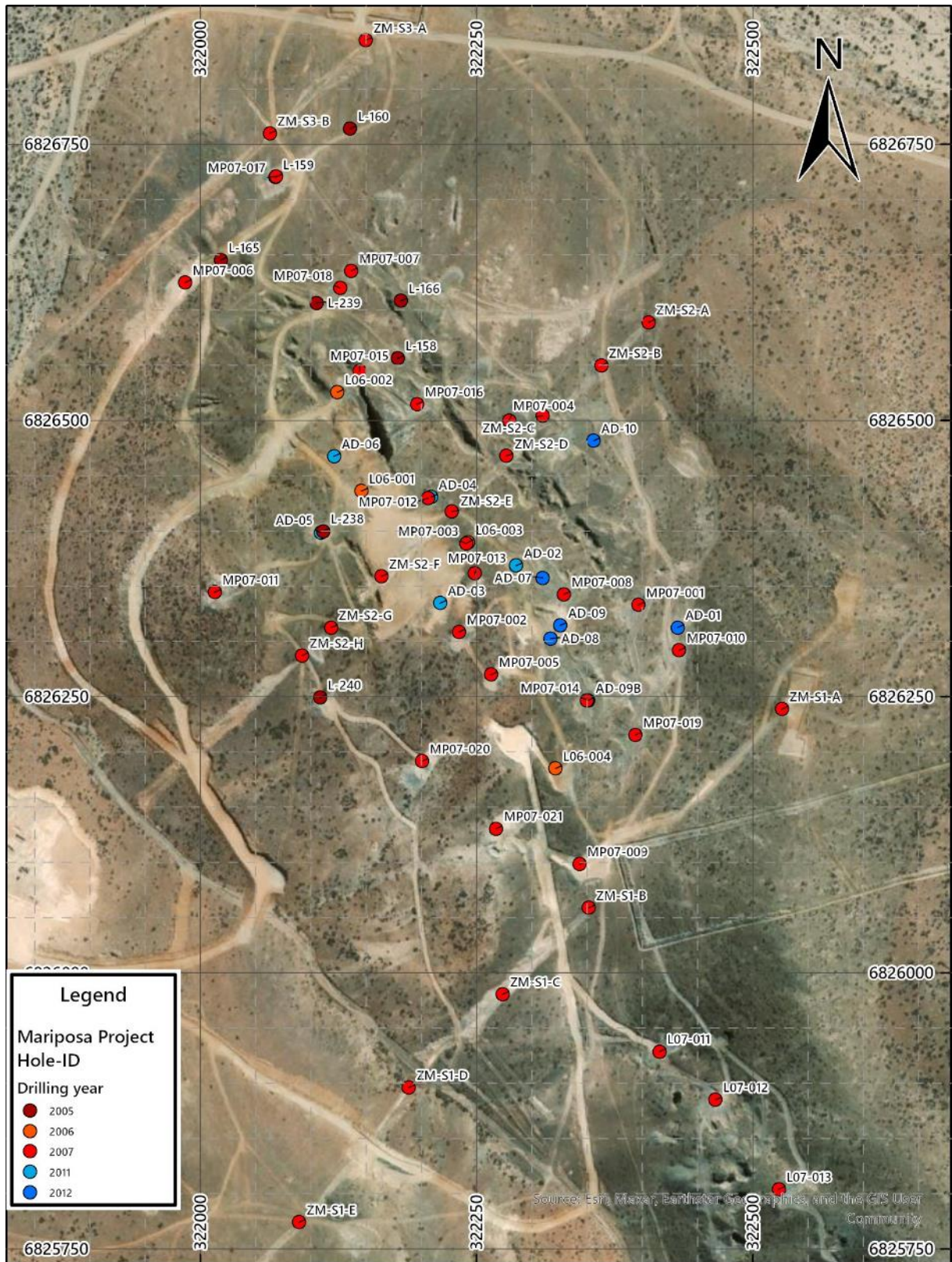
Figure 4-1. Drillhole collars and trenches ID, colored by year of construction. Source: Geoinvest (2023); data provided by ADY.
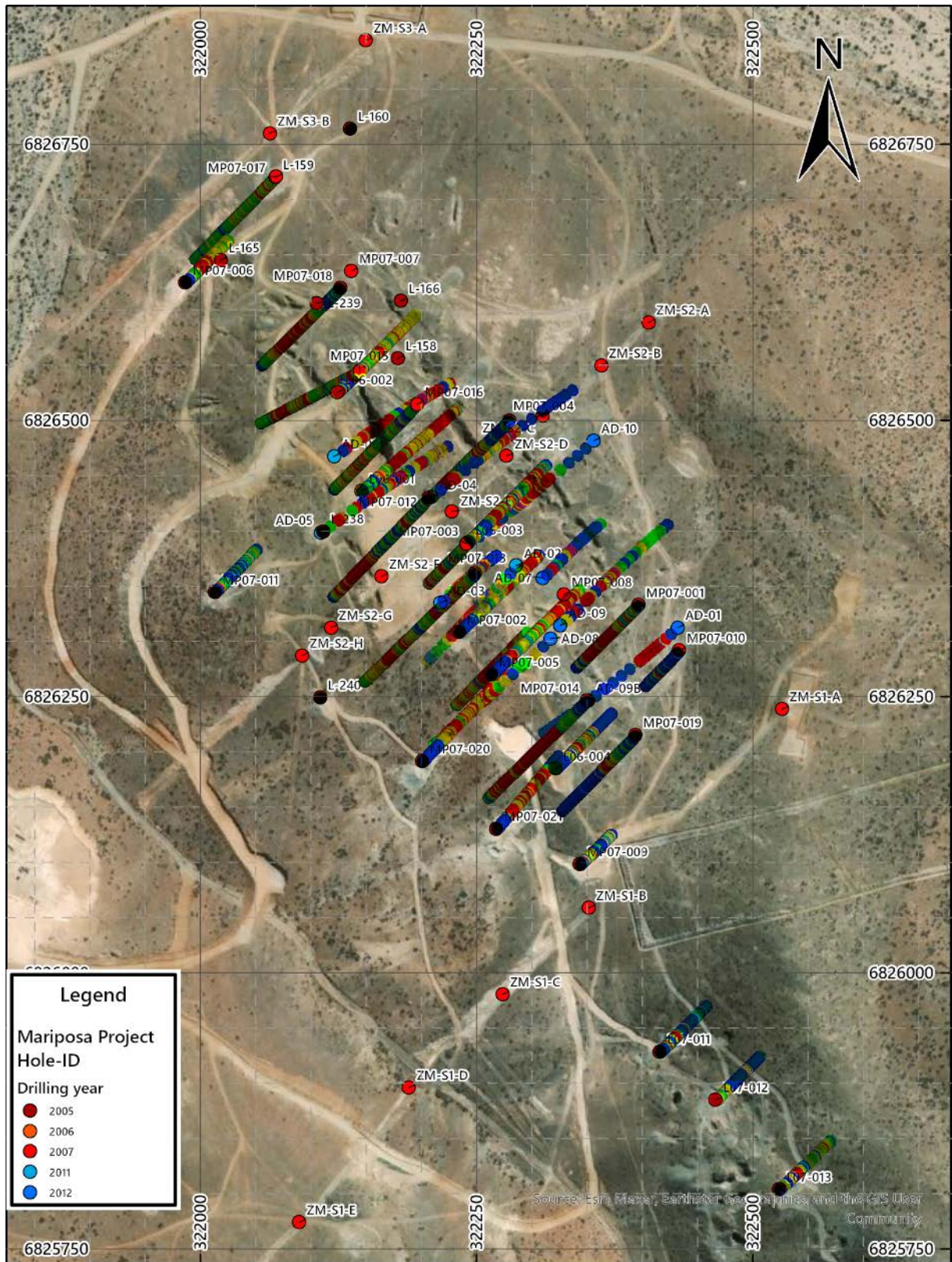
Figure 4-2. Same view as previous figure, with drillhole traces.

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Table 4-1. Original collar table for the 2005-2007 drilling campaign of the Mariposa Fe project. Source: ADY (2023).

HOLE-ID	LOCATIONX	LOCATIONY	LOCATIONZ	LENGTH	SERIES
L-158	322362.76	6826931.64	567.26	40	2005
L-159	322251.84	6827095.65	534.18	40	2005
L-160	322319.73	6827139.59	525.92	40	2005
L-165	322202.54	6827020.65	543.86	50	2005
L-166	322365.65	6826983.66	553.83	42	2005
L-238	322295.1	6826775.21	591.23	114	2005
L-239	322289.47	6826981.8	559.55	120	2005
L-240	322292.5	6826624.82	574.93	144	2005
L06-001	322329.82	6826811.44	589.55	230	2006
L06-002	322308.08	6826900.94	576.08	200	2006
L06-003	322426.15	6826765.14	599.52	200	2006
L06-004	322505.36	6826560.27	602.24	144	2006
L07-011	322599.72	6826304.1	586.65	120	2007
L07-012	322650.27	6826260.38	597.61	114	2007
L07-013	322707.55	6826179.45	623.46	130	2007
MP07-001	322580.38	6826708.37	573.88	160	2007
MP07-002	322417.98	6826683.85	609.31	202	2007
MP07-003	322425	6826763.82	599.64	100	2007
MP07-004	322463.5	6826875.59	573.89	200	2007
MP07-005	322447.26	6826645.34	606.2	222	2007
MP07-006	322170.28	6827000.32	541.84	110	2007
MP07-007	322320.83	6827010.94	551.79	94	2007
MP07-008	322513.14	6826717.98	589.05	280	2007
MP07-009	322527.41	6826473.69	591.12	80	2007
MP07-010	322617.43	6826667.34	559.47	90	2007
MP07-011	322196.91	6826719.9	587.57	110	2007
MP07-012	322390.09	6826804.92	592.34	248	2007
MP07-013	322432.43	6826736.95	602.53	280	2007
MP07-014	322534.09	6826622.15	597.06	252	2007
MP07-015	322328.15	6826920.07	573.82	204	2007
MP07-016	322380.19	6826890.14	576.21	216	2007
MP07-017	322252.4	6827096.29	534.17	210	2007
MP07-018	322310.47	6826995.4	555.5	200	2007
MP07-019	322577.87	6826590.67	582.85	192	2007
MP07-020	322384.67	6826566.9	583.47	236	2007
MP07-021	322451.88	6826505.91	583.2	174	2007
			Total	5,588	

4.1.1 Logging and sampling

During this drilling campaign, sampling methodologies were not recorded. The only remaining information is derived from the database and corresponding inferences. For example, it can be

inferred that sampling was conducted every two meters of drilling, and that drill cuttings were analyzed solely for Phosphorus (P) and total Iron (Fe). The only exception is drill hole L-240, which belongs to the first batch of drillings in the area. According to the database, sampling intervals for this drill hole were conducted every 10 meters. In general, this drill hole is relatively barren compared to the other drillings carried out.

Currently, there are no remaining cuttings or pulp samples from the assays conducted for the determination of P and Fe in this drilling campaign. ADY currently only possesses the information from the database. Furthermore, the database does not contain lithological or mineralogical information.

4.2   Trenches

Three trenches were excavated in 2007, and these trenches cut through the deposit area more or less perpendicular to the main mineralized structures, meaning they have a northeast orientation. These trenches have a depth of approximately 1-1.5 meters.

4.2.1   Sampling

The sampling in the trenches was conducted systematically, with sample intervals of 4 meters apart, except for the last 50 meters of trench ZM-S3, which had sampling every 8 meters. There is no photographic record of the sampling process, nor is there any record of the methods used for trench excavation. Additionally, there is no analysis such as geological mapping associated with the trenches in either the SRK report (Even & Jaramillo, 2008), or the REDCO report (País, Casali, & García, 2013).

It is worth noting that during Geoinvest's field visit to the Mariposa Fe project site, an inspection was conducted in trench ZM-S2 (Figure 4-4). This allowed for a macroscopic review of the mineralization (both gangue and economic), lithology, alteration, and structures present in the trench. Based on this inspection and a comparison with the existing data provided by ADY, the author believes that the information provided in terms of total Fe grades from trench sampling is reliable. Table 4-2 displays the locations of the starting points of trench sections as per the original database.
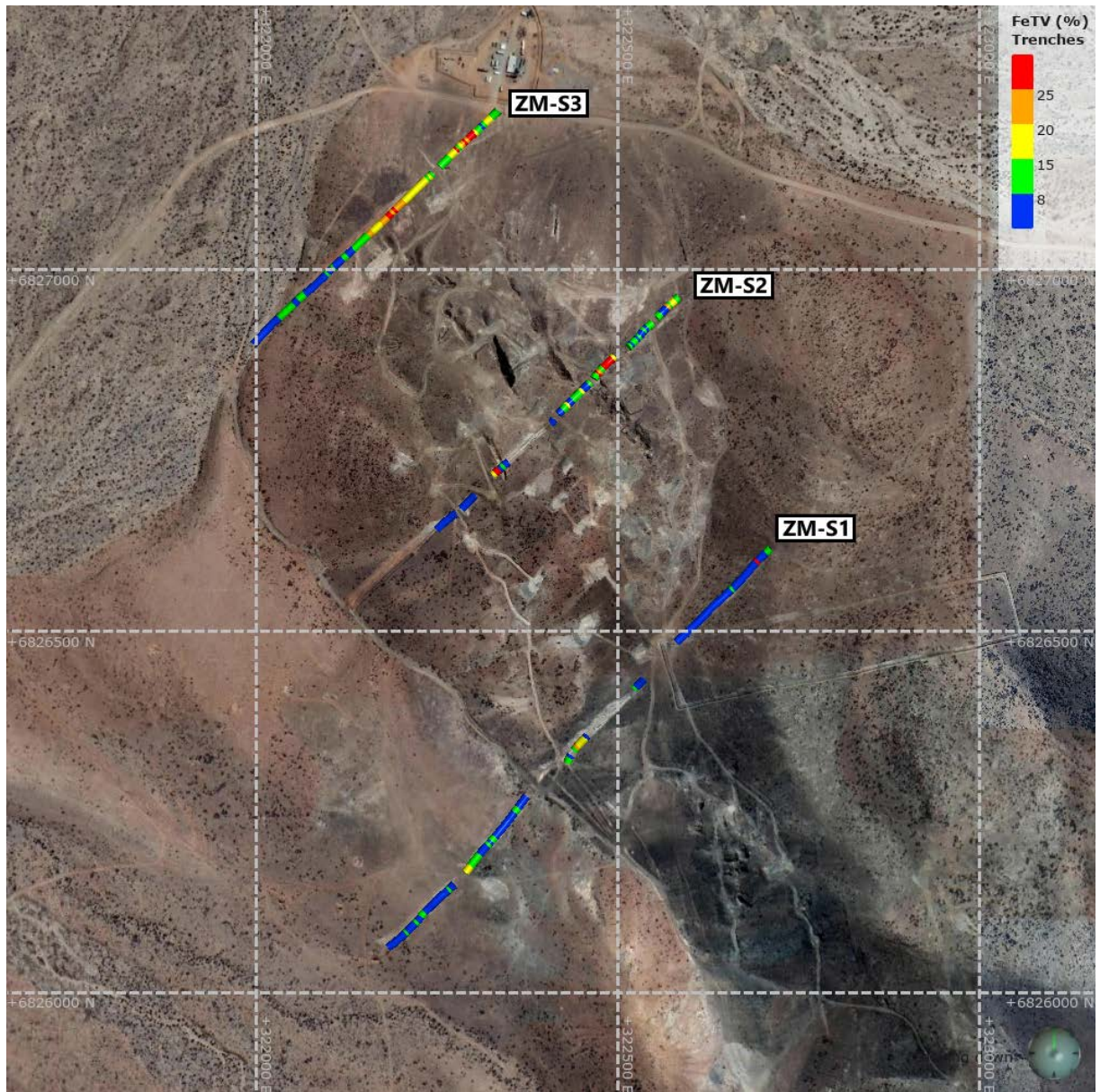
Figure 4-3. Location of trenches, excavated across the Mariposa Fe project area. Showing color legend with Total Fe %.

Figure 4-4. Southwest view to the trench ZM-S2. Segment with intense argillic alteration and low Fe grade and low magnetism.

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Table 4-2. Original "collar" table of the exploration trenches of the Mariposa Fe project. Source: ADY (2023).

HOLE-ID	LOCATIONX	LOCATIONY	LOCATIONZ	LENGTH	SERIES
ZM-S1-A	322710.53	6826614.12	599.01	184	2007
ZM-S1-B	322535.45	6826434.18	588.03	32	2007
ZM-S1-C	322457.47	6826355.86	570.6	48	2007
ZM-S1-D	322372.9	6826271.55	557.04	136	2007
ZM-S1-E	322273.49	6826149.51	569.17	128	2007
ZM-S2-A	322589.84	6826964.34	532.25	50.37	2007
ZM-S2-B	322546.88	6826925.22	543.56	50	2007
ZM-S2-C	322493.75	6826879.61	566.75	44	2007
ZM-S2-D	322461.15	6826843.4	581.41	64	2007
ZM-S2-E	322411.6	6826793.04	596.6	22.76	2007
ZM-S2-F	322348.1	6826734.31	591.64	28	2007
ZM-S2-G	322302.52	6826687.92	582.91	28	2007
ZM-S2-H	322276.12	6826662.66	576.68	36	2007
ZM-S3-A	322333.97	6827219.66	516.08	113.62	2007
ZM-S3-B	322247.01	6827135.44	527.76	348	2007

4.3 2011-2012 Drilling campaign

The current drilling campaign is the most recent one conducted by ADY. The drillings carried out on this occasion were of the diamond type (HQ diameter), and their remaining core samples are stored at ADY's facilities in Vallenar. Table 4-3 displays the locations and drilling lengths of the boreholes. It's worth noting the existence of drilling AD-09B, which was terminated at 40 meters, and for which only lithological data were acquired.

Table 4-3. Original collar table for the 2011-2012 drilling campaign of the Mariposa Fe project. Source: ADY (2023).

HOLE-ID	LOCATIONX	LOCATIONY	LOCATIONZ	LENGTH	SERIES
AD-01	322616	6826688	562.2	320	2012
AD-02	322470	6826744	601.76	300	2011
AD-03	322401	6826710	598.56	350	2011
AD-04	322393	6826806	593.24	320	2011
AD-05	322293	6826774	591.8	285	2011
AD-06	322305	6826843	584.84	255	2011
AD-07	322494	6826733	597.59	300	2012
AD-08	322501	6826678	601.04	300	2012
AD-09	322510	6826690	597.4	285	2012
AD-09B	322535	6826622	596.92	40	2012
AD-10	322540	6826857	560.69	285	2012
			Total	3,040	

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The campaign commenced drilling in November 2011 and concluded in February 2012, carried out by the Chilean drilling company Superex S.A., a significant player in the industry. The primary objectives of this campaign were to establish a more robust geological model, obtain geotechnical parameters for mine planning, correlate the results from reverse air drilling with diamond drilling, conduct mineralogical analyses to guide the mining project, and obtain test samples for the pilot plant.

One of the reasons for conducting this campaign was to validate data from the previous campaign. Figure 4-5 shows drillings L06-001 and AD-05, where it is evident that there is indeed correlation between the data obtained for drillings from different campaigns, displaying relatively similar mineralization intervals.
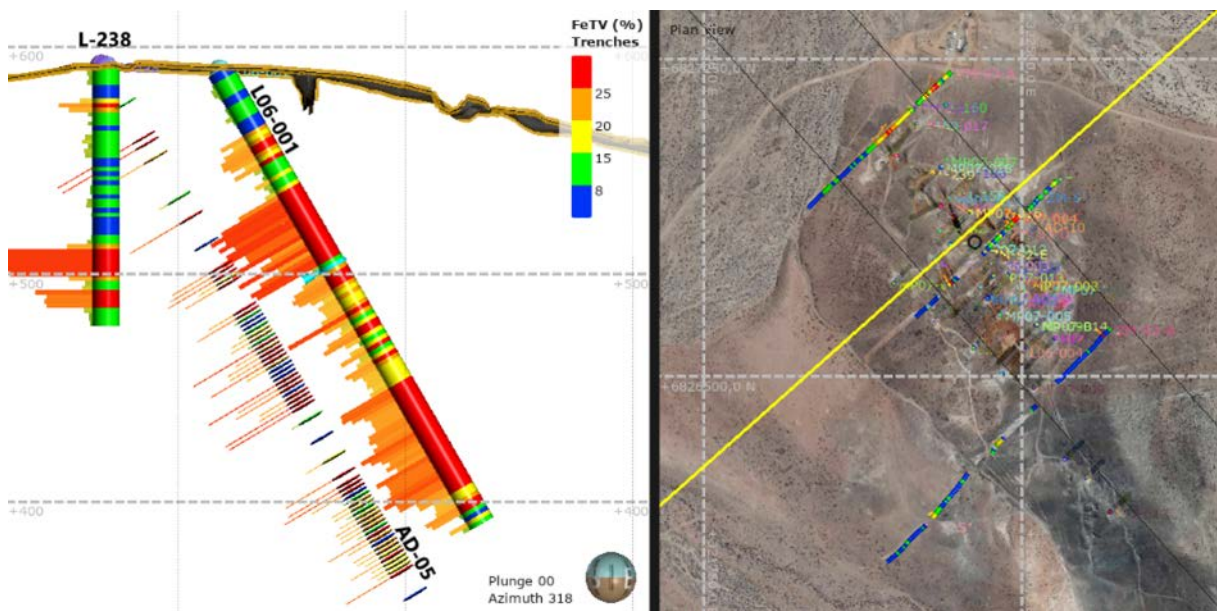
Figure 4-5. Section view for the L06-001 and AD-05 drillholes showing TFe (%).

4.3.1 Logging and sampling

According to the REDCO report (2013), drill core logging was carried out in a secure and dedicated facility within ADY's premises in the Mariposa Fe project area, under the supervision of responsible geologists and engineers. The processing of drill cores involved recording geological parameters such as lithology, alteration, vein descriptions, mineralization, and structures. Geotechnical parameters of the drill core were also determined, including fracture and joint counts, vein counts, fault identification, RQD (rock quality designation), rock strength, among others. Additionally, the core samples were properly photographed for documentation

purposes. Finally, the drill core samples were stored at ADY's facilities located within the project area (País, Casali, & García, 2013).

All the aforementioned in the previous paragraph was duly verified by Geoinvest on-site at the project, confirming the record-keeping and storage of drill core. In the opinion of the author of this report, the quality assurance measures for the information and the safeguarding of the core materials and data comply with industry-accepted standards, at least for the current drilling campaign described in this section.

In the following chapters on '*Data Verification*' and '*Sample Preparation, Analysis, and Security,*' more details are provided regarding the storage and logging of drill core for this campaign and the quality control measures carried out by ADY.

Regarding the preparation of the core samples for chemical analysis, this was conducted by Bureau Veritas Coquimbo (formerly Bureau Veritas Geoanalítica Coquimbo) in Chile.

4.4   Spatial disposition of drillholes

The drill collar locations are not in a regular grid but strategically positioned along the edges of mineralization, especially in the E and W directions. For the first part of the initial campaign (Figure 4-6), the exploration drill holes were solely vertical, spaced between 50 meters and up to 170 meters apart.

For the second part of the first drilling campaign, the arrangement was designed to determine the depth of mineralization associated with the mineralized structures. Therefore, all drillholes in this case have an inclination of approximately 60°, both to the northeast and southwest (Figure 4-7). The spacing between drillholes along the main structures is approximately 50 meters (in a northwest direction). However, some drillholes are as close as 20 meters apart, and in the case of drillholes located further to the north, the spacing between them reaches approximately 90 meters. The last three drillholes to the south are spaced approximately 167 meters apart from the northwestern group.

Figure 4-8 shows the arrangement of the drillholes from the last exploration campaign. These drillholes appear discontinuous in the figure due to the adopted sampling methodology. These drillholes also have an inclination of approximately 60°, both to the northeast and southwest, except for drillhole AD-07, which has an inclination of 76° towards the southwest. The drillholes

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located at both ends are approximately 310 meters apart, while the drillholes drilled between these two are spaced from about 20 meters to 60 meters apart.

The inclination and direction of inclination of the drillholes are relatively similar, so the distance between the samples from these drillholes is more or less similar to the calculated distances between the drillhole collars.
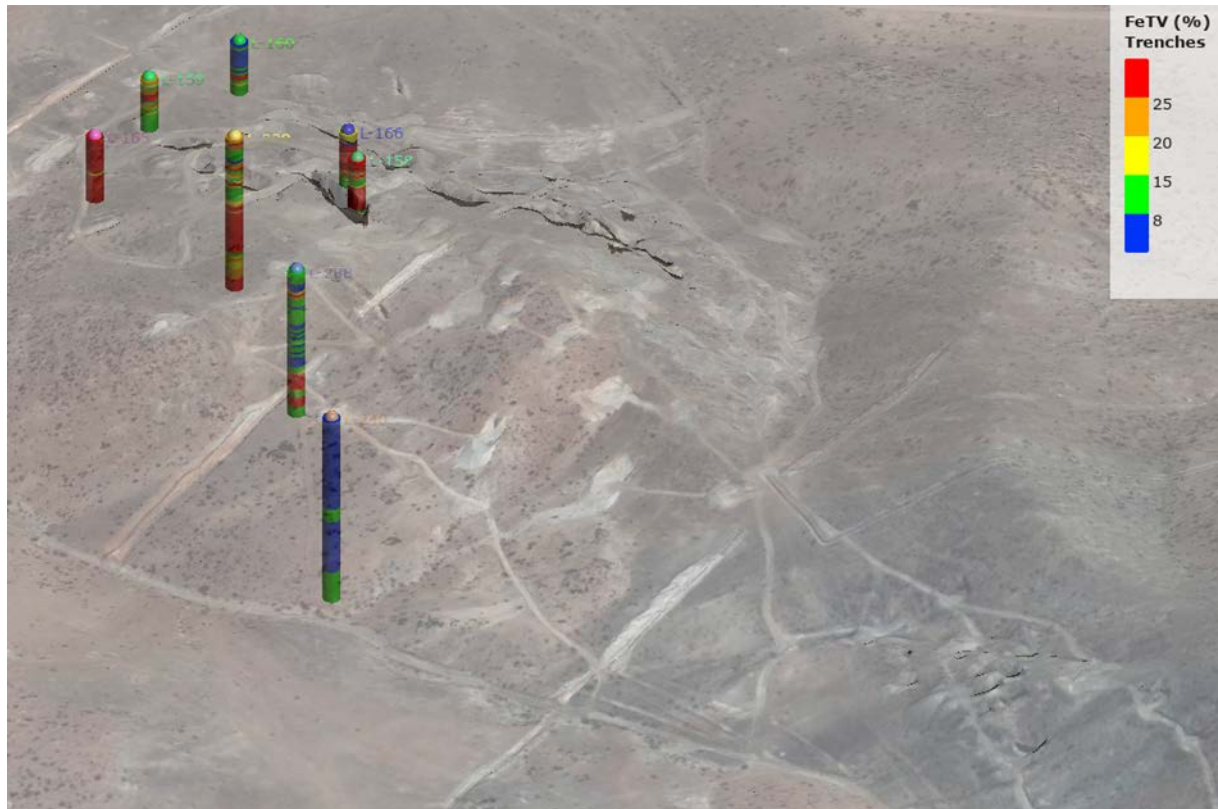
Figure 4-6. Drillholes from the first drilling campaign (only vertical) isometric view. Looking at north-northeast.
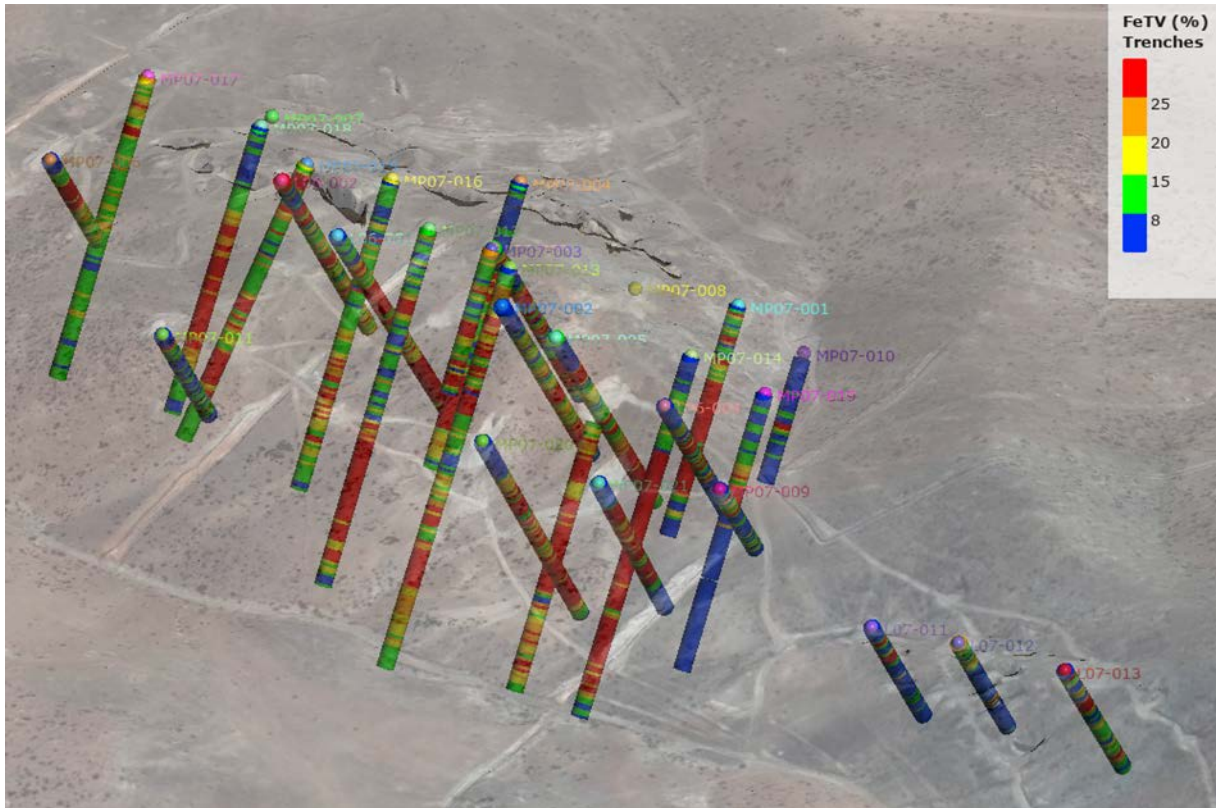
Figure 4-7. Drillholes from the first drilling campaign (only inclined) isometric view. Looking at north-northeast.

Figure 4-8. Drillholes from the second drilling campaign isometric view. Looking at north-northeast.

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5   SAMPLE PREPARATION, ANALYSIS AND SECURITY

The information presented here essentially corresponds to the data collected by SRK (Even & Jaramillo, 2008) and that collected by REDCO (País, Casali, & García, 2013) for the two drilling campaigns conducted at Mariposa Fe.

Regarding the reverse circulation drilling campaigns (conducted between 2005 and 2007), these did not include the implementation of regular QA/QC measures, and the SRK report (2008) suggests the need for such a program that complies with internationally accepted industry standards.

In relation to the analysis of trench samples, there is also no record of the implementation of QA/QC measures.

Considering the above, there is also no record of the type of sample preparation for both the drilling campaign and trench mapping carried out before 2007.

On the other hand, there is a record of certain quality assurance measures and the type of geochemical assays conducted for the samples from the 2011 and 2012 drilling campaign, especially regarding the information collected and generated by REDCO.

5.1   Sample preparation

As mentioned earlier, there are no records of sample preparation for samples obtained from drilling campaigns and trench mapping until 2007.

However, for the 2011-2012 campaign, samples for chemical analysis were processed by the "Bureau Veritas Geoanalytica" laboratory in Coquimbo, Chile. This laboratory had ISO 9001:2008 certification at the time of the geochemical assays. HQ core samples were cut in half in the field, and the halves were subsequently sent to the laboratory, while the other half was retained on-site. The selection of samples for this campaign was based on specific criteria, defined as follows according to geological mapping:

- Barren rocks: one sample every 20 meters, 50 cm in length;

- Rocks with disseminated magnetite: one sample every 10 meters, 50 cm in length;

- Rocks with magnetite in veins: one sample every 2 meters, 50 cm in length;

- Rocks with massive magnetite: one sample every 3 meters, 50 cm in length.

5.2   Analysis

Table 5-1 provides a summary of the number of specimens and types of analyses conducted.

Table 5-1. Summary of assays for the 2011-2012 drilling campaign. Source: REDCO (2013).

