



Mariela Phosphate Project (Mariela)

Mineral Resources Report on Sophia Deposit in Accordance JORC-2012

Antofagasta Region II, Chile

Coordinates: UTM: 19J | 393880W; 7134455N (25°54'16.47"S; 70° 3'34.14"W) -
Reference: Old mine entrance

Prepared for: Fosfatos de Taltal SpA – Bifox Limited

[\(https://bifox.com.au/\)](https://bifox.com.au/)

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Report date: January 10th, 2025

Effective date: January 17th, 2025

Competent Person's Statement and Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name:

"Mariela Phosphate Project (Mariela) - Mineral Resources Report on Sophia Deposit in Accordance JORC-2012 - Antofagasta Region II, Chile"

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Phosphate Deposit in Apatite stock work veins in a IOCG Complex

(Insert name of the deposit to which the Report refers)

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I am an AusIMM Member as Chattered Professional, and I have sufficient experience relevant to the style of mineralization and type of deposit under consideration and the activity I am undertaking to qualify as a Competent Person under the JORC -2012 Code.

I am responsible for the preparation of the sections of "The Report", and I confirm that these sections accurately reflect the data compiled and conclusions derived.

I verify that I have reviewed and approved the technical data, analysis, and interpretation contained in the aforementioned sections of the report.

Consent Statement: I consent to the inclusion in the Public Report of the matters based on my information and work in the form and context in which they appear.

I declare that I have no material interest in Mariela Phosphate Project and have no commercial or financial relationship with the entity that could reasonably be regarded as affecting my ability to give an unbiased opinion.:

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Dated this 17th day of January 2025

"Signed and sealed".

Important Notice

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- i) Information available at the time of preparation,
- ii) Data provided by external sources, and
- iii) The assumptions, conditions, and qualifications outlined in this report.

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1 SUMMARY

Fosfatos de Taltal SpA – Bifox Limited (<https://bifox.com.au/>) commissioned “MB Soluções em Geologia e Mineração Ltda (“MB”)” to compile an update on the Mineral Resource Estimates Report (MRE) of Mariela Phosphate Project (Mariela), specifically at Sofia Mine (Soffa Mine or the Project), located in Antofagasta II Region in northern Chile. The report supports disclosures by Bifox in a release “Mineral Resources Report on Sophia Deposit in Accordance JORC-2012 - Antofagasta Region II, Chile - Mariela Phosphate Project (Mariela), report date: January 10th, 2025 and the effective date: January 17th, 2025. Scope of Work:

The project involved reviewing historical data, conducting mapping, sampling, geophysical surveys, topographic studies, metallurgical tests, and estimating mineral resources using updated modeling and statistical methods.

1.1 Reliance on Information:

MB based its conclusions on historical SRK reports, recent fieldwork, panel sampling, topographic surveys, metallurgical testing, and documentation provided by stakeholders, including legal agreements and concession details.

1.2 Field Visits:

In 2023, MB visited the Sofia Mine to assess phosphate mineralization and infrastructure, collecting samples and mapping. A follow-up visit in 2024 focused on drilling data validation and inspecting core samples. MB also conducted QAQC reviews at the ALS Copiapó Laboratory to ensure sample preparation quality.

1.3 Prior Technical Reports:

The Mariela Project has no prior public technical reports compliant with NI 43-101 or JORC 2012 standards, relying instead on SRK’s 2009 exploration reports.

1.4 Tenements:

The Mariela Phosphate Project is in the Antofagasta Region of northern Chile, approximately 110 km northeast of Chañaral and 224 km from the Atacama Desert Airport. The project spans 891 hectares, consisting of eight mineral concessions (DORITA 1/4, GONZALO 1/3, IGNACIA 1/12, MARIELA 1/32, SOFIA 1 1/40, SOFIA 2 1/10, SOFIA 24 1/30, and SOFIA 6 1/20), all owned by **Cesar Bernardo Formas Ortiz**.

Irrevocable Purchase Option Agreement: The beneficiary is Fosfatos Bahia Salada SpA (later transferred to Fosfatos de Taltal SpA). The beneficiary has an option to purchase the properties by October 13, 2024, for USD 10.5 million in installments.

- **Exploration Rights:** Allowed during the option period to evaluate the site's potential.
- **Conditions:** Properties are free of encumbrances, and compliance with legal and environmental standards is guaranteed.
- **Confidentiality:** Agreement terms are confidential unless specific conditions apply.
- **Termination:** Non-exercise of the option cancels future obligations; initial payments are non-refundable.
- **Dispute Resolution:** Arbitration under Santiago Chamber of Commerce rules.

1.5 Access and Location Details:

The site is accessible via a combination of national highways and regional roads from the Atacama Desert Airport. It is located near significant mining sites, including Barreal Seco mine (4 km south) and Mina Hierro Taltal (10 km southwest).

1.6 History

Formas mine the Sofia Mine for approximately 20 years in production as a small-scale underground mine. Mining is selective with production at approximately 4,000t/m (48,000t/y) with a beneficiated product ranging from 30% to 70% P₂O₅ (Minera Formas, 2009b) and <0.6% MgO.

Before 2008, Formas conducted no industry standard exploration. Exploration conducted by Formas has included selective high-grade sampling of small pits and trenches to identify potential phosphate zones above 15% P₂O₅. The apatite (white) mineralization is visually, in color, very different from the andesitic and dioritic host rock (gray to greenish). Once apatite mineralization is located it can be easily followed in the underground mine.

In 2001, Rio Tinto explored at and around the Project for Iron Oxide Copper Gold (IOP205) style mineralization under a purchase agreement with Formas. As part of the purchase agreement, Rio Tinto drilled nine RC drillholes, four of which were analyzed. These RC drillholes were completed in the concession block around the Sofia Mine. Rio Tinto also generated a schematic geological map of the underground workings, a regional surface map and conducted a magnetic geophysical survey of the concession block.

Between November 2008 and May 2009, Formas contracted SRK Consulting (U.S.), Inc. and SRK Consulting (Chile) S.A. to conduct an Exploration Program at Sofia Mine in compliance with the best practices of the Industry to be released in accordance with international Reports Standards (JORC and NI-43101). It was performed a review of the Literature, Mapping, Geophysical Surveys, trenching and drilling.

Exploration completed prior to the 2009 drilling program included structural mapping at a 1 scale and a geophysical survey conducted by Geodatos Geofísica de Avanzada (Geodatos) based in

Santiago. The following geophysical surveys were performed within a 500m test area of the property that included the Sofia Mine:

- Electromagnetic for all surveys except 47025Hz;
- Ground Magnetic (magnetometry);
- Ohm-Mapper; and
- Gamma Ray Spectrometry for K%, ppm U and Th and Total Count (TC) in cpm.

Drilling included, 38 HQ diameter drillholes were completed, totaling 5,086.75m between January 2009 and February 2009 and assayed 286 samples (as is in the database provided by Cesar Formas). The area drilled was around and north of the Sofia Mine in an area approximately 500m. In addition, 5 trenches were oriented generally ENE – WSW, each approximately 100m in length and with variable depths, up to 5 meters.

SRK in 2009, based on the Exploration Program results concluded that the Project did not identify a phosphate deposit that satisfied the production criteria expected by Formas and SRK didn't release any update on Mineral Resources for Sofia Mine.

The historical Mineral Resources of phosphate was estimated by the owners, estimating, approximately 1.692Bt grading 20% P205 or 1.128Bt grading 30% P205 (Minera Formas, 2009a). This is a global estimate based on surface mapping of phosphate/phosphate alteration identified in trenches and small pits. Rio Tinto conducted a Reverse Circulation (RC) drilling program in 2001; however, the limited data were insufficient to support a resource estimate of P205. The global estimate was estimated by multiplying the mapped area (approximately c) 4,700m x 1,200m) by the assumed thickness of the deposit (approximately 100m). A specific gravity of 3.00g/cm was then used to estimate tonnes.

1.7 Geological Setting

1.8 Regional Geology

The Mariela Project is inserted on a Geotectonics features, including several N–S-trending morphostructural units between the present-day subduction margin and foreland (Figure 5-1). In the figure, from west to east these units are: (1) Coastal Cordillera, (2) Longitudinal Valley, (3) Chilean Precordillera and pre-Andean Depression, (4) Western Cordillera (magmatic arc), (5) Altiplano – Puna, (6) Eastern Cordillera and (7), Sub-Andean Ranges (deformed foreland).

The Deposit is positioned Specifically, eastern margin of the AFS Coastal **Cordillera** and encompasses both intrusive rocks characteristic of the Coastal **Cordillera** and extrusive rocks and sediments typical of the Longitudinal Valley (also called as Central Valley).

The mineralization at the Sofia Mine is structurally controlled and reflects the complex tectonic history of northern Chile. The tectonic evolution of the region, as synthesized by Barra et al. (2002), encompasses:

1. **Late Carboniferous:** Initiation of oceanic subduction during the first phase of the Gondwanan tectonic cycle, resulting in felsic magmatism associated with the Choiyoi Group of the Cordillera Frontal.
2. **Late Permian to Early Jurassic:** Cessation or reduction in subduction activity, leading to the development of back-arc and rift basins. Associated magmatism included both subduction-related felsic activity and non-orogenic magmatism linked to extensional faulting, exemplified by the Cuyo Basin.
3. **Late Permian to Early Jurassic:** Formation of an accretionary prism along the western continental margin, forming the basement of the Coastal Cordillera.
4. **Jurassic:** Renewed subduction initiated mantle-derived magmatism, forming the La Negra magmatic arc, which extends from Arica to Chañaral.
5. **Jurassic to Early Cretaceous:** Emplacement of granodioritic to dioritic stocks and andesitic to aplitic dykes, forming the Coastal Batholith.
6. **Late Jurassic to Early Cretaceous:** Transition to predominantly continental deposition marked by red bed sediments and volcanic flows from the La Negra magmatic arc (Aeropuerto Formation).
7. **Middle Cretaceous (~105 Ma):** Cessation of La Negra magmatic activity, basin closure, and uplift, leading to the formation of the Domeyko Proto-Cordillera.
8. **Late Cretaceous:** Renewed volcanic activity with continued eastward migration of the magmatic arc.
9. **Neogene Activity and IOP205 Potential:** During the Late Eocene to Oligocene (48 Ma to 28 Ma), intrusive activity was widespread despite a decline in volcanism. This period was critical for the emplacement of world-class porphyry copper deposits along the Domeyko Proto-Cordillera. These deposits are closely associated with strike-slip faults formed due to the oblique convergence of the Nazca Plate. This tectonic regime also contributed to the regional-scale propylitic alteration observed in the area.

1.9 Local Geology

The Local Geology is modified from the SRK Report 2009.

The geological mapping carried out by Rio Tinto and checked by SRK, the the area in and around the Sofia Mine, was described apatite mineralization as alteration associated with an IOA (Iron Ore Apatite) deposit. SRK remapped the concession area and areas identified by Rio Tinto mapping as favorable for apatite mineralization at a scale of 1:4,000 and produced a schematic map of the underground (Figure 5-4). SRK's focus was structural controls, rock types and the apatite mineralization (Véliz, et al, 2009).

The host rock is gray-green colored phaneritic, hornblende diorite ranging from fine to medium grained with porphyritic texture in places. This mineralization is controlled by NNW-SSE and ENE–WSW structures. The former are narrow, with widths up to 30cm. The ENE–WSW structures are dilational (open space) and host apatite and actinolite mineralization up to 4m wide. In places, scapolite is also present with apatite (Véliz, et al, 2009).

The Sofia deposit corresponds to an implosion mega breccia cemented by alteration minerals consisting of apatite > actinolite with what is considered to be minor amounts of scapolite. This mineralization is controlled by NNW - SSE and ENE – WSW structures. The former is rather discrete, with width up to 30cm. The latter gives rise to massive bodies of apatite > actinolite up to 4m wide. The host rock is a gray-green hornblende diorite with a variable texture between porphyritic and phaneritic, ranging from fine to medium grained. In the porphyritic variety, the ground mass is micro-phaneritic. The phenocrysts are plagioclase (80 - 90%), hornblende (3 - 5%), biotite (< 1%), traces of quartz and potassic feldspar.

The matrix-supported fabric shows a preferential order, where the diorite clasts with intense chlorite actinolite alteration exhibit a height/width ratio of about 1 and are oriented approximately N30- 50E/20 - 50SE.

The waste in-situ mineral ratio in the breccia zones as seen at the Sofia Mine is variable, ranging from about 3:1 to 5: 1, while there is no clast-produced waste in the massive zones. The grade still varies in the massive zones, ranging from about 30 – 70% probably due to inclusion of what is thought to be amounts of fine-grained scapolite. Visual identification of this mineral in this form is unfortunately rather difficult and a petrographic study with thin-section interpretation is recommended.

The mineral association from the massive mineralized zone outward is: apatite – actinolite (with tourmaline and k-feldspar) – magnetite (pyrite – chalcopyrite) – chlorite – epidote. The boundaries between these assemblages of alteration/mineralization minerals are frequently overlapping.

1.10 Geologic Structures of the Deposit

The Structural Geology is modified from the SRK Report 2009.

Both synmineral (those formed during mineralization) and post-mineral structures are identified in the Project area. The former are temporally related to the dilational tectonic environment that was filled by phosphate mineralization. The post-mineral structure has offset the original geometry of the mineral deposit.

Structures that developed during mineralization include veinlets, veins and breccias, which host the principal mineralized bodies. These are primarily composed of apatite and actinolite, with lesser scapolite where massive and apatite with lesser amounts of scapolite and diorite clasts in the megabreccia. The mineralization is associated with two well-defined fault trends. These include the NNW–SSE trend associated with shearing and the ENE–WSW trend, which is typically a dilational, extension domain. The ENE–WSW structures exhibit mineralization with greater widths and higher grades (Véliz, et al, 2009).

There are two types of post-mineral faults:

- Those that have displacement of the eluvial cover indicating recent activity; and
- Those that follow the preferential mineralized trend.

On the lower level (Level 3) of the Sofia Mine, SRK conducted geological mapping of the structures controlling apatite mineralization. Two major faults were identified, N08⁰W /75⁰SW and N08⁰W/28⁰SW, related to separate mineralizing events. The first was early with primarily dextral (right lateral movement), and the later event was extensional. Both faults offset the earlier high-grade mineralized apatite–actinolite zones. The mineralization on Level 3 occurs as:

- Matrix supported breccias with preferential orientation (ordered in a preferred direction) of clasts;
- High grade apatite veins that are located near the borders of the breccias; and
- Narrow apatite-actinolite veins and veinlets with varying amounts of scapolite that are near the outside margins of the main breccia zone.

Matrix material is generally composed of apatite and various amounts of scapolite. Observations made during mapping indicate 3% to 5% internal waste. Mining at this time has reached 50 m below surface (Véliz, et al, 2009).

1.11 Mineralization

The Magnetite-Apatite Mineralization along the Chilean Coastal Cordillera was described by Naslund, H.R. (2002), that the discovery of the enormous Cu-Au-U-REE hematite breccias at Olympic Dam in Australia (Roberts and Hudson, 1983; Oreskes and Einaudi, 1990, 1992; Haynes et al., 1995) has made iron-oxide-apatite deposits of considerable economic interest for commodities other than iron. Indeed, many deposits are associated with nearby Cu, Au, U, or REE mineralisation (Bai and Yuan, 1983; Crocker, 1985; Einaudi and Oreskes, 1990; Hauck, 1990; Kisvarsanyi, 1990; Marikos et al., 1990; Vivallo et al., 1993a, 1994a, 1995a, 1995b; Espinoza et al., 1994; Förster and Jafarzadeh, 1994; Rojas and Henríquez, 1994; Foose and McLelland, 1995; Porter, 2000). Although iron-oxide-apatite deposits share many common features, it is clear that they did not all form by the same process or processes. Many deposits show evidence of formation in evolving magmatic systems: some deposits present clear magmatic features whereas others are predominantly hydrothermal in character; others still have such complicated histories or such poor exposures, that their origins are unclear.

Low-Ti, magnetite-apatite ore deposits occur associated with volcanic rocks in two belts in northern Chile (Figure 5-5); one of Cenozoic age in the High Andean Cordillera, and one of Cretaceous age in the Coastal Cordillera. The best-preserved orebodies are the Plio-Pleistocene, El Laco deposits in the High Andes, which were first described by Park (1961), who reported iron-oxide orebodies that resembled lava flows. He suggested that the deposits formed from a volatile-rich, iron-rich magma which intruded the local volcanic sequence at shallow depth and in places erupted to the surface. This interpretation has been assumed by many subsequent investigators (Rogers, 1969; Haggerty, 1970; Frutos and Oyarzún, 1974; Henríquez and Martin, 1978; Frutos et

al., 1990; Nyström and Henríquez, 1994, 1995; Naslund et al., 1997, 1998; Henríquez and Nyström, 1998; Broman et al., 1999; Nyström et al., 2002). Although not as well preserved, similar magmatic iron ore deposits occur in the High Andes of Chile at Incahuasi and Magnetite Pedernales, and at numerous localities in the Cretaceous iron belt (Figure 5-6) (Greze et al., 1991; Henríquez et al., 1994; Travisany et al., 1995). A number of recent reports, however, have suggested that the El Laco iron-oxide deposits are hydrothermal in origin (Hildebrand, 1986; Hitzman et al., 1992; Larson and Oreskes, 1993; Larson, 1994; Rhodes and Oreskes, 1995a, 1995b, 1996, 1999; Oreskes et al., 1994, 1995; Rhodes, 1996; Sheets et al., 1997; Rhodes et al., 1997, 1999; Hitzman, 2000).

The Mineralization of the Mariela Deposit text is modified from the SRK Report 2009, which is relied by MB.

Apatite occurs as yellow to white, glassy, hexagonal crystals up to 4 cm but more commonly as massive material intergrown with what is thought to be scapolite (white) and actinolite (green). Scapolite occurs as white masses and on the west side of the project area, as fine-grained crystals up to 4mm. Scapolite has been tentatively identified in the field by its prismatic, striated crystals that are square in cross-section. A hand specimen of the intergrown material fluoresces orange under a UV lamp, which is indicative of scapolite. Actinolite occurs as medium green, fibrous, radiating crystals in masses greater than 10 cm. Apatite, scapolite, actinolite and diorite clasts are found throughout the entire mineralized zone. Carbonate minerals may be present in the mineralization but were not positively identified. In addition, preliminary mapping indicates that dacite does not host apatite mineralization.

Other minerals that are found in association with mineralization include magnetite, hornblende, epidote, chalcedony, crystalline quartz, jasper, calcite and tourmaline. These minerals appear to be zoned laterally. Rio Tinto (2001) also described lateral zoning of magnetite, hornblende and actinolite.

Magnetite was observed in crystalline and massive form in areas east and south of the Project, outside the concession boundary and as disseminations within the mineralization. Epidote is a secondary replacement mineral within the host rock and was also observed as small crystals in open spaces. A small amount of hornblende was observed in the workings immediately northeast of the camp. Workings northwest of camp included chalcedony, crystalline quartz and jasper.

In addition, gypsum was observed near surface as thin fracture coatings and trace amounts of malachite were observed as surface oxidation. Trace amounts of pyrite and chalcopryrite were observed distal to the main apatite zones. Nitrate caliches may also be present near surface (Even, 2009).

The internal waste to mineralized clast ratio in the megabreccia zones as seen at the Sofia Mine is variable, ranging from about 3:1 to 5: 1, while there is internal waste in the massive zones. The reported P205 grades are still variable in the massive zones. This variability may be a result of the presence of scapolite, which is visually difficult to identify and may be confused with apatite when massive. Specimens of massive apatite brought to SRK's Denver office had zones that fluoresced orange under a UV lamp, which is indicative of scapolite. However, core logging was performed outside during the day for safety reasons and the UV lamp was not useful for mineral identification

under these conditions. A petrographic study would be necessary to confirm the presence of scapolite in the deposit (Véliz, et al, 2009).

Mineral associations in the apatite zones shows magnetite zoning with immiscibility textures where apatite and magnetite occur together. In the core of the orebody at the Sofia Mine, the following mineral assemblages and textures area observed:

- Apatite with inclusions of cumulus actinolite at a millimeter scale;
- Apatite matrix in implosion megabreccia with angular clasts of altered hornblende diorite;
- Apatite as well-developed crystals associated with silica in open spaces or vugs;
- Apatite – actinolite – silica +- scapolite +- calcite as sub-rounded clasts incorporated into a crystalline actinolite matrix; and
- Apatite–actinolite and tourmaline ± potassium feldspar which may occur together with potassium feldspar in millimeter-scale veinlets (Véliz, et al, 2009).

The following alteration mineral assemblages are observed in the margins of the primary apatite mineralization in contact with host rock:

- Actinolite–chlorite–magnetite±epidote veinlets extending into the wallrock and in places, development of centimeter-scale halos of magnetite associated with actinolite;
- Magnetite–chlorite–actinolite in veinlets and dissemination in the host rock;
- Chlorite–magnetite±epidote, in millimeter scale veinlets;
- Chlorite–epidote magnetite, alteration of hornblende and plagioclase; and
- • Epidote±chlorite, marginal to the mineralized system (Véliz, et al, 2009).

These mineral associations and alteration zones are consistent with specific iron deposits and IOP205-style mineralization.

1.12 Deposit Type

In the bibliography, this deposit is considered analogous to the El Arco deposits, described by Keller, T. et all (2022) and San Juan Veins (by Keller T. et all (2022)) as a Magnetite-apatite (MtAp) deposits, also known as iron-oxide-apatite (IOA) or Kiruna-type. They comprise large bodies of high-grade magnetite (Fe₃O₄) ore enriched in Ca-Mg-(Fe)-bearing silicates (diopside, actinolite), sulphate-bearing minerals (anhydrite, scapolite), and phosphates (apatite, monazite) with, at some localities, significant concentrations of uranium, cobalt, and rare earth elements (REE). Their genesis is the subject of ongoing debate.

The formation of MtAp deposits related to a hydrothermal replacement or precipitation in subvolcanic environments (Hypabyssal). In contrast, the prevalent hypothesis of orthomagmatic to magmatic-hydrothermal ore genesis posits a formation by fracture-facilitated shallow intrusion to extrusion of an iron-enriched liquid of magmatic origin. The hypothesis is based largely on the conspicuous and well-exposed geology of the deposits at El Laco, an andesitic arc volcano in the Central Volcanic Zone, Northern Chile, their unique morphology, reminiscent of basaltic lava flows and tephra deposits, as well as their positioning along interpreted collapse structures on the edifice flanks. The nature and source of the ore-forming liquid, as well as the mechanics of its emplacement, however, remain contentious.

Recent evidence from melt inclusions hosted in silicate phenocrysts from El Laco andesite, as well as from petrology experiments on similar compositions, suggest that exsolution of an immiscible Fe-rich melt from a parent andesite magma potentially aided by assimilation or anatexis of evaporites in the shallow crust may be the source of an iron-silicate(-phosphate-sulfate) ore liquid. In contrast, others have proposed the liquid to be a magnetite-brine suspension formed by flotation and accumulation of bubble-oxide aggregates. Recent experiments confirm that bubble-oxide aggregates can form in a hot and wet andesite magma as magnetite phenocrysts heterogeneously nucleate on volatile bubbles, or vice-versa. However, experiments also show that flotation rates of small bubble-oxide aggregates are relatively slow. Bubble growth and coalescence would allow more rapid flotation but could result in detachment of the oxide load.

In this contribution, we refine a genetic model involving Fe-Si melt immiscibility and test its consistency with available evidence as well as the internal consistency of the physical processes comprised in it.

The proposed genetic model suggest the ore formation by intrusive to extrusive emplacement of an Fe-rich melt sourced from liquid immiscibility may apply to the genesis of Kiruna-type deposits more generally with important ramifications for understanding other ortho-magmatic mineral systems, for resource exploration, for magma differentiation at continental arcs, and for comparative to the other Chilean deposits with a direct relationship between magnetite-(apatite) (MtAp) mineralization and iron oxide-copper-gold (IOP205) mineralization. The MtAp mineralization includes Ti-poor magnetite, fluorapatite, and actinolite and is crosscut and partially replaced by a younger IOP205 mineralization that includes a second generation of actinolite and magnetite with quartz, chalcopyrite, pyrite, and molybdenite. Also associated with crystallized iron-rich melts that used the pre-existing structures of the Atacama Fault System as conduits. These rocks later acted as a trap for hydrothermal IOA mineralization, where the IOP205 event was related to fluids having a more crustal Nd ($\epsilon\text{Nd}_i < + 5.7$) composition than the MtAp mineralization. This likely reflects the mixing of Nd from the MtAp protolith and a deep magmatic-hydrothermal source, very likely an unexposed intrusion equivalent to the host diorite. Sulfur isotope compositions ($\delta^{34}\text{S}$, + 0.3 to + 3.4‰) are consistent with a magmatic source.

Although the genetic relationship between MtAp and IOP205 deposits remains debatable, the petrographic, geochemical, mineralogical, geochronological stable and radiogenic isotope, and field data results from the present study suggest that the IOP205 and MtAp mineralization events in the districts are genetically independent of each other.

Shown the two similar genetic models developed at Chilean MtAp deposits El Laco complex (left) and San Juan Veins (in right).

1.13 Exploration works

The exploratory work conducted by Fosfatos de Taltal between 2023 and 2024 focused on validating historical drilling data, performing topographic surveys, as well as surveying the collars of drill holes and excavations from the decommissioned underground mine. Additionally, samples were collected from panels within the underground mine.

The Data shed provided by Cesar Formas was in digital format and was accessed opening the provided data. The relevant information for Exploration program was the SRK Reports and the Drillhole database. Also, the cores of the drilling campaign performed in 2008/2009 that was possible validate the drilling database.

1.13.1 Underground Panel Sampling

Two sampling campaigns were conducted on panels within the galleries of the former underground mine operated by Cesar Formas, totaling 73 points and 75 samples (Points U55 and U56 were taken 2 samples):

1. **During the Field Visit of QP M. Batelochi (MB) in September 2023**, where 25 samples were collected.
2. **Complemented by an additional 50 samples in 48 points were collected by Mauricio Cornejo (MC) in 2024.**

Both campaigns followed the same procedures for sample collection, logging, and chemical analysis.

The sampling procedure started with identification of the representative point inside the Levels of the old underground mine (Old UG). After the selection of the point, the geologist marks the limits of the panel, take photo, estimate the percentage of apatite stock work veins, mark the points to be scratched by the assistants, taking two aliquots around 2 kg of apatite veins and waste material. The percentage of Apatite is the weight of mean grade calculation. In Figure 6-1.

The samples were prepared and assayed at ALS Patagonia S.A. in two batches (CO24082203 and CO2410148) with the inclusion of Blanks, Standards and Duplicates. The preparation and the assays were under management of Rene Manami and followed the following standard ALS procedures.

The Quality Assurance/Quality Control (QA/QC) analysis of the Underground samples followed the procedure described at of this report at Item 10.6 (Quality Assurance and Quality Control (QA/QC))10.6. Below is presented the analysis of Standard (Blinded, inserted by Fosfatos de Taltal Staff. Std = GPO17 – Geostats), blanks (from ALS – non blinded) and Duplicates (Blinded).

The Standards was monitored through the use of Company-submitted certified analytical standard GPO17, supplied by Geostats PTY Ltd (20 Hines Road, O'Connor, Western Australia 6163 - Phone: +61 8 9314 2566, Fax : +61 8 9314 3699 - Email: info@geostats.com.au - Website: <http://www.geostats.com.au>. Standards are inserted at a rate of 1 in 10 samples (average), totaling 14 control samples in 141 total original samples. Of them, 4 at batch CO24082203 and 10 at batch CO24101489 sent to ALS Copiapó Laboratory as Blinded sample. It was performed analysis only for P₂O₅% element. The control chart at Figure 6-2 shown the results for the standards that indicated 100% of the samples are in the region of less than +- 2 standard deviation, indicating acceptable accuracy with no relevant bias associated, indicating that there is no problem with the standard itself and adequate for Mineral Resources Estimates.

The Company has utilized 01 pulp blank supplied by ALS Copiapó, that is not blinded. 14 blanks were inserted, that represents a rate of 1 in 10 samples, where 4 of them were inserted at batch CO24082203 and 10 at batch CO24101489. There was 1 sample > 0.1% P₂O₅ that the Company had already re-assayed and fixed the contamination problem on the referred batch. The results are all acceptable indicating no systematic contamination of samples.

Sample duplicates are the duplicate sample has been taking following the Core duplicate procedures, to collect a pair of a quarter material after crushing.

Sample duplicates reported by the laboratories are illustrated in Figure 6-4. These duplicates are taken at a frequency of 1 in 8 samples (13%), totaling 18 duplicates. Despite the Small number of samples, there is no consolidation of any bias, but the ra with a moderate scatter characteristic in P₂O₅% results.

In the CP's opinion, these samples, due to their representativeness, including 1.5 x 1.5 meter panels, described and photographed, surveyed with high precision equipment, assays at ALS Chemex including QA, are robust enough to be included in mineral resource estimates.

1.13.2 Validation of historical drilling Data and Resource Database Consolidation

The validation of historical drilling data and the consolidation of the resource database were carried out using the drill core and accompanying documentation provided by César Formas. The Fosfatos de Taltal team conducted an analysis of historical data from documental analysis and cores of the drilling campaigns completed by SRK in 2009.

The objective was to validate the quality and reliability on identifying any inconsistencies, gap intervals to be sampled., to support a Mineral Resource Evaluation for the Mariela Project.

This section initially presents information on the historical drill holes, extracted from the SRK 2009 reports, and subsequently are presented details of the validation work performed by the Fosfatos de Taltal team to ensure these data could be used in the mineral resource estimates.

This item was derivate from the SRK Report 2009: "Confidential Exploration Report - Sofia Mine - Antofagasta Region II, Chile". *Perfo Andes Limitada (Perfo Andes) was contracted to perform the drilling program. Perfo Andes used two Boart Longyear drill rigs, a new LF90 and a smaller LF70. Thirty-eight drillholes were completed, totaling 5,086.75m using HQ3 triple tube rods and producing HQ core with a diameter of 63.5mm. Core recovery exceeded 90%. A total of 286 core samples and 31 control samples (QA/QC) were submitted for analysis. Samples were analyzed at ACME Vancouver using Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) in its whole rock analysis package 4A03. In this technique, a 0.2g split of the sample is fused with lithium metaborate/tetraborate and dissolved in dilute nitric acid. The sample is then analyzed using ICP-AES. Loss on ignition (LOI) is determined by weight difference after ignition at 1,000°C. Total C and S were also determined using LECO Analysis on a 2g split (package 2A12). As in the SRK 2009 report the downhole surveys were completed on ten drillholes using a non-magnetic survey to check for drillhole deviation during drilling. Surveying was contracted by Comprobe Limitada (Comprobe) based in Santiago, Chile. No significant deviation was identified in the drillholes surveyed. The drillholes*

surveyed by Comprobe.: SDH-09-02; SDH-09-08 SDH-09-09; SDH-09-11; SDH-09-14; SDH-09-16; SDH-09-19; SDH-09-20; SDH-09-22; SDH-09-23. Unfortunately, the survey data was not found in the documentation provided by Fosfatos de Taltal, and the survey for the drilling holes was considered as the orientation of the hole's collar as shown at Table 6-4. Due to the lack of down the hole survey, the location of the samples is not accurate, then it is appropriate to release only Inferred Mineral Resources.

A subset of historical samples was selected for validation based on their spatial distribution, lithological significance in terms of phosphate mineralization, and criticality to impact on materiality of the mineral resource estimation. In total, 326 samples were identified for re-sampling and re-assay, with the goal of verifying historical assay results and ensuring database integrity.

Re-sampling and re-logging were conducted at the selected intervals to verify lithological and geochemical continuity. A total of 326 samples were re-assayed at ALS Copiapó, following industry-standard analytical protocols. This included Quality Assurance and Quality Control (QAQC) measures to ensure the reliability of the assay results.

The sampling procedure started with identification of the representative point inside the Levels of the old underground mine (Old UG). After the selection of the point, the geologist marks the limits of the panel, take photo, estimate the percentage of apatite stock work veins, mark the points to be scratched by the assistants, taking two aliquots around 2 kg of apatite veins and waste material. The percentage of Apatite is the weight of mean grade calculation.

Below the summary of the activities performed by the re-sampling team localized at Fosfatos de Caldera facilities:

- Receiving core boxes into the area.
- Organizing core boxes and rock intervals.
- Cleaning cores with water.
- Verifying meterage and markers.
- Core regularization.
- Performing quick logging and detailed geological mapping.
- Selecting sampling intervals.
- Photographic documentation.
- Cutting and sample preparation.
- Storing samples.
- Sending samples to the laboratory for preparation and subsequent analysis.

The methodology also covers handling sample bags from rock sampling conducted in mines or during exploration and conducting density tests.

As the first activity, the drill core boxes were moved from the pallets and/or unloaded from the truck to the mapping table. In the case of the cores located far from the mapping area, a backhoe was used to transport the pallets to the sampling area.

Each core box weighs approximately 23 to 30 kilograms, depending on the rock composition and associated minerals (e.g., rocks with iron oxides such as magnetite and hematite are heavier). The

core boxes were placed on the table in sequential order based on depth, starting from meter 0.0 to the end of the drillhole as exemplified at Figure 6-9.

After that, the cores and tags are organized in the core boxes to certify that the sample intervals between blocking markers (spacers) in a drill hole with core recovery through diamond drilling. Also, the core fragments must be organized to match their natural in-situ positions as closely as possible. This involves aligning the core pieces to ensure fracture continuity and verifying that no part of the sample is reversed. This process ensures accurate and reliable measurements.

For recovery logs, each recovered interval is assigned the length it would have if it were a complete, continuous sample without fractures, recovery 100% and no adjustments were made. For core intervals with high fractured and recovery < 100% the recovery was logged from the measured length based on the space occupied by the core, considering rock quality, fracturing as exemplified

The Logging of the cores consisted on recording of drill core samples, whether they are fragments or cylindrical cores. Drilling is conducted to obtain information from different depths. In exploration, drilling programs are planned based on interpretations derived from surface geology, geochemical sampling results, and geophysical prospecting.

The analysis of rock core samples is performed visually and with a geological hand lens, and must be carried out by trained personnel. Each deposit has its unique characteristics, and therefore, a mapping guide (Mapping Guide – Mariela Mine Project, see Appendix 2) should be designed to ensure that all features are collected.

To begin recording core sample data, a quick log must be performed to identify the main units, contacts, alterations, and structures. Following this, detailed mapping can be initiated.

About the sampling procedure of cores, despite if it is the remain ½ core ore the not sampled interval, was obtained from two aliquots: ¼ or ½ core re-sampled and the other part of the core remained in the core box. The sample size was tried to follow the same interval sampled by SRK in 2009, but there are several intervals that were sampled in different size, mainly due to lack of whole interval with cores. The standard sample size was 2 meters in the Apatitic Rocks: STA (apatite stockwork), BHA, and VTA, and 4-6 meters of intervals without apatite. After being sampled, the material is stacked and stored in their respective bags, labelled (paper labels attached with a staple). Each sample bag is weighed using a scale, with a minimum weight of 0.5 kg per sample, and grouped into batches. All data is uploaded to the company's server, and the samples are stored by batch, to be sent to the preparation and chemical analysis. The remaining material in the core boxes were stocked at the temporary warehouse or in the sampling area (outdoor).

The samples were prepared and assayed at ALS Patagonia S.A. in four batches (CO24267335, CO24209962, CO24205764 and CO24201792) with the inclusion of Blanks, Standards and Duplicates. The preparation and the assays were under management of Rene Manami and followed the ALS standard procedures.

This section summarizes the QA/QC program developed by SRK during the 2008–2009 exploration campaigns, as documented in the report titled "Confidential Exploration Report - Sofia Mine -

Antofagasta Region II, Chile". MB did not conduct any additional QA/QC work nor review SRK's QA/QC procedures due to the unavailability of a consistent database containing references and detailed information on blanks, duplicates, and standards. MB only added some information of Blanks and Duplicates (not complete) found on the SRK reports.

The Quality Assurance/Quality Control (QA/QC) performed by MB is referent to the re-sampling program analysis. The QA/QC program implemented by Fosfatos de Taltal was designed to ensure the quality of sample reprocessing, including 41 control samples (13%). These samples consist of 13 blanks (inserted by ALS – not blinded), 13 standards (blinded – GPO-17), and 15 field duplicates (blinded). The results are detailed in the following items.

The Standards was monitored through the use of Company-submitted certified analytical standard GPO17, supplied by Geostats PTY Ltd (20 Hines Road, O'Connor, Western Australia 6163 - Phone: +61 8 9314 2566, Fax : +61 8 9314 3699 - Email: info@geostats.com.au - Website: <http://www.geostats.com.au>. Standards are inserted at a rate of 1 in 25 samples (average), totaling 11 control samples in 326 total original samples. Of them, 2 std at CO24267335, 2 std at CO24209962, 3 std CO24205764 and 4 std CO24201792, sent to ALS Copiapó Laboratory as Blinded sample. It was performed analysis only for P₂O₅% element. The results for the standards that indicated only the 1st std inserted just little above +2SD, but not critical. Also, there are a suggestion of a little bias of overestimation that not impact on the Mineral Resources estimates, indicating that there is no problem with the standard itself and adequate for Mineral Resources Estimates.

Blanks was utilized 01 pulp blank supplied by ALS Copiapó, that is not blinded. It was inserted 13 blanks that represents a rate of 1 in 25 samples, where 3 at CO24267335, 3 std at CO24209962, 3 std CO24205764 and 4 std CO24201792, sent to ALS Copiapó Laboratory as Blinded sample. It was retrieved 10 blanks inserted by SRK 2009 (it is not full blank data). The SRK blanks are ok, no evidence of contamination, But, there are evidence of contamination on the Batch CO24201792. recommended re-assays and Checks. Also, one blank contaminated on the Batch CO24205764. recommended re-assays and Checks. Despite that, it has been considered in the minimum standards to validate the SRK 2009 assays and release Inferred Mineral Resources. Further work must be done to check those contamination

The core duplicates in a ½ sample in the package, not a ½ core. The core duplicate procedures, to collect a pair of a quarter material after crushing. These duplicates are taken at a frequency of 1 in 22 samples (4.5%), totaling 15 duplicates. Also, included the partial duplicates data from SRK 2009, totaling 11 duplicates. Despite the Small number of samples, there is no consolidation of any bias, but, with a moderate scatter characteristic in P₂O₅% results.

1.13.2.1 **Results of Re-sampling - Validation of Historical Drilling Data**

The validation process included a pair data analysis between historical assays and the re-assayed 131 validated pairs (only pair with the same length and cores in good condition) of sampling results from ALS Copiapó, in ½ core support.

Based on the results reviewed and audited, MB has the opinion that the assays used for the present resource evaluation has adequate levels of accuracy and precision, without significant episodes of contamination. The results from both (SRK and Bifox) sampling, preparation and assays used meet the industry good standards for quality. The database assays can be used for grade interpolation and subsequent exploration and project development activities for Inferred Mineral Resources.

1.13.2.2 **Reconstruction of the Drilling Database**

The drilling database was re-built to incorporate validated results and eliminate inconsistencies. Key updates to the database, in MS Excell, included:

- Replacing 180 assays from the original SRK dataset with results from the Bifox re-assay program at coincident intervals.
- Adjusting 15 non-coincident intervals, which were composed by MB to ensure continuity and to eliminate data gaps. These adjustments were based on assays conducted at ALS Copiapó.
- Retaining 282 historical assays from the SRK dataset (2009) that were not subject to replacement or adjustment.

The updated database reflects a robust and consolidated resource dataset, which integrates new and historical information while adhering to rigorous QAQC protocols. The revised dataset is considered reliable and suitable for resource estimation purposes.

1.13.2.3 **Exploration Results**

The exploration results of the samples from 2009 drilling carried out by SRK, shows 21 drill hole intercepts with $P_2O_5 > 5\%$ including 7 intercepts with $P_2O_5 > 15\%$. In the Figure 6-23 is shown the 3D view of the intercepts. The information of those intercepts was the basis of the wireframing and block grade estimation, being robust enough to be included in mineral resource estimates.

1.13.3 **Topographic Survey**

This item is a compilation of the technical Report "Topographic Survey of Mariela Mine" and "Topographic Survey Report Using Laser Scanner" performed by MapScan in November 2023 to provide Fosfatos de Taltal a high precise survey for:

- Land survey topography and the collar of historical drill holes.
- excavated material at old underground mine.

1.13.4 **Density Measurements and Analysis**

The density determination was made by Fosfatos de Taltal staff, on selected 30 cores from historical drill holes, representative for the lithotypes and sent to ALS Copiapó para density

determination under procedure OA-GRA08. The length of the cores are in Intervals of 10-20cm, identified and sent to the lab..

The method OA-GRA08 and the instrument "WST-SEQ" for Specific Gravity Determination involves measuring the density of a bulk sample by comparing its weight in air and its weight in water. The Instrument (WST-SEQ) is the equipment used to ensure consistency and accuracy in measurements, possibly automated systems designed for high-throughput testing.

1.14 Mineral Processing and Metallurgical Testing

TOMRA's engineers conducted performance test work on the phosphate feed samples represented in the size ratios +6-12mm, +12-35mm and +35mm. These samples were provided by Bifox Ltd. from Mariela deposit to establish whether TOMRA's sorting systems are capable of sorting apatite ore from waste.

LASER was chosen as the most appropriate technique based on the different scattering properties of phosphate and waste, hence the First Inspection Test demonstrated that XRT would not be the most suitable technique for producing high-grade phosphate concentrate. Concerning the grain sizes +12-35mm and +35mm, the sorting workflow considered was: within the first step (rougher), pure waste (non-scattering particles) was separated. In the following steps, aiming to grade the product fraction, for the cleaner, so-called cascade approach was used. This approach included three steps, where the non-eject fraction was re-processed with the increasing sensitivity. This method allows to calculate the results which can be achieved within a single step sorting. For the +6-12mm material, in the first step pure waste was separated, within the next step, the product fraction was re-processed aiming to create a high-grade fraction.

The overall results of the sorting were very positive and demonstrated great potential of the LASER technology for the phosphate sorting and grading. Already after the rougher step, the phosphate grades were increased almost by factor three in 25% of the total mass. Whereas in the additional cleaner step, by grading the product from the rougher step, P₂O₅ grades over 30% were achieved, crucial for LFP batteries market.

The concentration of P₂O₅% serves as a crucial indicator of the quality and grade of phosphate ore, with high-grade phosphate samples typically exhibiting significantly higher P₂O₅ concentrations compared to waste or lower-grade samples. This disparity is evident in various sorting tests, where high-grade phosphate samples, often referred to as eject fractions, consistently demonstrate elevated P₂O₅ levels. For instance, in Test 1.2 and Test 2.2, the P₂O₅ concentrations reach impressive values of 34.60% and 35.50%, respectively, underscoring the successful enrichment for LFP-battery-grade achieved through TOMRA's LASER sorting technologies. Conversely, waste samples, as well as low-grade phosphate samples, tend to exhibit notably lower P₂O₅ concentrations, such as 2.01% in Test 1.1 and 5.44% in Test 2.4, indicative of their inferior quality.

Furthermore, the metrics of P₂O₅ recovery and upgrade factor provide valuable insights into the effectiveness of the sorting process in recovering phosphorus from the ore feed. Higher P₂O₅ recovery rates and upgrade factors indicate a more efficient separation process, resulting in

increased phosphorus content in the eject fraction compared to the non-eject. The data suggest that TOMRA's LASER sensor has the potential to significantly improve the recovery of phosphate minerals from low-grade ore, thereby increasing the overall efficiency and profitability of phosphate mining operations.

These findings underscore the efficacy of sensor-based sorting techniques in selectively enriching high-grade phosphate fractions while effectively removing waste and low-grade material. By enhancing the overall efficiency and profitability of phosphate ore processing operations, TOMRA's sensor-based sorting technologies play a pivotal role in optimizing resource utilization.

TOMRA recommends as a next step, to start discussions about flowsheet design which can form the basis of a budgetary estimation for equipment and operating costs.

1.15 Mineral Resource Estimate

The Mineral Resource Estimates (MRE) were prepared by Competent Person (CP) Marcelo A. Batelochi, an independent consultant based in Belo Horizonte, MG, Brazil. The Mineral Resources were reported to the private company Fosfatos de Taltal - Bifox to comply a shareholder's request, in accordance with JORC 2012 code.

An initial review of the old underground mine and cores of drilling conducted by SRK in 2009, in collaboration with the geologists, identified the phosphate mineralization in stock works of **Apatite** veins crossing an Andesitic /Dioritic sequence.

The total material inside the solids in the Mineral Resource Estimates were classified as Inferred Mineral Resources and the borders of the wireframing as Potential target exploration. No Mineral Resources Pit was made due to the wireframing were constrained in less than 130 meters depth. The Mineral Resources as Inferred based on three key elements related to metal content (Metal Content = Ore Volume * Density * Grades):

1. **Ore Modeling Challenges:** The most difficult aspect of this MRE was ore modeling due to the lack of complementary structural geology information, where the stock work of veins have a complex structural system. Then, it was creating a single solid using 5% of P_2O_5 as threshold.
2. **Density Model:** The density is based on 30 sample results, in natural dry basis. Density was estimated by Nearest Neighborhood estimator method.
3. **Grade Estimates:** The use of historical core drilling and the panels samples there is no relevant impacts on accuracy of the Mineral Resource Estimate, but, the drilling spacing is not enough to support a mine planning and feasibility studies.

The resource model was created in block model support, where the Ordinary Kriging, 2-meter composite, without capping was used to estimate P_2O_5 % constrained to the Ore envelope and nearest neighbor interpolation applied for density without constrain of Ore/Waste. The volume of ore solids was flagged in the block model using a majority material rule: if ore comprised more than 50% of the block, it was flagged as 100% ore; if less than 50%, the block was classified as 100%

waste. The ore volume was constrained by the topography, applying the same criteria as for ore solids.

Given that the ore is confined to shallow depths, extended up to 130m depth, then it was decided not to constrain the resources by resource pit that not impact on the quantity or quality of the Mineral Resources. This assessment ensures that the current resource estimates remain robust and unaffected by potential pit limitations.

The $P_2O_5\%$ block grade was estimated by Ordinary kriging interpolation from 324 input data of Ore at 2m Composite, constrained by ore solid limits. The output was 92,795 parent cells block of Phosphate Ore, in a support of 4m by 4m by 2m, with discretization of 4 x 4 x 2, unique search to encompass all blocks, minimum number de samples 4, maximum 8 samples, horizontal angular sections of 4 split vertically, and 2 maximum number of samples per hole.

Density blocks grade was estimated by Nearest Neighbour estimator, from 30 raw data density values after adjusting by swell factor (Density g/cm³ variable), unconstrained for outliers and the ore envelope. The output parameters are the same of the Ordinary Kriging, estimating the same 92,795 blocks of Ore (No waste material was estimated in the block model).

The estimated block grades were reviewed visually, and it was concluded that the grades are coherent in comparison with the 2m Composite data. Complementary, it was performed statistical checks with grade statistical checks, grade tonnage curves (P_2O_5 from Ordinary Kriging and Declustered mean) and Swath Plots that confirmed the modelling strategy as acceptable with no significant issues.

A block is classified as Inferred if the block was estimated by 4 samples in a search radius 40x60x12meters that represents the Second structure of the semivariogram.

Blocks out of this criterion were not classified (considered Potential Target Exploration)

The classification is based on the following considerations, that has been considered Positive aspects:

- Relatively simple 3D Ore model where the ore is concentrated the envelope of Mineralized intercepts.
- Good sampling procedures for the Company drilling and no issues with the QAQC data.
- Density data has acceptable quality for Inferred Mineral Resources.
- The drilling and Panel samples are acceptable due to the material recovered with good core recovery.
- Data spacing demonstrated appropriate for the Inferred Material of the MRE
- Good definition in the variography.

The Inferred Resources in this estimate have a lower level of confidence than that applied to Indicated Resources and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Resources could be updated to an Indicated Resources with continued exploration, specifically additional drilling.

Reasonable Prospects for Eventual Economic Extraction (RPEEE) considers that the geometry of the ore body and the restriction of Mineral Resources in shallow depth support the potential for open-pit mining, resulting in a favorable low strip ratio where the QP considered not required a Resource Pit to constrain the Mineral Resources.

The Mineral Resources for the Mariela Project is listed in Table 1-1, including the Mineral Resources notes.

Table 1-1: Mineral Resources

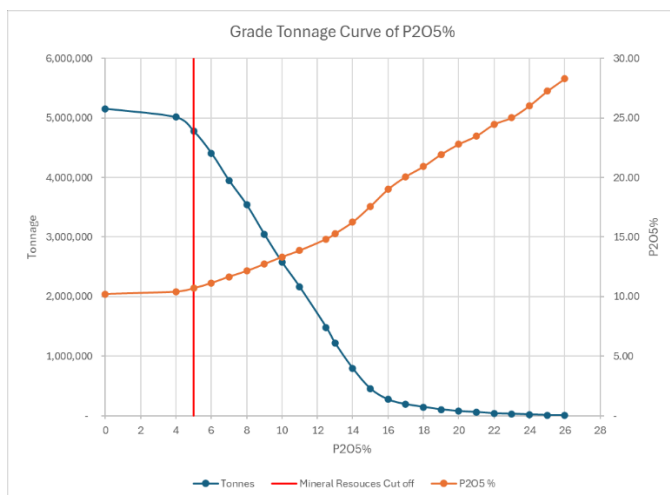
Source: MB Geologia 2024.

Inferred Mineral Resources					
Cut off 5% P ₂ O ₅	Volume	Density by Nearest Neighborhood	Tonnes	P ₂ O ₅ % - Ordinary Kriging	P ₂ O ₅ Tonnes Content
Total	1,660,361	2.88	4,778,472	10.69	510,777

Notes:

- The independent Qualified Person for the Mineral Resource estimate as defined by JORC-2012 is Marcelo Antonio Batelochi, P. Geo., of MB Soluções em Geologia e Mineração Ltda. The effective date is Report date: January 10th, 2025 Effective date: January 17th, 2025. CIM definitions and guidelines for Mineral Resource Estimation have been followed.
- These Mineral Resources are not Mineral Reserves as they do not have demonstrated economic viability. The MRE presented herein is Classified as Inferred. No Measured and Indicated Mineral Resources are reported.
- The quantity and grade of reported Inferred Resource are uncertain in nature and there has been insufficient exploration to define these Inferred resources as Indicated; however, it is reasonably expected that the majority of Inferred Mineral Resource could be upgraded to Indicated Mineral Resource with continued exploration.
- Resources are presented as undiluted and in-situ for an open pit mining scenario and are considered to have reasonable prospects for economic extraction.
- Density values in dry basis moisture were calculated based on the Nearest Neighborhood Estimator from Raw data.
- Grade was interpolated from drillhole 2m Composites using an ordinary kriging interpolation.
- The MRE was reported using a cut-off grade of 5.0 % P₂O₅, calculated from metallurgical assumption.
- Calculations are in metric tonnes. Tonnage has been rounded to reflect the level of accuracy and any discrepancies in total amounts are due to rounding errors.
- The author is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issues not reported in this Technical Report that could materially affect the Mineral Resource Estimate

A series of global resource estimates have been produced for a range of P₂O₅% cut off grades where the tables have the numbers plotted as grade tonnage curves in Figure 1-1.



Mineral Resources is released at 5.0 % of P₂O₅ cut-off; tabulation of other cut-off values is for information only

Source: MB Geologia, 2024.

Figure 1-1: Grade Tonnage Curves for Indicated Resources

In the CP Opinion, the risk to the resource estimates is that the Phosphate Ore would be englobe tonnage with P₂O₅ < 5%, due to the uncertainties on the geometry of the Ore modeled caused mainly for restricted structural information. On the other hand, there is potential to increase mineral resources in depths and by new Satellite deposits in the Mariela Mineral Rights.

1.16 Interpretation, Conclusions and Recommendations

The work has achieved its objective of releasing an inferred mineral resources, incorporating the historical drilling information conducted by SRK 2008/2009 and the pannel samples conducted by Fosfatos de Taltal 2023/2024.

