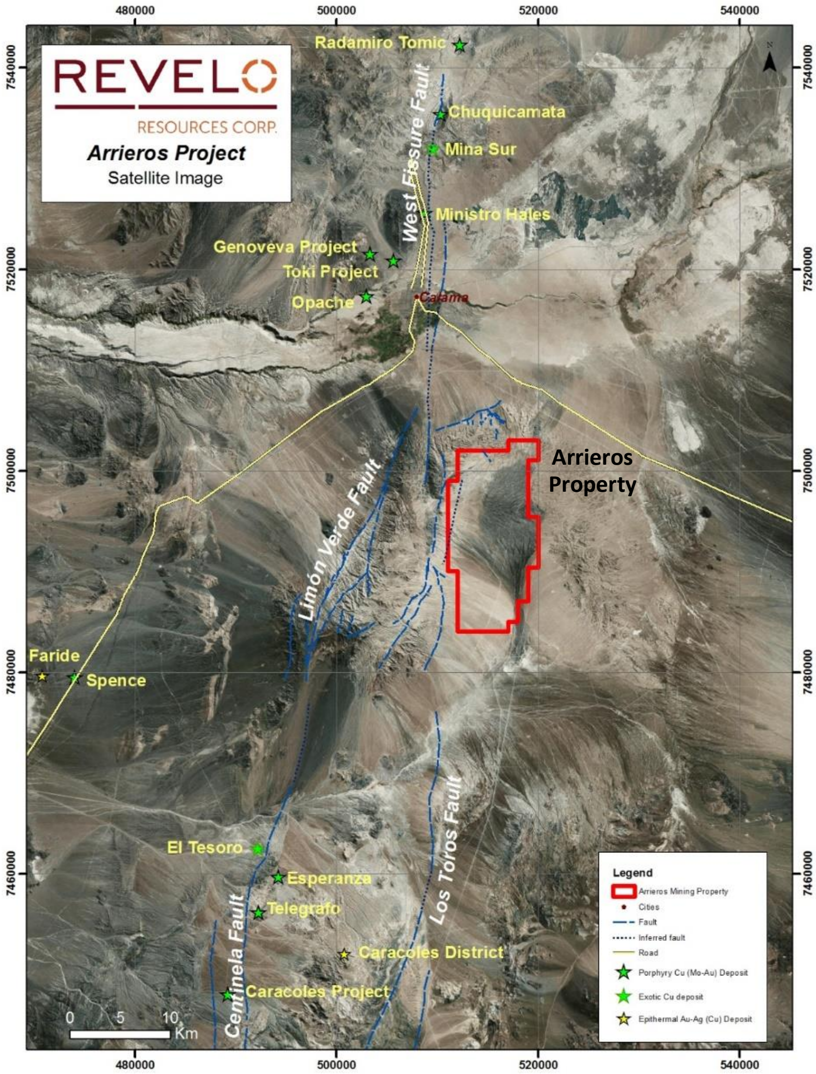
NI 43-101 Technical Report

of the

Arrieros Project

Northern Chile

Prepared for:	Fireswirl Technologies Inc.
By:	Mario Orrego G, Geologist, MBA and Registered Member of the Chilean Mining Commission
Effective date:	July 24, 2020



Certificate of Qualified Person

I, Mario Orrego, am an independent consultant who has worked in this capacity for at least 8 years after being employed for 20 years at Anglo American and another 2 years at Barrick. I am Chilean and I live in Santiago, Chile, from where I work from my consulting office in Chile-España 120, Ñuñoa.

This certificate applies to the technical report called "NI 43-101 Technical Report of the Arrieros Project Northern Chile", prepared for Fireswirl Technologies Inc.

I am a member of the Chilean Mining Commission and "… Registered Member in the Public Registry of Competent Persons in Minerals Resources and Reserves, from April 2014, under Nr. 0244, with specialization in Geology. …" according to a certificate issued by that mining entity and here included.

I am a geologist graduated from the Universidad Católica del Norte, Antofagasta, Chile, with postgraduate studies in administration, entrepreneurship and innovation (MBA) focused on news released about the advancement of copper, gold and iron exploration projects in South America.

I have more than 30 years of experience in exploring copper-molybdenum, copper-gold and gold copper porphyry systems, amongst other deposit types, in Chile, South America and Europe. As part of my experience, I have been part of Due Diligence processes on advanced projects, reviewed the progress of field exploration projects and conducted geological surveying, drilling, logging, modelling and targeting in early stage projects.

As a result of my experience and qualifications, I am a current Registered Member of the Chilean Mining Commission and, according to the reciprocity agreements of this commission with members of CRIRSCO, also a Qualified Person according to the terms of reporting of the Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects.

I am responsible and have been directly involved in all sections of this NI 43-101 technical report.

I visited the Arrieros Project on June 26 to June 28, 2020, during which I was able to verify the existence of drill holes, review drill chips and verify data. Previously, I had access to material technical information.

I am independent of Fireswirl Technologies Inc., as Independence is described in Part 1 and Article 5 of the Chapter 5 Rules and Policies of the National Instrument 43-101 Standards of Disclosure for Mineral Projects.

I have had no prior involvement with Fireswirl Technologies Inc., but I have some knowledge about the Arrieros Project due to the fact that I consulted in the geologic review of Revelo Resources Corporation's Montezuma Project, which at that time included the Arrieros Project, in 2017.

As of the effective date of the technical report, to the best of my knowledge, information and belief, all the sections of this technical report contain all scientific and technical information that is required to be disclosed in order to make the technical report not misleading.

Dated: July 24, 2020

"Mario Orrego G"

Mario Orrego G
RM CMC #0244

Important Notice

This report has been prepared in accordance with Canadian National Instrument 43-101 for Fireswirl Technologies Inc. by the author indicated on its title page. The report is consistent with the information provided to the author during its preparation, together with available public information and the author's experience in the understanding, interpretation and assumptions derived from the revision of the information and data provided and consulted. The report will be used by Fireswirl Technologies Inc. for the purposes of Canada's provincial securities laws. Any other use, both by Fireswirl Technologies Inc. and by third parties, is under its absolute responsibility because this report is formally *"… a summary of material scientific and technical information concerning mineral exploration, development, and production activities on a mineral property that is material to an issuer. ...*" according to the Form 43-101F1 that regulates this reportability standard.

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1. SUMMARY

The author has been requested by West Pacific Ventures Corporation (WPC), for the benefit of Fireswirl Technologies Inc.'s (FSW) Canadian Securities Exchange (CSE) application, to prepare a technical report in accordance with the NI 43-101 standard requirement. This contains relevant technical and scientific information summarized from data and reports provided by the project owners and collected from public sources. It also contains data obtained by the author during a technical visit to the project site during late June 2020.

In May 19, 2020, WPC signed the terms to acquire eight properties from Revelo Resources Corporation (RVL or Revelo) in Chile, including Arrieros. FSW entered into a binding letter of intent dated June 12, 2020, with WPC, pursuant to which FSW is proposing to acquire 100% of the outstanding shares of WPC in consideration for shares of the FSW.

Most of the coordinates quoted in the report are in UTM-PSAD56, except where otherwise indicated. Metals are reported in percentages (%), parts per million (ppm) or parts per billion (ppb) units according to the relevant metal content, and Millions of tons (Mt) of ore. RC (Reverse Circulation) and DDH (Diamond Drill Hole) drill holes are measured in metres (m) from a surface collar. This report has been prepared with a valid copy of Word from Microsoft 365, which contains the “Export” tool from where the current pdf version was obtained.

The Arrieros project is an initial stage exploration project with evidence for copper (Cu), gold (Au) and Molybdenum (Mo) mineralisation of porphyry copper type. Most of the information in this report has been provided by RVL, remotely and digitally and editable, most of which obtained from previous exploration activities developed by Polar Star Mining Corporation (PSR or Polar Star) and Minera Newmont (Chile) Limitada (Newmont), although subsequent review work by RVL is also included. RVL's technical team was always available to respond to enquiries and to provide additional insight.

During the technical visit to the project site from 26 June to 28 June, 27 field locations were inspected and 1,252.85 m in six drill holes (1 DDH and five RC) quick-logged. The drill holes are kept in good conditions at RVL's Calama warehouse, and this together with the adjacent small office in Calama has all the basic services to provide an adequate work environment. Reliance on Carolina Arias, RVL's in-house lawyer, who provided legal information on the Arrieros project's mineral concessions and property, surface rights, and company history. Information on exploration agreements were obtained directly from news released.

The Arrieros project is covered by 14,000 hectares (ha) of exploration and exploitation concessions in an approximately 18 km long and 8 km wide contiguous north-south block, centred about 40 km south of the Chuquicamata mine in the Antofagasta region of northern Chile. Exploitation concessions are named Topater and Montezuma, and the exploration Flanco Este, Montezuma and Lima, all owned by Sociedad Contractual Minera Montezuma Limitada (SCMM) derived from the merger between RVL and PSR in 2014 and the subsequent exploration agreement between RVL and Newmont originally signed between PSR and Newmont. There are no known surface rights, owned or third party, associated with the Arrieros property, and there are no known liabilities associated with the property. Maverix Metals Inc. (Maverix) and EMX Royalty Corp. (EMX) both own a 1% NSR royalty interest covering the entire property. The EMX royalty has a buy-back clause whereby the royalty interest can be reduced from a 1% to a 0.5% NSR, by paying EMX US$10 million.

The Arrieros property is located 25 km south of the town of Calama, an important mining centre that services the Chuquicamata-Radomiro Tomic (RT)-Ministro Hales (MH) mining cluster (Codelco), the Esperanza/Centinela mining district (Antofagasta Minerals or AMSA), the Spence (BHP Billiton), Sierra Gorda (KGHM), El Abra (Freeport McMoRan-Codelco) and Gabriela Mistral (Codelco) mines, all within a 35-80 km radius. Calama has a population of 166,000 inhabitants and provides basic services, specialized labour, and mining equipment to the surrounding operations. The airport normally provides more than 10 daily flights to the Chilean capital city of Santiago, from three different airline. San Pedro de Atacama, possibly the most important tourist place in the region, is located 75 km to the east.

The Arrieros project is located in the Precordillera, a north-south physiographic feature also known as the Cordillera de Domeyko (or Domeyko mountain range), with an elevation of 2,600 m in the south and 2,870 m in the north. The area forms part of the Atacama Desert, with scarce vegetation and fauna, but can be affected by rains during the summer due to the so-called "altiplano winter". Occasionally, the rains can be strong and cut roads and basic services. Despite this, mining activities in the region can normally be carried out throughout the year, and this also applies to exploration activities at the Arrieros project. Access to the project from Calama is good, via various dirt roads and also the CH23 and C255 routes that eventually lead to the Gabriela Mistral mine.

Following the merger agreement between Polar Star (PSR) and Iron Creek Capital (IRN) in December 2014, RVL acquired control of all PSR's assets in Chile. In January 2014, prior to the merger, PSR optioned the Montezuma property, which at that time included Arrieros, to Newmont. Exploration expenditures required of Newmont by the option agreement were completed and Sociedad Contractual Minera Montezuma (SCMM) was formed in May 2016 with Newmont owning 51 % and RVL 49 %. In March 2017 Newmont elected to withdraw from the Montezuma agreement and returned its earned interest to RVL in exchange for a perpetual 1% NSR. This royalty interest was subsequently sold by Newmont to Maverix. Consequently, RVL owned 100% of the Montezuma project, together with the SCMM. Subsequently, RVL decided to split the project into two parts; 1) Montezuma – including the western and northern parts of the original property and including the Target B and Melissa areas, and 2) Arrieros – the south-eastern quadrant of the original property, largely typified by having geological units obscured by post-mineral cover materials, and being relatively unexplored, and being the subject of this Technical Report.

The northern and western margins of the Arrieros property have limited geological outcrops (that extend further west and north out of the property boundary), and have been the subject of geological mapping (1:10,000 scale) minor rock and soil sampling, and limited IP geophysical surveying. Ground magnetics surveying covers most of the property, except for the southern extremities. All these exploration programs were carried out by PSR between 2007 and 2014. Six 18-338 m deep drill holes, including one DDH (MODD59-11) and five RC (MORC01-09, MORC11-09 to MORC-14-09) are located around the margins of the property and tested geoelectric IP anomalies. Two drill holes to the west and one to the north cut only post-mineral gravels, and it is likely that IP anomalies do not reflect any alteration and mineralization properties of the rocks under the cover. The other three drill holes cut granitoids without evidence of a porphyry system. MODD59-11 cut a fault between a shallow granitoid and gravels at depth, possibly part of the northeast trending Centinela fault system controlling the gravel-filled basin to the east and a porphyry system in zone B of the Revelo Montezuma project to the southwest. This lineament projects for about 40 km southwest where the Antofagasta Minerals Esperanza mine is located.