Analysis	Waste	Disseminated Magnetite	Magnetite in Veins	Massive Magnetite	Total
	Quantity of specimens				
Chemical analysis	49	100	341	60	550
Density analysis	5	5	5	5	20
Geotechnical analysis	4	5	7	4	20
Mineralogical analysis	0	5	5	5	15
Recovery test	0	1	1	1	3

5.2.1   Chemical analysis

Once in the chemical laboratory, the samples were examined using the redox titration method for Total Iron (TFe or FeT) and the Davis Tube test for determining Magnetic Iron (Fe_{mag}). Both techniques are commonly used for iron determination. Figure 5-1 provides a statistical summary of the results of the TFe (%) assays grouped by lithological/mineralogical group.
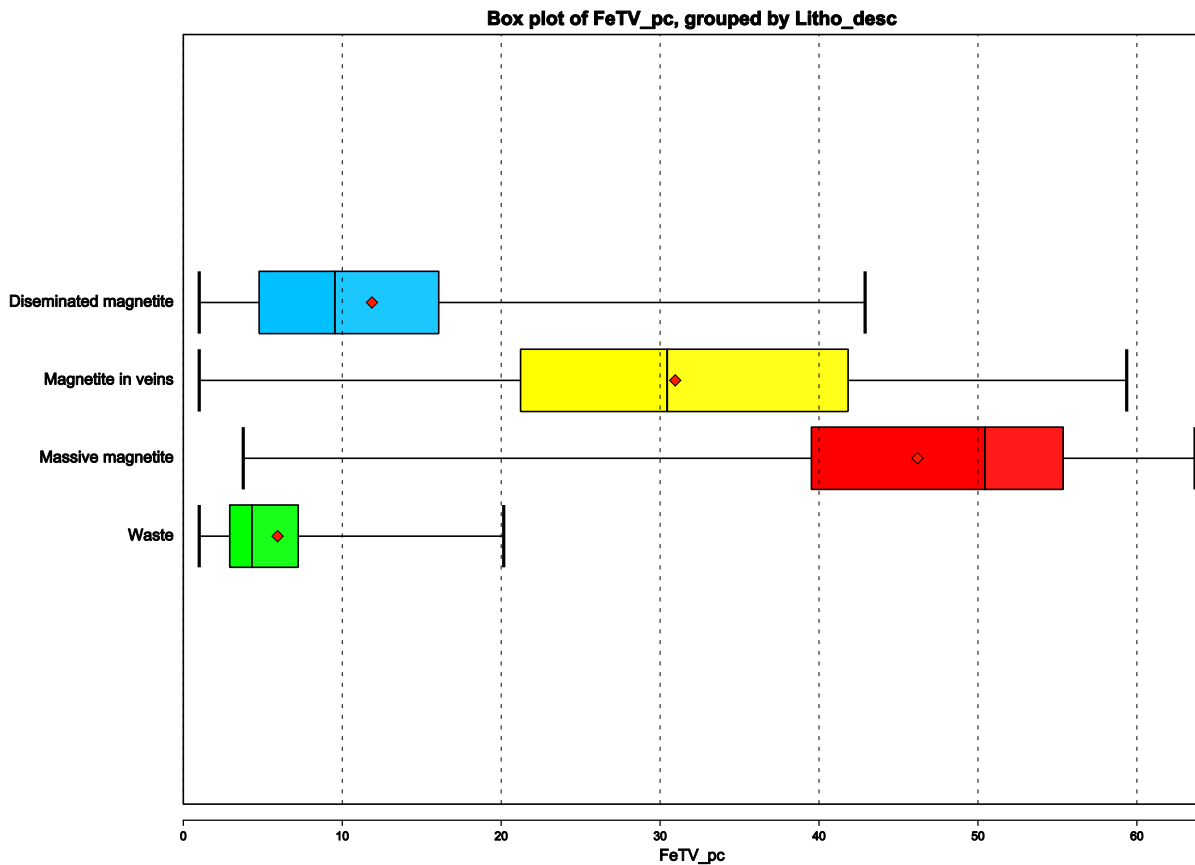
Figure 5-1. Assay FeT (%) box plot according to rock/mineralization type of the 2011-2012 drilling campaign.

5.2.2 Density analysis

Regarding the density analyses, these were conducted by Bureau Veritas Geoanalítica Coquimbo to determine the relationship between total iron and density and to validate the relationship between these variables used by SRK (2008).

For the density analysis, a total of 20 samples were tested. These consisted of 5 samples of sterile material, 5 with disseminated magnetite, 5 with magnetite in veins, and 5 with massive magnetite.

To estimate the density of the Mariposa deposit, an empirical model was developed based on the results of chemical analysis and densimetric analysis. To do this, densities were plotted against the type of rock and corresponding mineralization group (Figure 5-2). The results of this analysis yielded a linear correlation summarized in the following formula:

$$Density\ (\frac{tonnes}{m^3}) = 0.0254 \times FeT(\%) + 2.8202$$

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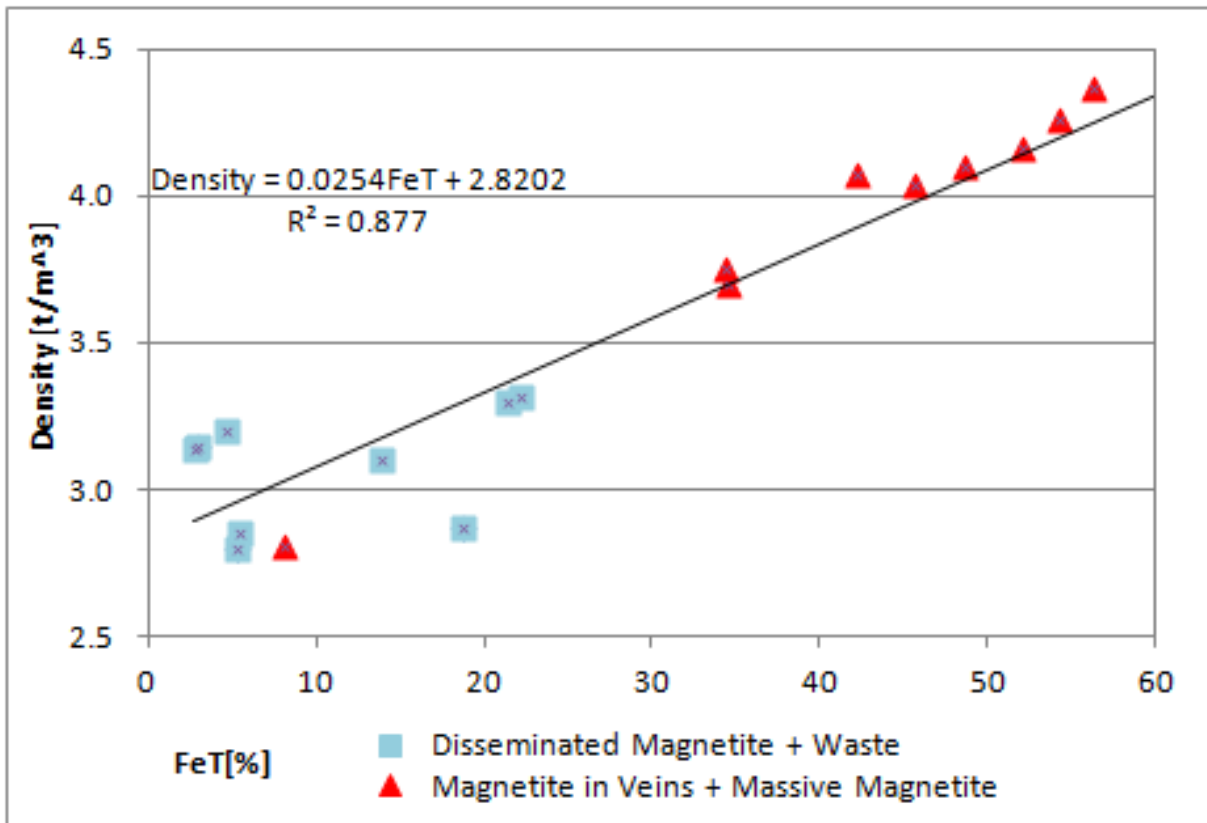
Figure 5-2. Density trend per rock type. Source: REDCO (2013).

5.2.3   Mineralogical analysis

For mineralogical analysis, a total of 15 specimens were sent to Guarachi Ingenieros Ltda., a Chilean company specializing in the mining and metallurgical sector as well as mineral microscopy. These specimens included 5 samples of rock with disseminated magnetite, 5 samples of rock with magnetite in veins, and 5 samples with massive magnetite. No samples of sterile rock were sent for analysis. Additionally, as reported by REDCO (2013), 10 remaining samples from the previous reverse circulation drilling campaign were also sent for analysis. However, the results of these samples and any remaining cuttings from those drillings are not available today. Table 5-2 displays the result of one sample for each rock type.

Table 5-2. Mineralogical analysis results for 3 selected samples, one per each rock-type. Source: REDCO (2013).

Sample Id.	M1 - AD07	M7 - AD03	M10 - AD04
Rocktype	Disseminated Magnetite	Magnetite in Veins	Massive Magnetite
FeT (%)	8.99	39.29	54.97
Mineralogical Composition			
Magnetite (%)	11.8	51.01	75.8

Hematite (%)	0.52	3.29	0.13
Martite (%)	0.0	0.0	0.0
Waste (%)	87.5	45.61	24.07
Others (%)	0.18	0.09	0.0
Liberation			
Liberation (%)	36.42	32.6	74.15
Asociation with Waste (%)	36.01	19.67	24.59
Oclusion with waste (%)	19.88	2.78	1.25
Liberation mean (%)	64	67	117
Liberation max (%)	632	240	874
Liberation min (%)	10	2	2
Asociation mean (%)	98	231	329
Oclusion mean (%)	75	15	75

As shown in Table 5-2, the most significant mineral phase by far is magnetite, followed by hematite in the "Magnetite in veins" lithological group. Additionally, gangue minerals have been identified, especially during the drilling mapping process. The main gangue minerals observed in the drillings are:

- Chlorite

- Epidote

- Actinolite

To a lesser extent, the presence of the following minerals has also been recorded:

- Quartz,

- Alkali Feldspar,

- Sericite, and

- Apatite

5.3 Author's opinion

Regarding the samples from the first drilling campaign and trenching survey, the author cannot comment on the sampling process, analysis, or sample security due to the lack of information and adequate data regarding all the points discussed in this chapter.

On the other hand, regarding the drilling campaign carried out in 2011-2012, the author's opinion is that minimum standards were met, and the methods of sample analysis and sample security are appropriate. Concerning sample preparation for their respective assays, there may

be some reasonable doubts, especially due to the methodology of selecting intervals from drill holes to be sent for chemical analysis, which is based on lithological-mineralogical classification. It is worth noting that the diamond drilling campaign was carried out for well-defined purposes, including the creation of a more robust geological model, obtaining samples for mineralogical and metallurgical analysis, and validating the previous drilling campaign. Therefore, the author believes that although the methodology for selecting samples for analysis may not be orthodox, it does fulfill the original purposes for which this campaign was conducted. More details about the location of the drill holes, storage, and review of corresponding records are provided in the "Data Verification" chapter.

6   DATA VERIFICATION

6.1   Site visit

For the Mariposa Project a site visit was made during July 11th & 12th of 2023. The main objective of this visit was the revision and validation in the field of both drilling campaigns conducted in the Mariposa Project (Figure 6-1). Drillhole collars, surface trenches and mineralized intervals of the cores of the second drilling campaign were identified and recognized.
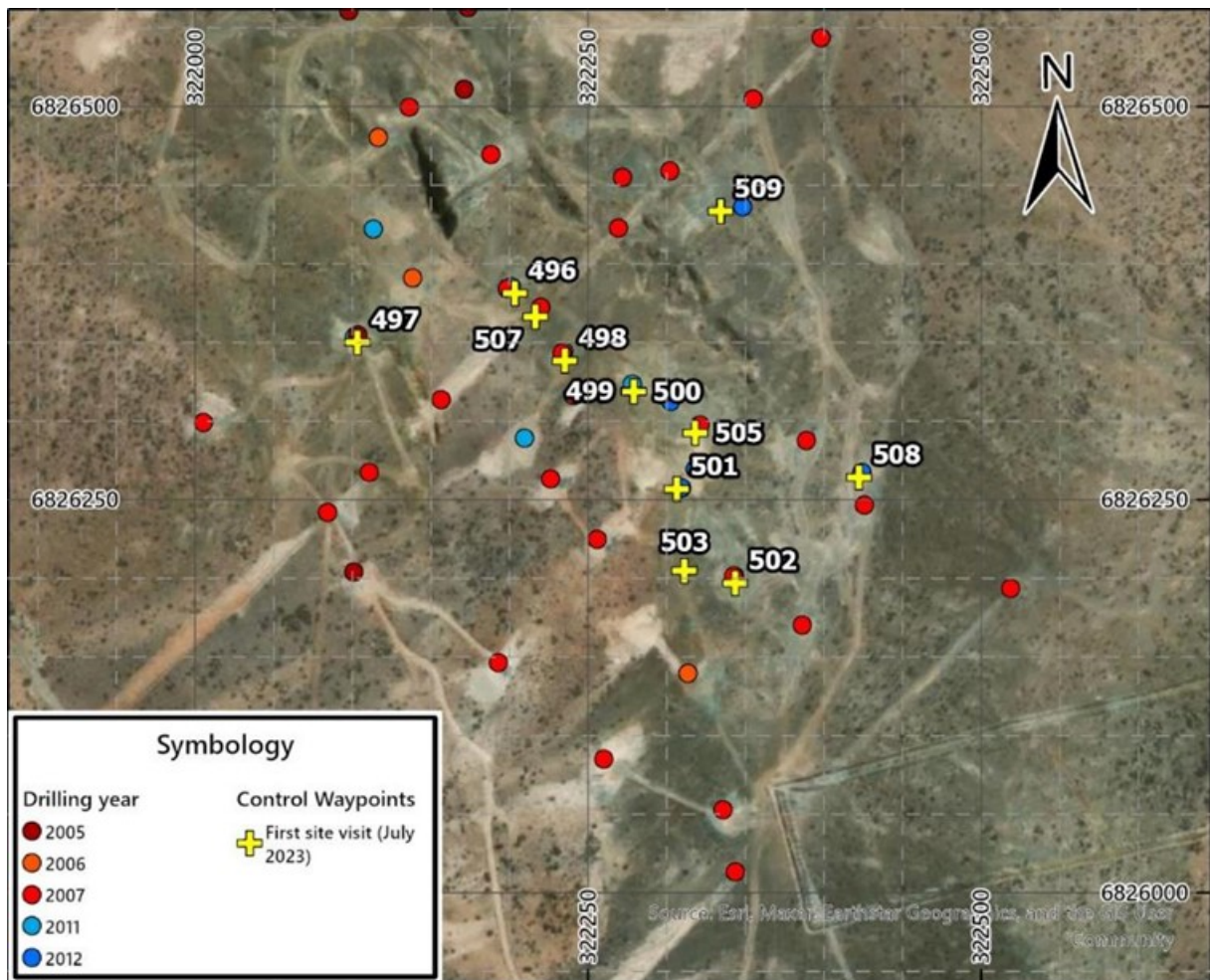
Figure 6-1. Control waypoints of the Mariposa Project area. The waypoints are derived from the July 2023 site visit. Drillhole locations are displayed and color-coded based on the year of drilling. Source: Geoinvest (2023), drillhole collar data from Admiralty Resources database.

Regarding the second drilling campaign, drill collars were visited and inspected by Geoinvest. Figure 6-2. displays the location of drill hole AD-06 from the 2011-2012 campaign and drill hole L-238 from the first drilling campaign. In total, 7 out of the 10 drill holes from the second campaign were reviewed, and some of the drill hole collars from the first drilling campaign, which are still visible in the field, were also inspected.

Figure 6-2. Drillholes AD-06 and L-238. Control Waypoint #497. Source: Geoinvest (2023).

Furthermore, the storage warehouse for drill core samples at ADY's facilities was visited, which contains the drill core samples from the campaign conducted in the years 2011-2012. Intervals of interest from drill holes AD-05 and AD-06 were reviewed and verified. Figure 6-3 shows the storage location with the boxes of drill core samples, and Figure 6-4 displays some of the drill cores arranged during the visit for inspection.

Figure 6-3. Storage of drill cores of the second drilling campaign. Source: Geoinvest (2023).

Figure 6-4. Core boxes of the AD-05 drillhole. Source: Geoinvest (2023).

The reviewed intervals were verified by Geoinvest and are consistent with the geological and geotechnical logging described in the drill core database. Additionally, the folders containing the geological and geotechnical logging records of the drill cores were inspected (Figure 6-5). These folders were cross-checked with the information in the database and the drill core intervals reviewed in the field. No discrepancies or deficiencies were found during the review, and it is believed that the database is complete and accurate with respect to the original logging information and what is observable in the drill core samples.

6.2 Database revision

The information in the database, as mentioned in the previous paragraph, aligns with the original geological logging information, and the data indicated in the drill core logging records in the folders match. Furthermore, the location of the drill collar points is also considered accurate; these points were measured using handheld GARMIN GPS devices, measured points are shown in Figure 6-1.

For each exposed drill hole, the inclination and direction were also reviewed using a compass and inclinometer, and the measurement results did not reveal significant differences from the information in the database.

With respect to the digital information provided to Geoinvest by ADY, it is worth noting that the database is not unique and is stored in separate files for both drilling campaigns.

Figure 6-5. Drill cores logging folders of the second drilling campaign. Source: Geoinvest (2023).

6.3 Main geological features

The geological aspects such as mineralization, structures, and lithology were reviewed both on-site at the deposit and in the reviewed drill holes. The presence of mineralized veins-faults and other mineralized bodies can be seen from Figure 3-3 to Figure 3-6 (Local Geology), which have been previously described by other authors of technical reports with similar characteristics and have been reviewed by Geoinvest.

7   METALLURGICAL TESTING AND MINERAL PROCESSING

The information presented here is primarily based on knowledge generated by REDCO (2013), Jianjian Institute of Mining and Metallurgy Co. Ltd (2015), and Magang Group Design & Research Institute Co., Ltd. (2018).

The initial metallurgical tests were conducted in 2012 by Polimin SPA, a Chilean company specializing in metallurgy, which has maintained ISO 9001 certification continuously since 2004. However, for these initial metallurgical studies, the results showed recoveries of 59%-60% for massive magnetite and disseminated magnetite bodies, with recovery expectations of up to 62%.

Due to the low recoveries obtained, new mineral processing tests were commissioned in 2015 from the Jianjian Institute of Mining and Metallurgy Co. Ltd. For this second series of tests, a grinding process to 75% of 0.075 mm and low-intensity magnetic separation (LIMS) were carried out, resulting in a concentrate with a total iron content of 65.17% based on a crude ore grade of 33.21% FeT, i.e., a concentration factor of 2.29 times. Additionally, it achieved a recovery rate of 85.65% for FeT. In this same study, insignificant amounts of impurities such as Phosphorus (P), Sulfur (S), and alumina (Al_2O_3) were determined. These values, according to Geoinvest's opinion, are expected and reasonable due to the absence of mineral phases associated with these contaminants. However, the amount of SiO2 reached 6.57%, which evidently affects the quality of the iron concentrate.

As a result, ADY commissioned studies from Magang Group Design & Research Institute Co., Ltd. in 2018 to conduct metallurgical tests aimed at improving the concentrate's quality, with a focus on reducing the SiO_2 content.

Below, the main aspects related to metallurgical recovery studies associated with the Mariposa Fe project are summarized, particularly in relation to the latest research generated by Magang Group Design & Research Institute Co., Ltd.:

7.1   Samples characterization

Two types of samples were analyzed for the metallurgical tests. These samples consisted of:

1) Core samples from previous tests conducted by Jianjian Institute of Mining and Metallurgy Co. Ltd (2015).

2) Surface samples provided to Magang by ADY.

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Regarding the core samples, these are the rejects from the tests conducted by Jianjian Institute of Mining and Metallurgy (Figure 7-1 & Figure 7-2), which were provided to Magang for further study.

Figure 7-1. Bags of drill cores samples for mineral processing tests. Source: Magang (2018).

Figure 7-2. Core sample - HPGR product for mineral processing tests. Source: Magang (2018).

On the other hand, surface samples were collected in situ by ADY at the locations shown in Figure 7-3. Figure 7-4 and Figure 7-5 depict the samples upon arrival at the analysis laboratory.

Figure 7-3. Location of surface samples. Source: Magang (2018).

Figure 7-4. Surface samples packages. Source: Magang (2018).   Figure 7-5. Surface sample example. Source: Magang (2018).

7.2   Chemical analysis of samples

Chemical and mineralogical analyses were conducted for both the drill core samples and the surface samples. The summary of results is shown in Table 7-1 and Table 7-2.

Table 7-1. Summary or multi-element assay results for core samples. Source: Magang (2018).

Element	TFe	MagFe	FeO	S	P

Content (%)	33.10	26.45	15.28	0.114	0.323
Element	SiO$_2$	Al$_2$O$_3$	CaO	MgO	LOI
Content (%)	28.53	3.74	9.51	7.26	0.37

Table 7-2. Summary or multi-element assay results for core samples. Source: Magang (2018).

Element	TFe	MagFe	FeO	S	P
Content (%)	50.66	39.92	21.67	0.015	0.598
Element	SiO$_2$	Al$_2$O$_3$	CaO	MgO	LOI
Content (%)	13.05	2.38	6.53	2.67	2.05

In the Magang report (2018), the specific assay type for chemical analysis and its treatment are not indicated. It is mentioned that the materials were analyzed after an initial comminution process using HPGR. Based on the results, the author estimates that the assay type performed would likely be WRA (Whole Rock Analysis) by XRF (X-ray Fluorescence), possibly accompanied by DTT (Davis Tube Test) assays. The results, however, are consistent with the chemical analysis results previously conducted by Bureau Veritas Geoanalítica in 2012.

7.3   Mineralogical analysis

For both drill core samples and surface samples, mineral phase analyses were also conducted. The results indicated a higher presence of magnetite compared to other iron mineral phases. Furthermore, there is a noticeable increase in the amount of limonite in the surface samples, a situation expected due to differences in mineral equilibrium conditions at the surface compared to samples extracted from depth (Table 7-3 & Table 7-4).

Table 7-3. Results summary of the Iron mineral phases for the drill core samples. Source: Magang (2018).

Mineral Phase	Content (%)	Distribution Ratio (%)
Magnetite	26.45	79.91
Limonites	4.07	12.30
Fe-carbonate	0.32	0.96
Fe-silicate	2.19	6.62
Pyrite	0.07	0.21
Total	33.10	100.00

Table 7-4. Results summary of the Iron mineral phases for the surface samples. Source: Magang (2018).

Mineral Phase	Content (%)	Distribution Ratio (%)
Magnetite	39.92	78.80
Limonites	8.86	17.49

Fe-carbonate	0.38	0.75
Fe-silicate	1.49	2.94
Pyrite	0.01	0.02
Total	50.66	100.00

While the results are correlated with those obtained by Guarachi Ingenieros SpA, especially regarding the high magnetite content, there are some differences in the quantification of other iron oxide phases, specifically the presence of limonite and hematite. In the case of the mineralogical analysis conducted by Guarachi Ingenieros SpA, the quantification method used was microscopy, while the methodology used by Magang has not been described in their report. Regardless of this, and in the author's opinion, the differences in the presence of hematite and limonite should not necessarily exclude each other. The higher presence of limonite at the surface is reasonable, and the presence of hematite in such deposits is also plausible. Therefore, it should be considered from a metallurgical perspective that both limonite and hematite are potential iron mineral phases with lower magnetism.

7.4 Crushing and comminution tests

For the comminution analysis of materials from the Mariposa Fe deposit, a comparative analysis was conducted with material from the Zhangzhuang iron mine, considering similar material characteristics in terms of behavior during comminution processes. The relative grindability curve in Figure 7-6 shows the comparison of grinding results to achieve 50% and 85% passing #200 mesh (0.075 mm) from concentrates with particle sizes of 3.0 mm.

The results indicate a higher resistance to comminution for the Mariposa Fe materials compared to those from the Zhangzhuang mine, which implies longer processing times.

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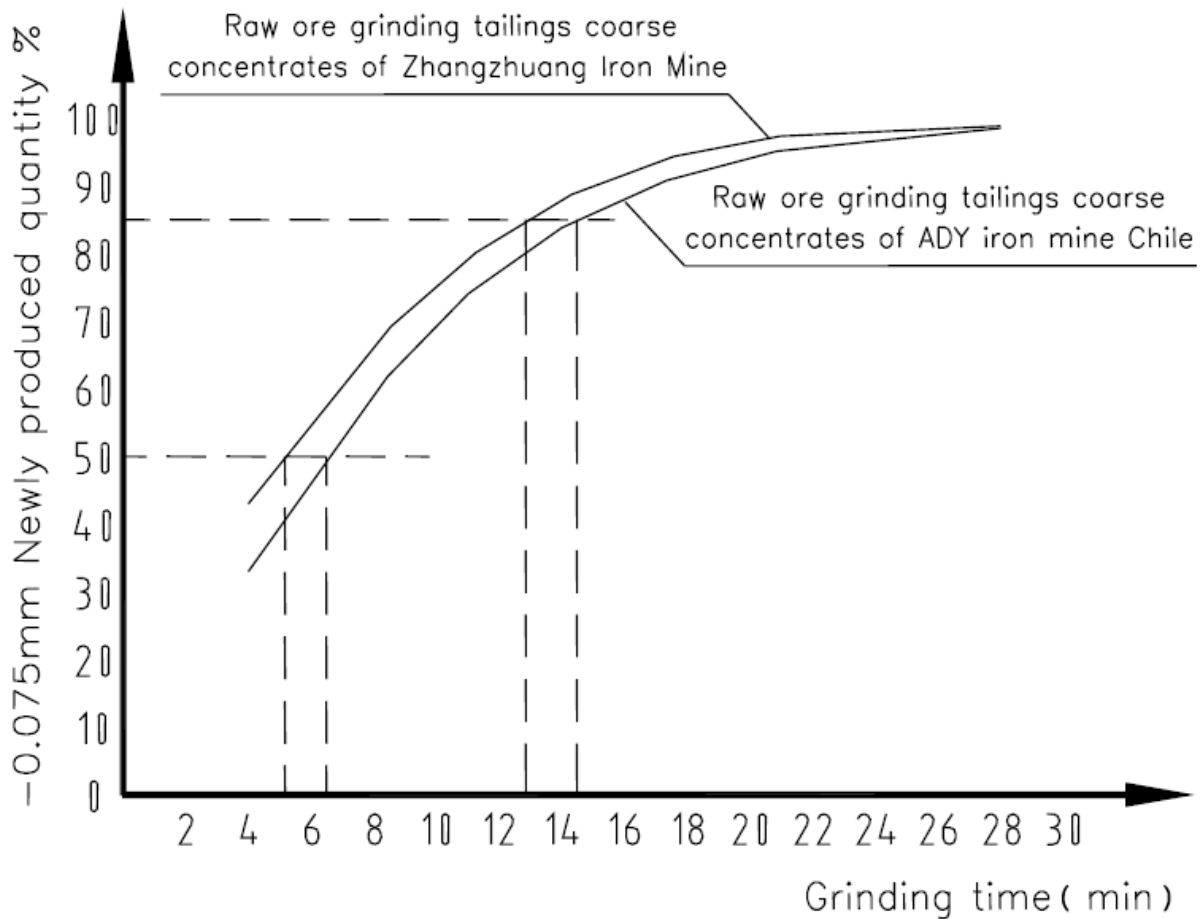
Figure 7-6. Grindability curve of 3.0 mm grade of coarse concentrates of Magang Zhangzhuang Iron Mine and Mariposa Fe. Source: Magang (2018).

7.5   Beneficiation process

The beneficiation test studies conducted on surface and drill core samples were commissioned to Mangang in order to meet at least two minimum conditions, which are to obtain a concentrate with TFe ≥ 67% and SiO2 content < 4%.

For the subsurface ore, such as that from drill core samples, the process flow determined by Mangang consists of the series of stages shown in Figure 7-7. According to the results of applying this process flow, considering a feed with TFe of 33.10%, a relative amount of magnetite of 79.91%, a relative amount of hematite and limonite of 12.30%, and a silica content of 28.53%, the theoretically generated concentrate product would contain a TFe grade of 68.71%, a TFe recovery of 83.56%, a yield of 40.23% (a selection ratio of 2.49).

According to the results of applying this process flow, considering a feed with TFe of 50.66%, a relative amount of magnetite of 78.80%, a relative amount of hematite and limonite of 17.45%, and a silica content of 13.05%, the theoretically generated concentrate product would

contain a TFe grade of 68.79%, a TFe recovery of 77.86%, a yield of 57.34% (a selection ratio of 1.74), and a SiO_2 content of 2.38%.
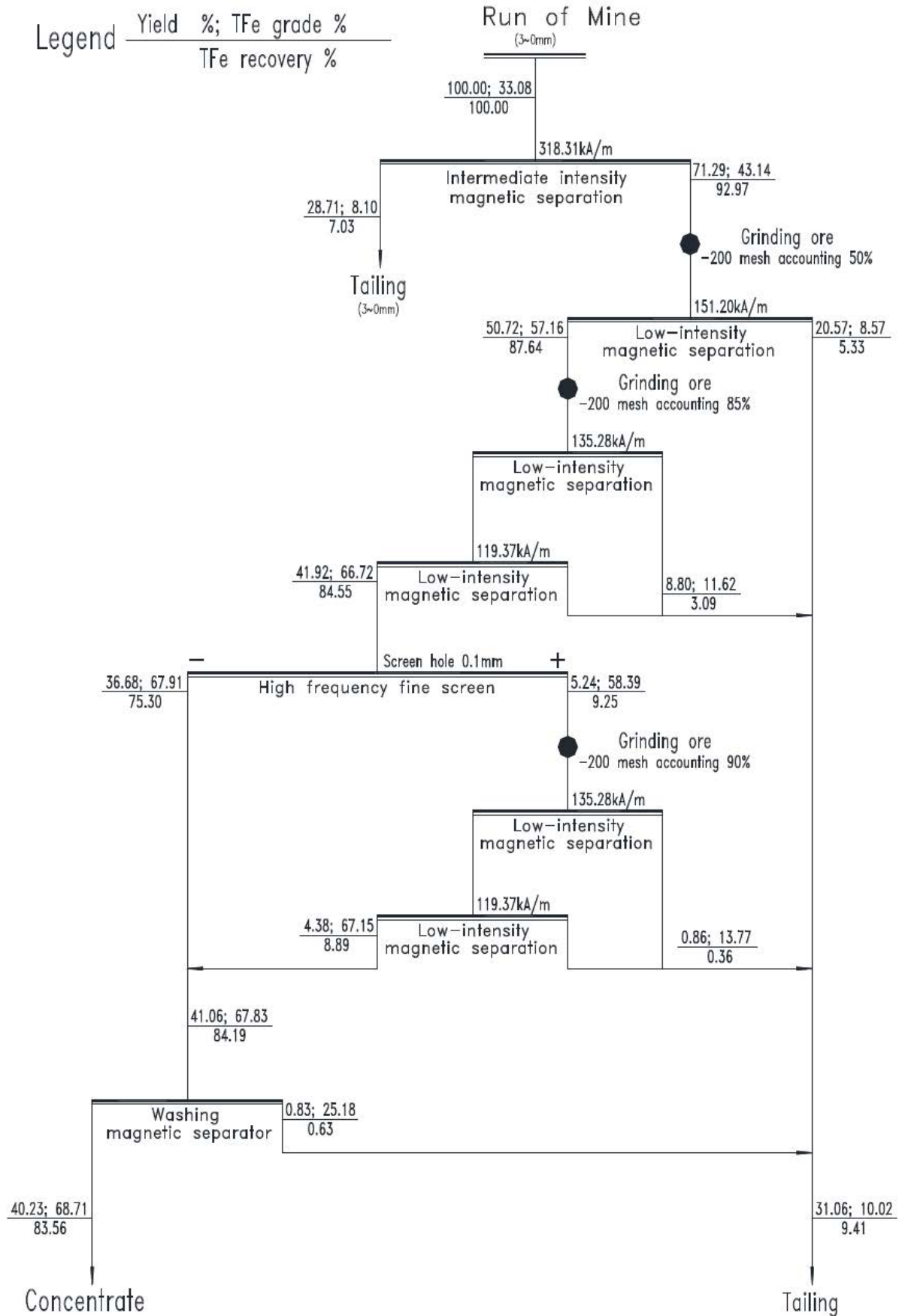
Figure 7-7. Flow chart of mechanical application process for underground Iron ore. Source: Magang (2018).
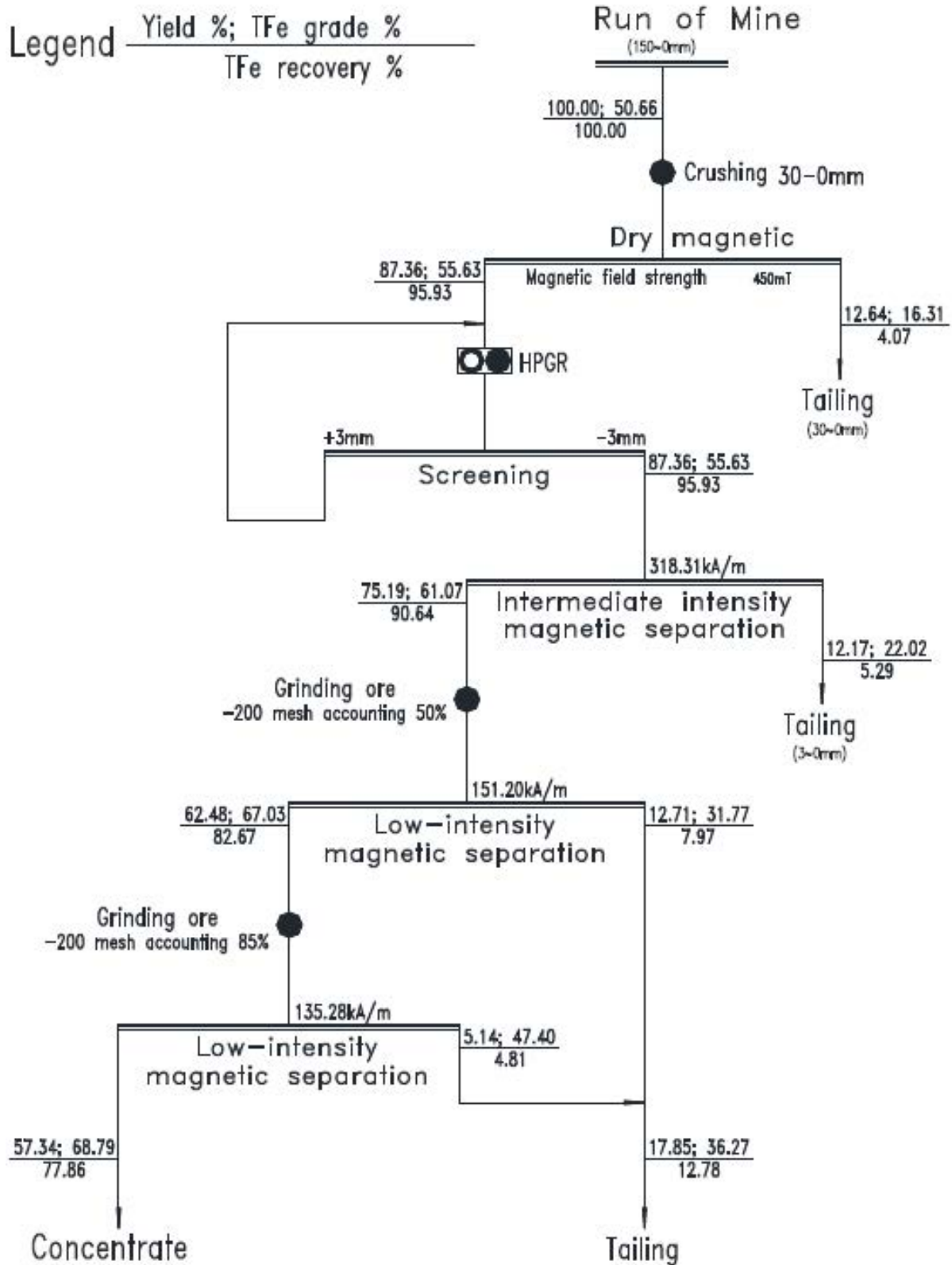
Figure 7-8. Flow chart of mechanical application process for surface Iron ore. Source: Magang (2018).