Some considerations that impacted on the Mineral resource that are strongly recommended:

- Sample spacing: the pass categories are derived from the search parameters which contain data point requirements in order to estimate block grades i.e. a function of the data point spacing, which ultimately is a function of the drillhole spacing. The resource classification is derived from the variogram range allocated to each block with subsequent consideration of other impacting factors. In the next stage of the project is recommended to test the "Score Card" methodology of classification.
- The geology of the deposit and the style of mineralization: The mineralization has strong structural controls of the Apatite veins that this high strain regime tends to have lower continuity than modeled and subjectively affecting the confidence in the accuracy of the next MRE.

- The sampling methods: the bulk of the resource estimates have been generated from diamond drilling results which is generally considered the best sampling technique (assuming good core recoveries) and thus provides increased confidence for the MRE. But the historical drill holes don't have the down the hole survey, then, it will be necessary a drilling campaign to substitute those drill holes guaranteeing the accuracy of the sample location
- Variography: shown good spatial variability that didn't impact the confidence of the MRE.
- Density data: there is 30 density data in good quality, but insufficient to support the feasibility studies and Measured and Indicated Resources. Then, it is suggested a density determination as part of the next stage of the exploration program, for new holes and for the historical SRK cores.
- The QAQC procedures and outcomes: these are considered to be to industry standard. The QAQC outcomes impart a high level of confidence in the appropriateness of the sampling methods and the accuracy of these assays.
- The priority one is the new drilling in the gaps of information to increase mineral resources category to indicated resources
- The historic drilling data: the historical data assay is validated and in good standards. But, due to the lack of down the hole survey data, it will be necessary twin holes to validate the deviation and the accuracy of the sample position.
- Core recoveries: visually the current recovery of >95% is reasonable to guarantee the confidence of the samples.
- Ore envelope interpretation. The use of unconstrained composite data precludes the need for mineral domains. This simplifies the grade interpolation and removes the risk of introducing conditional biases, which can lead to an overstatement of metal grades, especially with the use of high grade metal domains. The mineralization at Mariela is marked by a rather abrupt contact by the limit of the veins, where this contact was well logged in the drilling data such that a 3D wireframe could easily be created. The result is a rather simple geological model but with some clear cut geological controls to mineralization.
- The block size. The block size was defined intuitively. An optimal block size study is recommended for a feasibility study. Often a small block size can lead to over-smoothing of grades and thus an over-statement of grade for Mineral Resources. Large block sizes do not provide the appropriate resolution for selective mining in open pit scenarios. In theory a recoverable resource model would have a panel/block size with dimensions equal $\frac{1}{4}$ to the drillhole spacing. At this Mineral Resource Estimates the block sizes were defined intuitively for the Competent Person that the SMU is considered appropriate size for selective mining and represents the minimum dimensions of any mining unit. Further studies should be conducted to determine the best block size and SMU for the deposits.
- Top cutting. Not used, but should be reviewed in the next mineral resources estimates.

- The Estimation grade method indicating no skewed data distribution with extreme values. The OK method is acceptable for grade interpolation for P₂O₅% but a more sophisticated grade interpolation technique would increase the level of confidence.
- Search strategy is considered adequate for the estimates for Inferred resources. To report measured and indicated mineral resources it is recommended an optimization of the parameters, i.e. “optimum search neighborhood analysis”. The minimum three drill holes to classify as indicated and maximum 8-12 samples for OK grade interpolation was an appropriate strategy avoiding a lower number of minimum data that increase in risk to the interpolated grades particular at the margins of the deposit or in areas of wide drillhole spacing.
- Reporting Mineral Resources constrained by 5% of P₂O₅ supported by metallurgical testworks (Ore sorting concentration) are appropriate for this type and stage of Project. It is recommended to advance the conceptual studies to provide more robust and accurate parameters for the Project Evaluation.

The Competent Person is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the potential development of this mineral resources updates.

1.16.1 Potential Target for Mineral Exploration

Potential Exploration Target of the Mariela Project is a conceptual estimate of the quantity and grade of material based on geological data and preliminary exploration results, that could be converted in Mineral Resources with further mineral exploration. This classification is specifically not a resource nor reserve. The objective of reporting the Potential Exploration Target at Mariela Project is to offer investors an estimate of tonnage and grade, providing an initial understanding of the project’s potential economic value. These estimates are intended to build a baseline level of confidence and trust, supporting investors to invest in exploration activities on the Property to increase mineral Resources. The Potential Exploration Target estimated is from 1.7-2.6 million tonnes @ 9.0 P₂O₅%. The values are estimated based on the material inside the solid. The grades and density are estimated at same basis as the MRE.

The table below summarizes the Potential Exploration Target quantitative.

Potential Target	Vol (m ³ *1000)	Dens (g/cm ³)	Tons *1000	P ₂ O ₅ %
Sensitive Case (Minimum)	620	2.80	1,700	9.0
Optimistic Case (Maximum)	940	2.80	2,600	9.0

Note: Due to the imprecision of the estimates the numbers are rounded

1.17 Exploration program

An exploration program is required to follow up definition of the Phosphatic rocks in the tenements, starting with an Geophysics for identification of satellite deposits and a drill program at Sophia deposit to convert Exploration Potential material to mineral resources and the reported inferred resources in Measured and Indicated categories. This program is summarized in Table below, where it is estimated a total cost of USD 1.2 Mi.

Activity	Cost KUSD
Radiometric or magnetic surveys to cover the total area, especially in regions where apatite is linked to magnetite or radiogenic elements.	150
Dimond Drill program: 30 drillholes (appx 3,459 m) - 28 DDH to probe deposit in depth laterally and 2 for twinning of historic holes. Costs including all activities including Assays + Density	600
Topographic service to survey the drilling collars, drill rig orientation (azimuth and dip) and general services.	80
Logistics and Infrastructure (contract company for drill pads and accesses to the drill rig), trucks rental, trucks to send samples to the lab, tank truck (water for drilling), meals and accommodation	320
Mineral Resources review and revision + PEA	50
Metallurgical Test works	25
Total	1225

2 INTRODUCTION

Fosfatos de Taltal SpA – Bifox Limited (<https://bifox.com.au/>) commissioned “MB Soluções em Geologia e Mineração Ltda (“MB”)” to compile an update on the Mineral Resource Estimates Report (MRE) of Mariela Phosphate Project (Mariela), specifically at Sofia Mine (Soffa Mine or the Project), located in Antofagasta II Region in northern Chile. The report supports disclosures by Bifox in a release “Mineral Resources Report on Sophia Deposit in Accordance JORC-2012 - Antofagasta Region II, Chile - Mariela Phosphate Project (Mariela), report date: January 10th, 2025 and the effective date: January 17th, 2025”.

The purpose of this Mineral Resources update of the phosphate mineralization is to summarize the exploration results of the historical exploration information data by SRK Consulting (U.S.), Inc. and SRK Consulting (Chile) S.A. (collectively SRK) completed exploration at the Sofia Mine between November 2008 and May 2009 and the current activities of data validation and metallurgical testwork, releasing the results and recommendations to be used for the Valuation of the project.

This report was prepared in accordance with the Joint Ore Reserves Committee of Australasia reporting code (JORC) 2012 edition, which is incorporated within the disclosure regulations outlined in the listing rules of both the Australian Securities Exchange (ASX) and the New Zealand Stock Exchange (NZX). The preparation of the MRE was under the responsibility of Marcelo A. Batelochi, independent Consultant MB Geologia, in collaboration with the Bifox staff in Chile.

Fosfatos de Taltal SpA is an Australian/Chilean agribusiness company integrated into the phosphates fertilizers to provide solutions to the agricultural industry, focused on the mining production in the Atacama region in Chile of highly reactive phosphate rock for direct application, in a very consciously way and with the least possible environmental impact, compatibilizing the production of key nutrients required for a sustainable agriculture and to environment preservation (Source: <https://bifox.com.au/about-us/>).

2.1 Scope of Work

The scope of work for this project was defined in accordance with the Strategic Plan of Bifox staff (Owned of Fosfatos Bahia Salada Spa and Fosfatos de Taltal Spa) to develop the Mariela Project after the Option Agreement to purchase the property:

- Project Related Literature Review ;
- Old underground mine and surface Mapping;
- Surface and old underground mine pannel sampling;
- Geophysical Surveys, Drilling and treches historical works review;
- Check drilling with re-survey the collars and Re-sampling selected core intervals;
- Surface and old underground mine topographic survey;
- Quantitative of low grade Phosphate pile (waste pile of old operation);
- Database Compilation of drilling and pannel samples (discarded Trenches samples);

- Ore modeling – gradeshell 5% P₂O₅;
- Mineral Resources Estimates (Statistics of data, variography, grade estimates by Ordinary Kriging, classification of Inferred Mineral Resources and remain material as Potential Target Exploration);
- Metallurgical Testwork of Oresorter processing.

2.2 Reliance on Information

The MB opinion contained herein is based on data collected, and memos and reports generated by the Bifox throughout the course of the investigations and the documents referenced in the Bibliography.

- a) MB Rely on three technical reports generated by SRK Consultants are supported the pre-requisites of the scope of the work:

- Confidential Exploration Report - Sofia Mine - Antofagasta Region II, Chile. Authored:

SRK completed these activities between October 2008 and May 2009.

Table 1.2.1: Key SRK Project Personnel

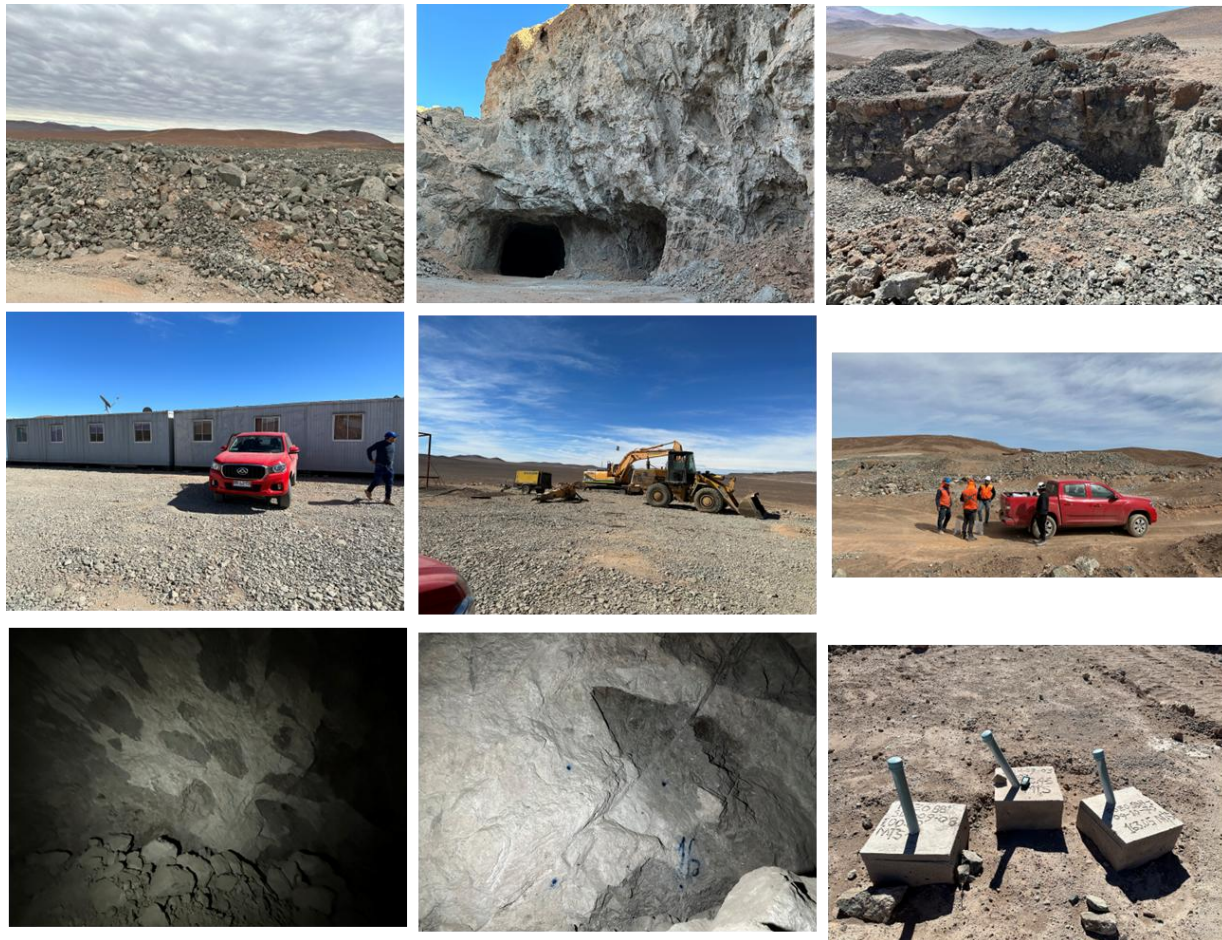
Name	Responsibility
Al Kuestermeyer	Project Manager/Metallurgist
Terry Braun	Project Principal
Dorinda Bair	Project Manager
George Even	Project Manager-Chile
Eduardo Bastías	Mining Engineer
Hector Véliz	Associate Structural Geologist-Chile
Santiago Field Crew: Mariana Ordoñez, Hugo Arriagada	Field Operations-Chile
Jeff Volk	Geostatistics/Resources

- Sofia Project Exploration Trenches – April 2009 – Authored by Hector Velis and George Even;
 - Sofia Project Data Report – June 2009 – Authored by George Even
- b) Relay in Geologo Mauricio Eugenio Soto Cornejo. RUT: 17.431.713-5 that carried out a 48 panel samples at Mariela Old Underground Mine under Fosfatos de Taltal staff supervision, in 2023. (PJ Cuile Itali 13, Copiapó – Cel 942922014).
- c) Relied on the surveys carried out by Mapscan (Eulogia Sanchez 065, Providencia, Santiago, Chile, phone: +569 96749150 - <http://www.mapscan.cl>) in november 2023:
- Topographic Survey and Collars of the Drill holes: by RPAS (drone) and GNSS - RTK
 - Underground by Laser Scanner: LASER FARO FOCUS 150 PREMIUM
- d) Relied on the Metallurgical test work performed by Tomra Sorting Solutions – Authored by: Alina Shibistova - TOMRA Ref. Report Number: C2740-23. Dated February 2024;
- e) Relied on the Sworn documents: Irrevocable Purchase Option Agreement with Cesar Formas and Fosfatos Bahia Salada and Fosfatos de Taltal;
- f) Also, relied on information provided by and obtained from Cesar Formas regarding exploration and mining concessions which MB did not independently verify their validity.

2.3 Field Visits

2.3.1 MB Field Visit in September 2023 and coreshack in February 2024

The QP responsible for this report, Marcelo Antonio Batelochi, conducted a visit to the Company in 2023, between September 1st and 5th. The objective of the field visit was to check the mineralization potential for a Phosphate Production through a mapping of the old underground mine and check evidence of exploration activities, including drill holes, regional and local geology and IOA (Iron Ore Apatite) mineralization and collecting 25 samples. Also, inspecting the existent infrastructure, equipment and logistics. In the field visit the most important task was the collection of the panel samples inside the old underground mine that is detailed at Item 6.2 (Underground Panel Sampling). In the Figure 2-1 is showed the Field visit photos.



Source. Field Visit photos by MB (2023).

Figure 2-1: September 2023 Field Visit Photos of Mariela Project

From 18th to 24th February 2024, MB visited the temporary Mariela coreshack in Caldera where it was checked the general condition of the cores and programmed the validation of the drilling data with a re-sampling programme. In the Figure 2-2 is showed the photos of temporary core shack of cores from Mariela Project.



Source. Field Visit photos by MB (2024).

Figure 2-2: February 2024 Field Visit Photos of temporary core shack of cores from Mariela Project

2.3.2 Visit of ALS Copiapó Laboratory in February 2024

MB visited and inspected the ALS Copiapó Laboratory in February 2024 as part of the QAQC activities to guarantee the high quality of the sample preparation protocols. The chemical assays were carried out at ALS Callao in Lima – Peru. In the Figure 2-3 are some photos of the field visit.



Source. Field Visit photos by MB (2024).

Figure 2-3: February 2024 Field Visit Photos of temporary core shack of cores from Mariela Project

2.4 Previous technical reports

No previous public Technical Reports compliant with the NI 43-101/JORC2012 rules and policies have been issued for the Mariela Project. The available documentation solely comprises exploration results and reports by SRK in 2009.

3 PROJECT DESCRIPTION, LOCATION AND ACCESS

The Project is located in Chilean Administrative Division, Antofagasta II Region in northern Chile, approximately 110km northeast of the city of Chañaral and immediately north of the boundary between II and III (Atacama) Regions. Geographic coordinates for the Project are 25 054' 16"S latitude, 70003' 16"W longitude. This area is west of the Altamira Copper District and 4km north of Barreal Seco mine owned by Minera Las Cenizas and 10km NE of Mina Hierro Taltal.

The project is distanced 224 km from the nearest airport facility, the Atacama Desert Airport. From the airport, follow 134 km on Panamericana Norte/Route 5 to C-147 in Chañaral, then, take 75.2 km on C-139 and C-119 to B-965 in Taltal to access the Property. The location Map with the route is at Figure 3-1.

The Mariela Project manages 8 (eight) tenements / 891 hectares in the Antofagasta II Region in northern Chile, approximately 110 km northeast of the city of Chañaral, under concession names: DORITA 1/4; GONZALO 1/3; IGNACIA 1/12; MARIELA 1/32; SOFIA 1 1/40; SOFIA 2 /1/10; SOFIA 24 1/30 and SOFIA 6 1/20 as detailed at Table 3-1.

Table 3-1: Mineral Concession information.

Concession Name	Titularity	Hectares	purchase option to:
DORITA 1/4	CESAR BERNARDO FORMAS ORTIZ	30	Fosfatos Bahía Salada SpA transferred the contract to Fosfatos de Taltal SpA Repertorio Nb-5368/2023 O.T.449215
GONZALO 1/3	CESAR BERNARDO FORMAS ORTIZ	15	
IGNACIA 1/12	CESAR BERNARDO FORMAS ORTIZ	96	
MARIELA 1/32	CESAR BERNARDO FORMAS ORTIZ	156	
SOFIA 1 1/40	CESAR BERNARDO FORMAS ORTIZ	164	
SOFIA 2 /1/10	CESAR BERNARDO FORMAS ORTIZ	50	
SOFIA 24 1/30	CESAR BERNARDO FORMAS ORTIZ	300	
SOFIA 6 1/20	CESAR BERNARDO FORMAS ORTIZ	80	
Total		891	

Source: Shapes from SERNAGEOMIN - Servicio Nacional de Geología y Minería de Chile

The mineral rights are held by Cesar Bernardo Formas Ortiz (Formas) as protocolized in the Chilean National Service of Geology and Mining (Servicio Nacional de Geología y Minería, SERNAGEOMIN), in which Fosfatos Bahía Salada SPA holds a Irrevocable Purchase Option Agreement for Mining Rights under Nb 04522,'2023 - O.T. 447439 (document confidential), which is summarized below:

Parties Involved:

- Beneficiary: FOSFATOS BAHIA SALADA SPA, a Chilean entity represented by Alina Bendersky Furman.
- Offeror: César Bernardo Formas Ortiz, owner of the mining properties described in the agreement.

Key Provisions:

1. Mining Properties and Area of Interest:

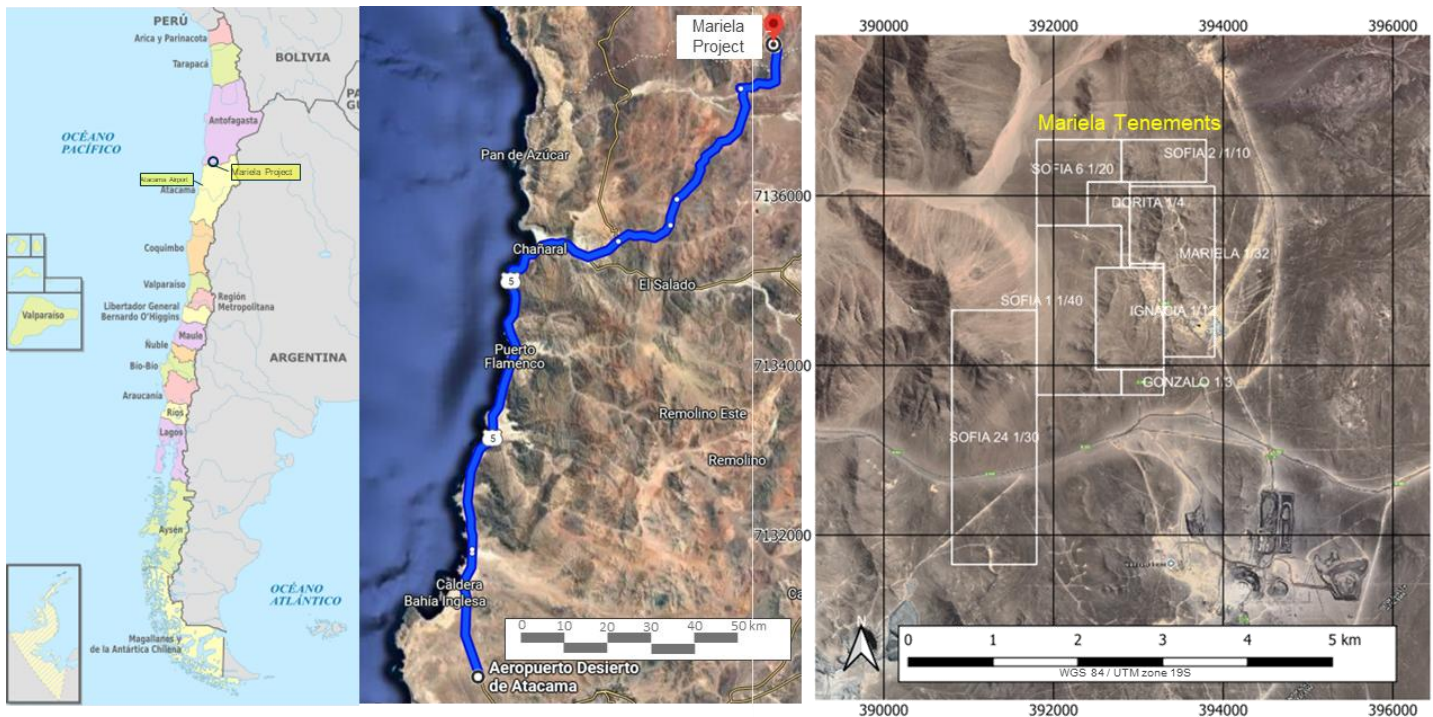
- The properties, located in Taltal, Antofagasta Region, encompass approximately 891 hectares.
 - Includes concessions: DORITA 1/4; GONZALO 1/3; IGNACIA 1/12; MARIELA 1/32; SOFIA 1 1/40; SOFIA 2 /1/10; SOFIA 24 1/30 and SOFIA 6 1/20.
2. Purchase Option:
- An irrevocable option to acquire the properties by October 13, 2024, under Chilean Mining Code Article 169.
 - Properties will be transferred free of encumbrances, including liens, claims, or disputes.
3. Purchase Price:
- Total of USD 10.5 million, divided into four payments:
 - Initial Payment: USD 1.05 million in two installments (October 2023 and February 2024).
 - Subsequent Installments: Three payments of USD 3.15 million each, due upon sale execution, 9 months, and 18 months later.
4. Exploration Rights:
- The Beneficiary may conduct exploration activities during the option period at its own expense.
 - Includes geological, geophysical, and technical evaluations to assess mineral potential.
5. Conditions and Representations:
- The Offeror guarantees ownership, legal status, and compliance of the properties with mining and environmental laws.
 - Confirms no overlapping third-party claims or disputes.
6. Confidentiality:
- Agreement terms and geological information are confidential and only disclosed under specific conditions.
7. Termination and Non-Exercise:
- If the Beneficiary chooses not to exercise the option, obligations such as payments and property maintenance cease.
 - Initial payments remain non-refundable, serving as compensation for Offeror's potential damages.
8. Arbitration and Dispute Resolution:
- Disputes are resolved through arbitration under the Santiago Chamber of Commerce regulations.
9. Additional Clauses:

- Includes rights for the Beneficiary to perform exploration work.
- Provides for automatic lifting of prohibitions upon option expiration or non-exercise.

Fosfatos Bahía Salada SpA transferred the contract to Fosfatos de Taltal SpA in a document: Repertorio Nb-5368/2023 - O.T.449215

For more details on those confidential agreement, please contact the Bifox Staff.

Figure 3-1 show the details of the spatial location of the Tenements.



Source. Map performed by MB on QGIS version 3.34.7-Prizren (2024).

Figure 3-1: Location Map of Mariela Project. At West the Position of the Property in National Scale; In the Middle the Regional Scale with the route from Desierto de Atacama Airport,. In the right the local map of the Property with the Mineral Rights.

4 HISTORY

This historical chapter is based on the reports issued by SRK between 2008 and 2009.

Formas mine the Sofia Mine for approximately 20 years in production as a small-scale underground mine. Mining is selective with production at approximately 4,000t/m (48,000t/y) with a beneficiated product ranging from 30% to 70% P205 (Minera Formas, 2009b) and <0.6% MgO.

Before 2008, Formas conducted no industry standard exploration. Exploration conducted by Formas has included selective high-grade sampling of small pits and trenches to identify potential phosphate zones above 15% P₂O₅. The apatite (white) mineralization is visually, in color, very different from the andesitic and dioritic host rock (gray to greenish). Once apatite mineralization is located it can be easily followed in the underground mine.

In 2001, Rio Tinto explored at and around the Project for Iron Oxide Copper Gold (IOP205) style mineralization under a purchase agreement with Formas. As part of the purchase agreement, Rio Tinto drilled nine RC drillholes, four of which were analyzed. These RC drillholes were completed in the concession block around the Sofia Mine. Rio Tinto also generated a schematic geological map of the underground workings, a regional surface map and conducted a magnetic geophysical survey of the concession block.

Between November 2008 and May 2009, Formas contracted SRK Consulting (U.S.), Inc. and SRK Consulting (Chile) S.A. to conduct an Exploration Program at Sofia Mine in compliance with the best practices of the Industry to be released in accordance with international Reports Standards (JORC and NI-43101). It was performed a review of the Literature, Mapping, Geophysical Surveys, trenching and drilling.

Exploration completed prior to the 2009 drilling program included structural mapping at a 1 scale and a geophysical survey conducted by Geodatos Geofisica de Avanzada (Geodatos) based in Santiago. The following geophysical surveys were performed within a 500m test area of the property that included the Sofia Mine:

- Electromagnetic for all surveys except 47025Hz;
- Ground Magnetic (magnetometry);
- Ohm-Mapper; and
- Gamma Ray Spectrometry for K%, ppm U and Th and Total Count (TC) in cpm.

Drilling included, 38 HQ diameter drillholes were completed, totaling 5,086.75m between January 2009 and February 2009 and assayed 286 samples (as is in the database provided by Cesar Formas). The area drilled was around and north of the Sofia Mine in an area approximately 500m. In addition, 5 trenches were oriented generally ENE – WSW, each approximately 100m in length and with variable depths, up to 5 meters.

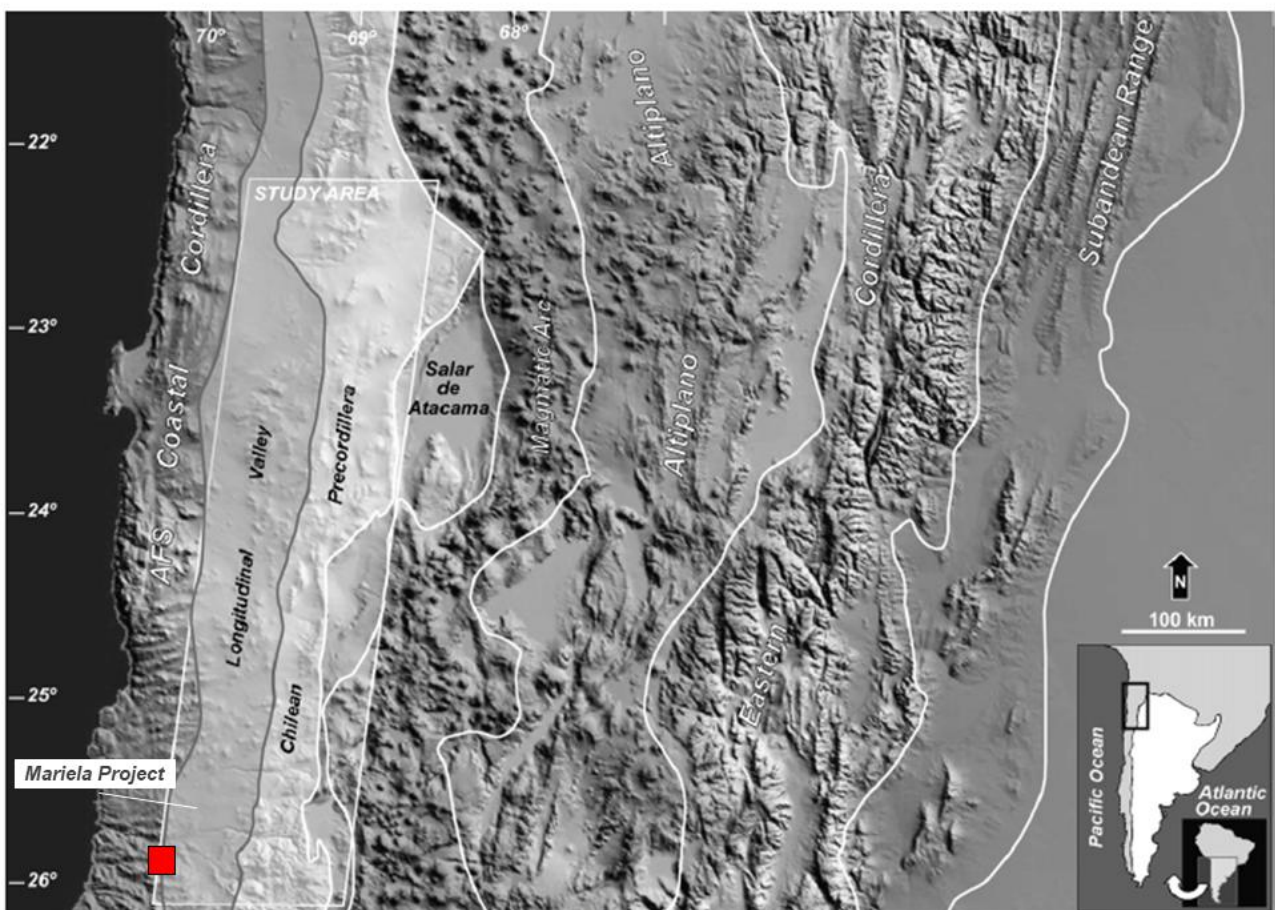
SRK in 2009, based on the Exploration Program results concluded that the Project did not identify a phosphate deposit that satisfied the production criteria expected by Formas and SRK didn't release any update on Mineral Resources for Sofia Mine.

The historical Mineral Resources of phosphate was estimated by the owners, estimating, approximately 1.692Bt grading 20% P₂O₅ or 1.128Bt grading 30% P₂O₅ (Minera Formas, 2009a). This is a global estimate based on surface mapping of phosphate/phosphate alteration identified in trenches and small pits. Rio Tinto conducted a Reverse Circulation (RC) drilling program in 2001; however, the limited data were insufficient to support a resource estimate of P₂O₅. The global estimate was estimated by multiplying the mapped area (approximately c) 4,700m x 1,200m) by the assumed thickness of the deposit (approximately 100m). A specific gravity of 3.00g/cm was then used to estimate tonnes.

5 GEOLOGICAL SETTING

5.1 Regional Geology

The Mariela Project is inserted on a Geotectonics features, including several N–S-trending morphostructural units between the present-day subduction margin and foreland (Figure 5-1). In the figure, from west to east these units are: (1) Coastal Cordillera, (2) Longitudinal Valley, (3) Chilean Precordillera and pre-Andean Depression, (4) Western Cordillera (magmatic arc), (5) Altiplano – Puna, (6) Eastern Cordillera and (7), Sub-Andean Ranges (deformed foreland).



Source: Modified from Amilibia, A. (2008)

Figure 5-1: Northern Chile and Argentina DEM base on Nasa SRTM dataset. The principal morphostructural units of the Central Andes are represented. The study area is located along the Chilean Precordillera morphostructural unit.

The Deposit is positioned Specifically, eastern margin of the AFS Coastal **Cordillera** and encompasses both intrusive rocks characteristic of the Coastal **Cordillera** and extrusive rocks and sediments typical of the Longitudinal Valley (also called as Central Valley).

Below is summarized the Geology the Coastal **Cordillera** or Costal Range and Longitudinal or Central Valley (Figure 5-2).

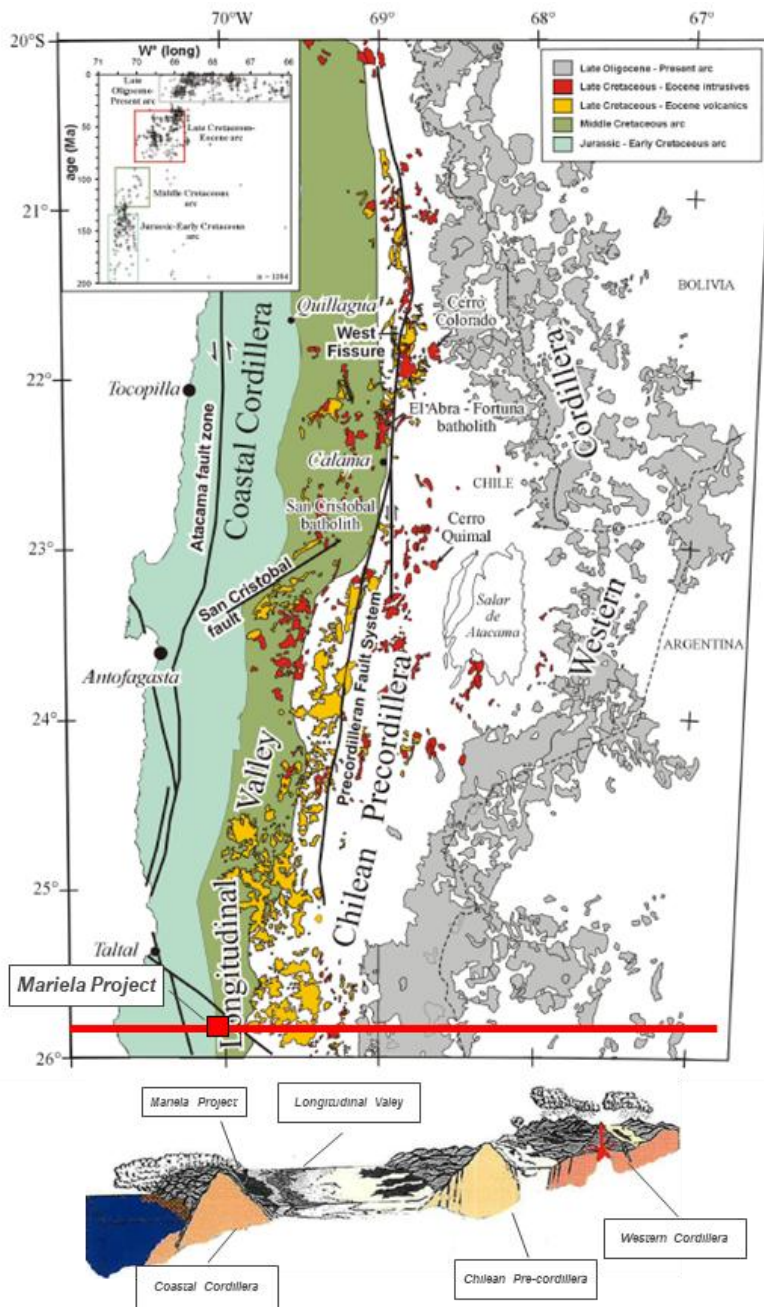
5.1.1 Coastal Cordillera or Costal Range

The Coastal Range features a complex geological history, dominated by a Paleozoic metamorphic basement. This basement is overlain by sedimentary, volcanic, and plutonic rocks from the Upper Paleozoic and Upper Triassic to Middle Jurassic periods. A prominent characteristic is the extensive sequence of Lower Cretaceous volcanic rocks, predominantly subaerial, which caps these older formations. Intrusive activity within the Coastal Range is marked by the Coastal Batholith, composed mainly of medium-grained granodioritic to dioritic stocks and andesitic to aplitic dykes.

Geochronological data from the Cerro del Pingo area, approximately 15 km west-northwest of the Sofia Mine, reveal K-Ar (biotite) and $40\text{Ar}-39\text{Ar}$ (biotite) ages of 124 ± 4 Ma and 112 ± 4 Ma, respectively, for the Coastal Batholith (Naranjo and Puig, 1984). These findings underscore the prolonged magmatic activity during the Early Cretaceous, contributing to the geological complexity of the Coastal Range.

5.1.2 Longitudinal or Central Valley

Immediately east of the Coastal Range, the Central Valley exhibits a distinct geological sequence. Upper Cretaceous to Tertiary felsic pyroclastic and volcanic rocks unconformably overlie a Lower Cretaceous volcanosedimentary and plutonic sequence. This valley is also characterized by extensive deposits of Oligocene to Miocene unconsolidated Atacama gravels, often associated with caliche-type formations. Holocene alluvial and colluvial deposits dominate large canyons (quebradas) and minor depressions, reflecting the region's dynamic geomorphic processes.



Source: Modified M. R. Haschke (2002).

Figure 5-2: Simplified geologic map of North Chile with distribution of Jurassic-Present arc magmatic rocks in the central Andean foreland.

5.2 Geotectonic Evolution and Mineralizations

The mineralization at the Sofia Mine is structurally controlled and reflects the complex tectonic history of northern Chile. The tectonic evolution of the region, as synthesized by Barra et al. (2002), encompasses:

10. **Late Carboniferous:** Initiation of oceanic subduction during the first phase of the Gondwanan tectonic cycle, resulting in felsic magmatism associated with the Choiyoi Group of the Cordillera Frontal.
11. **Late Permian to Early Jurassic:** Cessation or reduction in subduction activity, leading to the development of back-arc and rift basins. Associated magmatism included both subduction-related felsic activity and non-orogenic magmatism linked to extensional faulting, exemplified by the Cuyo Basin.
12. **Late Permian to Early Jurassic:** Formation of an accretionary prism along the western continental margin, forming the basement of the Coastal Cordillera.
13. **Jurassic:** Renewed subduction initiated mantle-derived magmatism, forming the La Negra magmatic arc, which extends from Arica to Chañaral.
14. **Jurassic to Early Cretaceous:** Emplacement of granodioritic to dioritic stocks and andesitic to aplitic dykes, forming the Coastal Batholith.
15. **Late Jurassic to Early Cretaceous:** Transition to predominantly continental deposition marked by red bed sediments and volcanic flows from the La Negra magmatic arc (Aeropuerto Formation).
16. **Middle Cretaceous (~105 Ma):** Cessation of La Negra magmatic activity, basin closure, and uplift, leading to the formation of the Domeyko Proto-Cordillera.
17. **Late Cretaceous:** Renewed volcanic activity with continued eastward migration of the magmatic arc.
18. **Neogene Activity and IOP205 Potential:** During the Late Eocene to Oligocene (48 Ma to 28 Ma), intrusive activity was widespread despite a decline in volcanism. This period was critical for the emplacement of world-class porphyry copper deposits along the Domeyko Proto-Cordillera. These deposits are closely associated with strike-slip faults formed due to the oblique convergence of the Nazca Plate. This tectonic regime also contributed to the regional-scale propylitic alteration observed in the area.

5.3 Local Geology

The Local Geology is modified from the SRK Report 2009.

The geological mapping carried out by Rio Tinto and checked by SRK, the the area in and around the Sofia Mine, was described apatite mineralization as alteration associated with an IOA (Iron Ore Apatite) deposit. SRK remapped the concession area and areas identified by Rio Tinto mapping as favorable for apatite mineralization at a scale of 1:4,000 (Figure 5-3) and produced a schematic map of the underground (Figure 5-4). SRK's focus was structural controls, rock types and the apatite mineralization (Véliz, et al, 2009).

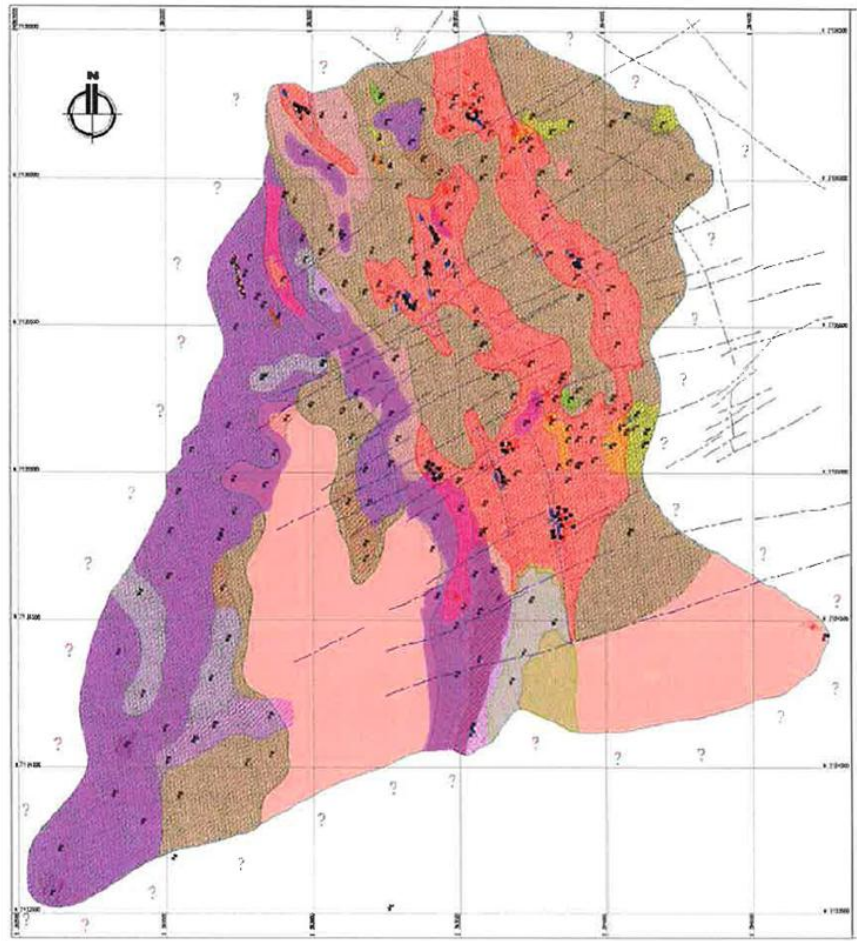
The host rock is gray-green colored phaneritic, hornblende diorite ranging from fine to medium grained with porphyritic texture in places. This mineralization is controlled by NNW-SSE and ENE–WSW structures. The former are narrow, with widths up to 30cm. The ENE–WSW structures are dilational (open space) and host apatite and actinolite mineralization up to 4m wide. In places, scapolite is also present with apatite (Véliz, et al, 2009).

The Sofia deposit corresponds to an implosion mega breccia cemented by alteration minerals consisting of apatite > actinolite with what is considered to be minor amounts Of scapolite. This mineralization is controlled by NNW - SSE and ENE – WSW structures. The former is rather discrete, With width up to 30cm. The latter gives rise to massive bodies of apatite > actinolite up to 4m wide. The host rock is a gray-green hornblend diorite with a variable texture between porphyritic and phaneritic, ranging from fine to medium grained. In the porphyritic variety, the ground mass is micro-phaneritic. The phenocrysts are plagioclase (80 - 90%), hornblende (3 - 5%), biotite (< 1%), traces of quartz y potassic feldspar.

The matrix-supported fabric shows a preferential order, where the diorite clasts with intense chlorite actinolite alteration exhibit a height/width ratio of about and are oriented approximately N30- 50E/20 - 50SE.

The waste in-situ mineral ratio in the breccia zones as seen at the Sofia Mine is variable, ranging from about 3:1 to 5: 1, while there is no clast-produced waste in the massive zones. The grade still varies in the massive zones, ranging from about 30 – 70% probably due to inclusion of what is thought to be amounts of fine-grained scapolite. Visual identification of this mineral this form is unfortunately rather difficult and a petrographic study with thin-section interpretation is recommended.

The mineral association from the massive mineralized zone outward is: apatite – actinolite (with tourmaline and k-feldspar) – magnetite (pyrite – chalcopyrite) – chlorite – epidote. The boundaries between these assemblages of alteration/mineralization minerals are frequently overlapping.

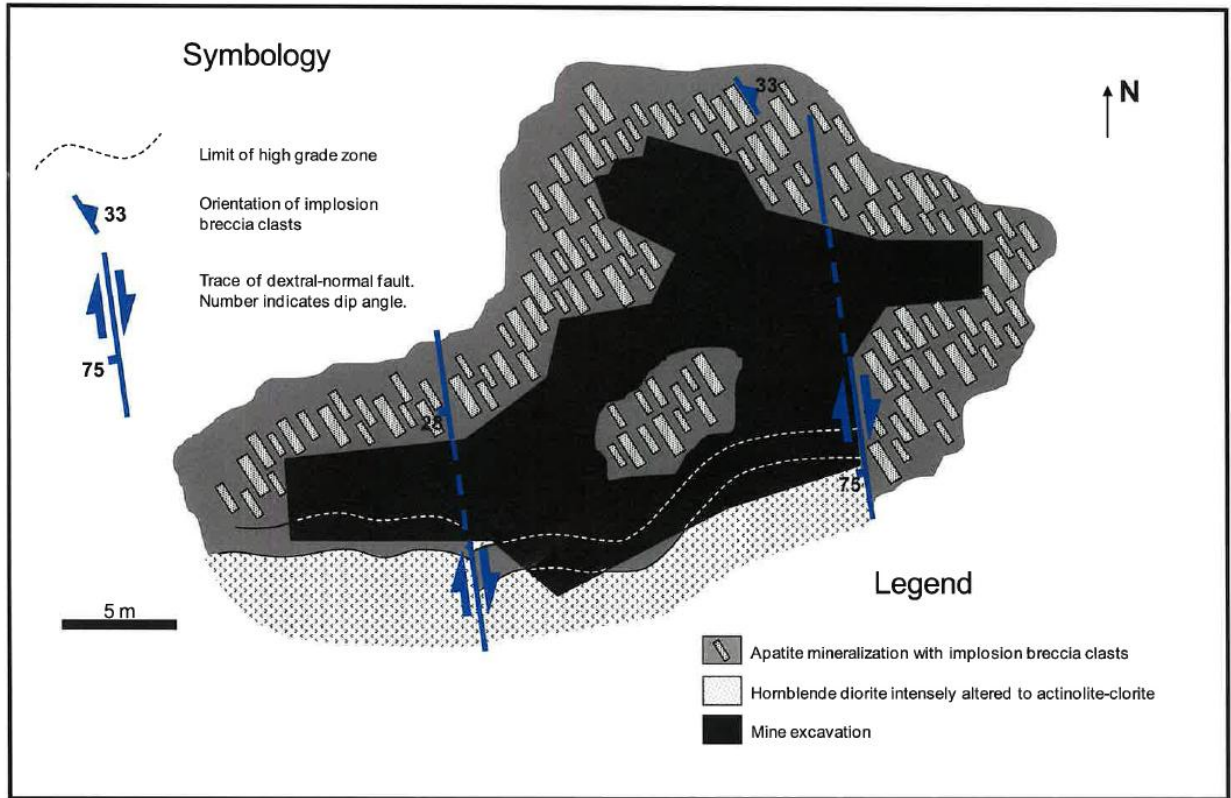


<p>Lithology</p> <ul style="list-style-type: none"> Hornblende Diorite – Hatch Indicates porphyritic texture Hornblende Monzo-diorite – Hatch Indicates porphyritic texture Hornblende Monzonite – Hatch Indicates porphyritic texture Andesite Dacite <p>Mineral Alteration</p> <ul style="list-style-type: none"> Apatite - Actinolite Chlorite – Magnetite – Epidote Actinolite Chlorite – Epidote Magnetite – Chlorite - Epidote 	<p>Symbology</p> <ul style="list-style-type: none"> Andesite Silica Calcite Apatite; Trace of Inferred Apatite Body Photolineaments Measured Fault Indicating Relative Movement Implosion Breccia Massive Magnetite Cu Oxide Zone of Brittle-Ductile Deformation with Strong Silicification Field Control Point
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Source: SRK Report 2008 – Figure 3.2.

Note: The map is in poor presentation condition; however, it was the best available in the data room provided. In the next phase of the Mariela Project, additional mapping work will be carried out, and this map will be updated accordingly.

Figure 5-3: Local Geology Map of Mariela Project



Source: SRK Report 2008 – Figure 3.3.

Note: The map is in poor presentation condition; however, it was the best available in the data room provided. In the next phase of the Mariela Project, additional mapping work will be carried out, and this map will be updated accordingly.

Figure 5-4: Geological Map of the Level 3 of the old underground mine

5.4 Geologic Structures of the Deposit

The Local Geology is modified from the SRK Report 2009.

Both synmineral (those formed during mineralization) and post-mineral structures are identified in the Project area. The former are temporally related to the dilational tectonic environment that was filled by phosphate mineralization. The post-mineral structure has offset the original geometry of the mineral deposit.

Structures that developed during mineralization include veinlets, veins and breccias, which host the principal mineralized bodies. These are primarily composed of apatite and actinolite, with lesser scapolite where massive and apatite with lesser amounts of scapolite and diorite clasts in the megabreccia. The mineralization is associated with two well-defined fault trends. These include the NNW–SSE trend associated with shearing and the ENE–WSW trend, which is typically a dilational, extension domain. The ENE–WSW structures exhibit mineralization with greater widths and higher grades (Véliz, et al, 2009).

There are two types of post-mineral faults:

- Those that have displacement of the eluvial cover indicating recent activity; and
- Those that follow the preferential mineralized trend.

On the lower level (Level 3) of the Sofia Mine, SRK conducted geological mapping of the structures controlling apatite mineralization. Two major faults were identified, N08°W /75 °SW and N08 °W/28 °SW, related to separate mineralizing events. The first was early with primarily dextral (right lateral movement), and the later event was extensional. Both faults offset the earlier high-grade mineralized apatite–actinolite zones. The mineralization on Level 3 occurs as:

- Matrix supported breccias with preferential orientation (ordered in a preferred direction) of clasts;
- High grade apatite veins that are located near the borders of the breccias; and
- Narrow apatite-actinolite veins and veinlets with varying amounts of scapolite that are near the outside margins of the main breccia zone.

Matrix material is generally composed of apatite and various amounts of scapolite. Observations made during mapping indicate 3% to 5% internal waste. Mining at this time has reached 50 m below surface (Véliz, et al, 2009).

5.5 Mineralization

5.5.1 Magnetite-Apatite Mineralization along the Chilean Coastal Cordillera

As Naslund, H.R. (2002), the discovery of the enormous Cu-Au-U-REE hematite breccias at Olympic Dam in Australia (Roberts and Hudson, 1983; Oreskes and Einaudi, 1990, 1992; Haynes et al., 1995) has made iron-oxide-apatite deposits of considerable economic interest for commodities other than iron. Indeed, many deposits are associated with nearby Cu, Au, U, or REE mineralisation (Bai and Yuan, 1983; Crocker, 1985; Einaudi and Oreskes, 1990; Hauck, 1990; Kisvarsanyi, 1990; Marikos et al., 1990; Vivallo et al., 1993a, 1994a, 1995a, 1995b; Espinoza et al., 1994; Förster and Jafarzadeh, 1994; Rojas and Henríquez, 1994; Foose and McLelland, 1995; Porter, 2000). Although iron-oxide-apatite deposits share many common features, it is clear that they did not all form by the same process or processes. Many deposits show evidence of formation in evolving magmatic systems: some deposits present clear magmatic features whereas others are predominantly hydrothermal in character; others still have such complicated histories or such poor exposures, that their origins are unclear.