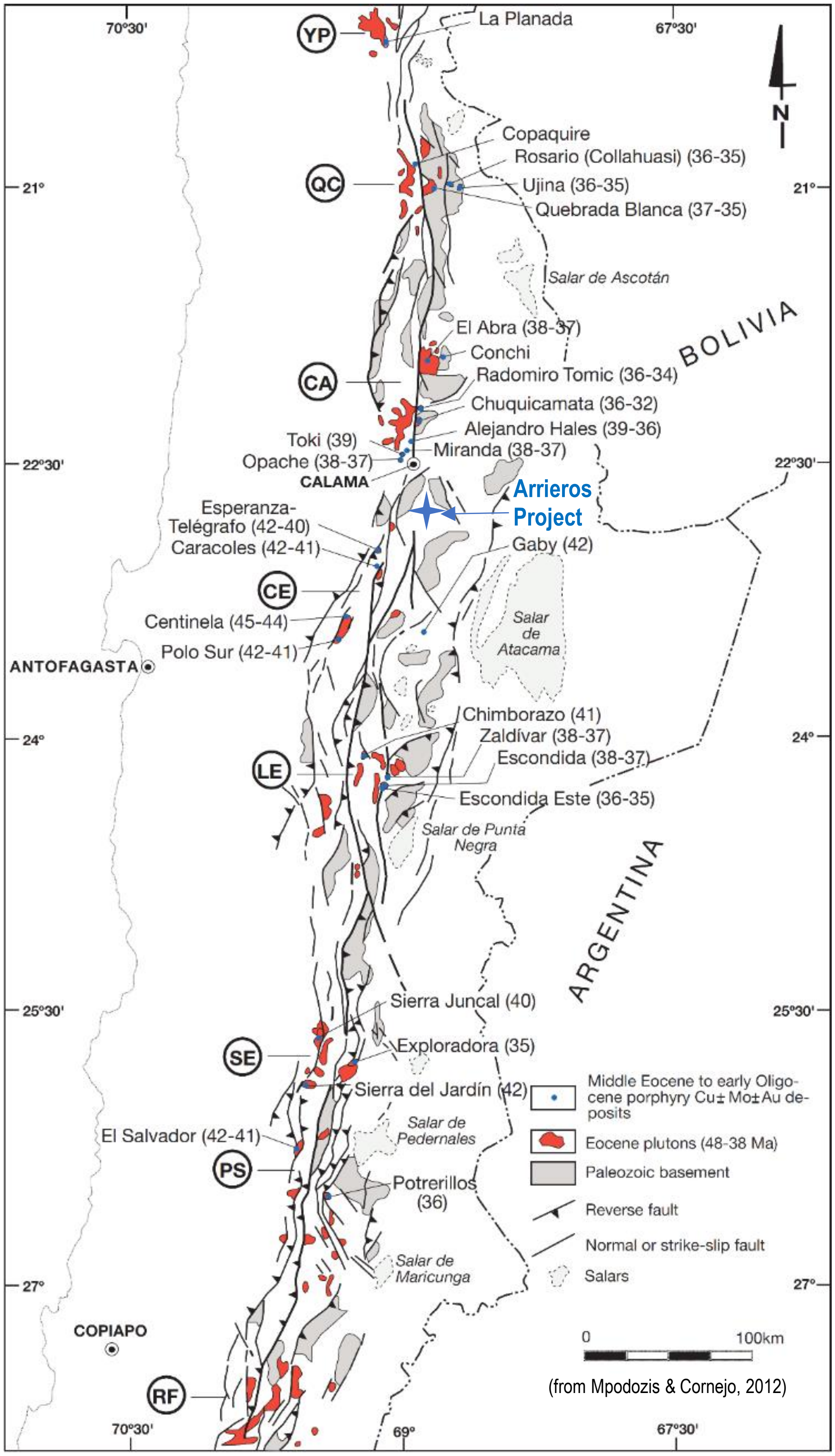
Lithology and alteration maps surveyed by Newmont as part of the option agreement from 2014 to 2017, recognized upper Palaeozoic granitic rocks affected by chlorite / quartz-sericite / green clays / tourmaline / potassic hydrothermal alteration at the northern and western edges of Arrieros. Rock samples indicate ore-grade anomalies in copper, gold and molybdenum in the northeast vertex of the Arrieros' property, where evidence of northwest trending quartz-tourmaline and north-south trending carbonate-copper oxide veins, together with potassic alteration, were also recognized. Values up to 0.127-0.415 % Cu, 54.5-171.5 ppm Mo and 0.142-0.486 g/t Au suggest a highly prospective area some 600 x 600 m in size, open towards the northwest and the Melisa target at Montezuma where RVL has defined a potential undrilled porphyry system with relatively shallow hydrothermal exposure. The western and northern edges of the Arrieros property were also studied by Newmont with 3DNewDas, an IP algorithm developed by Newmont, which indicated chargeability and resistivity geoelectric structures open to the northwest and southeast.

Newmont also carried out detailed ground magnetic surveying over a large portion of the property, extending a previous, less detailed survey completed by PSR along the northern and western margins of the pampa basin, in late 2016. Revelo subsequently processed and merged the two data sets with a geophysical contractor, and defined a series of magnetic anomalies – particularly AS and RTP magnetic highs – that may be related to dioritic to quartz monzo-dioritic magmatic centres along a northeast trending fault-controlled corridor. North-south and northwest magnetic lineaments have also been interpreted.

The Cordillera de Domeyko, which includes the Arrieros property, comprises a generalized north-south tectonic block of intermediate-felsic volcanic, marine and continental sedimentary, low to high grade metamorphic and dioritic to granitic intrusive rocks from Palaeozoic to recent age. These rocks show the effects of complex geologic events, including extension, tectonic inversion, dextral and sinistral transpression, fold and thrust tectonics, block rotation, shortening, uplift and the emplacement porphyry copper systems together with their subsequent exhumation, oxidation and supergene enrichment. Most of these events are related to the Middle Eocene-Early Oligocene compressive Incaic tectonic phase, involving the Domeyko fault systems developed in that period of time, although older episodes related to the Upper Cretaceous-Paleocene K-T and Upper Cretaceous Peruvian phases have also been documented.

The Domeyko porphyry belts are extremely prolific, with several deposits currently in production along a 700 km north-south segment of the belt in northern Chile. The Domeyko range is host to at least two sub-belts: 1) a Middle Eocene (44-41 Ma) Cu-Au-Mo porphyry belt that includes the El Salvador (Codelco) and Esperanza (Antofagasta Minerals & Marubeni) deposits and mining districts, and 2) a Late Eocene-Early Oligocene (38-31 Ma) Cu-Mo porphyry belt best represented by the La Escondida (BHP, Rio Tinto and others) and the Chuquicamata (Codelco) deposits. Although not evident in all cases, most of the porphyry copper systems and deposits are located along specific segments of the Domeyko fault zone. Known deposits commonly show uplifted basement rocks in contact with exposed pre-mineral Eocene plutons and preserved blocks of tectonically inverted Jurassic to Paleocene magmatic and sedimentary extensional basins (Figure 1).

The local geology of the Arrieros property is dominated by the Carboniferous-Permian Limón Verde Intrusive Complex (LMIC), mainly composed of granodioritic to granitic batholiths and stocks, and some dioritic and tonalitic phases. To the west, along the Sierra Limón Verde range of hills (SLM), the LMIC intrudes Upper Proterozoic (?) to Middle Permian volcanic, sedimentary, and metamorphic rocks. These units were associated with the evolution of the western margin of Gondwana, the oldest being Grenvillian and possibly deposited during the Rodinia breakup and the subsequent separation of Laurentia from Gondwana.



(from Mpodozis & Cornejo, 2012)

Figure 1. Geologic setting of the Eocene-Oligocene porphyry belt of northern Chile

To the north, northwest and northeast, granodiorites of the LMIC are covered in transgression by continental-transitional to marine clastic and carbonate rocks belonging to the early Jurassic Moctezuma Formation. These units are affected by the Domeyko fault system, trending north-south to north-northeast and northeast along the western flank of the SLV, and north-northwest to northwest along the eastern flank. Immediately west of Arrieros, at Target B in RVL's Montezuma project, a Middle Eocene monzo-dioritic porphyry intrudes upper Paleozoic granodiorites along a northeast segment of the Centinela fault. A poorly eroded copper-gold-molybdenum porphyry system has been defined in this area.

A Miocene-Holocene column of polymictic and poorly consolidated gravels and sands dominate the geology of the Arrieros property (Figure 2). The clastic components are partially cemented by gypsum. At depth, this unit could include other unconsolidated deposits such as the Tambores formation and Miocene ignimbritic flows. Granitic rocks of the LVIC outcrop along the northern and western edges of the property, which are affected by porphyry type intermediate argillic alteration, chlorite, chlorite-sericite, and "patches" of quartz-sericite-pyrite (QSP) alteration, tourmaline flooding, and carbonate veins with green-clay. In the northwest, granites are spatially related to granodiorite and tonalite facies and "enclaves" of quartz monzonites, micrograniteses and diorites, which are in contact through a north-south fault with rhyolitic flows of the Agua Dulce Formation. The rocks are affected by QSP "patches", chlorite-sericite, chlorite and propylitic alteration (Figure 2), partially associated to regional metamorphism. Siliciclastic rocks outcrop to the north, with siliceous hornfels appearance due to a certain degree of metasomatism. Calcareous rocks of the Moctezuma Formation are exposed at the northeast vertex of the property, affected by some recrystallization and evidences of hydrothermal alteration and mineralization.

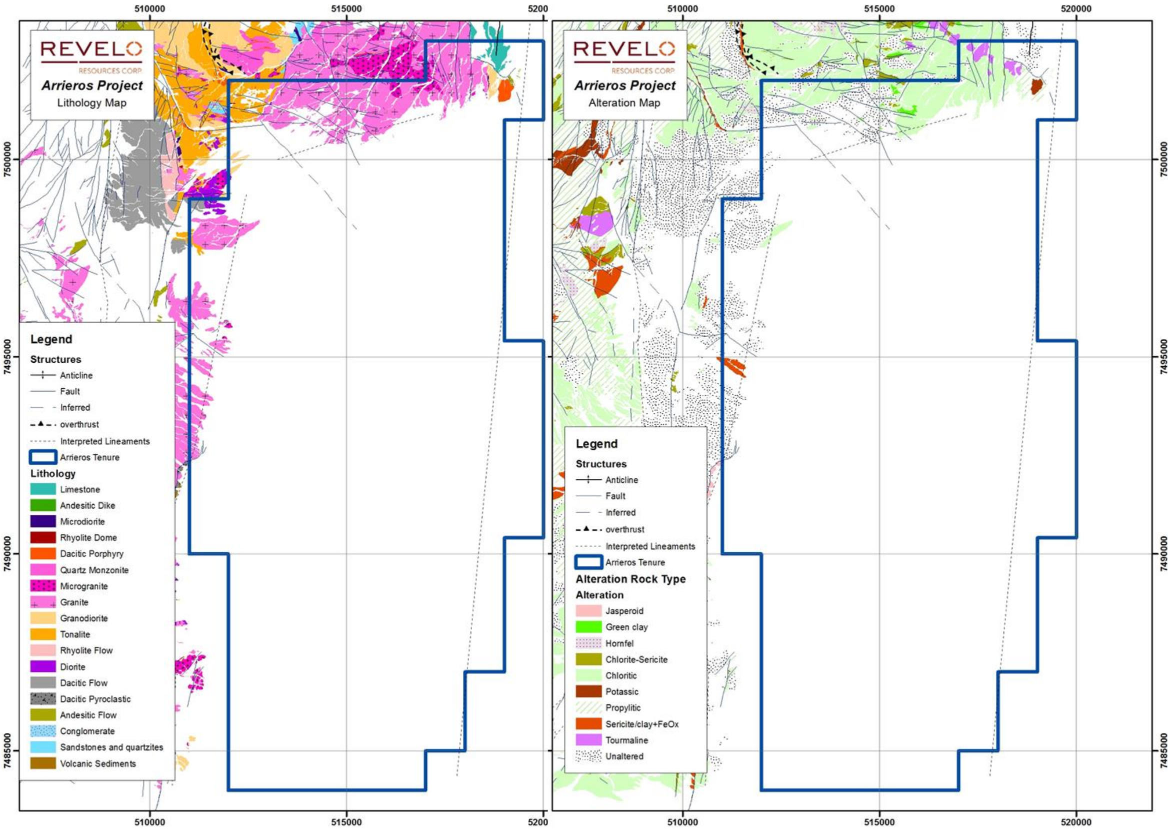


Figure 2. Lithology and alteration map of the Arrieros property (from Melgar, 2017)

An approximate 150 x 150 m area with copper oxides occurs in a series of ancient artisanal surface workings at the northeast vertex of Arrieros and inside of the property. These occurrences are associated with north-south carbonate veins hosted in Jurassic calcareous rocks. Immediately towards the west, rock sampling from quartz-tourmaline veins indicates highly anomalous values of copper (0.127-0.415 %), gold (142-486 ppb) and molybdenum (54.5-171.5 ppm) distributed over an approximate surface area of 600 x 600 m. No other evidence of mineralisation has been described.

The Arrieros property has been subject to exploration for porphyry copper systems due to its geologic location within the prolific Eocene-Oligocene porphyry belt of northern Chile, although so far limited, and further exploration efforts should continue towards that objective. The geologic models for the Chuquicamata (36-31 Ma) and Esperanza (41 Ma) deposits, located 40 km north and south of Arrieros respectively, might be considered to help in the selection of exploration tools and facilitate the understanding of the results. Because the Arrieros property consists of an area obscured by post-mineral cover materials, and is mainly without rock outcrops, indirect exploration techniques must be considered.

Chuquicamata to the north of Arrieros is located within the east block of the West Fissure fault zone, at the intersection with the north-northeast Mesabi fault. Basement rocks outcrop to the east, while Eocene intrusive and volcanic rocks are exposed to the west. The Cu-Mo porphyry system is 3.5 km long by 0.5-1.0 km wide, and probably extends to at least 2 km depth, and is highly anomalous in arsenic (As) and zinc (Zn). It is exposed at the 2900 m elevation. Quartz-sericite alteration, including “D” veins and sulphide assemblages of pyrite, pyrite-chalcopyrite-bornite, pyrite-bornite-digenite ± enargite, and pyrite-digenite-covellite ± enargite, have been described as the main copper mineralisation events. Pyrite is widely distributed, and sphalerite is common along with enargite. Minor tennantite occurs with pyrite-chalcopyrite and local magnetite has been described together with albite-chlorite. QSP alteration occurs next to the north-south trending West Fissure fault, where it is distributed over 2 km up to widths of 200-500 m, and is superimposed on potassic alteration. The latter is made up of K feldspar, quartz, K feldspar-quartz and secondary biotite with chalcopyrite-bornite, bornite-digenite-chalcopyrite and molybdenite mineralization all associated with quartz veins and veinlets which represent multiple mineralising events. Supergene chalcocite and covellite correspond to the main supergene enrichment products, but abundant hypogene chalcocite (including djurleite and digenite) and covellite also occur at depth. To the east, the propylitic alteration halo includes chlorite-epidote-specularite, with sulphide abundances of less than 0.5 % volume percent and a well-developed pyritic halo does not occur. Copper contents are low to 0.2%.

Esperanza to the south of Arrieros comprises an exposed 500 x 700 m potassic core at an elevation of 2300 m, located between two north-northeast fault traces of the Llano fault, which affects andesitic, sedimentary and volcano-sedimentary rocks of the Late Cretaceous Quebrada Mala Formation. Copper-molybdenum-gold mineralization is spatially related to minor quartz-feldspar dykes and stocks of granodioritic composition, mainly northeast trending, which at depth connect to bodies greater than 600 x 300 m dipping 50° southeast. Potassic alteration composed of quartz, K-feldspar and biotite with abundant magnetite, anhydrite and little apatite occurs in the porphyry and surrounding andesites. Several generations of A and B veinlets occur together the potassic alteration. A-type veins composed of quartz-K feldspar also contain anhydrite, magnetite, chalcopyrite and bornite, but biotite is notable absent. B-Type veins are composed of quartz-K feldspar with fine-grained biotite, interstitial anhydrite, magnetite, chalcopyrite, bornite, with traces of molybdenite and pyrite. Intermediate argillic alteration overprints the potassic core and develops a halo around it. Quartz-sericite alteration composed of quartz, white sericite and illite, with characteristic D-veins, forms a 2 km long ad 0.6-1 km wide northeast trending halo around the intermediate argillic association in andesitic wall-rocks.