8 MINERAL RESOURCE ESTIMATE

For the update of mineral resources at the Mariposa Project, a 3D geological model was utilized for the estimation units, including Massive Magnetite and Magnetite in Veins, whereas the unmodelled background unit corresponds to Disseminated Magnetite. The grade information was sourced from reverse circulation (RC) drilling campaigns conducted between 2005 and 2007, totaling 1,728 meters and 3,860 meters, respectively. In 2011, a diamond drilling campaign was undertaken to complement the previous RC campaigns. The diamond drilling campaign added 3,040 meters of new information from 11 boreholes.

The Resource Estimation updates the following variables: TFe (total Iron), P (Phosphorus), FeDTT (Iron by Davis Tube Test), Al_3O_2 (Alumina), Fe_{Mag} (Magnetic Iron), R_{weight} (Weight recovery), S (Sulfur) y SiO_2 (Silica). TFe and P variables were estimated using Ordinary Kriging (OK), while the variables FeDTT, Al_3O_2, Fe_{Mag}, R_{weight}, S y SiO_2 were estimated using the Inverse Distance Squared (ID2) method.

8.1 Statistical analysis

For the purpose of statistically characterizing the grades of TFe, P, FeDTT, Al_3O_2, Fe_{Mag}, R_{weight}, S y SiO_2, a descriptive statistical analysis was conducted, calculating histograms and log-probability plots for each estimation unit for these variables. To perform the statistical analysis, drillhole samples were composited to 2.0m intervals, and these composites were subsequently used during the resource estimation.

The estimation units defined for the Mariposa Project are presented in Table 8-1.

Table 8-1. Estimate units for the Mariposa Fe project.

Estimate Unit	Code
Background	5000
Massive_Mag	5001
Union_inveins	5002

The statistical summary of the distribution of the variables by estimation units is shown in the following tables:

Table 8-2. TFe and P distribution by estimate units.

Zone		FeTV				P			
Estimate Unit	**Code**	**Count (E.U.)**	**Min (FeTV%)**	**Max (FeTV%)**	**Avg (FeTV%)**	**Count (E.U.)**	**Min (P %)**	**Max (P %)**	**Avg (P %)**
Background	5000	2030	0.750	57.120	11.201	1713	0.003	1.380	0.286

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Massive_Mag	5001	557	1.000	63.740	31.052	410	0.013	2.951	0.303
Union_inveins	5002	1317	1.000	68.400	25.400	1070	0.014	3.389	0.318

Table 8-3. FeDTT and Al_3O_2 distribution by estimate units.

Zone		FeDTT				Al_3O_2			
Estimate Unit	Code	Count (E.U.)	Min (FeDTT %)	Max (FeDTT %)	Avg (FeDTT %)	Count (E.U.)	Min (Al_3O_2%)	Max (Al_3O_2%)	Avg (Al_3O_2%)
Background	5000	10	51.820	66.740	63.930	13	0.790	15.820	8.011
Massive_Mag	5001	31	43.820	70.270	63.368	32	0.470	16.800	3.381
Union_inveins	5002	40	50.900	70.730	65.358	42	0.250	11.810	2.287

Table 8-4. Fe_{Mag} and R_{weight} distribution by estimate units.

Zone		Fe_{Mag}				R_{weight}			
Estimate Unit	Code	Count (E.U.)	Min (Fe_{Mag}%)	Max (Fe_{Mag}%)	Avg (Fe_{Mag}%)	Count (E.U.)	Min (R_{weight} %)	Max (R_{weight} %)	Avg (R_{weight} %)
Background	5000	10	2.310	31.740	12.168	13	0.190	55.360	15.345
Massive_Mag	5001	31	5.000	57.780	31.016	32	8.830	90.320	47.830
Union_inveins	5002	40	4.230	57.570	32.902	42	0.350	87.480	47.703

Table 8-5. S and SiO_2 distribution by estimate units.

Zone		S				SiO_2			
Estimate Unit	Code	Count (E.U.)	Min (S %)	Max (S %)	Avg (S %)	Count (E.U.)	Min (SiO_2%)	Max (SiO_2%)	Avg (SiO_2%)
Background	5000	13	0.005	0.650	0.093	13	21.180	52.540	42.045
Massive_Mag	5001	32	0.005	3.160	0.122	32	4.430	37.890	20.595
Union_inveins	5002	42	0.005	2.140	0.073	42	4.640	41.370	22.833

In the preceding tables, there is a noticeable difference in the number of composites for the variables TFe and P compared to the rest of the variables. This situation influences the methodology to be used in the resource estimation process. The variables TFe and P are estimated using ordinary kriging (OK) because the number of composites per estimation unit allows for adequate variographic analysis to define the necessary parameters for kriging. The variables with a reduced number of composites are estimated using inverse distance squared (ID2).

As mentioned earlier, the preliminary statistical analysis includes generating histograms and log-probability plots to characterize the distribution of grades and the presence or absence of multiple populations within the estimation unit.

In this report, only the detailed graphs for TFe and P are presented (Figure 8-1 to Figure 8-6), while for FeDTT, Al_3O_2, Fe_{Mag}, R_{weight}, S and SiO_2 only histograms are shown (Figure 8-7 to Figure 8-9).

Figure 8-1 displays the histogram and log-probability plot obtained for the background unit, code 5000. This unit encompasses all composites that are not contained within the modeled units of Massive Magnetite and Magnetite in Veins.
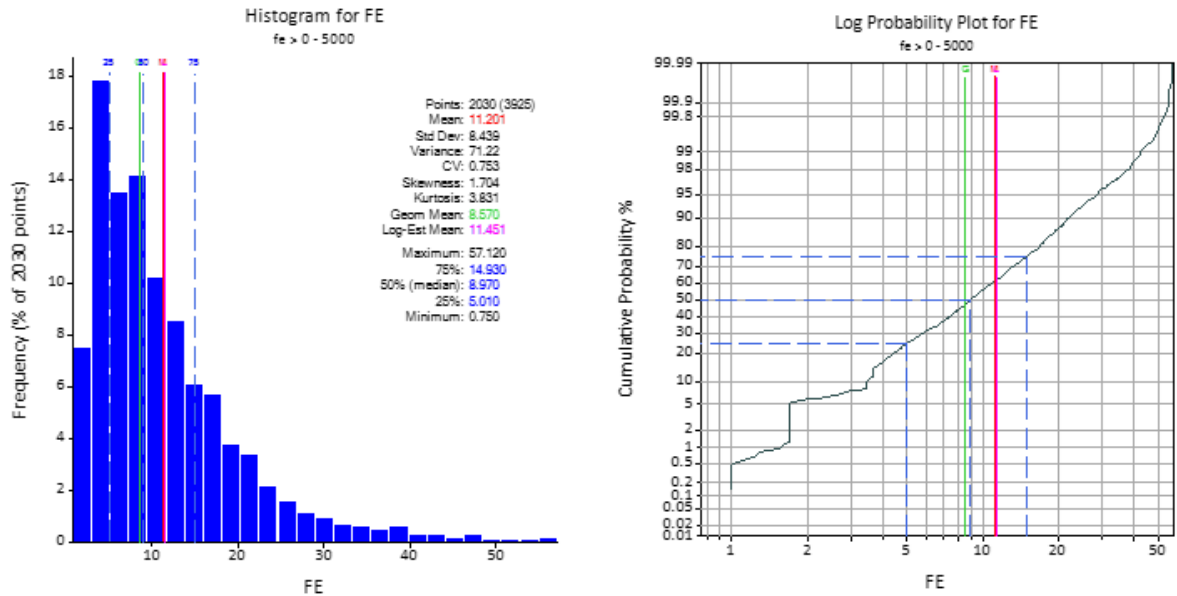
Figure 8-1. Histogram and Log probability plot of the unit Background (TFe %).
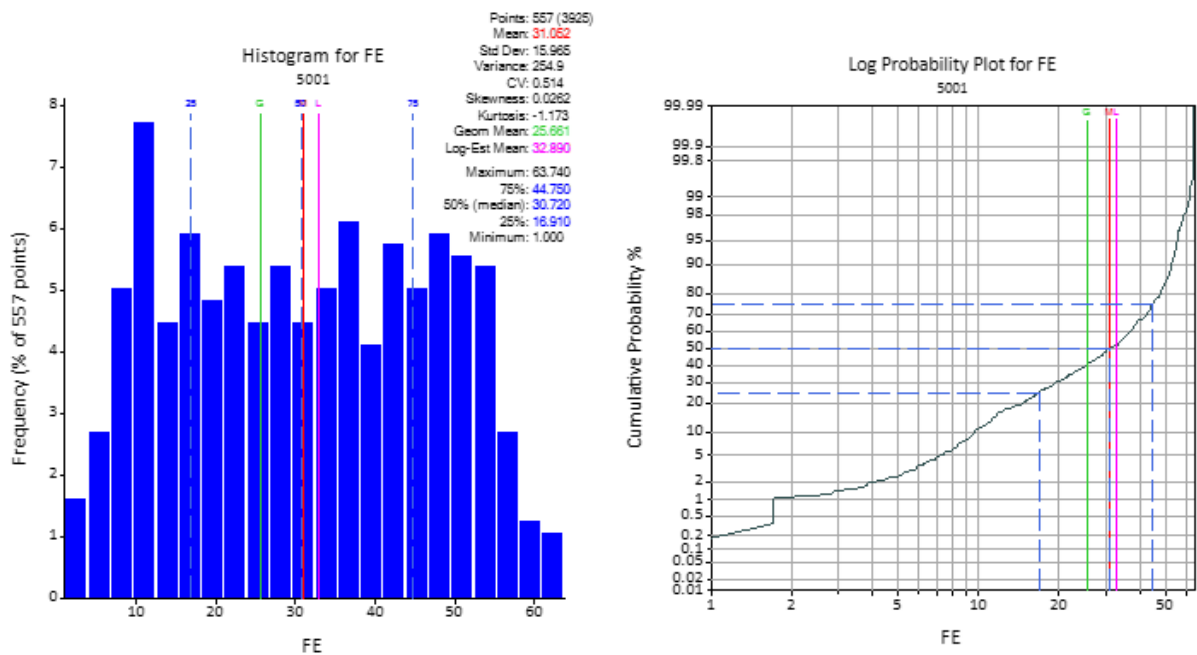
Figure 8-2. Histogram and Log probability plot of the unit Massive Magnetite (TFe %).

La unidad de estimación de Massive Magnetite, presenta las leyes más altas del depósito.
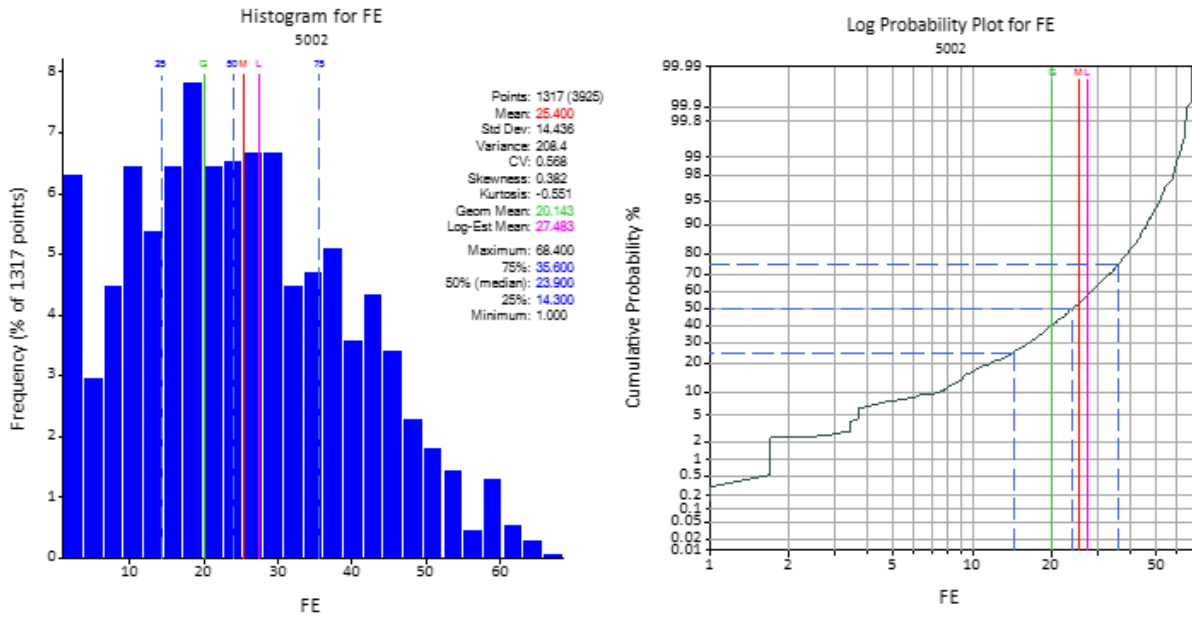
Figure 8-3. Histogram and Log probability plot of the unit Magnetite in veins (TFe %).

The statistical analysis reveals that TFe exhibits significant variation within the modeled estimation units compared to the background unit. The statistics for Phosphorus (P) are presented in the following figures. The P statistics show that the mean grades for the three units are similar, unlike TFe.
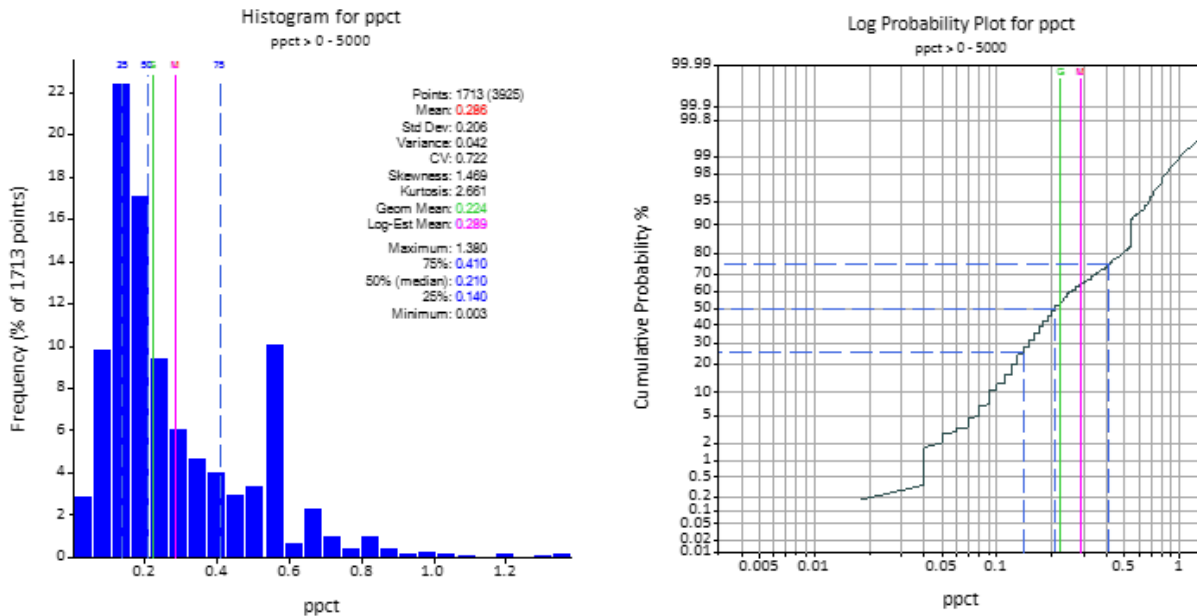
Figure 8-4. Histogram and Log probability plot of the unit Background (P %).
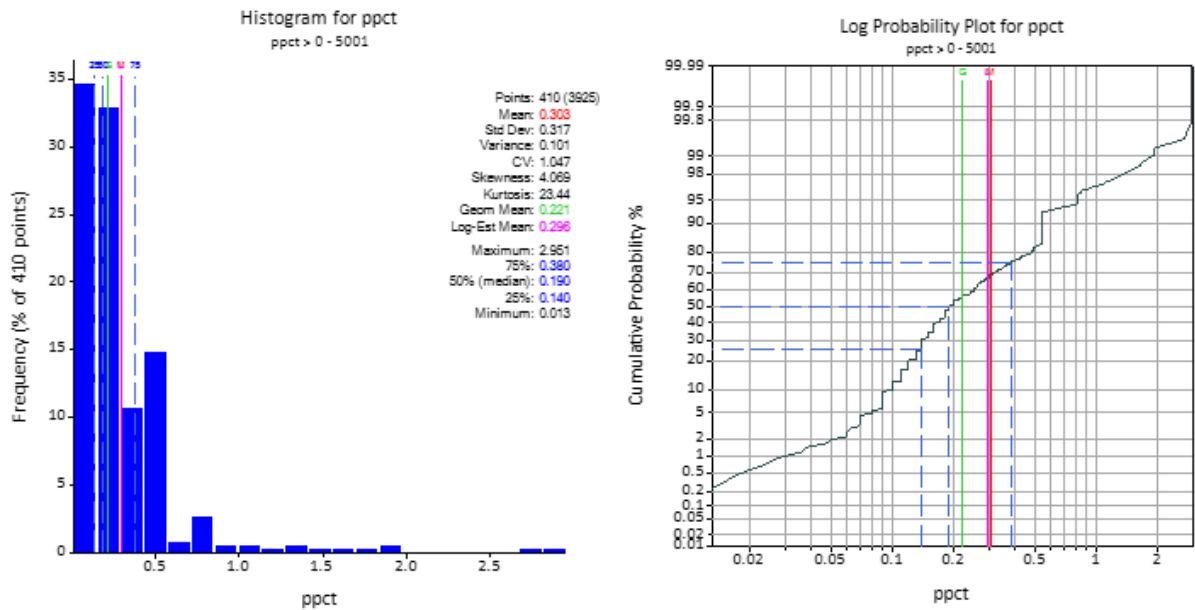
Figure 8-5. HIstogram and Log probability plot of the unit Massive Magnetite (P %).
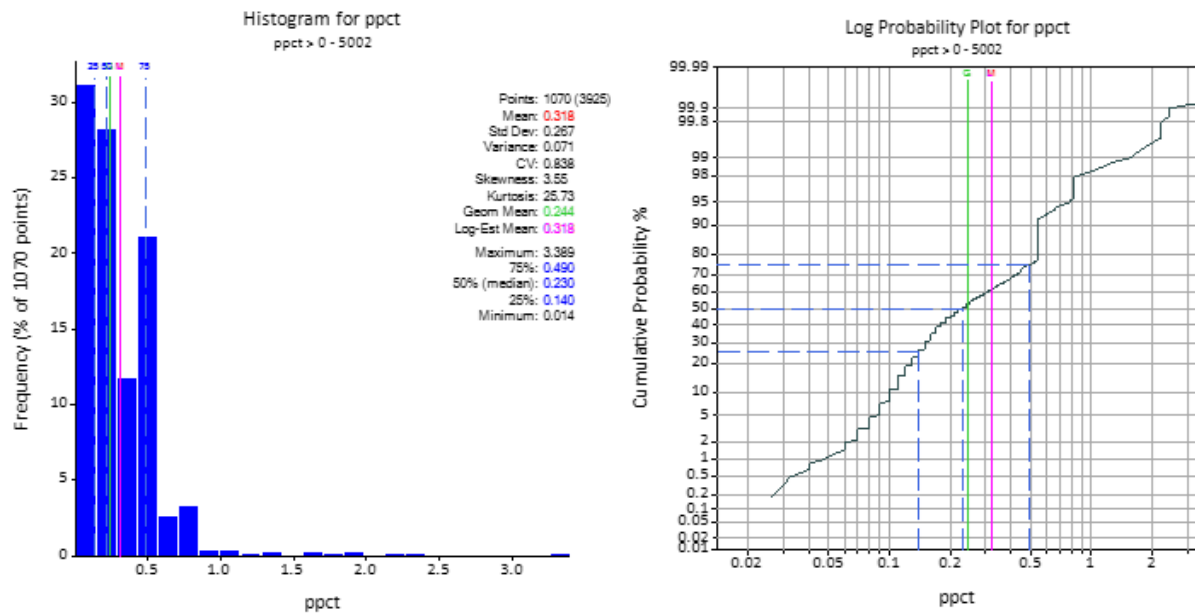
Figure 8-6. HIstogram and Log probability plot of the unit Magnetite in veins (P %).

As mentioned earlier, the mean values obtained for Phosphorus are similar, and as shown by the log-probability plots, they also exhibit similar distributions.
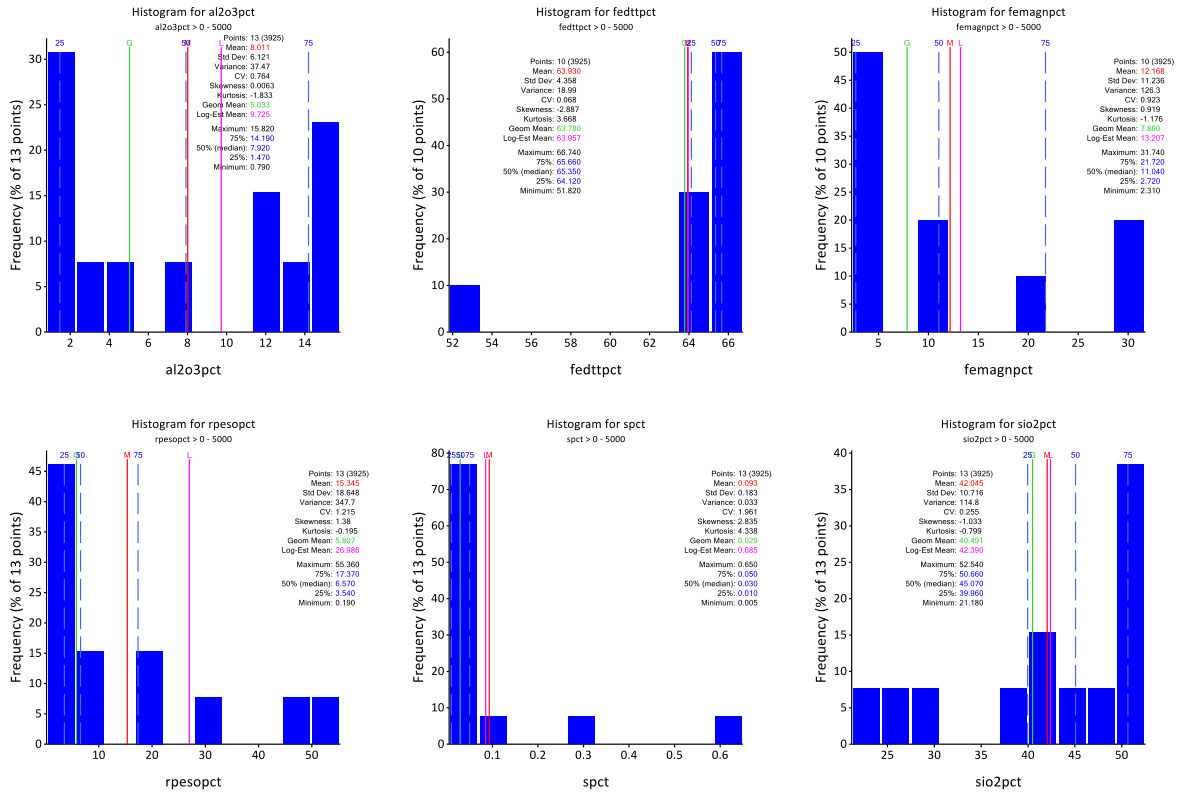
Figure 8-7. Histograms for unit Background (FeDTT, Al$_3$O$_2$, Fe$_{Mag}$, R$_{weight}$, S y SiO$_2$).
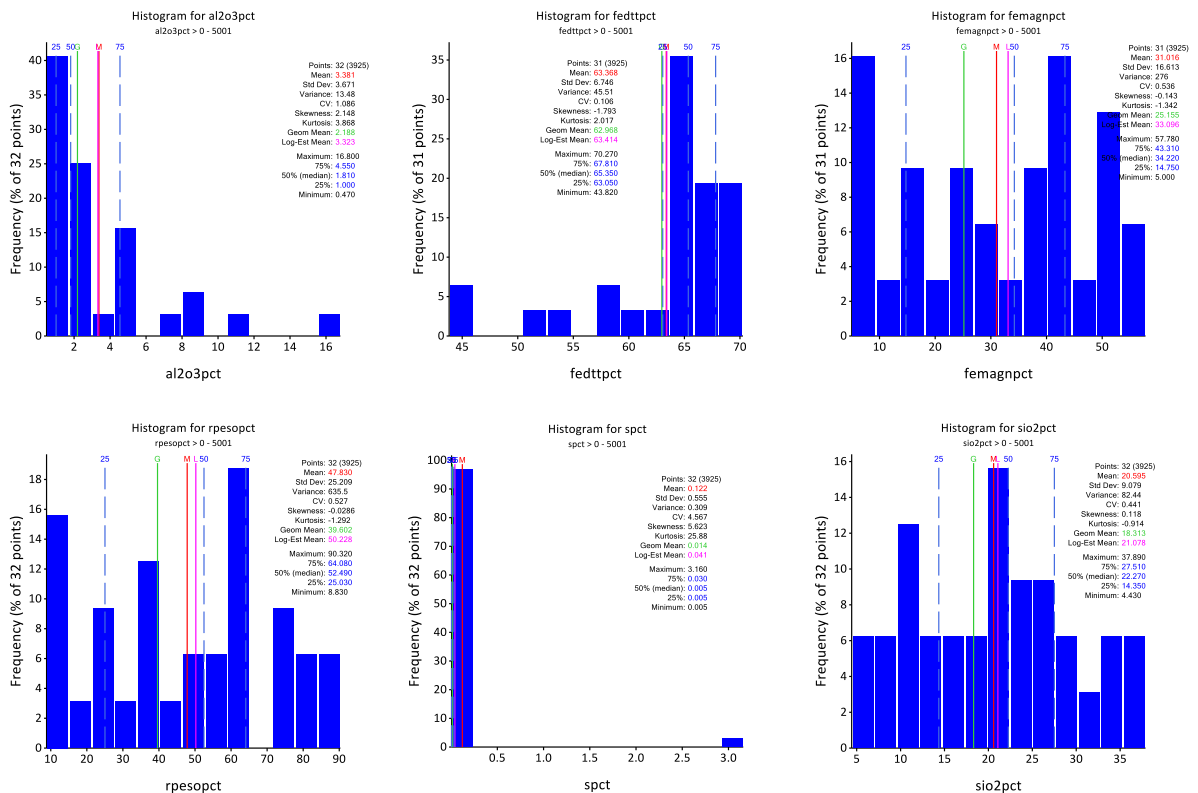
Figure 8-8. Histograms for unit Massive Magnetite (FeDTT, Al$_3$O$_2$, Fe$_{Mag}$, R$_{weight}$, S y SiO$_2$).
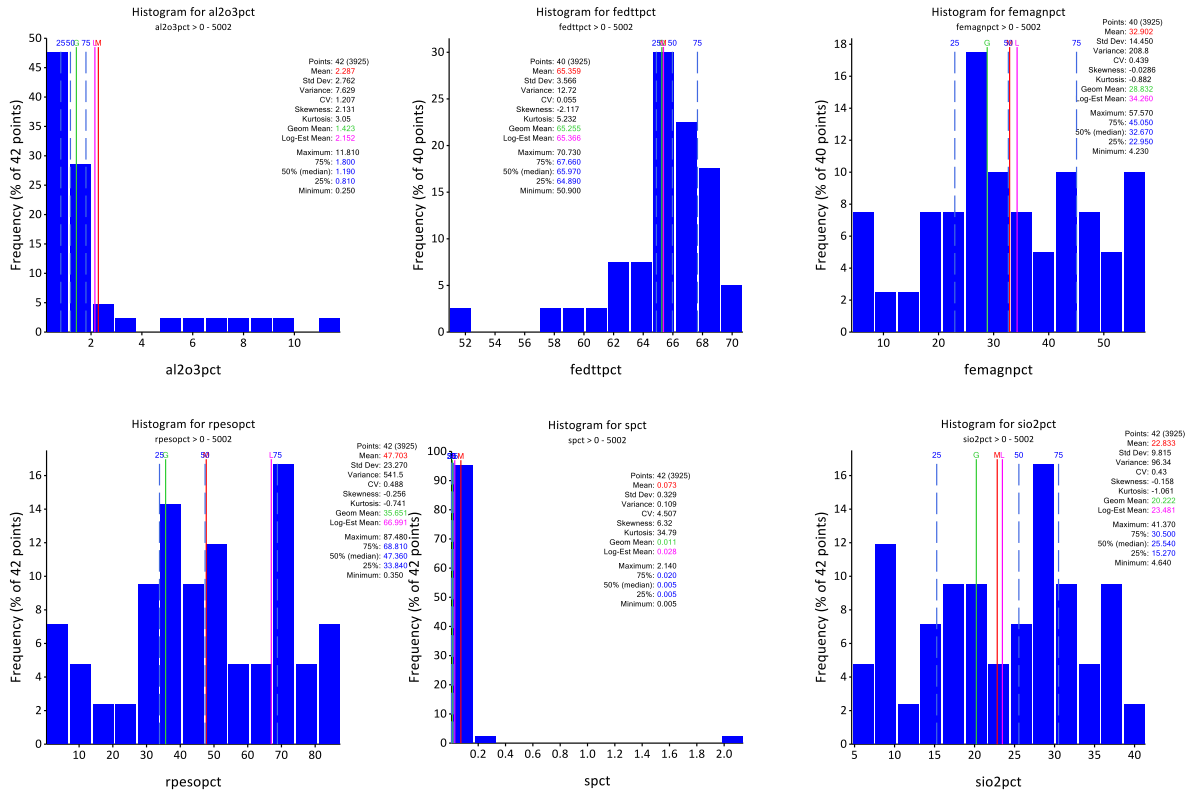
Figure 8-9. Histograms for unit Magnetite in veins (FeDTT, Al$_3$O$_2$, Fe$_{Mag}$, R$_{weight}$, S y SiO$_2$).

8.2 Spatial analysis

Variography analysis was conducted for TFe and P to determine the direction, anisotropies, and search radii parameters present in the values contained within each estimation unit (E.U.). These parameters will be used in the estimation plan for these variables. Variography was performed using the Snowden Supervisor® software.

Table 8-6 and Table 8-7 show the variography results obtained for the estimation units of TFe and P.