Low-Ti, magnetite-apatite ore deposits occur associated with volcanic rocks in two belts in northern Chile (Figure 5-5); one of Cenozoic age in the High Andean Cordillera, and one of Cretaceous age in the Coastal Cordillera. The best-preserved orebodies are the Plio-Pleistocene, El Laco deposits in the High Andes, which were first described by Park (1961), who reported iron-oxide orebodies that resembled lava flows. He suggested that the deposits formed from a volatile-rich, iron-rich magma which intruded the local volcanic sequence at shallow depth and in places

erupted to the surface. This interpretation has been assumed by many subsequent investigators (Rogers, 1969; Haggerty, 1970; Frutos and Oyarzún, 1974; Henríquez and Martin, 1978; Frutos et al., 1990; Nyström and Henríquez, 1994, 1995; Naslund et al., 1997, 1998; Henríquez and Nyström, 1998; Broman et al., 1999; Nyström et al., 2002). Although not as well preserved, similar magmatic iron ore deposits occur in the High Andes of Chile at Incahuasi and **Magnetite** Pedernales, and at numerous localities in the Cretaceous iron belt (Figure 5-6) (Grež et al., 1991; Henríquez et al., 1994; Travisany et al., 1995). A number of recent reports, however, have suggested that the El Laco iron-oxide deposits are hydrothermal in origin (Hildebrand, 1986; Hitzman et al., 1992; Larson and Oreskes, 1993; Larson, 1994; Rhodes and Oreskes, 1995a, 1995b, 1996, 1999; Oreskes et al., 1994, 1995; Rhodes, 1996; Sheets et al., 1997; Rhodes et al., 1997, 1999; Hitzman, 2000).

5.5.2 Mineralization of the Mariela Deposit

The Mineralization of the Mariela Deposit text is modified from the SRK Report 2009, which is relied by MB.

Apatite occurs as yellow to white, glassy, hexagonal crystals up to 4 cm but more commonly as massive material intergrown with what is thought to be scapolite (white) and actinolite (green). Scapolite occurs as white masses and on the west side of the project area, as fine-grained crystals up to 4mm. Scapolite has been tentatively identified in the field by its prismatic, striated crystals that are square in cross-section. A hand specimen of the intergrown material fluoresces orange under a UV lamp, which is indicative of scapolite. Actinolite occurs as medium green, fibrous, radiating crystals in masses greater than 10 cm. Apatite, scapolite, actinolite and diorite clasts are found throughout the entire mineralized zone. Carbonate minerals may be present in the mineralization but were not positively identified. In addition, preliminary mapping indicates that dacite does not host apatite mineralization.

Other minerals that are found in association with mineralization include magnetite, hornblende, epidote, chalcedony, crystalline quartz, jasper, calcite and tourmaline. These minerals appear to be zoned laterally. Rio Tinto (2001) also described lateral zoning of magnetite, hornblende and actinolite.



Source: Naslund, H.R., Henriquez, F., Nyström, J.O., Vivallo, W. & Dobbs, F.M., 2002

Figure 5-5: Magnetite-apatite ore and some associated Fe-Cu-(Au, Ag) mineralisation in northern Chile (the Toldo-Velarde deposit is situated 125 km north of Antofagasta).

Magnetite was observed in crystalline and massive form in areas east and south of the Project, outside the concession boundary and as disseminations within the mineralization. Epidote is a secondary replacement mineral within the host rock and was also observed as small crystals in open spaces. A small amount of hornblende was observed in the workings immediately northeast of the camp. Workings northwest of camp included chalcedony, crystalline quartz and jasper.

In addition, gypsum was observed near surface as thin fracture coatings and trace amounts of malachite were observed as surface oxidation. Trace amounts of pyrite and chalcopyrite were observed distal to the main apatite zones. Nitrate caliches may also be present near surface (Even, 2009).

The internal waste to mineralized clast ratio in the megabreccia zones as seen at the Sofia Mine is variable, ranging from about 3:1 to 5: 1, while there is internal waste in the massive zones. The reported P205 grades are still variable in the massive zones. This variability may be a result of the presence of scapolite, which is visually difficult to identify and may be confused with apatite when massive. Specimens of massive apatite brought to SRK's Denver office had zones that fluoresced orange under a UV lamp, which is indicative of scapolite. However, core logging was performed outside during the day for safety reasons and the UV lamp was not useful for mineral identification under these conditions. A petrographic study would be necessary to confirm the presence of scapolite in the deposit (Véliz, et al, 2009).

Mineral associations in the apatite zones shows magnetite zoning with immiscibility textures where apatite and magnetite occur together. In the core of the orebody at the Sofia Mine, the following mineral assemblages and textures area observed:

- Apatite with inclusions of cumulus actinolite at a millimeter scale;
- Apatite matrix in implosion megabreccia with angular clasts of altered hornblende diorite;
- Apatite as well-developed crystals associated with silica in open spaces or vugs;
- Apatite – actinolite – silica +- scapolite +- calcite as sub-rounded clasts incorporated into a crystalline actinolite matrix; and
- Apatite–actinolite and tourmaline ± potassium feldspar which may occur together with potassium feldspar in millimeter-scale veinlets (Véliz, et al, 2009).

The following alteration mineral assemblages are observed in the margins of the primary apatite mineralization in contact with host rock:

- Actinolite–chlorite–magnetite±epidote veinlets extending into the wallrock and in places, development of centimeter-scale halos of magnetite associated with actinolite;
- Magnetite–chlorite–actinolite in veinlets and dissemination in the host rock;
- Chlorite–magnetite±epidote, in millimeter scale veinlets;
- Chlorite–epidote magnetite, alteration of hornblende and plagioclase; and
- • Epidote±chlorite, marginal to the mineralized system (Véliz, et al, 2009).

These mineral associations and alteration zones are consistent with specific iron deposits and IOP205-style mineralization.

5.6 Deposit Type

There is no description of the Deposit type associated with the Mariela Project.

In the bibliography, this deposit is considered analogous to the El Arco deposits, described by Keller, T. et all (2022) and San Juan Veins (by Keller T. et all (2022)) as a Magnetite-apatite (MtAp) deposits, also known as iron-oxide-apatite (IOA) or Kiruna-type. They comprise large bodies of high-grade magnetite (Fe₃O₄) ore enriched in Ca-Mg-(Fe)-bearing silicates (diopside, actinolite),

sulphate-bearing minerals (anhydrite, scapolite), and phosphates (apatite, monazite) with, at some localities, significant concentrations of uranium, cobalt, and rare earth elements (REE). Their genesis is the subject of ongoing debate.

The formation of MtAp deposits related to a hydrothermal replacement or precipitation in subvolcanic environments (Hypabyssal). In contrast, the prevalent hypothesis of orthomagmatic to magmatic-hydrothermal ore genesis posits a formation by fracture-facilitated shallow intrusion to extrusion of an iron-enriched liquid of magmatic origin. The hypothesis is based largely on the conspicuous and well-exposed geology of the deposits at El Laco, an andesitic arc volcano in the Central Volcanic Zone, Northern Chile, their unique morphology, reminiscent of basaltic lava flows and tephra deposits, as well as their positioning along interpreted collapse structures on the edifice flanks. The nature and source of the ore-forming liquid, as well as the mechanics of its emplacement, however, remain contentious.

Recent evidence from melt inclusions hosted in silicate phenocrysts from El Laco andesite, as well as from petrology experiments on similar compositions, suggest that exsolution of an immiscible Fe-rich melt from a parent andesite magma potentially aided by assimilation or anatexis of evaporites in the shallow crust may be the source of an iron-silicate(-phosphate-sulfate) ore liquid. In contrast, others have proposed the liquid to be a magnetite-brine suspension formed by flotation and accumulation of bubble-oxide aggregates. Recent experiments confirm that bubble-oxide aggregates can form in a hot and wet andesite magma as magnetite phenocrysts heterogeneously nucleate on volatile bubbles, or vice-versa. However, experiments also show that flotation rates of small bubble-oxide aggregates are relatively slow. Bubble growth and coalescence would allow more rapid flotation but could result in detachment of the oxide load.

In this contribution, we refine a genetic model involving Fe-Si melt immiscibility and test its consistency with available evidence as well as the internal consistency of the physical processes comprised in it.

The proposed genetic model suggest the ore formation by intrusive to extrusive emplacement of an Fe-rich melt sourced from liquid immiscibility may apply to the genesis of Kiruna-type deposits more generally with important ramifications for understanding other ortho-magmatic mineral systems, for resource exploration, for magma differentiation at continental arcs, and for comparative to the other Chilean deposits with a direct relationship between magnetite-(apatite) (MtAp) mineralization and iron oxide-copper-gold (IOP205) mineralization. The MtAp mineralization includes Ti-poor magnetite, fluorapatite, and actinolite and is crosscut and partially replaced by a younger IOP205 mineralization that includes a second generation of actinolite and magnetite with quartz, chalcopyrite, pyrite, and molybdenite. Also associated with crystallized iron-rich melts that used the pre-existing structures of the Atacama Fault System as conduits. These rocks later acted as a trap for hydrothermal IOA mineralization, where the IOP205 event was related to fluids having a more crustal Nd ($\epsilon_{\text{Nd}} < + 5.7$) composition than the MtAp mineralization. This likely reflects the mixing of Nd from the MtAp protolith and a deep magmatic-hydrothermal source, very likely an unexposed intrusion equivalent to the host diorite. Sulfur isotope compositions ($\delta^{34}\text{S}$, + 0.3 to + 3.4‰) are consistent with a magmatic source.

Although the genetic relationship between MtAp and IOP205 deposits remains debatable, the petrographic, geochemical, mineralogical, geochronological stable and radiogenic isotope, and field data results from the present study suggest that the IOP205 and MtAp mineralization events in the districts are genetically independent of each other.

Shown the two similar genetic models developed at Chilean MtAp deposits El Laco complex (left) and San Juan Veins (in right).

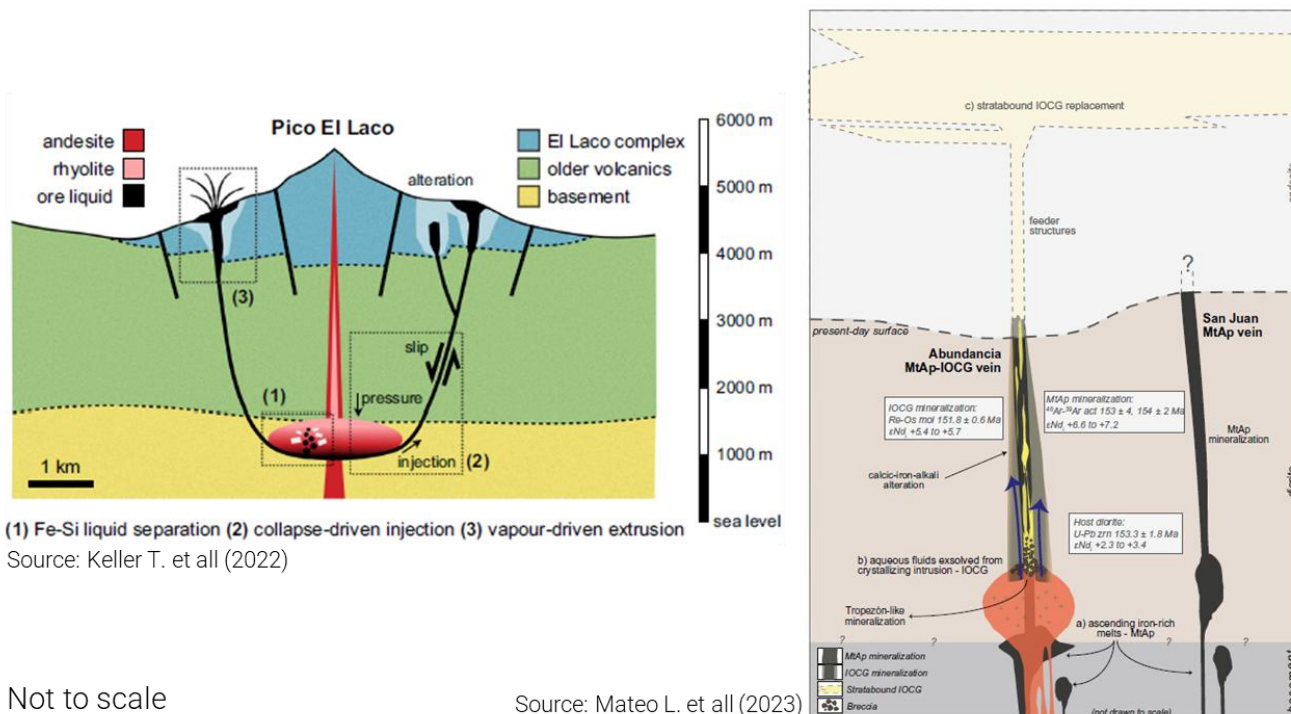


Figure 5-6: Two similar genetic models developed at Chilean MtAp deposits El Laco complex (left) and San Juan Veins (in right). The formation of the MtAp-IOP205 system. Basically, ascent of iron-rich melts after separating from a silicate melt with later crystallization along tensional faults related to the Atacama Fault System. The intrusion of these dykes postdates the emplacement and crystallization. A late magmatic-hydrothermal event with replacement of the earlier MtAp rocks by the IOP205 mineralization. Fluids are derived from a deep, late crystallizing, diorite intrusion. Local replacement of Late Jurassic-Early Cretaceous andesite by the IOP205 mineralization, forming stratabound deposits.

6 EXPLORATION WORKS

The exploratory work conducted by Fosfatos de Taltal between 2023 and 2024 focused on validating historical drilling data, performing topographic surveys, as well as surveying the collars of drill holes and excavations from the decommissioned underground mine. Additionally, samples were collected from panels within the underground mine.

In the Table 6-1 are presented the summary of Exploration Works performed by Fosfatos de Taltal SpA at Mariela Project

Table 6-1: Summary of Exploration Works performed by Fosfatos de Taltal SpA at Mariela Project.

Exploration	Summary
Bibliographic	- Access of data shed provided by Cesar Formas Collection of information on the regional geology and studies on phosphorite deposits.
Underground Panel Sampling	- Field Visit of QP M. Batelochi and collected 25 samples by MB; - The sampling was complemented by 48 samples collected by Mauricio Cornejo..
Historical drilling Data	- Analysis of historical data; - Selection of samples for Validation; - Re-sampling, Re-logging and re-assay at ALS a total of 326 samples; - QAQC and Validation of Historical data by Pair data analysis - Re-built the drilling database substituting the samples analyzed by SRK to Bifox re-assay at coincident intervals. Also, there are some not coincident intervals that was composited by MB to be adjusted on the database. In total the Resource database assays have: 180 SRK assays replaced by Bifox; 15 intervals composited by MB to consolidate the database without gaps (assayed at ALS Chemex) and 282 assays from SRK (2009).
Reconstitution of regional topography from SRTM Image	- Topographic Survey:: - - Collar of Drill holes; - - Topographic; - - Topography of Underground mine.

6.1 Data shed access and Bibliographic study

The Data shed provided by Cesar Formas was in digital format and was accessed opening the provided data. The relevant information for Exploration program was the SRK Reports and the Drillhole database. Also, the cores of the drilling campaign performed in 2008/2009 that was possible validate the drilling database.

6.2 Underground Panel Sampling

Two sampling campaigns were conducted on panels within the galleries of the former underground mine operated by Cesar Formas, totaling 73 points and 75 samples (Points U55 and U56 were taken 2 samples):

3. During the Field Visit of QP M. Batelochi (MB) in September 2023, where 25 samples were collected.
4. Complemented by an additional 50 samples in 48 points were collected by Mauricio Cornejo (MC) in 2024.

Both campaigns followed the same procedures for sample collection, logging, and chemical analysis.

6.2.1 Sampling, Preparation and Assay Protocols

The sampling procedure started with identification of the representative point inside the Levels of the old underground mine (Old UG). After the selection of the point, the geologist marks the limits of the panel, take photo, estimate the percentage of apatite stock work veins, mark the points to be scratched by the assistants, taking two aliquots around 2 kg of apatite veins and waste material. The percentage of Apatite is the weight of mean grade calculation. In Figure 6-1.

All panels were described and photographed and are available in the Item 10.7 (Logging of the Panel samples inside the Old Underground Mine).

The samples were prepared and assayed at ALS Patagonia S.A. in two batches (CO24082203 and CO2410148) with the inclusion of Blanks, Standards and Duplicates. The preparation and the assays were under management of Rene Mamani and followed the following procedures and the analyzed elements:

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-31d	Pulverize Split - duplicate
BAG-01	Bulk Master for Storage
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-22Y	Split Sample - Boyd Rotary Splitter
PUL-32m	Pulverize 500g - 85% <75um
DRY-22	Drying - Maximum Temp 60C
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22d	Sample login - Rcd w/o BarCode dup
SPL-22d	Duplicate split - rotary splitter

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF24	Phosphate by Fusion/XRF	XRF
ME-GRA05	H2O/LOI by TGA furnace	TGA
ME-MS81h	High grade REE by fusion/ICPMS	ICP-MS

Method	Element	Method	Element	Method	Element
ME-XRF24	Al2O3 %	ME-MS81h	Ce ppm	ME-MS81h	Rb ppm
ME-XRF24	CaO %	ME-MS81h	Dy ppm	ME-MS81h	Sm ppm
ME-XRF24	Fe2O3 %	ME-MS81h	Er ppm	ME-MS81h	Sr ppm
ME-XRF24	K2O %	ME-MS81h	Eu ppm	ME-MS81h	Ta ppm
ME-XRF24	MgO %	ME-MS81h	Gd ppm	ME-MS81h	Tb ppm
ME-XRF24	MnO2 %	ME-MS81h	Hf ppm	ME-MS81h	Th ppm
ME-XRF24	Na2O %	ME-MS81h	Ho ppm	ME-MS81h	Tm ppm
ME-XRF24	P2O5 %	ME-MS81h	La ppm	ME-MS81h	U ppm
ME-XRF24	SiO2 %	ME-MS81h	Lu ppm	ME-MS81h	W ppm
ME-XRF24	TiO2 %	ME-MS81h	Nb ppm	ME-MS81h	Y ppm
ME-XRF24	Total %	ME-MS81h	Nd ppm	ME-MS81h	Yb ppm
ME-GRA05	LOI %	ME-MS81h	Pr ppm	ME-MS81h	Zr ppm

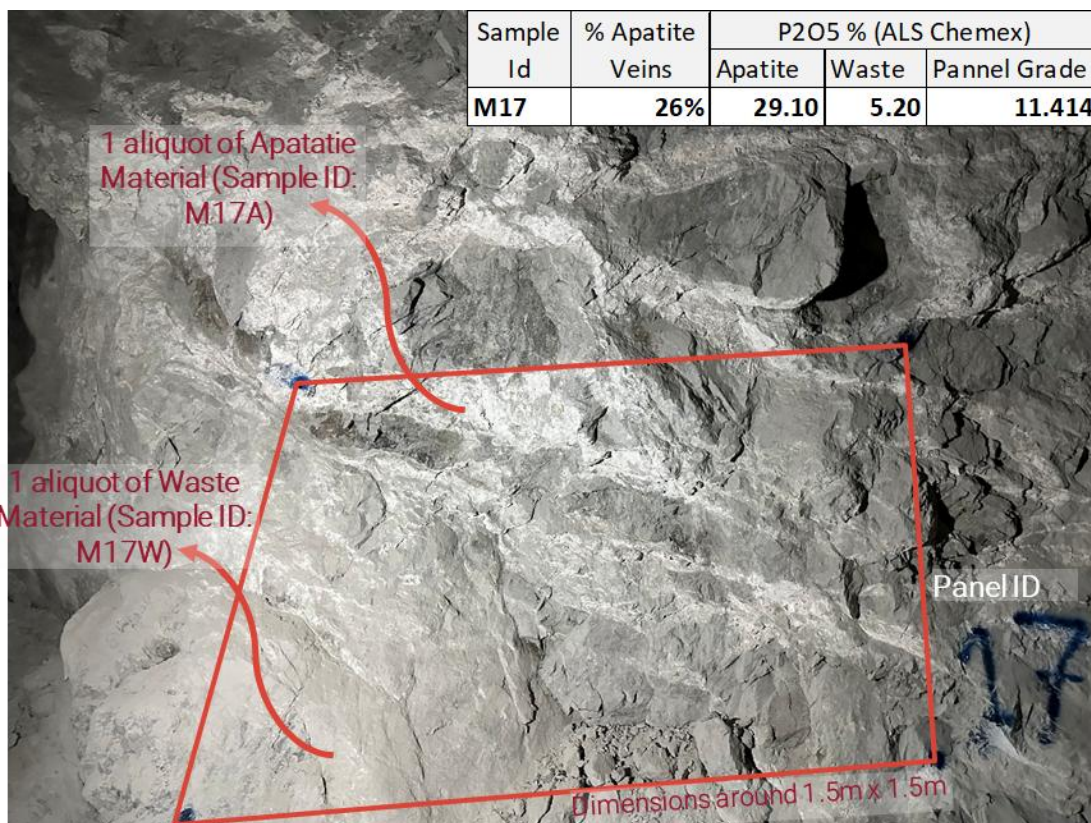
Rene Mamani, Laboratory Manager, Peru

ALS Patagonia S.A.

Hermanos Carrera Pinto 159,
Parque Industrial Los Libertadores, Colina
Santiago

Phone: +56 2 2654 6100 Fax: +56 2 2654 6163

www.alsglobal.com/geochemistry



Sample Id	% Apatite Veins	P2O5 % (ALS Chemex)		
		Apatite	Waste	Pannel Grade
M17	26%	29.10	5.20	11.414

Source: Field Visit Sampling Report by MB Geologia in Sept 2023

Figure 6-1: Example of Pannel 17 Sampling Procedure

The quantitative of the samples sent to laboratory by batch are shown at Table 6-2 :

Table 6-2: Quantitative Summary of Panel Underground Sampling

Source: Sampling Plan by Fosfatos de Taltal Staff and ALS Patagonia Certificates

Samples per Batch	CO24101489		CO24082203		Total	
	Nb Samples	Percent	Nb Samples	Percent	Nb Samples	Percent
Blanks	10	11%	4	9%	14	10%
Field Duplicates	14	15%	4	9%	18	13%
Standard (GPO-17)	10	11%	4	9%	14	10%
Total	34	36%	12	26%	46	33%
Original Samples	94		47		141	

6.2.2 QAQC

The Quality Assurance/Quality Control (QA/QC) analysis of the Underground samples followed the procedure described at of this report at Item 10.6 (Quality Assurance and Quality Control (QA/QC))10.6. Below is presented the analysis of Standard (Blinded, inserted by Fosfatos de Taltal Staff. Std = GPO17 – Geostats), blanks (from ALS – non blinded) and Duplicates (Blinded).

6.2.2.1 STANDARDS

Quality Assurance is monitored through the use of Company-submitted certified analytical standard GPO17, supplied by Geostats PTY Ltd (20 Hines Road, O'Connor, Western Australia 6163 - Phone: +61 8 9314 2566, Fax : +61 8 9314 3699 - Email: info@geostats.com.au - Website: <http://www.geostats.com.au>.

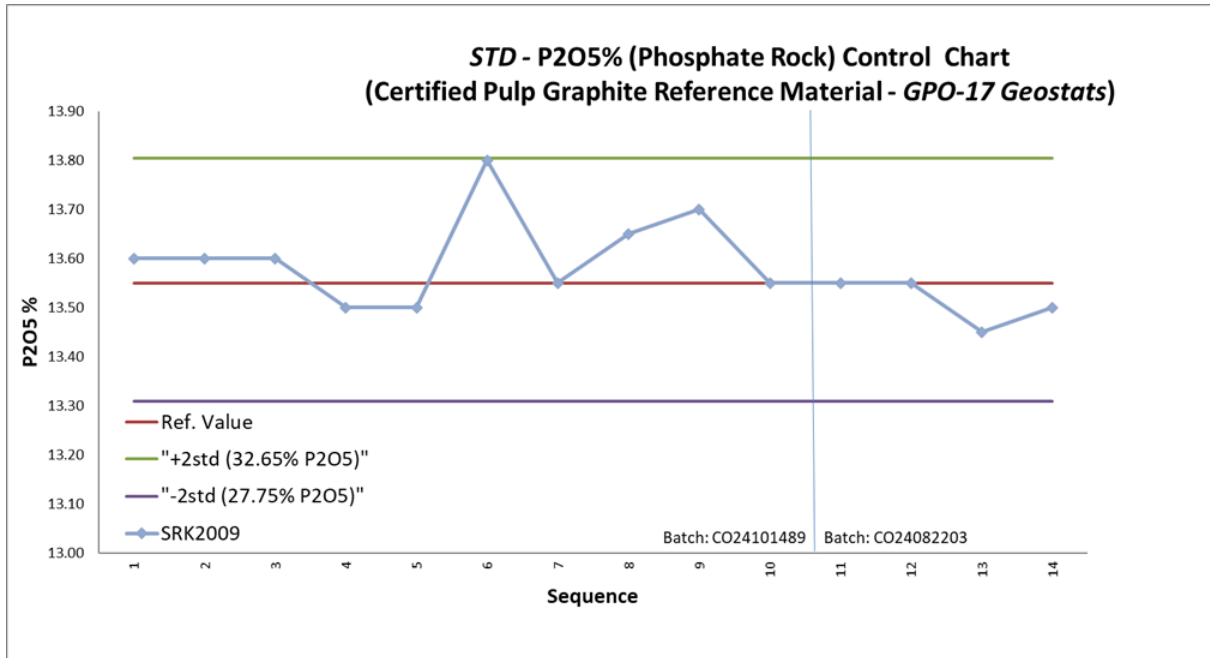
Standards are inserted at a rate of 1 in 10 samples (average), totaling 14 control samples in 141 total original samples. Of them, 4 at batch CO24082203 and 10 at batch CO24101489 sent to ALS Copiapó Laboratory as Blinded sample.

It was performed analysis only for P₂O₅% element. The control chart at Figure 6-2 shown the results for the standards that indicated 100% of the samples are in the region of less than +- 2 standard deviation, indicating acceptable accuracy with no relevant bias associated, indicating that there is no problem with the standard itself and adequate for Mineral Resources Estimates.

6.2.2.2 Blanks

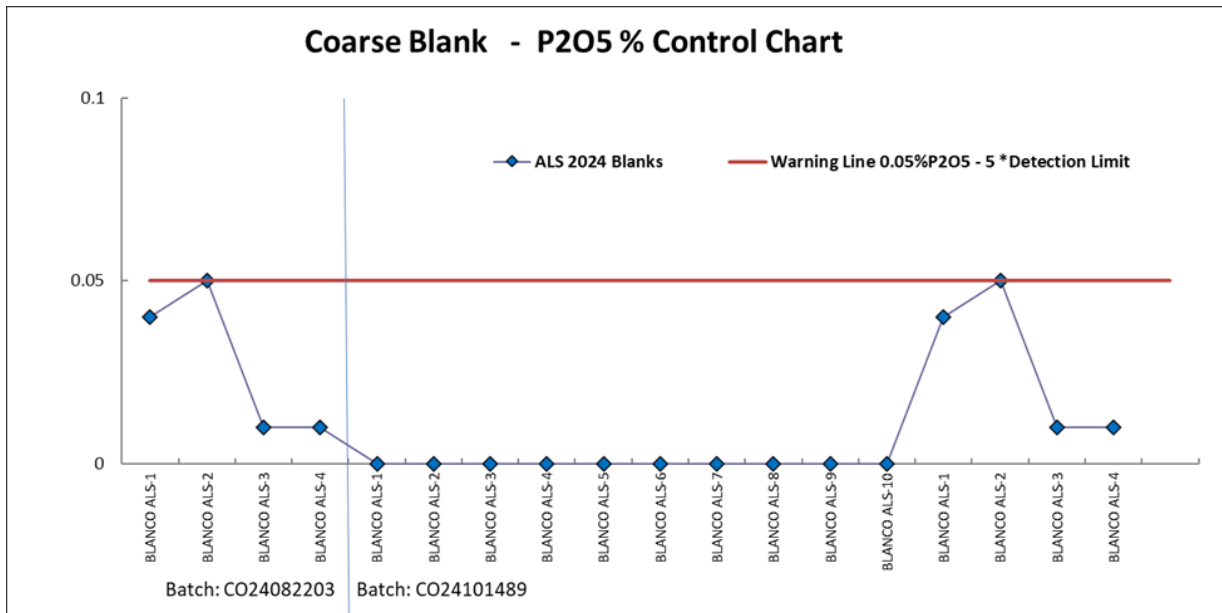
The Company has utilized 01 pulp blank supplied by ALS Copiapó, that is not blinded. 14 blanks were inserted, that represents a rate of 1 in 10 samples, where 4 of them were inserted at batch CO24082203 and 10 at batch CO24101489

Figure 6-3 shows the control chart of the blank standard for P₂O₅ %. There was 1 sample > 0.1% P₂O₅ that the Company had already re-assayed and fixed the contamination problem on the referred batch. The results are all acceptable indicating no systematic contamination of samples.



Source: Underground Sample Database and ALS Copiapó Certificates, 2024

Figure 6-2: Control Chart of P₂O₅% referred to the GPO-17 Geostats Certified Pulp Phosphate Reference Material.



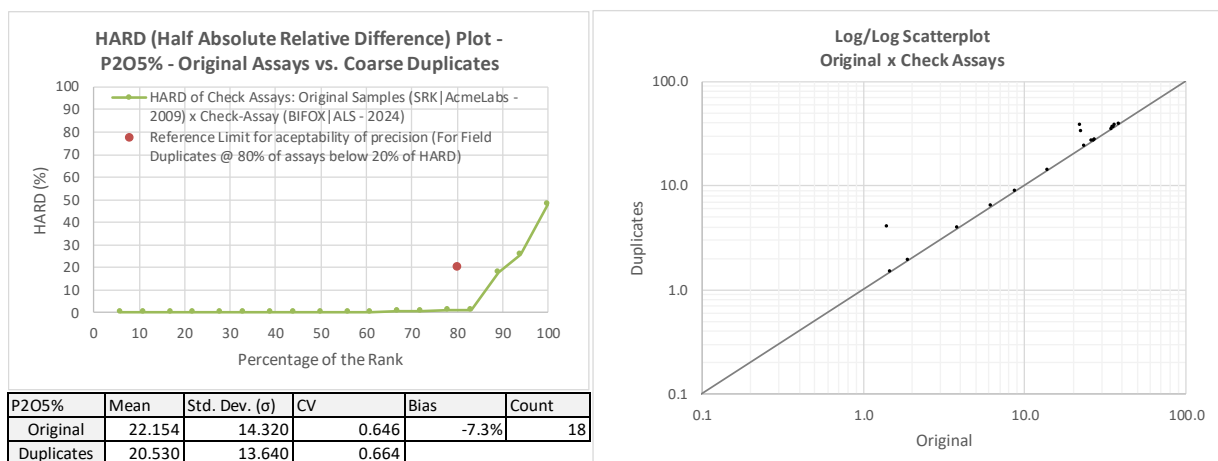
Source: Underground Sample Database and ALS Copiapó Certificates, 2024

Figure 6-3: Company-submitted Blanks. CRM non blinded inserted by ALS Copiapó.

6.2.2.3 Duplicates

Coarse duplicates are the duplicate sample has been taking following the Core duplicate procedures, to collect a pair of a quarter material after crushing.

Coarse duplicates reported by the laboratories are illustrated in Figure 6-4. These duplicates are taken at a frequency of 1 in 8 samples (13%), totaling 18 duplicates. Despite the Small number of samples, there is no consolidation of any bias, but the ra with a moderate scatter characteristic in P₂O₅% results.



Source: Underground Sample Database and ALS Copiapó Certificates, 2024

Figure 6-4: Coarse Duplicates of Underground Sampling

6.2.3 Exploration Results

The exploration results of the 75 panel samples (Table 6-3) in the old underground mine shows 70 samples with P₂O₅ > 5% and the 18 samples with P₂O₅ > 15% were in the Pillars (Geotechnics). In the **Erro! Fonte de referência não encontrada**. Figure 6-5 shown the map of the main intercepts and at and the statistics at Figure 6-6.

Table 6-3: List of Panel samples take inside the Old Underground Mine, in 2023 and 2024.

Source: 2024 Panel samples Database of Fosfatos de Taltal.

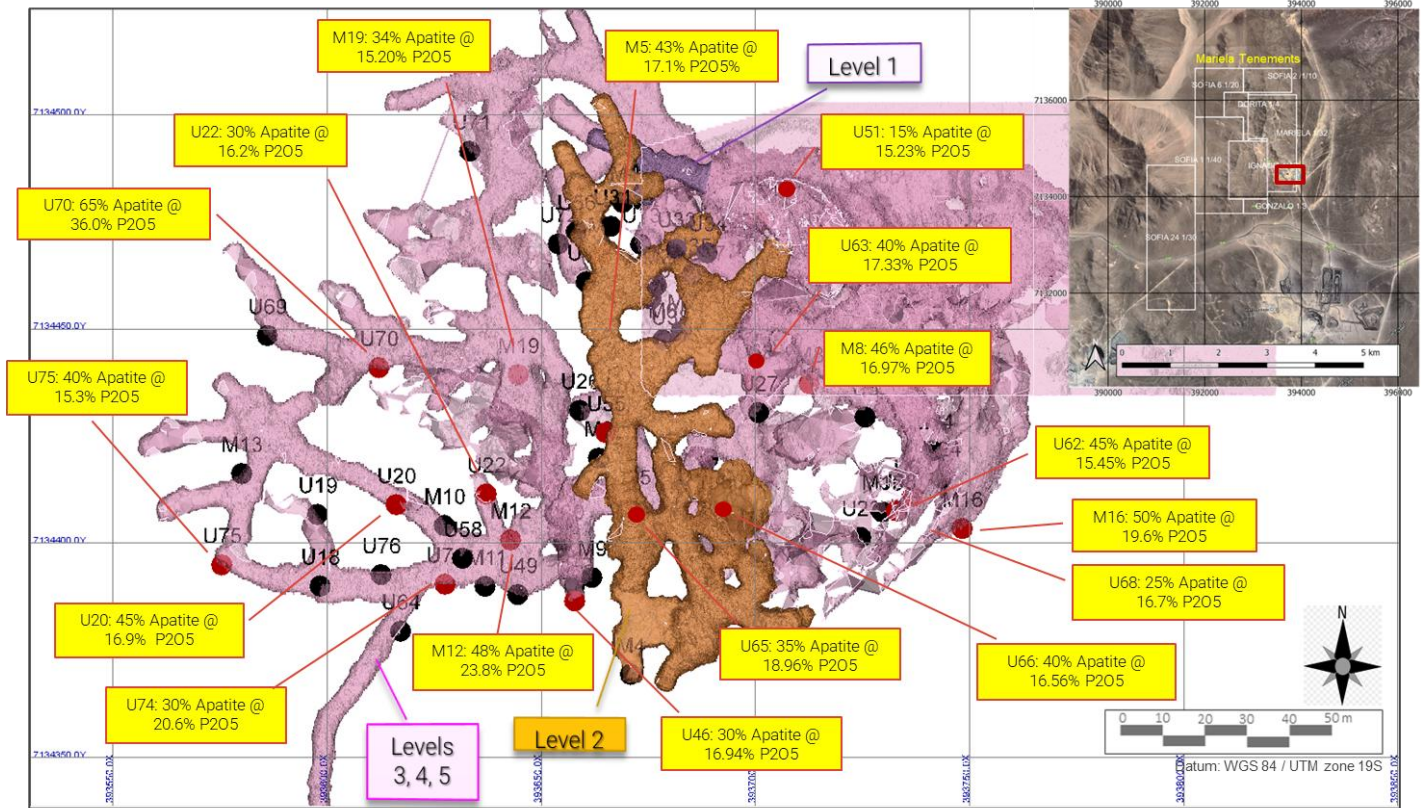
Notes: There are 4 waste samples that lost the aliquot and were not analyzed. For those samples assumed P₂O₅% = 3.7% that represents the Median of the analyzed waste aliquots.

Sample Numbers started with "M" were collected by MB and "U" by MC.

Point ID	% Apatite	Apatite		Waste		Panel P ₂ O ₅ %	Level
		P ₂ O ₅ % ALS	Sample ID	P ₂ O ₅ % ALS	Sample ID		
M1	11%	31.7	M1A	1.9	M1W	5.2	L1
M2	16%	36.9	M2A	4.5	M2W	9.7	L1
M3	32%	25.0	M3A	0.1	M3W	8.1	L2
M4	40%	36.0	M4A	0.5	M4W	14.7	L2

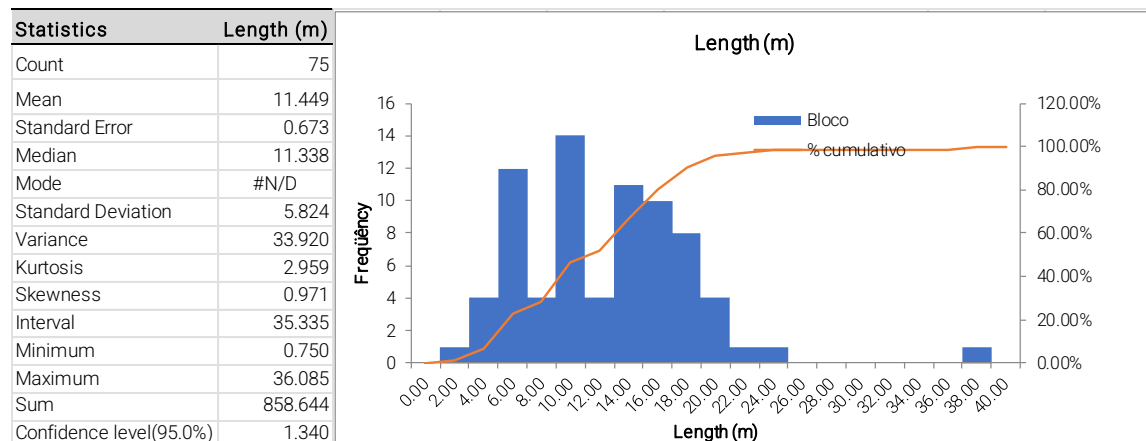
Point ID	% Apatite	Apatite		Waste		Panel P ₂ O ₅ %	Level
		P ₂ O ₅ % ALS	Sample ID	P ₂ O ₅ % ALS	Sample ID		
M5	43%	38.0	M5A	1.4	M5W	17.1	L2
M6	21%	27.1	M6A	1.0	M6W	6.5	L2
M7	35%	23.9	M7A	1.4	M7W	9.3	L2
M8	46%	36.2	M8A	0.6	M8W	17.0	L3
M9	15%	31.8	M9A	7.5	M9W	11.1	L3
M10	28%	36.0	M10A	0.7	M10W	10.6	L3
M11	25%	35.5	M11A	0.9	M11W	9.5	L3
M12	48%	38.3	M12A	10.4	M12W	23.8	L3
M13	36%	31.7	M13A	4.5	M13W	14.3	L3
M14	45%	30.4	M14A	1.5	M14W	14.5	L4
M15	43%	25.7	M15A	3.4	NoSample	13.0	L4
M16	50%	37.8	M16A	1.4	M16W	19.6	L4
M17	26%	29.1	M17A	5.2	M17W	11.4	L4
M18	26%	35.8	M18A	0.9	M18W	10.0	L5
M19	34%	34.4	M19A	3.4	NoSample	13.9	L5
M20	25%	26.8	M20A	11.0	M20W	15.0	L5
M21	22%	37.5	M21A	0.7	M21W	8.8	Near Mining
M22	10%	25.8	M22A	3.4	NoSample	5.6	Near Mining
M23	15%	34.7	M23A	0.8	M23W	5.9	Near Mining
M24	25%	30.7	M24A	0.8	M24W	8.3	Near Mining
M25	15%	14.0	M25A	8.3	M25W	9.1	Near Mining
U1	20%	26.1	U1A	5.5	U1W	9.6	L23
U11	10%	37.3	U11A	1.6	U11W	5.2	L3
U14	30%	34.7	U14A	2.9	U14W	12.4	L4
U18	20%	30.1	U18A	8.1	U18W	12.5	L3
U19	35%	26.4	U19A	5.7	U19W	13.0	L3
U20	45%	33.1	U20A	3.7	U20W	16.9	L3
U22	30%	39.3	U22A	6.3	U22W	16.2	L23
U23	25%	37.7	U23A	5.3	U23W	13.4	L3
U24	20%	26.9	U24A	1.4	U24W	6.5	L4
U26	0%	4.1	U26A	3.4	NoSample	3.4	L23
U27	25%	20.4	U27A	11.5	U27W	13.7	L23
U28	15%	36.1	U28A	9.0	U28W	13.1	L4
U31	15%	30.1	U31A	2.6	U31W	6.7	L12
U33	15%	38.6	U33A	0.8	U33W	6.4	L12
U34	20%	37.2	U34A	2.9	U34W	9.7	L12
U35	10%	25.4	U35A	1.9	U35W	4.3	L12
U36	15%	26.3	U36A	2.1	U36W	5.7	L12
U38	20%	30.3	U38A	2.7	U38W	8.2	L23
U39	10%	23.7	U39A	3.9	U39W	5.9	L12
U40	2%	24.5	U40A	2.4	U40W	2.8	L12
U44	10%	21.4	U44A	3.4	U44W	5.2	L5
U46	30%	33.9	U46A	9.7	U46W	16.9	L23
U49	5%	12.3	U49A	2.0	U49W	2.5	L23
U5	5%	39.2	U5A	0.5	U5W	2.5	L3
U50	5%	26.2	U50A	3.4	U50W	4.5	L12
U51	15%	24.2	U51A	13.7	U51W	15.2	L23
U52	20%	27.5	U52A	0.4	U52W	5.8	L23
U53	25%	33.8	U53A	3.9	U53W	11.3	L23
U54	40%	31.2	U54A	3.7	U54W	14.7	L23
U55	40%	32.8	U55A	8.8	U55W	18.4	L23
U56	15%	37.9	U56A	4.0	U56W	9.1	L23
U58	40%	32.9	U58A	1.6	U58W	14.1	L3
U62	45%	31.4	U62A	2.4	U62W	15.5	L4
U63	40%	26.3	U63A	11.4	U63W	17.3	L4
U64	40%	20.9	U64A	8.2	U64W	13.3	L3
U65	35%	29.1	U65A	13.5	U65W	19.0	L3
U66	40%	32.0	U66A	6.3	U66W	16.6	L3

Point ID	% Apatite	Apatite		Waste		Panel P ₂ O ₅ %	Level
		P ₂ O ₅ % ALS	Sample ID	P ₂ O ₅ % ALS	Sample ID		
U67	45%	25.1	U67A	4.8	U67W	14.0	L3
U68	25%	29.8	U68A	12.4	U68W	16.7	L3
U69	25%	31.0	U69A	1.4	U69W	8.8	L5
U70	65%	37.1	U70A	34.2	U70W	36.1	L5
U71	0%	0.0	U71A	0.8	U71W	0.8	L5
U72	30%	29.6	U72A	1.0	U72W	9.6	L5
U73	40%	35.6	U73A	0.9	U73W	14.8	L5
U74	30%	35.7	U74A	14.2	U74W	20.6	L3
U75	40%	35.6	U75A	1.7	U75W	15.3	L3
U76	15%	37.1	U76A	8.3	U76W	12.6	L3
U77	20%	25.4	U77A	0.9	U77W	5.8	L4
Repeated sample point of U55 and U56							
U55	45%	32.8	U55A	8.8	U55W	19.6	L23
U56	2%	37.9	U56A	4.0	U56W	4.7	L23



Source: 2024 Panel samples Database of Fosfatos de Taltal.

Figure 6-5: Map of the significant Exploration Results of the Panel Samples on old underground Mine, in 2023 and 2024. The background of the figure is the as built of the Underground Mine.



Source: 2024 Underground sample Database of Fosfato de Taltal.

Figure 6-6: Statistics Analysis of Panel Underground Sample.

In the CP's opinion, these samples, due to their representativeness, including 1.5 x 1.5 meter panels, described and photographed, surveyed with high precision equipment, assays at ALS Chemex including QA, are robust enough to be included in mineral resource estimates.

6.3 Validation of historical drilling Data and Resource Database Consolidation

The validation of historical drilling data and the consolidation of the resource database were carried out using the drill core and accompanying documentation provided by César Formas. The Fosfatos de Taltal team conducted an analysis of historical data from documental analysis and cores of the drilling campaigns completed by SRK in 2009.

The objective was to validate the quality and reliability on identifying any inconsistencies, gap intervals to be sampled., to support a Mineral Resource Evaluation for the Mariela Project.

This section initially presents information on the historical drill holes, extracted from the SRK 2009 reports, and subsequently are presented details of the validation work performed by the Fosfatos de Taltal team to ensure these data could be used in the mineral resource estimates.

6.3.1 Information of Historical Drilling campaign

This item was derivate from the SRK Report 2009: "Confidential Exploration Report - Sofia Mine - Antofagasta Region II, Chile".

Perfo Andes Limitada (Perfo Andes) was contracted to perform the drilling program. Perfo Andes used two Boart Longyear drill rigs, a new LF90 and a smaller LF70. Thirty-eight drillholes were completed, totaling 5,086.75m using HQ3 triple tube rods and producing HQ core with a diameter of 63.5mm. Core recovery exceeded 90%. A total of 286 core samples and 31 control samples (QA/QC) were submitted for analysis. Samples were analyzed at ACME Vancouver using Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) in its whole rock analysis package 4A03. In this technique,

a 0.2g split of the sample is fused with lithium metaborate/tetraborate and dissolved in dilute nitric acid. The sample is then analyzed using ICP-AES. Loss on ignition (LOI) is determined by weight difference after ignition at 1,000°C. Total C and S were also determined using LECO Analysis on a 2g split (package 2A12).

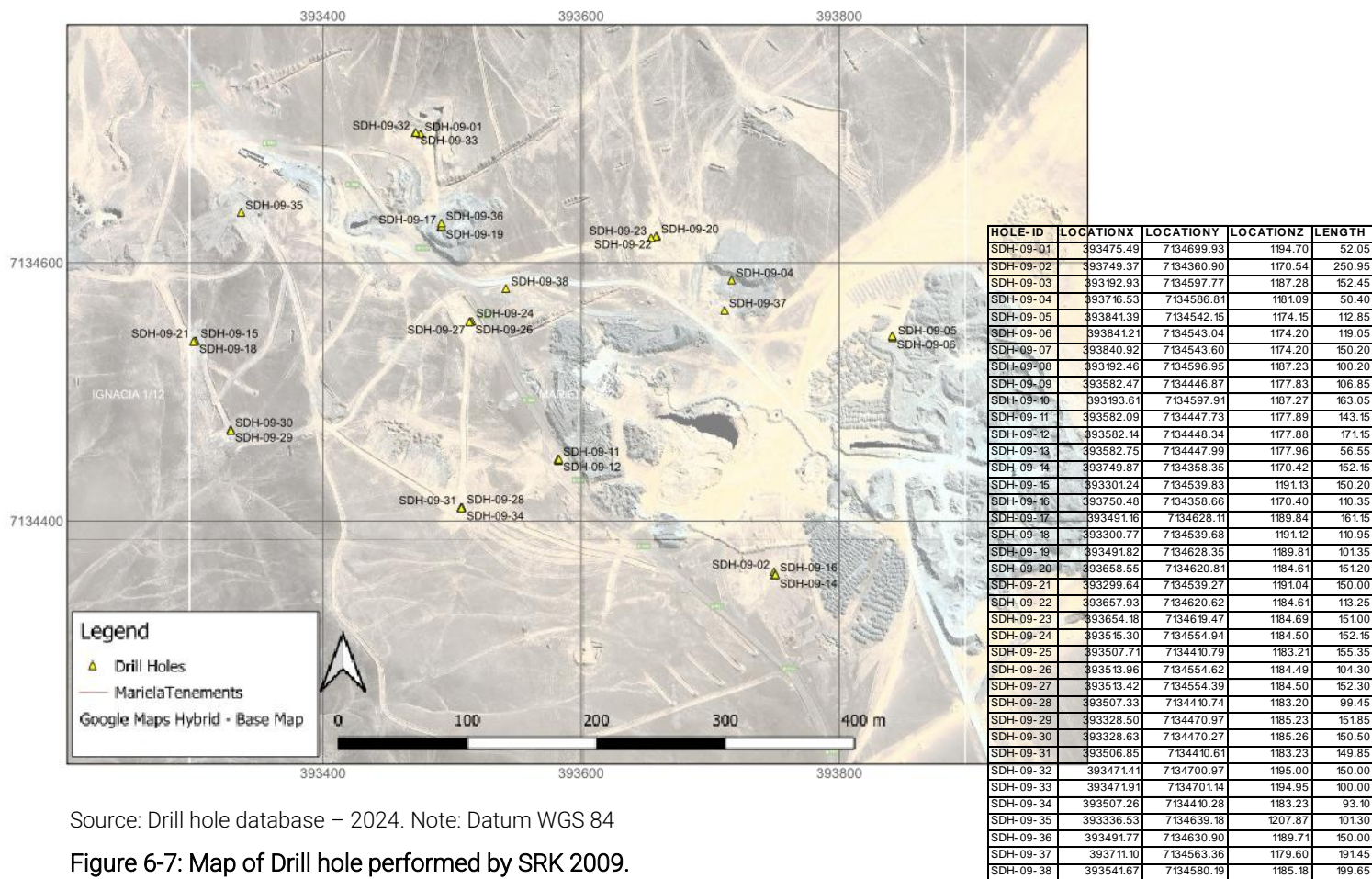
As in the SRK 2009 report the downhole surveys were completed on ten drillholes using a non-magnetic survey to check for drillhole deviation during drilling. Surveying was contracted by Comprobe Limitada (Comprobe) based in Santiago, Chile. No significant deviation was identified in the drillholes surveyed. The drillholes surveyed by Comprobe.: SDH-09-02; SDH-09-08 SDH-09-09; SDH-09-11; SDH-09-14; SDH-09-16; SDH-09-19; SDH-09-20; SDH-09-22; SDH-09-23. Unfortunately, the survey data was not found in the documentation provided by Fosfatos de Taltal, and the survey for the drilling holes was considered as the orientation of the hole's collar as shown at Table 6-4. Due to the lack of down the hole survey, the location of the samples is not accurate, them it is appropriate to release only Inferred Mineral Resources.

Table 6-4: List of down the hole orientation of the Drill holes performed SRK 2009.

Source: Available data to Fosfatos de Taltal in 2024. This information is in 2024 database.

HOLE-ID	DISTANCE	AZIMUTH	DIP	HOLE-ID	DISTANCE	AZIMUTH	DIP
SDH-09-01	52.05	10.00	-70.00	SDH-09-20	151.20	80.00	-70.00
SDH-09-02	250.95	0.00	-60.00	SDH-09-21	150.00	260.00	-70.00
SDH-09-03	152.45	30.00	-60.00	SDH-09-22	113.25	0.00	-90.00
SDH-09-04	50.40	0.00	-90.00	SDH-09-23	151.00	260.00	-70.00
SDH-09-05	112.85	160.00	-50.00	SDH-09-24	152.15	80.00	-70.00
SDH-09-06	119.05	160.00	-65.00	SDH-09-25	155.35	80.00	-70.00
SDH-09-07	150.20	160.00	-80.00	SDH-09-26	104.30	0.00	-90.00
SDH-09-08	100.20	0.00	-88.00	SDH-09-27	152.30	260.00	-70.00
SDH-09-09	106.85	160.00	-50.00	SDH-09-28	99.45	0.00	-90.00
SDH-09-10	163.05	80.00	-70.00	SDH-09-29	151.85	260.00	-70.00
SDH-09-11	143.15	160.00	-65.00	SDH-09-30	150.50	80.00	-70.00
SDH-09-12	171.15	160.00	-80.00	SDH-09-31	149.85	260.00	-70.00
SDH-09-13	56.55	100.00	-50.00	SDH-09-32	150.00	260.00	-70.00
SDH-09-14	152.15	255.00	-70.00	SDH-09-33	100.00	0.00	-90.00
SDH-09-15	150.20	80.00	-70.00	SDH-09-34	93.10	160.00	-70.00
SDH-09-16	110.35	0.00	-90.00	SDH-09-35	101.30	0.00	-90.00
SDH-09-17	161.15	250.00	-65.00	SDH-09-36	150.00	70.00	-60.00
SDH-09-18	110.95	0.00	-90.00	SDH-09-37	191.45	250.00	-60.00
SDH-09-19	101.35	0.00	-90.00	SDH-09-38	199.65	65.00	-65.00

All drilling was completed between January 8, 2009 and February 23, 2009. Figure 6-7 shows the drillhole location map.