In addition to the two key porphyry copper deposits mentioned above, three other porphyry copper prospects are located close to the Arrieros property: the Montezuma porphyry block (MPB), the Ricardo project (RP) and the Arrieros porphyry deposit (APD). The geological knowledge and the ongoing exploration work being carried out at these projects are considered relevant to better understand the results of imminent exploration at Arrieros.

Exploration activities have not been carried out to date by Fireswirl Technologies Inc. at the Arrieros property. Therefore, only historic and current data regarding mining property, geology, drilling, sampling, assays and geophysics have been verified for the purposes of this report. Arrieros is an initial stage exploration project, so there is no data on mineral resources, environmental studies, mining, recovery, markets, capital, cost and economics.

The technical inspection of the project site revealed the existence of several reverse circulation (RC) drill holes (Figure 3), some in search for water and others looking for metallic mineralisation. Several of these drill sites do not appear to have cut bedrock beneath the gravel cover, and show only evidence of having cut the post-mineral gravel materials. Some sites correspond to undrilled platforms, with no remains of drilling materials present on the prepared place. Other drill holes were clearly directed towards exploring for water within the gravel basin and also did not cut bedrock. According to this collected information, and the data provide by Revelo, most of the project area is free of effective drilling and until now the magnetic structures delineated from the available geophysical data remain untested.

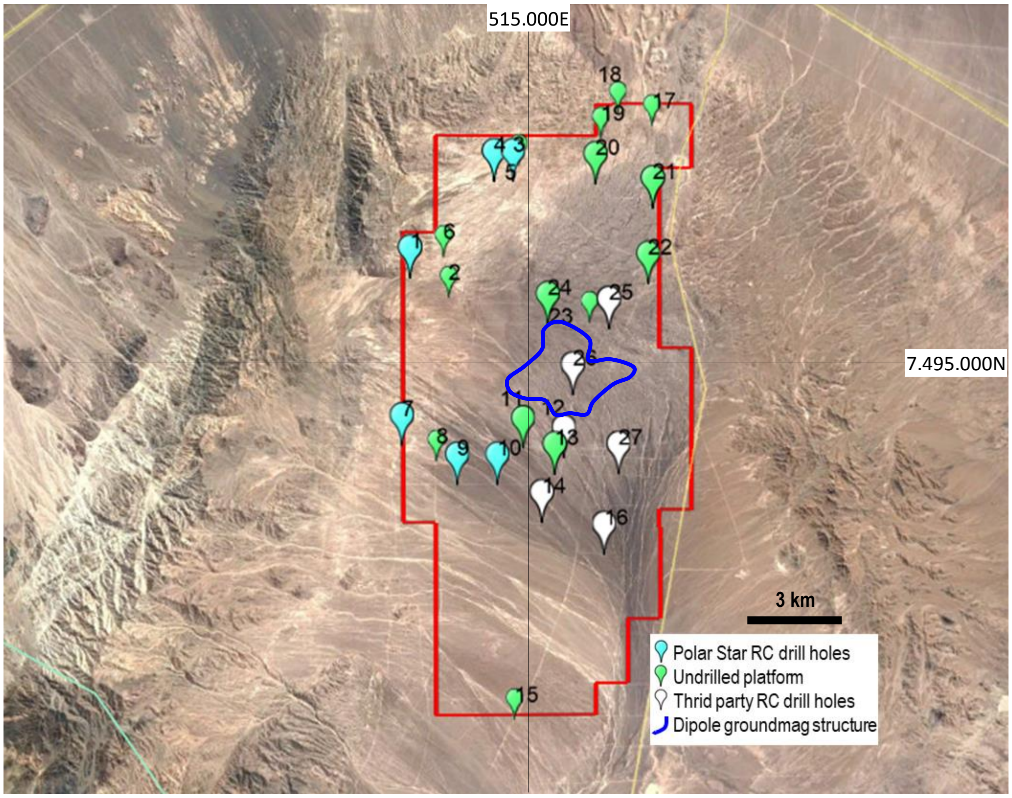


Figure 3. Existing drill holes at the Arrieros property

The geological setting at both regional and district levels, including lithology, magmatic history, mineral endowment with different deposit-types and mines in operation, all support the prospective nature of the Arrieros property. Although fault structures have not been clearly identified in the project area due to the preponderance of post-mineral cover, the project is clearly located in the zone of influence of the Domeyko fault zone, with key elements of this fault zone being present to the immediate west of Arrieros in particular.

At the local scale, Miocene-Holocene gravels cover most of the Arrieros property, so it is impossible to assess its exploration potential through direct observation of lithology, alteration, mineralization and structure. That analysis must be based on the best indirect tools available, such as geological models of known copper deposits around and geophysics at the site. The Arrieros ground magnetics (groundmag) data was obtained from two different surveys; the northwest portion of the property from a PSR 500m line-spaced ground magnetics survey contracted in 2009; and the southeast portion of the property from a more detailed 250m line-spaced ground magnetics survey contracted by Newmont in late 2016, which covers ~60-70% of the property. The latter survey was conventionally processed for the first time by Revelo and combined with re-processed data from the PSR survey, in order to attempt to eliminate problematic levelling between the two packages of data and maximize contrast from the rocks under the gravel cover. The result achieved by Revelo is considered valid (Figure 4), because it was obtained using a conventional ground magnetic data process and the result only highlights magnetic structures that are also present and in the same place when the data is processed as a whole. Also, the information from the southeast portion is better valued because the data has a higher capture density. The contours on AS represent areas of prospective interest initially identified by Revelo, which are described and discussed in the following paragraphs.

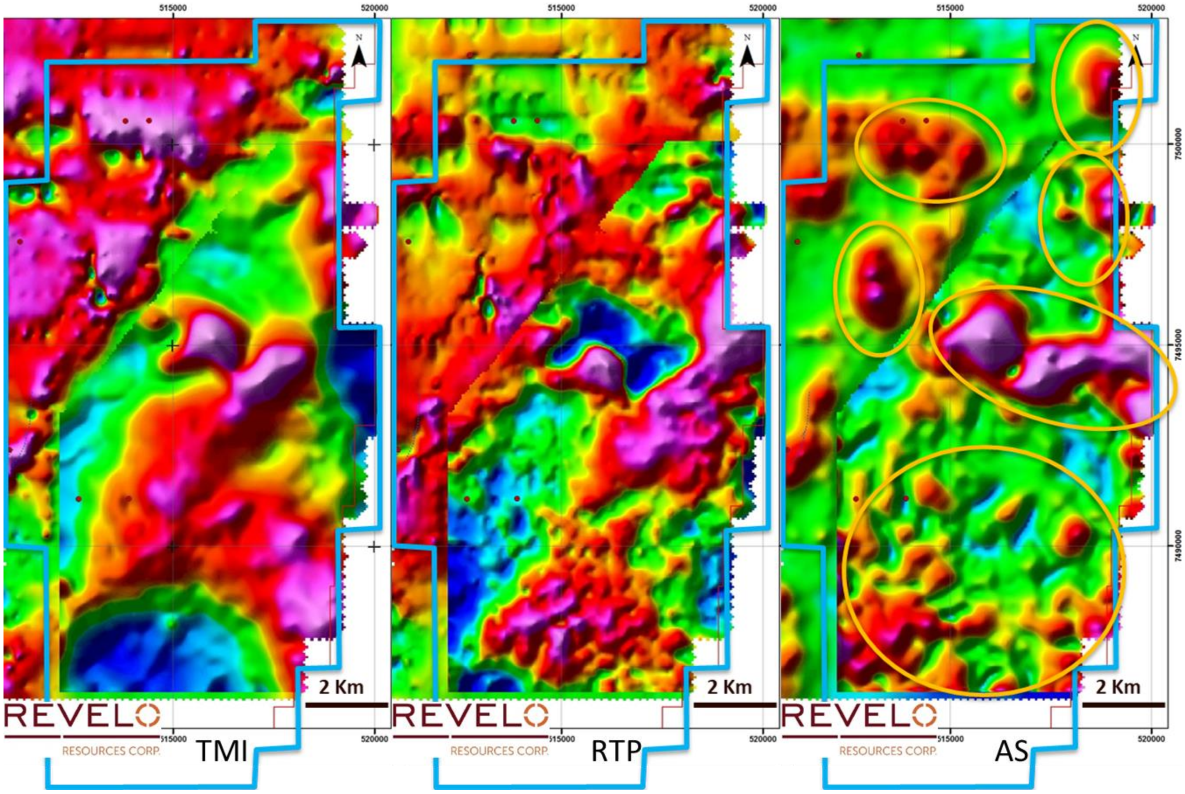


Figure 4. TMI, RTP and AS filters and initial targets from the groundmag at Arrieros project

The groundmag data processing suggests the predominance of northeast structures. The best defined is located in the central-northwest portion of the property, which continues southwest towards Target B in Revelo's Montezuma project. It appears to be related to a fault of the Centinela system, also cut by drill hole MODD59-11 and validated during the technical visit to the project site. Other northeast structures occur further to the southeast, possibly related to the El Llano and / or the Los Toros fault in the Centinela district. A north-south lineament at the southwest vertex of the property could correspond to a branch of the West Fissure fault mapped by Revelo at Target B at Montezuma. Along the eastern edge of the Arrieros pampa, north-south aligned magnetic highs have south continuity to faults that control outcrops of the Cerro Negro granodiorite (Upper Cretaceous?) and Paleocene-Eocene (?) andesitic, granitic and rhyolitic porphyries.

In the central part of the Arrieros property, a prominent Analytical Signal (AS), Reduction to Pole (RTP) and Total Magnetic Intensity (TMI) magnetic high is approximately centred on the coordinate 7.495.000N-516.000E (UTM-PSAD56), the causative body for which is totally obscured by post-mineral cover. It could correspond to a magmatic body with a subvertical to slightly south dip, according to the relative positions of the AS and RTP magnetic highs. It is connected to a generalized northeast oriented RTP high magnetic, possibly related to a dioritic to quartz monzo-dioritic batholitic intrusion (approximately 14 x 6-8 km). The AS process suggests that this intrusive maintains well-preserved magnetic properties in general, although better in the central part of Arrieros to a 6 x 2 km northwest corridor where the indicated center point is located. The RTP process shows that this magnetic structure, in contact with the northeast lineament of the Centinela fault, has the characteristics of a magnetic dipole with the low in the northeast position. Revelo has attributed this effect to remanence. Alternatively, this contrast can be due to strong magnetization of the host rocks during the intrusive process, that could explain remanence, or to severe loss of magnetism related to well-developed phyllic alteration at depth.

Revelo has defined other areas of interest along the northwest block of the Centinela northeast trending lineament, which should be evaluated in the field. The most striking is a subcircular AS high located at the northeast vertex of Arrieros, which is spatially related to copper occurrences in north-south carbonate veins, copper-gold-molybdenum contents in quartz-tourmaline structures, and a zone of potassic alteration identified by Newmont, all described previously. Tourmaline could be related to the periphery or shallowest hydrothermal level of a Middle Eocene Esperanza-type porphyry system. The AS high coincide with a RTP high, possibly due to the presence of a subvertical intrusive body.

The definition of magnetic highs as a priority objective immediately predisposes exploration in terms of an Esperanza-type geological model. This is a valid and realistic model according to the proximity of Arrieros to this mineral deposit, together with the presence of structures that have continuity between the Centinela district and Arrieros. Depending on the thickness of the gravel cover, a system exposed at a shallower hydrothermal level with predominant development of phyllic alteration might be expected.

A pending issue regarding magnetometry is obtaining a 3D susceptibility model, which should provide information on the depths and inclinations of the magnetic highs that appear as priority objectives at Arrieros. The data from the southeast sector has the required line spacing density to obtain a well-defined 3D model, including estimating the thickness of the gravel column over the central magnetic high and drawing the traces of the main faults that cross the project area. This type of model is more effective if used in combination with some electrical method. In the case of Arrieros, according to the characteristics of the terrain

(Picture 1), Natural Source Audio-frequency Magnetotellurics (NSAMT) may be the most appropriate. It can deliver a high-resolution resistivity image to significant depths depending on the resistivity of the terrain. A domain of high resistivity and high magnetic susceptibility, for example, could be associated with a magnetite-rich potassic core, while a high resistivity / low magnetic susceptibility could correspond to a potassic core without magnetite or a phyllic zone with disseminated sulphides.

The Arrieros magnetometry data base can also be used to generate certainty thresholds with the Geosoft Porphyry Filter module. If the Esperanza deposit type is the preferred model for exploration on the property, then this exercise can be of high prospective value. However, if the expected model is Chuquicamata, without a magnetite-rich potassic core, Geosoft can also be used to prepare porphyry models for such a case and replicate it at Arrieros.

Picture 1. General east view of the Arrieros project area

All the indicated activities are intended to delineate and categorize potential porphyry copper-related drilling targets, either new or as confirmation of those mentioned. This phase of work should include a first-pass of 6 -10 RC drill holes of 400-700 m in length to test the targets so defined. The potential targets must be carefully evaluated by experienced geo-scientists, with a thorough analysis and interpretation of the data available and the use of a rating matrix to minimize subjectivity. This Phase 1 of exploration at Arrieros, including Target Delineation and Drill Testing activities, is estimated to have an approximate cost of US$ 1.9 m and execution time of 6 months starting in the last quarter of current year.

A key decision point (KDP) is recommend for to run a follow-up Phase 2. The first phase should cut an indicative section about 50 m @ 0.1-0.2% Cu and or 0.01% Mo and or 0.1-0.2 g / t Au according to peripheral mineralization at Chuquicamata and Esperanza. Phase 2 includes 10,000 m drilling to an approximate cost of US $ 3.4 m and timeline Q2-Q4 2021.