Table 8-6. Variography obtained for TFe by estimate unit.

| E.U. | Nugget | Model | Structure 1 | | | | | | | Structure 2 | | | | | | |
			Sill/ Differential	Bearing	Plunge	Dip	Major	Semi	Minor	Sill/ Differential	Bearing	Plunge	Dip	Major	Semi	Minor
5001	0.310	Spherical	0.10	40.0	0.0	0.0	106.0	94.0	49.0	Spherical	40.0	0.0	0.0	198.0	164.0	87.0
5002	0.160	Spherical	0.31	325.0	0.0	0.0	43.0	44.0	9.0	Spherical	325.0	0.0	0.0	173.0	142.0	52.0
5000	0.111	Spherical	0.58	45.0	0.0	0.0	165.0	75.0	22.0	Spherical	45.0	0.0	0.0	325.0	129.0	23.0

The details of the variograms obtained and modeled for TFe, for each unit, are shown in the following figures:
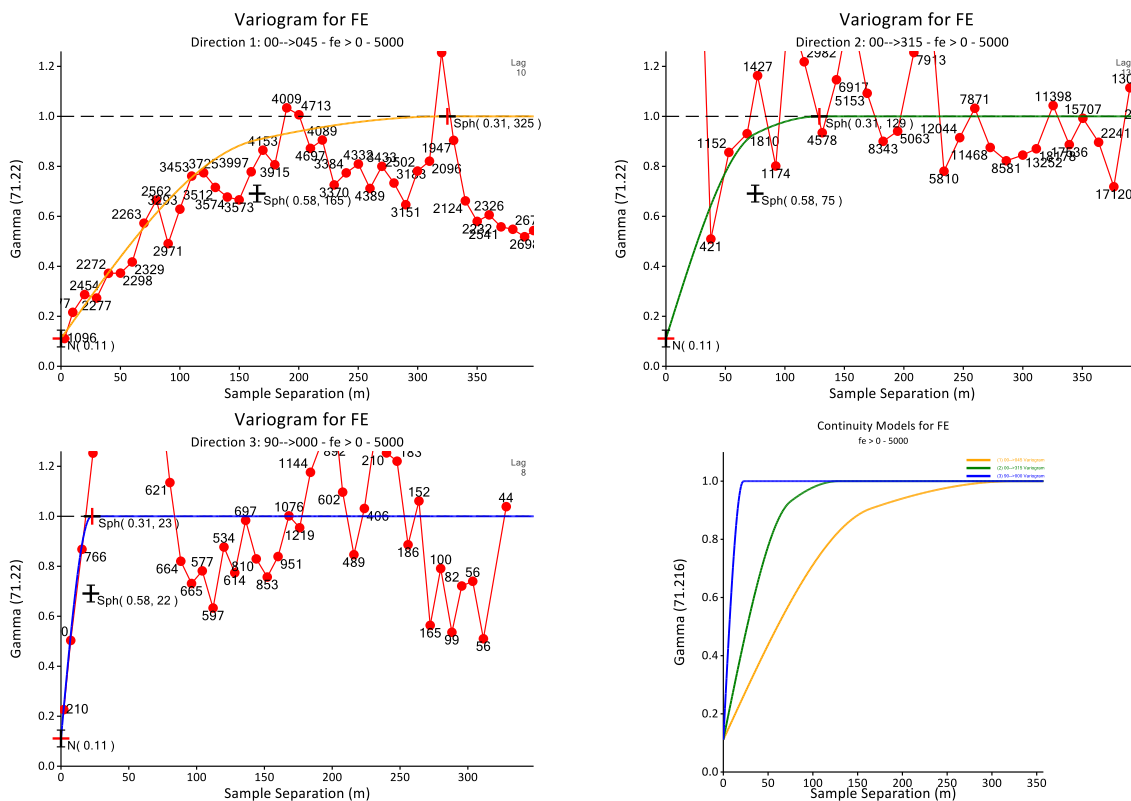
Figure 8-10. TFe variography, Background estimate unit.
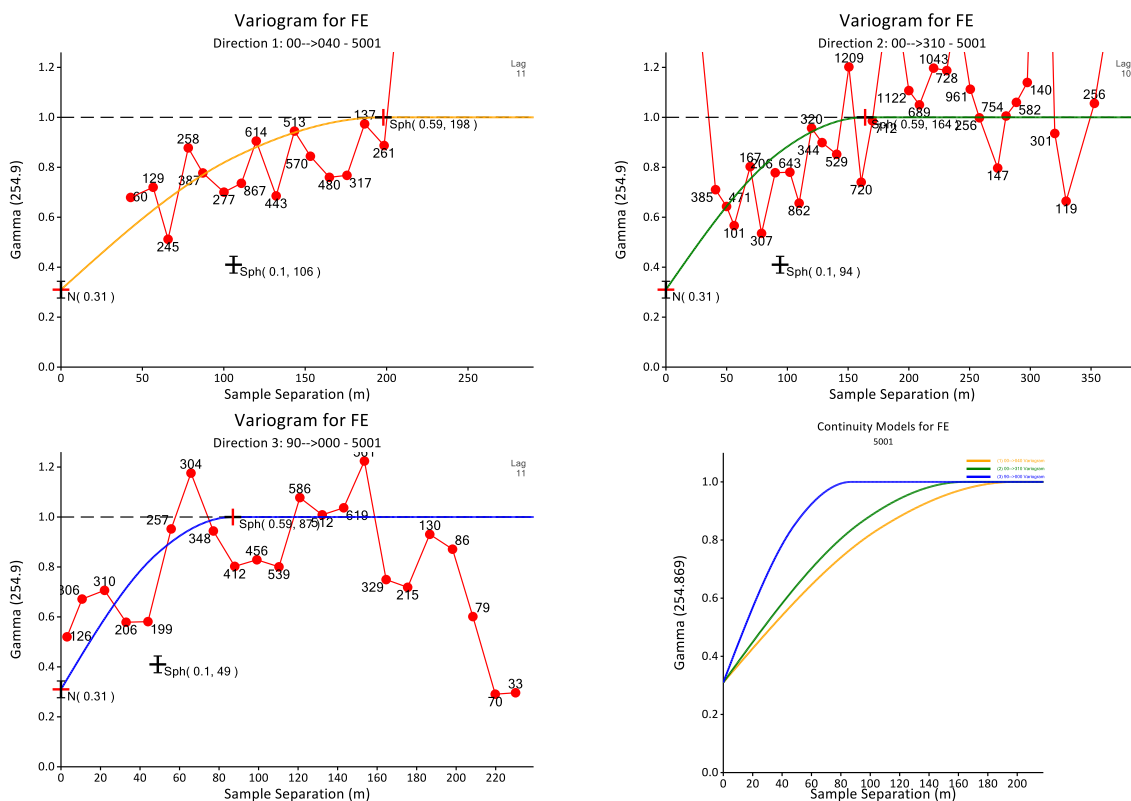
Figure 8-11. TFe variography, Massive magnetite estimate unit.
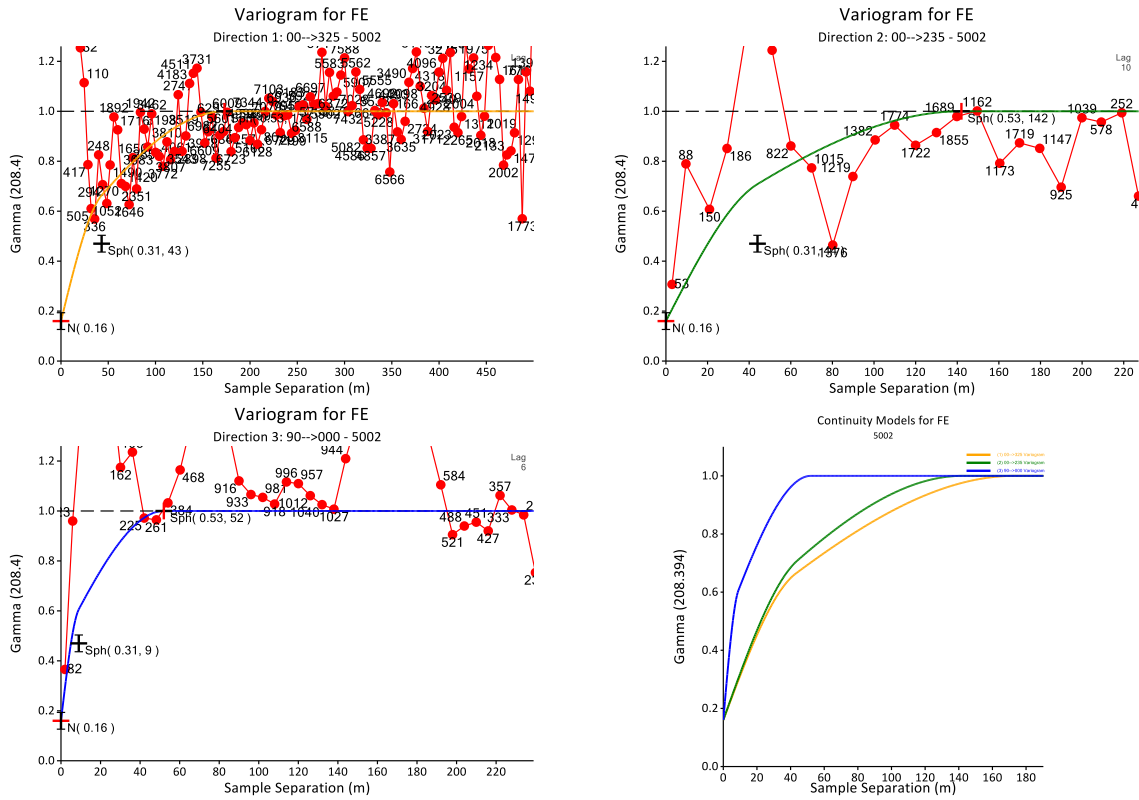
Figure 8-12. TFe variography, Magnetite in veins estimate unit.

Table 8-7. Variography obtained for P by estimate unit.

			Structure 1							Structure 2						
E.U.	Nugget	Model	Sill/ Differential	Bearing	Plunge	Dip	Major	Semi	Minor	Sill/ Differential	Bearing	Plunge	Dip	Major	Semi	Minor
5001	0.150	Spherical	0.35	320.0	0.0	0.0	120.0	111.0	88.0	Spherical	320.0	0.0	0.0	212.0	160.0	89.0
5002	0.160	Spherical	0.18	325.0	0.0	0.0	73.0	73.0	30.0	Spherical	325.0	0.0	0.0	165.0	74.0	60.0
5000	0.130	Spherical	0.27	325.0	0.0	40.0	40.0	40.0	21.0	Spherical	325.0	0.0	40.0	242.0	225.0	120.0

The details of the variograms modeled for P, for each estimation unit, are shown in the following figures:
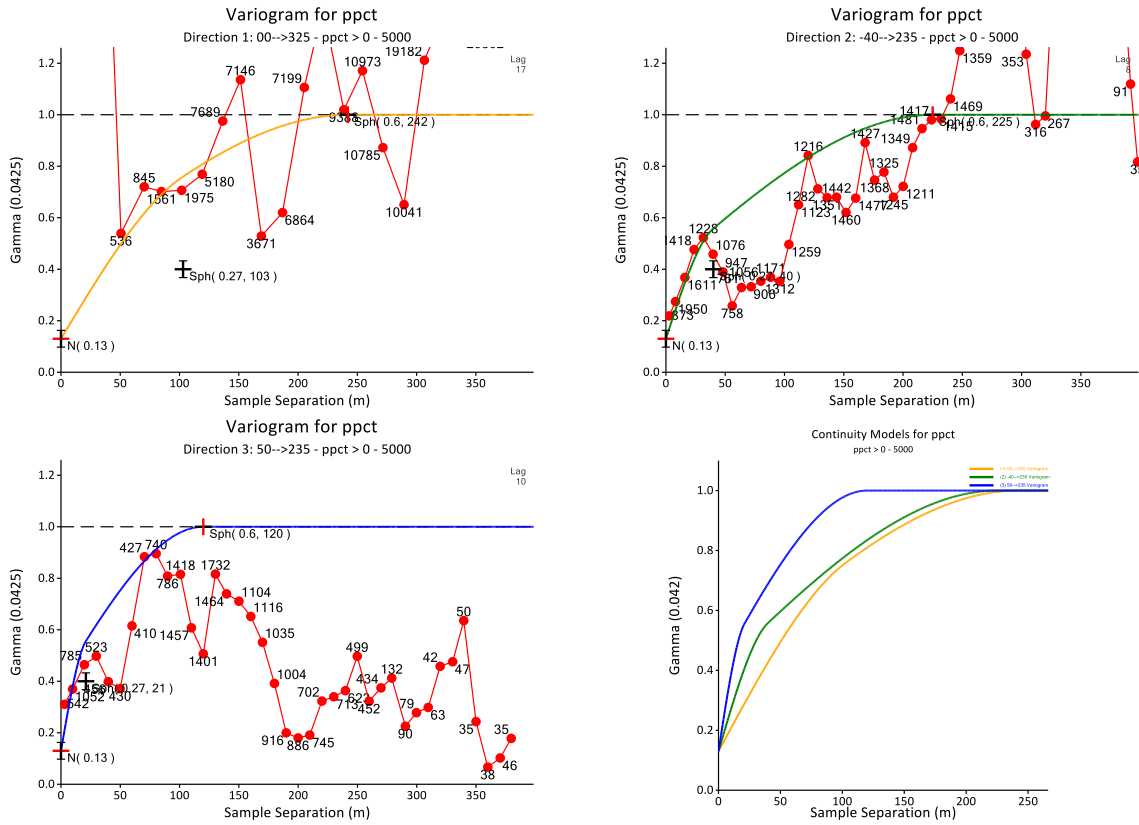
Figure 8-13. P variography, Background estimate unit.
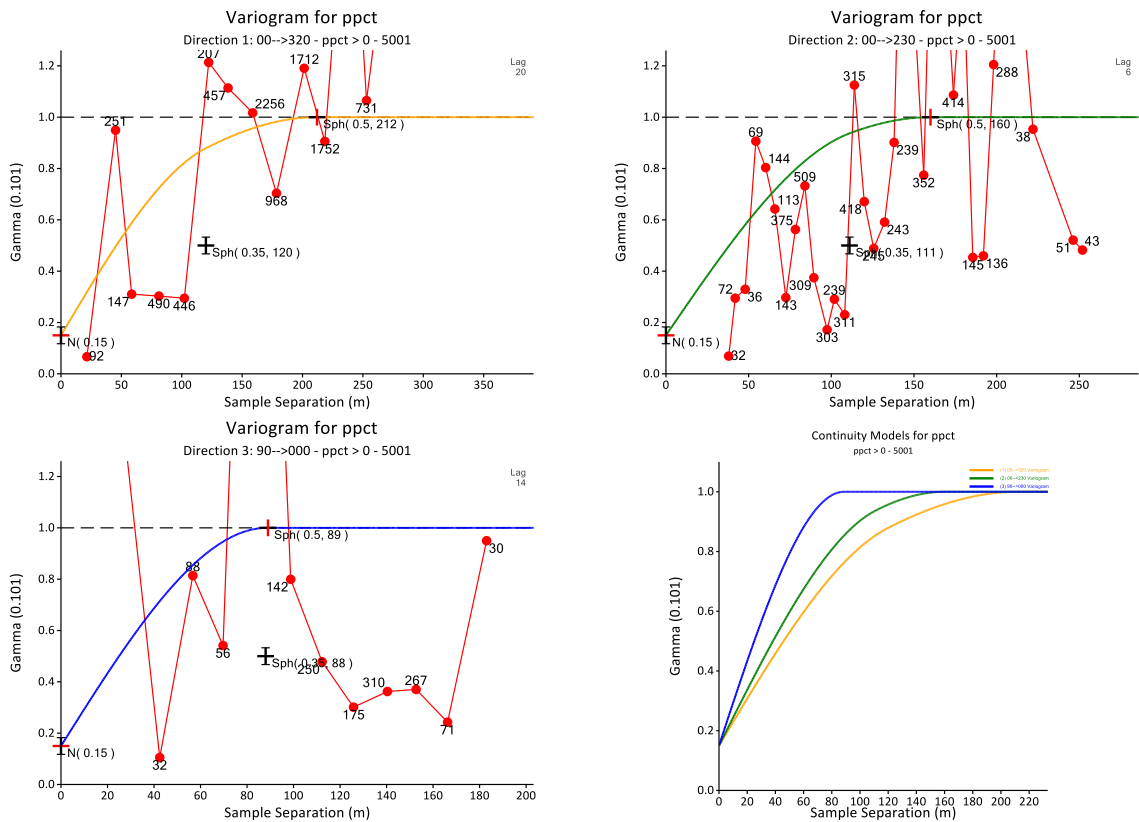
Figure 8-14. P variography, Massive magnetite estimate unit.
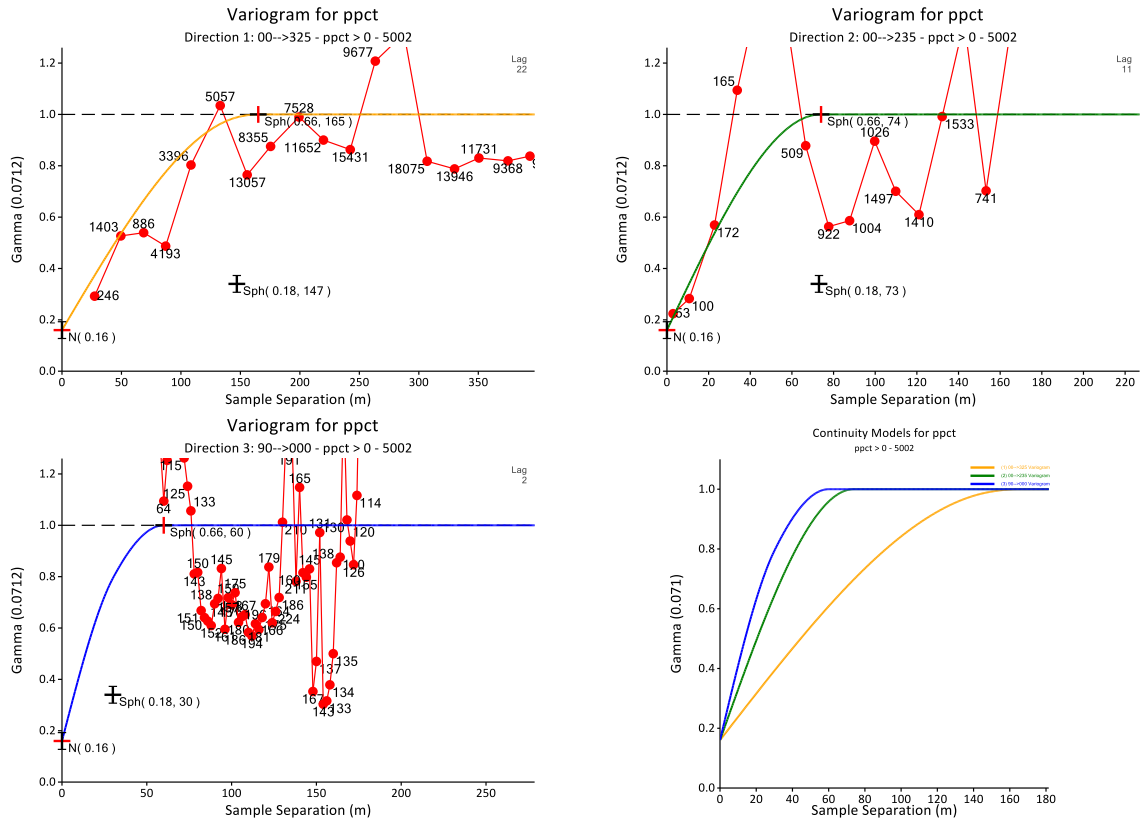
Figure 8-15. P variography, Magnetite in veins estimate unit.

8.3 Block model

Geoinvest considers that the block model used in the resource estimation reported in the REDCO (2013) document is adequate, and its construction parameters were retained. A regular block model of 5x5x5 m was constructed, oriented according to the direction of the estimation units, Massive Magnetite and Magnetite in Veins, in order to discretize the edges of the modeled units appropriately. The construction parameters of the model are shown in Table 8-8.

Table 8-8. Construction parameters for the block model.

Origin: East/North/Elev	322,767.53	6,827,543.08	215.00
Bearing/Dip/Plunge	245.00	0.00	0.00
Blocks size	5.00	5.00	5.00
Num Blocks: East/North/Elev	220	260	81

Once the block model was constructed, it was coded according to the defined unit codes. In other words, all blocks that are partially or entirely contained within the solids of Massive Magnetite and Magnetite in Veins were assigned codes 5001 and 5002, respectively. Blocks

outside of these estimation units were assigned the code 5000. Figure 8-16 shows a section of the block model illustrating this.
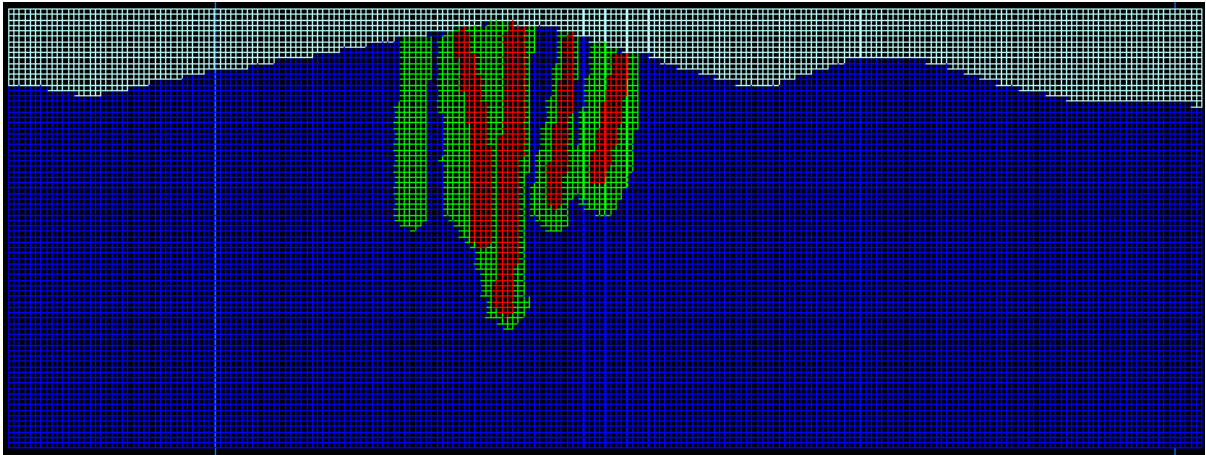
Figure 8-16. Block model cross section shown by Estimation Unit code.

In Figure 8-16, the cyan color corresponds to air, which was coded with a value of 0, the red color represents the E.U., Massive Magnetite (5001), the green color represents the E.U., Magnetite in Veins (5002), and the blue color represents the background unit (5000).

8.4 Grade estimation

The resource estimation utilized two methods, ordinary kriging (OK) and inverse square distance (ID2).

Ordinary kriging (OK) was employed in estimating TFe and P. These variables were distributed within the estimation units in sufficient numbers to conduct an adequate variographic analysis to determine the parameters used in this geostatistical method. As a result of the variographic analysis, the following kriging plans were constructed for TFe and P (Table 8-9 & Table 8-10).

Table 8-9. Estimate plan, TFe.

	Angle			Search radius		
E.U.	Bearing	Plunge	Dip	Major	Semi	Minor
5001	40.0	0.0	0.0	106.0	94.0	49.0
	40.0	0.0	0.0	180.0	140.0	80.0
5002	325.0	0.0	0.0	43.0	44.0	9.0
	325.0	0.0	0.0	173.0	142.0	52.0
5000	45.0	0.0	0.0	165.0	75.0	22.0
	45.0	0.0	0.0	325.0	129.0	23.0

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Table 8-10. Estimate plan, P.

E.U.	Angle			Search radius		
	Bearing	Plunge	Dip	Major	Semi	Minor
5001	320.0	0.0	0.0	120.0	111.0	88.0
	320.0	0.0	0.0	212.0	160.0	89.0
5002	325.0	0.0	0.0	147.0	73.0	30.0
	325.0	0.0	0.0	165.0	74.0	60.0
5000	325.0	0.0	40.0	103.0	40.0	21.0
	325.0	0.0	40.0	242.0	225.0	120.0

The number of composites used in the resource estimation for TFe and P ranged from a minimum of 2 to a maximum of 8 composites in the first pass and a minimum of 2 to a maximum of 16 composites in the second pass.

For the TFe estimation, no sample capping was applied. However, for the Phosphorus variable, it was necessary to apply a restriction to high-grade values due to the presence of outliers. Table 8-11 shows the restriction applied to the outliers.

Table 8-11. Outliers' treatment strategy.

E.U.	P (%)	Major	Semi	Minor
5001	1.70	10.00	10.00	10.00
5002	1.30	10.00	10.00	10.00
5000	1.10	10.00	10.00	10.00

The Table 8-11 shows the restriction on the distance up to which the search for high-grade composites is limited to estimate the block, ensuring that these high values do not cause overestimation in low-grade areas.

The inverse distance squared (ID2) method was used to estimate the variables FeDTT, Al_3O_2, Fe_{Mag}, R_{weight}, S y SiO_2, given the limited number of composites available in the estimation units (see Table 8-3 to Table 8-5). It is evident that the level of uncertainty associated with these estimated blocks will be significantly higher than the estimation of TFe and P blocks estimated by ordinary kriging. The estimated grade values for these variables should be taken as reference values that will guide future decision-making. Table 8-12 shows the estimation plan for these variables.

Table 8-12. Estimate plan for FeDTT, Al_3O_2, Fe_{Mag}, R_{weight}, S y SiO_2.

E.U.	Variable	Angle			Search radius		
		Bearing	Plunge	Dip	Major	Semi	Minor
5001	Al_3O_2	325.0	0.0	40.0	242.0	225.0	120.0
	FeDTT	325.0	0.0	40.0	242.0	225.0	120.0

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	Fe$_{Mag}$	325.0	0.0	40.0	242.0	225.0	120.0
	R$_{weight}$	325.0	0.0	40.0	242.0	225.0	120.0
	S	325.0	0.0	40.0	242.0	225.0	120.0
	SiO$_2$	325.0	0.0	40.0	242.0	225.0	120.0
5002	Al$_3$O$_2$	325.0	0.0	40.0	242.0	225.0	120.0
	FeDTT	325.0	0.0	40.0	242.0	225.0	120.0
	Fe$_{Mag}$	325.0	0.0	40.0	242.0	225.0	120.0
	R$_{weight}$	325.0	0.0	40.0	242.0	225.0	120.0
	S	325.0	0.0	40.0	242.0	225.0	120.0
	SiO$_2$	325.0	0.0	40.0	242.0	225.0	120.0
5000	Al$_3$O$_2$	325.0	0.0	40.0	242.0	225.0	120.0
	FeDTT	325.0	0.0	40.0	242.0	225.0	120.0
	Fe$_{Mag}$	325.0	0.0	40.0	242.0	225.0	120.0
	R$_{weight}$	325.0	0.0	40.0	242.0	225.0	120.0
	S	325.0	0.0	40.0	242.0	225.0	120.0
	SiO$_2$	325.0	0.0	40.0	242.0	225.0	120.0

This estimation plan considers a minimum of one composite and a maximum of 16 composites for block estimation. Using these estimation plans, the mineral resources of the Mariposa Project were estimated.

8.4.1 Density

The density was estimated using the empirical relationship obtained from a regression model between TFe and density, which was used in the previous mineral resource estimation for the Mariposa Project, as documented by REDCO (2013). Geoinvest did not have access to the density analytical results, so it was unable to replicate the regression analysis between the TFe and density variables. The empirical relationship used in the resource estimation is as follows:

$$Density\ (\frac{tonnes}{m^3}) = 0.0254 \times FeT(\%) + 2.8202$$

This relationship was used for the resource estimation in the September 2023 model.

8.4.2 Validation

The validation performed for the TFe resource estimation involved a graphical and visual review, where the estimated blocks were thoroughly compared to the composites used in the block estimation. In this review and validation, no inconsistencies were found between the estimated blocks and the surrounding composites. Two sections, Figure 8-14 and Figure 8-15, are presented in different areas of the deposit, graphically illustrating the aforementioned.
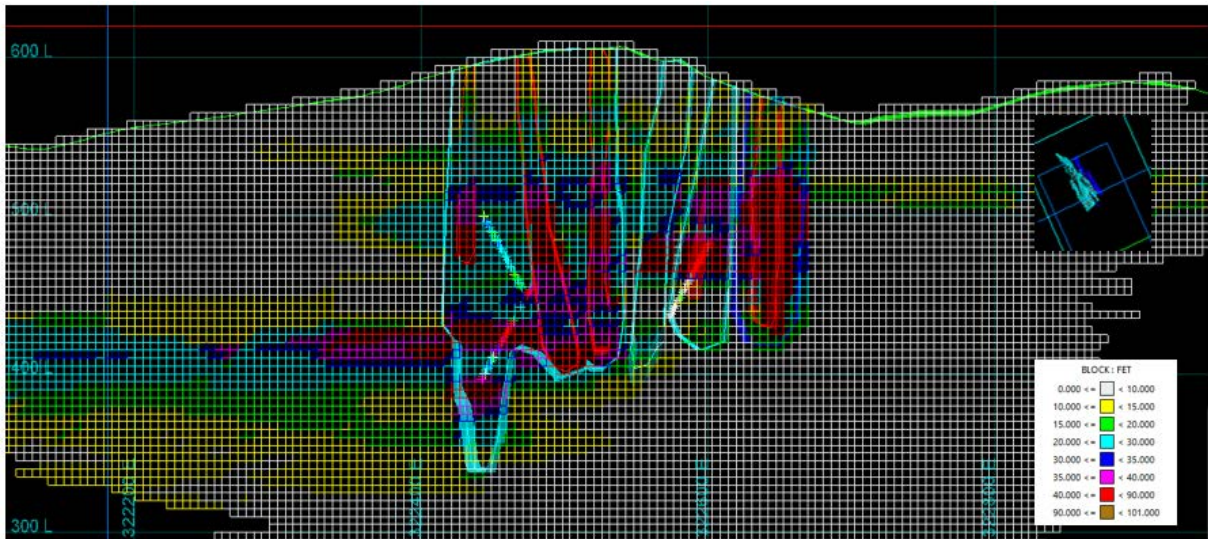
Figure 8-17. Cross section for TFe estimate validation.

The coordinates in Figure 8-14 and Figure 8-15 are for reference only since the model is rotated with a northwest orientation. The grade traces from the drill holes have been painted with the same colors as the estimated grade values of the blocks.
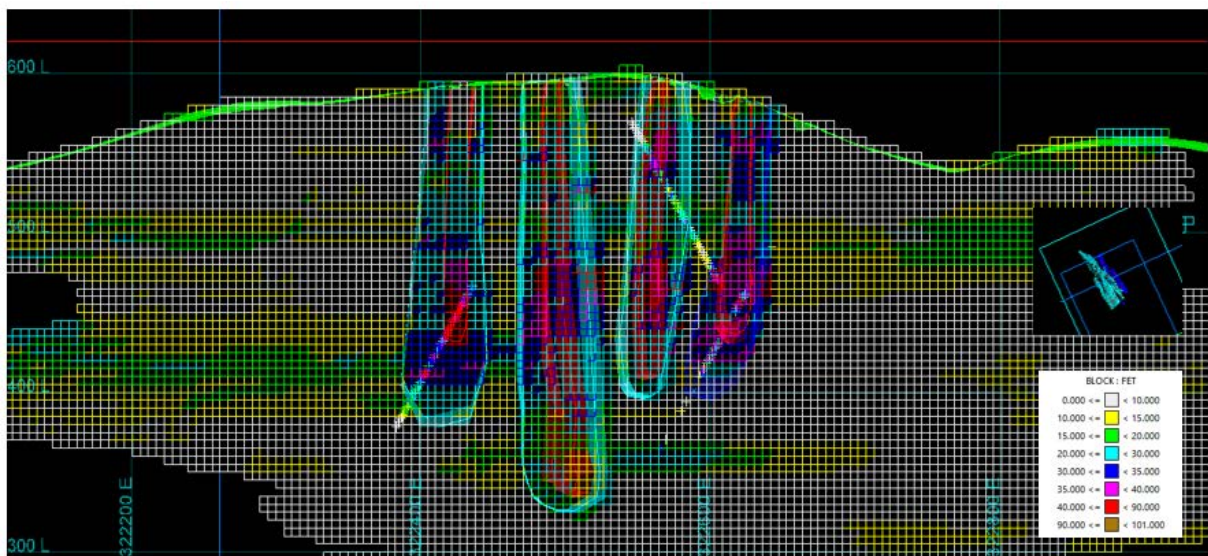
Figure 8-18. Cross section for TFe estimate validation.

The section presented in Figure 8-18, like the previous section, shows a good correlation between estimated blocks and composites used for their estimation. Additionally, a validation was conducted using the drift method. This numerical method, already standard in the mining industry, compares a reference estimation performed using the nearest neighbor (NN) methodology with the resource estimation carried out using ordinary kriging (OK). In this case, the estimation that needs to be validated is the one generated. To achieve this, graphs are

generated for the three directions that define the block model: east, north, and elevation. Figure 8-19 shows graphs with the drift analysis mentioned for the east, north, and elevation directions.
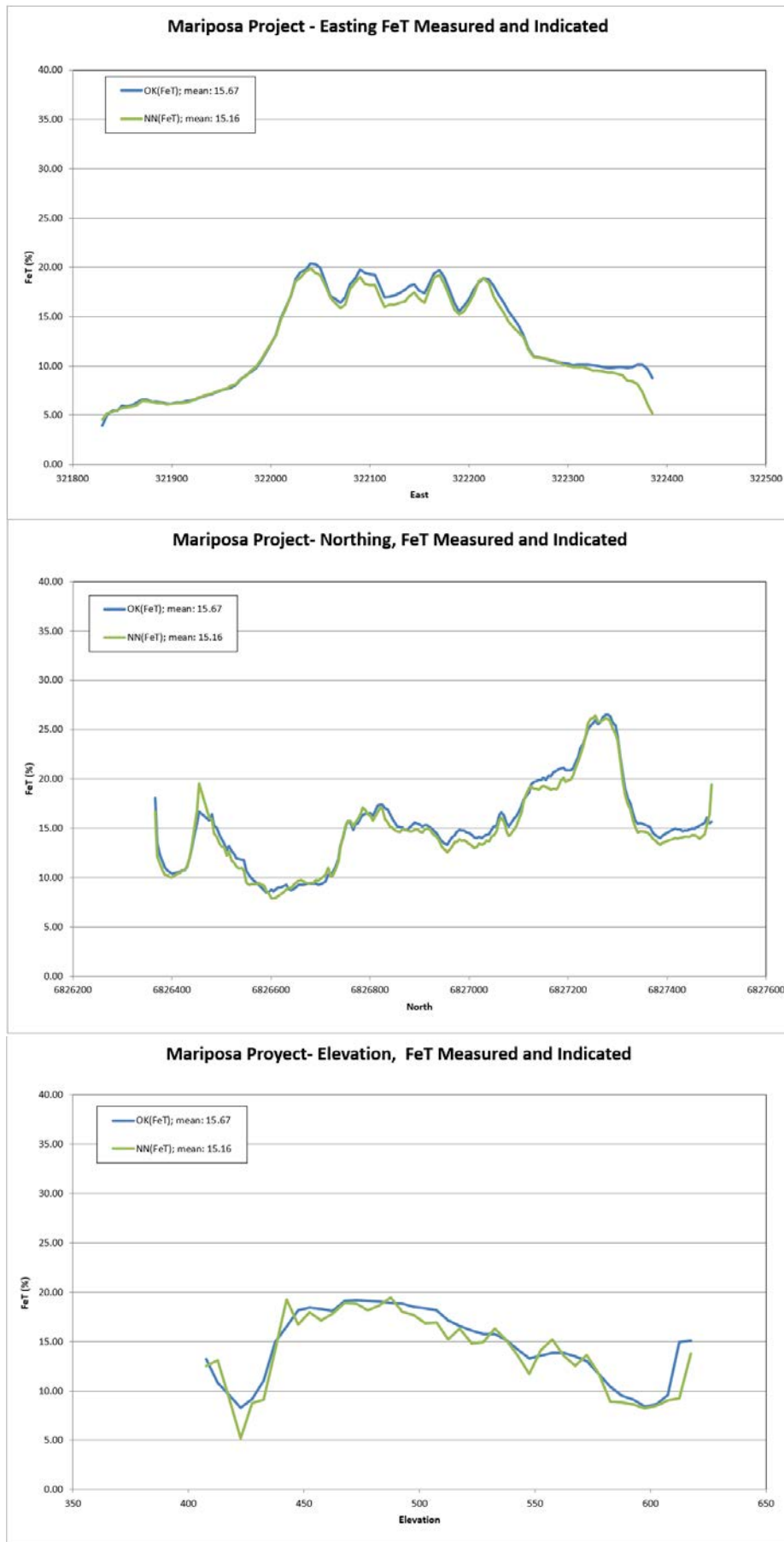
Figure 8-19. Drift analysis for Northing, Easting and Elevation directions.