Source: Drill hole database – 2024. Note: Datum WGS 84

Figure 6-7: Map of Drill hole performed by SRK 2009.

6.3.2 Selection of Samples for Validation

A subset of historical samples was selected for validation based on their spatial distribution, lithological significance in terms of phosphate mineralization, and criticality to impact on materiality of the mineral resource estimation. In total, 326 samples were identified for re-sampling and re-assay, with the goal of verifying historical assay results and ensuring database integrity.

6.3.3 Re-sampling, Re-logging, and Re-assay Procedures

Re-sampling and re-logging were conducted at the selected intervals to verify lithological and geochemical continuity. A total of 326 samples were re-assayed at ALS Copiapó, following industry-standard analytical protocols. This included Quality Assurance and Quality Control (QAQC) measures to ensure the reliability of the assay results.

Below the summary of the activities performed by the re-sampling team localized at Fosfatos de Caldera facilities:

- Receiving core boxes into the area.
- Organizing core boxes and rock intervals.
- Cleaning cores with water.
- Verifying meterage and markers.
- Core regularization.
- Performing quick logging and detailed geological mapping.
- Selecting sampling intervals.
- Photographic documentation.
- Cutting and sample preparation.
- Storing samples.
- Sending samples to the laboratory for preparation and subsequent analysis.

The methodology also covers handling sample bags from rock sampling conducted in mines or during exploration and conducting density tests.

As the first activity, the drill core boxes were moved from the pallets and/or unloaded from the truck to the mapping table. The geologist determines the priority order for deploying the drill cores as showed at Figure 6-8. In the case of the cores located far from the mapping area, a backhoe was used to transport the pallets to the sampling area.



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-8: Temporary Storage Facilities.

Each core box weighs approximately 23 to 30 kilograms, depending on the rock composition and associated minerals (e.g., rocks with iron oxides such as magnetite and hematite are heavier). The core boxes were placed on the table in sequential order based on depth, starting from meter 0.0 to the end of the drillhole as exemplified at Figure 6-9.



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-9. Sequence of the arrangement of boxes on a mapping table. Detailed view of the rank of footage inside a box.

After that, the cores and tags are organized in the core boxes to certify that the sample intervals between blocking markers (spacers) in a drill hole with core recovery through diamond drilling. Also, the core fragments must be organized to match their natural in-situ positions as closely as possible. This involves aligning the core pieces to ensure fracture continuity and verifying that no part of the sample is reversed. This process ensures accurate and reliable measurements.

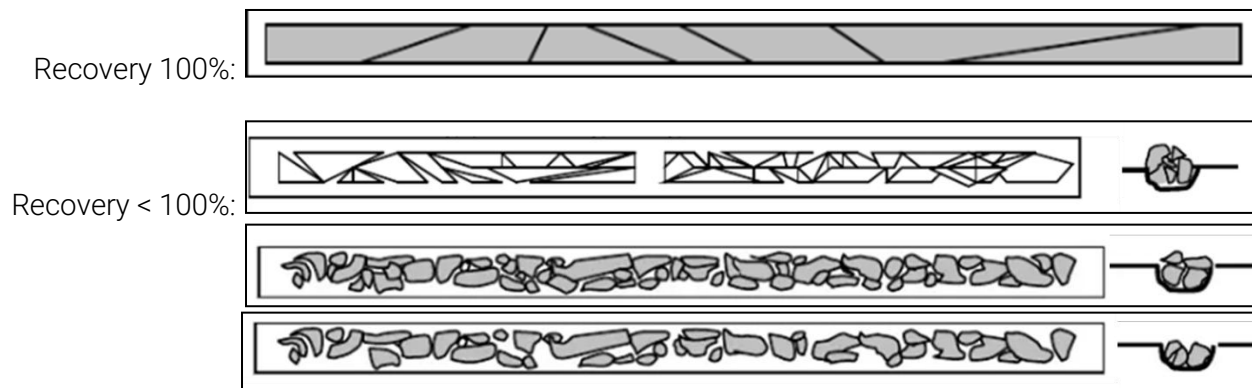
As there are no drilling certificates, it was carried out an acquisition of the information recorded in the wooden tags as showed at Figure 6-10



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-10. Wooden tags with depth, advance and recovery.

For recovery logs, each recovered interval is assigned the length it would have if it were a complete, continuous sample without fractures, recovery 100% and no adjustments were made. For core intervals with high fractured and recovery < 100% the recovery was logged from the measured length based on the space occupied by the core, considering rock quality, fracturing as exemplified at Figure 6-11 .



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-11. Schematic example of the cores on the core boxes.

Once the recovery calculation for the section is completed, each meter is marked along the edges of the longitudinal walls of the box (Figure 6-12).



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-12. Sample Marks on depth 32, 33, 34 y 35.

The Logging of the cores consisted on recording of drill core samples, whether they are fragments or cylindrical cores. Drilling is conducted to obtain information from different depths. In exploration, drilling programs are planned based on interpretations derived from surface geology, geochemical sampling results, and geophysical prospecting.

The analysis of rock core samples is performed visually and with a geological hand lens (Visual Estimation – see Appendix 1), and must be carried out by trained personnel. Each deposit has its unique characteristics, and therefore, a mapping guide (Mapping Guide – Mariela Mine Project, see Appendix 2) should be designed to ensure that all features are collected.

To begin recording core sample data, a quick log must be performed to identify the main units, contacts, alterations, and structures. Following this, detailed mapping can be initiated.

The Mariela Mine project corresponds to an IOA (Iron Oxide Apatite) deposit, which is interpreted as an extreme member of the IOCG (Iron Oxide Copper Gold) deposits. IOA deposits are rich in magnetite-apatite and poor in copper. The mineralization in IOA deposits is dominated by massive magnetite with low titanium content, which may be associated with variable amounts (1-50% modal) of apatite, actinolite, pyroxene, epidote, and sulfides (Williams et al., 2005).

At Mariela, the main alteration and mineralization are associated with a large breccia pipe-oriented NNE, bounded to the east by an N-S fault. Minor copper oxide mineralization is present, associated with supergene alteration, and trace amounts of sulfides (Roffey, 2001). The color of apatite at Mariela ranges from white to yellow as shown at Figure 6-13.



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-13: Massive to prismatic crystals of translucent yellowish apatite with a vitreous to silky luster (sample from Mariela mine drillings with 20x magnifying glass).

The Logging information acquired are:

A. Identifying the Rock

The rock must be identified based on its color, texture, and mineral components, among other characteristics.

B. Defining Contacts

Drill cores can extract different rock and alteration units, meaning there will be contacts between these distinct units.

C. Lithological Units for Mariela Mine Drilling Mapping

The following lithological units have been defined for the Mariela Mine drilling mapping:

- **AN:** Andesite
- **ANP:** Porphyritic Andesite
- **MDIO:** Microdiorite
- **DIO:** Diorite
- **BF:** Tectonic Breccia
- **BAN:** Volcanic Breccia
- **BDIO:** Igneous Breccia
- **BVC:** Volcaniclastic Breccia

Additionally, three main units (UG) are defined based on the amount of whitish matrix and the visual content of apatite according to the matrix quantity (Figure 6-14).

UG	DESCRIPCIÓN	% VISUAL MATRIZ BLANQUECINA DE APATITO	%VISUAL P2O5
RX	TIPO DE ROCA	0 a 10	0 a 4
STA	STOCKWORK CON MATRIZ DE APATITO	10 a 25	4 a 10
BHA	BRECHA HIDROTHERMAL CON MATRIZ DE APATITO	25 a 50	10 a 25
VTA	VETA DE APATITO	>50	>25

Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-14: Definition visual percentages of apatite mineralization.

D. Classifying Rock Type

Based on the geological context, the classification of the rock is determined according to Streckeisen's classification for intrusive and extrusive igneous rocks (see Appendix 3).

E. Defining Alteration

Alteration refers to the recognition of minerals that indicate changes due to hydrothermal processes. The process of alteration produces mineralogical and chemical changes in igneous, sedimentary, and metamorphic rocks as a result of interaction with hydrothermal fluids.

Hydrothermal Alterations:

- **Potassic Alteration:** Characterized by the presence of secondary potassium feldspar and/or secondary biotite (anhydrite may also be present). This alteration occurs in the presence of nearly neutral solutions at high temperatures (400°-600°C).
- **Propylitic Alteration:** Characterized by the presence of chlorite, epidote, and/or calcite, and albite-affected plagioclase. It occurs due to nearly neutral solutions over a range of temperatures.
- **Phyllic Alteration** (also called Quartz-Sericitic or simply Sericitic): Characterized by the development of secondary sericite and quartz. This results from moderate to strong hydrolysis of feldspars at temperatures between 300°-400°C.
- **Argillic Alteration** (also called Intermediate Argillic): Characterized by the presence of kaolinite and/or montmorillonite.
- **Advanced Argillic Alteration:** Characterized by the total destruction of feldspars under very strong hydrolysis conditions, resulting in the formation of kaolinite and/or alunite.
- **Silicification:** Characterized by the complete destruction of the original mineralogy. The rock is converted into a siliceous mass. This represents the highest possible degree of hydrolysis. Hydrothermal fillings of open spaces with quartz are not considered silicification.

Additionally, magnetite-rich deposits (IOA) are associated with biotite, potassium feldspar, and amphibole. Hematite-rich deposits are characterized by sericitic and chloritic alteration. Sodium and calc-sodic alteration is found in the deeper, more external, and distal parts of the deposit (e.g., Fontboté, 2007):

2A. ALTERACION MINERALOGY			
INTENSITY (I)		OCURRENCE (O)	
1	VERY WEAK (<10%)	1	MASSIVE
2	WEAK (10-19%)	2	PATINA
3	MODERATE (20-29%)	3	DISEMINATED
4	STRONG (30-49%)	4	CLOTS
5	VERY STRONG (>50%)	5	FRACTURES
		6	VEINLETS
		7	MATRIX
		8	REPLACEMENT
		9	OTHER
		10	OPEN SPACES FILLING

2B. ALTERACION ASSOCIATION			
1	ACTINOLITIZATION	4	ARGILIC
2	POTASSIC	5	SILICIFICATION
3	PROPYLITIC	6	LIMONITIZATION
10	CARBONATIZATION	11	CHLORITIZATION
		7	TURMALINIZATION
		8	MARTITIZATION
		9	SERICITIZATION
		12	QUARTZ-SERICITE

Source: Procedure of re-sampling made by Fosfato Taltal - 2024

Recognizing Rock Discontinuities: It is essential to identify and document the discontinuities present in the rock, such as faults, fractures, and veinlets. These structural features are crucial as they can influence the overall behavior of the rock mass, including its mechanical properties and the flow of fluids through the rock. Proper recognition and classification of these discontinuities help in understanding the geological history and in making accurate interpretations of the site's characteristics:

4.STRUCTURES			
TYPE OF STRUCTURES			
1	FAULT	4	FRACTURE ZONE
2	FAULT ZONE	5	VEINS
3	CIZALLE ZONE	6	CONTACT
7	STOCKWORK ZONE		

Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

A. Recognizing Discontinuities in Rock: The identification of rock discontinuities such as faults, fractures, and veinlets is essential. These features must be noted and measured as they can significantly influence the interpretation of the geological structure.

B. Measuring Observations: Differences between observed sections, indicated by the presence of contacts or the appearance of new features, should be marked and measured. It is crucial to define where these geological observations begin and end, meaning that the lengths of the core sections must be measured accurately.

C. Geological Mapping and Data Recording: All geological information should be transferred to the mapping guide, noting the project name, drill hole number, responsible geologist, units based on the project objectives, and uploaded to the company's server.

The core boxes are photographed after sampling to capture beyond the cores, additional information such as sample contacts, core ends, tags and marks. The photo was taken combining 2 core boxes. In each photo was Identified: the drill hole name, the date the photograph was taken, the number each three boxes, and the initial and final depths. The Figure 6-15 exemplify the photography of the core boxes.



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-15: Example of a photograph with 3 boxes with a scale and core box Id's.

Core-Sampling Procedure

The sampled cores, despite if it is the remain $\frac{1}{2}$ core ore the not sampled interval, was obtained from two aliquots: $\frac{1}{4}$ or $\frac{1}{2}$ core re-sampled and the other part of the core remained in the core box.

The sample size was tried to follow the same interval sampled by SRK in 2009, but there are several intervals that were sampled in different size, mainly due to lack of whole interval with cores. The standard sample size was 2 meters in the Apatitic Rocks: **STA (apatite stockwork)**, **BHA**, and **VTA**, and 4-6 meters of intervals without apatite. In the Figure 6-16 is shown the intervals of re-sampling cores

Sampled by SRK 2009				Re-sampled by Fosfatos de Taltal 2024				Lithology
Hole Id	From	To	P ₂ O ₅ %	Sample Id	From	To	Interval	
SDH-09-22	73.45	88.70	15.25	SDH22_35	73.45	75.45	2.00	AN
				SDH22_36	75.45	77.45	2.00	
				SDH22_37	77.45	79.45	2.00	
				SDH22_38	79.45	81.45	2.00	
				SDH22_39	81.45	83.45	2.00	
				SDH22_40	83.45	85.45	2.00	
				SDH22_41	85.45	87.45	2.00	
				SDH22_42	87.45	88.70	1.25	
SDH-09-22	88.70	90.30	1.60	SDH22_43	88.70	90.30	1.60	STA
SDH-09-22	90.30	101.80	11.50	SDH22_44	90.30	92.30	2.00	AN
				SDH22_45	92.30	94.30	2.00	
				SDH22_46	94.30	96.30	2.00	
				SDH22_47	96.30	98.30	2.00	
				SDH22_48	98.30	100.30	2.00	
				SDH22_49	100.30	101.80	1.50	

Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-16. Example of mineralized zone (STA: apatite stockwork) to be sampled with waste rock margin (hole #22 of sample #40 to #46).

After being sampled, the material is stacked and stored in their respective bags, labelled (paper labels attached with a staple). Each sample bag is weighed using a scale, with a minimum weight of 0.5 kg per sample, and grouped into batches. All data is uploaded to the company’s server, and the samples are stored by batch, to be sent to the preparation and chemical analysis (Figure 6-17).



Source: Procedure of re-sampling made by Fosfatos de Taltal - 2024

Figure 6-17: Organization of the samples to be sent to the ALS Copiapó Laboratory

The remaining material in the core boxes were stocked at the temporary warehouse or in the sampling area (outdoor), as shown at Figure 6-18 .



Figure 6-18: Final arrangement of the drilling boxes. Left: cut sections transferred to metal boxes. Right: uncut sections kept in the original box.

The samples were prepared and assayed at ALS Patagonia S.A. in four batches (C024267335, C024209962, C024205764 and C024201792) with the inclusion of Blanks, Standards and Duplicates. The preparation and the assays were under management of Rene Manami and followed the following procedures:

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-31d	Pulverize Split - duplicate
BAG-01	Bulk Master for Storage
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-22Y	Split Sample - Boyd Rotary Splitter
PUL-32m	Pulverize 500g - 85% <75um
DRY-22	Drying - Maximum Temp 60C
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22d	Sample login - Rcd w/o BarCode dup
SPL-22d	Duplicate split - rotary splitter

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF24	Phosphate by Fusion/XRF	XRF
ME-GRA05	H2O/LOI by TGA furnace	TGA
ME-MS81h	High grade REE by fusion/ICPMS	ICP-MS

Method	Element	Method	Element	Method	Element
ME-XRF24	Al2O3 %	ME-MS81h	Ce ppm	ME-MS81h	Rb ppm
ME-XRF24	CaO %	ME-MS81h	Dy ppm	ME-MS81h	Sm ppm
ME-XRF24	Fe2O3 %	ME-MS81h	Er ppm	ME-MS81h	Sn ppm
ME-XRF24	K2O %	ME-MS81h	Eu ppm	ME-MS81h	Ta ppm
ME-XRF24	MgO %	ME-MS81h	Gd ppm	ME-MS81h	Tb ppm
ME-XRF24	MnO2 %	ME-MS81h	Hf ppm	ME-MS81h	Th ppm
ME-XRF24	Na2O %	ME-MS81h	Ho ppm	ME-MS81h	Tm ppm
ME-XRF24	P2O5 %	ME-MS81h	La ppm	ME-MS81h	U ppm
ME-XRF24	SiO2 %	ME-MS81h	Lu ppm	ME-MS81h	W ppm
ME-XRF24	TiO2 %	ME-MS81h	Nb ppm	ME-MS81h	Y ppm
ME-XRF24	Total %	ME-MS81h	Nd ppm	ME-MS81h	Yb ppm
ME-GRA05	LOI %	ME-MS81h	Pr ppm	ME-MS81h	Zr ppm

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The quantitative of the samples sent to laboratory by batch are shown at Table 6-5:

Table 6-5: Quantitative Summary of Panel Underground Sampling

Source: ALS Patagonia Certificates

Samples from Batches	BIFOX 2024	
	Nb Samples	Percent
Blanks	12	4%
Field Duplicates	15	5%
Standard	13	4%
Ckeck Assays	0	0%
Total	41	13%
Original Samples	326	

Note: The number of original samples in the certificates is different than the samples on the consolidated resource database, due to in the resource database there are composited intervals and intervals discarded where there are loses of cores.

6.3.4 QAQC

6.3.4.1 QA/QC Program – SRK 2009

This section summarizes the QA/QC program developed by SRK during the 2008–2009 exploration campaigns, as documented in the report titled "Confidential Exploration Report - Sofia Mine - Antofagasta Region II, Chile".

MB did not conduct any additional QA/QC work nor review SRK's QA/QC procedures due to the unavailability of a consistent database containing references and detailed information on blanks, duplicates, and standards. MB only added some information of Blanks and Duplicates (not complete) found on the SRK reports.

The QA/QC samples from SRK for the drilling program were managed by Vigalab under the guidance of SRK Chile. Due to the lack of suitable on-site facilities, sample preparation and QA/QC management were conducted at the preparation laboratory. The QA/QC program included the insertion of blanks, standards, and pulp duplicates at a frequency of one standard, one duplicate, and one blank for every 20 regular samples, corresponding to approximately 9% of the sample database. This frequency aligns with the batch size required for inductively coupled plasma atomic emission spectrometry (ICP-AES) analyses. Coarse duplicates were not included in this program.

Standard Samples

The high-grade standard utilized for the program was the National Institute of Standards & Technology (NIST) Standard Reference Material (SRM) 694, Western Phosphate Rock. Although not a matrix match to the deposit's lithology, SRM694 was selected due to practical constraints on creating a site-specific standard at this stage of the project. A low-grade standard intended for use in the program was delayed in customs and unavailable during the sampling campaign.

The certified constituents and their median concentrations for SRM694 are summarized in Table 6-6.

Table 6-6: Certified Constituents and Median Concentrations for SRM694

Constituent	Concentration (%)	Constituent	Concentration (%)
Al ₂ O ₃	1.8	MnO	0.0116
CaO	43.6	Na ₂ O	0.86
CdO	0.015	P ₂ O ₅	30.2
Fe ₂ O ₃	3.2	SiO ₂	11.2
K ₂ O	0.79	V ₂ O ₅	0.31

Blanks

Blanks inserted by Vigalab were uncertified quartz blanks sourced from a quartz mine near Chañaral. While not certified, these blanks served the program's requirements. Most blanks were at or below detection limits for P₂O₅, with three technical failures noted. Adopting a rejection limit of five times the detection limit reduced the number of failures to one. All failures were below the crustal abundance of P₂O₅ (0.2406%), and their results were accepted. For future campaigns, the use of certified blanks free of P₂O₅ is recommended.

Analytical Check Samples

Approximately 3% of the total samples (10 samples) were submitted to PhosLab Environmental Services, Inc. (PhosLab) in Florida, USA, as an external check. These samples were selected from duplicate samples analyzed by ACME Vancouver. PhosLab, accredited under the National Environmental Laboratory Accreditation Conference (NELAC) criteria, analyzed these samples using multiple methods, including:

- EPA Method 6010B (acid digestion with ICP-AES),
- AFPC phosphate analytical method (acid digestion with molybdate colorimetric), and
- EPA Method 365.1 (acid digestion with persulfate colorimetric).

Results from Method 6010B, most comparable to ACME Vancouver's technique, were used for direct comparison. Two duplicate failures were observed, with PhosLab reporting lower values. After reanalysis, these results fell within two standard deviations and were deemed acceptable.

Performance and Results

The QA/QC program demonstrated excellent results for this early-stage drilling program. Rejection limits for SRM694 were based on X-ray fluorescence (XRF) spectrometry, differing from the ICP-AES method used by ACME Vancouver. To address analytical discrepancies, rejection limits were adjusted to ±9–10% of the median concentration for P₂O₅.

One standard sample failure was identified. The standard, along with the preceding 16 samples and subsequent 12 samples, was reanalyzed by ACME Vancouver. In the second analysis, the standard was within the acceptable range, and the associated samples remained within two standard deviations of the original results. For future work, SRM694's performance should be closely monitored, and a site-specific standard is recommended if feasible.

Recommendations by SRK Consultants

SRK Consultants recommends that the QA/QC results indicate robust data quality for this early-stage program. To enhance future campaigns, SRK recommends:

- Developing a site-specific standard that better matches the deposit's lithology,
- Monitoring SRM694 performance in subsequent analyses,
- Using certified blanks without P_2O_5 contamination, and
- Continuing to track duplicates over time to detect potential instrument drift or variability.

6.3.4.2 QA/QC Program - Fosfatos Taltal 2004

The Quality Assurance/Quality Control (QA/QC) analysis of the core samples followed the procedure described at Item 10.6 of this report.

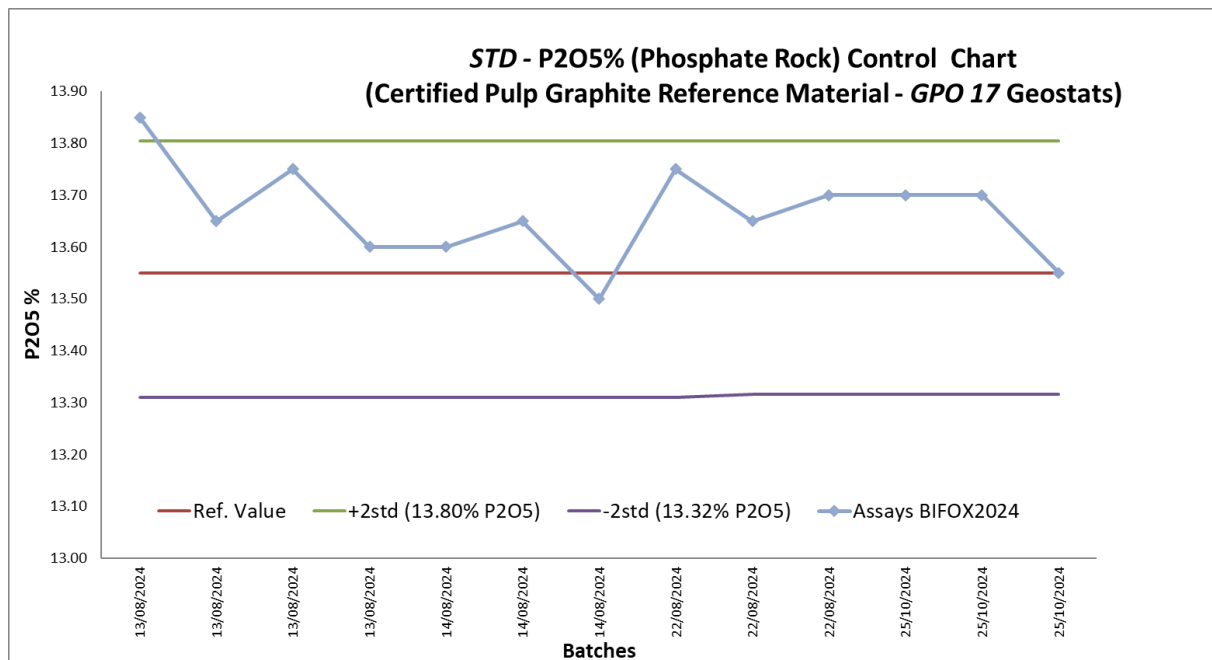
The QA/QC program implemented by Fosfatos de Taltal was designed to ensure the quality of sample reprocessing, including 41 control samples (13%). These samples consist of 13 blanks (inserted by ALS – not blinded), 13 standards (blinded – GPO-17), and 15 field duplicates (blinded). The results are detailed in the following items.

6.3.4.2.1 STANDARDS

Quality Assurance is monitored through the use of Company-submitted certified analytical standard GPO17, supplied by Geostats PTY Ltd (20 Hines Road, O'Connor, Western Australia 6163 - Phone: +61 8 9314 2566, Fax : +61 8 9314 3699 - Email: info@geostats.com.au - Website: <http://www.geostats.com.au>).

Standards are inserted at a rate of 1 in 25 samples (average), totaling 11 control samples in 326 total original samples. Of them, 2 std at CO24267335, 2 std at CO24209962, 3 std CO24205764 and 4 std CO24201792, sent to ALS Copiapó Laboratory as Blinded sample.

It was performed analysis only for $P_2O_5\%$ element. The control chart at Figure 6-19 shown the results for the standards that indicated only the 1st std inserted just little above +2SD, but not critical. Also, there are a suggestion of a little bias of overestimation that not impact on the Mineral Resources estimates, indicating that there is no problem with the standard itself and adequate for Mineral Resources Estimates.



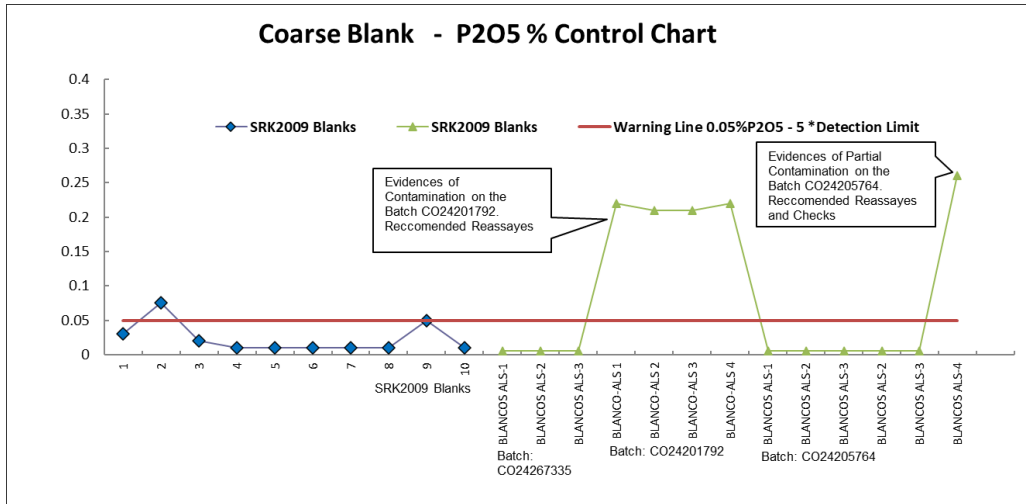
Source: Drill cores re-sampling controls and ALS Copiapó Certificates, 2024

Figure 6-19: Control Chart of P₂O₅% referred to the GPO-17 Geostats Certified Pulp Phosphate Reference Material.

6.3.4.2.2 BLANKS

The Company has utilized 01 pulp blank supplied by ALS Copiapó, that is not blinded. It was inserted 13 blanks that represents a rate of 1 in 25 samples, where 3 at CO24267335, 3 std at CO24209962, 3 std CO24205764 and 4 std CO24201792, sent to ALS Copiapó Laboratory as Blinded sample. It was retrieved 10 blanks inserted by SRK 2009 (it is not full blank data).

Figure 6-20 shows the control chart of the blank standard for P₂O₅ %. The SRK blanks are ok, no evidence of contamination, But, there are evidence of contamination on the Batch CO24201792. recommended re-assays and Checks. Also, one blank contaminated on the Batch CO24205764. recommended re-assays and Checks. Despite that, it has been considered in the minimum standards to validate the SRK 2009 assays and release Inferred Mineral Resources. Further work must be done to check those contamination



Source: Drill cores re-sampling controls and ALS Copiapó Certificates, 2024

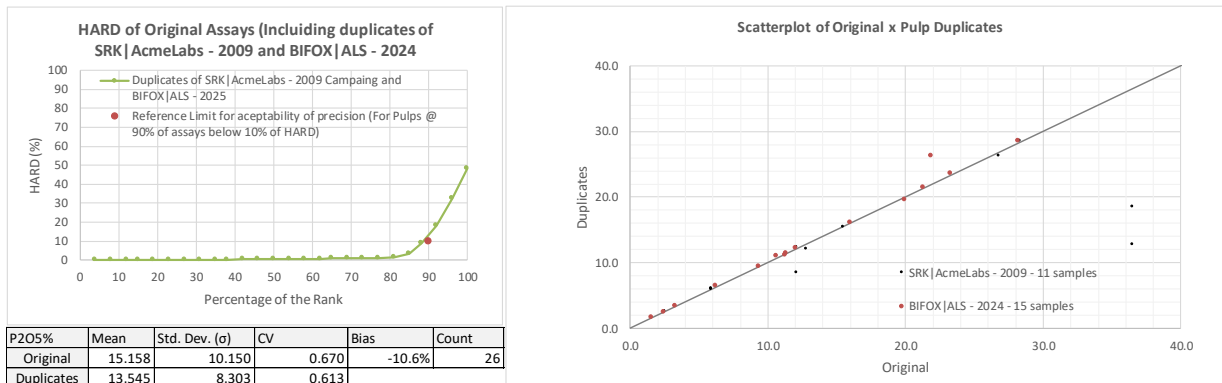
Figure 6-20: Company-submitted Blanks. CRM non blinded inserted by ALS Copiapó.

6.3.4.2.3 DUPLICATES

It is referred Core duplicates in a ½ sample in the package, not a ½ core. The core duplicate procedures, to collect a pair of a quarter material after crushing.

Core duplicates reported by the laboratories are illustrated in Figure 6-21. These duplicates are taken at a frequency of 1 in 22 samples (4.5%), totaling 15 duplicates. Also, included the partial duplicates data from SRK 2009, totaling 11 duplicates.

Despite the Small number of samples, there is no consolidation of any bias, but, with a moderate scatter characteristic in P₂O₅% results.



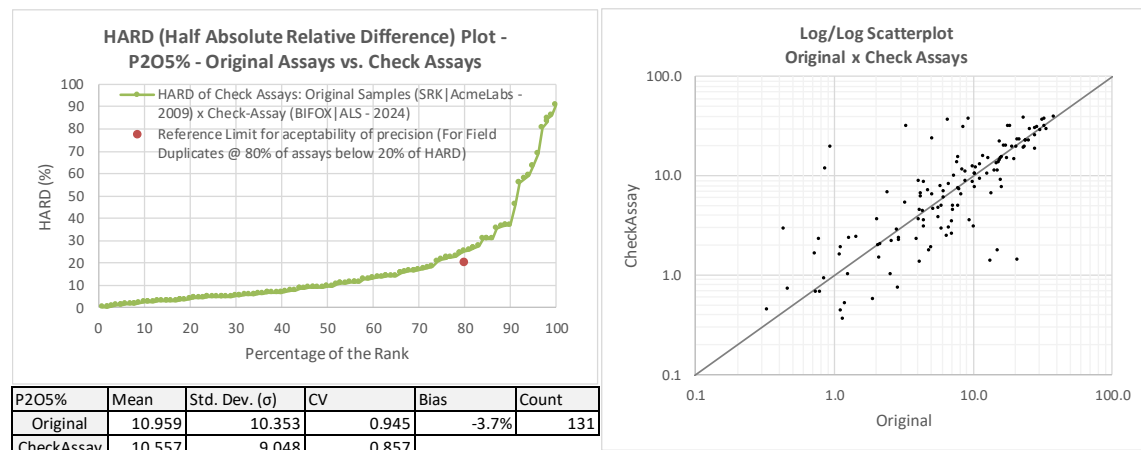
Source: Drill cores re-sampling controls and ALS Copiapó Certificates, 2024

Figure 6-21: Coarse Duplicates from drill cores

6.3.5 Results of Re-sampling - Validation of Historical Drilling Data

The validation process included a pair data analysis between historical assays and the re-assayed 131 validated pairs (only pair with the same length and cores in good condition) of sampling results from ALS Copiapó, in ½ core support.

The analysis of the ½ core duplicate samples, are showed at Figure 6-22.



Source: Drill cores re-sampling controls and ALS Copiapó Certificates, 2024

Figure 6-22: ½ core Duplicates from historical drill cores

Based on the results reviewed and audited, MB has the opinion that the assays used for the present resource evaluation has adequate levels of accuracy and precision, without significant episodes of contamination. The results from both (SRK and Bifox) sampling, preparation and assays used meet the industry good standards for quality. The database assays can be used for grade interpolation and subsequent exploration and project development activities for Inferred Mineral Resources.

6.3.6 Reconstruction of the Drilling Database

The drilling database was re-built to incorporate validated results and eliminate inconsistencies. Key updates to the database, in MS Excell, included:

- Replacing 180 assays from the original SRK dataset with results from the Bifox re-assay program at coincident intervals.
- Adjusting 15 non-coincident intervals, which were composed by MB to ensure continuity and to eliminate data gaps. These adjustments were based on assays conducted at ALS Copiapó.

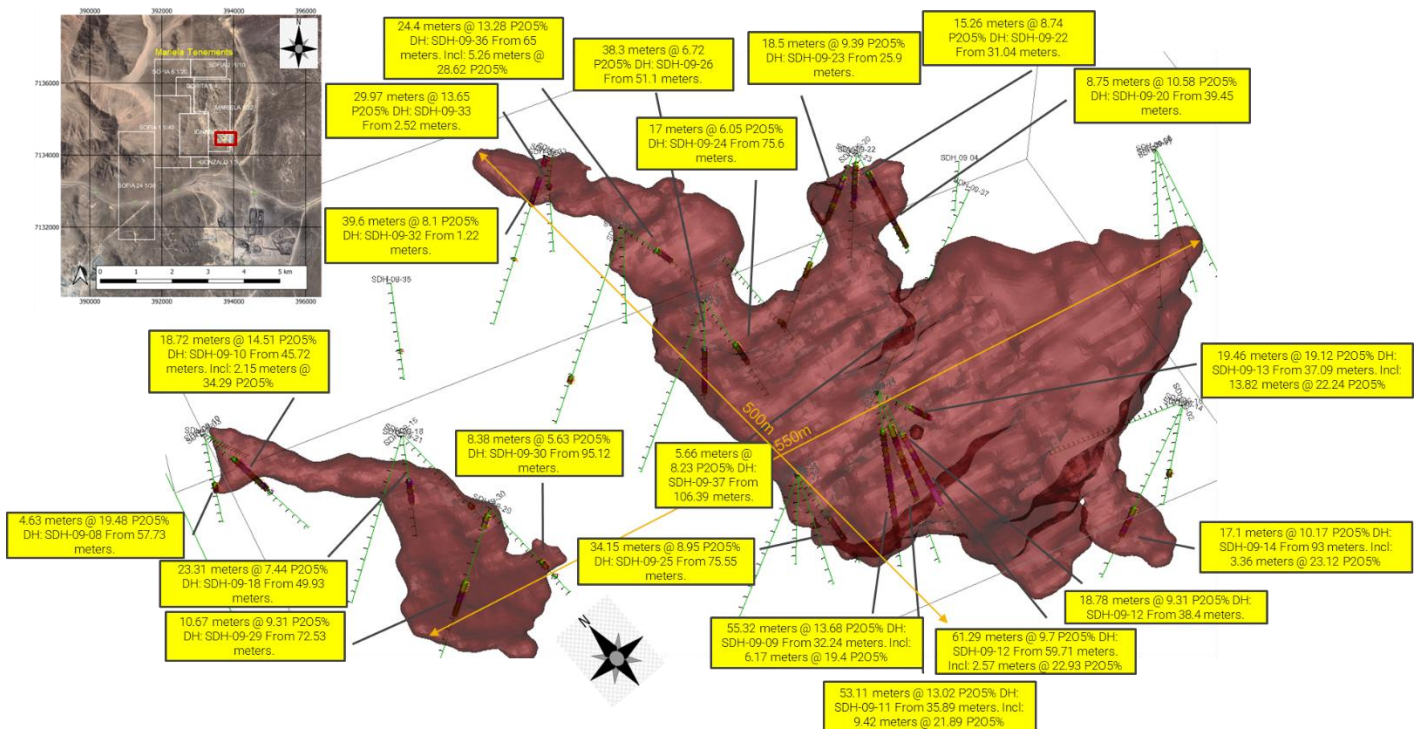
- Retaining 282 historical assays from the SRK dataset (2009) that were not subject to replacement or adjustment.

The updated database reflects a robust and consolidated resource dataset, which integrates new and historical information while adhering to rigorous QAQC protocols. The revised dataset is considered reliable and suitable for resource estimation purposes.

6.3.7 Exploration Results

The exploration results of the samples from 2009 drilling carried out by SRK, consolidated as mentioned at Item 6.3.6 (Reconstruction of the Drilling Database) shows 21 drill hole intercepts with $P_2O_5 > 5\%$ including 7 intercepts with $P_2O_5 > 15\%$. In the Figure 6-23 is shown the 3D view of the intercepts and in the Table 6-7.

The information of those intercepts was the basis of the wireframing and block grade estimation, being robust enough to be included in mineral resource estimates.



Source: Validade 2024 Resources database

Figure 6-23: Intercepts $P_2O_5 > 5\%$. Drilling campaign SRK 2009, validated by MB in 2024

Table 6-7: Assays of the Intercepts $P_2O_5 > 5\%$. Drilling campaign SRK 2009, validated by MB in 2024

Source: Validade 2024 Resources database

HOLE-ID	FROM	TO	P_2O_5	SAMPID	SOURCE	LOCATIONX	LOCATIONY	LOCATIONZ	Length
SDH-09-08	57.73	58.41	26.63	S08-02	SRK	393192.46	7134598.98	1129.2	0.68
SDH-09-08	58.41	58.94	14.98	S08-03	SRK	393192.46	7134599	1128.59	0.53
SDH-09-08	58.94	60.90	31.00	S08-04	SRK	393192.46	7134599.04	1127.35	1.96
SDH-09-08	60.90	62.36	5.32	S08-05	SRK	393192.46	7134599.1	1125.64	1.46
SDH-09-09	32.24	33.79	0.34	S09-1	SRK	393589.73	7134426.93	1152.54	1.55
SDH-09-09	33.79	35.20	28.87	S09-2	SRK	393590.05	7134426.03	1151.41	1.41
SDH-09-09	35.20	36.01	3.67	S09-3	SRK	393590.3	7134425.36	1150.55	0.81
SDH-09-09	36.01	38.31	26.84	S09-4	SRK	393590.64	7134424.42	1149.36	2.3
SDH-09-09	38.31	39.96	13.95	S09-5	SRK	393591.07	7134423.23	1147.85	1.65
SDH-09-09	39.96	41.11	35.73	S09-6	SRK	393591.38	7134422.39	1146.78	1.15
SDH-09-09	41.11	42.65	10.82	S09-7	SRK	393591.68	7134421.57	1145.75	1.54
SDH-09-09	42.65	45.05	1.35	S09-8	SRK	393592.11	7134420.38	1144.24	2.4
SDH-09-09	45.05	45.84	28.41	S09-9	SRK	393592.46	7134419.42	1143.02	0.79
SDH-09-09	45.84	46.85	5.52	S09-10	SRK	393592.66	7134418.88	1142.33	1.01
SDH-09-09	46.85	47.66	36.23	S09-11	SRK	393592.86	7134418.33	1141.63	0.81
SDH-09-09	47.66	50.80	8.16	S09-12	SRK	393593.29	7134417.13	1140.12	3.14
SDH-09-09	50.80	53.00	26.21	S09-13	SRK	393593.88	7134415.52	1138.07	2.2
SDH-09-09	53.00	56.08	15.59	S09-14	SRK	393594.46	7134413.93	1136.05	3.08
SDH-09-09	56.08	56.97	16.41	S09-15	SRK	393594.9	7134412.73	1134.53	0.89
SDH-09-09	56.97	58.85	1.23	S09-16	SRK	393595.2	7134411.89	1133.47	1.88
SDH-09-09	58.85	59.79	15.09	S09-17	SRK	393595.51	7134411.04	1132.39	0.94
SDH-09-09	59.79	62.51	0.67	S09-18	SRK	393595.91	7134409.93	1130.99	2.72
SDH-09-09	62.51	63.90	17.90	S09-19	SRK	393596.37	7134408.69	1129.41	1.39
SDH-09-09	63.90	65.85	8.68	S09-20	SRK	393596.73	7134407.68	1128.13	1.95
SDH-09-09	65.85	67.85	17.68	S09-21	SRK	393597.17	7134406.49	1126.62	2
SDH-09-09	67.85	70.85	6.71	S09-22	SRK	393597.72	7134404.98	1124.7	3
SDH-09-09	70.85	72.95	19.38	S09-23	SRK	393598.28	7134403.44	1122.75	2.1
SDH-09-09	72.95	75.57	6.64	S09-24	SRK	393598.8	7134402.02	1120.94	2.62
SDH-09-09	75.57	77.07	12.92	S09-25	SRK	393599.25	7134400.77	1119.37	1.5
SDH-09-09	77.07	79.91	9.53	S09-26	SRK	393599.73	7134399.46	1117.7	2.84
SDH-09-09	79.91	82.28	6.02	S09-27	SRK	393600.3	7134397.89	1115.71	2.37
SDH-09-09	82.28	85.00	11.01	S09-28	SRK	393600.86	7134396.35	1113.76	2.72
SDH-09-09	85.00	87.56	5.24	S09-29	SRK	393601.44	7134394.75	1111.74	2.56
SDH-09-10	46.06	46.73	2.69	S10-01	SRK	393209.24	7134600.67	1143.67	0.67
SDH-09-10	46.73	47.17	25.36	S10-02	SRK	393209.42	7134600.7	1143.15	0.44
SDH-09-10	47.17	47.71	1.11	S10-03	SRK	393209.59	7134600.73	1142.69	0.54
SDH-09-10	47.71	48.48	30.23	S10-04	SRK	393209.81	7134600.77	1142.08	0.77
SDH-09-10	48.48	49.86	38.34	S10-05	SRK	393210.17	7134600.83	1141.07	1.38
SDH-09-10	49.86	50.58	9.33	S10-06	SRK	393210.53	7134600.89	1140.08	0.72
SDH-09-10	50.58	51.31	16.13	S10-07	SRK	393210.77	7134600.94	1139.4	0.73
SDH-09-10	51.31	53.40	4.47	S10-08	SRK	393211.24	7134601.02	1138.07	2.09
SDH-09-10	53.40	53.77	28.26	S10-09	SRK	393211.66	7134601.09	1136.92	0.37
SDH-09-10	54.22	56.40	9.58	S10-10	SRK	393212.24	7134601.19	1135.3	2.18
SDH-09-10	56.40	57.24	19.59	S10-11	SRK	393212.75	7134601.28	1133.88	0.84
SDH-09-10	57.24	58.94	6.40	S10-12	SRK	393213.18	7134601.36	1132.68	1.7
SDH-09-10	58.94	61.54	13.01	S10-13	SRK	393213.9	7134601.49	1130.66	2.6
SDH-09-10	61.54	62.64	6.42	S10-14	SRK	393214.52	7134601.6	1128.92	1.1
SDH-09-10	62.64	64.44	6.68	S10-15	SRK	393215.01	7134601.68	1127.56	1.8
SDH-09-11	35.89	37.43	26.40	SDH11_15	BIFOX	393587.39	7134433.17	1144.66	1.54
SDH-09-11	37.43	38.97	30.00	SDH11_16	BIFOX	393587.61	7134432.56	1143.27	1.54
SDH-09-11	38.97	40.90	4.92	S11-3	SRK	393587.86	7134431.87	1141.7	1.93
SDH-09-11	40.90	41.90	22.63	S11-4	SRK	393588.07	7134431.29	1140.37	1
SDH-09-11	41.90	42.42	4.47	S11-5	SRK	393588.18	7134430.99	1139.68	0.52
SDH-09-11	42.42	44.26	15.29	S11-6	SRK	393588.35	7134430.52	1138.61	1.84
SDH-09-11	44.26	46.00	4.38	S11-7	SRK	393588.61	7134429.81	1136.99	1.74
SDH-09-11	46.00	46.85	19.31	S11-8	SRK	393588.8	7134429.29	1135.81	0.85
SDH-09-11	46.85	48.98	0.67	S11-9	SRK	393589.02	7134428.7	1134.46	2.13
SDH-09-11	48.98	51.92	0.74	S11-10	SRK	393589.38	7134427.69	1132.17	2.94
SDH-09-11	51.92	53.91	0.95	S11-11	SRK	393589.74	7134426.72	1129.93	1.99
SDH-09-11	53.91	56.56	15.26	S11-12	SRK	393590.07	7134425.79	1127.83	2.65
SDH-09-11	56.56	56.90	21.59	S11-13	SRK	393590.29	7134425.2	1126.48	0.34
SDH-09-11	56.90	58.43	0.44	S11-14	SRK	393590.63	7134424.83	1125.63	1.53
SDH-09-11	58.43	59.84	38.80	S11-15	SRK	393590.64	7134424.25	1124.3	1.41
SDH-09-11	59.84	60.70	21.99	S11-16	SRK	393590.8	7134423.79	1123.27	0.86
SDH-09-11	60.70	61.55	36.51	S11-17	SRK	393590.93	7134423.46	1122.49	0.85

HOLE-ID	FROM	TO	P ₂ O ₅	SAMPID	SOURCE	LOCATIONX	LOCATIONY	LOCATIONZ	Length
SDH-09-11	61.55	63.33	18.62	S11-18	SRK	393591.12	7134422.93	1121.3	1.78
SDH-09-11	63.33	64.07	2.03	S11-19	SRK	393591.3	7134422.43	1120.16	0.74
SDH-09-11	64.07	64.78	24.85	S11-20	SRK	393591.4	7134422.14	1119.5	0.71
SDH-09-11	64.78	66.55	4.37	S11-21	SRK	393591.58	7134421.65	1118.38	1.77
SDH-09-11	66.55	67.10	35.73	S11-22	SRK	393591.75	7134421.19	1117.33	0.55
SDH-09-11	67.10	69.30	13.50	S11-23	SRK	393591.95	7134420.65	1116.08	2.2
SDH-09-11	69.30	70.47	1.00	S11-24	SRK	393592.19	7134419.98	1114.55	1.17
SDH-09-11	70.47	71.66	1.40	S11-29	SRK	393592.36	7134419.51	1113.48	1.19
SDH-09-11	71.66	74.00	36.49	S11-30	SRK	393592.62	7134418.81	1111.88	2.34
SDH-09-11	74.00	75.00	31.38	S11-31	SRK	393592.86	7134418.14	1110.37	1
SDH-09-11	75.00	77.30	0.08	S11-32	SRK	393593.1	7134417.49	1108.87	2.3
SDH-09-11	77.30	78.20	2.12	SDH11_42	BIFOX_CMP	393593.33	7134416.85	1107.42	0.9
SDH-09-11	78.20	79.75	2.38	SDH11_43	BIFOX	393593.51	7134416.37	1106.31	1.55
SDH-09-11	79.75	80.60	13.00	SDH11_44	BIFOX	393593.68	7134415.89	1105.23	0.85
SDH-09-11	80.60	81.30	2.91	SDH11_45	BIFOX	393593.79	7134415.58	1104.52	0.7
SDH-09-11	81.30	83.90	4.83	SDH11_46	BIFOX	393594.03	7134414.93	1103.03	2.6
SDH-09-11	83.90	85.90	6.89	SDH11_47	BIFOX	393594.36	7134414.01	1100.94	2
SDH-09-11	85.90	87.90	1.14	SDH11_48	BIFOX	393594.65	7134413.22	1099.13	2
SDH-09-11	87.90	89.00	1.58	SDH11_49	BIFOX	393594.87	7134412.6	1097.73	1.1
SDH-09-12	38.40	40.30	3.70	SDH12_16	BIFOX_CMP	393584.48	7134441.92	1139.13	1.9
SDH-09-12	40.30	41.72	18.03	S12-2	SRK	393584.58	7134441.65	1137.49	1.42
SDH-09-12	41.72	43.35	1.20	S12-3	SRK	393584.67	7134441.4	1135.99	1.63
SDH-09-12	43.35	44.22	28.92	S12-4	SRK	393584.74	7134441.2	1134.76	0.87
SDH-09-12	44.22	46.27	2.54	S12-5	SRK	393584.83	7134440.96	1133.32	2.05
SDH-09-12	46.27	48.93	8.44	S12-6	SRK	393584.97	7134440.57	1131	2.66
SDH-09-12	48.93	49.96	14.94	S12-7	SRK	393585.08	7134440.27	1129.19	1.03
SDH-09-12	49.96	52.12	3.00	S12-8	SRK	393585.17	7134440.01	1127.62	2.16
SDH-09-12	52.12	54.46	0.91	S12-9	SRK	393585.3	7134439.64	1125.4	2.34
SDH-09-12	54.46	55.48	18.41	S12-10	SRK	393585.4	7134439.37	1123.75	1.02
SDH-09-12	55.48	57.18	2.32	S12-11	SRK	393585.49	7134439.15	1122.41	1.7
SDH-09-12	59.71	62.63	8.19	S12-12	SRK	393585.77	7134438.36	1117.64	2.92
SDH-09-12	62.63	64.00	15.01	S12-13	SRK	393585.9	7134438.01	1115.53	1.37
SDH-09-12	64.00	65.20	30.85	S12-14	SRK	393585.98	7134437.8	1114.26	1.2
SDH-09-12	65.20	68.33	14.20	S12-15	SRK	393586.11	7134437.45	1112.13	3.13
SDH-09-12	68.33	70.17	0.48	SDH12_31	BIFOX_CMP	393586.25	7134437.04	1109.68	1.84
SDH-09-12	70.17	71.82	1.61	S12-16	SRK	393586.36	7134436.76	1107.96	1.65
SDH-09-12	71.82	73.22	24.78	S12-17	SRK	393586.45	7134436.51	1106.46	1.4
SDH-09-12	73.22	76.22	3.41	S12-18	SRK	393586.58	7134436.15	1104.3	3
SDH-09-12	76.22	79.22	6.94	S12-19	SRK	393586.76	7134435.66	1101.34	3
SDH-09-12	79.22	82.22	6.52	S12-20	SRK	393586.93	7134435.17	1098.39	3
SDH-09-12	82.22	85.22	6.83	S12-21	SRK	393587.11	7134434.68	1095.43	3
SDH-09-12	85.22	88.22	6.00	S12-22	SRK	393587.29	7134434.19	1092.48	3
SDH-09-12	88.22	89.22	4.24	SDH12_41	BIFOX_CMP	393587.41	7134433.86	1090.51	1
SDH-09-12	89.22	91.22	7.15	SDH12_42	BIFOX	393587.5	7134433.62	1089.03	2
SDH-09-12	91.22	94.22	5.22	S12-24	SRK	393587.65	7134433.21	1086.57	3
SDH-09-12	94.22	95.27	7.54	S12-25	SRK	393587.77	7134432.88	1084.57	1.05
SDH-09-12	95.27	97.25	2.62	SDH12_45	BIFOX_CMP	393587.86	7134432.63	1083.08	1.98
SDH-09-12	97.25	98.06	1.88	SDH12_46	BIFOX_CMP	393587.94	7134432.41	1081.71	0.81
SDH-09-12	98.06	101.06	2.87	S12-26	SRK	393588.05	7134432.09	1079.83	3
SDH-09-12	101.06	103.33	19.34	S12-27	SRK	393588.21	7134431.66	1077.24	2.27
SDH-09-12	103.33	105.99	1.75	S12-28	SRK	393588.36	7134431.26	1074.81	2.66
SDH-09-12	105.99	107.04	21.94	S12-29	SRK	393588.47	7134430.96	1072.98	1.05
SDH-09-12	107.04	109.89	2.82	S12-30	SRK	393588.58	7134430.64	1071.06	2.85
SDH-09-12	109.89	111.71	11.35	S12-31	SRK	393588.72	7134430.26	1068.76	1.82
SDH-09-12	111.71	113.36	8.76	S12-32	SRK	393588.82	7134429.98	1067.05	1.65
SDH-09-12	113.36	114.32	31.30	S12-33	SRK	393588.9	7134429.76	1065.77	0.96
SDH-09-12	114.32	117.21	7.69	S12-34	SRK	393589.02	7134429.45	1063.87	2.89
SDH-09-12	117.21	120.28	10.28	S12-35	SRK	393589.19	7134428.96	1060.94	3.07
SDH-09-13	37.09	39.00	12.56	S13-2	SRK	393606.83	7134443.74	1148.82	1.91
SDH-09-13	39.00	40.85	14.27	S13-3	SRK	393608.02	7134443.53	1147.38	1.85
SDH-09-13	40.85	43.43	29.90	S13-4	SRK	393609.43	7134443.29	1145.68	2.58
SDH-09-13	43.43	45.07	21.09	S13-5	SRK	393610.76	7134443.05	1144.06	1.64
SDH-09-13	45.07	46.91	33.72	S13-6	SRK	393611.86	7134442.86	1142.73	1.84
SDH-09-13	46.91	49.60	1.08	S13-7	SRK	393613.3	7134442.6	1140.99	2.69
SDH-09-13	49.60	52.05	28.32	S13-8	SRK	393614.92	7134442.32	1139.03	2.45
SDH-09-13	52.05	54.67	19.34	S13-9	SRK	393616.53	7134442.03	1137.08	2.62
SDH-09-13	54.67	56.55	11.76	S13-10	SRK	393617.95	7134441.78	1135.36	1.88
SDH-09-14	93.00	94.75	3.36	SDH14_42	BIFOX	393718.86	7134350.04	1082.21	1.75
SDH-09-14	94.75	96.77	7.03	SDH14_43	BIFOX	393718.23	7134349.87	1080.44	2.02