2. INTRODUCTION

2.1. About this report

This technical report has been prepared for Fireswirl Technologies Inc., an entity that requires a document that contains both the review of relevant project information and complies with the reporting standard delineated in Canada National Instrument 43-101.

The author, Registered Member of the Chilean Mining Commission (Appendix 1), has been directly commissioned by West Pacific Ventures Corp. to prepare this document.

2.2. Terms of reference

In May 12, 2020, West Pacific Ventures Corp. (“West Pacific”) signed the terms to acquire eight copper projects, including Arrieros, owned by Revelo Resources Corp. (“Revelo”) through a Chilean subsidiaries in Chile. Fireswirl Technologies Inc. (“Fireswirl”) entered into a binding letter of intent dated June 12, 2020, pursuant to which is proposing to acquire 100% of the outstanding shares of West Pacific in consideration for own shares. The report will be using for the Canadian Securities Exchange (“CSE”) listing application.

All length measurements in this report are in metric units and refer to the meter unit expressed as m. All currency quoted correspond to US dollars. Likewise, most of the location data refers to UTM coordinates of the PSAD56 geodetic system, widely used in the cartography of Chile and still in force. Some of regional data are located specifically in geographic coordinates, and some more recent data are located in UTM datum WGS84. All these abbreviations, along with others used in this document, are contained in Table 1.

This report is formatted in Canadian English and letter-size pages from a valid copy of Word from Microsoft 365. The pdf version is obtained with a tool included in that same software.

2.3. Source of the information and data

The main information contained in this report has been provided directly to the author by Revelo, by digital and remote means, at the request of West Pacific and pursuant to the terms of a Binding Letter of Intent (“LOI) recently signed by both companies.

Other information included in this NI 43-101 technical report has been obtained directly from public material, such as news released by mining companies that have activity in the region including Antofagasta Minerals (AMSA), Revelo, Solaris Resources, CODELCO and Minera Freeport-McMoRan South America Limitada. The websites of these companies were visited to understand the advancement of exploration projects in the vicinity of Arrieros.

Public information has also been consulted on the websites of state entities, such as the SERNAGEOMIN Online Cadastre and the Academic Repository of the University of Chile.

Finally, a series of articles by Economic Geology, Mineralium Deposita and others, included in the reference chapter of this report, have also been consulted.

Table 1. Table of abbreviations included in this NI 43-101 Technical Report

°	Degrees Celsius (superscripted)	MMH or MH	Ministro Hales Mine (Chuquicamata district)
°	Degrees in geographic coordinates	Mt	Millions of tons (metric)
‘	Minutes in geographic coordinates	N	North
“	Seconds in geographic coordinates	Na	Sodium
%	Percent	NE	Northeast
Ar	Argon	NW	Northwest
As	Arsenic	nT	Nanotesta (magnetism)
AS	Analytical Signal (magnetics)	Os	Osmium
Au	Gold	Pb	Lead
Bi	Bismuth	ppb	Parts per billlion
BHP	Company BHP Billiton	ppm	Parts per million
Ca	Calcium	PSAD56	Provisional South America Datum 56
Cd	Cadmium	QaQc	Quality assurance/Quality control
cm	Centimeters	RC	Reverse Circulation (drilling)
CODELCO	Corporación del Cobre de Chile	Re	Rhenium
Cu	Copper	RTP	Reduction To Pole (magnetics)
DTH	Down The Hole (drilling)	S	South
DDH	Diamond Drill Hole (drilling)	S°	Sulfur
E	East	SE	Southeast
Fe	Iron	SERNAGEOMIN	Servicio Nacional de Geología y Minería
ha	Hectare (metric unit)	SW	Southwest
ICP	Inductively Couple Plasma (assay)	TMI	Total Magnetic Intensity (magnetics)
FA	Fire Assay (assay)	U	Uranium
K	Potassium	US$	United States dollars (monetary)
km	Kilometers	UTM	Universal Transverse Mercator (coordinates)
m	Meters	W	West
Ma	Millions of years	WGS84	World Geodetic System 1984 (coordinates)
Mo	Molybdenum	Zn	Zinc

2.4. Inspection of the property

After reviewing the project information, the Arrieros project was visited on June 26-28 / 2020 together with a field assistant from Revelo. During this visit, the author had the opportunity to inspect the exploration area, verify on site the existence of drill holes, IP geophysical lines and geochemical samples.

Minor differences encountered in the positions of some of the identified exploration sites, possibly due to different error ranges of the current GPS instruments with those of 10 years ago when these exploration studies were performed.

Geological maps and reports of the exploration area were included during the field inspection, so there was an opportunity to verify the main lithology and alteration units of the project as well as understand its geological setting. The Arrieros project area is dominated by young gravel (Miocene and younger) and caliche deposits that obscure the underlying geology over much of the project area. District and regional lineaments, including small scarps affecting modern gravels, related to the West Fissure Fault Zone and other structures, were observed. Lithologies are dominated by Paleozoic volcanic and intrusive rocks, the main host rock of the mineralized porphyry intrusions in the region according to the existing scientific literature. It is estimated that future work should place greater emphasis on hydrothermal alteration associations, with the aim of vectorizing the best opportunities of the project and supporting geophysical interpretations. Porphyry Copper models by Corbett & Leach (1998) and Sillitoe (2010), are useful in defining principal vectors in the search for certain geological and geochemical distribution patterns.

During the site visit, it was possible to verify the existence of third-party drill holes in the Arrieros property area, which had been previously identified by Revelo. Several of these drill holes did not reached bedrock and consequently those areas remain as an open opportunity to generate additional information. An innovative plan must be devised to use the drill hole cuttings, where available, and drill holes themselves, such as the use of geochemistry on specific minerals and deep penetrating geophysics in order to vectorize towards mineralized alteration zones.

Revelo maintains storage facility in the town of Calama, 25 km north-northwest of the project, where the reverse circulation drill cuttings from Arrieros, together with reverse circulation cuttings and diamond drill core from the neighbouring Montezuma project area (owned by Revelo), all drilled by Revelo's predecessor, Polar Star Mining Corporation (“Polar Star”), in the project area, remain in an acceptable state of protection and maintenance.

All the reverse circulation drill hole cuttings historically completed by Polar Star indicated on the maps of the project area have been preserved in the Calama storage facility. The inspection of a total of 1,215.85 m in 1 DDH and five RC drillings, showed that most of them did not reach the bedrock under gravel cover. These drillings were generally sampled every 2 m, although chemical tests were not carried out by Polar Star due to the prevalence of modern gravel cover. In view of the lack of data, it is impossible to verify the applicability of simple porphyry copper vectorization exercises using different geochemical elements.

3. RELIANCE ON OTHER EXPERTS

Most of the information and data contained in this NI 43-101 technical report were generated by Polar Star from 2007 (consolidation of the property in the Montezuma- Arrieros area) to the end of 2014 when Polar Star was amalgamated with Iron Creek Capital Corporation (“Iron Creek”), with the newly merged companies being renamed Revelo Resources Corporation. From the beginning of 2014 to the beginning of 2017, the area was explored by Minera Newmont (Chile) Limitada (“Newmont”) as part of a “Venture” agreement signed with Polar Star and filed on January 20, 2014 (PSR, 2014; RVL. 2014b).

Revelo had access to both the Polar Star and Newmont project information after the agreement with Newmont ended. Revelo management and geological staff have been consulted on information and data that they only know indirectly, not having been directly involved in either the Polar Star or Newmont exploration campaigns. The author of this report did not have access to professionals from either Polar Star or Newmont, and consequently it is impossible to directly know the technical reasons and objectives for the locations, methods and interpretations of geological studies, geochemical sampling, geophysical surveys and drilling campaigns in the Arrieros project area. This has resulted in a series of logically derived interpretations and assumptions by Revelo’s management and geological staff and this author, which apply in chapters 8 to 12 of this report.

Carolina Arias is the lawyer for Revelo in Santiago and an expert in Mining Law and mineral concession management, and who is responsible for the maintenance of all the exploration and exploitation concessions of Revelo, including those subject to the terms of acquisition between Revelo and West Pacific. In Chile, mineral concessions, whether exploration or exploitation, are governed by the Political Constitution of the Republic, the Organic Constitutional Law on Mining Concessions (No. 18,097), the Mining Code and its Regulations, and other civil provisions in force that do not contravene the provisions previously indicated. Carolina Arias has been consulted about the legal validity and general condition of the mineral concessions of the Arrieros project, which applies in chapters 4 and 12 of this technical report. She has provided figures and written concepts and comments.

4. PROPERTY DESCRIPTION AND LOCATION

4.1. Property units

According to news released by Revelo (RVL., 2019), the Arrieros project mineral concessions cover an area of approximately 14,000 ha, which is contained within a north-south oriented rectangle about 18 km long (N-S) by 8 km wide (E-W) (Figure 5). Within the concessions block, there are a series of 1 x 3 km and 1 x 2 km north-south and east-west oriented mining concessions described later. In terms of equivalence, 1 ha is equal to 10,000 m^2 (100 x 100 m) or 0.01 km^2 (0.1 x 0.1 km).

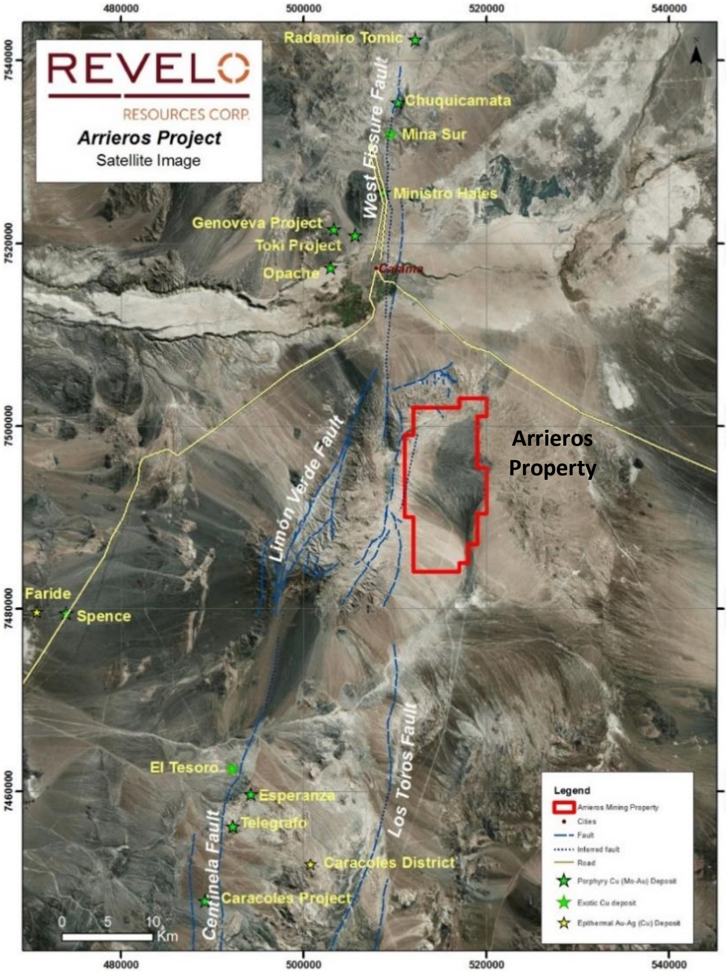


Figure 5. Outlines of mining property of Arrieros (red) project

4.2. Property location

The approximate central point of the Arrieros property block is located about 25 km in a straight line to the south-southeast of the city of Calama, entirely within El Loa province according to the political division of the country (Figure 6). El Loa, together with the provinces of Tocopilla to the west and Antofagasta to the southwest, are part of the Antofagasta region of the north of the country, situated about 1150 km north of Chile´s capital Santiago.

Figure 6. Location of Arrieros (red), political division (green) and main roads (yellow)

4.3. Type and name of mineral tenure

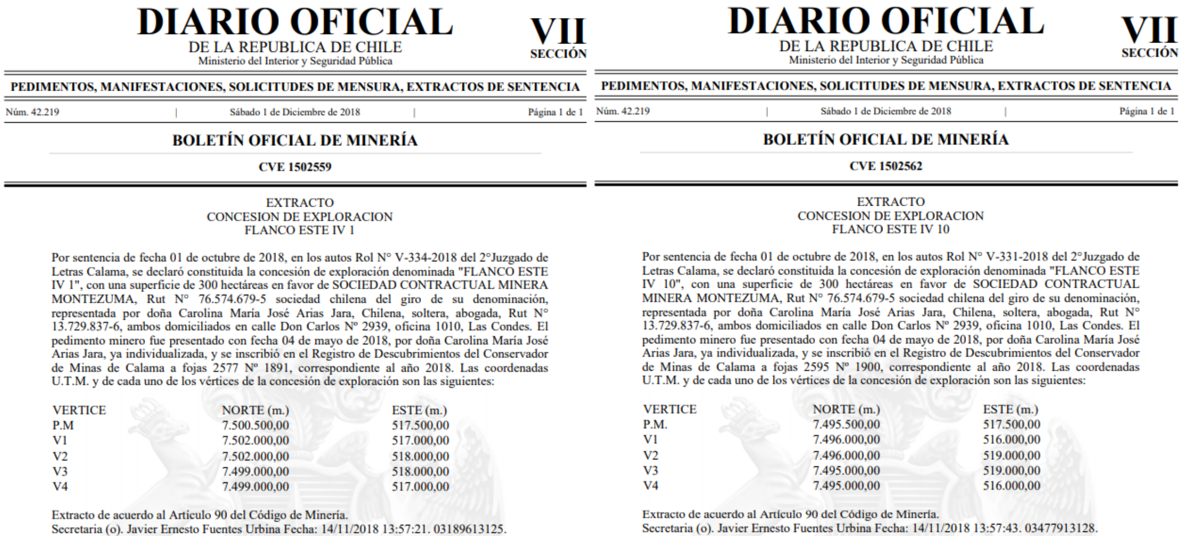
The Arrieros mining property block is made up of a series of 1 x 3, 1 x 2 and 1 x 1 km exploitation (mining rights or “pertenencias”) and exploration (“pedimentos”) concessions oriented east-west and north-south (Figure 7). The first are mainly located in the northern part of the block and are distributed in eight 1 x 3 km concessions that cover an area of 24 km^2 or 2,400 ha. From north to south and west to east, these rights are named Topater 6 to 10 (1-30), Topater 13-14 (1-30) and Montezuma 27 (1-30), constituted in the name of Sociedad Contractual Minera Montezuma according to the SERNAGEOMIN online 1983 Code cadastre. The Rol (role) number of each one is indicated in Figure 8, and additional information is included in Table 2.