Los gráficos de la Figura 8.15, muestran una excelente correlación entre las estimaciones de referencia y oficial y que no existen desviaciones significativas entre estas, NN y OK.

Finalmente, la validación visual, grafica, y por derivas realizada al modelo de recursos de FeT del Proyecto Mariposa, revela que la estimación del FeT es razonablemente robusta y que se encuentra en rango de incertidumbre adecuado para los ejercicios de planificación estratégica que se puedan realizar, orientados a la extracción económica de este recurso.

8.5 Mineral resource report

For the classification of mineral resources in accordance with the guidelines outlined by JORC code 2012, the effective data spacing method was used for each estimated TFe block.

This method utilizes the boreholes in the vicinity of the block (the three closest drill holes) and emulates a square regular grid using the following relationship:

$$Grid\ side\ length = \frac{Average\ distance}{\sqrt{2}}$$

To implement the method, the average range of the first variogram structure modeled for the Massive Magnetite and Magnetite in Veins units was determined to ensure the continuity of mineralization in defining the measured and indicated mineral resources. Once this distance, which was defined with approximately 100 m (consistent with geological observations in the field), the following criteria were established:

- **Measured mineral resources:** Estimated blocks with 3 drill holes and an average distance to the block in a regular grid of 45.0 m.

- **Indicated Mineral Resources:** Estimated blocks with 3 drill holes and an average distance to the block in a regular grid of 90.0 m.

- **Inferred Mineral Resources:** Estimated blocks with 3 drill holes and an average distance to the block in a regular grid of 150.0 m.

The results of the classified mineral resources obtained for the Mariposa Fe Project are as follows:

Table 8-13. Grade-tonnage table for Measured, Indicated and Inferred Mineral Resources estimate for the Mariposa Fe Project, for TFe, Fe$_{Mag}$, FeDTT and P.

Cut-off	**Measured Mineral Resources**					**Indicated Mineral Resources**					**Inferred Mineral Resources**				
	Tonnes	TFe	Fe$_{Mag}$	FeDTT	P	Tonnes	TFe	Fe$_{Mag}$	FeDTT	P	Tonnes	TFe	Fe$_{Mag}$	FeDTT	P
40.00	563,749	46.52	29.77	65.43	0.52	4,374,875	46.98	29.96	63.67	0.29	3,502,399	44.15	32.05	61.91	0.18
35.00	969,847	42.69	28.92	65.35	0.49	7,075,473	43.37	29.10	63.70	0.30	6,772,074	40.87	31.75	61.60	0.18
30.00	1,676,559	38.31	28.57	65.24	0.46	11,198,533	39.24	28.42	63.66	0.30	12,044,199	37.06	29.76	58.97	0.19
25.00	2,665,104	34.23	27.25	64.31	0.44	17,672,045	34.89	27.26	62.74	0.30	19,869,073	33.25	25.81	55.14	0.21
20.00	4,186,369	29.85	25.63	62.39	0.43	25,544,276	31.03	25.66	61.05	0.31	33,345,313	28.80	20.34	50.56	0.23
15.00	6,654,594	25.20	22.62	58.49	0.41	39,160,928	26.18	20.85	54.28	0.31	59,738,240	23.68	13.76	43.29	0.24
10.00	9,879,791	21.02	20.60	56.64	0.39	61,256,955	21.30	15.78	46.82	0.31	109,656,121	18.48	8.82	32.61	0.24
5.00	13,112,174	17.72	18.50	55.50	0.38	81,728,955	17.85	13.10	41.62	0.30	175,018,901	14.30	6.68	27.85	0.23
0.00	14,488,376	16.31	18.13	55.38	0.37	89,682,782	16.57	12.51	40.48	0.29	207,890,702	12.66	6.25	27.62	0.22

9   ORE RESERVES ESTIMATE

This chapter presents the ore reserve evaluation of the Mariposa Mining Project. It considers the use of an updated mineral resource model of the deposit ("mar02_rot") and incorporates technical and economic criteria outlined in this document.

9.1   Objectives

9.1.1   Primary objective

- Evaluate the Mariposa Mining Project based on the new mineral resource estimate and model, "mar02_rot."

9.2   Secondary objectives

- Review base information of models: density, topography, mineral resource categorization.

- Operationalize Mining Phases and Final Pit, including respective volumetrics and the generation of the final mine plan.

9.3   Scope

This study is conducted based on the information provided by Admiralty:

- Topography: "Topo_Extend_Final_Softed.00t"

- Geological Bodies: "Geobody Massive Mag topo.00t," "Geobody union inveins 01.00t," "Geobody union inveins 02.00t."

And the information generated by Geoinvest for the "JORC 2012 Updated mineral resources estimate report":

- Block Model: "mar02_rot"

9.4 Base information for evaluation

For the evaluation generation, a review, validation, and/or adjustments to the base information used for the mineral resource model were carried out. The worked information includes topography ("Topo Extend Final Softed.00t"), block model ("mar 02.00t"), and geological bodies ("Geobody Massive Mag topo.00t," "Geobody union inveins 01.00t," "Geobody union inveins 02.00t"). Further details are outlined below.

9.4.1 Topography

The topography of the analyzed sector corresponds to March 2023, as depicted in Figure 9-1, covering the entire deposit area, with an approximate width of 2,219 m (east to west) and a length of 2,300 m (north to south).
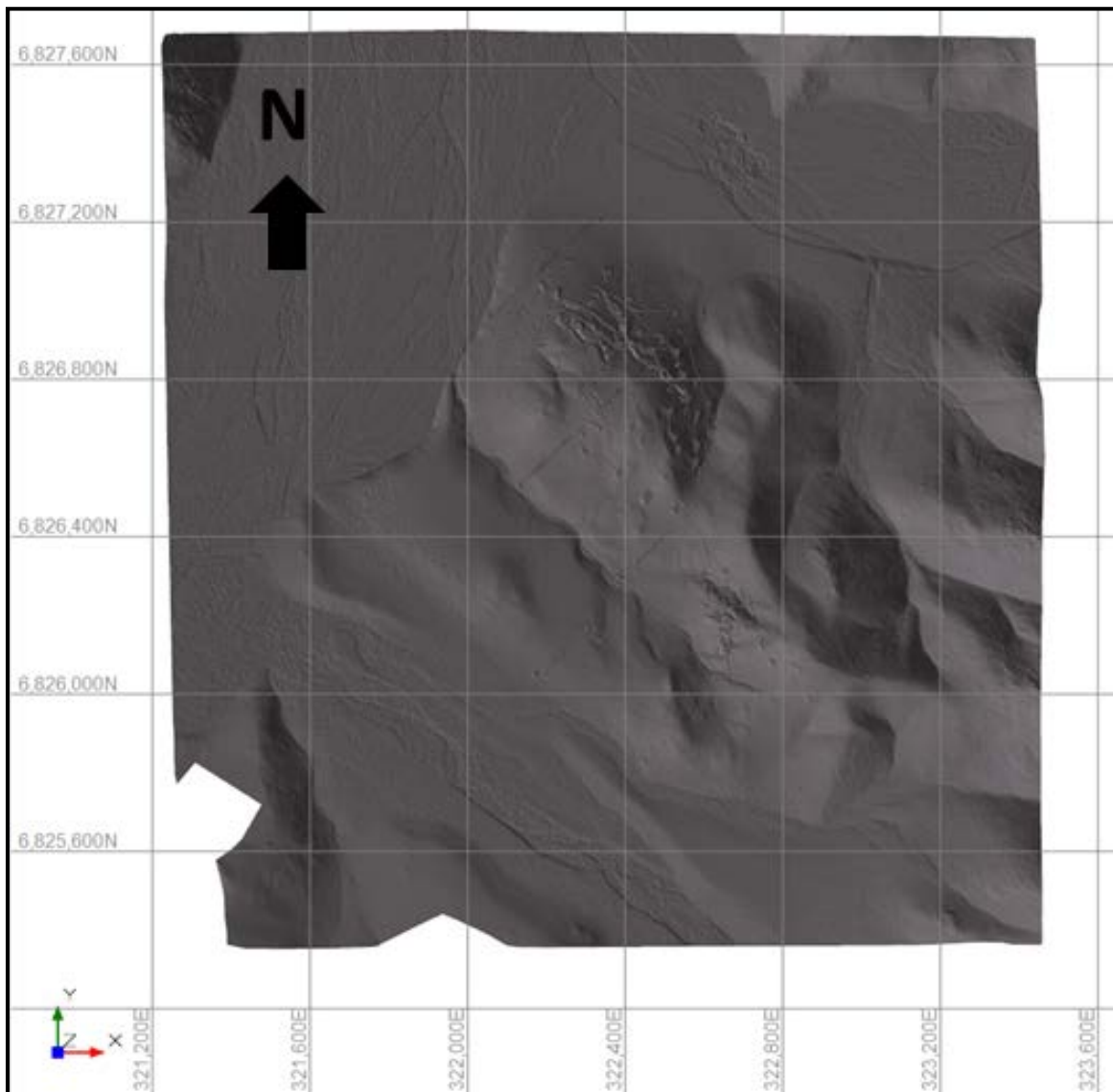
Figure 9-1. Topography of the analyzed sector, March 2023.

9.4.2   Block model

The utilized Block Model is depicted in Figure 9-2 ("mar02.rot"), corresponding to March 2023.

It considers the spatial location of the main body containing the material of interest.
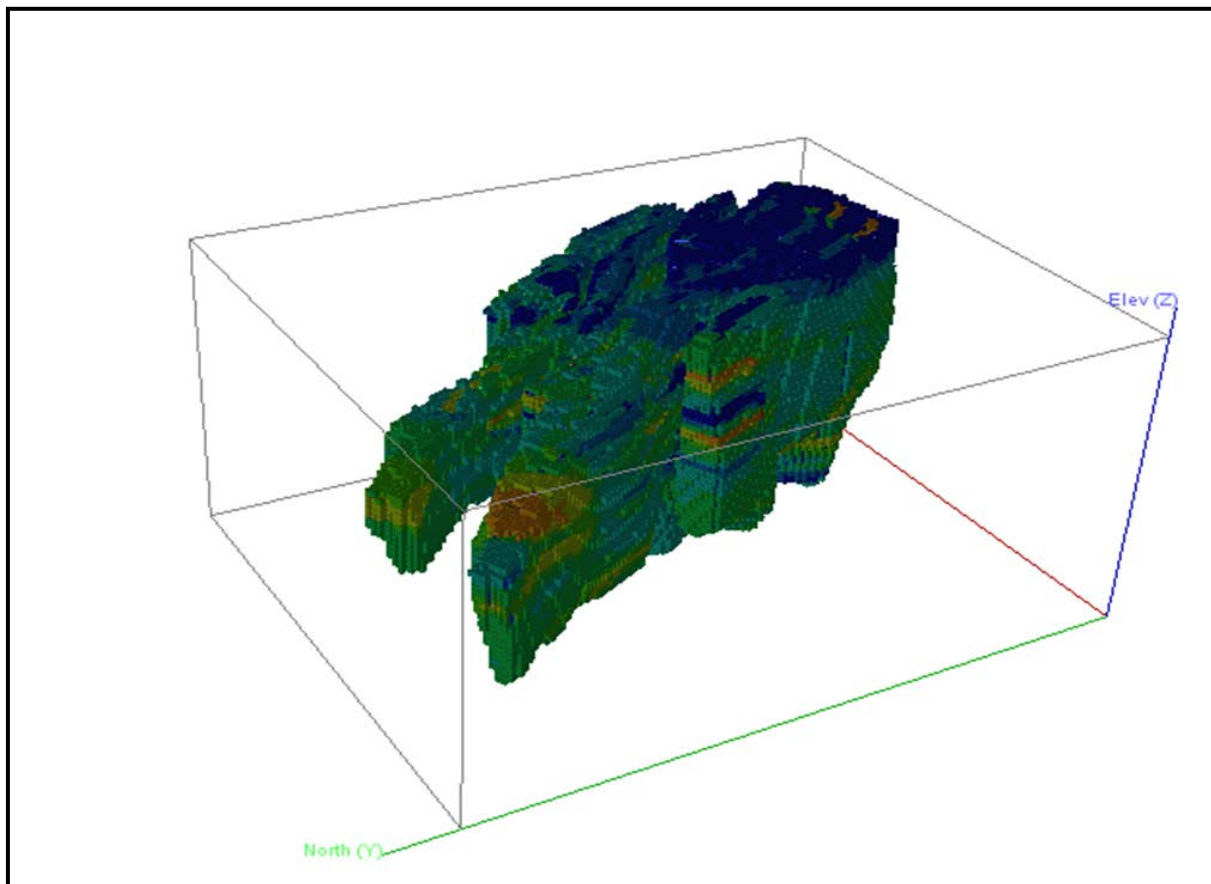
Figure 9-2. Utilized Block Model.

In Figure 9-3, the spatial location of the Block Model in relation to the topography of the evaluated deposit is presented.
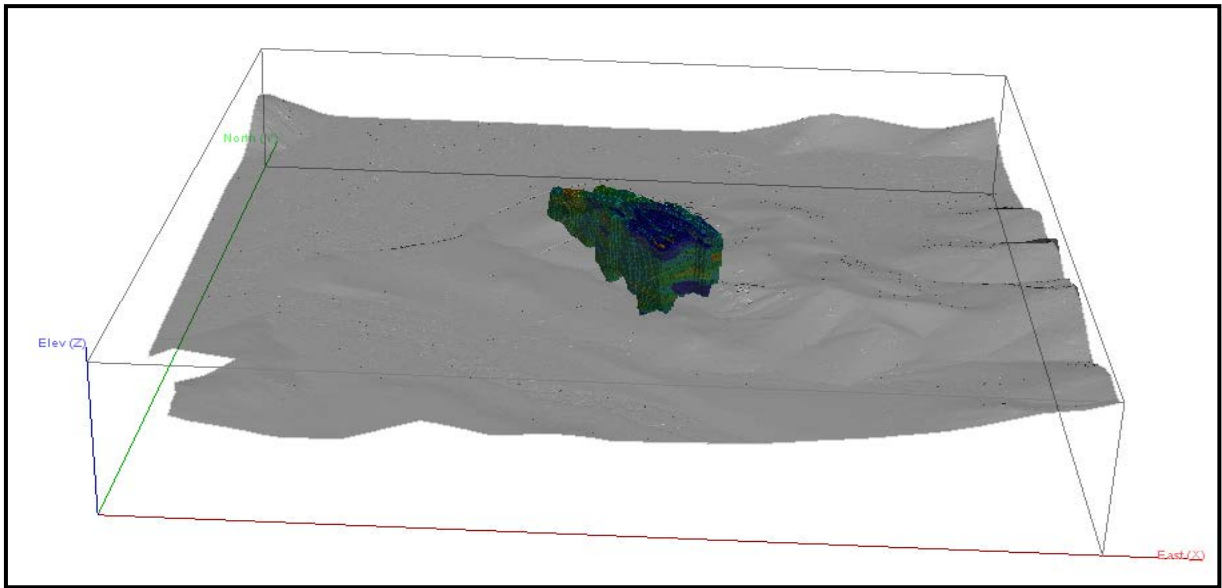
Figure 9-3. Block Model and Topography.

9.4.3 Geological bodies

The utilized geological bodies are illustrated in Figure 9-4, displayed alongside the Mariposa
Fe Project's topography.
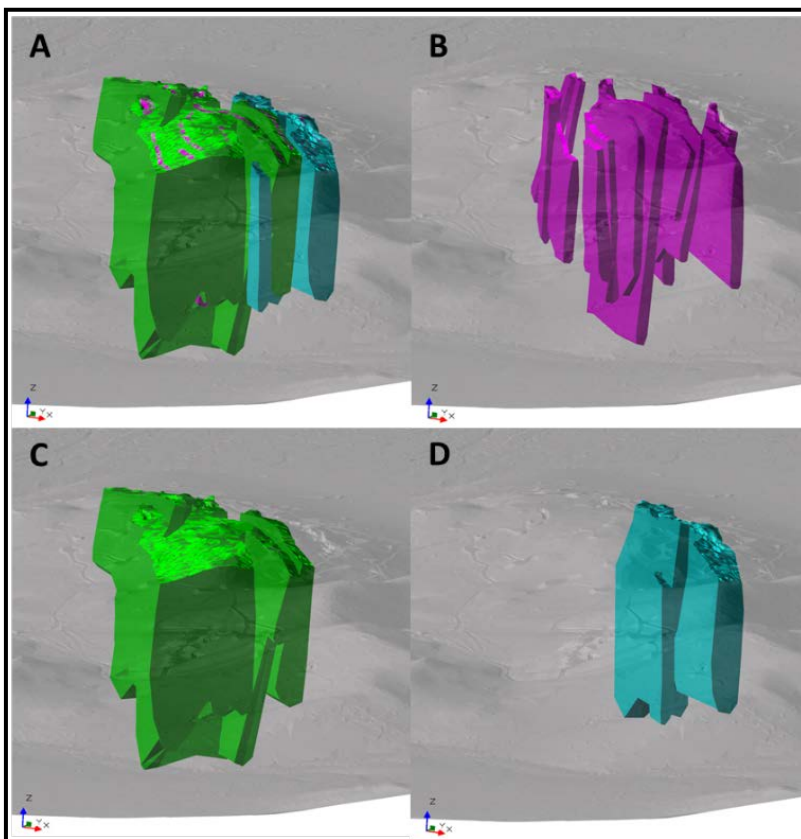
*Figure 9-4. Unified Geological Bodies (A). "Geobody Massive Mag Topo" Body (B). "Geobody Union Veins 01"
Body (C). "Geobody Union Veins 02" Body (D).*

9.4.4 Geotechnical Base

Regarding geotechnical design considerations, a global pit wall inclination angle of 50° was used overall.

9.4.5 Cost Base

Economic criteria were derived from previous studies and agreed upon with Admiralty, as shown in Table 9-1 below:

Table 9-1. Economic Criteria Used in the Evaluation.

Economic Criteria	Value	Unit
Sale Price of Ore	110	US$/t concentrate
Ore Mining Cost	3.22	US$/t extracted
Waste Mining Cost	3.22	US$/t extracted
Additional Costs for each 1m Ore and Rock Transport Height Reduction	0.075	US$/t extracted
Waste Dump Rehabilitation Cost	0.12	US$/t treated
Process Cost (treatment plant)	8.27	US$/t concentrate
Tailings Disposal Cost	0.2	US$/t concentrate
Mine to Port Transportation Cost	4.88	US$/t concentrate
Energy Cost	10.53	US$/t concentrate
Interest Cost	0.42	US$/t concentrate
General and Administrative Cost	0.75	US$/t concentrate
Labor Cost	8.36	US$/t concentrate
Amortization Cost	0.006	US$/t concentrate
Port Loading and Storage Cost	8.14	US$/t concentrate
Shipping and Insurance Cost	18.45	US$/t concentrate
Cut-off Grade	15	%Fe

9.5 Results

9.5.1 Block model, volumetric assessment

The volumetric assessment of the block model was conducted, considering the total mineral resources (inferred, measured and indicated) and the measured and indicated mineral resources. The spatial distribution of mineral resources is depicted in Figure 9-5. The corresponding values are presented in Table 9-2 and Table 9-3.
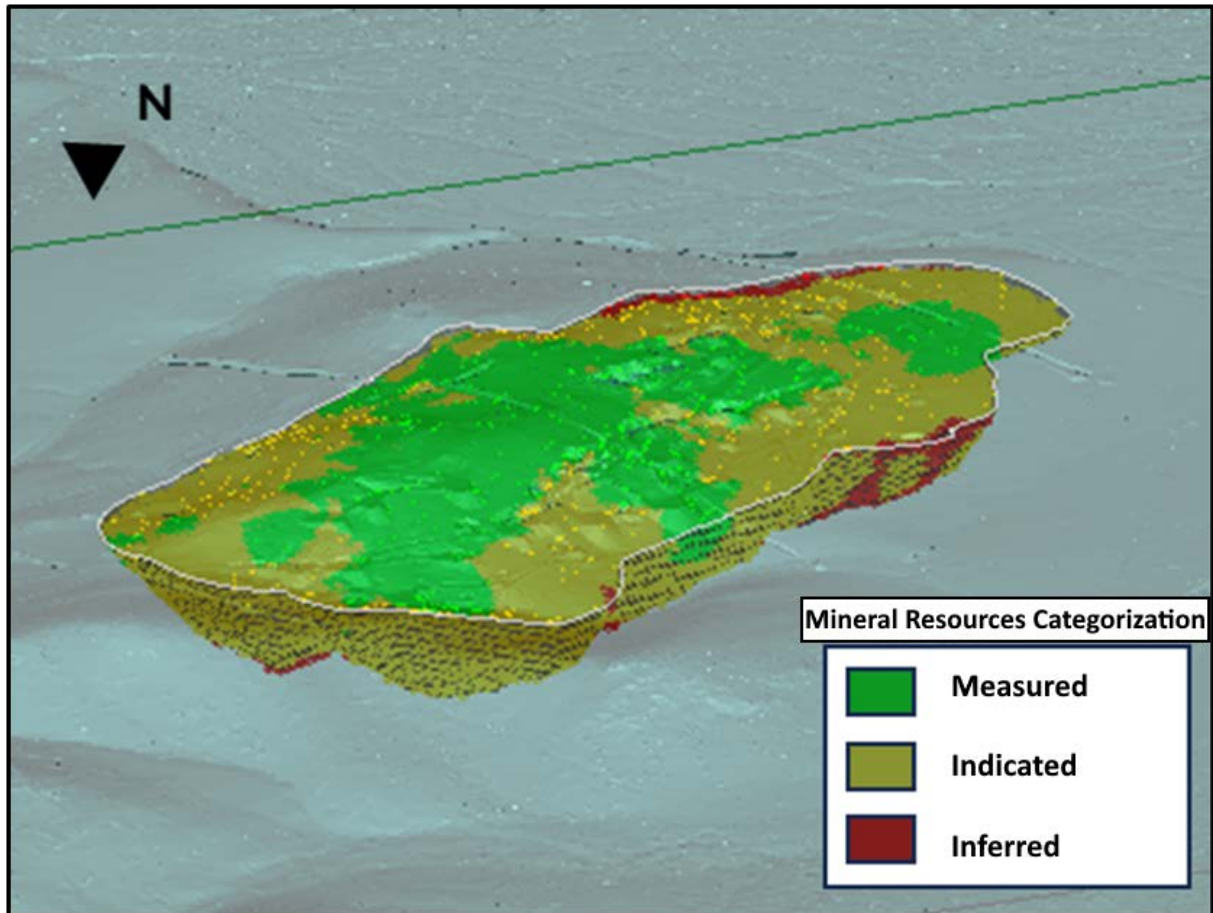
Figure 9-5. Mineral Resources distribution by category.

Table 9-2. Total mineral resources.

Fe Cut-off Grade [%]	Tonnage [Mt]	Fe [%]	FeMag [%]
0.0	312	14.0	8.6
5.0	270	15.5	9.2
10.0	181	19.6	11.8
12.5	141	21.9	13.8
15.0	106	24.7	17.0
20.0	63	29.8	22.8

25.0	40	34.0	26.5
30.0	25	38.1	29.1
35.0	15	42.2	30.3
40.0	8	45.8	30.8
45.0	4	49.8	33.2
50.0	2	52.9	33.0
55.0	0	57.4	35.2
60.0	0	60.9	35.1

Table 9-3. Measured + Indicated Mineral resources.

Fe Cut-off Grade [%]	Tonnage [Mt]	Fe [%]	FeMag [%]
0.0	104	16.5	13.3
5.0	95	17.8	13.8
10.0	71	21.3	16.4
12.5	59	23.2	18.0
15.0	46	26.0	21.1
20.0	30	30.9	25.7
25.0	20	34.8	27.3
30.0	13	39.1	28.4
35.0	8	43.3	29.1
40.0	5	46.9	29.9
45.0	3	50.4	32.7
50.0	1	53.1	32.4
55.0	0	57.4	34.8
60.0	0	60.9	35.1

The respective tonnage-grade curves are presented in Figure 9-6 (total resources) and Figure 9-7 (measured + indicated resources).
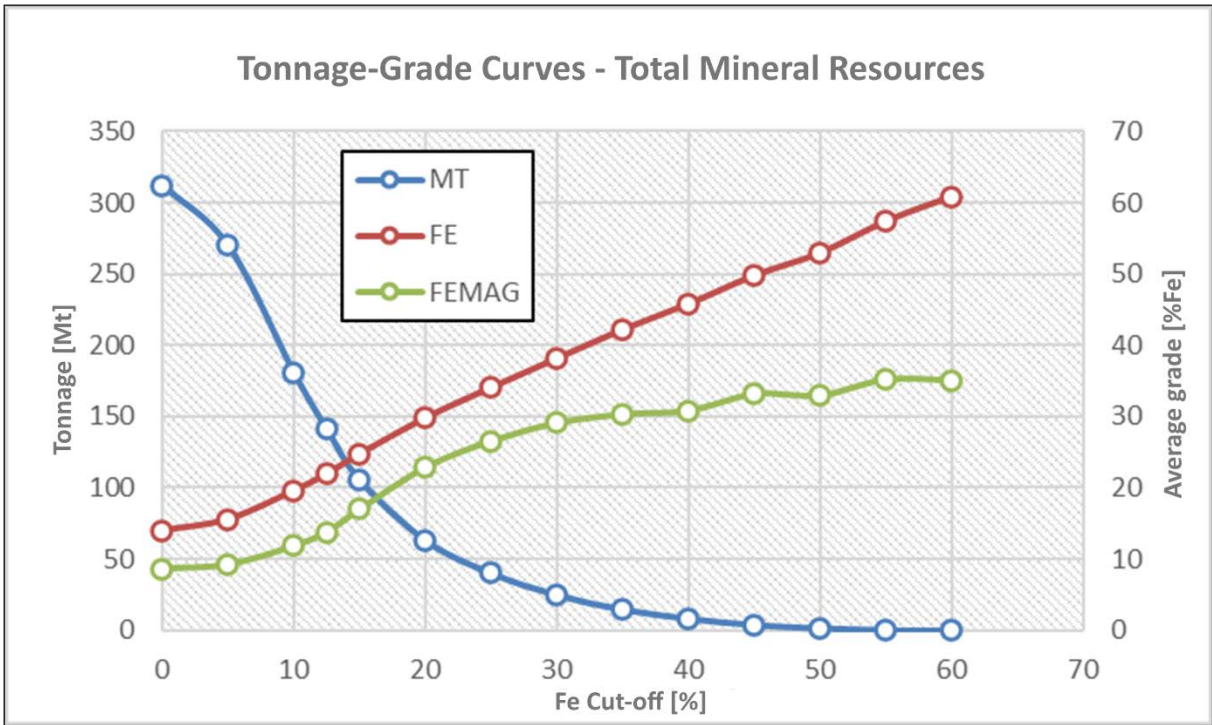
Figure 9-6. Tonnage-Grade Curve for Total Mineral Resources.
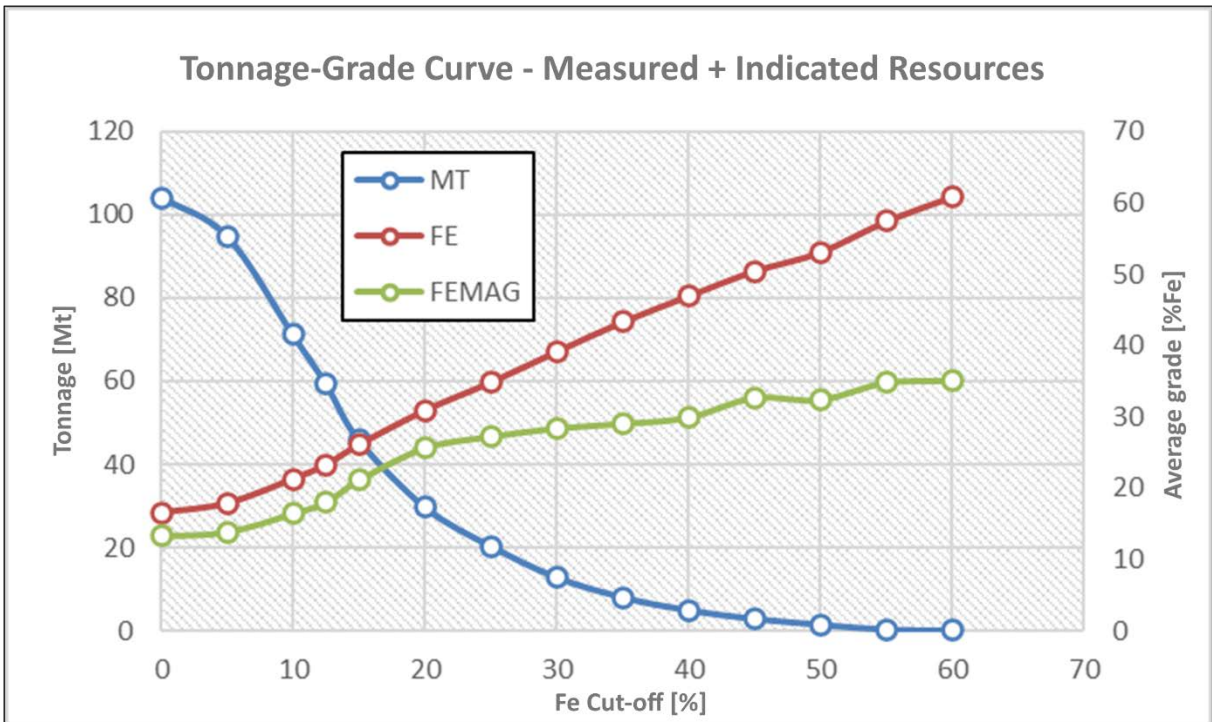
Figure 9-7. Tonnage-Grade Curve for Measured + Indicated Mineral Resources.

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9.5.2 Nested Pits

The nested pits were generated using Whittle software, considering the economic criteria from Table 9-1. The obtained results are presented in Table 9-4. The determination of mining phases takes into account the following considerations:

- Maximum Mining Movement: 4.4 Mt/year.

- Plant Capacity: 2.4 Mt/year.

- Phase 1: Aim to satisfy at least 5 years of production.

- Phase 2: Aim to satisfy at least 10 years of production.

Table 9-4. Obtained nested pits.