HOLE-ID	FROM	TO	P ₂ O ₅	SAMPID	SOURCE	LOCATIONX	LOCATIONY	LOCATIONZ	Length
SDH-09-14	96.77	98.79	5.47	SDH14_44	BIFOX	393717.57	7134349.69	1078.54	2.02
SDH-09-14	98.79	100.82	15.51	S14-01	SRK	393716.9	7134349.52	1076.63	2.03
SDH-09-14	100.82	102.15	30.73	S14-02	SRK	393716.34	7134349.37	1075.06	1.33
SDH-09-14	102.15	104.12	3.00	S14-03	SRK	393715.8	7134349.22	1073.5	1.97
SDH-09-14	104.63	107.36	8.45	SDH14_48	BIFOX	393714.85	7134348.97	1070.81	2.73
SDH-09-14	107.36	110.10	7.78	SDH14_49	BIFOX	393713.95	7134348.72	1068.24	2.74
SDH-09-18	49.93	50.24	11.77	S18-2	SRK	393300.77	7134539.68	1141.03	0.31
SDH-09-18	50.24	50.95	8.67	S18-3	SRK	393300.77	7134539.68	1140.52	0.71
SDH-09-18	50.95	53.72	5.36	S18-4	SRK	393300.77	7134539.68	1138.78	2.77
SDH-09-18	53.72	54.50	1.41	S18-5	SRK	393300.77	7134539.68	1137.01	0.78
SDH-09-18	54.50	55.21	10.67	S18-6	SRK	393300.77	7134539.68	1136.26	0.71
SDH-09-18	55.21	56.17	0.66	S18-7	SRK	393300.77	7134539.68	1135.43	0.96
SDH-09-18	56.17	57.12	2.98	S18-8	SRK	393300.77	7134539.68	1134.47	0.95
SDH-09-18	57.12	59.49	0.31	S18-9	SRK	393300.77	7134539.68	1132.81	2.37
SDH-09-18	59.49	62.00	4.74	S18-10	SRK	393300.77	7134539.68	1130.38	2.51
SDH-09-18	62.00	63.92	0.70	S18-11	SRK	393300.77	7134539.68	1128.16	1.92
SDH-09-18	63.92	64.67	9.33	S18-12	SRK	393300.77	7134539.68	1126.82	0.75
SDH-09-18	64.67	65.36	37.49	S18-13	SRK	393300.77	7134539.68	1126.1	0.69
SDH-09-18	65.36	71.28	9.58	S18-14	SRK	393300.77	7134539.68	1122.8	5.92
SDH-09-18	71.28	73.24	0.46	S18-15	SRK	393300.77	7134539.68	1118.86	1.96
SDH-09-20	39.45	41.45	12.35	SDH20_17	BIFOX	393672.17	7134623.21	1146.6	2
SDH-09-20	41.45	43.45	9.40	SDH20_18	BIFOX	393672.85	7134623.33	1144.72	2
SDH-09-20	43.45	45.45	16.45	SDH20_19	BIFOX	393673.52	7134623.45	1142.84	2
SDH-09-20	45.45	48.20	4.11	SDH20_20	BIFOX	393674.32	7134623.59	1140.61	2.75
SDH-09-22	31.04	32.88	3.04	S22-6	SRK	393657.93	7134620.62	1152.65	1.84
SDH-09-22	32.88	33.27	26.47	S22-7	SRK	393657.93	7134620.62	1151.53	0.39
SDH-09-22	33.27	34.97	2.51	S22-8	SRK	393657.93	7134620.62	1150.49	1.7
SDH-09-22	34.97	37.73	10.94	S22-9	SRK	393657.93	7134620.62	1148.26	2.76
SDH-09-22	37.73	39.34	0.67	S22-10	SRK	393657.93	7134620.62	1146.07	1.61
SDH-09-22	39.34	40.10	15.24	S22-11	SRK	393657.93	7134620.62	1144.89	0.76
SDH-09-22	40.10	41.50	4.86	S22-12	SRK	393657.93	7134620.62	1143.81	1.4
SDH-09-22	42.30	44.30	6.73	SDH22_19	BIFOX	393657.93	7134620.62	1141.31	2
SDH-09-22	44.30	46.30	8.24	SDH22_20	BIFOX	393657.93	7134620.62	1139.31	2
SDH-09-23	25.90	27.90	6.70	SDH23_11	BIFOX_CMP	393645.12	7134617.87	1159.41	2
SDH-09-23	27.90	29.27	2.23	SDH23_12	BIFOX	393644.55	7134617.77	1157.83	1.37
SDH-09-23	29.27	31.44	2.15	S23-01	SRK	393643.96	7134617.67	1156.17	2.17
SDH-09-23	31.44	32.91	28.73	S23-02	SRK	393643.34	7134617.56	1154.46	1.47
SDH-09-23	32.91	33.75	1.38	S23-03	SRK	393642.95	7134617.49	1153.37	0.84
SDH-09-23	33.75	34.92	27.96	S23-04	SRK	393642.62	7134617.43	1152.43	1.17
SDH-09-23	34.92	35.81	3.51	S23-05	SRK	393642.27	7134617.37	1151.46	0.89
SDH-09-23	35.81	38.76	14.94	S23-06	SRK	393641.62	7134617.26	1149.65	2.95
SDH-09-23	38.76	40.68	2.93	S23-07	SRK	393640.8	7134617.11	1147.36	1.9
SDH-09-23	41.93	44.40	3.36	SDH23_21	BIFOX	393639.64	7134616.91	1144.13	2.47
SDH-09-24	75.60	76.37	19.47	S24-02	SRK	393540.89	7134559.45	1113.1	0.77
SDH-09-24	76.37	79.13	2.31	S24-03	SRK	393541.49	7134559.56	1111.44	2.76
SDH-09-24	79.13	80.60	7.46	S24-04	SRK	393542.2	7134559.68	1109.45	1.47
SDH-09-24	80.60	82.05	10.75	S24-05	SRK	393542.69	7134559.77	1108.08	1.45
SDH-09-24	82.05	83.12	0.67	S24-06	SRK	393543.12	7134559.84	1106.9	1.07
SDH-09-24	83.12	84.68	1.88	SDH24_43	BIFOX	393543.56	7134559.92	1105.66	1.56
SDH-09-24	84.68	86.18	3.22	SDH24_44	BIFOX	393544.07	7134560.01	1104.22	1.5
SDH-09-24	86.18	87.90	3.37	SDH24_45	BIFOX	393544.62	7134560.11	1102.71	1.72
SDH-09-24	87.90	90.25	4.72	SDH24_46	BIFOX	393545.3	7134560.23	1100.8	2.35
SDH-09-24	90.25	92.60	6.60	SDH24_47	BIFOX	393546.09	7134560.37	1098.59	2.35
SDH-09-25	75.55	76.85	4.07	SDH25_40	BIFOX	393533.38	7134415.32	1111.61	1.3
SDH-09-25	76.85	77.97	2.68	SDH25_41	BIFOX	393533.78	7134415.39	1110.47	1.12
SDH-09-25	77.97	80.26	2.94	SDH25_42	BIFOX	393534.36	7134415.49	1108.87	2.29
SDH-09-25	80.26	81.98	10.21	S25-01	SRK	393535.03	7134415.61	1106.98	1.72
SDH-09-25	81.98	83.43	2.26	S25-02	SRK	393535.57	7134415.7	1105.49	1.45
SDH-09-25	83.43	84.82	11.08	S25-03	SRK	393536.05	7134415.79	1104.16	1.39
SDH-09-25	84.82	86.43	22.69	S25-04	SRK	393536.55	7134415.88	1102.75	1.61
SDH-09-25	86.43	86.98	4.60	S25-05	SRK	393536.91	7134415.94	1101.73	0.55
SDH-09-25	86.98	88.42	2.26	S25-06	SRK	393537.25	7134416	1100.8	1.44
SDH-09-25	88.42	91.26	5.95	S25-07	SRK	393537.97	7134416.13	1098.79	2.84
SDH-09-25	91.26	92.15	30.92	S25-08	SRK	393538.6	7134416.24	1097.04	0.89
SDH-09-25	92.15	94.92	0.78	S25-09	SRK	393539.21	7134416.35	1095.32	2.77
SDH-09-25	94.92	96.88	16.39	S25-10	SRK	393540.01	7134416.49	1093.09	0.96
SDH-09-25	96.88	97.75	1.21	S25-11	SRK	393540.49	7134416.57	1091.76	1.87
SDH-09-25	97.75	98.91	18.73	S25-12	SRK	393540.83	7134416.63	1090.81	1.16
SDH-09-25	98.91	99.52	1.52	S25-13	SRK	393541.13	7134416.68	1089.98	0.61

HOLE-ID	FROM	TO	P ₂ O ₅	SAMPID	SOURCE	LOCATIONX	LOCATIONY	LOCATIONZ	Length
SDH-09-25	99.52	101.60	8.84	S25-14	SRK	393541.58	7134416.76	1088.71	2.08
SDH-09-25	101.60	102.60	1.65	S25-15	SRK	393542.1	7134416.85	1087.27	1
SDH-09-25	104.80	107.25	19.95	SDH25_57	BIFOX	393543.42	7134417.09	1083.58	2.45
SDH-09-25	107.25	109.70	10.35	SDH25_58	BIFOX	393544.25	7134417.23	1081.28	2.45
SDH-09-26	51.10	52.08	1.03	SDH26_25	BIFOX_CMP	393513.96	7134554.62	1132.9	0.98
SDH-09-26	52.08	54.40	2.91	S26-01	SRK	393513.96	7134554.62	1131.25	2.32
SDH-09-26	54.40	54.80	37.30	S26-02	SRK	393513.96	7134554.62	1129.89	0.4
SDH-09-26	54.80	56.60	3.60	S26-03	SRK	393513.96	7134554.62	1128.79	1.8
SDH-09-26	56.60	59.08	7.42	S26-04	SRK	393513.96	7134554.62	1126.65	2.48
SDH-09-26	59.08	60.36	1.33	S26-05	SRK	393513.96	7134554.62	1124.77	1.28
SDH-09-26	60.80	63.20	5.68	SDH26_31	BIFOX	393513.96	7134554.62	1122.49	2.4
SDH-09-26	63.20	65.20	2.22	SDH26_32	BIFOX	393513.96	7134554.62	1120.29	2
SDH-09-26	65.20	67.20	4.15	SDH26_33	BIFOX	393513.96	7134554.62	1118.29	2
SDH-09-26	67.20	69.20	1.04	SDH26_34	BIFOX	393513.96	7134554.62	1116.29	2
SDH-09-26	70.09	72.27	1.47	S26-06	SRK	393513.96	7134554.62	1113.31	2.18
SDH-09-26	72.27	74.84	13.45	S26-07	SRK	393513.96	7134554.62	1110.93	2.57
SDH-09-26	74.84	75.60	0.36	S26-08	SRK	393513.96	7134554.62	1109.27	0.76
SDH-09-26	75.60	76.44	1.85	S26-09	SRK	393513.96	7134554.62	1108.47	0.84
SDH-09-26	76.44	77.76	12.79	S26-10	SRK	393513.96	7134554.62	1107.39	1.32
SDH-09-26	77.76	80.73	14.94	S26-11	SRK	393513.96	7134554.62	1105.24	2.97
SDH-09-26	80.73	82.74	7.14	S26-12	SRK	393513.96	7134554.62	1102.76	2.01
SDH-09-26	82.74	84.60	4.71	S26-13	SRK	393513.96	7134554.62	1100.82	1.86
SDH-09-26	84.60	87.00	4.34	SDH26_43	BIFOX	393513.96	7134554.62	1098.69	2.4
SDH-09-26	87.00	89.40	6.67	SDH26_44	BIFOX	393513.96	7134554.62	1096.29	2.4
SDH-09-29	72.53	74.10	0.56	S29-01	SRK	393303.81	7134466.62	1116.34	1.57
SDH-09-29	74.10	74.78	22.21	S29-02	SRK	393303.43	7134466.55	1115.28	0.68
SDH-09-29	74.78	76.95	4.28	S29-03	SRK	393302.95	7134466.46	1113.94	2.17
SDH-09-29	76.95	77.60	19.38	S29-04	SRK	393302.47	7134466.38	1112.62	0.65
SDH-09-29	77.60	79.70	4.66	S29-05	SRK	393302.01	7134466.3	1111.32	2.1
SDH-09-29	80.05	81.65	5.91	SDH29_42	BIFOX	393301.27	7134466.17	1109.26	1.6
SDH-09-29	81.65	83.20	8.16	SDH29_43	BIFOX	393300.74	7134466.07	1107.78	1.55
SDH-09-30	95.12	96.02	1.24	S30-03	SRK	393360.82	7134475.95	1095.45	0.9
SDH-09-30	96.02	96.69	9.80	S30-04	SRK	393361.08	7134475.99	1094.72	0.67
SDH-09-30	96.69	98.28	2.08	S30-05	SRK	393361.47	7134476.06	1093.65	1.59
SDH-09-30	98.28	100.82	1.13	S30-06	SRK	393362.16	7134476.18	1091.71	2.54
SDH-09-30	100.82	101.99	16.35	S30-07	SRK	393362.79	7134476.29	1089.97	1.17
SDH-09-30	101.99	103.50	3.19	S30-08	SRK	393363.24	7134476.37	1088.71	1.51
SDH-09-32	1.22	3.34	9.21	S32-01	SRK	393470.64	7134700.83	1192.86	2.12
SDH-09-32	3.34	5.58	19.65	S32-02	SRK	393469.91	7134700.71	1190.81	2.24
SDH-09-32	5.58	7.97	4.43	S32-03	SRK	393469.13	7134700.57	1188.63	2.39
SDH-09-32	19.02	20.45	6.43	S32-04	SRK	393464.76	7134699.8	1176.46	1.43
SDH-09-32	20.45	21.90	13.23	S32-05	SRK	393464.28	7134699.71	1175.1	1.45
SDH-09-32	21.90	23.34	4.42	S32-06	SRK	393463.79	7134699.63	1173.74	1.44
SDH-09-32	23.34	25.13	5.16	S32-07	SRK	393463.25	7134699.53	1172.23	1.79
SDH-09-32	25.13	26.53	6.17	S32-08	SRK	393462.71	7134699.44	1170.73	1.4
SDH-09-32	26.53	27.06	10.29	S32-09	SRK	393462.38	7134699.38	1169.82	0.53
SDH-09-32	27.06	27.69	4.50	S32-10	SRK	393462.19	7134699.34	1169.28	0.63
SDH-09-32	27.69	28.09	16.75	S32-11	SRK	393462.02	7134699.31	1168.79	0.4
SDH-09-32	28.09	28.66	1.20	S32-12	SRK	393461.85	7134699.28	1168.34	0.57
SDH-09-32	28.66	29.15	10.39	S32-13	SRK	393461.67	7134699.25	1167.84	0.49
SDH-09-32	29.15	30.35	3.59	S32-14	SRK	393461.39	7134699.2	1167.04	1.2
SDH-09-32	30.35	30.85	16.97	S32-15	SRK	393461.1	7134699.15	1166.25	0.5
SDH-09-32	30.85	31.57	2.95	S32-16	SRK	393460.9	7134699.12	1165.67	0.72
SDH-09-32	31.57	34.76	13.11	S32-17	SRK	393460.24	7134699	1163.84	3.19
SDH-09-32	34.76	36.51	1.85	S32-18	SRK	393459.41	7134698.85	1161.51	1.75
SDH-09-32	36.51	39.15	9.98	S32-19	SRK	393458.67	7134698.72	1159.45	2.64
SDH-09-32	39.15	40.10	1.16	S32-20	SRK	393458.06	7134698.62	1157.76	0.95
SDH-09-32	40.10	40.82	8.73	S32-21	SRK	393457.78	7134698.57	1156.98	0.72
SDH-09-33	2.52	3.59	20.42	S33-01	SRK	393471.91	7134701.14	1191.9	1.07
SDH-09-33	3.59	4.60	1.85	S33-02	SRK	393471.91	7134701.14	1190.86	1.01
SDH-09-33	30.27	31.37	12.69	S33-03	SRK	393471.91	7134701.14	1164.13	1.1
SDH-09-33	31.37	32.49	19.63	S33-04	SRK	393471.91	7134701.14	1163.02	1.12
SDH-09-36	67.69	68.71	1.58	S36-01	SRK	393523.81	7134642.56	1130.65	1.02
SDH-09-36	68.71	69.17	23.13	S36-02	SRK	393524.16	7134642.69	1130.01	0.46
SDH-09-36	69.17	69.92	8.58	S36-03	SRK	393524.45	7134642.79	1129.48	0.75
SDH-09-36	69.92	71.26	4.49	S36-04	SRK	393524.94	7134642.97	1128.58	1.34
SDH-09-36	71.26	73.16	12.09	S36-05	SRK	393525.7	7134643.25	1127.17	1.9
SDH-09-36	73.16	74.61	28.04	S36-06	SRK	393526.48	7134643.54	1125.72	1.45
SDH-09-36	74.61	76.11	35.80	S36-07	SRK	393527.18	7134643.79	1124.45	1.5

HOLE-ID	FROM	TO	P ₂ O ₅	SAMPID	SOURCE	LOCATIONX	LOCATIONY	LOCATIONZ	Length
SDH-09-36	76.11	78.42	22.02	S36-08	SRK	393528.07	7134644.11	1122.8	2.31
SDH-09-36	78.42	79.66	14.35	S36-09	SRK	393528.91	7134644.42	1121.26	1.24
SDH-09-36	79.66	82.08	12.70	SDH36_40	BIFOX	393529.77	7134644.73	1119.67	2.42
SDH-09-36	82.08	84.50	8.08	SDH36_41	BIFOX	393530.9	7134645.14	1117.58	2.42
SDH-09-36	84.50	86.95	1.24	SDH36_42	BIFOX	393532.05	7134645.56	1115.47	2.45
SDH-09-36	86.95	89.40	0.59	SDH36_43	BIFOX	393533.2	7134645.98	1113.35	2.45
SDH-09-37	106.39	106.95	19.37	S37-02	SRK	393660.98	7134545.12	1087.22	0.56
SDH-09-37	106.95	108.76	0.44	S37-03	SRK	393660.42	7134544.92	1086.19	1.81
SDH-09-37	108.76	112.05	4.89	S37-04	SRK	393659.23	7134544.48	1083.99	3.29

6.3.8 Safety and Security Protocols of the core Re-sampling

The Risks and Preventive Measures Before starting any task, it is essential to analyze and evaluate the associated risks to ensure the safety and well-being of both the individual and the team.

STAGE OF WORK	POTENTIAL RISKS OR HAZARDS	PREVENTIVE MEASURES
Vehicle Movement	Vehicle failure Tip Collision. Outrage.	Carry out a daily checklist of the truck. Maintain and respect speeds within the site. Drive defensively. Wear seat belts (driver and passengers). Respect safety signs and traffic laws. Park in front of or around the shed according to the location of the drill boxes. Use handbrake and turn off engine before loading/unloading warning boxes.
	Unexpected team moves	Use a handbrake and turn off the engine of the truck. Remove keys when getting out to load boxes or other items into the truck. Be attentive to the environment and make corresponding coordination in case of entry of equipment into the area such as backhoe, truck or other.
Work in sampling	Electric shock	Check electrical connections in good condition. Keep the area clean and dry to avoid the formation of puddles of water. At the end of the working day, leave the electric panel and cutting machine covered to protect them from moisture and dew. At the end of tasks, cut/turn off the passage of electrical power to the equipment. If you have doubts about the state of the electrical panel, request support from the civil maintenance area. If you have doubts about the condition of the cutting machine, request specialized maintenance from a supplier. Report operation to supervisor if you are alone.
	Exertion	Bring the manual load closer to the body, keeping the back straight, and bending the legs. Avoid sudden movements. Prefer to swipe before loading. Rest and stretch to avoid injury. Respect maximum load weight of 25 kg for adult men and 20 kg for women. Support transfers with cargo cart.
	Same or different level fall.	Recognition of the state and irregularities of the terrain. Use of safety shoes appropriate to the conditions of the terrain. Caution with uneven surfaces. Keep the floor dry and free of obstacles, boxes, cables or other tools.
	Hit by/against	Handle cargo as close to the body as possible. Verify good condition of the mesh parapet and its structure, otherwise request civil maintenance support. Check for loose or hanging items in the work environment that could cause an injury.
	Parallel works	Considering work area as a restricted area, making corresponding coordination with areas or equipment that require activities to be carried out in the same place simultaneously.
	Sun/cold/wind exposure	Verify good condition of the mesh parapet and its structure, otherwise request civil maintenance support. Use sunscreen at least 20 minutes before sun exposure and apply every two hours during sun exposure. Drink plenty of water to avoid dehydration or discomfort due to sun exposure. Withdraw from the area and rearrange tasks when weather conditions are not suitable for your health.

6.4 Topographic Survey

This item is a compilation of the technical Report "Topographic Survey of Mariela Mine" and "Topographic Survey Report Using Laser Scanner" performed by MapScan in November 2023 to provide Fosfatos de Taltal a high precise survey for:

- Land survey topography and the collar of historical drill holes.
- excavated material at old underground mine.

Below is summarized the procedures. For more detailed information is in the original report in Spanish.

6.4.1 Topographic Survey and Collars of Historical Drill holes

The generated topography has been validated through GNSS RTK self-checks and meets the precision requirements for photogrammetric restitutions at a 1:500 scale. The products, including point clouds, DTM, contour lines, and ortho-mosaics, are suitable for engineering designs.

The activities of Topographic Survey and Collars of Historical Drill holes conducted included a survey using RPAS (drone) technology and GNSS in RTK mode.

The objectives of the project were as follows:

- Conduct a survey using RPAS (drone) technology.
- Conduct a topographic survey using GNSS RTK techniques to obtain self-checks.
- Generate a 5 cm pixel ortho-mosaic, depending on flight conditions.
- Develop 1:500 scale contour lines (0.5 meters) in DWG format.
- Create a planimetric map in DWG format based on the generated ortho-mosaic.
- Produce the ortho-mosaic in TIFF, JPG, ECW, and KMZ formats.
- Report the collar of the historical drill holes

The methodology developed for the project included:

- Verification of project background (scale, products, precision, timelines, area of interest, cartographic projection, and vertical reference).
- Flight planning (weather verification and campaign scheduling).
- Field campaign: Geodetic linkage, flight execution, and topographic self-checks.
- Post-fieldwork: Data processing for topography generation, contour line development, and planimetric mapping based on the project ortho-mosaic.

The equipment used for geodetic and topographic data capture, the following equipment was used are presented at Figure 6-24.



Source: Surveying performed by MapScan. Nov 2023

Figure 6-24: GNSS SANDING T7 Plus.

RPAS Instrumentation: Mavic 3 Enterprise Multispectral

The geodetic system and Cartographic Projection employed was the SIRGAS 2021 epoch, linked to the SRGD vertex, part of the active station network managed by the Seismological Center of the University of Chile. For the survey, a concrete vertex labeled MA01 (Figure 6-25) was established, and coordinates were obtained through static GNSS linkage. The cartographic projection used was Universal Transverse Mercator (UTM), Zone 19S, with the central meridian at -69° W. The elevations for the project were referred to the EGM-2008 Geoidal Model.

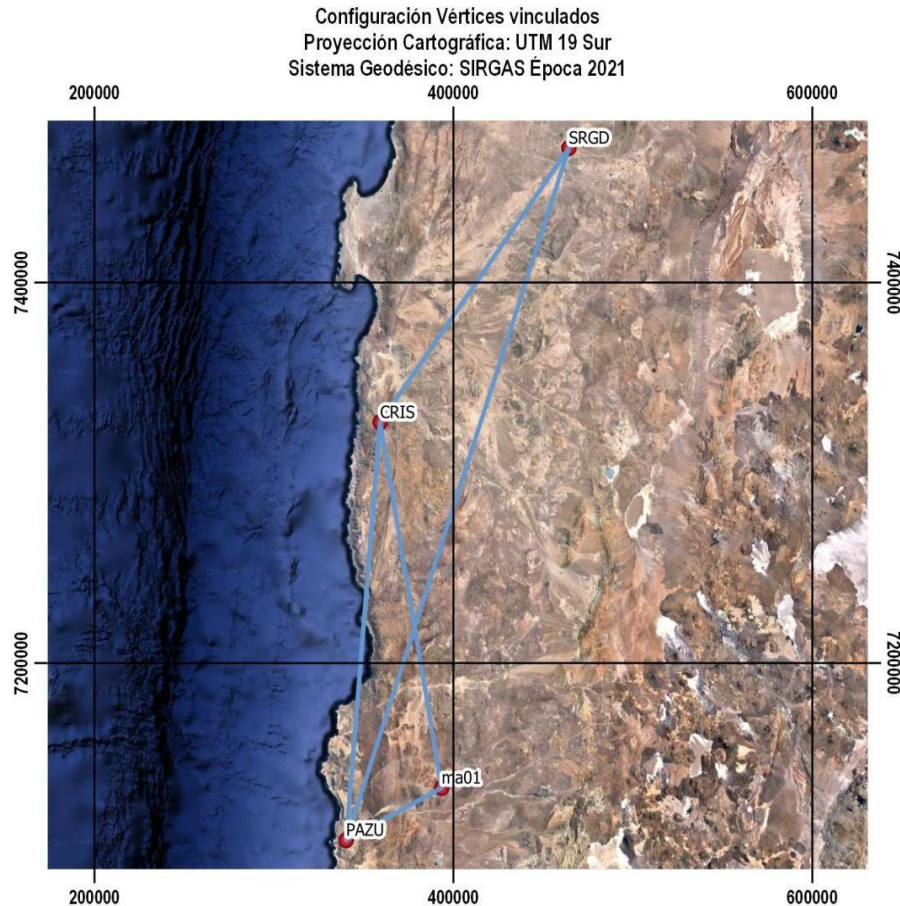


Source: Surveying performed by MapScan. Nov 2024

Figure 6-25: Reference Point MA01.

The processing of the Main Reference Network (RRP) used the SRGD vertex served as the starting point for geodetic linkage. A geodetic certificate for the SRGD vertex is provided.

The linkage and Calculation of the SRGD vertex was used to calculate the main reference network, with GNSS baseline observations (Figure 6-26) ensuring the precision of all linked points. The results, processed in Trimble Business Center using precise ephemerides, were within acceptable tolerances.



Source: Surveying performed by MapScan. Nov 2023

Figure 6-26: Reference GNSS's.

The results of the processed GNSS data showed precise horizontal and vertical accuracies for the linked vertices. The closure of geometric figures satisfied the required tolerances per the Chilean Road Manual (Section 2.302.201).

6.4.2 Aerophotogrammetric Survey

The goal of the aerial survey was to produce high-precision topography for the project area (1:500 scale). RPAS flights were planned and executed, followed by digital photogrammetric restitution using Agisoft Metashape Professional software.

The RPAS Flight Methodology:

- **Verification:** Background verification included defining the product scale (1:500), precision (25 cm), area of interest, cartographic projection, geodetic system (SIRGAS), and vertical reference (EGM08).

Flight Planning: Weather conditions were checked, and flight schedules were optimized for full coverage of the area of interest (Figure 6-27).



Source: Surveying performed by MapScan. Nov 2023

Figure 6-27: Location map of the Flight routes

- **Field Campaign:** Flights were conducted with the Mavic 3 Enterprise Multispectral, with data quality checks on overlap, georeferencing, and orientation.
- **Processing and High-Density Point Cloud Generation**

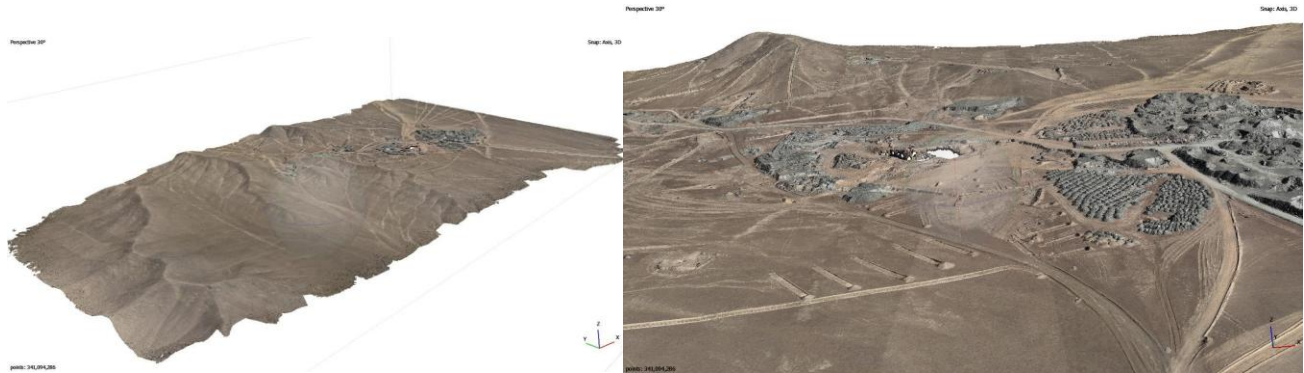
After flight data processing, a high-density point cloud was generated from the aligned images, enabling further analysis for topographic model generation. The data was processed using RTKPOST and VHP_Mavic3M_PPK software for kinematic GNSS trajectory processing and photogrammetry correlation.

6.4.3 Digital Elevation Model (DEM)

Using the high-density point cloud, a Digital Terrain Model (DTM) was generated for the project, forming the basis for the ortho-mosaic and contour lines.

The Ortho-Mosaic and Contour Lines for the DTM was used to generate individual ortho-photos, which were combined to create a high-resolution ortho-mosaic (4 cm/pixel). Contour lines were

developed at 10-meter index intervals and 0.5-meter intermediate intervals, corresponding to the project scale of 1:500. In the Figure 6-28 is showed the high-density point cloud obtained.

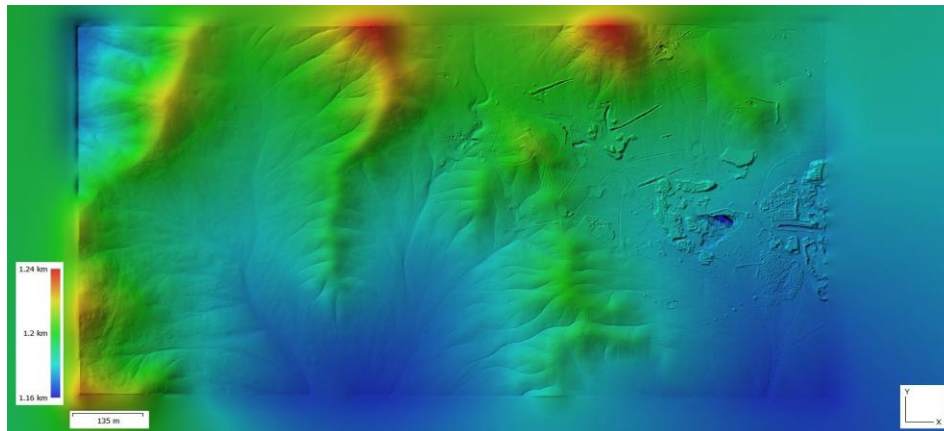


Source: Surveying performed by MapScan. Nov 2023

Figure 6-28: High-density point cloud obtained. Left the total coverage area and in right the detail of the old mine operation

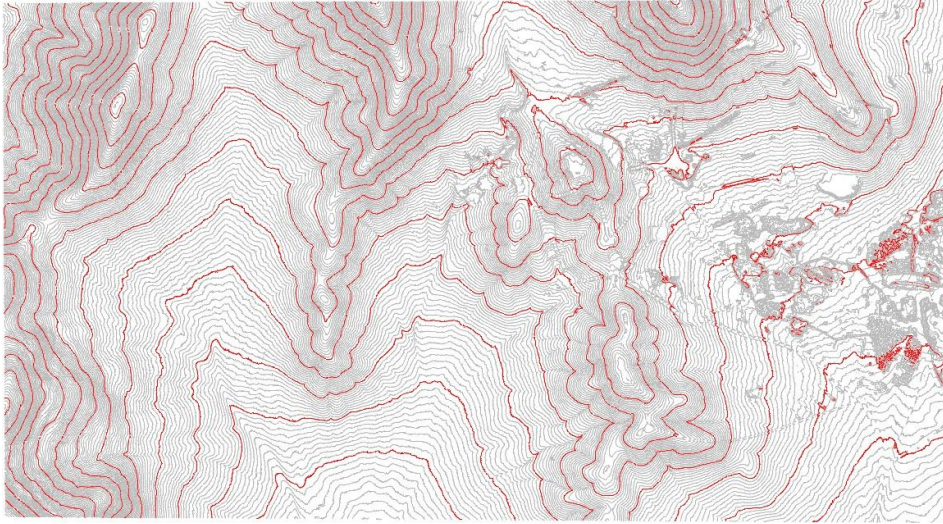
The planimetry for the project area was digitized based on the ortho-mosaic. The DTM was reported in datum SIRGAS and PSAD-56 systems, using appropriate parameters for Cartesian coordinate translation.

In the Figure 6-29 and Figure 6-30 are shown the DTM and contour lines of the Mariela Project, respectively.



Source: Surveying performed by MapScan. Nov 2023

Figure 6-29: DTM



Source: Surveying performed by MapScan. Nov 2023

Figure 6-30: Contour Lines

6.4.4 Topographic Survey Report Using Laser Scanner – Mariela Mine Galleries

Topographic Survey Report Using Laser Scanner – Mariela Mine Galleries had the objective to survey of excavated material by old underground mine operation that developed galleries at levels 1, 2, 3, 4, and 5 to support the feasibility studies that are in the strategic plan of Bifox.

The activities included high-precision laser scanning, total station surveys, and GNSS in RTK mode. The data collected was used to generate a high-density point cloud and create 3D models in *.OBJ and *.DXF formats.

The survey produced validated 3D topography of Mariela Mine galleries (levels 1–5). The laser scanning results, including point clouds and 3D models, are compatible with photogrammetric data, enabling their use in combined engineering applications. Deliverables were provided in UTM Zone 19 South, referenced to both SIRGAS 2021 and PSAD-56 systems.

The methodology included the following steps:

- Project Planning: Verification of scope, deliverables, precision requirements, deadlines, and geodetic parameters.
- Fieldwork:
 - Geodetic linkage to reference points inside the mine galleries.
 - Execution of laser scanner measurements.
- Data Processing:
 - Alignment of scans.
 - Processing of point clouds.
 - Generation of 3D models in *.OBJ and *.DXF formats.

- o Datum transformation from SIRGAS to PSAD-56.

The equipment used for geodetic and topographic data collection are: Laser Scanner: FARO Focus 150 Premium; GNSS Equipment: SANDING T7 Plus GNSS receiver and Total Station: Stonex R2 Plus as shown at Figure 6-31.



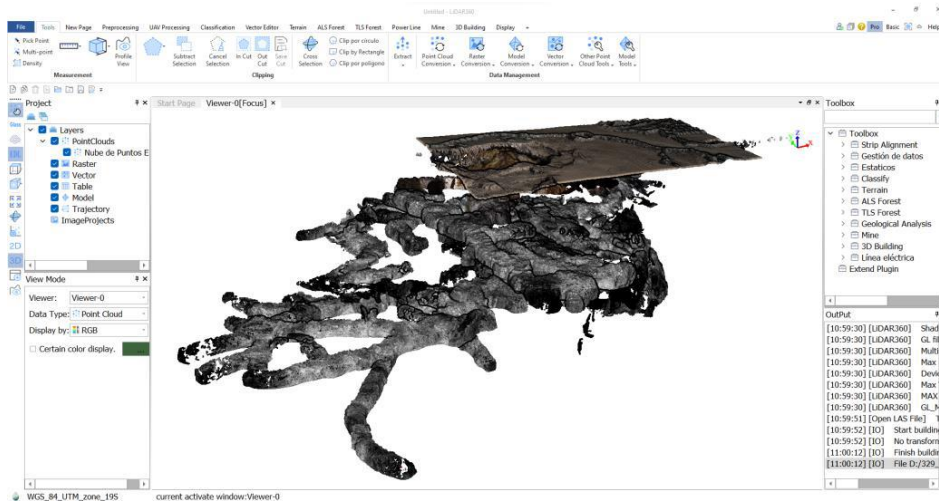
Source: Surveying performed by MapScan. Nov 2023

Figure 6-31: Top left: Scanner Laser Faro Focus 150 Premium. Top right: GNSS SANDING T7 Plus. Low Center: Total Station Stonex R2 Plus

The survey was conducted in the SIRGAS 2021 geodetic system and linked to the SRGD vertex from Chile's active station network managed by the University of Chile's Seismological Center. A concrete reference point (MA01) was established, and its coordinates were obtained using GNSS in static mode. The UTM projection (Zone 19 South) with the central meridian at -69° W was employed, and elevations were referenced to the EGM-2008 geoidal model.

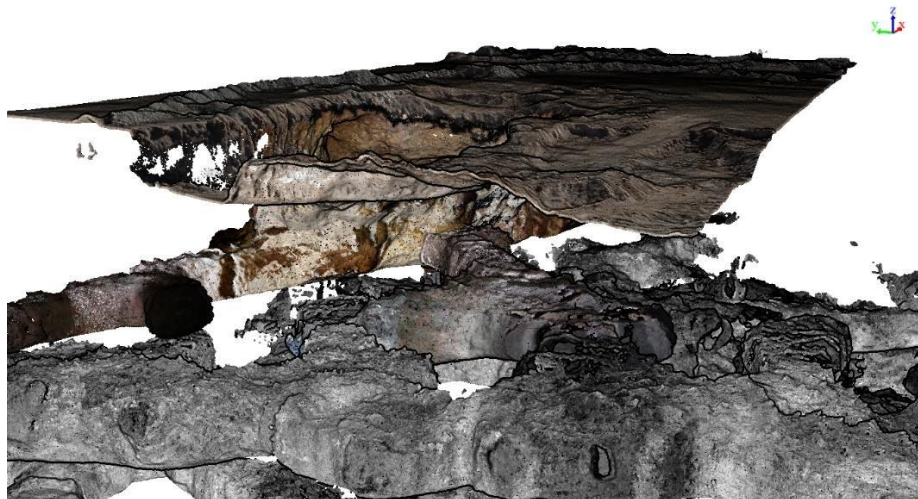
Processing of the Main Reference Network (RRP) - The SRGD vertex served as the geodetic linkage origin. GNSS baselines were processed in Trimble Business Center using precise ephemerides. The results met the tolerances defined in Chile's Road Manual for linear closure at 1:40,000 (25 PPM). Adjusted coordinates for key reference points were provided in both UTM and geodetic formats.

Laser Scanner Survey used to capture high-precision topography for galleries at levels 1–5, scans were conducted using the FARO Focus 150 Premium laser scanner. Overlapping scans ensured accurate sequential point cloud alignment, processed in Faro Scene software. 3D models were subsequently developed using Lidar 360 software with its mining module (Figure 6-32, Figure 6-33 and Figure 6-34).



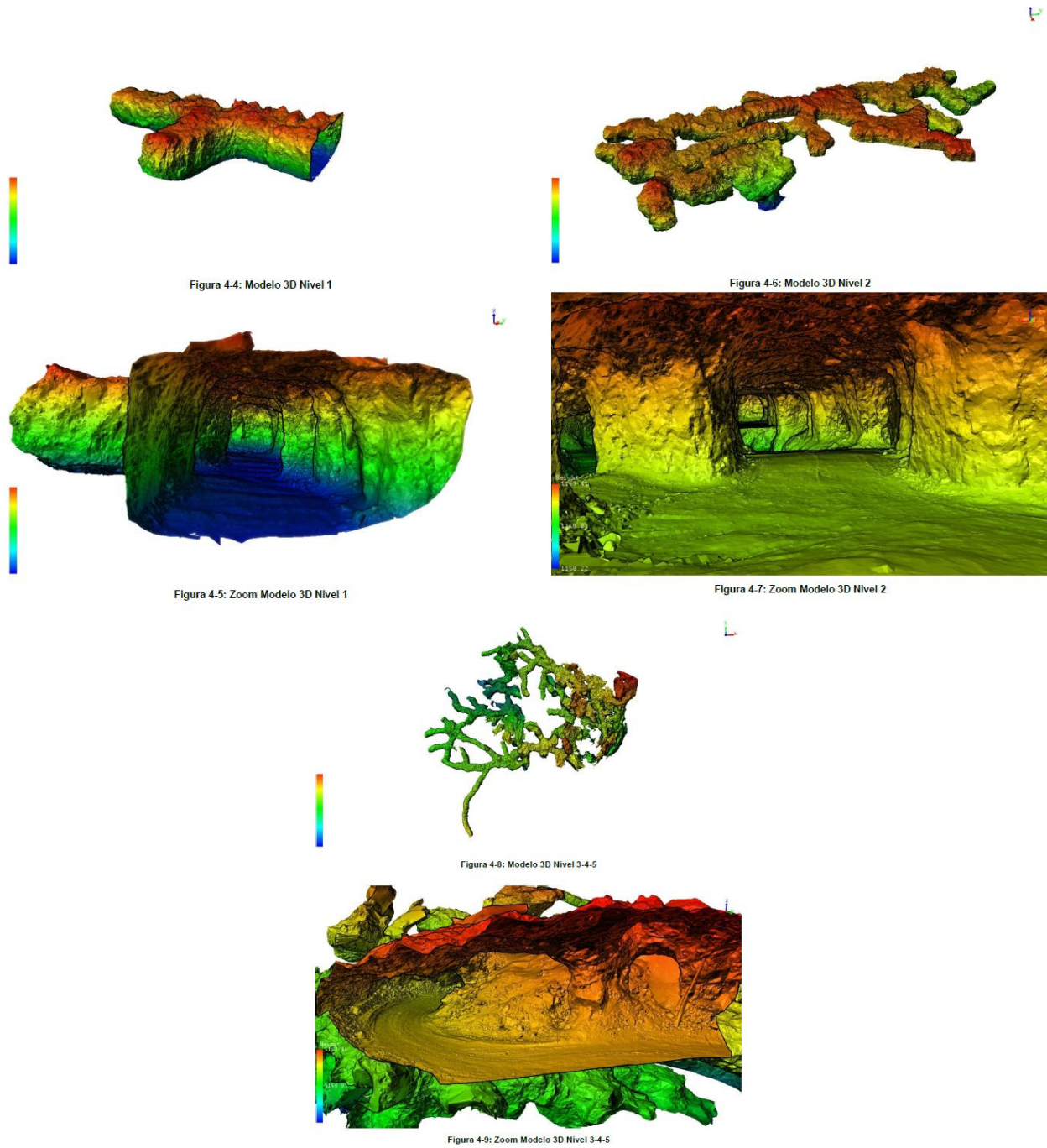
Source: Surveying performed by MapScan. Nov 2023

Figure 6-32: Cloud of points acquired at Levels 1, 2, 3, 4 y 5



Source: Surveying performed by MapScan. Nov 2023

Figure 6-33: Integrated Cloud of acquired points from Laser Scanner and topographic reconstitution



Source: Surveying performed by MapScan. Nov 2023

Figure 6-34: Detailed 3D models of excavated Levels 1, 2, 3, 4

Verification between laser scanning and photogrammetric survey results confirmed compatibility, ensuring the methodologies can be integrated into engineering projects.

Monographs for the MA01 reference point were generated, detailing coordinates in UTM (both SIRGAS and PSAD-56), orthometric elevation, and geodetic parameters.

6.5 Density Measurements and Analysis

The density determination was made by Fosfatos de Taltal staff, on selected 30 cores from historical drill holes, representative for the lithotypes and sent to ALS Copiapó para density determination under procedure OA-GRA08.

The length of the cores are in Intervals of 10-20cm, identified and sent to the lab;

The method OA-GRA08 and the instrument "WST-SEQ" for Specific Gravity Determination involves measuring the density of a bulk sample by comparing its weight in air and its weight in water. The Instrument (WST-SEQ) is the equipment used to ensure consistency and accuracy in measurements, possibly automated systems designed for high-throughput testing.

In summary the procedure are:

- Sample is weighed dry.
- The sample is then weighed while suspended in water.
- Specific Gravity (SG) is calculated using:

$$SG = \text{Weight in air (g)} / (\text{Weight in air (g)} - \text{Weight in water (g)})$$

In QP opinion, the procedure for density determination is reasonable for use in mineral resource estimation at economic assessment studies.

Table 6-8 the density determination of the 30 samples.

Table 6-8: Density determination in ALS Copiapó

Source: Sampling plan by Fosfato de Taltal and Certificates from ALS Copiapó.

Sample	Batch	DATE FINALIZED	OA-GRA08 - S.G.	Hole Id	FROM	TO	LENGTH	MIDPOINT
GD0996.6_01	C024274379	22-10-24	2.87	SDH-09-09	96.55	96.75	0.2	96.65
GD2911.5_01	C024274379	22-10-24	2.66	SDH-09-29	11.45	11.65	0.2	11.55
GD3740.5_02	C024274379	22-10-24	2.94	SDH-09-37	40.49	40.64	0.15	40.565
GD339.4_01	C024274379	22-10-24	2.92	SDH-09-33	9.3	9.5	0.2	9.4
GD3313.9_02	C024274379	22-10-24	2.86	SDH-09-33	13.8	14	0.2	13.9
GD3321.9_03	C024274379	22-10-24	2.92	SDH-09-33	21.8	22	0.2	21.9
GD3325.8_04	C024274379	22-10-24	2.91	SDH-09-33	25.79	25.99	0.2	25.89
GD3334.6_05	C024274379	22-10-24	2.85	SDH-09-33	34.5	34.7	0.2	34.6
GD014.2_01	C024274379	22-10-24	2.83	SDH-09-01	4.1	4.3	0.2	4.2
GD0110.02	C024274379	22-10-24	2.99	SDH-09-01	9.95	10.15	0.2	10.05
GD3742.7_01B	C024274379	22-10-24	2.92	SDH-09-37	42.65	42.8	0.15	42.725
GD3341.2_08B	C024274379	22-10-24	2.94	SDH-09-33	41.12	41.3	0.18	41.21
GD2698.8_02	C024274379	22-10-24	2.84	SDH-09-26	98.75	98.95	0.2	98.85
GD3744.6_04B	C024274379	22-10-24	2.81	SDH-09-37	44.5	44.7	0.2	44.6
GD3344.1_09B	C024274379	22-10-24	2.89	SDH-09-33	44	44.19	0.19	44.095
GD0117.04	C024274379	22-10-24	2.90	SDH-09-01	16.95	17.1	0.15	17.025
GD3336.6_06	C024274379	22-10-24	2.94	SDH-09-33	36.5	36.7	0.2	36.6
GD0120.7_05	C024274379	22-10-24	2.52	SDH-09-01	20.63	20.83	0.2	20.73
GD0126.4_06	C024274379	22-10-24	2.92	SDH-09-01	26.35	26.55	0.2	26.45
GD3337.4_07	C024274379	22-10-24	2.75	SDH-09-33	37.35	37.55	0.2	37.45
GD23146.6_02	C024274379	22-10-24	2.78	SDH-09-23	146.5	146.7	0.2	146.6
GD2645.2_01	C024274379	22-10-24	2.97	SDH-09-26	45.18	45.38	0.2	45.28
GD25137.3_01	C024274379	22-10-24	2.90	SDH-09-25	137.2	137.4	0.2	137.3
GD24142.3_01	C024274379	22-10-24	2.85	SDH-09-24	142.24	142.44	0.2	142.34
GD3658.1_01	C024274379	22-10-24	2.78	SDH-09-36	58	58.2	0.2	58.1
GD3742.2_03B	C024274379	22-10-24	2.84	SDH-09-37	42.15	42.35	0.2	42.25
GD3769.3_05	C024274379	22-10-24	2.86	SDH-09-37	69.25	69.41	0.16	69.33
GD3897.8_01	C024274379	22-10-24	2.73	SDH-09-38	97.72	97.88	0.16	97.8
GD1935.1_02	C024274379	22-10-24	2.74	SDH-09-19	35	35.2	0.2	35.1
GD0112.3_03	C024274379	22-10-24	2.81	SDH-09-01	12.2	12.4	0.2	12.3

7 MINERAL PROCESSING AND METALLURGICAL TESTING

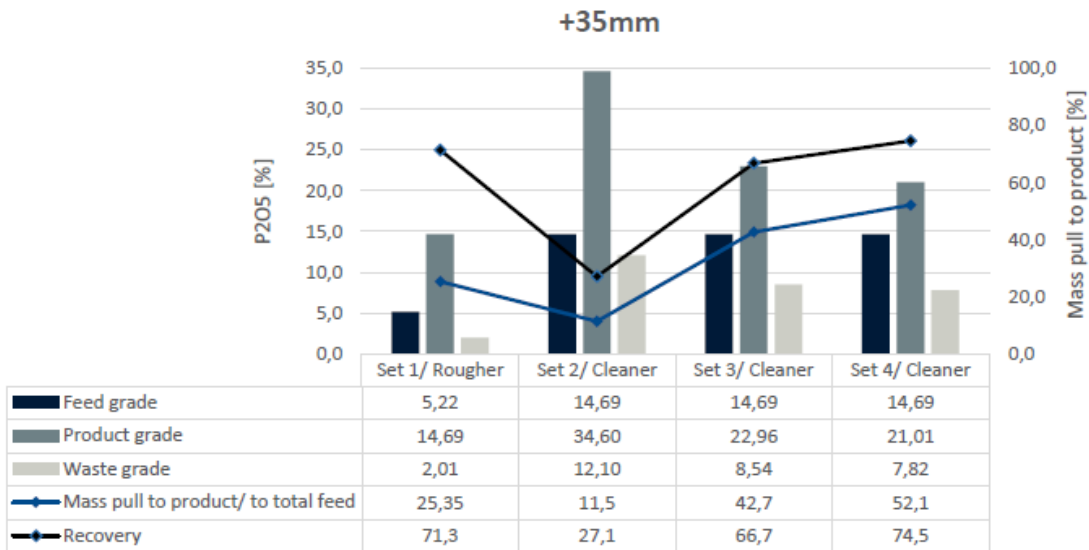
Below is the summary of the Mineral Processing and Metallurgical Testing report, relied by MB, conducted by TOMRA Mining, addressed at Feldstrasse 128 - 22880 Wedel, Hamburg – Germany, authored by Alina Shibistova and peer reviewed by Rodrigo Chaves, as TOMRA Ref. Number: C2740-23 - V1, dated of February 2024

7.1 Executive Summary

TOMRA’s engineers conducted performance test work on the phosphate feed samples represented in the size ratios +6-12mm, +12-35mm and +35mm. These samples were provided by Bifox Ltd. from Mariela deposit to establish whether TOMRA’s sorting systems are capable of sorting apatite ore from waste.