Table 2. Exploitation concession of the Arrieros property

ROL No.	Name	ID (RUT) Holder No.	Divisions	Holder	Status	Folios	Inscription No.	Year	City	Type
02301-3862-1	Topater 6 1/30	076574679-5	0	SCM Montezuma	Constituted	514	139	2016	Calama	Property
02301-3863-K	Topater 7 1/30	076574679-5	0	SCM Montezuma	Constituted	515	140	2016	Calama	Property
02301-3864-8	Topater 8 1/30	076574679-5	0	SCM Montezuma	Constituted	516	141	2016	Calama	Property
02301-3865-6	Topater 9 1/30	076574679-5	0	SCM Montezuma	Constituted	517	142	2016	Calama	Property
02301-3866-4	Topater 10 1/30	076574679-5	0	SCM Montezuma	Constituted	518	143	2016	Calama	Property
02301-3867-2	Topater 13 1/30	076574679-5	0	SCM Montezuma	Constituted	519	144	2016	Calama	Property
02301-3868-0	Topater 14 1/30	076574679-5	0	SCM Montezuma	Constituted	520	145	2016	Calama	Property
02301-3822-2	Montezuma 27 1/30	076574679-5	0	SCM Montezuma	Constituted	492	117	2016	Calama	Property

Exploration rights are made up of 35 concessions of 3 x 1 km, or 10,500 ha, 5 of 2 x 1 km, or 1,000 ha, and one of 1 x 1 km, or 100 ha, totalling 11,600 ha. The name of the properties, listed from north to south and west to east, correspond to Montezuma V 10, Flanco Este IV 1-2, Lima II 3, Montezuma V 15-16, Flanco Este IV 3-6, Montezuma V 21-22, Flanco Este IV 7-14, Flanco Este IV 15-22, Flanco Este IV 24-30, Flanco Este IV 33-38,), constituted in the name of Sociedad Contractual Minera Montezuma (”SCM Montezuma”) according to the SERNAGEOMIN online 1983 Code cadastre. The Rol (role) number of each one is indicated at Figure 9, and additional information is included in Table 3.

Pictures 2 and 3 below are copies of the extracts of the constitution of Flanco Este IV 1 and Flanco Este IV 10 exploration concessions of SCM Montezuma as presented by Carolina Arias for Revelo’s Chilean subsidiary. See https://www.boletinoficialdemineria.cl/?date=01-12-2018&edition=42219&subseccion=7103.



DIARIO OFICIAL
DE LA REPUBLICA DE CHILE
Ministerio del Interior y Seguridad Pública
VII
SECCIÓN

PEDIMENTOS, MANIFESTACIONES, SOLICITUDES DE MENSURA, EXTRACTOS DE SENTENCIA

Núm. 42.219 | Sábado 1 de Diciembre de 2018 | Página 1 de 1

BOLETÍN OFICIAL DE MINERÍA

CVE 1502559

EXTRACTO
CONCESION DE EXPLORACION
FLANCO ESTE IV 1

Por sentencia de fecha 01 de octubre de 2018, en los autos Rol N° V-334-2018 del 2°Juzgado de Letras Calama, se declaró constituida la concesión de exploración denominada "FLANCO ESTE IV 1", con una superficie de 300 hectáreas en favor de SOCIEDAD CONTRACTUAL MINERA MONTEZUMA, Rut N° 76.574.679-5 sociedad chilena del giro de su denominación, representada por doña Carolina María José Arias Jara, Chilena, soltera, abogada, Rut N° 13.729.837-6, ambos domiciliados en calle Don Carlos Nº 2939, oficina 1010, Las Condes. El pedimento minero fue presentado con fecha 04 de mayo de 2018, por doña Carolina María José Arias Jara, ya individualizada, y se inscribió en el Registro de Descubrimientos del Conservador de Minas de Calama a fojas 2577 Nº 1891, correspondiente al año 2018. Las coordenadas U.T.M. y de cada uno de los vértices de la concesión de exploración son las siguientes:

VERTICE	NORTE (m.)	ESTE (m.)
P.M	7.500.500,00	517.500,00
V1	7.502.000,00	517.000,00
V2	7.502.000,00	518.000,00
V3	7.499.000,00	518.000,00
V4	7.499.000,00	517.000,00

Extracto de acuerdo al Artículo 90 del Código de Minería.
Secretaria (o). Javier Ernesto Fuentes Urbina Fecha: 14/11/2018 13:57:21. 03189613125.

DIARIO OFICIAL
DE LA REPUBLICA DE CHILE
Ministerio del Interior y Seguridad Pública
VII
SECCIÓN

PEDIMENTOS, MANIFESTACIONES, SOLICITUDES DE MENSURA, EXTRACTOS DE SENTENCIA

Núm. 42.219 | Sábado 1 de Diciembre de 2018 | Página 1 de 1

BOLETÍN OFICIAL DE MINERÍA

CVE 1502562

EXTRACTO
CONCESION DE EXPLORACION
FLANCO ESTE IV 10

Por sentencia de fecha 01 de octubre de 2018, en los autos Rol N° V-331-2018 del 2°Juzgado de Letras Calama, se declaró constituida la concesión de exploración denominada "FLANCO ESTE IV 10", con una superficie de 300 hectáreas en favor de SOCIEDAD CONTRACTUAL MINERA MONTEZUMA, Rut N° 76.574.679-5 sociedad chilena del giro de su denominación, representada por doña Carolina María José Arias Jara, Chilena, soltera, abogada, Rut N° 13.729.837-6, ambos domiciliados en calle Don Carlos Nº 2939, oficina 1010, Las Condes. El pedimento minero fue presentado con fecha 04 de mayo de 2018, por doña Carolina María José Arias Jara, ya individualizada, y se inscribió en el Registro de Descubrimientos del Conservador de Minas de Calama a fojas 2595 Nº 1900, correspondiente al año 2018. Las coordenadas U.T.M. y de cada uno de los vértices de la concesión de exploración son las siguientes:

VERTICE	NORTE (m.)	ESTE (m.)
P.M.	7.495.500,00	517.500,00
V1	7.496.000,00	516.000,00
V2	7.496.000,00	519.000,00
V3	7.495.000,00	519.000,00
V4	7.495.000,00	516.000,00

Extracto de acuerdo al Artículo 90 del Código de Minería.
Secretaria (o). Javier Ernesto Fuentes Urbina Fecha: 14/11/2018 13:57:43. 03477913128.

Pictures 2 & 3. Extracts on the constitution of exploration concessions to SCM Montezuma

4.4. Surface rights, legal access, obligations and expirations

Exploration and exploitation concessions give certain mineral rights to the sub-surface of the land to the holder of the relevant concession. Surface rights at Arrieros have not been investigated or registered by Revelo or the companies in the acquisition agreement regarding the Arrieros property.

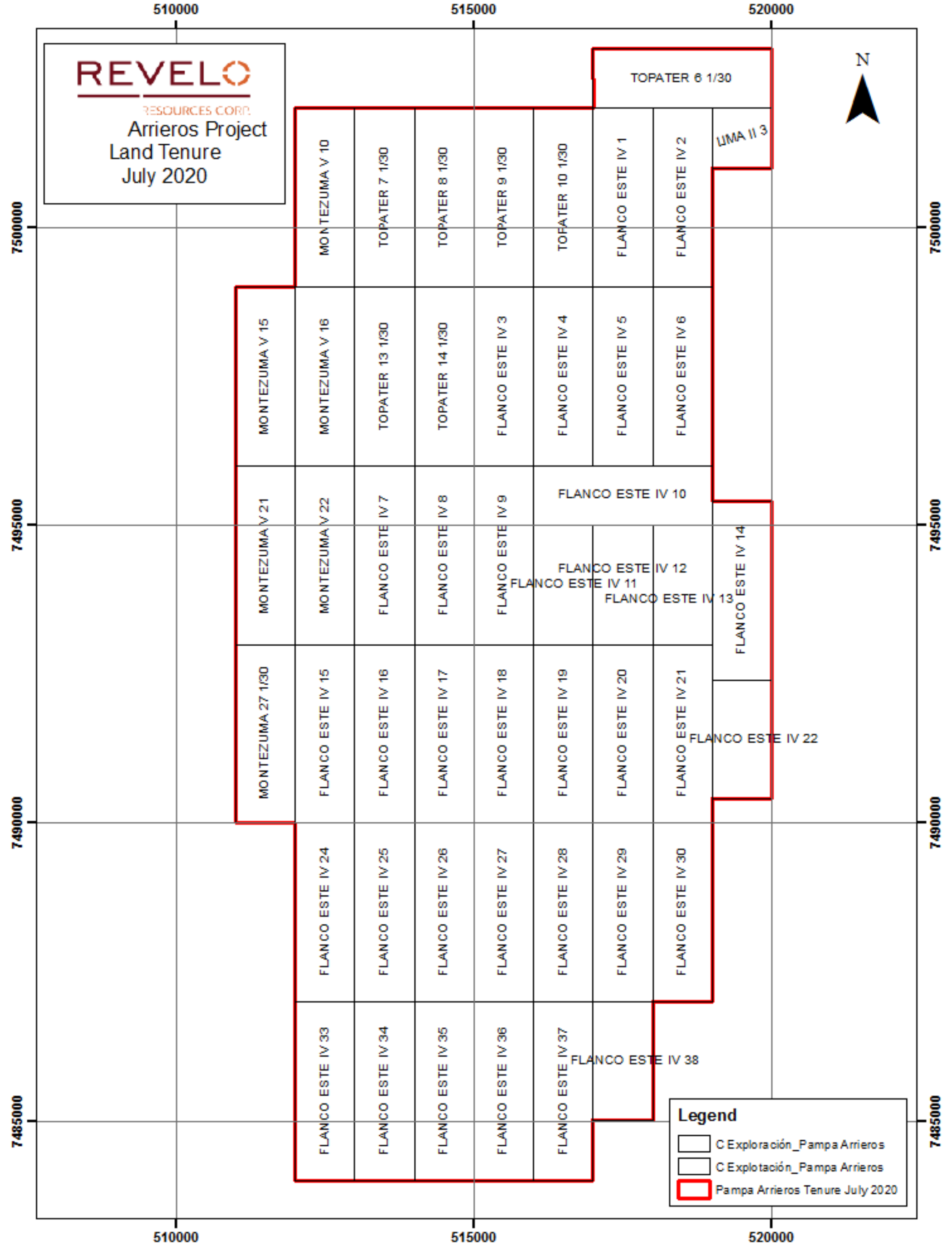


Figure 7. Mining concessions of the Arrieros property

Exploration works developed by Polar Star, Newmont and Revelo, have not required surface permits or third-party payments to date, according to Revelo's management. Similarly, third parties have not requested access rights or payments and no evidence of difficulties with local communities has been found.

To the north (Calama) and south (Sierra Gorda Este) of the project, there are wind farms of electric generation controlled respectively by Engie Energia Chile SA and ENEL. Access to the project by access roads within the surface controlled by these wind farms, requires the obtention of traffic permits due to the existence of control posts. No other movement limitation has been identified, and the project is easily accessed from the north.

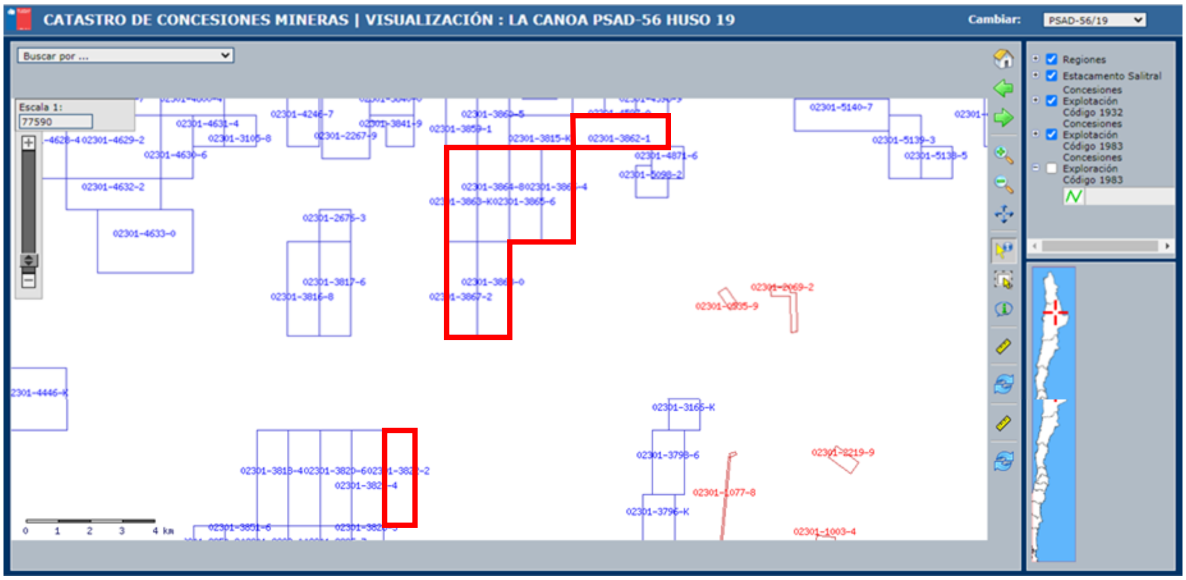


Figure 8. Exploitation concessions of the Arrieros property (SERNAGEOMIN)