Pit	RF	Total [Mt]	Mineral [Mt]	FeT [%]	FeMag [%]	FEDT [%]	P [%]	SiO$_2$ [%]	Al$_2$O$_3$ [%]	S [%]	RP [%]	CAT [%]
1	0.62	0.03	0.03	52.7	19.1	50.4	0.6	22.3	7.2	0	29.9	1.9
2	0.64	0.28	0.26	49.8	28.9	62.7	0.6	17.5	3	0	43.7	1.9
3	0.66	0.56	0.49	47	28.7	63.5	0.5	18.1	2.9	0	43.4	1.8
4	0.69	1.12	0.92	43.9	27.8	64	0.5	19	3.1	0	42.1	1.8
5	0.72	2.52	1.87	40.2	28.1	64.6	0.5	18.2	2.8	0	42.6	1.7
6	0.75	5.21	3.54	37.3	27.4	62.9	0.4	17.9	2.7	0	41.4	1.6
7	0.78	24.27	14.55	32.4	26.2	62.8	0.3	22.6	3.6	0	39	1.8
8	0.82	40.58	26.67	29.3	25.9	62.4	0.3	22.8	3.6	0	38.5	1.8
9	0.86	49.25	32.25	28.4	25.4	61.9	0.3	23	3.5	0	37.6	1.8
10	0.9	55.62	35.82	27.8	24.6	60.7	0.3	23.2	3.5	0	36.3	1.8
11	1	62.07	38.98	27.3	23.6	59.4	0.3	23.3	3.6	0	34.7	1.8
12	1.1	65.66	40.24	27	23.2	58.7	0.3	23.2	3.6	0	34	1.8
13	1.2	68.51	41.07	26.9	22.9	58	0.3	23.1	3.5	0	33.5	1.8
14	1.3	75.16	43.04	26.4	21.9	56	0.3	22.4	3.5	0	32.2	1.9
15	1.4	76.74	43.36	26.4	21.8	55.8	0.3	22.4	3.4	0	32	1.9
16	1.5	78.11	43.6	26.3	21.7	55.8	0.3	22.4	3.4	0	31.9	1.9
17	1.6	79.21	43.79	26.3	21.7	55.6	0.3	22.3	3.4	0	31.8	1.9
18	1.7	79.8	43.87	26.3	21.6	55.6	0.3	22.3	3.4	0	31.7	1.9
19	1.8	80.52	43.96	26.2	21.6	55.5	0.3	22.3	3.4	0	31.7	1.9
20	1.9	81.52	44.08	26.2	21.6	55.5	0.3	22.3	3.4	0	31.7	1.9
21	2	83.31	44.29	26.2	21.5	55.5	0.3	22.3	3.5	0	31.5	1.9

With the results shown in Table 9-4 and considering the mentioned considerations, it has been determined that mining phases 1 and 2, and the final pit will be determined by Pit 7, Pit 8, and Pit 11, respectively. These are shown from Figure 9-8 to Figure 9-10.
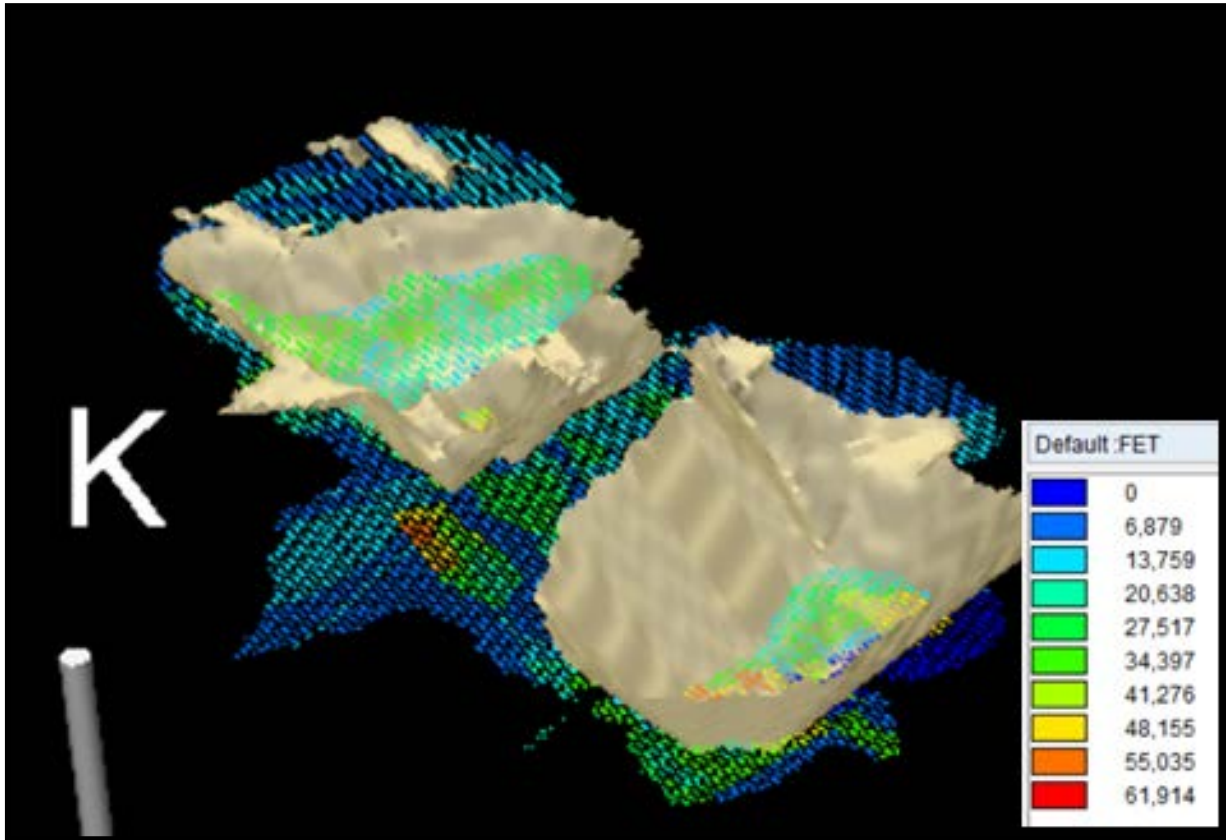
Figure 9-8. Pit 7 - Mining Phase 1.
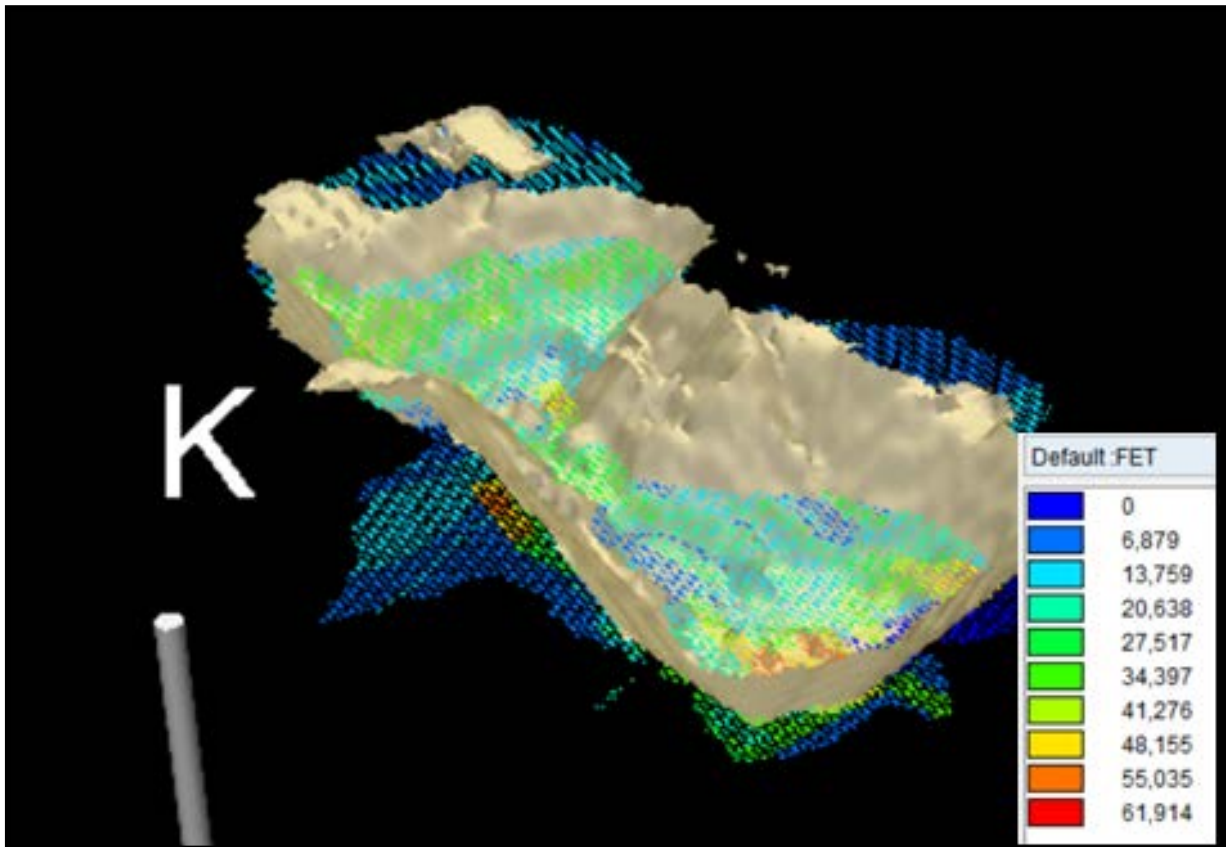
Figure 9-9. Pit 8 - Mining Phase 2.
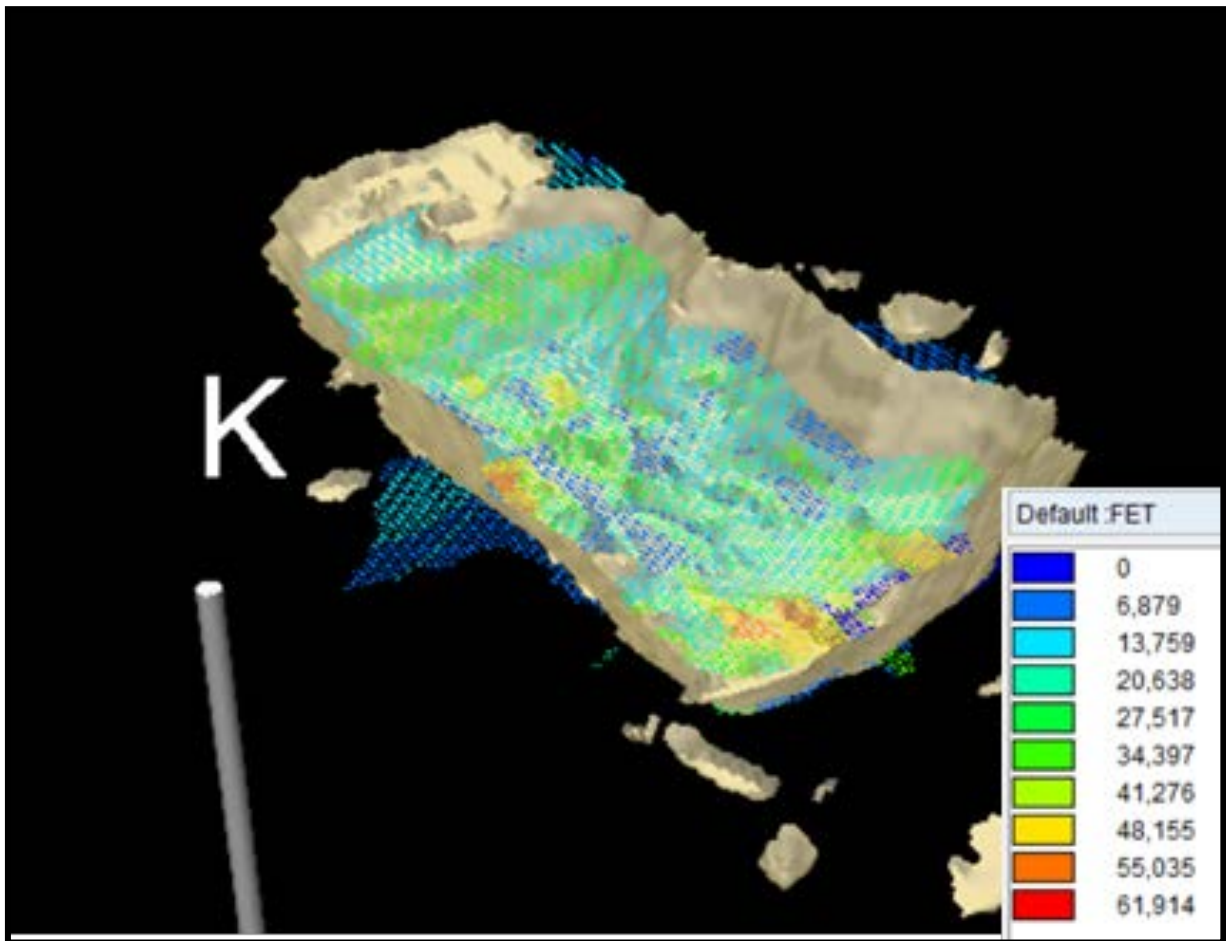
Figure 9-10. Pit 11 - Final Pit.

9.5.3   Preliminary Mine Plan

With the considerations mentioned in the previous sections, the preliminary mine plan for the project is obtained. This plan considers a maximum mining movement of 4.4 Mt/year and a treatment of 2.4 Mt/year. The plan is shown in Figure 9-11, and the obtained product is shown in Figure 9-12. Additionally, it takes into account:

- Constant processing of ore from year 2 to 16.

- Mining movement uses maximum capacity in the first 4 years.
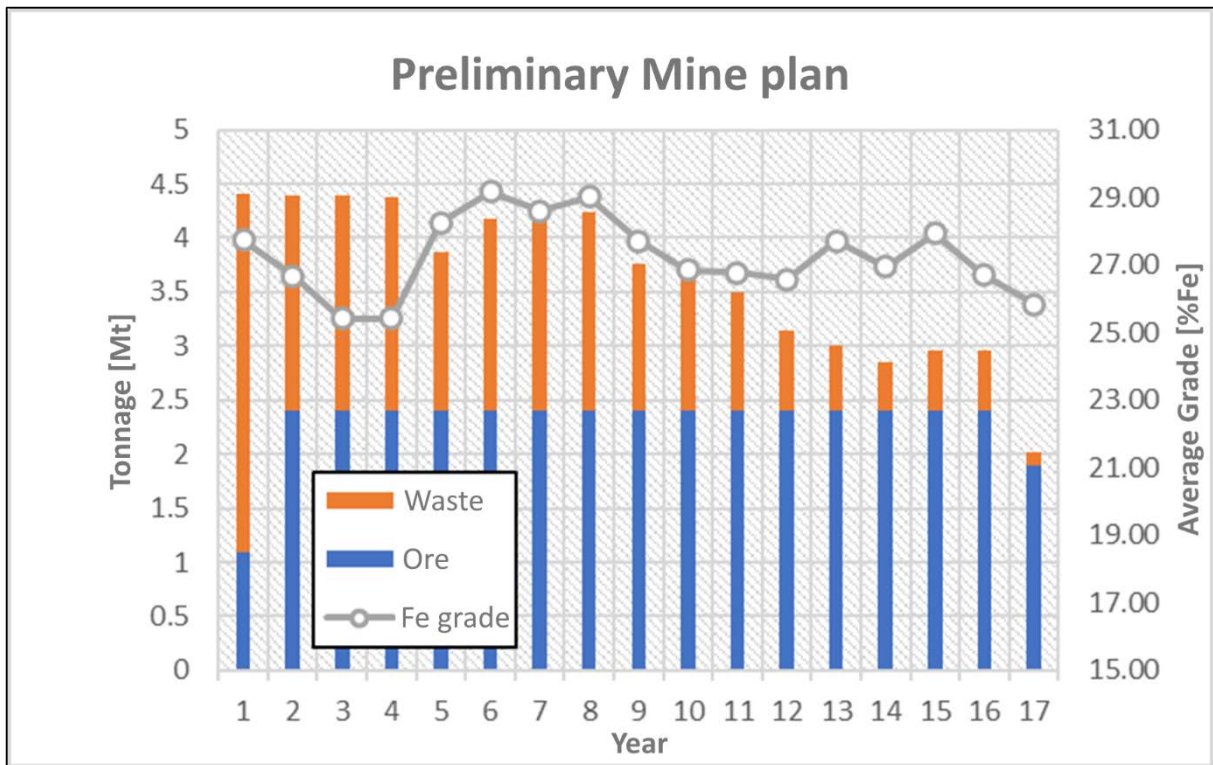
Figure 9-11. Preliminary Mine Plan.
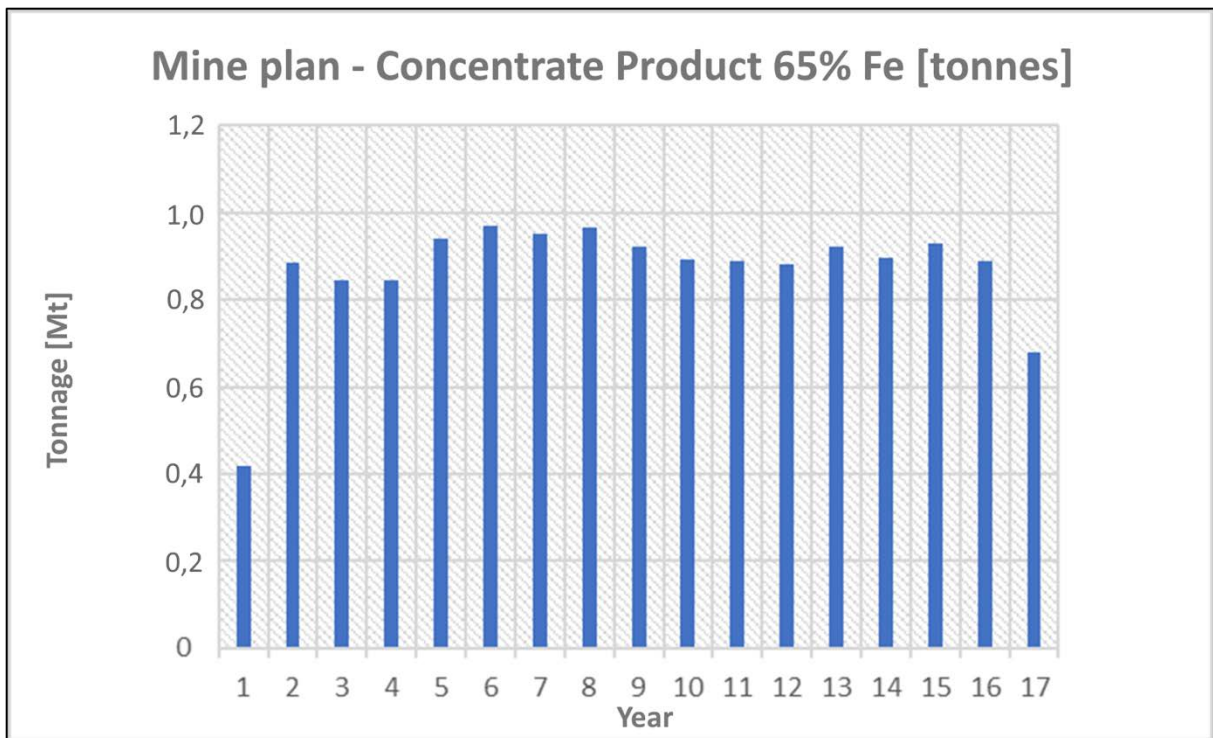
Figure 9-12. Concentrate Product 65% Fe.

Table 9-5 details the preliminary mine plan without the operationalization.

Table 9-5. Preliminary Mine Plan and Product.

Period [year]	Mineral input [Mt]	Waste [Mt]	Strip Ratio W/O	Total Mov [Mt]	Grade FeT [%]	Grade FeMag [%]	Grade P [%]	Grade SiO₂ [%]	Grade Al₂O [%]	Grade S [%]	Weight Recovery [%]	Product [Mt]	Cashflow [M US$]	Discounted Cashflow [M US$]
1	1.1	3.3	3.0	4.4	27.7	25.0	0.4	19.3	4.0	0.0	36.8	0.4	1	1
2	2.4	2.0	0.8	4.4	26.7	22.4	0.4	21.0	4.1	0.0	33.1	0.9	17	14
3	2.4	2.0	0.8	4.4	25.4	24.4	0.4	22.5	4.1	0.0	35.7	0.8	15	11
4	2.4	2.0	0.8	4.4	25.4	23.1	0.4	18.6	3.1	0.0	34.1	0.8	15	10
5	2.4	1.5	0.6	3.9	28.3	25.7	0.4	21.1	3.4	0.0	38.2	0.9	22	14
6	2.4	1.8	0.7	4.2	29.2	26.4	0.4	21.1	3.4	0.0	39.1	1.0	23	13
7	2.4	1.9	0.8	4.3	28.6	26.6	0.3	21.4	3.4	0.0	39.3	1.0	21	11
8	2.4	1.8	0.8	4.2	29.0	25.6	0.3	20.9	3.2	0.0	37.9	1.0	22	10
9	2.4	1.4	0.6	3.8	27.7	23.6	0.3	23.1	3.5	0.0	34.9	0.9	22	9
10	2.4	1.3	0.5	3.7	26.9	22.3	0.3	23.6	3.5	0.0	33.0	0.9	20	8
11	2.4	1.1	0.5	3.5	26.8	21.1	0.3	23.2	3.5	0.0	31.1	0.9	21	7
12	2.4	0.7	0.3	3.1	26.6	21.2	0.3	23.3	3.5	0.0	30.6	0.9	21	7
13	2.4	0.6	0.3	3.0	27.7	23.5	0.3	24.6	3.5	0.0	33.6	0.9	24	7
14	2.4	0.5	0.2	2.9	26.9	24.0	0.3	25.5	3.5	0.0	34.2	0.9	23	6
15	2.4	0.6	0.2	3.0	27.9	24.9	0.3	26.6	3.6	0.0	36.0	0.9	25	6
16	2.4	0.6	0.2	3.0	26.7	23.3	0.3	27.8	3.5	0.0	34.3	0.9	22	5
17	1.9	0.1	0.1	2.0	25.8	18.0	0.2	32.5	4.4	0.0	26.4	0.7	17	3
TOTAL	**39.0**	**23.1**	**0.6**	**62.1**	**27.3**	**23.6**	**0.3**	**23.3**	**3.6**	**0.0**	**38.0**	**14.7**	**332**	**143**

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ADMIRALTY RESOURCES

The total material extracted from the mine is 62 Mt, of which 38.9 Mt is ore with an average grade of 27.3% Fe, and 23 Mt is waste material, resulting in a Waste-to-Ore ratio of 0.6. The total product obtained is 14.7 Mt with a grade of 65% Fe, implying a weight recovery of 37.8%.

9.5.1 Operationalized Mine Plan

9.5.1.1 Design Considerations

To obtain the Final Operationalized Mine Plan, a ramp width of 10 m was considered in the design, with a slope of 10% and an overall angle between 42° and 52°. Additionally, trucks with a capacity of 20 m^3 were taken into account for the determination. Figure 9-13 shows a plan view and three isometric views of the Operationalized Pit with the mentioned design geometry considerations.
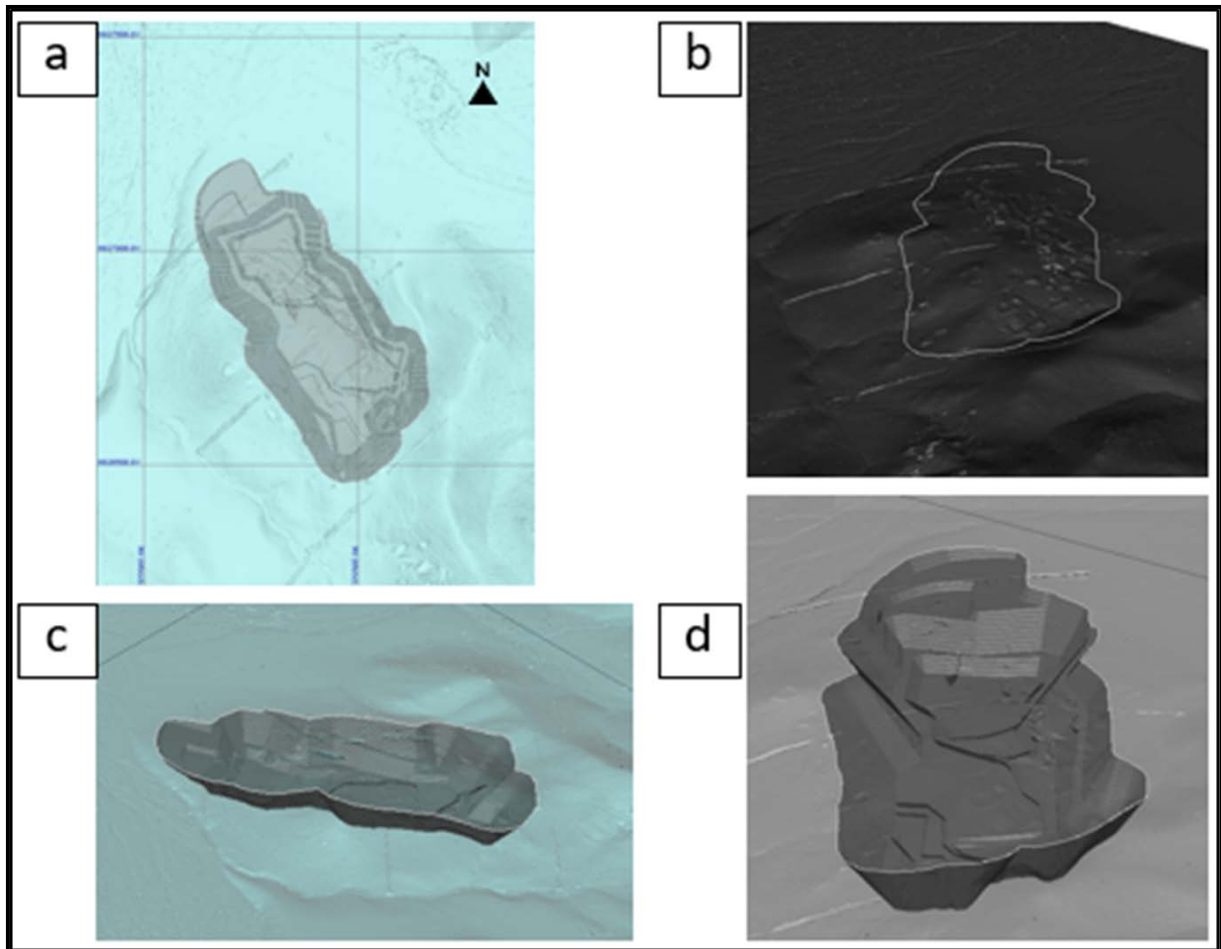
Figure 9-13. Operational Pit. A - Plan View. B, C, D - Isometric Views.

9.5.1.2 *Operationalized Pit Volumes*

With the defined design geometry, the volumes of the obtained pits are recalculated. The results, for the case of the final pit, considering only Measured and Indicated mineral resources, are shown in Table 9-6.

Table 9-6. Operationalized Final Pit Volumes, Measured + Indicated Mineral Resources.

Fe Cutoff [%]	Total Ton [Mt]	Fine Fe Ton [Mt]	Total Ton [Mt]	Fe Grade [%]	Waste [Mt]	W/O
0	56	12	56	21.2%	1.70	0.03
5	53	12	53	22.1%	4.11	0.08
10	46	11	46	24.4%	11.45	0.25
13	41	11	41	25.8%	15.92	0.38
15	**36**	**10**	**36**	**27.5%**	**21.05**	**0.58**
20	27	8	27	31.1%	30.70	1.15
25	19	6	19	34.9%	38.80	2.09
30	12	5	12	39.2%	45.53	3.85
35	7	3	7	43.4%	49.95	6.74
40	5	2	5	47.0%	52.75	11.43
45	3	1	3	50.5%	54.69	20.52
50	1	1	1	53.1%	55.95	39.80
55	0	0	0	57.4%	57.07	195.07
60	0	0	0	60.9%	57.33	2188.70

The minimum cutoff grade for processing was defined at 15% Fe. Its graphical representation is shown in Figure 9-14, and its specific tonnage-grade curve in Figure 9-15.
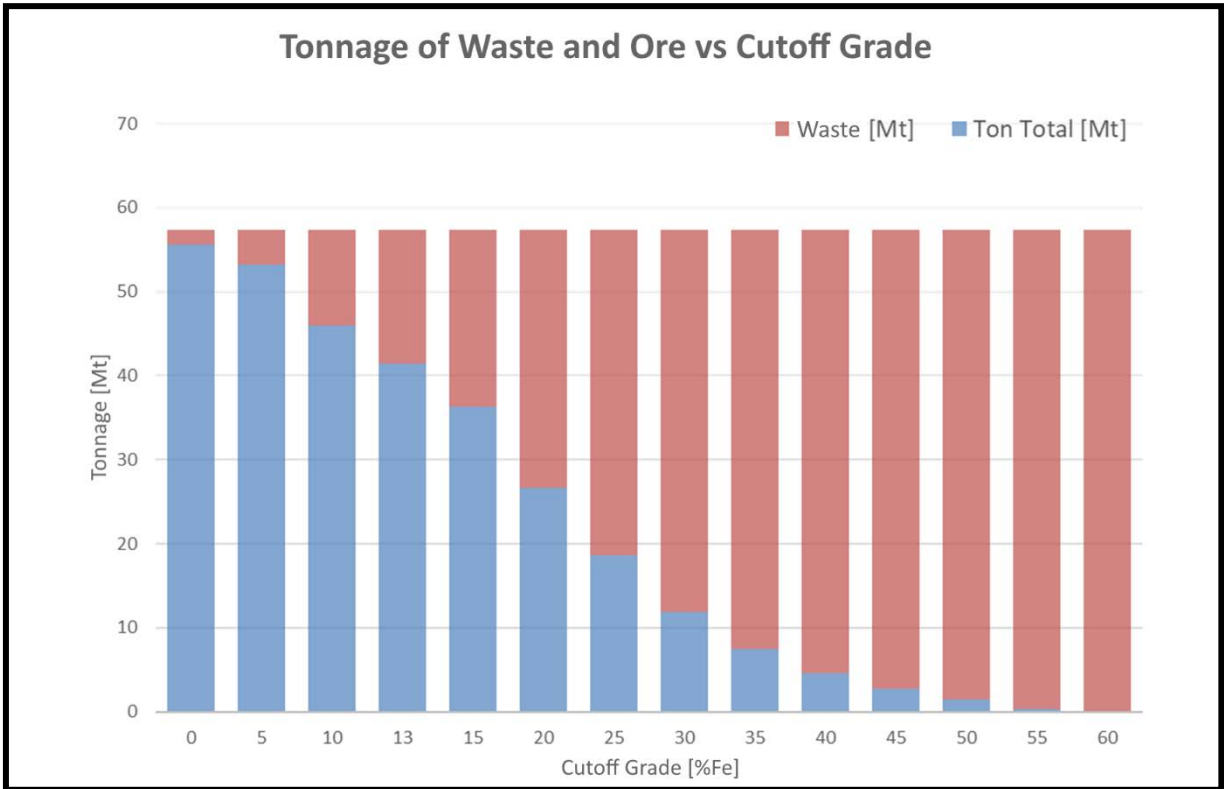
Figure 9-14. Tonnage of Waste and Ore vs. Cutoff Grade.
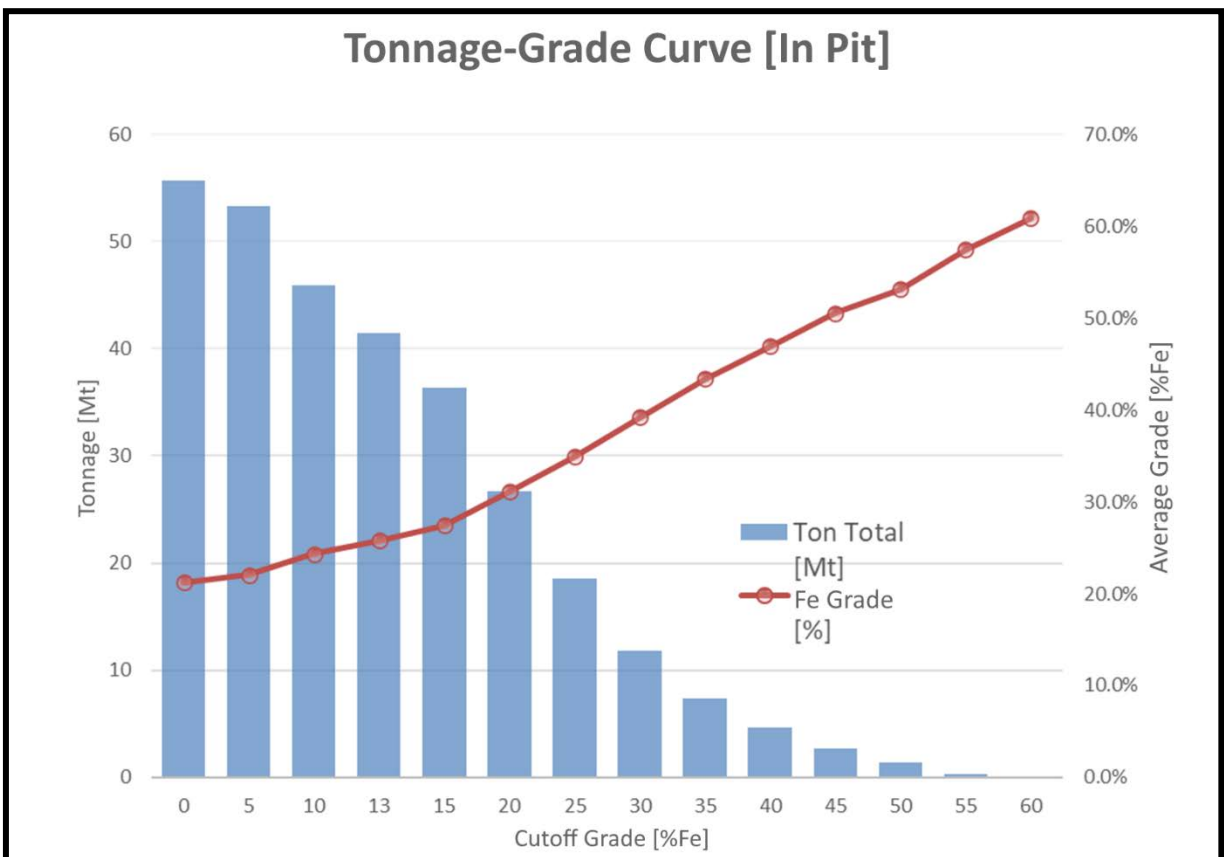
Figure 9-15. Tonnage-Grade Curve for Indicated + Inferred Mineral Resources, Operationalized Final Pit.