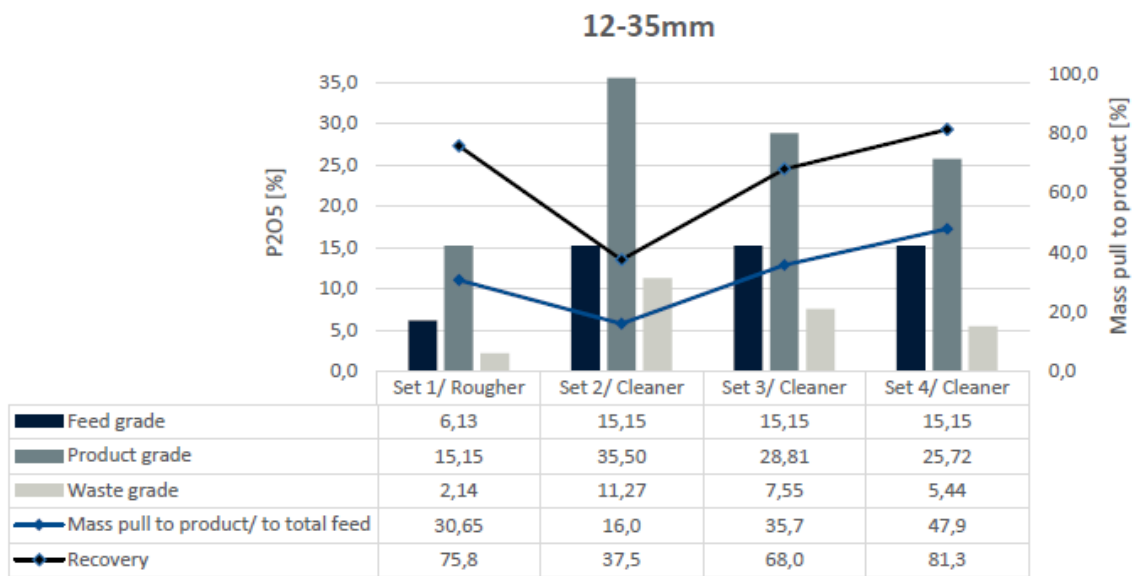
LASER was chosen as the most appropriate technique based on the different scattering properties of phosphate and waste, hence the First Inspection Test demonstrated that XRT would not be the most suitable technique for producing high-grade phosphate concentrate. Concerning the grain sizes +12-35mm and +35mm, the sorting workflow considered was: within the first step (rougher), pure waste (non-scattering particles) was separated. In the following steps, aiming to grade the product fraction, for the cleaner, so-called cascade approach was used. This approach included three steps, where the non-eject fraction was re-processed with the increasing sensitivity. This method allows to calculate the results which can be achieved within a single step sorting. For the +6-12mm material, in the first step pure waste was separated, within the next step, the product fraction was re- processed aiming to create a high-grade fraction.

The overall results of the sorting were very positive and demonstrated great potential of the LASER technology for the phosphate sorting and grading. Figure 7-1 to Figure 7-3 summarize the results. Already after the rougher step, the phosphate grades were increased almost by factor three in 25% of the total mass. Whereas in the additional cleaner step, by grading the product from the rougher step, P₂O₅ grades over 30% were achieved, crucial for LFP batteries market.



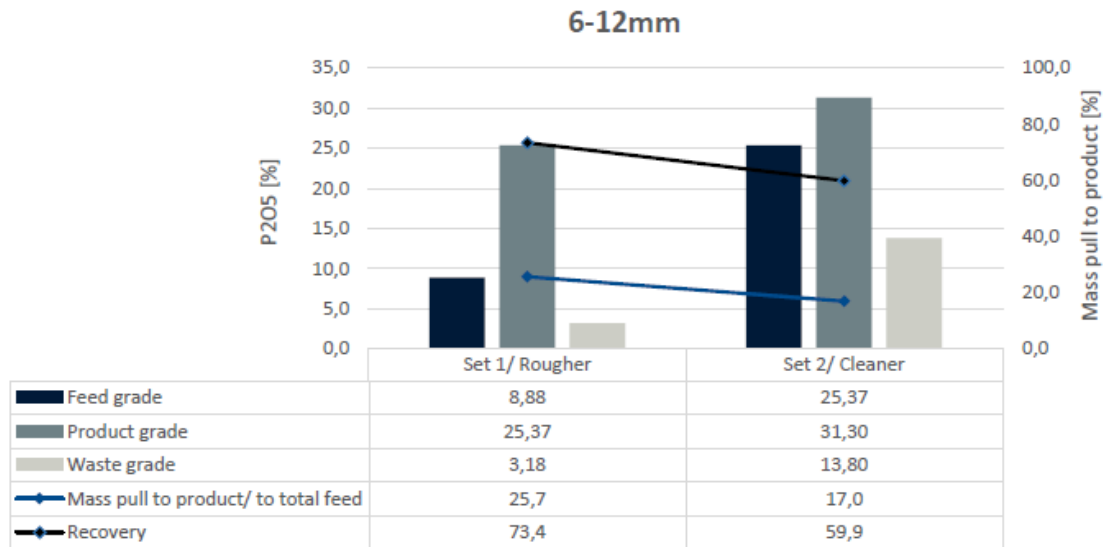
Source: TOMRA Report (2024)

Figure 7-1: +35mm material sorting results.



Source: TOMRA Report (2024)

Figure 7-2: 12-35mm material sorting results



Source: TOMRA Report (2024)

Figure 7-3: 6-12mm material sorting results

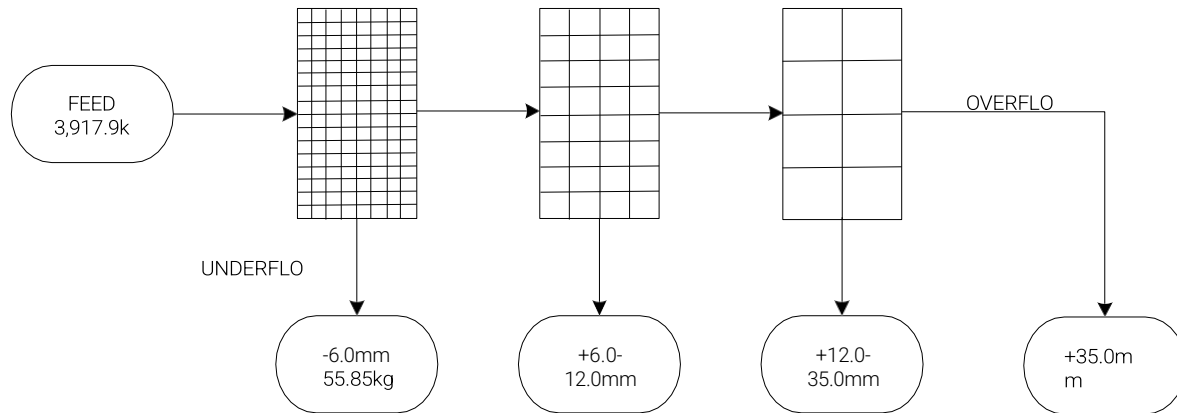
7.2 Objective

The main objective of this performance test was to detect and separate apatite from the remaining material using TOMRA’s LASER technology.

The material description, preparation, and test procedure followed by the discussion of the preliminary results are elaborated in the following sections of this report.

7.3 Material and Preparation

For the performance test, four bags of material were received. The material was screened with the aim to generate following size ratios proposed for the sorting: +6-12mm, +12-35mm and +35mm, as illustrated in Figure 7-4.



Source: TOMRA Report (2024)

Figure 7-4: Procedure of sorting: +6-12mm, +12-35mm and +35mm

The material was sorted dry. Please note, that for the phosphate material sorting an optical technique was used, which requires a clean material surface, therefore the de-dusting of the material with a rinse air flow is mandatory.

7.4 Test Equipment

7.4.1 PRO Secondary LASER Dual

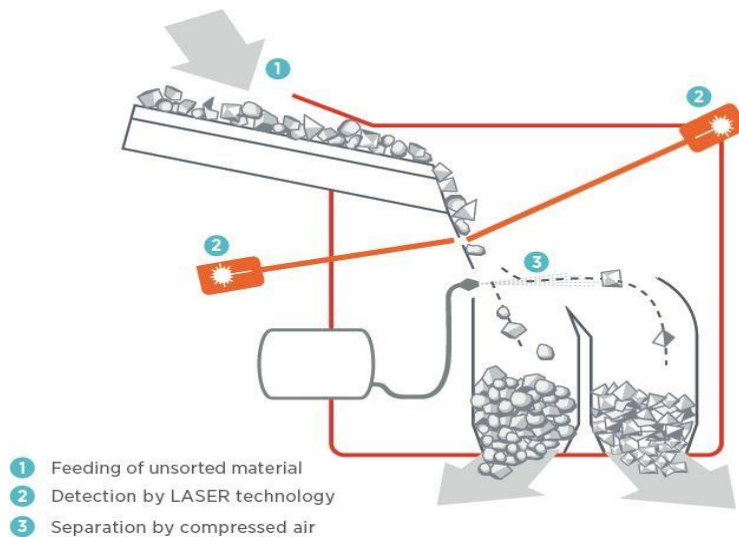
The Industrial Processing (PRO) series sorting equipment is designed for the typical minerals processing environment. The simple and compact design based on the freefall principle is efficient and reliable. The particle size range from 20 mm to 120 mm is covered by the PRO Secondary which can be equipped with COLOR, Near- Infrared (NIR) and LASER technology.



Source: TOMRA Report (2024)

The LASER identification technology consists of a multi-channel laser scanning system with high resolution and cutting-edge color and structure selectivity. Multiple material characteristics such as brightness, color, size, shape and surface structure are processed simultaneously.

The machine can be quickly optimized for the required sorting tasks by the selection of sorting programs and sensitivity adjustments. Figure 7-5 shows the functional principle of the PRO Secondary LASER Dual.



Source: TOMRA Report (2024)

Figure 7-5: Functional principle of the PRO Secondary LASER Dual

Input material (1) is evenly fed via a vibration feeder onto a chute, where it is detected by a multi-channel laser scanning (2) system simultaneously from two sides. If the sensors detect material to be sorted out, it commands the control unit to open the appropriate valves of the ejection module at the end of the chute. The detected materials are separated from the material flow by jets of compressed air (3). The sorted material is divided into two fractions in the separation chamber.

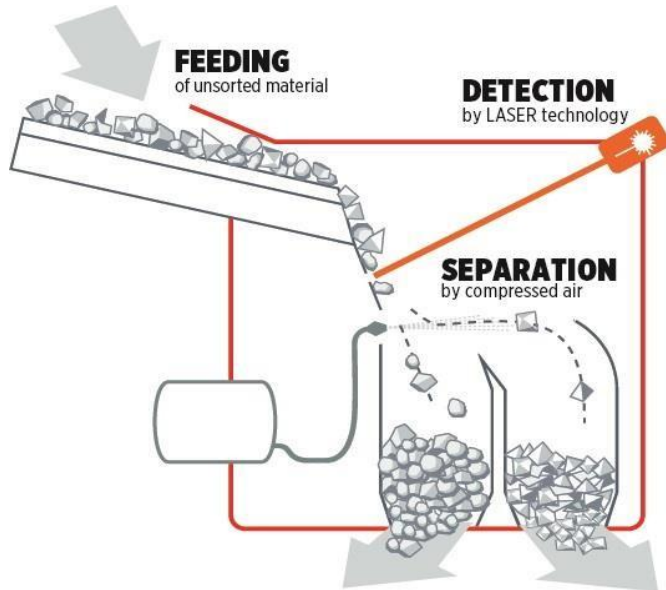
7.4.2 PRO Tertiary LASER

The Industrial Processing (PRO) series sorting equipment is designed for the typical minerals processing environment. The heavy duty and compact design based on the freefall principle is efficient and reliable. The particle size ranges from 8mm to 25mm.

The LASER identification technology consists of a multi-channel laser scanning system with high resolution and cutting-edge structure and color selectivity. Multiple material characteristics like surface structure, brightness, color, size and shape are processed at the same time.

The machine can be quickly optimized for the required sorting tasks by the selection of sorting programs and sensitivity adjustments.

Figure 7-6 shows the functional principle of the PRO Tertiary LASER:



Source: TOMRA Report (2024)

Figure 7-6: Functional principle of the PRO Tertiary LASER

Input material is evenly fed via a vibration feeder onto a chute, where it is detected by a multi-channel laser scanning system. If the sensors detect material to be sorted out, it commands the control unit to open the appropriate valves of the ejection module at the end of the chute. The detected materials are separated from the material flow by jets of compressed air. The sorted material is divided into two fractions in the separation chamber.

7.5 Test Procedure

TOMRA specializes in the sensor-based sorting techniques. Sensor-based sorting is an umbrella term for all applications where particles are individually detected and analyzed by a sensor technique, and ejected by an amplified mechanical, hydraulic, or pneumatic process.

The selected sensing techniques for this material was LASER. The sorters used for the test work documented in this report were TOMRA's PRO Secondary LASER Dual and PRO Tertiary LASER. For the coarser grain sizes, 12- 35mm and +35mm, the PRO Secondary LASER Dual was used, whereas for the fine particles, 6-12mm, the PRO Tertiary LASER was applied. These sorters are described in more detail in the appendix.

7.5.1 LASER Set-up

The selected sensing technique for this material is the LASER because of the different scattering responses for apatite and waste. The sorters used for the test work documented in this report were TOMRA's PRO Secondary LASER Dual and Pro Tertiary LASER. These sorters are also described in more detail in the appendix.

Images were taken of product and waste rock to train the sorter and to parameterize the software. These images were analyzed using proprietary TOMRA image-processing software. Sorting-task-specific algorithms were developed, based on these acquired images.

With the LASER technology, a multi-channel laser system is used to scan the surface of the particles. The degrees of diffusion (scattering effects) on the surface of the rocks varies with distinct types of minerals, as well as with their crystallinity and color. The different spot sizes of the diffusion measured are analyzed using TOMRA's image-processing software. Laser scanning can detect small variances in surface patterns, even when those patterns are identical in color. It should be noted that, because the wavelengths used in this process are outside the visible spectrum, arbitrary colors have been assigned to the raw images. Examples of raw and processed sensor images collected are shown in the tables below. The different selected color classes (colored pixels) are then assessed as a percentage of the single rock area. This percentage is used as parameter to determine and to set the sorting cut. Surface detection requires a clean material therefore dedusting is mandatory.

Table 7-1: LASER classification scheme

Classification scheme LASER	Given colors	
Product	Blue	
Waste	Red	
Background	Green	

	Raw LASER image	Processed LASER image
Product/ Apatite		
Middling/ Apatite & Host Rock		
Waste/ Host Rock		

Source: TOMRA Report (2024)

7.5.2 Test Work Procedure

The detailed test work procedure is demonstrated below in the Figure 7-7 to Figure 7-9.

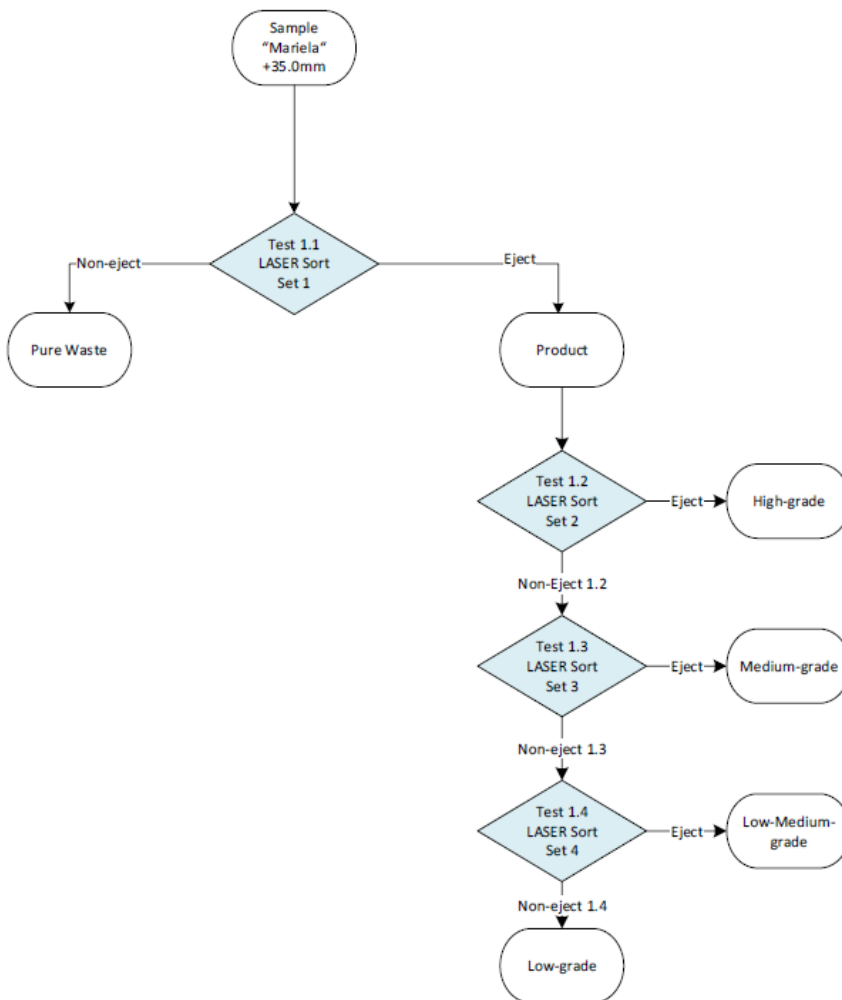
Both coarse-grained size ratios, +12-35mm (Tests 2.X) and +35mm (Tests 1.X), were tested with the same equipment- PRO Secondary LASER Dual, by applying the same sorting algorithm, including two approaches: rougher and cleaner which was run in cascade.

In the first step, so-called rougher, product particles were separated from waste. Thereafter, the product fraction was re-processed (cleaner) by applying the cascade sorting method. The cascade sorting principle usually comprises a sequence of several sorting steps with increasing sorting sensitivity for one sample. The actual sorting results of this method form the basis for a re-calculated simulation of a 1-step sorting process with a specific sensitivity. The cascade method proposed for the tested material included three additional steps, with the increasing sensitivity to the non-eject fraction. So, in the second sorting step, after rougher, product was sorted aiming to produce a high-grade fraction. The non-eject fraction was then re-run in the third step, here, medium-grade fraction was generated. In the last cascade step, fourth step, low-grade and low-

medium grade material separation was done. So, in total, after sorting, for each material following fractions were generated: waste, high-grade, medium-grade, low-medium-grade and low-grade.

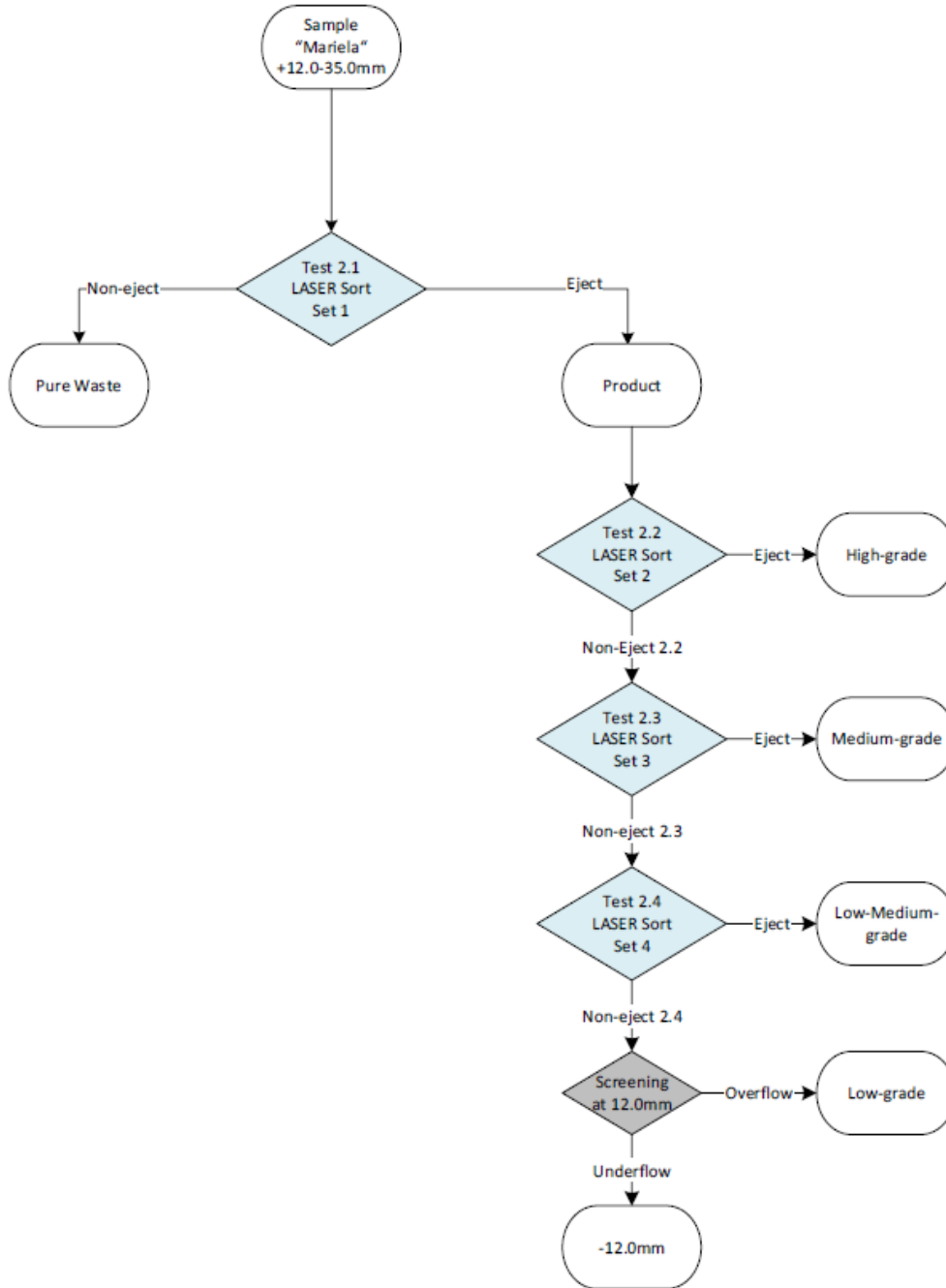
In addition, the fine-grained material, +6-12mm, was sorted with the PRO Tertiary LASER. Here, the material was sorted within two steps. Same, as for the coarse grain, the first step rougher step aimed to separate waste from the apatite-bearing particles. Thereafter, the product fraction was re-processed aiming to separate high-grade material from low-grade. Three fractions were generated in total: waste, high-grade and low-grade.

All the samples generated after sorting were submitted to chemical analysis by Wardel Armstrong laboratory.



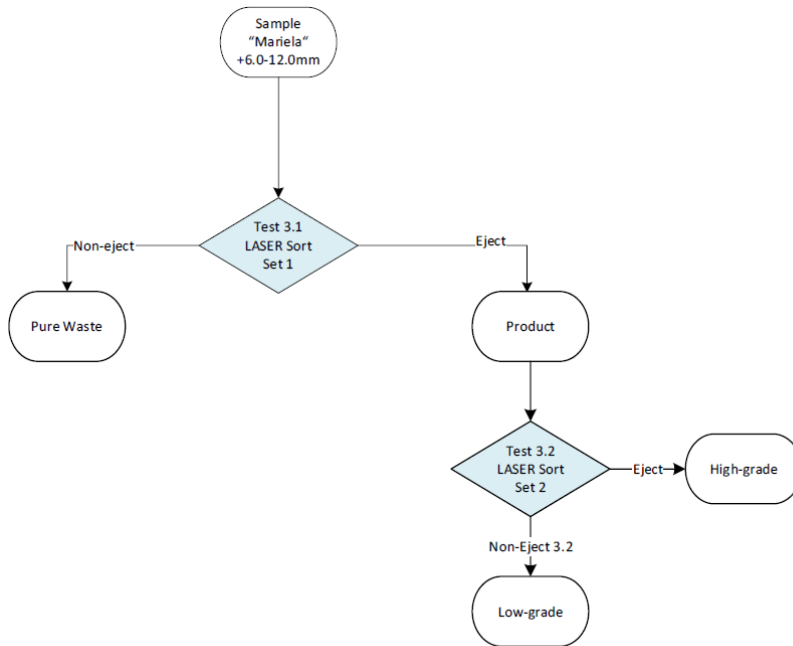
Source: TOMRA Report (2024)

Figure 7-7: coarse-grain material sorting procedure (+35mm)



Source: TOMRA Report (2024)

Figure 7-8: coarse-grain material sorting procedure (+12-35mm)



Source: TOMRA Report (2024)

Figure 7-9: fine-grained material sorting procedure (+6-12mm)

7.6 Results

Table 7-2 to Table 7-4 give the overview of the results. Please note that additionally to the rougher step, where product and waste were separated, a cleaner was performed on the product fraction from the rougher step. This cleaner was run by using the cascade procedure, which included three steps, where the non-eject material was re-processed with the increasing sensitivity. The results of the cascade sorting represent the combined results which can be achieved within single step sorting by using one specific sensitivity. The individual results of the sorting can be found in the appendix.

For the +35mm material, already after the first sorting step, by removing 75% of waste, phosphate grades were increased by factor 3, from 5.22% to 14.69%. In the additional LASER steps, the product was re-processed in the cleaner step aiming to grade the product. Here, by recovering 11% of the material from the re-processed product feed, the grades of 34.6% were achieved.

Similar results were calculated also for the +12-35mm. After the first LASER step, the product was upgraded twice, from 6.13% to 15.15% with the yield of 30.7%. Within the additional cleaner step, by recovering 16% of the mass from the LASER step 1, a grade of 35.5% was achieved.

Also, for the fine-grained material +6-12mm, sufficient upgrades were achieved. Removing 74.3% of the mass to the waste, phosphate grade increased from 8.88% to 25.37%. Whereas, by reprocessing the product fraction created after the first step, a grade of 31.3% was achieved with 17% yield.

Table 7-2: +35mm results overview.

		Mass	Mass	P2O5	SiO2	Al2O3	Fe2O3	MgO	Cl*	F*	P2O5	Upgrad	
		[kg]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	Recovery	e Factor	
Test Run 1 +35mm	Feed	1906.2	100.0	5.22	40.48	11.01	12.46	8.32	4411.31	1787.69			
	ROUGHER												
	Set 1	Non-eject	1423.0	74.6	2.01	44.30	12.65	13.43	9.00	2790.00	960.00		
		Eject	483.2	25.4	14.69	29.22	6.19	9.58	6.33	9186.00	4225.19	71.3	2.8
	CLEANER												
	Set 2	Non-eject	427.5	88.5	12.10	31.95	6.91	10.51	6.99	7978.97	3848.02		
		Eject	55.7	11.5	34.60	8.25	0.69	2.46	1.27	18450.00	7120.00	27.1	2.4
	Set 3	Non-eject	277	57.3	8.54	36.00	8.28	11.77	7.96	6446.25	3118.90		
		Eject	206.2	42.7	22.96	20.11	3.38	6.65	4.13	12866.46	5711.34	66.7	1.6
	Set 4	Non-eject	231.5	47.9	7.82	36.80	8.73	12.00	8.11	6190.00	2930.00		
		Eject	251.7	52.1	21.01	22.24	3.86	7.36	4.69	11941.56	5416.44	74.5	1.4

Source: TOMRA Report (2024)

Table 7-3: +12-35mm results overview.

		Mass	Mass	P2O5	SiO2	Al2O3	Fe2O3	MgO	Cl*	F*	P2O5	Upgrade	
		[kg]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	Recovery	Factor	
Test Run 2 +12-35mm	Feed	1842.8	100.0	6.13	39.13	10.38	12.39	8.11	4614.62	1959.94			
	ROUGHER												
	Set 1	Non-eject	1278	69.3	2.14	43.80	12.15	13.74	9.01	2680.00	990.00		
		Eject	564.8	30.7	15.15	28.58	6.39	9.34	6.07	8992.18	4154.68	75.8	2.5
	CLEANER												
	Set 2	Non-eject	474.5	84.0	11.27	32.71	7.48	10.72	7.03	7344.55	3559.92		
		Eject	90.3	16.0	35.50	6.87	0.65	2.11	1.04	17650.00	7280.00	37.5	2.3
	Set 3	Non-eject	363	64.3	7.55	37.20	8.96	11.89	7.96	5745.63	2702.91		
		Eject	201.8	35.7	28.81	13.07	1.76	4.76	2.69	14832.11	6766.15	69.0	1.9
	Set 4	Non-eject	294.5	52.1	5.44	39.80	10.05	12.46	8.36	4570.00	2150.00		
		Eject	270.3	47.9	25.72	16.35	2.40	5.94	3.58	13810.28	6338.84	81.3	1.7

Source: TOMRA Report (2024)

Table 7-4: +6-12mm results overview.

		Mass	Mass	P2O5	SiO2	Al2O3	Fe2O3	MgO	Cl*	F*	P2O5	Upgrad	
		[kg]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	Recovery	e Factor	
Test Run 3 +6-12mm	Feed	113.05	100.0	8.88	35.64	8.92	11.37	7.66	6178.66	2577.77			
	ROUGHER												
	Set 1	Non-eject	84	74.3	3.18	42.44	10.95	13.35	9.09	3360.0	1420.0		
		Eject	29.05	25.7	25.37	16.09	3.03	5.66	3.54	14328.98	5925.54	73.4	2.9
	CLEANER												
	Set 2	Non-eject	9.85	8.7	13.80	29.3	6.37	9.84	6.49	9220.0	4260.0		
Eject		19.2	17.0	31.30	9.32	1.32	3.51	2.03	16950.0	6780.0	59.5	3.5	

Source: TOMRA Report (2024)

The settings used for the test work are summarized in:

- Set 1: separate waste and product
- Set 2: eject high-grade
- Set 3: eject medium-grade
- Set 4: separate low-medium-grade and low-grade

7.6.1 Pictures of the Sorted Fractions



Source: TOMRA Report (2024)



Source: TOMRA Report (2024)

7.7 Conclusions and Recommendations

The concentration of P_2O_5 serves as a crucial indicator of the quality and grade of phosphate ore, with high-grade phosphate samples typically exhibiting significantly higher P_2O_5 concentrations compared to waste or lower-grade samples. This disparity is evident in various sorting tests, where high-grade phosphate samples, often referred to as eject fractions, consistently demonstrate elevated P_2O_5 levels. For instance, in Test 1.2 and Test 2.2, the P_2O_5 concentrations reach impressive values of 34.60% and 35.50%, respectively, underscoring the successful enrichment for LFP-battery-grade achieved through TOMRA's LASER sorting technologies. Conversely, waste

samples, as well as low-grade phosphate samples, tend to exhibit notably lower P_2O_5 concentrations, such as 2.01% in Test 1.1 and 5.44% in Test 2.4, indicative of their inferior quality.

Furthermore, the metrics of P_2O_5 recovery and upgrade factor provide valuable insights into the effectiveness of the sorting process in recovering phosphorus from the ore feed. Higher P_2O_5 recovery rates and upgrade factors indicate a more efficient separation process, resulting in increased phosphorus content in the eject fraction compared to the non-eject. The data suggest that TOMRA's LASER sensor has the potential to significantly improve the recovery of phosphate minerals from low-grade ore, thereby increasing the overall efficiency and profitability of phosphate mining operations.

These findings underscore the efficacy of sensor-based sorting techniques in selectively enriching high-grade phosphate fractions while effectively removing waste and low-grade material. By enhancing the overall efficiency and profitability of phosphate ore processing operations, TOMRA's sensor-based sorting technologies play a pivotal role in optimizing resource utilization.

TOMRA recommends as a next step, to start discussions about flowsheet design which can form the basis of a budgetary estimation for equipment and operating costs.

8 MINERAL RESOURCE ESTIMATE

8.1 Introduction

The Mineral Resource Estimates (MRE) were prepared by Competent Person (CP) Marcelo A. Batelochi, an independent consultant based in Belo Horizonte, MG, Brazil. The Mineral Resources were reported to the private company Fosfatos de Taltal - Bifox to comply a shareholder's request, in accordance with JORC 2012 code.

An initial review of the old underground mine and cores of drilling conducted by SRK in 2009, in collaboration with the geologists, identified the phosphate mineralization in stock works of **Apatite** veins crossing an Andesitic /Dioritic sequence.

The total material inside the solids in the Mineral Resource Estimates were classified as Inferred Mineral Resources and the borders of the wireframing as Potential target exploration. No Mineral Resources Pit was made due to the wireframing were constrained in less than 130 meters depth. The Mineral Resources as Inferred based on three key elements related to metal content (Metal Content = Ore Volume * Density * Grades):

4. **Ore Modeling Challenges:** The most difficult aspect of this MRE was ore modeling due to the lack of complementary structural geology information, where the stock work of veins have a complex structural system. Then, it was creating a single solid using 5% of P_2O_5 as threshold.
5. **Density Model:** The density is based on 30 sample results, in natural dry basis. Density was estimated by Nearest Neighborhood estimator method.

6. **Grade Estimates:** The use of historical core drilling and the panels samples there is no relevant impacts on accuracy of the Mineral Resource Estimate, but, the drilling spacing is not enough to support a mine planning and feasibility studies.

The resource model was created in block model support, where the Ordinary Kriging, 2-meter composite, without capping was used to estimate P_2O_5 % constrained to the Ore envelope and nearest neighbor interpolation applied for density without constrain of Ore/Waste. The volume of ore solids was flagged in the block model using a majority material rule: if ore comprised more than 50% of the block, it was flagged as 100% ore; if less than 50%, the block was classified as 100% waste. The ore volume was constrained by the topography, applying the same criteria as for ore solids.

Given that the ore is confined to shallow depths, extended up to 130m depth, then it was decided not to constrain the resources by resource pit that not impact on the quantity or quality of the Mineral Resources. This assessment ensures that the current resource estimates remain robust and unaffected by potential pit limitations.

In the CP Opinion, the risk to the resource estimates is that the Phosphate Ore would be englobe tonnage with $P_2O_5 < 5\%$, due to the uncertainties on the geometry of the Ore modeled caused mainly for restricted structural information. On the other hand, there is potential to increase mineral resources in depths and by new Satellite deposits in the Mariela Mineral Rights.

8.2 Supplied Data

The Company supplied the following items to MB Geologia:

- Historical drilling database + assays of re-sampling + Panel samples in the underground mine consolidated in in MSEXcel, included hole collars, downhole surveys, assays, lithology and densities;
- 3D topography and as built of underground old mine in triangles files, DXF format;
- SRK Exploration Report, Internal Reports and bibliography in PDF format.

The drilling spacing was controlled by places with Apatite veins stockwork, where carried out drill holes on the same pad in several directions (fan drill holes design) started on surface. Downhole sampling was generally on 1-2m intervals respecting the lithological contacts.

The MRE is based on 550 samples, in which 477 from drilling in 38 drill holes @ 5081.75m drilled. And 73 data from Pannel samples. There is no survey of the Drill holes (imprecision of sample location). A database summary is presented in Table 8-1, showing the data provided for a range of items.

Table 8-1: Database Summary

Source: Consolidated Database by MB (2024).

Drill holes	Holes	Records
Collar	38	5281 meters
Survey	0	Assumed the Az/Dip of the Collars
P2O5%	38	477 samples
Density	12	30 samples

UG Panels	Samples/Assays	Records
Total	73 P2O5%	In total 75, but there are 2 duplicates

The drill hole database (including assays and density data), survey points, and topographic surfaces and UG Solid have been validated, the procedures applied by the Company staff for Assays on the project have been of excellent quality and meet the minimum standards required for reporting an Inferred Mineral Resource.

8.3 Topographic Model

The topographic surface and the as built of the old underground operation are considered validated as described at Item 6.4 (Topographic Survey).

8.4 Geological Interpretation

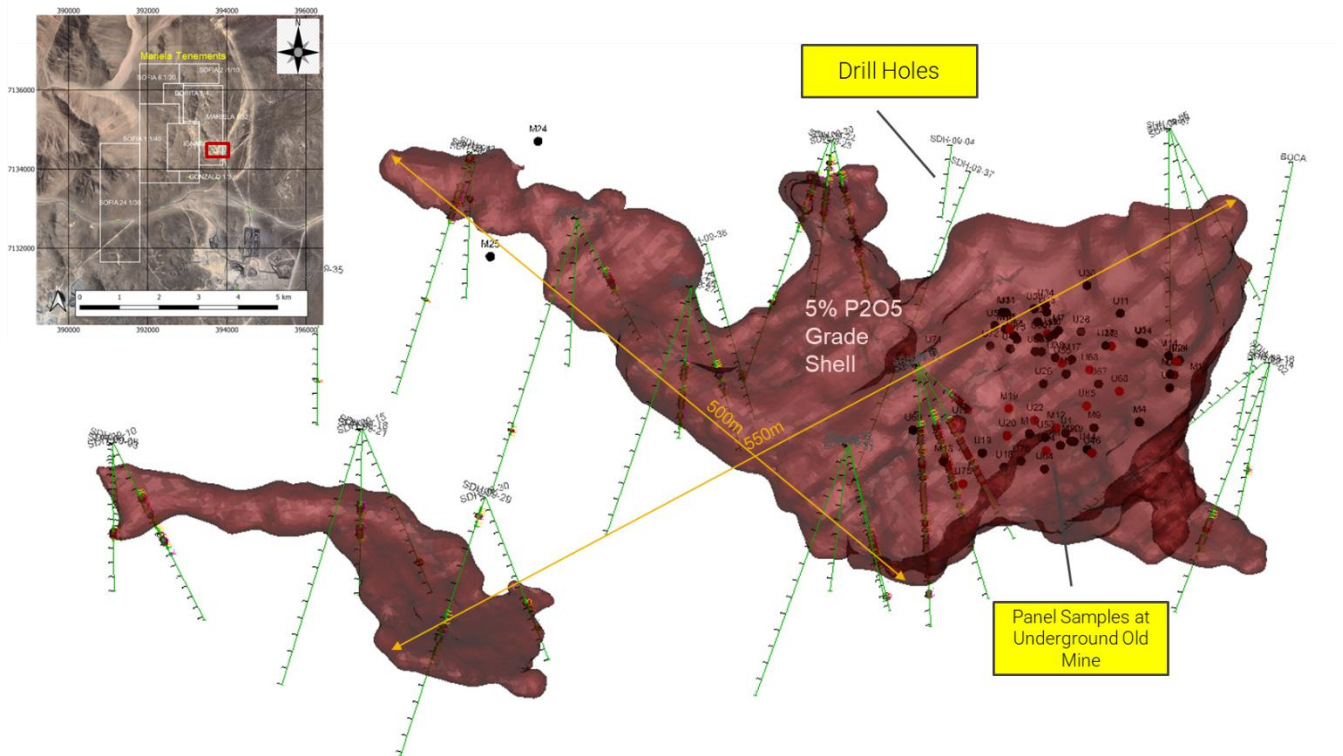
The 3D Geological Modeling was conducted based on the resource database, constrained on the top by the surface. Assumed that 5% of P₂O₅ is feasible to produce concentrate of Apatite in an Ore shorter concentrator.

The Interpretation started with an interpretation of the grade shell @ 5.0% P₂O₅ as threshold on the cross sections intercepted by the drill holes and compatibilized. After that, the interpretation was completed by cross section spaded in 10 meters to make the ore solids. Due to the structural complexity, it was interpreted only one Ore domain represented by the high frequency of stock work Apatite veins. It is understood that this resource model does not provide a guaranteed accuracy of the ore body geometries, that is the minimum standard for reporting Inferred Mineral Resources (Highlight that the Geological model doesn't have robustness to support Mine Plans and Feasibility Studies)

The interpreted Posphate mineralized zone has overall dimensions of maximum 550m (along EW) and 500m along NS direction. The Apatite veins strikes approximately N330-350° (northwest) and another direction N100-N120 (southeast) and no plunge was defined, but the maximum 130 m in

depth. Out of drilling coverage area, the solids were not extrapolated more than 50 meters horizontally.

The Figure 8-1 shows the Ore Modeling performed based on the grade shell @ 5.0% P_2O_5 .



Source: Ore Modeling - MB Geologia 2024

Figure 8-1: 3D Ore Modeling considering grade shell 5% of P_2O_5 .

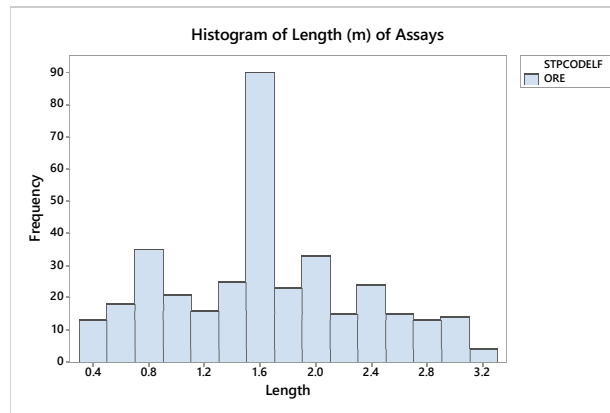
8.5 Data Analysis

8.5.1 P_2O_5 % variable

The data Analysis was performed on the Raw data for the variable P_2O_5 %” comparing the statistical behavior of the variable inside and outside of the 3D Ore envelope.

In spatial distribution, the data has non regular spacing. In general, they are spaced 20 in the drill holes at same pad and are spaced 100-150 meters in drill holes performed at different pads. The Downhole sampling was majority on 1m intervals (minimum 0.40 and maximum 3.2m) with all the collected materials with Apatite veins were sampled and therefore it was decided to use 2m composites that regularize better the data for input to the block grade interpolation.

In the Figure 8-2 is shown the sample length histogram that shown the necessity of regularization.



Source: MB Geologia,2024.

Figure 8-2: Histogram of Sample Intervals (m).

Analyses of the P₂O₅% grade distributions were conducted for those sample assays contained within the mineralized wireframe. These analyses (Figure 8-3) included of descriptive statistics and Probability plots with the purpose to identify whether any outlier P₂O₅% values whose influence on the Mineral Resource estimate must be restrained. The results of these analyses suggest not to apply any capping. Also, in the figure there is reported the amount of P₂O₅% < 5 (Cut off grade) inside the solid that showed 30% of samples has P₂O₅% < 5%.

P2O5%	ORE	Waste
N*	349	201
Mean	10.885	3.657
StDev	9.214	4.946
Variance	84.904	24.465
CoefVar	84.65	135.26
Minimum	0.08	0.13
Q1	3.39	0.95
Median	8.45	2.09
Q3	15.37	4.32
Maximum	38.8	38.96
Range	38.72	38.83
Skewness	1.09	3.76
Kurtosis	0.58	19.32

Source: Statistical Analysis by MB (2024)

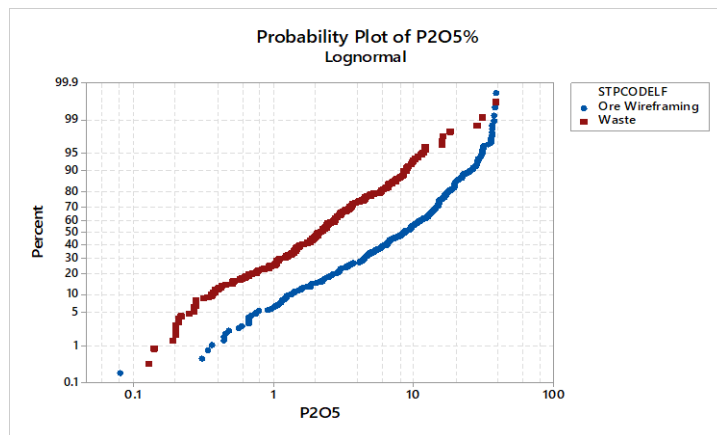
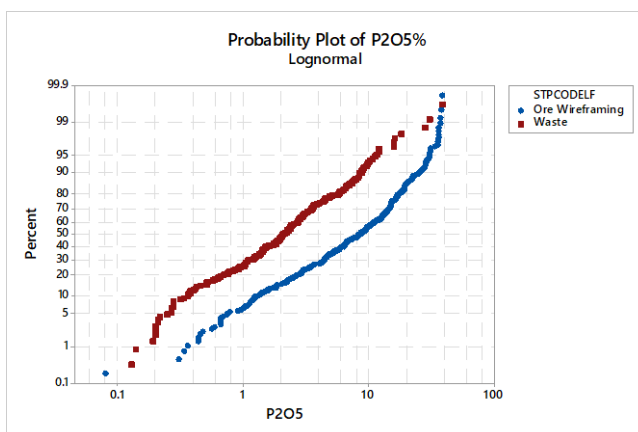


Figure 8-3: EDA of P₂O₅% – Raw Data.

An EDA of the P₂O₅% in 2-meter composite support is shown as Figure 8-4 and indicates a single, almost normal population for the ore domain with no significant skew or bimodal nature. Also, the 2m composite grouped internal waste intervals <1m and minimize this effect on the sample support (30% of internal waste of raw data was minimized to 20% on 2m Composite).

P2O5%	ORE	Waste
N	324	219
Mean	9.855	3.156
StDev	6.709	3.169
Variance	45.006	10.045
CoefVar	68.07	100.43
Minimum	0.31	0.13
Q1	4.89	1.24
Median	8.465	2.23
Q3	13.652	4.312
Maximum	36.49	27.49
Range	36.18	27.36
Skewness	1.19	3.1
Kurtosis	1.83	16.8



Source: MB Geologia 2024 – Log-Normal scale for x-axis.

Figure 8-4: Histogram of P₂O₅% for 2m Composite Data

The statistical behavior of the 2m composites, with > 80% of the data falling above 5% P₂O₅%, indicates reduced risk from extreme values effect and high data variability on the grade estimates. This supports the use of Ordinary Kriging (OK) as an appropriate grade interpolation method for these Mineral Resource Estimates.

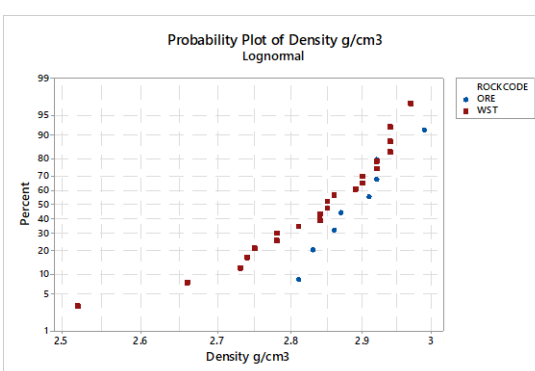
8.5.2 Density g/cm³ variable

The Density Model was obtained from the 30 samples analysed at ALS Copiapó, in dry basis moisture.

Density values were estimated using the nearest neighbor method, where all samples were used to estimate only the ore blocks.

Figure 8-5 and Figure 8-6 present, respectively, the input data statistics for the Nearest Neighbor estimations, as well as the output estimated values in the block model.

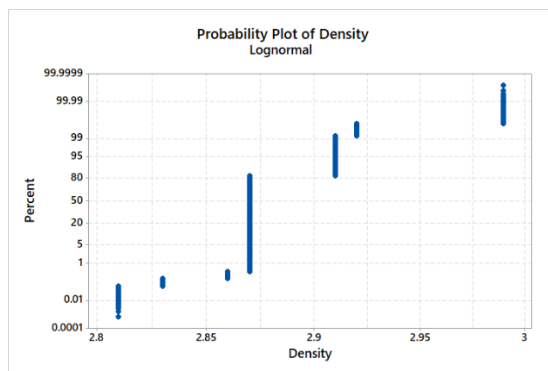
Density g/cm ³	ORE	WST
N	8	22
Mean	2.8888	2.8332
StDev	0.0579	0.1074
Variance	0.0034	0.0115
CoefVar	2.01	3.79
Minimum	2.81	2.52
Q1	2.8375	2.7725
Median	2.89	2.85
Q3	2.92	2.92
Maximum	2.99	2.97
Range	0.18	0.45
Skewness	0.38	-1.29
Kurtosis	-0.08	2.09



Source: MB Geologia 2024 – Log-normal scale for x-axis.

Figure 8-5: Histogram of raw data set for Density g/cm³.

Ore Blocks	Density g/cm3
N	92,795
Mean	2.8769
StDev	0.0161
Variance	0.00026
CoefVar	0.56
Minimum	2.81
Q1	2.87
Median	2.87
Q3	2.87
Maximum	2.99
Range	0.18
Skewness	2.02



Source: MB Geologia 2024 – Lognormal scale for x-axis.

Figure 8-6: Histogram of Block Density DE g/cm3 (wet moisture basis) estimated by Nearest Neighborhood

8.6 Variography

Variography was conducted on two-meter composites in N330/Vertical Plan and down-hole directions. The decision to orientate the variogram was made due to the limited number of data points and the uncertainty on the geometry of the 3D Ore Modeling, which is considered adequate for reporting Inferred Resources.

The variograms (Figure 8-7.) showed consistent structures, likely due to the spacing of the samples and the spread of horizontal plan.

8.7 Resource Estimation

Details of the block model are supplied in Table 8-2. No sub-blocking has been applied and the variables codes were flagged in a unique code based on the majority quantitative inside the block. The P₂O₅ % is estimated by Ordinary Kriging and the Density by Nearest Neighbourhood. Also, P₂O₅ % was estimated by Nearest Neighbourhood for validation of the grades.

The search radius was defined based on the variogram range: 60m N20W x 40m N70E x 15m Orthogonal. Blocks not estimated using the initial search radius were estimated with a search radius of 500x500x100 meters to ensure that all blocks within the ore envelope were estimated.

Table 8-2: Block Model Details

Block Dimensions	X	Y	Z	Totals	
Origin (Lower-SW corner)	383,150	7,134,250	980		
End (upper - NE Corner)	386,854	8,134,770	1200		
Nb of Blocks	176	130	110	7,293,000	Blocks
Block Size	4	4	2	50	m3

A 3D block model representation of geology is included as Figure 8-8. The red orebodies with NW continuity are the Orebody below base of the Soil surface, the orange contour line is the block model limit and in Green the topographic surface.