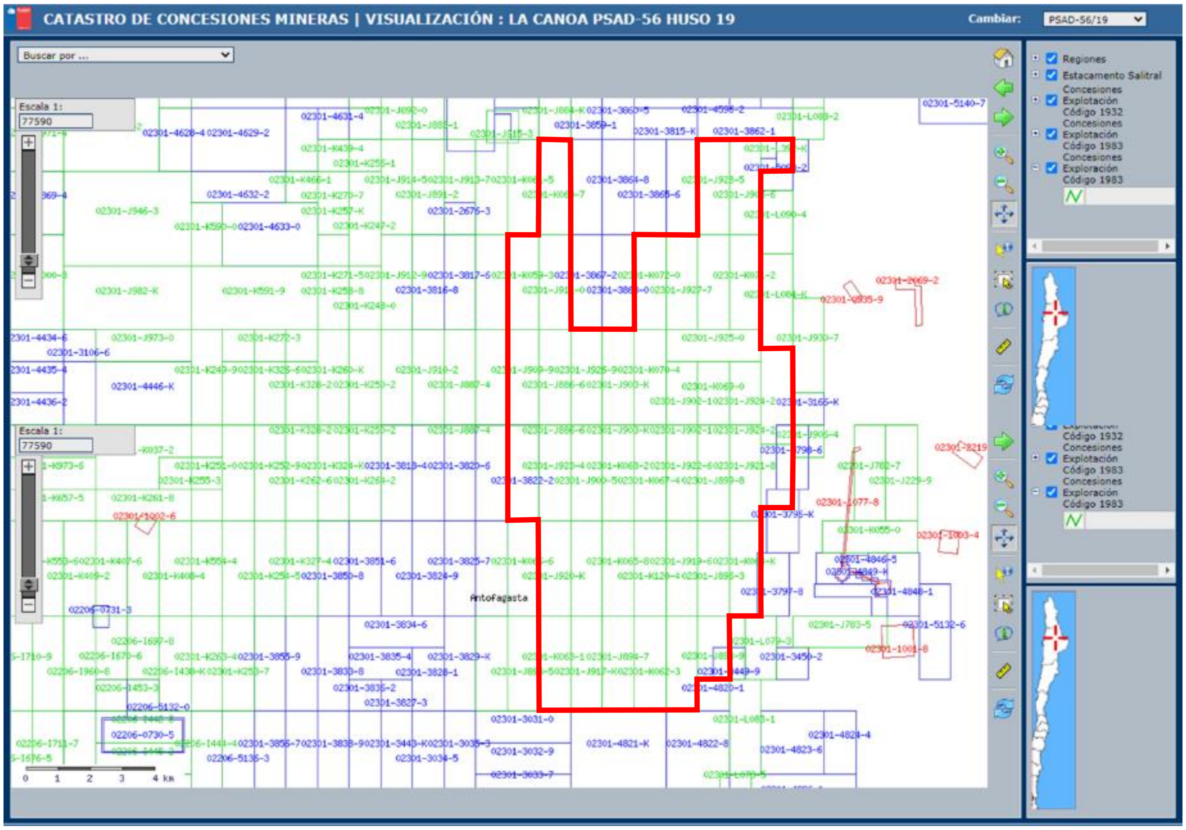


Figure 9. Exploration concessions of the Arrieros property (SERNAGEOMIN)

Table 3. Exploration concessions of the Arrieros property

ROL No.	Name	Holder ID (RUT) No.	Hectares	Divisions	Holder	Status
02301-K060-7	Montezuma V 10	076574679-5	300	0	SCM Montezuma	Constituted
02301-J928-5	Flanco Este IV 1	076574679-5	300	0	SCM Montezuma	Constituted
02301-J905-6	Flanco Este IV 2	076574679-5	300	0	SCM Montezuma	Constituted
02301-L392-K	Lima II 3	076574679-5	100	0	SCM Montezuma	Constituted
02301-K059-3	Montezuma V 15	076574679-5	300	0	SCM Montezuma	Constituted
02301-J911-0	Montezuma V 16	076574679-5	300	0	SCM Montezuma	Constituted
02301-K072-0	Flanco Este IV 3	076574679-5	300	0	SCM Montezuma	Constituted
02301-J927-7	Flanco Este IV 4	076574679-5	300	0	SCM Montezuma	Constituted
02301-J904-8	Flanco Este IV 5	076574679-5	300	0	SCM Montezuma	Constituted
02301-K071-2	Flanco Este IV 6	076574679-5	300	0	SCM Montezuma	Constituted
02301-J909-9	Montezuma V 21	076574679-5	300	0	SCM Montezuma	Constituted
02301-J886-6	Montezuma V 22	076574679-5	300	0	SCM Montezuma	Constituted
02301-J926-9	Flanco Este IV 7	076574679-5	300	0	SCM Montezuma	Constituted
02301-J903-K	Flanco Este IV 8	076574679-5	300	0	SCM Montezuma	Constituted
02301-K070-4	Flanco Este IV 9	076574679-5	300	0	SCM Montezuma	Constituted
02301-J925-0	Flanco Este IV 10	076574679-5	300	0	SCM Montezuma	Constituted
02301-J902-1	Flanco Este IV 11	076574679-5	200	0	SCM Montezuma	Constituted
02301-K069-0	Flanco Este IV 12	076574679-5	200	0	SCM Montezuma	Constituted
02301-J924-2	Flanco Este IV 13	076574679-5	200	0	SCM Montezuma	Constituted
02301-J901-3	Flanco Este IV 14	076574679-5	300	0	SCM Montezuma	Constituted
02301-J923-4	Flanco Este IV 15	076574679-5	300	0	SCM Montezuma	Constituted
02301-J900-5	Flanco Este IV 16	076574679-5	300	0	SCM Montezuma	Constituted
02301-K068-2	Flanco Este IV 17	076574679-5	300	0	SCM Montezuma	Constituted
02301-K067-4	Flanco Este IV 18	076574679-5	300	0	SCM Montezuma	Constituted
02301-J922-6	Flanco Este IV 19	076574679-5	300	0	SCM Montezuma	Constituted
02301-J899-8	Flanco Este IV 20	076574679-5	300	0	SCM Montezuma	Constituted
02301-J921-8	Flanco Este IV 21	076574679-5	300	0	SCM Montezuma	Constituted
02301-J898-K	Flanco Este IV 22	076574679-5	200	0	SCM Montezuma	Constituted
02301-J920-K	Flanco Este IV 24	076574679-5	300	0	SCM Montezuma	Constituted
02301-J897-1	Flanco Este IV 25	076574679-5	300	0	SCM Montezuma	Constituted
02301-K065-8	Flanco Este IV 26	076574679-5	300	0	SCM Montezuma	Constituted
02301-K120-4	Flanco Este IV 27	076574679-5	300	0	SCM Montezuma	Constituted
02301-J919-6	Flanco Este IV 28	076574679-5	300	0	SCM Montezuma	Constituted
02301-J896-3	Flanco Este IV 29	076574679-5	300	0	SCM Montezuma	Constituted
02301-K064-K	Flanco Este IV 30	076574679-5	300	0	SCM Montezuma	Constituted
02301-K063-1	Flanco Este IV 33	076574679-5	300	0	SCM Montezuma	Constituted
02301-J917-K	Flanco Este IV 34	076574679-5	300	0	SCM Montezuma	Constituted
02301-J894-7	Flanco Este IV 35	076574679-5	300	0	SCM Montezuma	Constituted
02301-K062-3	Flanco Este IV 36	076574679-5	300	0	SCM Montezuma	Constituted
02301-J916-1	Flanco Este IV 37	076574679-5	300	0	SCM Montezuma	Constituted
02301-J893-9	Flanco Este IV 38	076574679-5	200	0	SCM Montezuma	Constituted

Exploration and exploitation concessions have associated procedures, deadlines and payments, which must be met and regularly managed to keep the mining property of the project in good standing. One of these is the annual ”patentes” (patents) payment, which must be made in advance in March of each year. Exploration concessions are valid for 2 years from the date of their constitution, after which they can be extended, reapply for the same protecting a preference or converted into exploitation concessions. Different situations can be found, especially regarding the presence of third-party properties. For this reason, many companies maintain an expert person, such as Carolina Arias in the case of Revelo, specifically in charge of the company's mineral concessions.

The review of the Arrieros mining property in the SERNAGEOMIN online cadastre, indicates that they are constituted and there are no pending procedures. The cadastre indicates the exploitation concessions include information on folios, registration number and date, for which it is estimated that all the procedures have been completed to keep them in good standing. Physically, the existence of the patent payments for the year 2020-2021 is verified.

4.5. Agreements and encumbrances

The mining concessions of Arrieros are subject to the terms of a Binding Letter of Intent signed between Revelo Resources Corp. (the owner) and West Pacific Ventures Corp. (or VWP the acquirer). According to a news released by Revelo on May 19, 2020 (RVL, 2020), the “LOI” “*will allow WPV to acquire 100% interest in eight of Revelo’s copper-focused projects in northern Chile*”. The news also indicates that “*Revelo will receive new shares of WPV that in turn will be exchanged for shares of a public company shell ("PubCo"). The transaction will result in a Reverse Take-Over ("RTO") of Pubco, with the resulting company seeking to concurrently list on the Canadian Securities Exchange ("CSE") after having raised a minimum of $4 million. Revelo will on closing of the RTO hold 19.9% of the issued and outstanding shares of PubCo*”. In June 15, 2020, Fireswirl Technologies Inc. announced the proposal to acquire 100% of the outstanding shares of West Pacific (FSW, 2020).

Between 2014 and 2017, as indicated above, the Montezuma copper project, including the Arrieros property, was explored by Minera Newmont (Chile) Ltda. (“Newmont”). Revelo announced in a news released on March 3, 2017 (RVL, 2017), that Newmont “*has elected to withdraw from the Montezuma copper project (“Montezuma”) in northern Chile and return its earned interest to Revelo in exchange for a perpetual 1% NSR Royalty interest in the project. As a result of signing definitive documentation to this effect, Revelo, consequently, owns 100% of the Montezuma project”*. This royalty interest was sold to Maverix.

Montezuma was initially staked as two main groups of concessions (Montezuma and Topater) controlled by Minera Polar Mining Chile Limitada and later by Minera Serena Limitada, both subsidiary companies controlled by Polar Star. Revelo acquired its interest in the Montezuma concessions (including Arrieros) pursuant to a merger agreement between Polar Star and Iron Creek Capital Corp. (“Iron Creek”) executed on December 10, 2014. The merged company was renamed Revelo Resources Corporation (RVL, 2014b). No references regarding royalties, back-in rights, payments, or other agreements and encumbrances have been found related to this merger. No references have been found regarding rights associated with the acquisition of properties by Polar Star (PSR, 2008). In

March 2020, Revelo closed the sale of 20 generative NSR royalty interest on exploration properties in Chile, between them the 1% of Arrieros to EMX Royalty Corp. (RVL., 2020a).

4.6. Environmental liabilities

No evidence of environmental liabilities associated with exploration works from Revelo and predecessors, was found in the Arrieros properties area during the site survey.

4.7. Permits

The most advanced exploration activities, including a drilling campaign that exceeds 40 drilling platforms and their respective drill holes, must be submitted to the Environmental Assessment System in accordance with environmental regulations, specifically contained in Law 19,300 on General Bases of the Environment and DS Nº 40, of 2012. The start of exploration activities that involve some continuity, must be reported to SERNAGEOMIN through an Exploration Program standard form, of which a copy is included in Appendix 2 as well as the link where it can be obtained. Contractors are subject to sector permits.

4.8. Significant factors and risks

Arrieros is located in a region of abundant mining tradition, with at least eight large porphyry copper-molybdenum and copper-gold deposits within a radius of 35-80 km. These includes the Chuquicamata-RT-MH cluster (CODELCO), Esperanza (Antofagasta Minerals), Spence (BHP Billiton), Sierra Gorda (KGHM), El Abra (Freeport McMoRan-Codelco) and Gabriela Mistral (CODELCO). As a consequence of that, the nearby town of Calama has been developing as an important mining infrastructure centre where it is possible to find good basic services, specialized labour and light and heavy mining equipment.

The above mentioned deposits operate at different mineral grades and operating lives, from Sierra Gorda describing itself as a pioneer in low-grade mining (Sierra Gorda, 2018) to Chuquicamata with higher copper contents and estimated useful life measured in several decades (CODELCO, 2018), after mining has been carried out for around 100 years. This is probably a good indicator that any new discovery in the Arrieros property has a good chance of being developed.

In addition to CODELCO, several large copper companies operate in Chile such as BHP, Vale, Freeport, Anglo American, Rio Tinto and Teck, among others, which are constantly looking for acquisition opportunities. Any announcement in the area may awaken the attention of these companies and Arrieros might be subject of interest in case of discovery.

Exploration expenses and others that may be required to advance the Arrieros project, are subject to monetary exchange factors between different currencies including Chilean pesos (CL $), United States dollars (US $) and Canadian dollars (CA $), due to the fact that the companies involved operate internationally. This exposure could affect costs with certain losses or gains. The Chilean Peso has lost position with respect to the US dollar, a situation that could be reversed with the end of the pandemic.

Mining operations, as well as other operation and normal life for people who live in the region, are sometimes affected by summer rains associated with the so-called "altiplano winter". The rains can, on occasions, be so severe that they can cut roads and interrupt basic services. Despite this, it is normally possible to carry out mining and exploration activities uninterrupted throughout the year.

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1. Topography, elevation and vegetation

Arrieros is located in the commune of Calama, one of the three that makes up the Antofagasta region in northern Chile. It is located in a north-south to northeast mountain chain that constitutes the geographic feature called the Chilean Precordillera (Figure 10), also known as Cordillera de Domeyko (or Domeyko mountain range). The Precordillera, next to the Coastal Cliff, the Coastal Range, the Intermediate Basin (or depression), the pre-Andean Plain, the pre-Andean Basin, the Salt-pan Basin and the Main Range (Andes mountain range), are the main physiographic features of the Antofagasta region.