For the three determined phases, Phase 1, Phase 2, and Phase 3 (see section 3.2), the tonnage-grade curves are shown from Figure 9-16 to Figure 9-18.
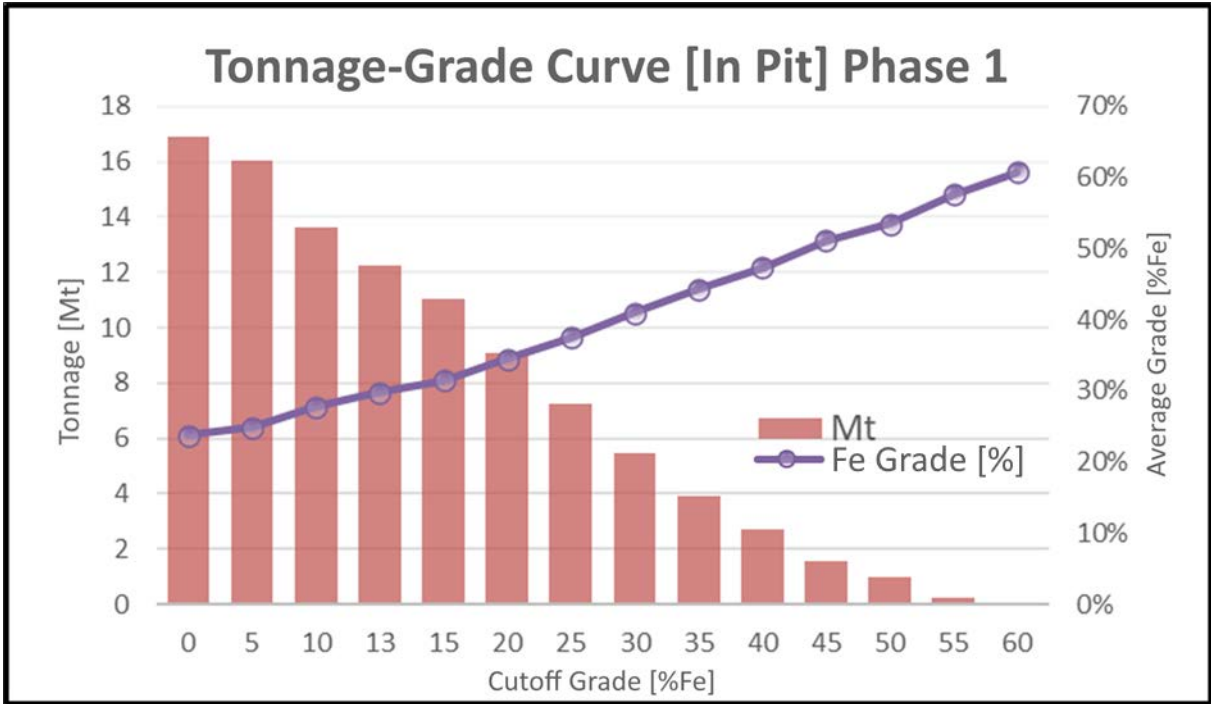
Figure 9-16. Tonnage-Grade Curve for Phase 1.
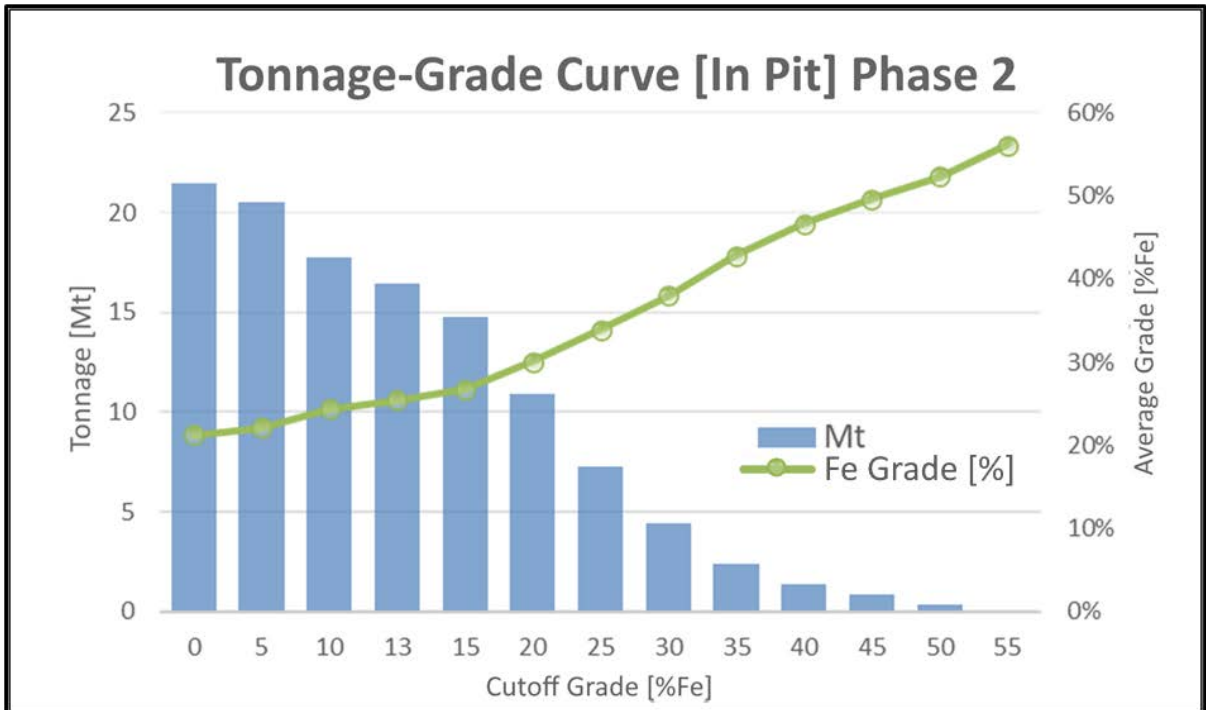
Figure 9-17. Tonnage-Grade Curve for Phase 2.
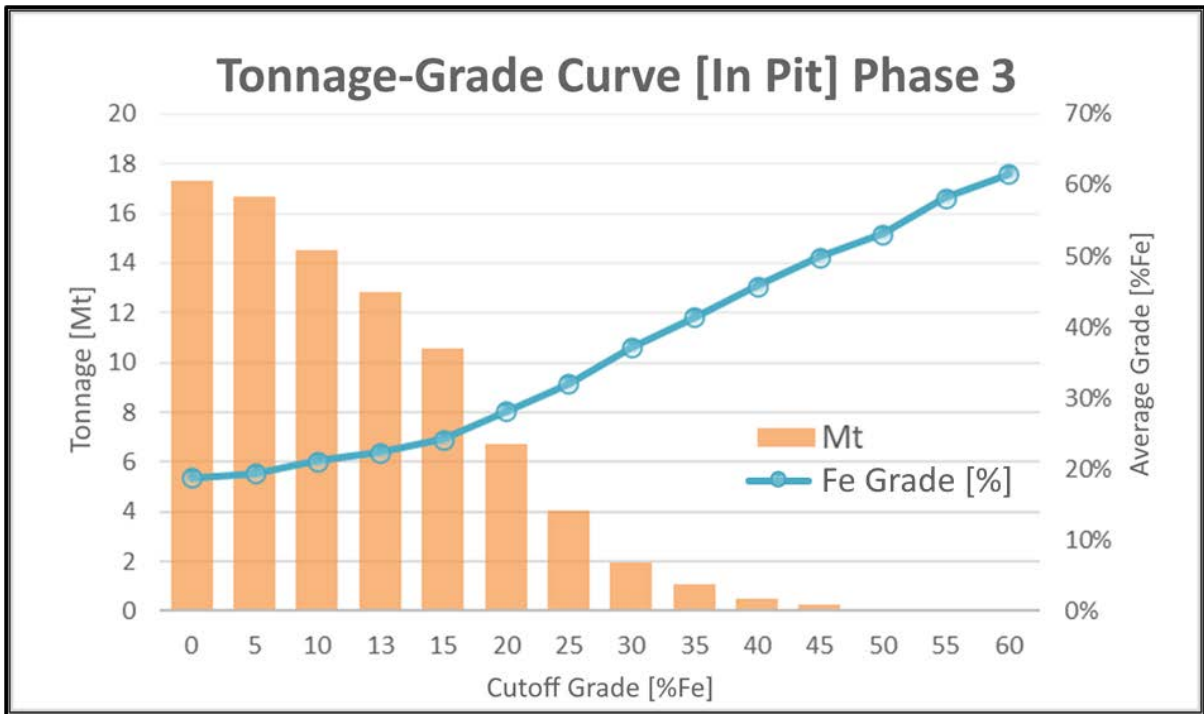
Figure 9-18. Tonnage-Grade Curve for Phase 3.

In Figure 9-19, the spatial representation of the considered phases is shown.
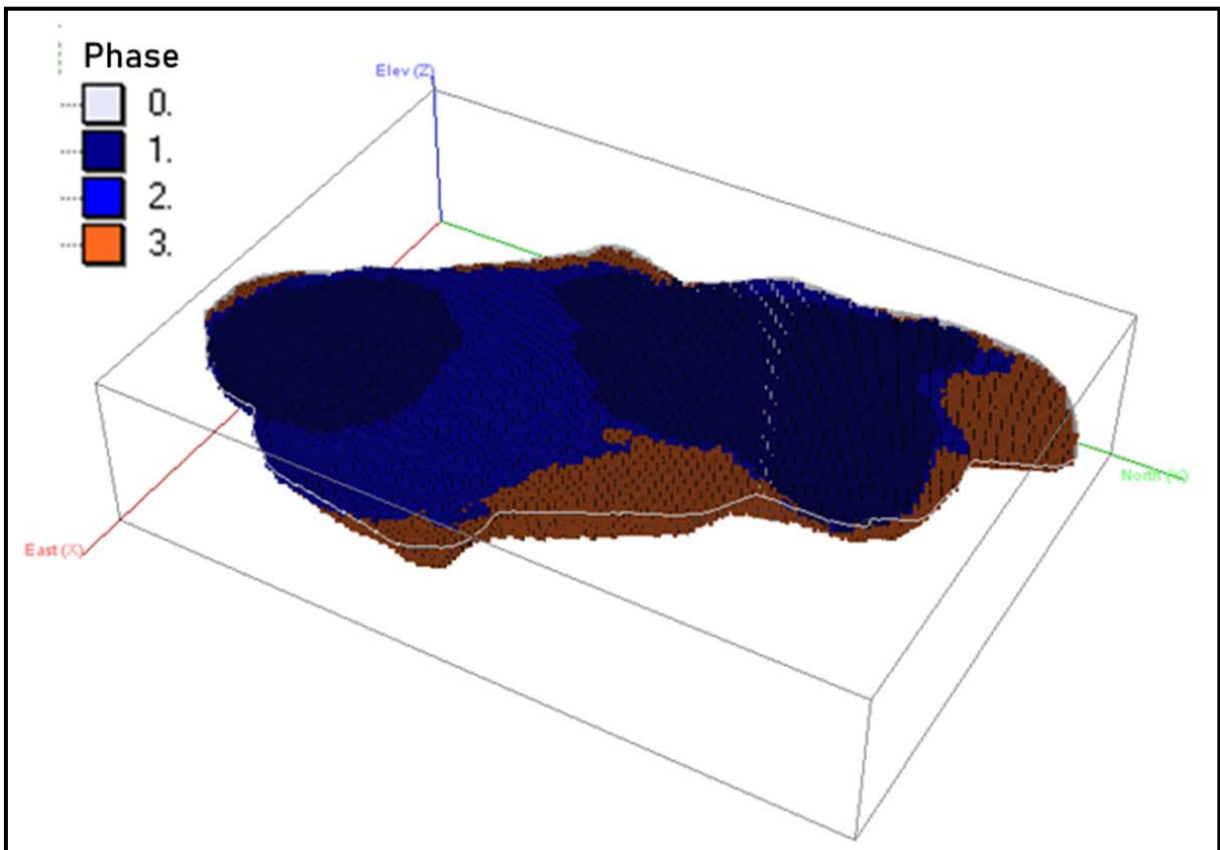
Figure 9-19. Considered phases, isometric view.

9.5.1.3 *Annualized Plan*

The operationalized mining plan obtained is shown in Table 9-7 (maximum annual mine movement of 4.4 Mt and plant treatment of 2.4 Mt per year). It considers 36 Mt of ore feed to the plant with a total iron grade of 27.46% FeT and plans to remove 21 Mt of waste over a lifespan of 15 years and a couple of months, resulting in a waste-to-ore ratio of 0.6. The final product obtained is around 14 Mt with a grade of 65% Fe, equivalent to a total weight recovery of 38%.

The total material movement for each period is graphically presented in Figure 9-20. The geometry at each level of the plan is shown in Figure 9-21.
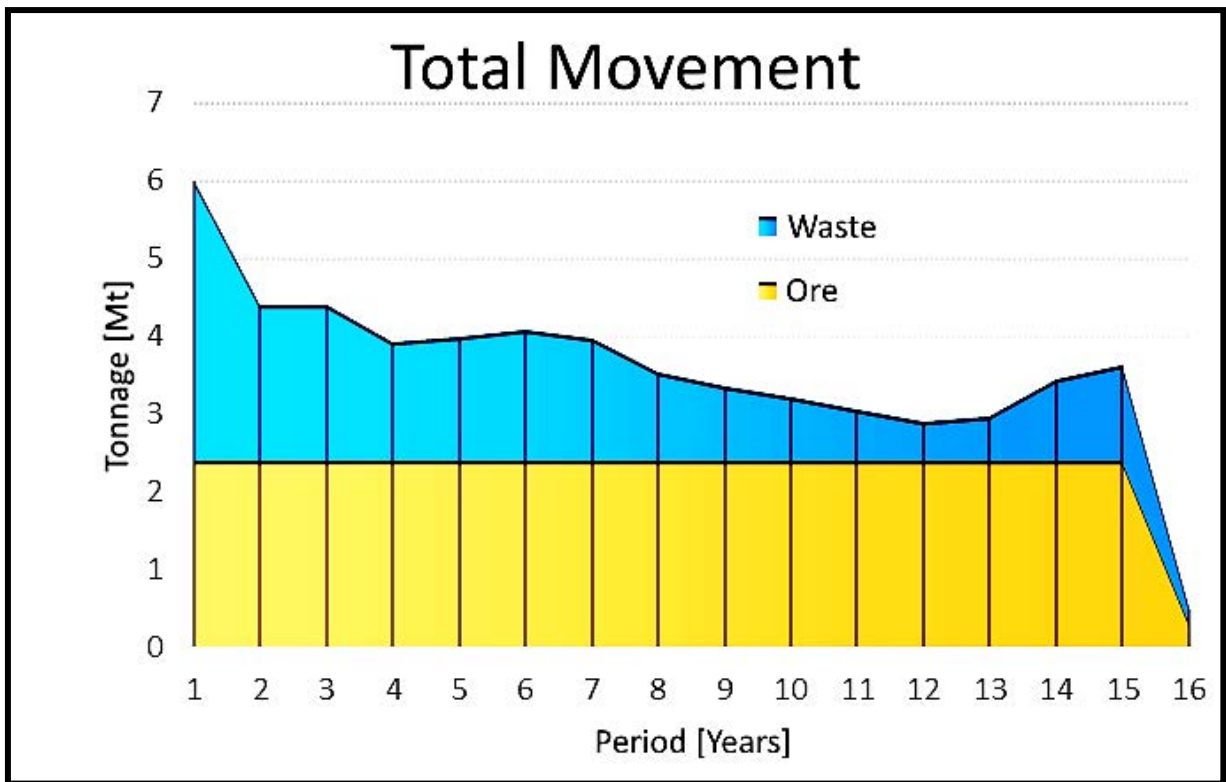
Figure 9-20. Total Material Movement per Period.

Table 9-7. Operationalized Mining Plan.

Period [year]	Ore input [Mt]	Waste [Mt]	Strip Ratio W/O	Period [year]	Grade FeT [%]	Grade FeMag [%]	Grade P [%]	Grade SiO$_2$ [%]	Grade Al$_2$O [%]	Grade S [%]	Weight Recovery [%]	Product [Mt]	Cashflow [M US$]	Discounted Cashflow [M US$]
1	2.4	3.6	6.0	1.5	29.0	25.1	0.4	19.4	3.8	0.0	37.5	1.0	16.6	15.1
2	2.4	2.0	4.4	0.8	27.2	26.8	0.4	20.4	3.4	0.0	39.9	0.9	18.4	15.2
3	2.4	2.0	4.4	0.8	25.5	24.9	0.4	22.5	3.9	0.0	36.6	0.8	15.1	11.4
4	2.4	1.5	3.9	0.6	27.0	24.4	0.4	23.3	4.2	0.0	35.5	0.9	19.7	13.4
5	2.4	1.6	4.0	0.7	28.6	26.6	0.4	21.4	3.4	0.0	39.4	1.0	22.5	14.0
6	2.4	1.7	4.1	0.7	27.8	26.4	0.4	21.2	3.4	0.0	39.3	0.9	20.6	11.6
7	2.4	1.6	4.0	0.7	28.1	25.2	0.3	21.5	3.3	0.0	37.5	0.9	21.6	11.1
8	2.4	1.1	3.5	0.5	26.9	24.1	0.3	24.5	3.7	0.0	35.3	0.9	20.7	9.7
9	2.4	0.9	3.3	0.4	27.3	22.7	0.3	23.6	3.5	0.0	33.4	0.9	22.1	9.4
10	2.4	0.8	3.2	0.3	27.1	21.9	0.3	22.9	3.4	0.0	31.9	0.9	22.3	8.6
11	2.4	0.7	3.1	0.3	27.9	24.3	0.3	24.0	3.4	0.0	35.1	0.9	24.3	8.5
12	2.4	0.5	2.9	0.2	27.8	25.3	0.3	25.0	3.4	0.0	36.3	0.9	24.6	7.8
13	2.4	0.6	3.0	0.2	28.3	26.5	0.3	25.7	3.4	0.0	38.3	0.9	25.2	7.3
14	2.4	1.0	3.4	0.4	27.4	23.7	0.3	27.4	3.5	0.0	34.9	0.9	22.0	5.8
15	2.4	1.2	3.6	0.5	26.0	21.2	0.3	29.8	3.9	0.0	31.3	0.9	18.7	4.5
16	0.3	0.2	0.5	0.6	26.0	11.2	0.2	37.2	5.3	0.0	16.9	0.1	2.3	0.5
TOTAL	**36.3**	**21.1**	**57.4**	**0.6**	**27.5**	**24.5**	**0.3**	**23.6**	**3.6**	**0.0**	**38.0**	**13.8**	**316.7**	**153.9**
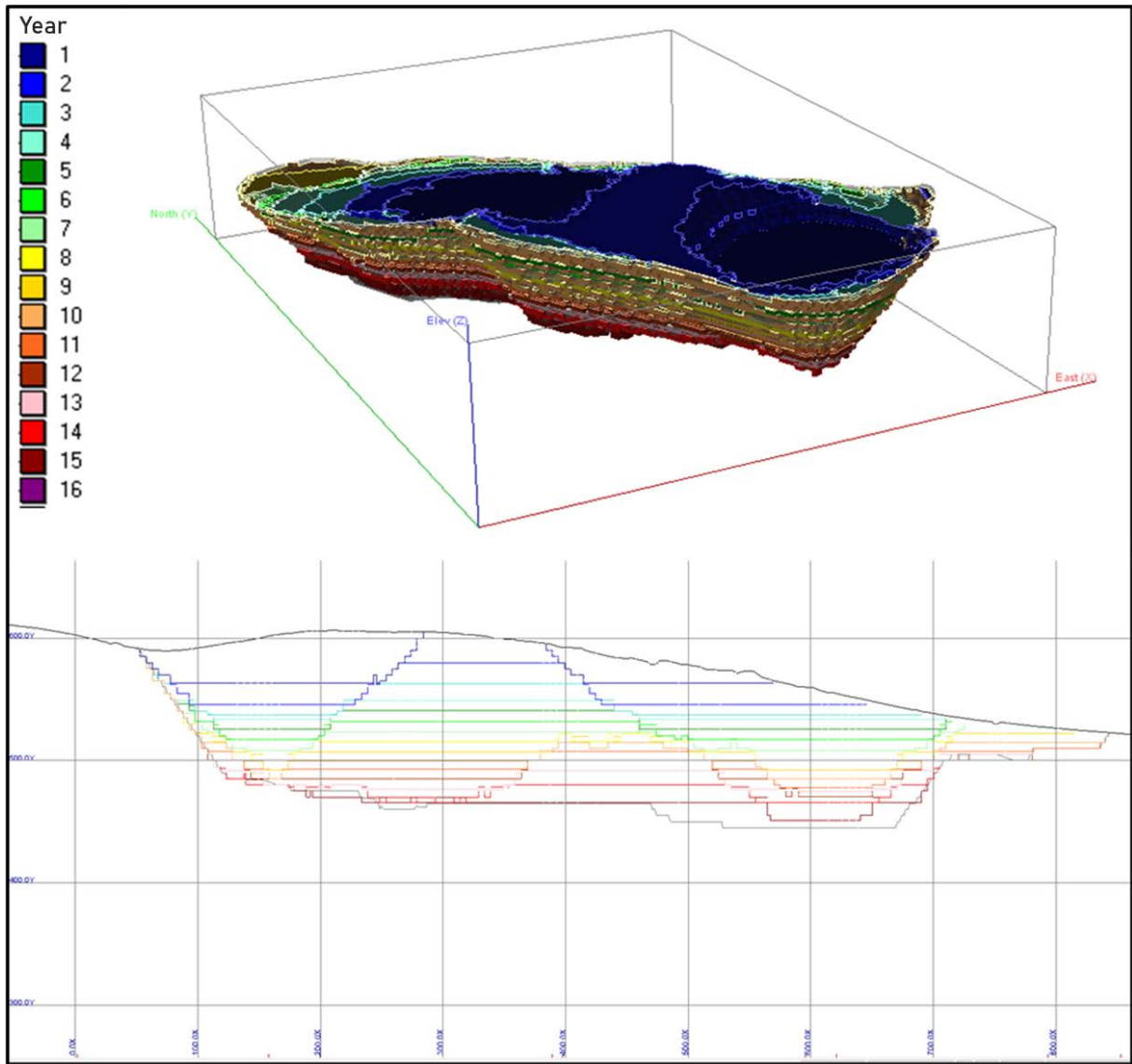
Figure 9-21. Annualized Mining Plan.

9.5.2   **Economic Results**

The economic results for the Final Pit, considering or not considering the initial investment, are shown in Table 9-8. The initial investment, evaluated at 45M US$ with an 8.5% discount rate, results in an NPV ranging from 169M US$ to 124M US$.

Table 9-8. Economic Results.

Parameters	Without Investment	45M US$ Investment and 8.5% Discount Rate
Movement [Tonnes]		
Ore	36,306,911	36,306,911
Waste (reject)	21,052,607	21,052,607

Waste (other)	0	0
Total	**57,359,518**	**57,359,518**
Strip Ratio	0.58	0.58
Product [INPUTS]		
FET [%m]	996,816,506	996,816,506
FEMA [%m]	889,077,385	889,077,385
FEDT [%m]	2,219,076,320	2,219,076,320
P [%m]	12,084,945	12,084,945
SIO2 [%m]	857,955,643	857,955,643
AL2O [%m]	130,209,657	130,209,657
S [%m]	1,037,535	1,037,535
RP [unit]	1,306,067,859	1,306,067,859
CAT [unit]	66,685,660	66,685,660
Measures		
NPV [$]	169,089,731	124,089,731
Life [year]	15.13	15.13
Payback [year]	0	2.66
Payback Ratio	0	0.18
IRR [%]	0	40.66

9.5.3 Waste Dump Considerations

For the disposal of waste material, a waste dump design located east of the Pit with a capacity of 21 Mt has been considered, as depicted in Figure 9-22. In the same figure, a cross-sectional cut over the waste dump is indicated, where its stability is evaluated based on the considered criteria shown in Table 9-9.

Additionally, for the analysis of the results, acceptability criteria shown in Table 9-10 were considered, taking into account static, pseudo-static short-term, and pseudo-static long-term conditions.

The obtained results are shown in Figure 9-23. Waste Dump stability results., with safety factors in all evaluated conditions exceeding 1.5, thus meeting the acceptability criteria. Therefore, this design is considered stable.
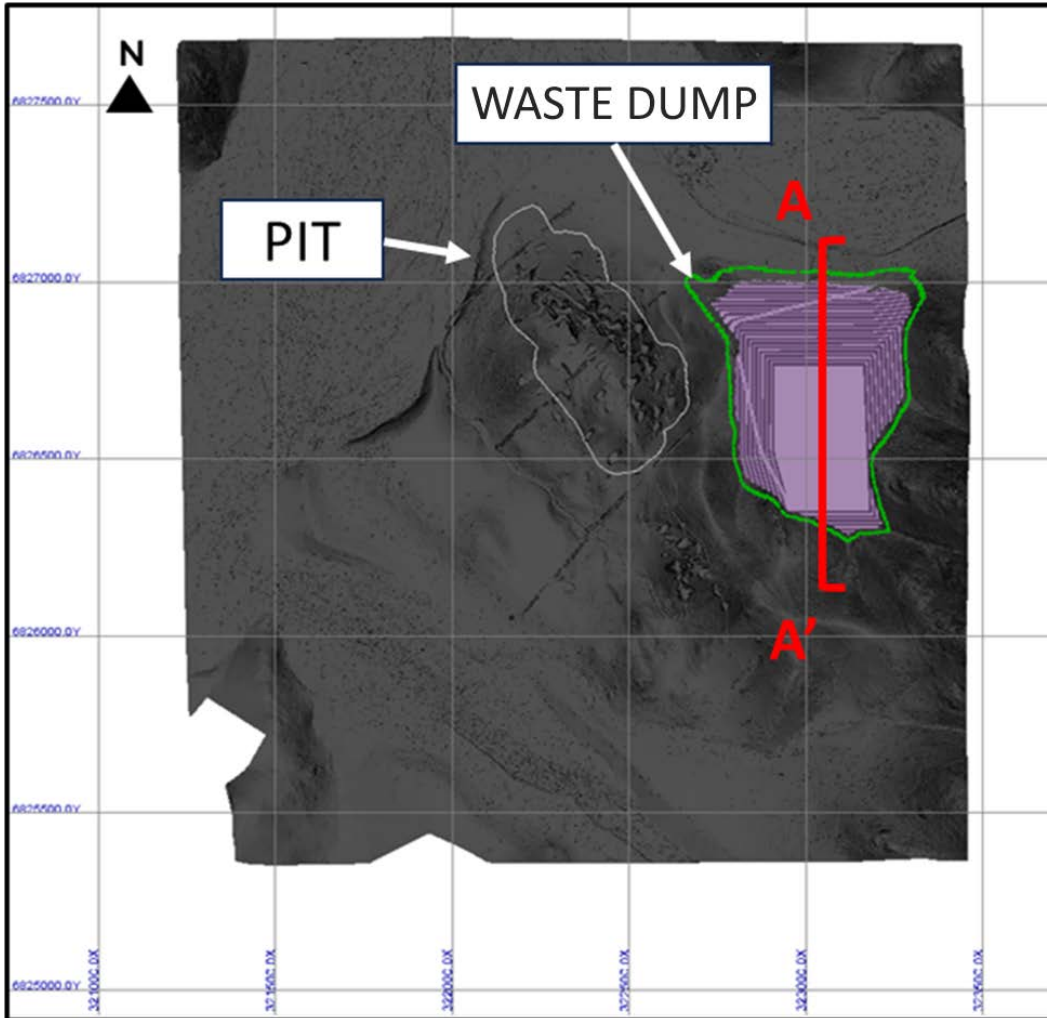
Figure 9-22. Location considered for the waste dump.

Table 9-9. Stability Evaluation Criteria.

Considered Parameters	Waste Dump Material
Bulk Density [ton/m^3]	2.21
Internal Friction Angle [°]	41.00
Apparent Cohesion [kN/m^2]	2.94

Table 9-10. Utilized Acceptability Criteria.

Failure Mode	Condition	Minimum Safety Factor

Global Failure	Static	≥1.3
	Pseudo-static	≥1.1
	Pseudo-static [Mine Closure]	≥1.1
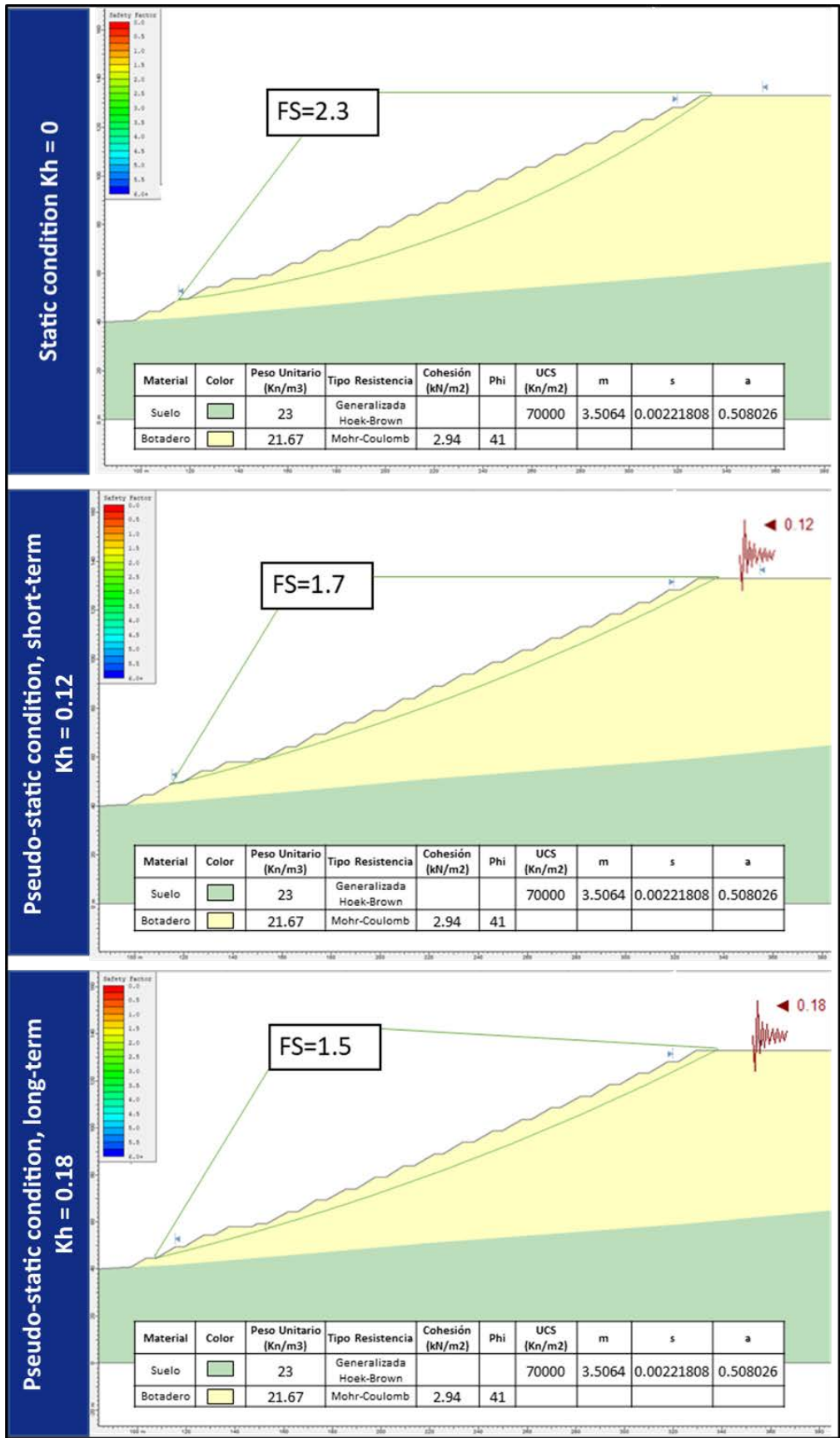
Figure 9-23. Waste Dump stability results.

10 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL COMMUNITY IMPACT

For mining projects of the scale of Mariposa Fe in Chile, the preparation and approval of an 'Environmental Impact Study' ("Estudio de Impacto Ambiental" or "EIA") or an 'Environmental Impact Declaration' ("Declaración de Impacto Ambiental" or "DIA") is required by the Chilean environmental authority

In the case of Mariposa Fe, the corresponding DIA has already been submitted to the competent authority and was duly approved by the Chilean authorities through 'Resolución de calificación ambiental #20, dated March 28, 2018', issued by the Evaluation Commission of the Atacama Region. This resolution authorizes extractive mining operations and the placement of permanent structures in accordance with the technical parameters presented by ADY regarding the areas and volumes affected by mining operations, compliance with the environmental commitments detailed in the DIA by ADY, all within the existing legal framework in Chile.

11   ADJACENT PROPERTIES

ADY's mining concessions are mostly surrounded by their own mining concessions on the south, east, and west sides. However, there are some small mining concessions highlighted in red in Figure 11-1, which belong to the 'Compañía Minera del Pacífico' or CMP. This company is part of the CAP Group, the main supplier of iron ore on the west coast of the American continent. The remaining properties highlighted in yellow correspond to concessions granted to third parties, individuals. Currently, there are no overlaps with third-party properties, and there are no records of ongoing legal disputes associated with Admiralty's properties, at least with respect to the Mariposa Fe project.
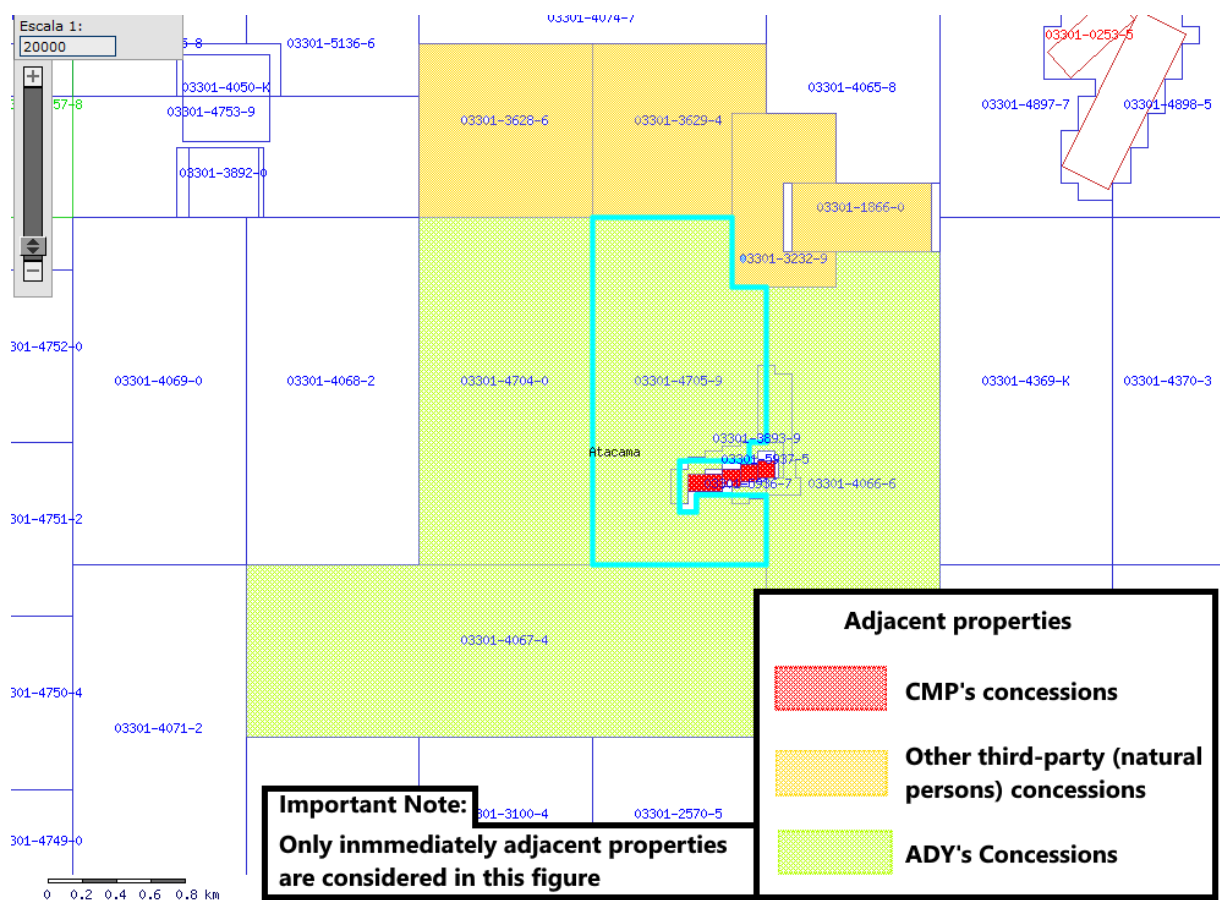
Figure 11-1. Map showing the adjacent mining concessions. Map extracted from the public land registry of chilean mining concessions. Leo 6 property is highlighted in light blue contour. Note: not all ADY's concessions are shown in this figure.