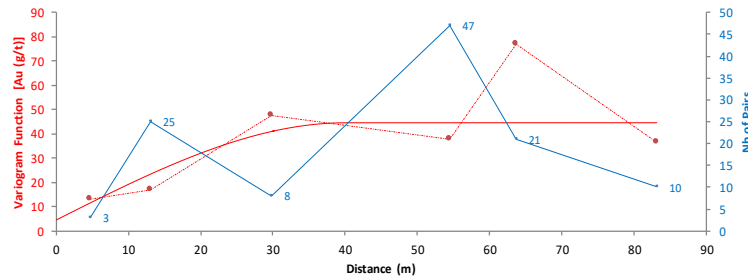
Spatial Analysis - Variogram Function - Azimuth: S30W; Dip: 90

Mariela Project - P2O5% - 2m Composite inside the Single Ore domain

Composites	Variogram Fitting	Nugget Effect	S1	S2	S3
Total	Type:		Spherical	Spherical	Spherical
Minimum: 0.31	Sill:	4.5	30	10	3
Maximum: 36.49	Range:				
Mean: 9.855	- Major Vector		40.0	40.0	10000.0
Standard Deviaton: 6.698	- Intermediate Vector		3.0	60.0	10000.0
Covariance Matrix: 0	- Minor Vector		5	12	15

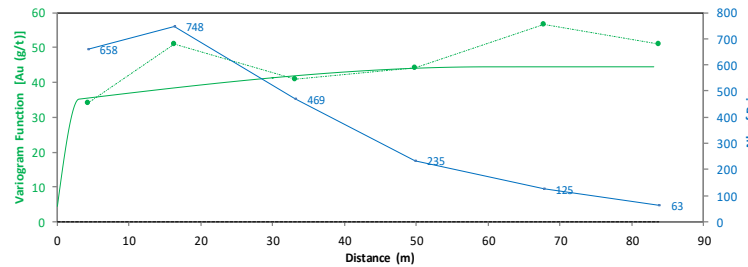
Major Vector:

Total
Tolerance on Distance = 0.5
Lag Value = 17.0m
Nb of Lags = 6
Vector Direction:
- N330/0
Angular Tolerance = 45
Slicing Width = 0
Slicing Height = 1.6597



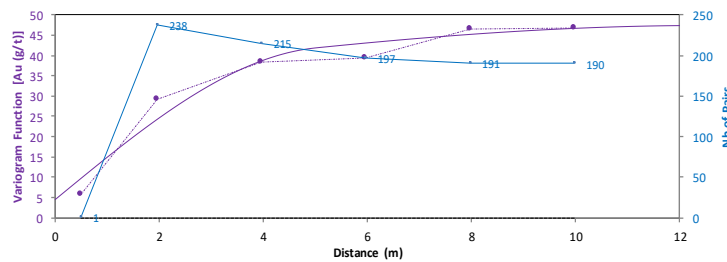
Intermediate Vector (Orthogonal of Major)

Total
Tolerance on Distance = 0.5
Lag Value = 17.0184 m
Nb of Lags = 6
Vector Direction:
- N60/Vert
Angular Tolerance = 45
Slicing Width = 0
Slicing Height = 0



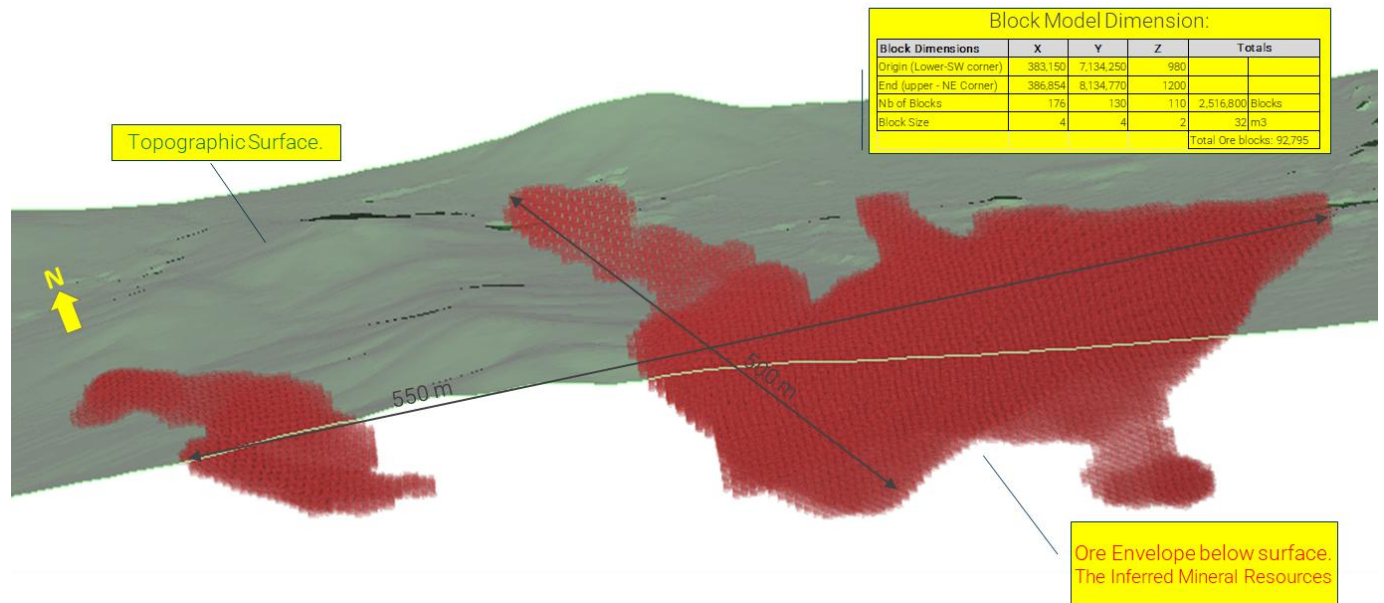
Minor Vector (Normal of Other Vectors)

Total
Tolerance on distance: 0.5
Lag Value = 2 m
Total
Vector Direction:
Down the hole
Angular Tolerance = 90



Source: MB Geologia, 2024. MB has his own Variogram construction procedure (made in 2010), that is considered better for basic spatial analysis. This homemade calculus was checked and validated with ISATIS software in 2010.

Figure 8-7: Variogram for P₂O₅% - 2 m composite in a Single Ore Envelope.



Source: MB Geologia 2024. View Looking down to N45E.

Figure 8-8: Block Model dimensions flagged the Ore blocks

The P₂O₅% block grade was estimated by Ordinary kriging interpolation from 324 input data of Ore at 2m Composite, constrained by ore solid limits. The output was 92,795 parent cells block of Phosphate Ore, in a support of 4m by 4m by 2m, with discretization of 4 x 4 x 2, unique search to encompass all blocks, minimum number de samples 4, maximum 8 samples, horizontal angular sections of 4 split vertically, and 2 maximum number of samples per hole.

Density blocks grade was estimated by Nearest Neighbour estimator, from 30 raw data density values after adjusting by swell factor (Density g/cm³ variable), unconstrained for outliers and the ore envelope. The output parameters are the same of the Ordinary Kriging, estimating the same 92,795 blocks of Ore (No waste material was estimated in the block model).

8.8 Estimation Results

The estimated block grades were reviewed visually, and it was concluded that the grades are coherent in comparison with the 2m Composite data. Complementary, it was performed statistical checks with grade statistical checks, grade tonnage curves (P₂O₅ from Ordinary Kriging and Declustered mean) and Swath Plots that confirmed the modelling strategy as acceptable with no significant issues.

8.8.2 Statistical Checks

Statistical checks have not been considered a robust method for grade verification due to differences in support: Point Support for 2-meter composites and Block Support. However, these checks are useful during estimation runs as a quick and straightforward way to evaluate overall output performance. Despite the support differences, grades should fall within a similar magnitude. Complementary it is included on this statistical check, grades estimated using Nearest Neighborhood (Declustered Mean) and Inverse Distance methods.

As shown in Table 8-3, the estimated P₂O₅% results confirm the expected grade variation, with a difference 5.9% in sample mean grade and 0.2% with the grade estimated by Nearest Neighbourhood. Additionally, some typical relationships between input and output values in Ordinary Kriging are confirmed, such as reduced standard deviation between blocks and samples.

Based on the statistical check, the estimated grade is of a good standard for reporting Inferred Mineral Resources.

Table 8-3: Comparison of P₂O₅ % Mean, Median and Standard Deviation for Block Grades and 2m Composite.

Source: MB Geologia 2024.

P2O5%	OK	NN	2m	Dif	Dif
N	92795	92795	324		
Mean	9.2699	9.2904	9.855	-5.9%	-0.2%
StDev	4.69	6.385	6.709		
Variance	21.9957	40.7686	45.006		
CoefVar	50.59	68.73	68.07		
Minimum	0.31	0.31	0.31		
Q1	5.739	4.507	4.89		
Median	9.036	8.45	8.465		
Q3	12.8755	13.872	13.652		
Maximum	36.085	36.49	36.49		
Range	35.775	36.18	36.18		
Skewness	0.33	1.08	1.19		
Kurtosis	0.67	2.26	1.83		

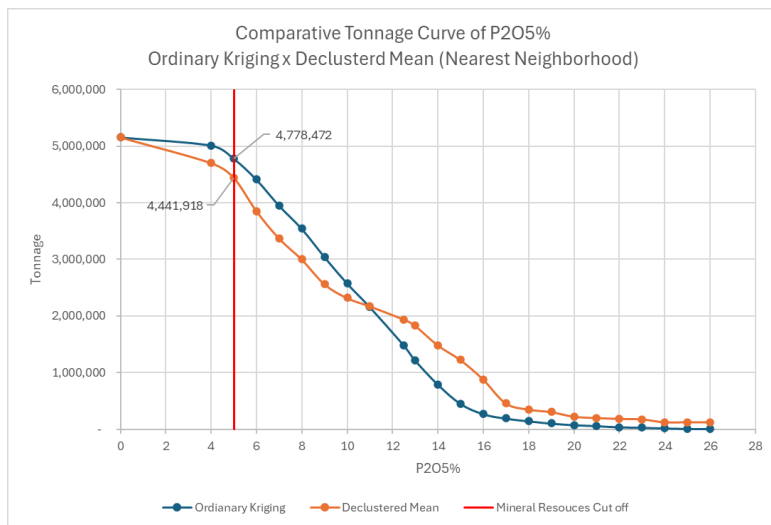
8.8.3 Validation by Grade tonnage Curves (Ordinary Kriging x De-clustered Mean)

Validation by Grade tonnage Curves is a comparison of the cumulative tonnage curves for the block grades and the De-clustered 2m Composite mean values that represent a simplified procedure to check the Ordinary Kriging with the Theoretical distribution curve with change of support.

Figure 8-10 shows the resultant curves indicate difference of 0.3Mtons (8%) between the Ordinary Kriging and the De-clustered mean that is explained by the smooth of the estimated grades caused

by the sample spacing (where the anisotropic distance between samples and blocks are in the region of low covariance of the variogram).

In the QP opinion, the Grade tonnage curve was more one element to corroborate for releasing the Mineral Resources classified as Inferred.



Source: MB Geologia 2024.

Figure 8-10: Comparative Tonnage Curve from estimated grades by OK x Nearest Neighborhood (2m Composites declustered).

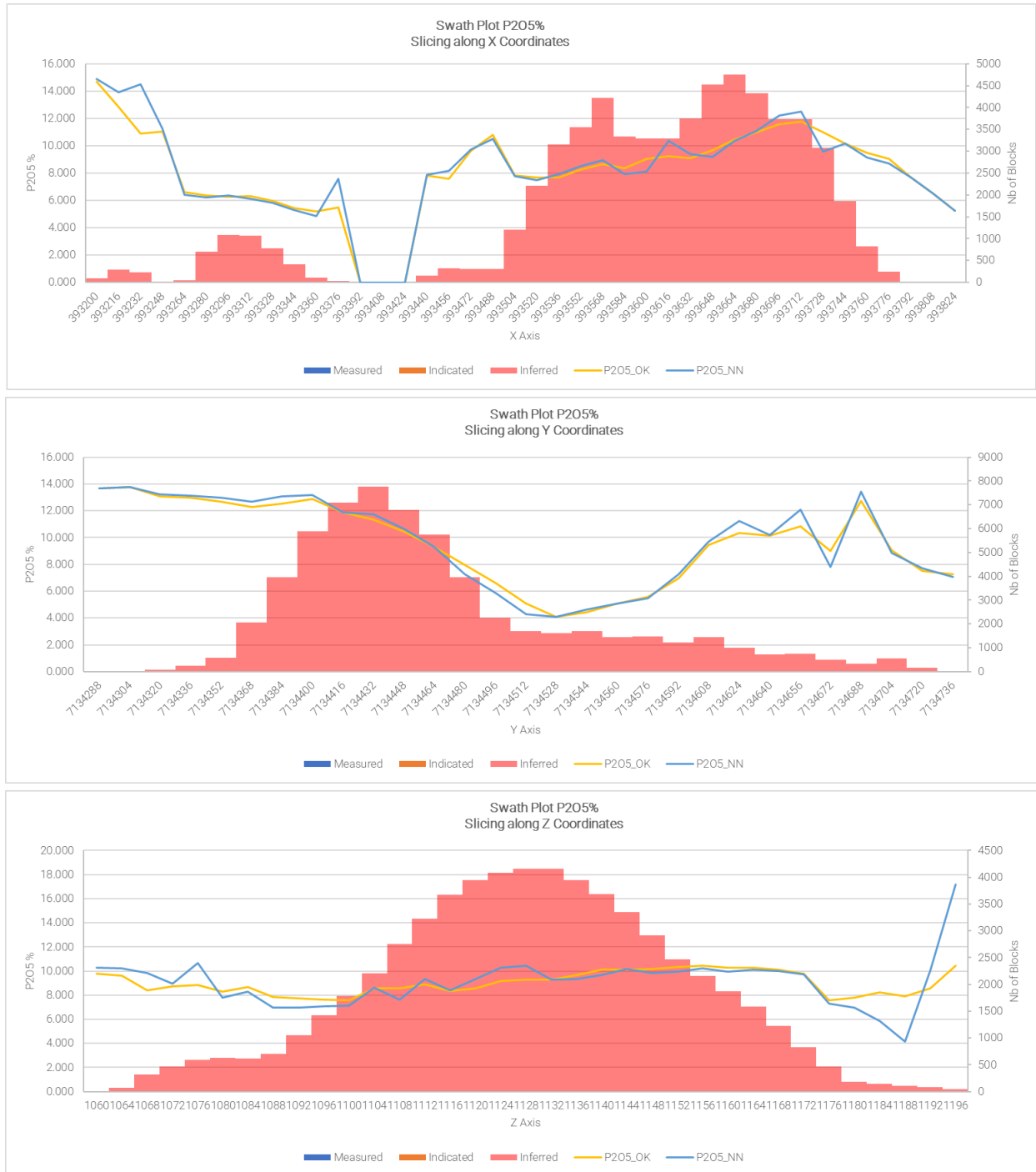
8.8.4 Swath Plot

The Swath Plot is a tool to check results of the grade estimates, that consists of a Comparison average grade of declustered 2m Composites and estimated values along the major axis of the deposit (x, y, z). The results are showed at Figure 8-11 were considered confirmed the smooth of the estimated grades and in accordance to report Mineral Resources as Inferred.

8.9 Resource Classification

A block is classified as Inferred if the block was estimated by 4 samples in a search radius 40x60x12meters that represents the Second structure of the semivariogram as showed below..

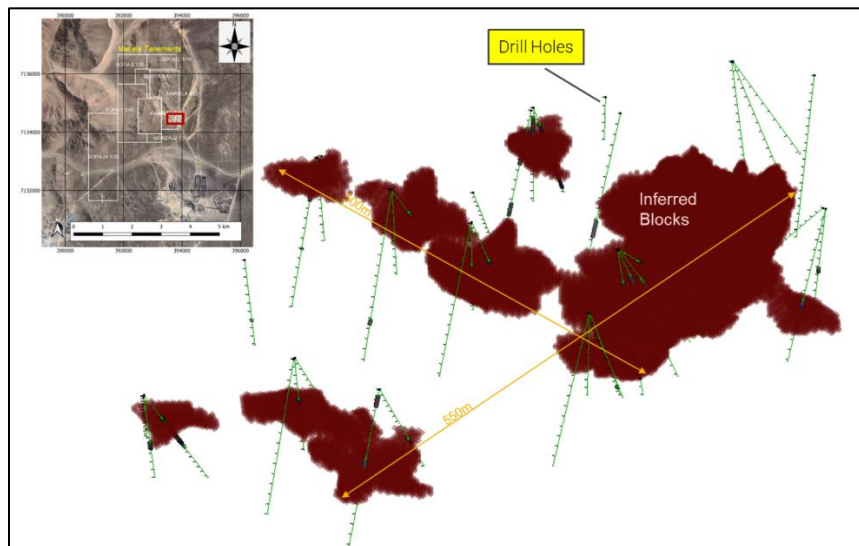
Variogram Fitting	Nugget Effect	S1	S2	S3
Type:		Spherical	Spherical	Spherical
Sill:	4.5	30	10	3
Range:				
- Major Vector		40.0	40.0	10000.0
- Intermediate Vector		3.0	60.0	10000.0
- Minor Vector		5	12	15



Source: MB Geologia 2024.

Figure 8-11: Swath Plot for P₂O₅%

The Classified blocks are illustrated in the Figure 8-12.



Source: MB Geologia 2024.

Figure 8-12: Inferred Blocks in the Mineral Resources

Blocks out of this criterion were not classified (considered Potential Target Exploration)

The classification is based on the following considerations, that has been considered Positive aspects:

- Relatively simple 3D Ore model where the ore is concentrated the envelope of Mineralized intercepts.
- Good sampling procedures for the Company drilling and no issues with the QAQC data.
- Density data has acceptable quality for Inferred Mineral Resources.
- The drilling and Panel samples are acceptable due to the material recovered with good core recovery.
- Data spacing demonstrated appropriate for the Inferred Material of the MRE
- Good definition in the variography.

The Inferred Resources in this estimate have a lower level of confidence than that applied to Indicated Resources and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Resources could be updated to an Indicated Resources with continued exploration, specifically additional drilling.

8.10 Reasonable Prospects for Eventual Economic Extraction (RPEEE)

The geometry of the ore body and the restriction of Mineral Resources in shallow depth support the potential for open-pit mining, resulting in a favorable low strip ratio where the QP considered not required a Resource Pit to constrain the Mineral Resources.

8.11 Depletion of Material mined at old underground operation

The mineral resources were released excluding the mined material from the old underground mine operation. Part of this material considered low grade was stocked surround the old operation and it was not included on mineral resources due to the estimation of those tonnes is based on visual inspection.

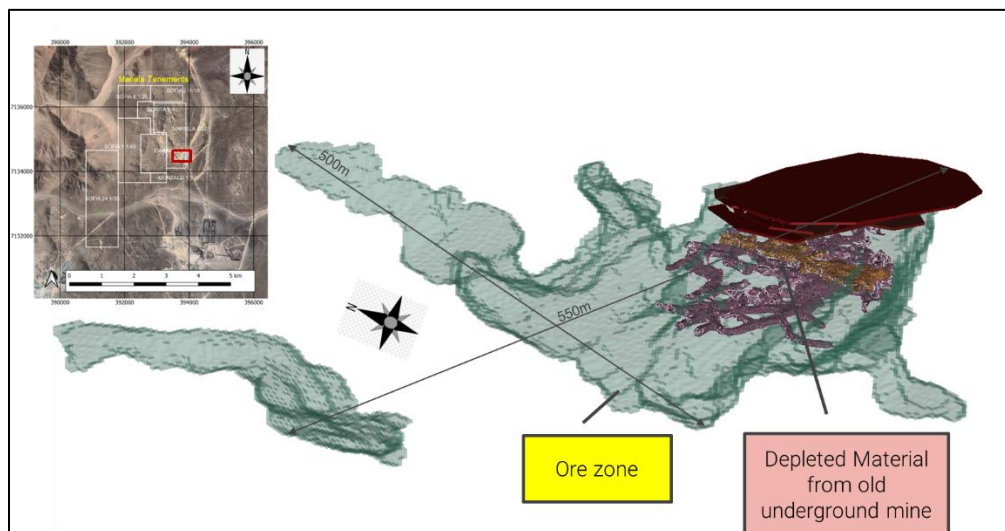
The depletion calculus considering Levels 1 to 5, covering the total mined by Cesar Formas that processed the high-grade material and stocked low grade ones. The volume extracted was based in the underground topography carried out by Bifox in 2023 (Item 6.4.4 | Topographic Survey Report Using Laser Scanner – Mariela Mine Galleries) that was flagged the blocks inside on the block model for its quantification and qualification.

There is high imprecision on the grade estimation of the mined material, that does not reflect the real grade of those blocks. It is due to the information used to estimate the mine blocks came from the samples collected at the pillars.

The old operation extracted and processed approximately 692 thousand tonnes of material, with an average grade 9.80% P_2O_5 (unrealistic in my opinion), yielding a total of 67,804 tonnes of P_2O_5 content. In the Figure 8-13 is shown the depleted material from old underground mine operation.

8.12 Mineral Resources

The Mineral Resources for the Mariela Project is listed in Table 8-4. The Mineral Resources notes are included on the resource table. The main comments are the Material from old underground mine was excluded from the mineral resources and the low grade stock pile stocked surrounding the old operation was not considered in the mineral resources inventory



Source: MB Geologia 2024.

Figure 8-13: 3D view showing the depleted material from old underground mine operation

Table 8-4: Mineral Resources

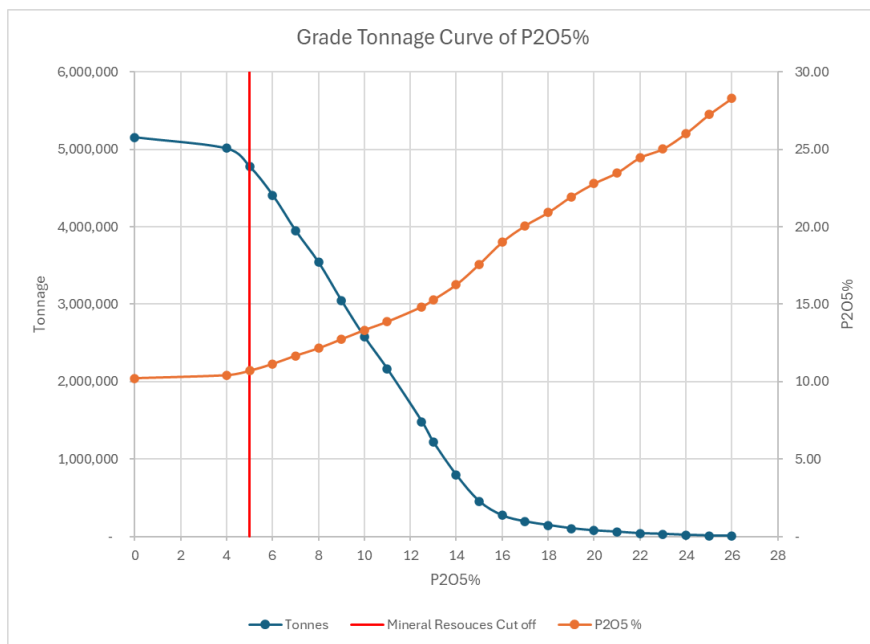
Source: MB Geologia 2024.

Inferred Mineral Resources					
Cut off 5% P ₂ O ₅	Volume	Density by Nearest Neighborhood	Tonnes	P ₂ O ₅ % - Ordinary Kriging	P ₂ O ₅ Tonnes Content
Total	1,660,361	2.88	4,778,472	10.69	510,777

Notes:

- The independent Qualified Person for the Mineral Resource estimate as defined by JORC-2012 is Marcelo Antonio Batelochi, P. Geo., of MB Soluções em Geologia e Mineração Ltda. report date: January 10th, 2025 and the effective date: January 17th. CIM definitions and guidelines for Mineral Resource Estimation have been followed.
- These Mineral Resources are not Mineral Reserves as they do not have demonstrated economic viability. The MRE presented herein is Classified as Inferred. No Measured and Indicated Mineral Resources are reported.
- The Material extracted from old mine was depleted from the total mineral resources;
- Not included on mineral resources the material from the stock piles stocked surround the old pit due to lack of consistent basis for a accurate calculation (only visual and by polygons drawn on the google earth x hypothetical height);
- The quantity and grade of reported Inferred Resource are uncertain in nature and there has been insufficient exploration to define these Inferred resources as Indicated; however, it is reasonably expected that the majority of Inferred Mineral Resource could be upgraded to Indicated Mineral Resource with continued exploration.
- Resources are presented as undiluted and in-situ for an open pit mining scenario and are considered to have reasonable prospects for economic extraction.
- Density values in dry basis moisture were calculated based on the Nearest Neighborhood Estimator from Raw data.
- Grade was interpolated from drillhole 2m Composites using an ordinary kriging interpolation.
- The MRE was reported using a cut-off grade of 5.0 % P₂O₅, calculated from metallurgical assumption.
- Calculations are in metric tonnes. Tonnage has been rounded to reflect the level of accuracy and any discrepancies in total amounts are due to rounding errors.
- The author is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issues not reported in this Technical Report that could materially affect the Mineral Resource Estimate

A series of global resource estimates have been produced for a range of P₂O₅% cut off grades where the tables have the numbers plotted as grade tonnage curves in Figure 8-14



Mineral Resources is released at 5.0 % of P₂O₅ cut-off; tabulation of other cut-off values is for information only

Source: MB Geologia,2024.

Figure 8-14: Grade Tonnage Curves for Indicated Resources

8.13 Potential Target for Mineral Exploration

Potential Exploration Target of the Mariela Project is a conceptual estimate of the quantity and grade of material based on geological data and preliminary exploration results, that could be converted in Mineral Resources with further mineral exploration. This classification is specifically not a resource nor reserve. The objective of reporting the Potential Exploration Target at Mariela Project is to offer investors an estimate of tonnage and grade, providing an initial understanding of the project’s potential economic value. These estimates are intended to build a baseline level of confidence and trust, supporting investors to invest in exploration activities on the Property to increase mineral Resources.

The Potential Exploration Target estimated is from 1.7-2.6 million tonnes @ 9.0 P₂O₅%. The values are estimated based on the material inside the solid. The grades and density are estimated at same basis as the MRE.

The table below summarizes the Potential Exploration Target quantitative.

Potential Target	Vol (m ³ *1000)	Dens (g/cm ³)	Tons *1000	P ₂ O ₅ %
Sensitive Case (Minimum)	620	2.80	1,700	9.0
Optimistic Case (Maximum)	940	2.80	2,600	9.0

Note: Due to the imprecision of the estimates the numbers are rounded

9 INTERPRETATION, CONCLUSIONS AND RECCOMENDATIONS

The work has achieved its objective of releasing an inferred mineral resources, incorporating the historical drilling information conducted by SRK 2008/2009 and the pannel samples conducted by Fosfatos de Taltal 2023/2024.

Some considerations that impacted on the Mineral resource that are strongly recommended:

- Sample spacing: the pass categories are derived from the search parameters which contain data point requirements in order to estimate block grades i.e. a function of the data point spacing, which ultimately is a function of the drillhole spacing. The resource classification is derived from the variogram range allocated to each block with subsequent consideration of other impacting factors. In the next stage of the project is recommended to test the “Score Card” methodology of classification.
- The geology of the deposit and the style of mineralization: The mineralization has strong structural controls of the Apatite veins that this high strain regime tends to have lower continuity than modeled and subjectively affecting the confidence in the accuracy of the next MRE.
- The sampling methods: the bulk of the resource estimates have been generated from diamond drilling results which is generally considered the best sampling technique (assuming good core recoveries) and thus provides increased confidence for the MRE. But the historical drill holes don't have the down the hole survey, then, it will be necessary a drilling campaign to substitute those drill holes guaranteeing the accuracy of the sample location
- Variography: shown good spatial variability that didn't impact the confidence of the MRE.
- Density data: there is 30 density data in good quality, but insufficient to support the feasibility studies and Measured and Indicated Resources. Then, it is suggested a density determination as part of the next stage of the exploration program, for new holes and for the historical SRK cores.
- The QAQC procedures and outcomes: these are considered to be to industry standard. The QAQC outcomes impart a high level of confidence in the appropriateness of the sampling methods and the accuracy of these assays.

- The priority one is the new drilling in the gaps of information to increase mineral resources category to indicated resources
- The historic drilling data: the historical data assay is validated and in good standards. But, due to the lack of down the hole survey data, it will be necessary twin holes to validate the deviation and the accuracy of the sample position.
- Core recoveries: visually the current recovery of >95% is reasonable to guarantee the confidence of the samples.
- Ore envelope interpretation. The use of unconstrained composite data precludes the need for mineral domains. This simplifies the grade interpolation and removes the risk of introducing conditional biases, which can lead to an overstatement of metal grades, especially with the use of high grade metal domains. The mineralization at Mariela is marked by a rather abrupt contact by the limit of the veins, where this contact was well logged in the drilling data such that a 3D wireframe could easily be created. The result is a rather simple geological model but with some clear cut geological controls to mineralization.
- The block size. The block size was defined intuitively. An optimal block size study is recommended for a feasibility study. Often a small block size can lead to over-smoothing of grades and thus an over-statement of grade for Mineral Resources. Large block sizes do not provide the appropriate resolution for selective mining in open pit scenarios. In theory a recoverable resource model would have a panel/block size with dimensions equal $\frac{1}{4}$ to the drillhole spacing. At this Mineral Resource Estimates the block sizes were defined intuitively for the Competent Person that the SMU is considered appropriate size for selective mining and represents the minimum dimensions of any mining unit. Further studies should be conducted to determine the best block size and SMU for the deposits.
- Top cutting. Not used, but should be reviewed in the next mineral resources estimates.
- The Estimation grade method indicating no skewed data distribution with extreme values. The OK method is acceptable for grade interpolation for P_2O_5 but a more sophisticated grade interpolation technique would increase the level of confidence.
- Search strategy is considered adequate for the estimates for Inferred resources. To report measured and indicated mineral resources it is recommended an optimization of the parameters, i.e. “optimum search neighborhood analysis”. The minimum three drill holes to classify as indicated and maximum 8-12 samples for OK grade interpolation was an appropriate strategy avoiding a lower number of minimum data that increase in risk to the interpolated grades particular at the margins of the deposit or in areas of wide drillhole spacing.
- Reporting Mineral Resources constrained by 5% of P_2O_5 supported by metallurgical testworks (Ore sorting concentration) are appropriate for this type and stage of Project. It is recommended to advance the conceptual studies to provide more robust and accurate parameters for the Project Evaluation.

The Competent Person is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the potential development of this mineral resources updates.

9.1 Exploration program

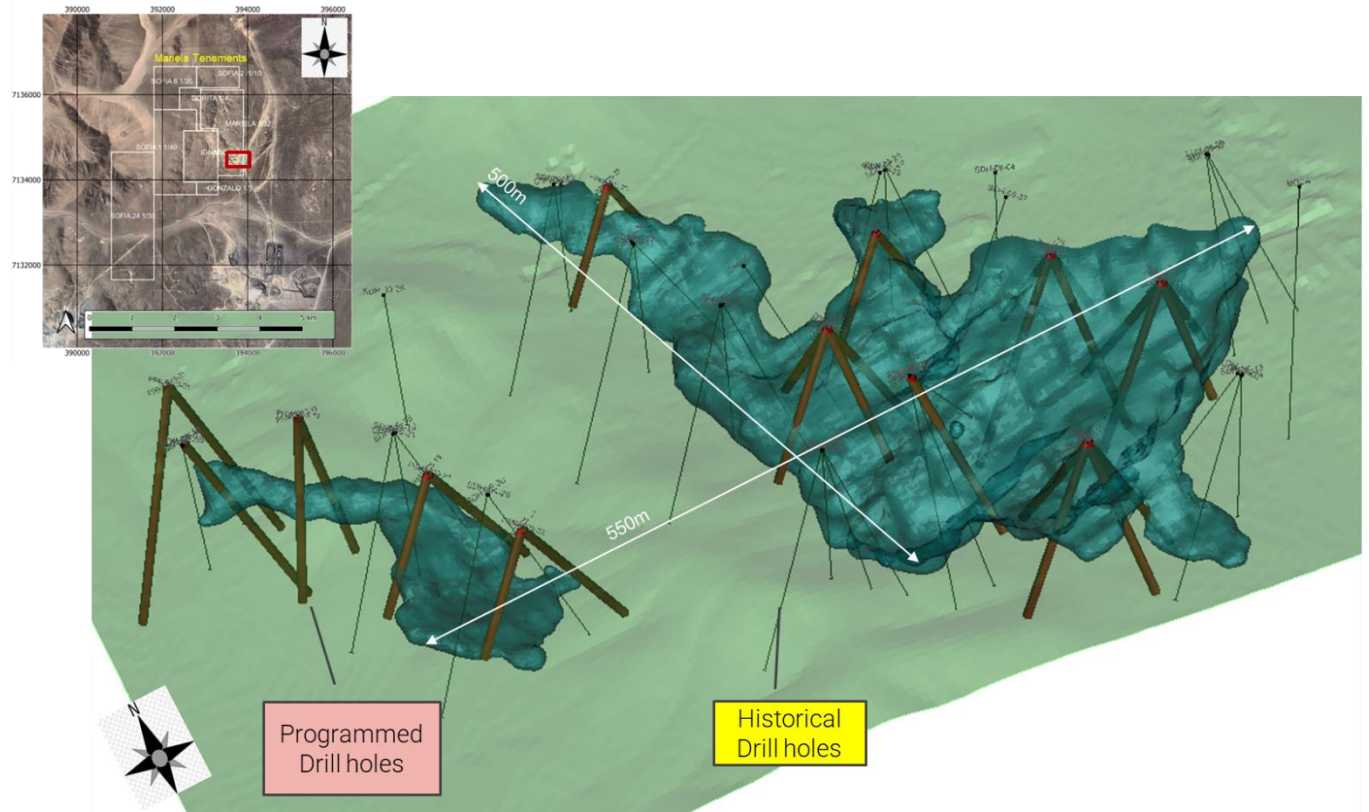
An exploration program is required to follow up definition of the Phosphatic rocks in the tenements, starting with an Geophysics for identification of satellite deposits and a drill program at Sophia deposit to convert Exploration Potential material to mineral resources and the reported inferred resources in Measured and Indicated categories. This program is summarized in Table below, where it is estimated a total cost of USD 1.2 Mi.

Activity	Cost KUSD
Radiometric or magnetic surveys to cover the total area, especially in regions where apatite is linked to magnetite or radiogenic elements.	150
Dimond Drill program: 30 drillholes (appx 3,459 m) - 28 DDH to probe deposit in depth laterally and 2 for twinning of historic holes. Costs including all activities including Assays + Density	600
Topographic service to survey the drilling collars, drill rig orientation (azimuth and dip) and general services.	80
Logistics and Infrastructure (contract company for drill pads and accesses to the drill rig), trucks rental, trucks to send samples to the lab, tank truck (water for drilling), meals and accommodation	320
Mineral Resources review and revision + PEA	50
Metallurgical Test works	25
Total	1225

The programmed 30 drill holes are distributed in 10 pads where the drilling would be held 2 or 4 drill holes per pad in distinct Azimuth and Dip, as detailed in the table below:

Hole Id	LOCATIONX	LOCATIONY	LOCATIONZ	Meters	Azimuth	Dip	Pad
PRMAR25-1	393560	7134507	1181	130	70	-60	1
PRMAR25-2	393560	7134507	1181	90	160	-60	1
PRMAR25-3	393560	7134507	1181	100	250	-60	1
PRMAR25-4	393560	7134507	1181	80	340	-60	1
PRMAR25-5	393708	7134504	1177	80	70	-60	2
PRMAR25-6	393708	7134504	1177	120	160	-60	2
PRMAR25-7	393708	7134504	1177	140	250	-60	2
PRMAR25-8	393708	7134504	1177	80	340	-60	2
PRMAR25-9	393753	7134450	1174	80	70	-60	3
PRMAR25-10	393753	7134450	1174	80	160	-60	3
PRMAR25-11	393753	7134450	1174	110	250	-60	3
PRMAR25-12	393753	7134450	1174	120	340	-60	3
PRMAR25-13	393643	7134349	1174	150	70	-60	4
PRMAR25-14	393643	7134349	1174	100	160	-60	4
PRMAR25-15	393643	7134349	1174	110	250	-60	4
PRMAR25-16	393643	7134349	1174	100	340	-60	4
PRMAR25-17	393256	7134575	1196	120	70	-60	5
PRMAR25-18	393256	7134575	1196	130	250	-60	5
PRMAR25-19	393305	7134501	1188	120	70	-60	6
PRMAR25-20	393305	7134501	1188	90	250	-60	6
PRMAR25-21	393334	7134436	1183	130	70	-60	7
PRMAR25-22	393334	7134436	1183	80	250	-60	7
PRMAR25-23	393626	7134570	1182	90	70	-60	8
PRMAR25-24	393626	7134570	1182	80	250	-60	8
PRMAR25-25	393500	7134684	1193	80	70	-60	9
PRMAR25-26	393500	7134684	1193	80	250	-60	9
PRMAR25-27	393202	7134647	1190	160	70	-60	10
PRMAR25-28	393202	7134647	1190	160	250	-60	10
PRMAR25-29	393582	7134447	1178	106.85	160	-50	Twin
PRMAR25-30	393194	7134598	1187	163.05	80	-70	Twin
TOTAL			30 drill holes	3,260			

The 3D Viewer of the programmed Drill holes are presented in the Figure 9-1:



Source: MB Geologia, 2024.

Figure 9-1: Proposed Drilling programme

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10.1 List of abbreviations may be used in this report.

Abbreviation	Unit or Term
Ai	Abrasion Index
ABA	Environmental Acid/Base Accounting
AA	atomic absorption
Ag	silver
ALS	ALS Chemex Laboratory
AM	Amazonas (Amazon region or Amazon River or Amazon Craton)
Au	gold
AuEq	gold equivalent grade
BWI	Ball Mill Bond Work Index
°C	degrees Centigrade
CCD	counter-current decantation
CIL	carbon-in-leach
CoG	cut-off grade
Cm	centimeter
cm ²	square centimeter
cm ³	cubic centimeter
Cfm	cubic feet per minute
ConfC	confidence code
CRec	core recovery
CSS	closed-side setting
CTW	calculated true width
Cu	Copper
°	degree (degrees)
dia.	diameter
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FA	fire assay
Ft	foot (feet)
ft ²	square foot (feet)
ft ³	cubic foot (feet)
G	gram
Gal	gallon
g/L	gram per liter
g-mol	gram-mole
Gpm	gallons per minute
GRG	Gravity Recoverable Gold
g/t	grams per tonne
Ha	hectares
HDPE	Height Density Polyethylene
HLS	Heavy Liquid Separation
Hp	horsepower
HTW	horizontal true width
ICP	induced couple plasma
ID2	inverse-distance squared
ID3	inverse-distance cubed
IFC	International Finance Corporation
ILS	Intermediate Leach Solution

Abbreviation	Unit or Term
LHD	Long-Haul Dump truck
LLDDP	Linear Low Density Polyethylene Plastic
LOI	Loss On Ignition
LoM	Life-of-Mine
M	meter
m ²	square meter
m ³	cubic meter
Masl	meters above sea level
MARN	Ministry of the Environment and Natural Resources
MDA	Mine Development Associates
mg/L	milligrams/liter
MIBC	Methyl Isobutyl Carbinol
MIK	Multiple Indicator Kriging
Mm	millimeter
mm ²	square millimeter
mm ³	cubic millimeter
MME	Mine & Mill Engineering
Moz	million troy ounces
MRE	Mineral Resources Estimation
Mt	million tonnes
MTW	measured true width
MW	million watts
m.y.	million years
NAG	Net Acid Generation
NGO	non-governmental organization
NSR	NSR (Net Smelter Return)
NI 43-101	Canadian National Instrument 43-101
OK	Ordinary Kriging
OSC	Ontario Securities Commission
Oz	troy ounce
%	percent
PAX	Potassium Amyl Xanthate
Pb	Lead
PLC	Programmable Logic Controller
PLS	Pregnant Leach Solution
PMF	probable maximum flood
Ppb	parts per billion
Ppm	parts per million
QA/QC	Quality Assurance/Quality Control
RC	rotary circulation drilling
RoM	Run-of-Mine
RQD	Rock Quality Description
SF	São Francisco (Brazilian River and a Craton)
SEC	U.S. Securities & Exchange Commission
Sec	second
SG	specific gravity
SGS	SGS Laboratory (In Brazil: SGS Geosol)

Abbreviation	Unit or Term
JORC	Joint Ore Reserves Committee
kA	kiloamperes
Kg	kilograms
Km	kilometer
km ²	square kilometer
Koz	thousand troy ounces
Kt	thousand tonnes
kt/d	thousand tonnes per day
kt/y	thousand tonnes per year
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
kWh/t	kilowatt-hour per metric tonne
L	liter
L/sec	liters per second
L/sec/m	liters per second per meter
Lb	pound
LCT	Locked Cycle Test

Abbreviation	Unit or Term
SPT	standard penetration testing
St	short ton (2,000 pounds)
T	tonne (metric ton) (2,204.6 pounds)
tpa	tonnes per annum
t/h	tonnes per hour
t/d	tonnes per day
t/y	tonnes per year
TSF	tailings storage facility
TSP	total suspended particulates
µm	micron or microns
V	volts
VLF	Very Low Frequency
VFD	variable frequency drive
W	Watt
XRD	x-ray diffraction
Y	Year
Zn	Zinc

10.2 List of Main Definition used in this report.

Term	Definition
ASX	Australian Stock Exchange
Assay	The chemical analysis of mineral samples to determine the metal content.
AusIMM	Australasian Institute of Mining and Metallurgy
Block model	A 3D shape comprised of blocks each with various metal grades and geological parameters; used for reporting the Mineral Resource
Capital Expenditure	All other expenditures not classified as operating costs.
Composite	Combining more than one sample result to give an average result over a larger distance.
Competent Person (JORC Code)	A Competent Person is a geoscientist or engineer with at least five years of relevant experience in the type of mineralization and deposit under consideration. They must be a member of a recognized professional organization with an enforceable code of ethics.
Concentrate	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
CP	Chartered Professional (CP) MAusIMM designation is an advanced level of recognition within the Australasian Institute of Mining and Metallurgy (AusIMM). This designation is awarded to members who demonstrate a high level of professional competence, ethics, and commitment to continuing professional development in their expertise area.
Crushing	Initial process of reducing ore particle size to render it more amenable for further processing.
Cut-off Grade (CoG)	The grade of mineralized rock, which determines as to whether it is economic to recover its metal content by further concentration.
Density	mass of a unit volume of a material substance. The formula for density is $d = M/V$, where d is density, M is mass, and V is volume
Dilution	Waste, which is unavoidably mined with ore.
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Exploration Results	
FLTEM Survey	Fixed Loop Transient Electromagnetic survey - a surface survey method designed to detect conductive bodies
Footwall	The underlying side of an orebody or stope.
Gangue	Non-valuable components of the ore.
Grade	The measure of concentration of a metal within mineralized rock.
Grade Capping	Grade capping is a technique used in mineral resource estimation to manage the influence of exceptionally high-grade values on the overall resource estimate. This practice is essential for providing a more realistic and reliable estimate of the resource, ensuring that the final estimates are representative of the typical mineralization and not skewed by outliers.
Hangingwall	The overlying side of an orebody or slope.
Haulage	A horizontal underground excavation which is used to transport mined ore.
Hydrocyclone	A process whereby material is graded according to size by exploiting centrifugal forces of particulate materials.
Igneous	Primary crystalline rock formed by the solidification of magma.
JICA	Japan International Cooperation Agency (JICA)
JORC 2012 Edition	Code of practice that sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources, and Ore Reserves. JORC stands for the Joint Ore Reserves Committee, which is sponsored by the Australian mining industry and its professional organizations
Kriging	An interpolation method of assigning values from samples to blocks that minimizes the estimation error. Uses variography
Level	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Lithological	Geological description pertaining to different rock types.

Term	Definition
LoM Plans	Life-of-Mine plans.
LRP	Long Range Plan.
Material Properties	Mine properties.
MAusIMM	Member of the Australasian Institute of Mining and Metallurgy.
Milling	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mineral/Mining Lease	A lease area for which mineral rights are held.
Mining Assets	The Material Properties and Significant Exploration Properties.
Ongoing Capital	Capital estimates of a routine nature, which is necessary for sustaining operations.
Pillar	Rock left behind to help support the excavations in an underground mine.
QA/QC	QA/QC stands for Quality Assurance (QA) and Quality Control (QC). Critical practices in various industries, including mining, manufacturing, and construction, to ensure that products, processes, or services meet defined standards and specifications. QA/QC practices are integral to maintaining high standards of quality and reliability in products, services, and processes. Quality Assurance focuses on creating systems and processes to ensure quality, while Quality Control is concerned with detecting and correcting defects. In industries like mining, QA/QC ensures that data, materials, and operations meet rigorous standards, supporting efficient and sustainable practices.
Principles of JORC Code	Transparency: Ensures that all relevant information is disclosed to investors and stakeholders to make informed decisions. Materiality: Focuses on providing all material information that could affect the economic value or assessment of a project. Competence: Requires that exploration results, mineral resources, and ore reserves are reported by a Competent Person with relevant experience and qualifications.
RoM	Run-of-Mine.
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
Shaft	An opening cut downwards from the surface for transporting personnel, equipment, supplies, ore, and waste.
Sill	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Specific Gravity	Ratio of the density of a substance to that of a standard substance, the usual standard of comparison for solids and liquids being water.
Stope	Underground void created by mining.
Stratigraphy	The study of stratified rocks in terms of time and space.
Strike	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulphide	A sulfur bearing mineral.
Tailings	Finely ground waste rock from which valuable minerals or metals have been extracted.
Tenements in Chile	The Mineral Rights in Chile are primarily governed by the country's Constitution and the Mining Code. The regulations aim to balance the interests of the state, mining companies, and local communities while ensuring the sustainable development of the mining sector.
Thickening	The process of concentrating solid particles in suspension.
Total Expenditure	All expenditures including those of an operating and capital nature.
Tuff	A rock composed of compacted volcanic ash varying in size from fine sand to coarse gravel
Variogram	A statistical representation of spatial characteristics usually metal grade.
Variography	A methodology to measure the spatial grade continuity of a particular metal and the relationship between samples; uses variograms to generate variogram models.

10.3 Overview of Mineral Rights in Chile.

The Mineral Rights in Chile are primarily governed by the country's Constitution and the Mining Code. The regulations aim to balance the interests of the state, mining companies, and local communities while ensuring the sustainable development of the mining sector:

- **Ownership and Sovereignty:** The Chilean Constitution establishes that the state owns all mineral resources. This includes metallic and non-metallic substances in the soil, subsoil, and territorial waters. The state grants mining rights to individuals or companies through concessions, allowing them to explore and exploit mineral resources.
- **Mining Concessions:**
 - o **Exploration Concessions:** These provide the right to search for minerals in a specified area. They are valid for up to four years and can be renewed once for an additional two years.
 - o **Exploitation Concessions:** These allow the holder to extract and process minerals. They have an indefinite duration as long as the annual mining license fee is paid.
- **Granting of Concessions:** Concessions are granted by judicial authorities and require a legal process involving public notices, surveying, and registration in the Mining Registry. The process aims to ensure transparency and competition among applicants.
- **Legal Framework:** The Mining Code is the primary legislation governing mineral rights, outlining the procedures for obtaining, maintaining, and transferring concessions. The Environmental Law also plays a significant role, requiring mining projects to undergo environmental impact assessments before approval.
- **Taxation and Royalties:** Concession holders are subject to various taxes, including a specific mining tax (royalty) based on the operational income derived from mining activities. The tax rate varies depending on the level of production and the type of minerals extracted.
- **Environmental Regulations:** Mining activities must comply with environmental regulations, which include measures to prevent pollution, manage waste, and rehabilitate mining sites. The Chilean Environmental Impact Assessment System (SEIA) evaluates and approves mining projects based on their environmental impact.
- **Community and Indigenous Rights:** Mining projects must consider the rights and interests of local communities and indigenous peoples. The consultation and participation of affected communities are required, especially when projects are located on indigenous lands.
- **Foreign Investment:** Chile encourages foreign investment in the mining sector, offering legal protections and guarantees to foreign investors. Foreign companies can acquire mining concessions and participate in joint ventures with Chilean entities.

10.4 Exploration Results Report discloses as JORC Code – Version 2012

To report exploration results, the following must be disclosed in accordance with : JORC Code – Version 2012:

- **Location and Tenure:** Provide the geographical location of the exploration site, including property boundaries and relevant mining licenses.
- **Geological Context:** Describe the geology, mineralization style, and type of deposit.
- **Drilling Information:** Include details about drill hole locations, depths, orientations, and types (e.g., diamond drilling, reverse circulation).
- **Sampling Techniques:** Explain the methods used for sample collection, preparation, and analysis.
- **Data Quality:** Discuss the quality control measures taken to ensure data reliability, including sampling, assaying, and laboratory procedures.
- **Results and Interpretation:** Present the assay results and provide interpretations or conclusions based on the data. Include information on mineralization trends, continuity, and potential extensions.
- **Relationship Between Mineralization Widths and Intercept Lengths:** Clarify the true width of mineralization compared to the drill intercept length.
- **Diagrams and Maps:** Provide maps, sections, and diagrams to illustrate the results and geological context.
- **Further Work:** Outline any proposed future exploration activities and the rationale behind them.

10.5 Higher Accuracy of the Datum WGS84 in comparison with Datum PSAD56

The PSAD56 was a critical reference for South American geodesy, the advent of WGS84 and newer datums has largely replaced it for most applications. Accurate transformations between PSAD56 and WGS84 are essential for ensuring geospatial data compatibility and precision in modern contexts.

- **PSAD56 (Provisional South American Datum 1956)**
 - **Development:** PSAD56 was established in 1956 to provide a unified geodetic reference for mapping across South America.
 - **Reference Ellipsoid:** Uses the International Ellipsoid of 1924 (Hayford Ellipsoid).
 - **Semi-major axis:** 6,378,388 meters
 - **Flattening:** 1/297
 - **Datum Origin:** The origin is based on a triangulation point at "La Canoa" in Colombia.
 - **Usage:** Primarily used in South America for older maps and surveys. It's less common now but still encountered in legacy data.
- **WGS84 (World Geodetic System 1984)**
 - **Development:** WGS84 was developed by the United States Department of Defense and released in 1984, designed to be a global geodetic datum.
 - **Reference Ellipsoid:** Uses the WGS84 Ellipsoid.
 - **Semi-major axis:** 6,378,137 meters
 - **Flattening:** 1/298.257223563
 - **Datum Origin:** Geocentric, meaning it is centered at the Earth's center of mass.

- **Usage:** The standard global datum used for GPS and most modern mapping applications worldwide.
- **Differences Between PSAD56 and WGS84**
 - **Geodetic Basis:**
 - **PSAD56** is based on ground surveys conducted across South America, with its origin tied to a specific terrestrial point.
 - **WGS84** is a geocentric system based on satellite data, making it more accurate and consistent for global use.
 - **Accuracy:**
 - **WGS84** offers higher accuracy and precision due to its satellite-based geodetic framework and alignment with the International Terrestrial Reference Frame (ITRF).
 - **PSAD56** is less accurate compared to WGS84, particularly for applications requiring precise positioning.
 - **Coordinate Systems:**
 - Both datums can support geographic coordinate systems (latitude and longitude) and projected systems like UTM, but the ellipsoidal parameters and transformations differ.
 - **Geographic Differences:**
 - Positions defined in PSAD56 can differ from WGS84 by several meters. The differences are not uniform and vary across regions due to the datum's local nature.
- **Transformations Between PSAD56 and WGS84**

To convert coordinates between PSAD56 and WGS84, a datum transformation is required. This process involves applying a set of parameters that account for shifts in the geodetic framework. Here's how the transformation is typically handled:

 - **Transformation Parameters:**
 - Transformations are defined by translation, rotation, and scale parameters.
 - Common methods include using a 3-parameter or 7-parameter Helmert transformation.
 - **Transformation Example:**
 - A typical transformation from PSAD56 to WGS84 might involve translations along the X, Y, and Z axes, as well as possible rotations and scaling.
 - **Regional Variations:**
 - Because PSAD56 is region-specific, transformation parameters can vary depending on the location within South America. Localized adjustments might be necessary.
 - **Software Tools:**
 - Geospatial software like GIS platforms (e.g., ArcGIS, QGIS) and transformation tools provide functions to convert between these datums, often incorporating built-in or user-defined transformation parameters.
- **Practical Considerations**
 - **Mapping and Surveying:**
 - For modern mapping and surveying in South America, it's advisable to use WGS84 or newer local datums like SIRGAS to ensure compatibility and accuracy.
 - **Historical Data:**

- When working with historical maps or datasets in PSAD56, it's crucial to transform data accurately to WGS84 for integration with modern geospatial information.
- **Applications:**
 - PSAD56 might still be encountered in older projects or archives, so understanding its characteristics is important for geospatial professionals working with legacy data.

10.6 Quality Assurance and Quality Control (QA/QC)

The Quality Assurance/Quality Control (QA/QC) program instituted at the Mariela Project was founded upon the principles delineated in ISO 9000, specifically emphasizing Total Quality Control. This methodology combines the quality assurance (QA), which encompasses the processes employed to measure and guarantee the accuracy and precision of assay-oriented endeavors, with a focus on averting failures, and quality control (QC), which ensuring that assays conform to predetermined standards, emphasizing the identification of failures and errors within chemical analyses.