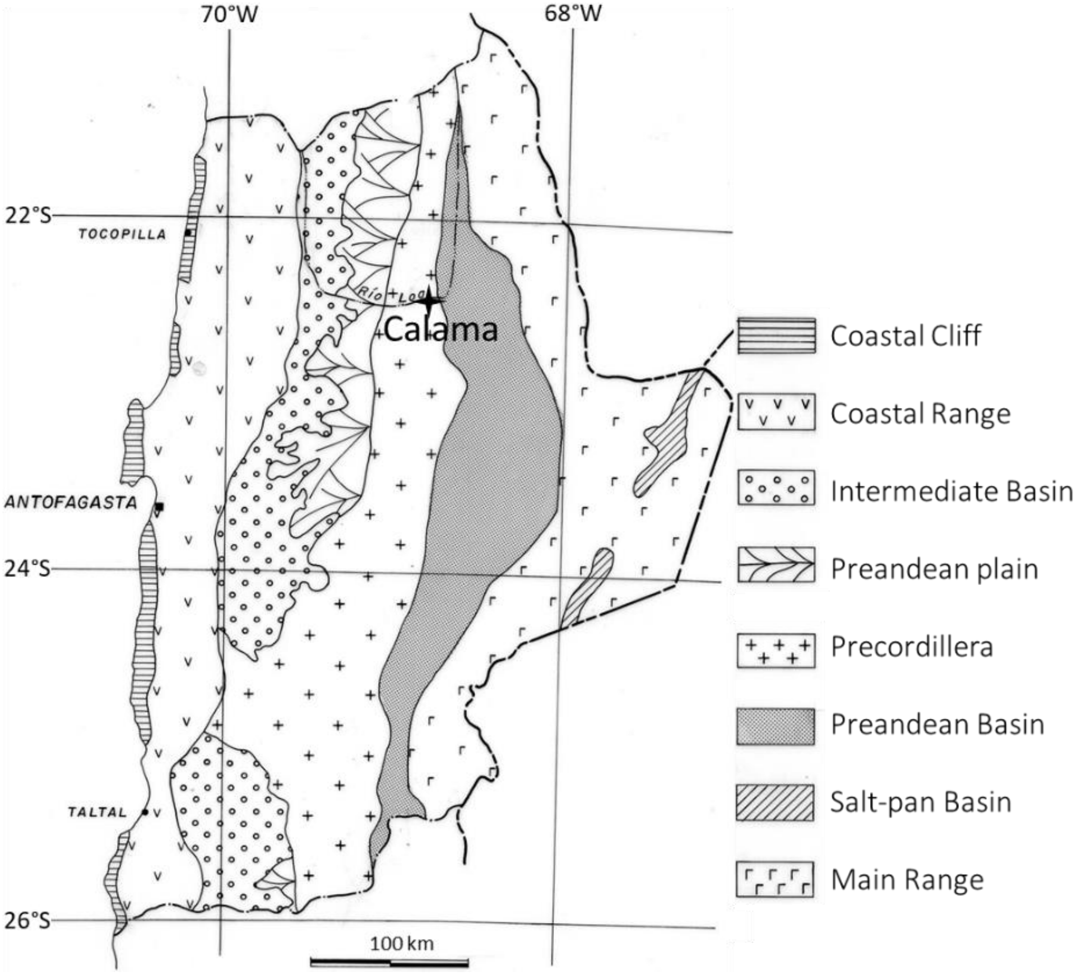


Figure 10. Main geographic units in the Antofagasta region (after Börgel, 1983)

About 25 km southeast of the city of Calama, the property is found in the 1:50,000 scale Montezuma 2230-6845 topographic chart No. 1519, according to the registration of the Military Geographical Institute (IGM) of 1972. This chart shows that the area has a smooth topography, basically plain, sloping lightly to the south, with a maximum elevation of 2,869 m at the northwest vertex and a minimum of 2,600 m at the extreme south. The most important topographical feature is the so-called Llano Quenante, which occupies the entire central-southern portion of the property. Small island hills and escarpments related to erosion and faults can be observed, so this plain is probably affected by neo-tectonism. Sedimentation evidence suggests that the area has been recently affected by runoff.

The drainage network of the area is of low density, with dry, narrow and rambling courses that lead to the southeast and south and ultimately to the Los Arrieros creek in the namesake topographic chart. A marked north-south pattern in the Arrieros drainage network is possibly related to structures of the Domeyko Fault System (known as the West Fissure Fault System in this general area). To the west, the plain is limited by the northeast-southwest Limón Verde and Montezuma hills, while to the east by the north-south Quenante mountains, which are considered part of a partially exorheic intermountain basin. The drainage network drains towards the Intermediate Basin and some of drainages reach the Pacific Ocean.

Discrete and isolated evidence of vegetation, limited to some courses that receive sporadic water loads, can be observed in the properties. Likewise, wildlife sightings, such as foxes, lizards, and mice, are rare. The project area is inserted in a region affected by severe desertification, with an average monthly rainfall of 4 mm according to data consulted on the website of the Chilean water authority (https://snia.mop.gob.cl/BNAConsultas/reportes). The summer months between the end and beginning of each year, concentrate the main rains with an average of 4-10 mm month, while the middle part of the year has water precipitations of 0-4 mm according the data of a meteorological station in Calama (Figure 11).

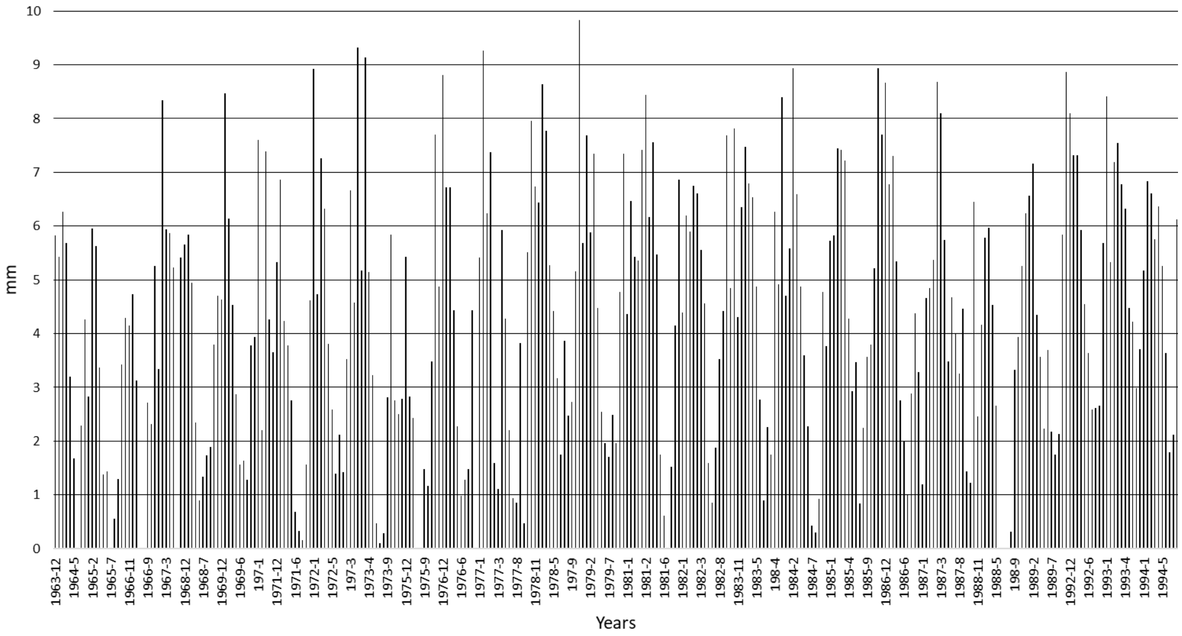


Figure 11. Average monthly rainfall in the Calama area from 1963 to 1994 years

Data obtained from the same source mentioned above indicates that the maximum temperatures vary from 18 to 28 °C, with the highest temperatures in the spring and summer months. The monthly minimum temperatures vary from 0 to 10 °C. Snowfall is scarce in the area, but occasional strong sandstorms can affect the normal development of activities.

5.2. Means of access

Arrieros has good ground access. Probably the best, considering its proximity, is the road that leads south to the Gabriela Mistral operating mine. This was built in part on the B-255 route. For this, it is necessary to take the CH-23 route from Calama that leads east to the town of San Pedro de Atacama. After about 20 km, the route joins to the south to the road to Gabriela Mistral and, then, after 6 km, it enters into the northern vertex of Arrieros.

Calama has an airport with a high frequency of flights from Santiago from at least three different companies and about 10 itineraries per day that start so early and end late.

5.3. Proximity to population centres

The closest city to Arrieros is Calama, located about 25 km northwest from the approximate central point of the group of properties. Calama has an estimated area of 24 km^2 where a population close to 166 thousand people lives (51.8% male and 48.2% female) according to the 2017 census. The age groups of 0-14, 15-29, 30-44 an 45-64 years old, have closely the same representativeness between 22.3 and 24.7%. The census data, digitally obtained from the national congress library, indicates that 75% of the population declares themselves non-native (https://reportescomunales.bcn.cl/2017/index.php/Calama/Poblaci%C3%B3n), while 25% consider they belonging to native people

The next closest town is located about 55 km southwest of Arrieros. It corresponds to Sierra Gorda, with an approximate surface of 2 km^2 and an estimated population of 2.3 thousand people (10 thousand in the whole commune). San Pedro de Atacama, possibly the most important tourist place in the region, is located 75 km to the east-southeast of Arrieros and has a population estimated at 11,000 people (in the whole commune). Antofagasta, the main city in the region, an important port for import and export of mining supplies and products, and the region's administrative capital, is located 190 km to the southwest of Arrieros. The commune of Antofagasta has a population of 362,000 according Census 2017.

5.4. Surface rights

As indicated in previous paragraphs, the Arrieros property is not subject to surface rights of its own or of third parties. A review of the cadastre of Bienes Nacionales (National Assets), the government entity that regulates the registry of private and public property, indicate that the area is not subject to fiscal land under some type of concession (Figure 12). Likewise, web consultations, including Conaf, the entity that regulates national parks, did not indicate the presence of patrimonial and environmentally protected areas. These conclusions can be verified in the catalogue of Chilean geospatial information of the National Assets Ministry (http://www.geoportal.cl/visorgeoportal/).

The northern border of Arrieros is very close to the ruins of the Montezuma Heliophysical Observatory facilities (Picture 4), installed and operated by the Smithsonian Astrophysical Observatory (SAO) between 1918 and 1940 (Minniti, 2014). Although the area is not protected by any title, the observatory is considered an important benchmark in providing data on solar radiation worldwide, therefore it is highly recommended to keep the area in its current condition. Individuals, tourists and people linked to some scientific entity, could visit the ruins under their sole responsibility.

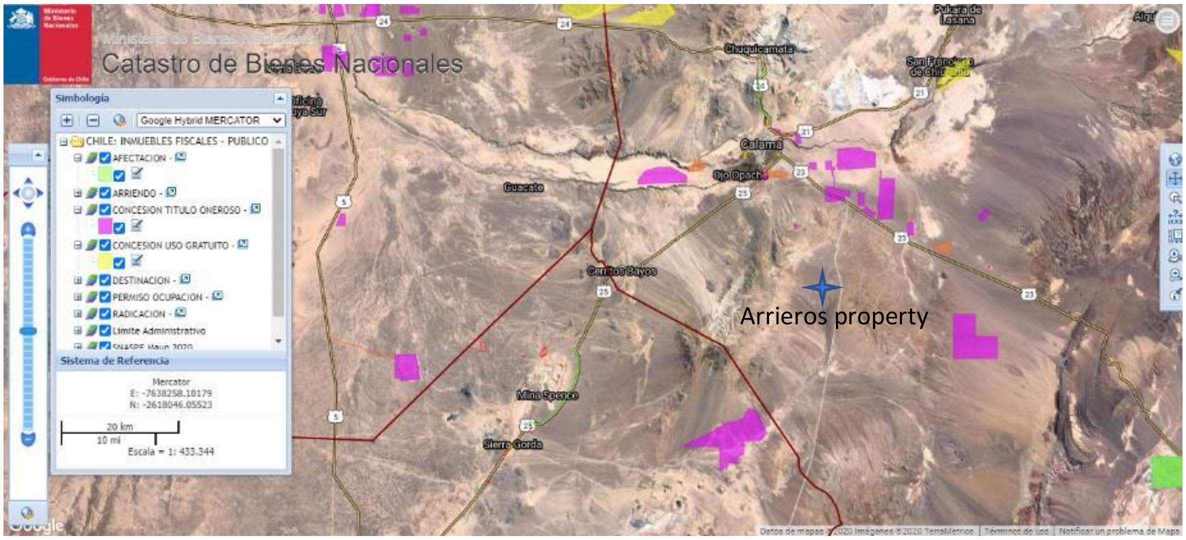


Figure 12. Cadastre of fiscal terrains under concession near Calama (http://www.catastro.cl/)

Picture 4. North view of the ruins of the Montezuma observatory (after Minniti, 2014)

5.5. Operating season

Except for one or two episodes of heavy rain during some summers, which can cut off accesses and interrupt basic services, the Arrieros area is not affected by severe weather conditions that prevent exploration and exploitation works for months or seasons.

5.6. Resources and infrastructure

The proximity to Calama gives the Arrieros project an advantageous position in terms of infrastructure. The basic services that the city has, such as domestic flights, hotels, drinking water supply, electricity, among others, meet the requirements of eight large copper deposits installed in its surroundings. Service companies, including some specialized in construction, maintenance, sample preparation and blasting, have settled in Calama. Light and heavy mining equipment may be rented. Workforce has experience in mining services.

Calama has permanent electricity and drinking water services. The city is connected to the centralized electric power generation system in the country, including power generating stations located further west at Tocopilla and Mejillones. In addition, non-conventional renewable energy services, such as wind and photovoltaic farms, have recently been installed to the east of the city.

Calama's drinking water supply comes mainly from the Loa river and tributaries.

6. HISTORY

6.1. Ownership and changes

As indicated in previous paragraphs, the Arrieros property was initially controlled by Polar Star. The prior history of the project area is unknown in detail. After the merger agreement with Iron Creek. and the formation of Revelo, Revelo took control of all Polar Star's assets in Chile (RVL. 2014b). This included subsidiary companies, such as Minera Polar Mining Chile Limitada, Minera Celeste Chile Limitada and Minera Serena Limitada.

The Montezuma block of properties was initially staked as two main groups denominated Montezuma and Topater, constituted first by Minera Polar Mining Chile Limitada and later by Minera Serena Limitada, both subsidiary companies 100% controlled by Polar Star and later 100% owned by Revelo. Prior to the merger agreement between Polar Star and Iron Creek, Polar Star optioned this group of properties to Newmont "*to explore, and if appropriate, develop the Montezuma project*" (RVL. 2014a).

During February 2015, Revelo announced that Newmont had "*completed the Phase 1 Earn-In to earn a 51% interest at Revelo's Montezuma copper project in northern Chile, by spending in excess of the US$2.5M required under the Venture Agreement signed between the parties in January 2014*" (RVL, 2015). The announcement indicated too that "*Newmont has also formally elected to continue to Phase 2, in which Newmont must spend a further US$5.5M over the next 2.5 years in order to earn an additional 14% interest, to 65% in total*".

In May 2016, Revelo announced that its subsidiary Minera Serena Limitada established a new JV company with Minera Newmont (Chile) Limitada in order to own and manage the Montezuma project. The new company, Sociedad Contractual Minera Montezuma, was then controlled by Newmont (51%) and Revelo (49%) as shareholders (RVL, 2016).