GeoINVEST S.A.C. E.I.R.L. , **100 Badajoz ST, OFC 526, Las Condes, RM 7560908 Chile**

12 OTHER RELEVANT DATA AND INFORMATION

Currently, Admiralty is in the construction process with a focus on the commissioning of the Mariposa Fe project. In collaboration with Hainan Xinlei Mining Management Co. Ltd., the beneficiation plant for the processing of iron ore extracted from Mariposa is being operated and constructed.

13 INTERPRETATIONS AND CONCLUSIONS

The present mineral resource estimate complies with minimum standards, considering the high reliability of the data from the second drilling campaign, the previous validation of the first drilling campaign, and the macroscopic and mesoscopic validation conducted by Geoinvest in the field, not only of the drill core but also of the surface geology. Therefore, the information can be considered reliable.

There are still areas with potential for improvement, such as the analysis of precision and accuracy related to field sampling and laboratory results.

It is also noteworthy that ADY obtained environmental permits early on from the relevant authorities. The environmental authorization process can be extensive, and based on Geoinvest's experience, it usually takes a long time. Currently, ADY is in the process of constructing the plant for the exploitation of the deposit in partnership with Hainan.

Regarding the Ore Reserves estimate:

- The designed mining plan spans 15 years and a few months, utilizing the maximum plant capacity of 2.4 Mt/year. The total processed ore reserves are of proven and probable quality.

- The evaluation of the Mariposa project through open-pit mining, using the new mineral resource model, yields a total iron concentrate of approximately 14 Mt with a grade of 65% Fe, equivalent to a total weight recovery of 38%.

- The Final Pit obtained results in an NPV of 124 M US$, considering an initial investment of 45 M US$ with a discount rate of 8.5%.

- The designed waste dump has a capacity of 21 Mt, and stability analysis results demonstrate that the geometric configuration is stable.

14 RECOMMENDATIONS

1) Conduct an infill drilling campaign to upgrade the inferred mineral resources to higher categories.

2) Carry out an exploratory drilling campaign towards the southwestern and northern parts of the deposit to confirm mineralization continuity and increase mineral resources.

3) It is recommended to conduct a new geotechnical analysis of the waste dump and open-pit walls, once geomechanical values for each material type are available.

4) For future economic evaluations of the project, it is essential to incorporate more detailed values for each process.

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16   CERTIFICATES OF AUTHORS

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Certificate of Competent Person (Co-Author)

I, Sergio Alvarado Casas, do hereby certify that:

1. I am currently a Consultant Geologist, full-time employee and sole Shareholder of Geoinvest S.A.C. E.I.R.L.

2. My professional title is Geologist, with the degree of Geology obtained in 1991 at Universidad Católica del Norte, Chile, with post graduate studies in resource assessment at the Universidad de Chile, in 1997. I have practiced my profession continuously since 1985. I have estimated and audited mineral resources for a variety of early and advanced international base and precious metals projects. I have worked in the mining industry on several underground and open pit mining operations and held various senior operational and corporate positions;

3. I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition);

4. I am a Competent Person (Registered Member) from the Chilean Mining Commission (a Recognized Professional Organization or 'RPO'), with Registration N° 004. I am registered at the Institute of Chilean Mining Engineers (IMCH), License No. 1,939, and with the Canadian Institute of Mine (CIM) (a Recognized Professional Organization or 'RPO'), License No. 144,015.

5. I visited the Mariposa Fe Project during July 11th-12th, 2023;

6. I have read the definition of Competent Person set out in JORC code 2012 and certify that by virtue of my education, affiliation to a recognized professional association, and past relevant work experience, I fulfill the requirements to be a Competent Person for the purposes of JORC code 2012 and this technical report has been prepared in compliance with those reporting guidelines;

7. As a Competent Person, I am independent of Admiralty Resource NL. There is no scenario outside of my scope as a Competent Person that I would not satisfy the requirement of independence.

8. I am the co-author of this report and responsible for chapters 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12 and 13 of this report and accept professional responsibility for those sections of this technical report;

9. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the securities of Admiralty Resources NL;

10. That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Sergio Alvarado Casas (Geologist)

Chilean Mining Commission (Registered Member N° 004)

CIM (Registration N° 144,015)

IIMCH Chile (Registration N° 1,939)

Geoinvest S.A.C. E.I.R.L.

Santiago, Chile

February 14th, 2024

16.2 Ricardo Muñoz

Mr. Ricardo Muñoz

Mining Engineering Consultant

Geoinvest S.A.C. E.I.R.L.

100 Badajoz Street, Office 526, Las Condes

Región Metropolitana, Chile

Certificate of Competent Person (Co-Author)

I, Ricardo Muñoz, do hereby certify that:

1. I am currently a Consultant Mining Engineer, full-time employee and consultant of Geoinvest S.A.C. E.I.R.L.

2. I am a mining engineer by profession, with a degree obtained in 1995 from the Universidad de la Serena, Chile. I have a postgraduate, MBA in Mining Management from the University of Chile in 2014. I was also in the "Citation in Applied Geostatistics" program of the extension faculty of the University of Alberta of Canada in 2005. I have practiced my profession continuously, for 40 years, in activities associated with the entire geological mining value chain. The experience acquired in these 40 years of practice comes from having participated in various projects and mines, specifically in Chile, Mexico, Argentina, Perú and Brazil. These projects included copper, gold, lead and zinc deposits in different stages of development, from exploration to production where, depending on the state of progress of the project, I have participated in database activities, ore resource estimation, ore control and estimation of mineral resources and ore reserves;

3. I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition);

4. I am a Competent Person from the Chilean Mining Commission (a Recognized Professional Organization or 'RPO'), with Registration N° 005, I am registered at the Institute of Chilean Mining Engineers (IMCH),

License No. 1,998. I was admitted to the grade of member MAusIMM of the Australasian Institute of Mining and Metallurgy, with Registration N°. 312,131;

5. I have read the definition of Competent Person set out in JORC code 2012 and certify that by virtue of my education, affiliation to a recognized professional association, and past relevant work experience, I fulfill the requirements to be a Competent Person for the purposes of JORC code 2012 and this technical report has been prepared in compliance with those reporting guidelines;

6. As a Competent Person, I am independent of Admiralty Resource NL. There is no scenario outside of my scope as a Competent Person that I would not satisfy the requirement of independence.

7. I am the co-author of this report and responsible for chapter 8 of this report and accept professional responsibility for those sections of this technical report;

8. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the securities of Admiralty Resources NL;

9. That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Ricardo Muñoz (Mining Engineer)
Chilean Mining Commission (Registered Member N° 005)
MAusIMM (Registration N° 312,131)
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Santiago, Chile
February 14th, 2024

16.3 Carlos Puga Gómez

Mr. Carlos Puga Gómez
Civil Mining Engineering Consultant
Geoinvest S.A.C. E.I.R.L.
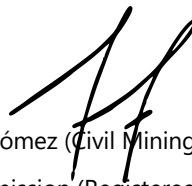100 Badajoz Street, Office 526, Las Condes
Región Metropolitana, Chile

Certificate of Competent Person (Co-Author)

I, Carlos Puga, do hereby certify that:

1. I am currently a Consultant Civil Mining Engineer, full-time employee and consultant of Geoinvest S.A.C. E.I.R.L.

2. My professional title is Civil mining engineer, with the degree of Mining engineer, obtained in 2000 at Universidad de Chile, Chile; with post graduate studies in mining and metallurgy assessment at the Universidad de Chile, in 2021. I have practiced my profession continuously since 2003. I have estimated and audited mineral resources for a variety of early and advanced international base and precious metals projects. I have worked in the mining industry on several underground and open pit mining operations and held various senior operational and corporate positions;

3. I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition);

4. I am a Competent Person from the Chilean Mining Commission (a Recognized Professional Organization or 'RPO'), with Registration N° 180.

5. I have read the definition of Competent Person set out in JORC code 2012 and certify that by virtue of my education, affiliation to a recognized professional association, and past relevant work experience, I fulfill the requirements to be a Competent Person for the purposes of JORC code 2012 and this technical report has been prepared in compliance with those reporting guidelines;

6. As a Competent Person, I am independent of Admiralty Resource NL. There is no scenario outside of my scope as a Competent Person that I would not satisfy the requirement of independence.

7. I am the co-author of this report and responsible for chapter 9 of this report and accept professional responsibility for those sections of this technical report;

8. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the securities of Admiralty Resources NL;

9. That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Carlos Puga Gómez (Civil Mining Engineer)
Chilean Mining Commission (Registered Member N° 180)
Geoinvest S.A.C. E.I.R.L.

Santiago, Chile
February 14th, 2024

17 CONSENT OF AUTHORS

17.1 Sergio Alvarado Casas

I, Sergio Alvarado Casas, consent to the release of this Consent Statement by the directors of Admiralty Resources NL and the chapters for which I am responsible of the report entitled "Mariposa Fe Project, Vallenar, IIIrd Region, Chile, JORC 2012 Updated mineral resources and ore reserves estimate report" dated January 18th, 2024, and any extracts or summary of the above-mentioned report in the form and context in which it appears..

Sergio Alvarado Casas (Geologist)
Chilean Mining Commission (Registered Member N° 004)
CIM (Registration N° 144,015)
IIMCH Chile (Registration N° 1,939)
Geoinvest S.A.C. E.I.R.L.

Santiago, Chile
February 14th, 2024

17.2 Ricardo Muñoz

I, Ricardo Muñoz, consent to the release of this Consent Statement by the directors of Admiralty Resources NL and the chapters for which I am responsible of the report entitled "Mariposa Fe Project, Vallenar, IIIrd Region, Chile, JORC 2012 Updated mineral resources estimate report" dated September 16th, 2023, and any extracts or summary of the above-mentioned report in the form and context in which it appears.

Ricardo Muñoz (Mining Engineer)
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MAusIMM (Registration N° 312,131)
IIMCH Chile (Registration N° 1,998)
Geoinvest S.A.C. E.I.R.L.
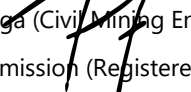
Santiago, Chile
February 14th, 2024

17.3 Carlos Puga

I, Carlos Puga, consent to the release of this Consent Statement by the directors of Admiralty Resources NL and the chapters for which I am responsible of the report entitled "Mariposa Fe Project, Vallenar, IIIrd Region, Chile, JORC 2012 Updated mineral resources and ore reserves estimate report" dated January 18th, 2024, and any extracts or summary of the above-mentioned report in the form and context in which it appears.

Carlos Puga (Civil Mining Engineer)
Chilean Mining Commission (Registered Member N° 180)
Geoinvest S.A.C. E.I.R.L.

Santiago, Chile
February 14th, 2024

18 JORC 2012 Table 1

18.1 Sampling techniques and data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Regarding the first reverse air drilling campaign (2005-2007), there is no clear information available about the sampling methodology beyond what can be inferred from the database. It can be inferred from the database that samples were collected every 2 meters of drilling. • In relation to trench sampling, limited inferences can be made due to the lack of detailed information or records beyond the database. It can be assumed that sampling was conducted every 4 meters. • There is no available information about the weight of the samples collected during the sampling stages mentioned in the previous points. • Concerning the second drilling campaign, samples were obtained based on the following criteria: 1) Sterile rocks: one sample every 20 meters, 50 cm in length; 2) Rocks with disseminated magnetite: one sample every 10 meters, 50 cm in length; 3) Rocks with magnetite in veins: one sample every 2 meters, 50 cm in length; and 4) Rocks with massive magnetite: one sample every 3 meters, 50 cm in length. The reason for this type of sampling was to focus on areas with high and medium grades in order to obtain samples for metallurgical, mineralogical, physical, chemical tests, and validation of the previous drilling campaign. Considering the stated objectives of the 2011-2012 drilling campaign, the methodology, although unconventional, aligns with the proposed objectives.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The first drilling campaign was of reverse circulation type. There were no measurements for deviation for these drillholes. • The second drilling campaign was of diamond drillhole type, with HQ diameter, the perforation company Superex S.A. performed the measures of length and deviation with non-magnetic equipment, with measures every 5 m depth.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• There is no information about drill sample recovery for the first RC drilling campaign. • For the second DDH drilling campaign, REDCO reviewed the Superex S.A. recovery measurements. In its original report, REDCO did not mention any relation between grade and recovery or bias related, neither about measures taken to maximise the sample recovery.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• There is evidence in old cross sections that show geological logging of RC drillholes of the first drilling campaign, besides this, there is no more information about logging of the first drilling campaign. • Regarding the second drilling campaign (DDH), the cores were detailed logged, obtaining geological information both qualitative and quantitative with lithological, mineralogical, and textural descriptions, described on paper (available in folders) and saved in the database. Geotechnical logging was made considering variables such as hardness, veining, veins filling, rock type, fractures, RQD (rock quality designation). Descriptions were made all along the drillholes. • Proper photographs were taken for all drill cores of the second campaign.

Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*
		• In the report of REDCO (2013), the validation of the first drilling campaign was addressed, and a review of 200 samples was made by re-assaying these samples. The selection method was the following:
		  • To select samples of 2007 reverse circulation drilling campaign.
		  • To select samples with magnetic iron content.
		  • To select samples located inside the geophysical body which represents magnetic susceptibility more than 0.6 (SI).
		  • To include 1 2007 RC drill which has some samples inside the body defined in 3 and samples of waste and mineral before the intersection of the body defined in 3.
		  • To select 200 samples (10% of 2007 drilling campaign) by the following criteria:
		    - "N" samples defined by 4.
		    - To separate 200-N samples in 3 sectors depending on the Fe / FeMg regression: above regression (30% samples),

Criteria	JORC Code explanation	Commentary
		below regression and no more than 4% between Fe/FeMg content (30% samples) and below regression more than 4% between Fe/FeMg content (40% samples). - To separate 200-N samples by random selection of 4 groups statistically defined by the 1st, 2nd, 3rd, and 4th quantiles to distribute uniformly in each group defined by "b" the selected samples. • To select 55 alternative samples in order to replace in case that samples in 5) are not physically found. These samples are chosen arbitrary from along the complete FeMg/FeT regression. • To randomly select 25 samples from the 200 samples for double check analysis in other laboratory and density estimation. • To randomly select 10 samples from the 25 samples of point 7 for mineralogical analysis. • For the second drilling campaign (DDH), half cores were cut to be sent to laboratory analyses. For metallurgical analyses, ½ and ¼ cores were sent for testing. For geotechnical analysis (UCS), intervals of 10 cm of full core samples were sent to laboratory. To ensure the representativeness of samples, these were selected according to their lithological/mineralogical setting, according to the classification as Massive Magnetite, Magnetite in veins, or Disseminated magnetite.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• For the fist RC drilling campaign the assaying and laboratory procedures are unknown. • For the second campaign, the laboratory Bureau Veritas Geoanalítica (Geoanalítica) Coquimbo was engaged to conduct the chemical analyses, to the date of assaying (2012), the laboratory was certificate under ISO9001:2008. The procedure of analysis utilized by Geoanalítica are standardized, and can be considered sufficient for the purposes of the present study. The use of internal blanks and standard samples for internal quality control of the laboratory was reported. • The use of coarse blanks, field duplicates, pulp duplicates and standard reference materials was not reported for any of the exploration campaigns. • The geotechnical samples were analized for UCS in the DICTUC laboratory, an ISO 9001 certificated laboratory since 2007, DICTUC laboratory is well known

Criteria	JORC Code explanation	Commentary
		in Chile for its reliability in a broad range of aspects. Sampling was according to lithological-mineralogical units. There is no definition considering a geological-geotechnical conceptual model, once at least a qualitative approach is done for the conceptual modelling of the Mariposa Fe deposit, an informed judgement cannot be made on the representativeness of the samples assayed. • About geophysical tools utilized for the project, in the 2012 geophysical survey made by Quantec Geoscience, a GEM Overhauser magnetometer was utilized, and location data points were surveyed by using a handheld Garmin GPS. The east-west lines defined for magnetometry survey were defined each 100 m., fully covering the area of the Mariposa Fe. There are no reasons to doubt about the quality of the survey performed by Quantec. Maybe, and according to the author's opinion, the geological interpretation of the geophysical results could be improved. • According to the metallurgical test reports, the samples are representative of the surface and underground conditions, however, the quantity of samples assayed may not have been sufficient, and theoretical approaches had to be done for performing the grindability tests.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Geoinvest has verified and reviewed significant intervals from drill cores and compared the information in the database and logging folders of the DDH drilling campaign performed between 2011-2012. No issues or discrepancies were found in this comparative analysis. The information saved in the logging folders is reliable. • Data verification measured were performed by REDCO regarding the first RC drilling campaign. Re-analysis of samples obtained from drillholes was conducted. • Database is not located in a unique digital archive, by considering this issue, Geoinvest did not process the data until the reliability of the data had been verified. The assay data other than TFe and P (assayed for the DDH drilling campaign) was included in the database used by Geoinvest in the general database.

Criteria	JORC Code explanation	Commentary
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The accuracy of the locations of trenches, drillhole collars was verified by Geoinvest during the site visit, and no issues or discrepancies were found. The inclination and azimuth of drillholes was measured with compass, no issues or discrepancies with database were found. • The original database for the 2005-2007 drilling campaign was recorded in UTM PSAD-56 coordinates, after, the second drilling campaign was recorded in UTM WGS-84 coordinates system and the previous campaign data was diligently transformed. For this report, the UTM SIRGAS-Chile coordinates system was used, a WGS-84 based and the most updated and official coordinates system for the Chilean territory. • No issues or discrepancies with database were found during the verification of the location of drill holes collars or during the comparative analysis with sampling of trenches.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The data spacing is irregular, with ranges of distance which varies from 20 m to 160 m in the main structures strike direction. In the central zone of the deposit the quantity of drillholes drilled and sampling distance decreases to a maximum distance of approximately 90 m. Despite the irregularity of the drilling mesh, the density of drillings if sufficient to estimate the continuity of mineralization and the main geological features which accompany the mineral distribution. • No sample compositing was applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• From the first drilling campaign, there are 6 vertical drillings, which are not in accordance to the distribution of mineralization along fault-veins structures. Nonetheless, all other drillholes are well oriented according to the geometry of the mineralized bodies interpreted and mapped at surface, as well as the orientation of trenches which cross-cut perpendicular to the main mineralized structures.
Sample security	• *The measures taken to ensure sample security.*	• There is no information about the measured taken to ensure sample security of the first drilling campaign.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No external reviews or audits have been completed

18.2 Reporting of exploration results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The mineral concessions of the Mariposa Fe project are fully constituted, and are of exploitation type. These mining concessions are fully owned by the Chilean subsidiary of Admiralty Resources NL, Amiralty Minerals Chile Pty. Ltd. Agencia en Chile. The mineral concessions are not subject of overlaps or pending court cases, at least in the Mariposa Fe project area. • The exploitation permissions are subject of environmental approval, and ADY has fulfilled the requirements by the Chilean authorities for development of mining operations at the Mariposa Fe project area.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• All available historical information regarding Exploration acknowledgment and appraisal is properly summarized in the Chapter 2.3 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Geology	• *Deposit type, geological setting and style of mineralisation.*	• All available information regarding Deposit type, geological setting and mineralization is properly described in the Chapter 3 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  o *easting and northing of the drill hole collar*
	  o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  o *dip and azimuth of the hole*
	  o *down hole length and interception depth*
	  o *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• All available information for all Material drill holes is properly described in the Chapter 4 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• The samples used for all variables had grades greater than 0.0%. • Only the variable P (Phosphorus) exhibited atypical grade values, necessitating capping of high-grade values for all three estimated units. • The mineral resources estimation utilized all available data, standardized to a 2.0-meter spacing, although there is a population of approximately 10% with an original sample length of 0.5 meters. This information was also incorporated into the mineral resource estimation.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Mineralization is interpreted as vertical with NW strike. Drillings are not perpendicular to the mineralization. Drillings are inclined 60° approximately, with inclination directions to the NE and SW, which is perpendicular to the strike of the mineralization in plain view. • The angle between the mineralized structures and drill holes is of 30° with respect to vertical • Due to the nature of the mineralized bodies having a vertical arrangement, true thickness of the mineralized bodies is approximately 50±5 % of the drilled intervals thickness.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Appropriate scale diagrams are included within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All information available was reported. No data was omitted. Is worth mentioning, that drill holes intervals and trenches intervals with no sampling data correspond to sterile segments and with non-economic interest.

Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential*	• Preliminary studies were conducted in the elaboration process of the environmental permits, such as:
		    o Hydrography and Hydrogeological impact
		    o Geological hazards
		    o Soils characterization

Criteria	JORC Code explanation	Commentary
	deleterious or contaminating substances.	o Waste disposal areas and engineering and runoff water
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The work to be carried out at Mariposa Fe is still in the planning process. There are currently no diagrams or plans outlining projections for the recommended exploration activities.

18.3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Cross validation was conducted by Geoinvest, by considering the data in the database and the information in field, such as collars location, review of geological variables directly from selected intervals of diamond drill cores, this review allowed a comprehensive validation of the initial collection of data from the second drilling campaign. • For the first drill campaign, Geoinvest has relied in the methods and data validation conducted by REDCO. The lack of remnant cuttings or another source of material evidence, Geoinvest only was able to check the collars location of certain drill holes, finding no discrepancies or issues.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• All available information and results about site visit are properly described in the Chapter 6 'Data Verification' within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Geoinvest has relied in the interpretation made by REDCO, likewise, the interpretation made by REDCO (2013) was based in the formerly model made by SRK (2008), both relying in the geological schemes, interpretations, maps and sections made by Minera Santa Bárbara and ADY. Only two solid mesh volumes were considered from the REDCO's interpretation, these are the "magnetite in veins" and "massive magnetite" units. • The geometry of mineralized bodies has been assumed as strictly fault related, forming a mineralized faults system. The continuity has been properly mapped on the surface area of Mariposa by Minera Santa Bárbara and ADY. • The depth of the mineralization is uncertain beyond the drilled holes. • The main geological features related with mineralization are faults, which according to surface mapping, are considered as vertical dipping and NW striking. The mineral resource estimation plan has been made along the dip/strike directions mentioned. • Due to the lack of data, to the north the structures were not modelled further; the mineralization is unknown to the north. There are no more mineralized structures mapped or modelled to the west or east, drill holes did not showed mineralization further.

Criteria	JORC Code explanation	Commentary
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Along strike (NW), mineralization extends for at least 620 meters; plan width of the mineralized structures varies from 25 meters to the northwest to 230 m to the southeast; from top to bottom, the modelled mineralized structure extends 250 measured from the surface. The deepest mineralized zone explored by drill holes is at 330 m above sea level.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• The estimation method for the primary variable, TFe (total iron), was Ordinary Kriging (OK). This method was also used to estimate the variable P. The software used was GSLIB, Deutsch, C.V. and Journel, A.G., (1997). • Variography was performed using the Snowden Supervisor software. • Due to the limited number of samples, additional variables were estimated using Inverse Distance Weighting (IDW). • The block size was inherited from previously conducted resource estimates. However, it was verified that the block size is suitable and allows for reasonable discretization of the boundaries of the modeled solids for each estimated unit. • The comparison between the drillhole data and the estimated values indicates that the estimation conducted is robust and can be used, within a reasonable confidence range, for strategic planning. • The geologically modeled units appropriately represent the population distribution of grades they host.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Density and tonnage values are based on dry values.

Criteria	JORC Code explanation	Commentary
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The results are presented with cut-offs from 0 to 40%
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• This report does not include the definition of mining methods; however, it is worth mentioning that the Pre-feasibility and Feasibility reports conducted previously consider open-pit mining. These reports are for reference purposes and do not necessarily represent the author's opinion in terms of selecting the mining method. Nevertheless, the author believes that these reports contain relevant information and, although they do not comply with the standards for reporting mineral resources or ore reserves under the JORC code 2012, they have sufficient foundation based on the parameters considered to conclude that the most efficient mining method would be open-pit mining. This is a common mining method, considering the type of deposit in question.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• All metallurgical variables have been studied by ADY, with the aim of producing a concentrate with TFe $\geq$ 67% and a SiO_2 content < 4%.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• For the projected exploitation of the Mariposa Fe deposit, ADY considers the commitments made to the Chilean environmental authority and the waste disposal areas specified by ADY in its 'Declaración de Impacto Ambiental' (DIA) approved by the 'Servicio de Evaluación Ambiental' (SEA) of Chile. The evaluation records and general project information are public in accordance with Chile's environmental regulations and laws. It is recommended that the reader refer to the direct information source at SEA https://seia.sea.gob.cl/expediente/ficha/fichaPrincipal.php?modo=normal&id_expediente=2132370779 where the records, general information, original reports, and documents submitted by ADY, as well as the corresponding

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Criteria	JORC Code explanation	Commentary
		environmental qualification resolution, are published.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• All available information about assumptions for density are properly described in the Chapter 5.2.2 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT • Regarding the method used to determine density, this has not been explicitly stated. The author has also not been able to access the direct results of the tests conducted by BV Geoanalítica Coquimbo. However, the author has no reason to doubt the results, which are geologically reasonable, and in his opinion, do not exhibit atypical values. Additionally, the laboratory entrusted for the density analyses is reliable. Beyond this, the author cannot provide an opinion on the sufficiency of the methodology used.

Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*
		• The classification of the estimated mineral resources considered:
		  ○ The quality of the information; data within the industry mining standard,
		  ○ The geological continuity of the modelled bodies,
		  ○ The continuity of the mineralized phenomenon obtained analytically through the variogram tool.

Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No external reviews or audits have been completed.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	• In the opinion of the competent person, the current mineral resource estimation is sufficiently accurate, at least for the TFe and P variables. The accuracy is significantly lower for the rest of the relevant variables that were also estimated, primarily due to the difference in the amount of available data. • For each relevant chapter and subchapter of the report, the relative conditions of accuracy and confidence in the materially relevant variables for the mineral resource estimation were indicated.

Criteria	JORC Code explanation	Commentary
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• There is no production data at this stage of the project.

18.4 Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mariposa Fe ore reserves estimate is entirely based on the measured and indicated portion of the 2023 Mariposa Fe Project Mineral Resources Estimate. • The Mineral Resource is reported inclusive of the Ore Reserve estimate
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• All available information and results about site visit are properly described in the Chapter 6 'Data Verification' within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves.*	• The Mariposa Fe Mineral Resources and Ore Reserves estimate is based on the "*Australia ADY's Mining Construction Project of 2 million t/a Mariposa Iron Ore in Chile*". Feasibility Study report prepared for

Criteria	JORC Code explanation	Commentary
	Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• An economic cut-off of 15% TFe was applied to the Mineral Resource model from which the Ore Reserves has been estimated.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The Mineral Resources were converted to Ore reserves by open pit optimization model, using Whittle software (with the Lerch-Grossman algorithm) which generated nested pit shells. 3 pit shells were selected according to the production requirements and were used for the mine plan projection. • The Mariposa Fe project will be mined via Open Pit method, with movable haulage ways. The most optimal mining method for this deposit. • The Mariposa Fe final pit considers an overall pit wall inclination of 50°, bench height of 10 m (20 m for double), bench angle of 75°, safety berm with of 10 m width and minimum bottom with of 30 m to ensure safe production of mine, in accordance with guidelines provided in the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. • For the open pit optimisation, the economic parameters shown in the Table 9-1 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT" were utilized and the considerations of a maximum mining movement of 4.4 Mt/year and a plant capacity of 2.4 Mt/year. • The pit design was selected and detailed in order to accomplish with the production and projected plant capacity. • No global dilution factor has been applied, and 38% of weight recovery is applied. A waste to ore ratio of 0.58 was estimated. • Only Indicated and Measured Mineral Resources were considered in

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Criteria	JORC Code explanation	Commentary
		the pit optimisation and the mine plan operationalization. For the volumetric assessment, both Total Mineral Resources (including Inferred) and only Indicated+Measured Mineral Resources were assessed for the tonnage-grade curves. • Mining infrastructure includes the beneficiation plant, power and water supply facilities, external transportation of ore concentrate, internal transportation system, dewatering system , tailings system, and auxiliary facilities.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• All available metallurgical information is properly summarized in the Chapter 7 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• All available environmental impact information and status of approvals tailings and waste dump emplacement is properly summarized in the Chapter 10 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT". • The waste dump design information and characterization is shown in the Chapter 9.5.3 within the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".

Mariposa Fe Project, Vallenar, IIIrd Region, Chile

JORC 2012 Updated Mineral Resources and Ore

Reserves Estimate report

GE⊕ INVEST
SERGIO ALVARADO CASAS
E.I.R.L.

ADMIRALTY RESOURCES

Criteria	JORC Code explanation	Commentary
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• ADY has sufficient availability of land for an optimal emplacement for all mining and complementary infrastructures for Mariposa Fe. Is worth mentioning that according to Chilean regulations, surface and subsurface rights must be duly notarized by the authorities, likewise power and water supply, and accesses. • Currently, Admiralty is in the construction process with a focus on the commissioning of the Mariposa Fe project. Main infrastructures are being utilised and maintained under the construction process being conducted, such as roads, beneficiation plant site, accommodation site.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• The operating costs are derived from the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018. • The detailed parameters are shown in the Table 9-1, and Table 9-8 shows the economic results with and without initial investment. Cost Base is summarized in Chapter 9.4.5 and Economic results are summarized in Chapter 9.5.2 of the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT".
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Revenue assumptions are based on long-term metal price of 110 US$ by tonne of Fe concentrate.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.*	• There is a transparent market for the sale of iron and iron concentrate. • The forecasted value for the Fe concentrate was derived from previous studies and agreed upon with ADY. • The beneficiation process has been comprehensively conducted to meet the industry standards of the Fe and Fe concentrate market.

Criteria	JORC Code explanation	Commentary
	• *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The detailed parameters are shown in the Table 9-1, and Table 9-8 shows the economic results with and without initial investment. Cost Base is summarized in Chapter 9.4.5 and Economic results are summarized in Chapter 9.5.2 of the "JORC 2012 UPDATED MINERAL RESOURCES AND ORE RESERVES ESTIMATE REPORT". • Sensitivity to changes in construction investment, Operation costs and sales revenue are shown in the Feasibility Study report prepared for ADY by Ma Steel Group Design & Research Institute Co. Ltd. in 2018; and showed that project benefits are most sensitive to changes in sales price, followed by operation costs and construction investment.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• For the projected exploitation of the Mariposa Fe deposit, ADY considers the commitments made to the Chilean environmental authority and the social and community agreements specified by ADY in its 'Declaración de Impacto Ambiental' (DIA) approved by the 'Servicio de Evaluación Ambiental' (SEA) of Chile. The evaluation records and general project information are public in accordance with Chile's environmental regulations and laws (which includes social and community agreements). It is recommended that the reader refer to the direct information source at SEA https://seia.sea.gob.cl/expediente/ficha/fichaPrincipal.php?modo=normal&id_expediente=2132370779 where the records, general information, original reports, and documents submitted by ADY, as well as the corresponding environmental qualification resolution, are published.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be*	• All naturally occurring risks are assumed to have adequate mitigation measures. • The environmental permits required by Chilean authorities have already been duly approved. Likewise, the so-called "sectoral permits" have also been approved by the National Geology and Mining Service of Chile (SERNAGEOMIN). All activities carried out in the Mariposa Fe project must comply with the legal framework and the voluntary

Criteria	JORC Code explanation	Commentary
	received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	agreements adopted by ADY before the competent authorities of the Ministry of the Environment and the Ministry of Mining of Chile.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The Ore Reserves consist of Proved and Probable reserves. • According to the author's opinion, the estimation of ore reserves has been conducted using procedures that adhere to the minimum standards and best practices accepted by the industry.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No external reviews or audits have been completed.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The mining and ore treatment methods considered for the present project are deemed typical for the type of deposit involved, specifically for the processing of iron ore and the production of iron concentrate. • In the corresponding sections of the report, the competent persons (authors) provide proper statements regarding the suitability and effectiveness of the mineral resource estimation methods. The modifying factors used for the estimation of ore reserves, as determined by the competent persons responsible for this report, are considered appropriate for the evaluation, and the results align with the realities observed in other similar-scale projects in which the authors have participated in the past. • In Chapter 14 (Recommendations), necessary suggestions are provided to enhance the confidence and reliability of mineral resource estimates and ore reserve assessments.