In the Table 10-1 provides the definitions of quality control definitions that are undertaken by BIFOX (Standard, Blanks and Field Duplicate) and by the commercial laboratories as checks to monitor analytical results reported.

Table 10-1: Quality Control Definitions.

Source: Description Compiled by MB from several bibliography

Item	Description	Comments
Standard	Certified Reference Material (“CRM”) used to measure accuracy of the sample prep and analysis of the samples. GPO-16 is the Standard inserted.	1 Batch with 22 blanks and 2 duplicates was sent to the ALS Chemex Lab;
Blank Standard	A Certified Reference Material (“CRM”) with a value at or near to the detection limit of the element analyzed, used to monitor contamination.	Inserted 2 duplicates and 2 standards GPO-16, but, Blanks were inserted in the project;
Field Duplicate	This sample provides a check in particular on the short scale continuity of the metal grades – taken as a paired quarter of core collected in the field.	No QAQC charts were performed due to the insufficient samples.
Laboratory Duplicate	This sample provides a check on sample homogeneity from the sample prep stage and the repeatability of the sample extraction. The sample is normally nominated by the on-site geologist. Sample collected as a sub-sample of the originally submitted 1-5 kg sample after crushing and pulverizing. Referred to as a pulp duplicate	2 lab duplicates were inserted.
2nd Lab Checks (Umpire Lab)	This sample provides a check on the accuracy of the original lab assays, preferably using a different analytical method. Completed by a second independent commercial laboratory.	Has Not performed on the Selaqueos Project yet. Recommend this check to report Measured Mineral Resources
Laboratory Replicate	A second measurement (often analytical reading) of the same sub-sample after sample digest; a check for sample prep homogeneity and machine calibration. It is usually nominated by the laboratory and therefore not an independent check.	Not Performed on this report due to this check in the routine of the lab. This information is in the Lab Certificates
Twin Hole of Twin trench sample	A repeat hole, usually a diamond hole, located in very close proximity to an original hole i.e., nominally <5m spatial difference. It is used to validate any previous drilling and is a check that the sampling is representative and provides a measure of the short scale grade continuity.	Not performed

The standard GPO-17 is provided from Geostats Pty, located at 10A Marsh Close, O'Connor, Western Australia 6163 - Phone : +61 8 9314 2566, Fax : +61 8 9314 3699 - e-mail : pjh@geostats.com.au, srr@geostats.com.au - Website <http://www.geostats.com.au>. This standard was sourced from Sedimentary Phosphate Deposit, Tunisia, certified on 20th July 2012, packed in 10g pulp samples, XRF analyses for 7 elements as shown in Figure 10-1.

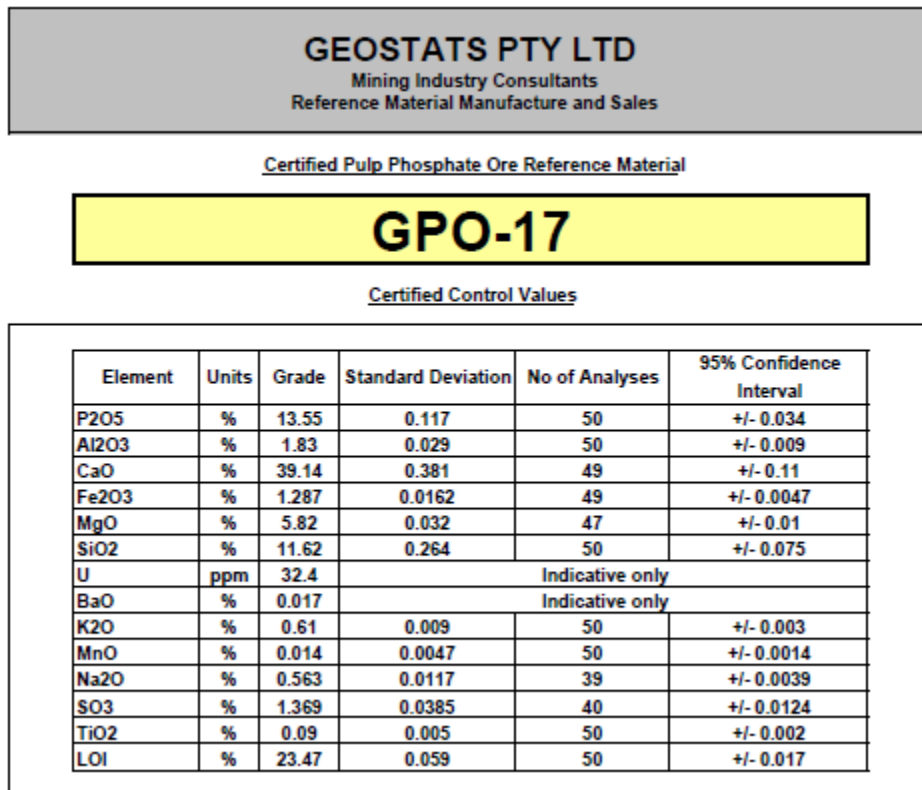








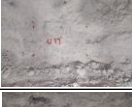













Figure 10-1: Certified Elements of Standard GPO-17– Geostats PTY LTD










10.7 Logging of the Panel samples inside the Old Underground Mine

Muestra	% Matriz Blanca	Descripción	Foto	Este	Norte	Cota
U36	15	Brecha verde con "clastos Andesita-Actinolita" en matriz Blanca (apatito-cuarzo) arcilloso , Ox-Hierro (Goethita) y epidota.		393729.41	7134479.0	1149.38
U35	10	Brecha verde con "clastos Andesita-Actinolita" en matriz Blanca (apatito-cuarzo) arcilloso con vetillas de actinolita, magenetismos debil, Ox-Hierro (Goethita) y epidota. Ox-Cobre (Crisocola)		393685.149	7134462.65	1160.07
U39	10	Brecha verde con "clastos Andesita-Actinolita" en matriz Blanca (apatito-cuarzo-epidota) arcilloso con vetillas de actinolita con Ox-Hierro (Goethita) y epidota. Ox-Cobre (Crisocola) vetillas de calcita		393675.66	7134457.0	1140.85
U50	5	Brecha verde con "clastos Andesita" poca matriz Blanca (apatito-cuarzo) arcilloso con vetillas de actinolita- epidota. adyacente falla N-S corta la matriz blanca. vetillas de Calcita con Ox-Cu (Crisocola)		393683.625	7134464.0	1142.39
U40-42	2	Matriz Verdosa (Andesítica) con veta de 10 cm de Matriz blanca Arcillosa . Matriz con Ox-hierro y Ox- Manganeseo .		393660.5	7134461.0	1146.38
U31	15	Brecha verde con "clastos Andesita-Actinolita " poca matriz Blanca (apatito-cuarzo) arcilloso con vetillas de actinolita con magnetismo . Presencia de Ox-Hierro y Epidota.		393666.277	7134474.0	1159.888
U33-R	15	Brecha verde con "clastos Andesita-Actinolita " matriz Blanca (apatito-cuarzo) arcilloso con vetillas de actinolita con orbiculos (Ox-Hierro ,Crisocola , Calcita)		393681.557	7134468.69	1159.821
U34-R	20	Brecha verde con "clastos Andesita-Actinolita " matriz Blanca (apatito-cuarzo) arcilloso con vetillas de actinolita con orbiculos (Ox-Hierro , Crisocola , Calcita)		393688.753	7134467.78	1159.752

Muestra	% Matriz Blanca	Descripcion	Foto	Este	Norte	Cota
U22	30	Brecha con "clastos Andesita-Actinolita" en matriz Blanca (apatito-cuarzo-Ortoclasa) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn)		393637.13	7134411.5	1142.19
U1	20	Brecha con "clastos Andesita" en matriz Blanca (apatito-cuarzo) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn), vetillas Ortoclasa.		393655.13	7134405.2	1130
U46	30	Brecha con "clastos Andesita cafe-verdosa" en matriz Blanca (apatito-cuarzo) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn), Epidota en clastos y matriz.		393657.81	7134386.5	1128.62
U49	5	Brecha con "clastos Andesita cafe-verdosa" en escasa matriz Blanca (apatito-cuarzo) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn), Epidota en clastos y matriz.		393644.51	7134388.0	1141.502
U51	15	Brecha con "clastos Andesita cafe-verdosa" en escasa matriz Blanca (apatito-cuarzo) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn), presencia de vetillas de calcita.		393700.75	7134475.0	1130.49
U38	20	Brecha con "clastos Andesita cafe-verdosa" en escasa matriz Blanca (apatito-cuarzo-Ortoclasa) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn), vetillas de calcita.		393680.13	7134446.0	1142.43
U53	25	Brecha con "clastos Andesita cafe-verdosa" Matriz Blanca (apatito-cuarzo) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn).		393683.343	7134482.5	1131.183
U54	40	Brecha con "clastos Andesita verdosa" en escasa matriz Blanca (apatito-cuarzo-Ortoclasa) arcilloso, con vetillas de Actinolita (Ox-Fe, Ox-Mn), Ox-Cu (Crisocola).		393676.061	7134465.6	1154.214
U52	20	Brecha con "clastos Andesita verdosa" en escasa matriz Blanca (apatito-cuarzo-Ortoclasa, Epidota), con vetillas de Actinolita (Ox-Fe, Ox-Mn).		393685.52	7134462.3	1132.88
U56	15	Brecha con "clastos Andesita verdosa" en escasa matriz Blanca (apatito-cuarzo-Ortoclasa, Epidota), con vetillas de Actinolita (Ox-Fe, Ox-Mn). Falla cortando la estructuras (calcita-arcillas).		393658.169	7134472.8	1155.167
U55	40	Brecha con "clastos Andesita verdosa" en escasa matriz Blanca (apatito-cuarzo-Ortoclasa, Epidota), con vetillas de Actinolita (Ox-Fe, Ox-Mn). Vetillas de calcita y Qz cristalizadas.		393663.469	7134426.0	1157.375
U27	25	Brecha con "clastos Andesita verdosa" en escasa matriz Blanca (apatito-cuarzo-Ortoclasa, Epidota), con vetillas de Actinolita (Ox-Fe, Ox-Mn) y magnetitado.		393700.75	7134430.5	1152.85
U26	S/N	Plano de Falla, relleno de calcita y Ox-Fe (Goethita)		393659.03	7134431.0	1143.88

Muestra	% Matriz Blanca	Descripcion	Foto	Este	Norte	Cota
U23	25	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Epidota) con vetillas de actinolita con (Dx-Fe). Presencia de Oróvilos de (Dx-Fe)(Goethita) con Ox-Cu(crisocóla) y Magnetita.		393729.3	7134403.0	1137.4
U64	40	Brecha con "clastos Actinolita-andesita" con Ox-Fe, matriz Blanca (apatito-Qz-Epidota) y vetillas de actinolita con (Dx-Fe) y Magnetita.		393619.5	7134377.8	1139.0
U65	35	Brecha con "clastos Actinolita-andesita" con epidota y clorita, matriz Blanca (apatito-Qz-Epidota-clorita), vetillas de actinolita con (Dx-Fe) con Magnetismo debil.		393671.0	7134408.6	1139.5
U66	40	Brecha con "clastos Actinolita-andesita" con epidota, matriz Blanca (apatito-Qz), vetillas de actinolita con (Dx-Fe) y ojos de cuarzo.		393692.0	7134407.6	1141.0
U67	45	Brecha con "clastos Actinolita-andesita" con epidota, Ox-Fe, Ox-Mn, matriz Blanca (apatito-Qz-Ortoclasa), vetillas de actinolita con (Dx-Fe), vetas de cuarzo (Dx-Fe, Cu) Zona delimitada por fallas N-S.		393688.9	7134419.8	1139.0
U11	10	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz) vetillas de yeso, vetillas de actinolita con (Dx-Fe) con Magnetismo debil.		393732.2	7134453.6	1146.3
U5	5	Brecha con "clastos Actinolita-andesita" con Ox-Fe, matriz Blanca (apatito-Qz-Epidota-clorita), vetillas de actinolita con (Dx-Fe) con Magnetismo .		393725.6	7134429.4	1145.6
U68	25	Brecha con "clastos Actinolita-andesita" Ox-Fe matriz Blanca (apatito-Qz), vetillas de actinolita con (Dx-Fe), trazas de Magnetita, vetillas de yeso.		393732.9	7134407.6	1144.5
U19	35	Brecha con "clastos Actinolita-andesita" Ox-Fe(Goethita) matriz Blanca (apatito-Qz-Ortoclasa), vetillas de actinolita-Calcita con (Dx-Fe) Magnetismo debil		393599.0	7134410.8	1146.2
U18	20	Brecha con "clastos Actinolita-andesita" con epidota matriz Blanca (apatito-Qz-Ortoclasa), vetillas de actinolita con (Dx-Fe) .		393598.4	7134390.0	1142.8
U20	45	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Ortoclasa), vetillas de actinolita con (Dx-Fe) , magnetita, trazas de Ox-Cu (crisocóla)		393616.1	7134409.0	1142.7
U58	40	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz), vetillas de actinolita con (Dx-Fe) , magnetita, vetillas de Qz con trazas de Ox-Cu (crisocóla)		393631.6	7134396.5	1143.8
U74	30	Brecha con "clastos Actinolita-andesita" matriz Blanca-Verdosa (apatito-Qz-Epidota-clorita), vetillas de actinolita con (Dx-Fe,Cu) , cristales de magnetita, Falla Adyacente rellena por Ox-Fe (Goethita, Limonita, Hematita"Especlarita") Vetillas de yeso		393627.3	7134384.7	1145.8
U75	40	Brecha con "clastos Actinolita-andesita" matriz Blanca-Verdosa (apatito-Qz-Epidota), vetillas de actinolita con (Dx-Fe) magnetismo debil cortada por Falla rellena de Calcita con Ox-Fe (Goethita)		393569.2	7134394.7	1135.4
U76	15	Brecha con "clastos Actinolita-andesita" con vetillas de Qz-Calcita(trazas de Ox-Cu) matriz Blanca-Verdosa (apatito-Qz), vetillas de actinolita con (Dx-Fe) y magnetita.		393611.7	7134395.2	1137.4

Muestra	% Matriz Blanca	Descripcion	Foto	Este	Norte	Cota
U62	45	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Epidota),con vetillas de actinolita con (Ox-Fe, Cu).		393736.7	7134410.9	1131.1
U63	40	Brecha con "clastos Actinolita-andesita" con Ox-Cu (crisocola), matriz Blanca (apatito-Qz-Epidota,ortoclasa), con vetillas de actinolita con (Ox-Fe, Cu) magnetismo debil		393699.0	7134433	1131.4
U24	20	Brecha con "clastos Actinolita-andesita" con Ox-Fe (Goethita), matriz Blanca (apatito-Qz-Epidota),con vetillas de actinolita .		393738.8	7134412.3	1137.65
U28	15	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Epidota),con vetillas de actinolita con (Ox-Fe, Cu).		393706.3	7134455.5	1142.9
U77	20	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Epidota),con vetillas de actinolita , magnetismo debil.		393688.4	7134461.0	1142.9

Muestra	% Matriz Blanca	Descripcion	Foto	Este	Norte	Cota
U44	10	Plano de Falla ,se conservan un % de Matriz Blanca (apatito -Qz) arcillosa, con vetillas de actinolita. Falla rellena de calcita , Ox-Fe(Goethita).		393657.8	7134390.2	1128.6
U55	45	Brecha con "clastos Andesita verdosa" matriz Blanca (apatito-Qz), con vetillas de Actinolita (Ox-Fe, Ox-Mn), Vetillas de calcita, Ox-Fe(Goethita)		393651.3	7134430.2	1127.5
U56	2	Brecha con "clastos Andesita -Actinolita" poca matriz Blanca arcillosa con vetillas de actinolita y Ox-Fe (Goethita) vetas de Qz de 15 cm de espesor		393648.9	7134464.0	1129.3
U14	30	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Epidota),con vetillas de actinolita con (Ox-Fe, Mn, Cu).		393737.753	7134437.99	1133.88
U69	25	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz-Ortoclase),con vetillas de actinolita con (Ox-Fe)		393583.2	7134445.5	1129.5
U70	65	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz), con vetillas de actinolita con (Ox-Fe), vetas de cuarzo (Ox-Fe,Cu) de 20 cm de espesor .		393615.4	7134435.9	1129.8
U71	2	Brecha "Andesita-Actinolita "con Ox-Fe, presenta magnetismo debil, 15cm de matriz Blanca (apatito-Qz- Ortoclase).		393628.0	7134488.7	1137.4
U72	30	Brecha con "clastos Actinolita-andesita" matriz Blanca (apatito-Qz),con vetillas de actinolita con (Ox-Fe) y Epidota , Magnetismo.		393663.0	7134452.1	1139.7
U73	40	Brecha con "clastos Actinolita-andesita" Con Ox-Fe , Epidota matriz Blanca (apatito-Qz-Ortoclase) "cristales de apatito", con vetillas de actinolita con (Ox-Fe, Epidota), Ox-Cu (crisocola) diseminada en la matriz.		393672.2	7134469.8	1141.5

11 TABLE 1 - JORC -2012

11.1 Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections, note data in this section is extracted from historic reports)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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 Nickel that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> SRK 2009: Half diamond core was sampled and submitted for analysis, ensuring representative of the sample zones. Sampling was typically 2m in mineralised zones unless the geologist determined a different length was appropriate. Areas away from the main mineralised zones may have been sampled as 4-6m composite samples. BIFOX 2024: 1/4 of selected cores for validation in the same sample interval of SRK2009. Also, the complementary sampling were made using the same SRK 2009 procedure. Sampling was supervised by BIFOX geologists who selected the sampling zones. Geologists log the phosphate mineralisation, alteration and RQD. These logs were used to determine the main mineralisation zones, which dictated the sampling. Mineralisation was also logged as potentially supergene mineralised in the oxidised zone.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> The historical drilling were made by standard-tube diamond drilling by independent drill contractor. Drillhole diameter was variable- HW for collar and friable material, HQ diameter was generally used until the base of complete oxidation and then the diameter reduced to NQ. SRK carried out a down-hole survey, but those information were not available and Bifox 2025 considered the collar orientation constant for the complete drill hole.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> In the SRK 2009 report is mentioned that the recoveries are recorded by both the driller’s assistant (on site) and Bifox field assistant once the core has been received at the core shed. Recoveries were measured by comparing the length of the drill run with the amount of core actually recovered. Recovery has averaged >95% for all drilling to date. Despite this information is not available, Bifox checked on the core boxes and confirmed the information from report Also in the SRK 2009 report, the drillers are penalized for poor recovery and are constantly supervised at the rig to ensure care is taken to ensure high recoveries. No relationship is believed to exist between recovery and grade.
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All holes have been geologically logged by SRK 2009 and re-logged by Bifox geologists in 2025, to a detail relevant for inclusion in an MRE. Care is taken to ensure metallurgical factors are included (specifically the % of the Apatite present). Basic geotechnical logging is standard. Logging and core processing is both qualitative and quantitative. Core is photographed by SRK 2009 wet and dry and it is included on the report with low quality of the image. Bifox 2025 photographed the cores again. All core is structurally logged by geologists to look for planar and linear features, but no measurements of these are taken due to the non-oriented core. All drilling results reported have been logged onsite by Bifox geologists. Logs include hole number, hole location, date drilled, collar, dip and azimuth as well as qualitative data such as rock type, and descriptions of the color, alteration, weathering, grainsize, mineralisation and texture. No drilling was carried out by Bifox.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> SRK 2009: Drill core is sawn in half and one half (consistently the same half) of the core is sampled. The remaining half is stored by Bifox in its dedicated facility. BIFOX 2009 sawn the remaining half core and a half core for intervals sampled by Bifox that was not sampled before. Sample size, being generally 2m sample intervals, is appropriate to the material being sampled and considered to be representative.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> 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. 	

Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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. 	<table border="1"> <thead> <tr> <th colspan="2">SAMPLE PREPARATION</th> </tr> <tr> <th>ALS CODE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>WEI-21</td><td>Received Sample Weight</td></tr> <tr><td>PUL-31d</td><td>Pulverize Split - duplicate</td></tr> <tr><td>BAG-01</td><td>Bulk Master for Storage</td></tr> <tr><td>LOG-22</td><td>Sample login - Rcd w/o BarCode</td></tr> <tr><td>CRU-QC</td><td>Crushing QC Test</td></tr> <tr><td>PUL-QC</td><td>Pulverizing QC Test</td></tr> <tr><td>CRU-31</td><td>Fine crushing - 70% <2mm</td></tr> <tr><td>SPL-22Y</td><td>Split Sample - Boyd Rotary Splitter</td></tr> <tr><td>PUL-32m</td><td>Pulverize 500g - 85% <75um</td></tr> <tr><td>DRY-22</td><td>Drying - Maximum Temp 60C</td></tr> <tr><td>LOG-24</td><td>Pulp Login - Rcd w/o BarCode</td></tr> <tr><td>LOG-22d</td><td>Sample login - Rcd w/o BarCode dup</td></tr> <tr><td>SPL-22d</td><td>Duplicate split - rotary splitter</td></tr> </tbody> </table>	SAMPLE PREPARATION		ALS CODE	DESCRIPTION	WEI-21	Received Sample Weight	PUL-31d	Pulverize Split - duplicate	BAG-01	Bulk Master for Storage	LOG-22	Sample login - Rcd w/o BarCode	CRU-QC	Crushing QC Test	PUL-QC	Pulverizing QC Test	CRU-31	Fine crushing - 70% <2mm	SPL-22Y	Split Sample - Boyd Rotary Splitter	PUL-32m	Pulverize 500g - 85% <75um	DRY-22	Drying - Maximum Temp 60C	LOG-24	Pulp Login - Rcd w/o BarCode	LOG-22d	Sample login - Rcd w/o BarCode dup	SPL-22d	Duplicate split - rotary splitter	<table border="1"> <thead> <tr> <th>Method</th> <th>Element</th> <th>Method</th> <th>Element</th> <th>Method</th> <th>Element</th> </tr> </thead> <tbody> <tr><td>ME-XRF24</td><td>Al2O3 %</td><td>ME-MS81h</td><td>Cu</td><td>ppm</td><td>ME-MS81h</td><td>Rb</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>CaO %</td><td>ME-MS81h</td><td>Dy</td><td>ppm</td><td>ME-MS81h</td><td>Sm</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>Fe2O3 %</td><td>ME-MS81h</td><td>Er</td><td>ppm</td><td>ME-MS81h</td><td>Sr</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>K2O %</td><td>ME-MS81h</td><td>Eu</td><td>ppm</td><td>ME-MS81h</td><td>Ta</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>MgO %</td><td>ME-MS81h</td><td>Gd</td><td>ppm</td><td>ME-MS81h</td><td>Tb</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>MnO2 %</td><td>ME-MS81h</td><td>Hf</td><td>ppm</td><td>ME-MS81h</td><td>Tm</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>Na2O %</td><td>ME-MS81h</td><td>Hb</td><td>ppm</td><td>ME-MS81h</td><td>Y</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>P2O5 %</td><td>ME-MS81h</td><td>La</td><td>ppm</td><td>ME-MS81h</td><td>Zr</td><td>ppm</td></tr> <tr><td>ME-XRF24</td><td>SiO2 %</td><td>ME-MS81h</td><td>Nb</td><td>ppm</td><td></td><td></td><td></td></tr> <tr><td>ME-XRF24</td><td>TiO2 %</td><td>ME-MS81h</td><td>Nd</td><td>ppm</td><td></td><td></td><td></td></tr> <tr><td>ME-XRF24</td><td>Total %</td><td>ME-MS81h</td><td>Pr</td><td>ppm</td><td></td><td></td><td></td></tr> <tr><td>ME-GRA05</td><td>LOI %</td><td>ME-MS81h</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>Rene Mamani, Laboratory Manager, Peru ALS Patagonia S.A. Hermanos Carrera Pinto 159, Parque Industrial Los Libertadores, Colina Santiago Phone: +56 2 2654 6100 Fax: +56 2 2654 6163 www.alsglobal.com/geochemistry</p>	Method	Element	Method	Element	Method	Element	ME-XRF24	Al2O3 %	ME-MS81h	Cu	ppm	ME-MS81h	Rb	ppm	ME-XRF24	CaO %	ME-MS81h	Dy	ppm	ME-MS81h	Sm	ppm	ME-XRF24	Fe2O3 %	ME-MS81h	Er	ppm	ME-MS81h	Sr	ppm	ME-XRF24	K2O %	ME-MS81h	Eu	ppm	ME-MS81h	Ta	ppm	ME-XRF24	MgO %	ME-MS81h	Gd	ppm	ME-MS81h	Tb	ppm	ME-XRF24	MnO2 %	ME-MS81h	Hf	ppm	ME-MS81h	Tm	ppm	ME-XRF24	Na2O %	ME-MS81h	Hb	ppm	ME-MS81h	Y	ppm	ME-XRF24	P2O5 %	ME-MS81h	La	ppm	ME-MS81h	Zr	ppm	ME-XRF24	SiO2 %	ME-MS81h	Nb	ppm				ME-XRF24	TiO2 %	ME-MS81h	Nd	ppm				ME-XRF24	Total %	ME-MS81h	Pr	ppm				ME-GRA05	LOI %	ME-MS81h					
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Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> - 100g split is sent for analysis, and - 400g split is stored at the laboratory. • Bifox 2025 : <ul style="list-style-type: none"> • The QA/QC data includes standards, blanks, duplicates and laboratory checks. Bifox inserts internationally certified standards at a rate of 4% samples, blanks 4% samples. Duplicates are selected from the crushed samples at a rate 5% samples and follow the same assaying procedure. • MB has reviewed the QA/QC data for all lab samples and are satisfied the results are within acceptable limits
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Significant intercept tables are prepared by Bifox personal and checked by at least one other geologist. • No twinned holes are being reported. • All data is received from the laboratories and uploaded into excel spreadsheets where it is checked and uploaded into cloud storage. Once QA/QC procedures have been completed, the data is loaded into an Access database. • No adjustments to the data were made. Weighted averages were used to calculate significant intercepts. For duplicates, the first sample is recorded for intercepts.
Location of data points	<ul style="list-style-type: none"> • <i>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.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • Bifox is using GPS to locate and record the drillhole collar locations. No drillholes were downhole surveyed using the Gyro tool from Reflex. • All location data has been recorded WGS84 UTM zone 19S. • Topographic control is adequate for the exploration at Mariela Project.
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> • Drillholes were variably around 100-150 meters drilling pad is apart. From each Drill pad 2-4 drill holes were performed varying Azimuth and Dip.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drill spacing is considered sufficient to report Inferred JORC 2012 MRE. Certainly, new results will improve the geological and grade continuity. No compositing has been applied to the results (beyond weight averaging the results). Some sampling at >2m intervals was applied in areas away from the Apatite mineralisation.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drilling was oriented to intercept mineralisation as perpendicular as possible. No bias is believed to have occurred however geological and geophysical evidence suggests structural complexity like folding and faulting. Sampling lengths were generally 2m downhole, unless there was a specific geological control required by the geologist. MB considers that there are 'scissor holes' (holes drilled in the opposite azimuth to the normal) were drilled in order to aid understanding of geological continuity and or ore-body orientation. All intercepts recorded are downhole intervals and may not equal true width. Scissor holes are reported the same and normally oriented holes.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> SRK 2009 reported Drill core is transported from the field to a locked facility. In Both SRK 2009 and Bifox 2025 the samples were prepared in the core shed and transported to the lab by a dedicated transport company.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits of the techniques or data has been undertaken at this stage.

11.2 Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The Mariela Phosphate Project is in the Antofagasta Region of northern Chile, approximately 110 km northeast of Chañaral and 224 km from the Atacama Desert Airport. The project spans 891 hectares, consisting of eight mineral concessions (DORITA 1/4, GONZALO 1/3, IGNACIA 1/12, MARIELA 1/32, SOFIA 1 1/40, SOFIA 2 1/10, SOFIA 24 1/30, and SOFIA 6 1/20), all owned by Cesar Bernardo Formas Ortiz. Irrevocable Purchase Option Agreement: The beneficiary is Fosfatos Bahia Salada SpA (later transferred to Fosfatos de Taltal SpA). The beneficiary has an option to purchase the properties by October 13, 2024, for USD 10.5 million in installments. Exploration Rights: Allowed during the option period to evaluate the site's potential. Conditions: Properties are free of encumbrances, and compliance with legal and environmental standards is guaranteed. Confidentiality: Agreement terms are confidential unless specific conditions apply. Termination: Non-exercise of the option cancels future obligations; initial payments are non-refundable. Dispute Resolution: Arbitration under Santiago Chamber of Commerce rules. Bifox is confident the tenement is in good standing and no known impediments exist for further exploration or eventual mining, apart from normal statutory reporting, local access agreements and state and federal approvals.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> SRK Consulting (U.S.), Inc. and SRK Consulting (Chile) S.A. (collectively SRK) completed exploration at the Sofia Mine between November 2008 and May 2009: Project Related Literature Review; Mapping; Geophysical Surveys; Drilling; Trenching; and Data Compilation. Bifox 2025: The exploratory work conducted by Fosfatos de Taltal between 2023 and 2024 focused on validating historical drilling data, performing topographic surveys, as well as surveying the collars of drill holes and excavations from the decommissioned underground mine. Additionally, samples were collected from panels within the underground mine.

Criteria	JORC Code explanation	Commentary
<p>Geology</p>	<ul style="list-style-type: none"> • Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> • Apatite occurs as yellow to white, glassy, hexagonal crystals up to 4 cm but more commonly as massive material intergrown with what is thought to be scapolite (white) and actinolite (green). Scapolite occurs as white masses and on the west side of the project area, as fine-grained crystals up to 4mm. Scapolite has been tentatively identified in the field by its prismatic, striated crystals that are square in cross-section. A hand specimen of the intergrown material fluoresces orange under a UV lamp, which is indicative of scapolite. Actinolite occurs as medium green, fibrous, radiating crystals in masses greater than 10 cm. Apatite, scapolite, actinolite and diorite clasts are found throughout the entire mineralized zone. Carbonate minerals may be present in the mineralization but were not positively identified. In addition, preliminary mapping indicates that dacite does not host apatite mineralization. Other minerals that are found in association with mineralization include magnetite, hornblende, epidote, chalcedony, crystalline quartz, jasper, calcite and tourmaline. These minerals appear to be zoned laterally. Rio Tinto (2001) also described lateral zoning of magnetite, hornblende and actinolite. Magnetite was observed in crystalline and massive form in areas east and south of the Project, outside the concession boundary and as disseminations within the mineralization. Epidote is a secondary replacement mineral within the host rock and was also observed as small crystals in open spaces. A small amount of hornblende was observed in the workings immediately northeast of the camp. Workings northwest of camp included chalcedony, crystalline quartz and jasper. • In the bibliography, this deposit is considered analogous to the El Arco deposits, described by Keller, T. et al (2022) and San Juan Veins (by Keller T. et al (2022)) as a Magnetite-apatite (MtAp) deposits, also known as iron-oxide-apatite (IOA) or Kiruna-type. They comprise large bodies of high-grade magnetite (Fe₃O₄) ore enriched in Ca-Mg-(Fe)-bearing silicates (diopside, actinolite), sulphate-bearing minerals (anhydrite, scapolite), and phosphates (apatite, monazite) with, at some localities, significant concentrations of uranium, cobalt, and rare earth elements (REE). Their genesis is the subject of ongoing debate. The formation of MtAp deposits related to a hydrothermal replacement or precipitation in subvolcanic environments (Hypabyssal). In contrast, the prevalent hypothesis of orthomagmatic to magmatic-hydrothermal ore genesis posits a formation by fracture-facilitated shallow intrusion to extrusion of an iron-enriched liquid of magmatic origin. The hypothesis is based largely on the conspicuous and well-exposed geology of the deposits at El Laco, an andesitic arc volcano in the Central Volcanic Zone, Northern Chile, their unique morphology, reminiscent of basaltic lava flows and tephra deposits, as well as their positioning along interpreted collapse structures on the edifice flanks. The nature and source of the ore-forming liquid, as well as the mechanics of its emplacement, however, remain contentious.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The significant intercepts were calculated using minimum sample length of 2m, with up to 2m of consecutive dilution, samples included with values > 5% P₂O₅. No upper cuts were considered. Weighted averages were calculated for all intercepts. No metal equivalent has been considered.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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'). 	<ul style="list-style-type: none"> The mineralised domain dips moderately to steeply towards the two main direction of the mineralization (20o Northwest and 70° Northeast) with the drill holes planned to cut the mineralised domain in a perpendicular manner. The downhole depths are reported, true width is not accurately known at this stage. The downhole depths are reported, but not in true widths, then it is not accurately known at this stage. In this stage it was not possible to ensure scissor hole due to the uncertainties on overall geometry.
Diagrams	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> See diagrams reported in the report
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All results are reported above the cut-offs described above. Not all of the holes and intervals were sampled.

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> 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 deleterious or contaminating substances. 	<ul style="list-style-type: none"> Historical exploration data and information has been recovery by the Bifox staff from SRK and Formas backups at the Mariela Project. Geophysics data was not recovery yet Drilling: Recovery the sample database in Excel, but it was not recovery the raw and the acquired data from SRK. No daily drilling report, no survey, no sampling plans, no assay certificates, no original loggings
<i>Further work</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> An exploration program is required to follow up definition of the Phosphatic rocks in the tenements, starting with an Geophysics for identification of satellite deposits and a drill program at Sophia deposit to convert Exploration Potential material to mineral resources and the reported inferred resources in Measured and Indicated categories. This program is summarized in Table below, where it is estimated a total cost of USD 1.2 Mi.

11.3 Section 3; Estimation and Reporting of Mineral Resources

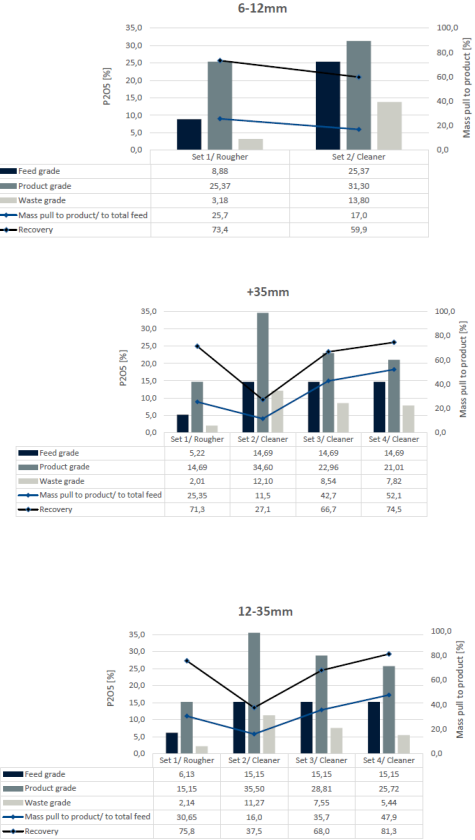
(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database Integrity	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Bifox Minerals provided data in Excel database The database is composed by the drilling data from SRK 2009 and panel underground samples by Bifox 2024 Following this approach, the excel spreadsheet has been validated for internal consistency within and between tables for collar, survey, assay and lithology files. All original files and printed copies of the assay data and drill logs has been filed in the project and backup. The CP checked the data integrity for: <ul style="list-style-type: none"> The drilling logs, codification, downhole intervals of lithology and geological observations by visual inspection and during the field visit. The original assay certificates were reviewed and cross-verified with the corresponding the Assays text file received. The data set is suitable for resource estimation, which the mineral resource estimation was performed using the meters assayed. The historic data doesn't have information of Survey and the Recovery is below than 90%, which the loss of core is relevant for low confidence of the assays.
Site Visits	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> MB conducted a visit to the Company in 2023, between September 1st and 5th. The objective of the field visit was to check the mineralization potential for a Phosphate Production through a mapping of the old underground mine and check evidence of exploration activities, including drill holes, regional and local geology and IOA (Iron Ore Apatite) mineralization and collecting 25 samples. Also, inspecting the existent infrastructure, equipment and logistics. In the field visit the most important task was the collection of the panel samples inside the old underground mine that is detailed at Item 6.2 (Underground Panel Sampling). In the Figure 2 1 is showed the Field visit photos. From 18th to 24th February 2024, MB visited the temporary Mariela coreshack in Caldera where it was checked the general condition of the cores and programmed the validation of the drilling data with a re-sampling programme. In the Figure 2 2 is showed the photos of temporary core shack of cores from Mariela Project. MB visited and inspected the ALS Copiapó Laboratory in February 2024 as part of the QAQC activities to guarantee the high quality of the sample preparation protocols. The chemical assays were carried out at ALS Callao in Lima - Peru. In the Figure 2 3 are some photos of the field visit.
Geological	<ul style="list-style-type: none"> Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. 	<ul style="list-style-type: none"> The geological information provided by Bifox Minerals included detailed observations, enabling a comprehensive understanding of their interpretative work. The level of detail

Criteria	JORC Code explanation	Commentary
<i>interpretation</i>	<ul style="list-style-type: none"> • <i>Nature of the data used and of any assumptions made.</i> • <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> • <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> • <i>The factors affecting continuity both of grade and geology.</i> 	<p>allowed the CP own interpretations through three-dimensional Ore Modeling.</p> <ul style="list-style-type: none"> • The Geological Interpretation and Grade shell modeling was conducted to define the Apatite mineralized domains, for eventual economic extraction of Phosphatic Rock. • The methodology applied for modeling the mineralization involved the traditional interpretation of drill holes along vertical sections, conditioned by geological descriptions and structural interpretation. The consolidated polylines of mineralised domains were interpolated between the vertical sections to generate wireframes including the intercept drilling points. • Due to the complexity of the mineralization it was decided to create a series of 3D wireframes via interpretation of the sections. Section spacing of 10 and the interpretation included the grade shell of 5% P₂O₅ as threshold.
<i>Dimensions</i>	<ul style="list-style-type: none"> • <i>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</i> 	<ul style="list-style-type: none"> • The Orebodies extend to 550m (along N20W) of a 500m wide (N70E), up to 130m depth. The modeling was conducted in stages, utilizing the assays of core sample to delineate the phosphatic rock domain.
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • The Mineral Resource Estimates updates are supported from historical drilling data obtained from SRK and the underground panel samples. • The estimate was prepared by Marcelo A. Batelochi, Member AusIMM (Chartered Professional), supported by guidelines compliant with the Joint Ore Reserves Committee of Australasia 2012 (JORC) reporting code that in accordance with the principles of the CRIRSCO Template (Including under the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves). • The Mineral Resource Estimate (MRE) started with the analysis of a data room provided by Bifox, followed by field visits from September 2003 and February 2024. The methodology employed involved: <ul style="list-style-type: none"> • Database consolidation and QAQC; • 2m composite Data Analysis and Capping Definitions • Variography - 3 directions – along strike; along Dip and Orthogonal; • Interpolation by Ordinary Kriging ("OK"). Block Density was determinate using the Nearest Neighborhood estimator conditioned to the P₂O₅ Envelope. • Mineral resources classification based on drilling spacing and Mineral Resources Open Pit.

Criteria	JORC Code explanation	Commentary																														
		<ul style="list-style-type: none"> The Cut-off grade definition for Mineral Resources was established based on 5% of P₂O₅ that is based on the assumed economic grade from Ore sorted Metallurgical test work. 																														
	<ul style="list-style-type: none"> 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 process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 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). 	<ul style="list-style-type: none"> Following the completion of grade estimation encompassing the mineralized wireframe, a visual check of the block model was conducted, and it was concluded that the block model fairly represents the grades observed in the drillholes. Additionally, validation of the block model was performed through comparative analysis of summary statistics, tonnage curves from Ordinary Kriging x Nearest Neighborhood estimation, and Swath Plots. These analyses confirmed the suitability of the estimated grades methodology and results for inclusion in the Mineral Resources Report, with no significant issues identified. Less than 15% for Inferred Mineral Resources. At this maturity of the Project, no by-product recovery has been calculated in the resource estimate. No deleterious elements or other non-grade economically significant variables have been modelled due to a lack of Geometallurgical Studies. 																														
	<ul style="list-style-type: none"> In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. 	<ul style="list-style-type: none"> In this stage of the project, the resource evaluation does not consider selective mining units (SMU). 																														
		<table border="1"> <thead> <tr> <th>Block Dimensions</th> <th>X</th> <th>Y</th> <th>Z</th> <th>Totals</th> <th></th> </tr> </thead> <tbody> <tr> <td>Origin (Lower-SW corner)</td> <td>383,150</td> <td>7,134,250</td> <td>980</td> <td></td> <td></td> </tr> <tr> <td>End (upper - NE Corner)</td> <td>386,854</td> <td>8,134,770</td> <td>1200</td> <td></td> <td></td> </tr> <tr> <td>Nb of Blocks</td> <td>176</td> <td>130</td> <td>110</td> <td>7,293,000</td> <td>Blocks</td> </tr> <tr> <td>Block Size</td> <td>4</td> <td>4</td> <td>2</td> <td>50</td> <td>m3</td> </tr> </tbody> </table>	Block Dimensions	X	Y	Z	Totals		Origin (Lower-SW corner)	383,150	7,134,250	980			End (upper - NE Corner)	386,854	8,134,770	1200			Nb of Blocks	176	130	110	7,293,000	Blocks	Block Size	4	4	2	50	m3
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	<ul style="list-style-type: none"> Any assumptions about correlation between variables. 	<ul style="list-style-type: none"> Grade modelling did not include any specific assumptions about correlation between variables. 																														
	<ul style="list-style-type: none"> Description of how the geological interpretation was used to control the resource estimates. 	<ul style="list-style-type: none"> It was established that there is an association between Apatite stockwork veins that controls the ore envelope and controls the mineral resources estimates. The grade shell thresholds (Thr) were defined from the Metallurgical test work. 																														
	<ul style="list-style-type: none"> Discussion of basis for using or not using grade cutting or capping. 	<ul style="list-style-type: none"> There is no Extreme P₂O₅ values ("outliers") that fall outside the normal range in data distribution analysis. 																														

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Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> Tonnages are estimated on a dry basis.
Cut-off Parameters	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> The Cut-off grade definition for Mineral Resources was established based on the P₂O₅% value that represent the feasible grade for Ore Sorter concentration. At this stage of the project there is no cost composition for the cut-off calculation.
Mining factors or assumptions	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Economic evaluation of the mineralisation is at an Pre-Economic Assessment stage, and the mining parameters are not yet being considered consistent for any assumptions. Underground extraction also will be study during the feasibility study
Metallurgical factors or assumptions	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Below is the summary of the Mineral Processing and Metallurgical Testing report, relied by MB, conducted by TOMRA Mining, addressed at Feldstrasse 128 - 22880 Wedel, Hamburg – Germany, authored by Alina Shibistova and peer reviewed by Rodrigo Chaves, as TOMRA Ref. Number: C2740-23 - V1, dated of February 2024 Based on reported by BHM, the assumptions for metallurgical recovery are:

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<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Environmental considerations for economic extraction of the deposits have not yet been evaluated in detail. 																																																																	
<p><i>Bulk density</i></p>	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> The density measurements were performed in 30 samples at ALS Copiapó, from drill cores, following the procedure: 																																																																	

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	<p><i>nature, size and representativeness of the samples.</i></p> <ul style="list-style-type: none"> <i>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.</i> <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	<ul style="list-style-type: none"> samples of 10 to 25 cm in length were collected, preferably from the beginning of each meter of the intact core; Sample is weighed dry. The sample is then weighed while suspended in water. Specific Gravity (SG) is calculated using: $SG = \text{Weight in air (g)} / (\text{Weight in air (g)} - \text{Weight in water (g)})$ In QP opinion, the procedure for density determination is reasonable for use in mineral resource estimation at economic assessment studies. 																																			
Classification	<ul style="list-style-type: none"> <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> <i>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).</i> 	<ul style="list-style-type: none"> A block is classified as Inferred if the block was estimated by 4 samples in a search radius 40x60x12meters that represents the Second structure of the semivariogram as showed below. <table border="1"> <thead> <tr> <th>Variogram Fitting</th> <th>Nugget Efect</th> <th>S1</th> <th>S2</th> <th>S3</th> </tr> </thead> <tbody> <tr> <td>Type:</td> <td></td> <td>Spherical</td> <td>Spherical</td> <td>Spherical</td> </tr> <tr> <td>Sill:</td> <td>4.5</td> <td>30</td> <td>10</td> <td>3</td> </tr> <tr> <td>Range:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>- Major Vector</td> <td></td> <td>40.0</td> <td>40.0</td> <td>10000.0</td> </tr> <tr> <td>- Intermediate Vector</td> <td></td> <td>3.0</td> <td>60.0</td> <td>10000.0</td> </tr> <tr> <td>- Minor Vector</td> <td></td> <td>5</td> <td>12</td> <td>15</td> </tr> </tbody> </table>	Variogram Fitting	Nugget Efect	S1	S2	S3	Type:		Spherical	Spherical	Spherical	Sill:	4.5	30	10	3	Range:					- Major Vector		40.0	40.0	10000.0	- Intermediate Vector		3.0	60.0	10000.0	- Minor Vector		5	12	15
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	<ul style="list-style-type: none"> Whether the result appropriately reflects the Competent Person's view of the deposit. 	<p>Blocks out of this criterion were not classified (considered Potential Target Exploration)</p> <p>The classification is based on the following considerations, that has been considered Positive aspects:</p> <ul style="list-style-type: none"> Relatively simple 3D Ore model where the ore is concentrated the envelope of Mineralized intercepts. Good sampling procedures for the Company drilling and no issues with the QAQC data. Density data has acceptable quality for Inferred Mineral Resources. The drilling and Panel samples are acceptable due to the material recovered with good core recovery. Data spacing demonstrated appropriate for the Inferred Material of the MRE Good definition in the variography. <p>The Inferred Resources in this estimate have a lower level of confidence than that applied to Indicated Resources and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Resources could be updated to an Indicated Resources with continued exploration, specifically additional drilling.</p>
<p><i>Audits or reviews</i></p>	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<p>Mineral Resources released is 4,778,472 Tonnes @ 10.69 P₂O₅ % - Ordinary Kriging;</p> <ul style="list-style-type: none"> The independent Qualified Person for the Mineral Resource estimate as defined by JORC-2012 is Marcelo Antonio Batelochi, P. Geo., of MB Soluções em Geologia e Mineração Ltda. report date: January 10th, 2025 and the effective date: January 17th. CIM definitions and guidelines for Mineral Resource Estimation have been followed. These Mineral Resources are not Mineral Reserves as they do not have demonstrated economic viability. The MRE presented herein is Classified as Inferred. No Measured and Indicated Mineral Resources are reported. The Material extracted from old mine was depleted from the total mineral resources; Not included on mineral resources the material from the stock piles stocked surround the old pit due to lack of consistent basis for a accurate calculation (only visual and by polygons drawn on the google earth x hypothetical height); The quantity and grade of reported Inferred Resource are uncertain in nature and there has been insufficient exploration to define these Inferred resources as Indicated; however, it is reasonably expected that the majority of Inferred Mineral Resource could be upgraded to Indicated Mineral Resource with continued exploration. Resources are presented as undiluted and in-situ for an open pit mining scenario and are considered to have reasonable prospects for economic extraction. Density values in dry basis moisture were calculated based on the Nearest Neighborhood Estimator from Raw data. Grade was interpolated from drillhole 2m Composites using an ordinary kriging interpolation.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none">• The MRE was reported using a cut-off grade of 5.0 % P₂O₅, calculated from metallurgical assumption.• Calculations are in metric tonnes. Tonnage has been rounded to reflect the level of accuracy and any discrepancies in total amounts are due to rounding errors.• The author is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issues not reported in this Technical Report that could materially affect the Mineral Resource Estimate• The acquired data on the deposits has been submitted to internal audits and revised by the Competent Person for Mineral Resources Estimates.• The mineral Resources Estimates reported in this table 1 has not been Audited and Revised yet.

<p>Discussion of relative accuracy/ confidence</p>	<ul style="list-style-type: none"> • 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. 	<p>The work has achieved its objective of releasing an inferred mineral resources, incorporating the historical drilling information conducted by SRK 2008/2009 and the panel samples conducted by Fosfatos de Taltal 2023/2024. Some considerations that impacted on the Mineral resource that are strongly recommended:</p> <ul style="list-style-type: none"> • Sample spacing: the pass categories are derived from the search parameters which contain data point requirements in order to estimate block grades i.e. a function of the data point spacing, which ultimately is a function of the drillhole spacing. The resource classification is derived from the variogram range allocated to each block with subsequent consideration of other impacting factors. In the next stage of the project is recommended to test the “Score Card” methodology of classification. • The geology of the deposit and the style of mineralization: The mineralization has strong structural controls of the Apatite veins that this high strain regime tends to have lower continuity than modeled and subjectively affecting the confidence in the accuracy of the next MRE. • The sampling methods: the bulk of the resource estimates have been generated from diamond drilling results which is generally considered the best sampling technique (assuming good core recoveries) and thus provides increased confidence for the MRE. But the historical drill holes don't have the down the hole survey, then, it will be necessary a drilling campaign to substitute those drill holes guaranteeing the accuracy of the sample location • Variography: shown good spatial variability that didn't impact the confidence of the MRE. • Density data: there is 30 density data in good quality, but insufficient to support the feasibility studies and Measured and Indicated Resources. Then, it is suggested a density determination as part of the next stage of the exploration program, for new holes and for the historical SRK cores. • The QAQC procedures and outcomes: these are considered to be to industry standard. The QAQC outcomes impart a high level of confidence in the appropriateness of the sampling methods and the accuracy of these assays. • The priority one is the new drilling in the gaps of information to increase mineral resources category to indicated resources • The historic drilling data: the historical data assay is validated and in good standards. But, due to the lack of down the hole survey data, it will be necessary twin holes to validate the deviation and the accuracy of the sample position. • Core recoveries: visually the current recovery of >95% is reasonable to guarantee the confidence of the samples. • Ore envelope interpretation. The use of unconstrained composite data precludes the need for mineral domains. This simplifies the grade interpolation and removes the risk of introducing conditional biases, which can lead to an overstatement of metal grades, especially with the use of high grade metal domains. The mineralization at Mariela is marked by a rather abrupt contact by the limit of the veins, where this contact was well logged in the drilling data such that a 3D wireframe could easily be created. The result is a rather simple
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	<ul style="list-style-type: none"> • <i>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.</i> • <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<p>geological model but with some clear cut geological controls to mineralization.</p> <ul style="list-style-type: none"> • The block size. The block size was defined intuitively. An optimal block size study is recommended for a feasibility study. Often a small block size can lead to over-smoothing of grades and thus an over-statement of grade for Mineral Resources. Large block sizes do not provide the appropriate resolution for selective mining in open pit scenarios. In theory a recoverable resource model would have a panel/block size with dimensions equal ¼ to the drillhole spacing. At this Mineral Resource Estimates the block sizes were defined intuitively for the Competent Person that the SMU is considered appropriate size for selective mining and represents the minimum dimensions of any mining unit. Further studies should be conducted to determine the best block size and SMU for the deposits. • Top cutting. Not used, but should be reviewed in the next mineral resources estimates. • The Estimation grade method indicating no skewed data distribution with extreme values. The OK method is acceptable for grade interpolation for P₂O₅% but a more sophisticated grade interpolation technique would increase the level of confidence. • Search strategy is considered adequate for the estimates for Inferred resources. To report measured and indicated mineral resources it is recommended an optimization of the parameters, i.e. “optimum search neighborhood analysis”. The minimum three drill holes to classify as indicated and maximum 8-12 samples for OK grade interpolation was an appropriate strategy avoiding a lower number of minimum data that increase in risk to the interpolated grades particular at the margins of the deposit or in areas of wide drillhole spacing. • Reporting Mineral Resources constrained by 5% of P₂O₅ supported by metallurgical testworks (Ore sorting concentration) are appropriate for this type and stage of Project. It is recommended to advance the conceptual studies to provide more robust and accurate parameters for the Project Evaluation. <p>The Competent Person is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the potential development of this mineral resources updates.</p>