Revelo announced in a news released on March 3, 2017 (RVL., 2017), that Newmont "*has elected to withdraw from the Montezuma copper project ("Montezuma") in northern Chile and return its earned interest to Revelo in exchange for a perpetual 1% NSR Royalty interest in the project. As a result of signing definitive documentation to this effect, Revelo, consequently, owns 100% of the Montezuma project*". This event also meant that Revelo came to control 100% of Sociedad Contractual Minera Montezuma, the current holder of the exploration and exploitation concessions at Arrieros.

6.2. Previous exploration/development works and results

The mineral concessions to the immediate west and north of Arrieros were subject to exploration activities carried out by Polar Star from 2007 to 2014. From 2008 to 2009, JVX and Quantec Geoscience completed an IP survey program with E-W lines separated by 1-4.2 km up to 25.2 km long and depth penetration of around 300-500 m (PSR. 2009), later infilled to 0.3-1 km spacing (Walker, 2014). The eastern extent of this survey partially covered the western and northern portions of the Arrieros project area according to maps included in a series of presentation from Revelo (Figure 13).

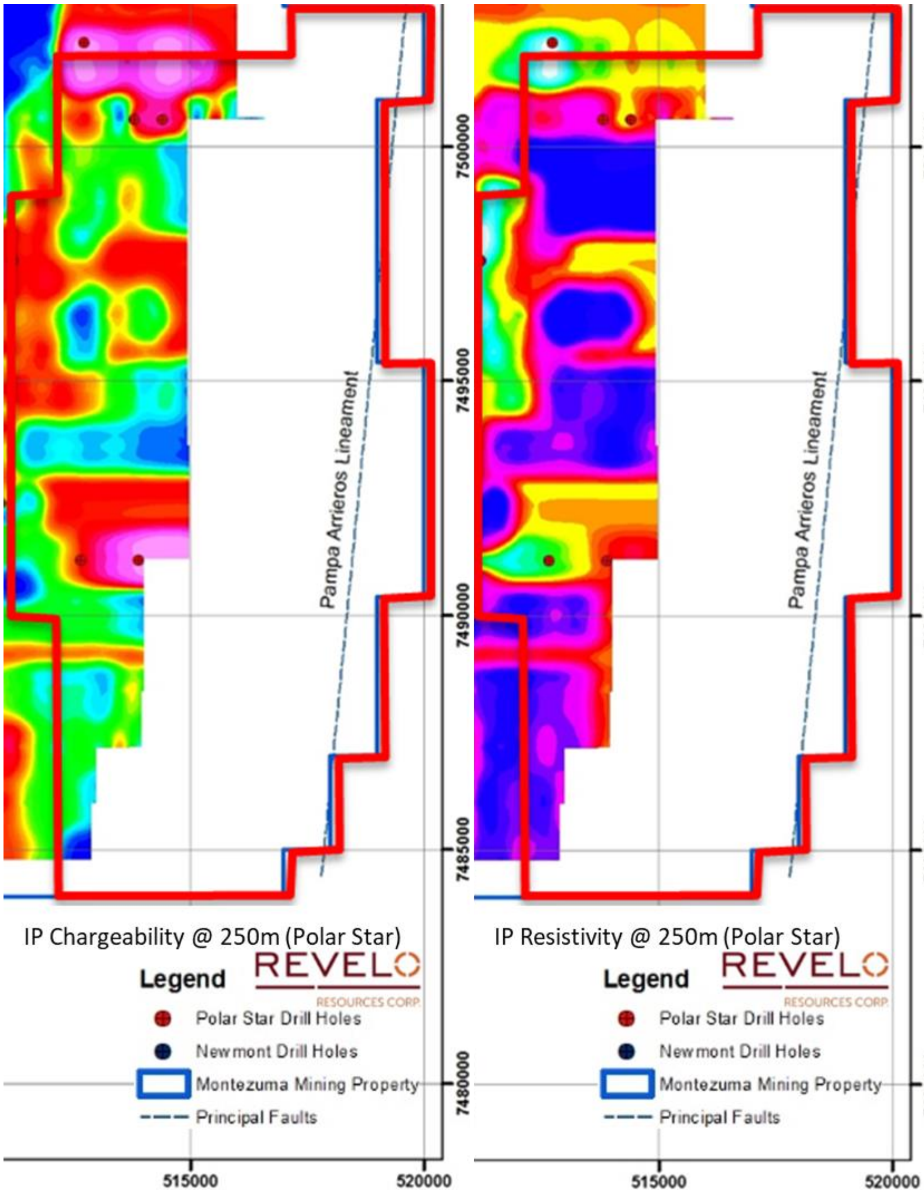


Figure 13. IP Chargeability / Resistivity maps at the western border of Arrieros

The north and west edge of Arrieros were also partially covered by Newmont surveys with its in-house IP system – 3D NewDas. The information contained in a Newmont report (Melgar, 2017) and plotted by Revelo (Figure 14), did not have sufficient coverage to enable any vectorization towards targets of interest. The Quantec IP and NewDas results most likely reflect the gravel cover (in blue) and do not reflect penetration of the underlying bedrock.

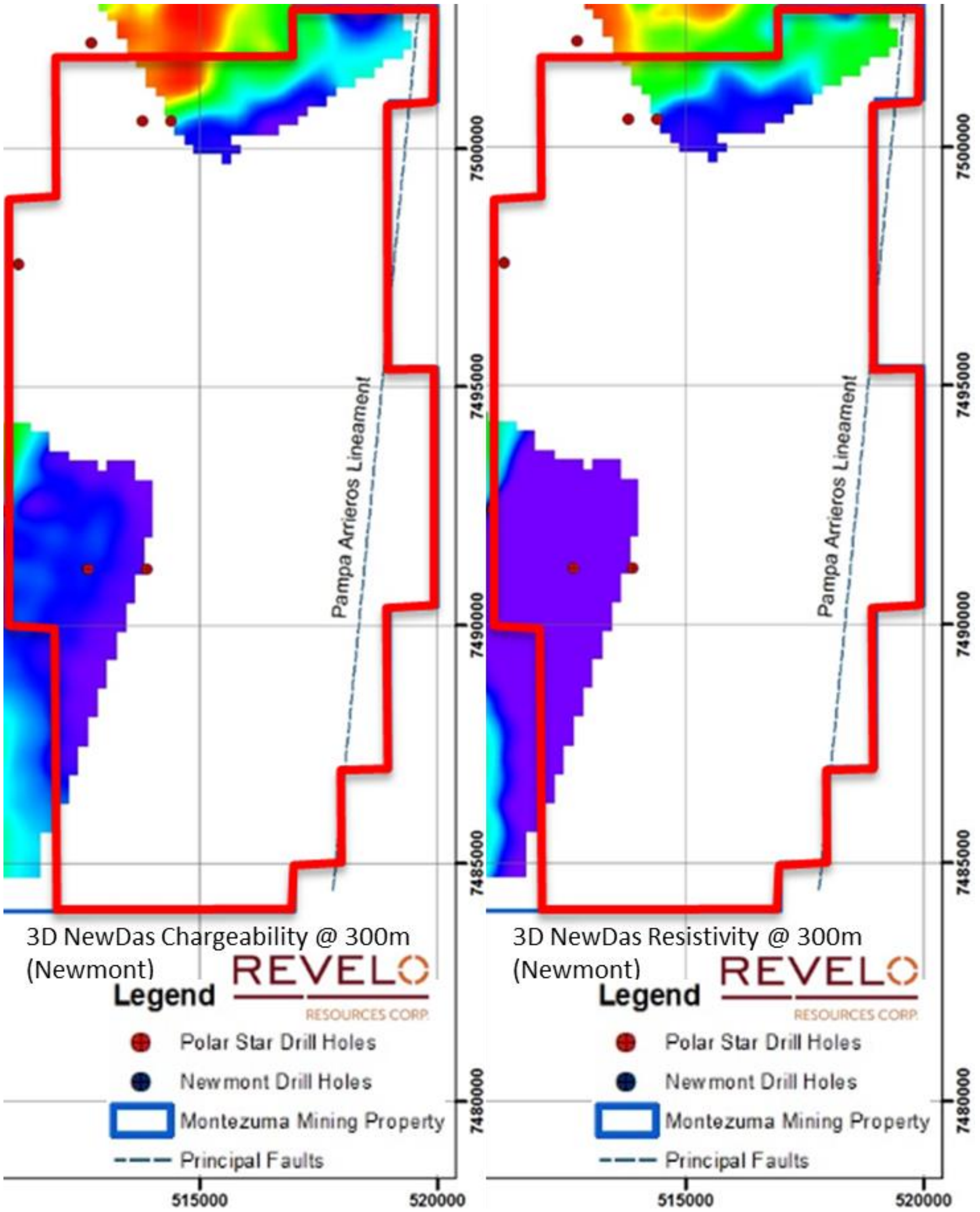


Figure 14. 3D NewDas Chargeability and Resistivity on the Arrieros property

Maps created by Revelo from the IP and NewDas surveys (Figures 13 & 14), show isolated bodies of high chargeability and high resistivity. Extensive low resistivity anomalies dominate to the east, possibly related to the presence of relatively deep gravel cover and possibly deep water bodies. In any case, the parameters measured are mainly low with maximums of ~ 6 mV/V and ~ 600 ohm-m for Chargeability and Resistivity respectively, which possibly means that the IP study by Polar Star has not penetrated to sufficient depths to detect bedrock and possibly associated sulfides. Drilling by Polar Star along the perimeter of the Arrieros property, described later, were too short to reach rocks beneath the gravel cover.

In 2009, Quantec completed a ground magnetic study of 350 line km on E-W lines spaced by 500 m, with data acquired each 10 m and controlled by means of a high-quality manual GPS tied to pre-existing IP topographic lines (Walker, 2014). The study was focused on northeast and north-south faults of the West Fissure and Centinela Fault systems, so it only partially covered the western portions of Arrieros. The ground magnetics was expanded to the east by Newmont in late 2016, which included 390 line km in east-west 2-9 km long lines spaced by 250 m covering an approximate surface of 90 km^2 (Melgar, 2017). The data merged, processes and reported by Revelo is synthesized in the Figure 15 (RVL., 2019).

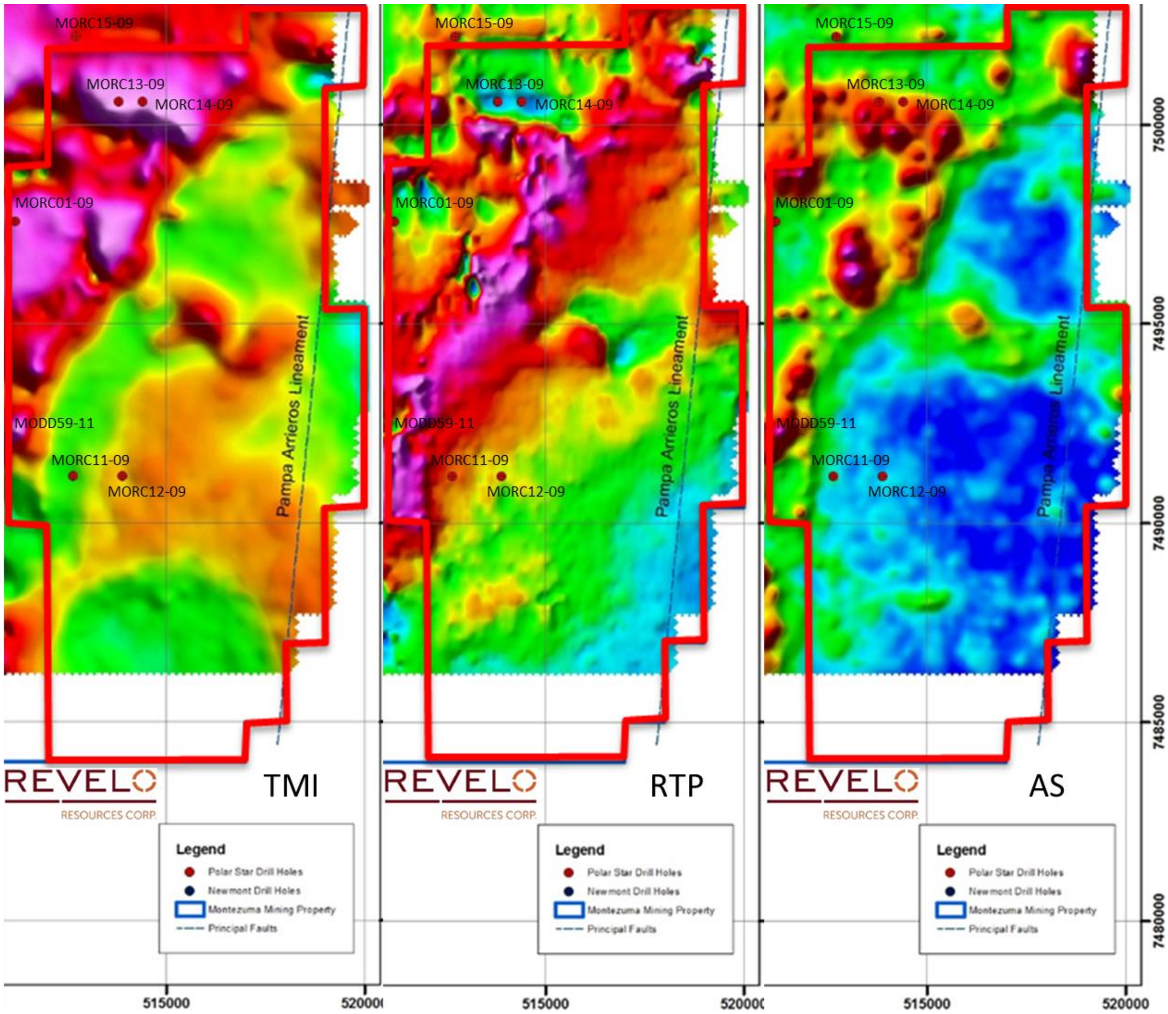


Figure 15. Ground magnetics maps on the Arrieros property reported by Revelo

The ground magnetic data integrated by Revelo, shows main north-south and northeast structural corridors which control magnetic highs prevailing to the northwest where intrusive and volcanic Paleozoic basement outcrops. Some sub-rounded and discrete highs, with a good response in the RTP and AS processes, such as one located in the central part of the Arrieros property, are possibly related to later sub-vertical intrusive bodies. These magnetic signals, especially those near larger structures, are of prospective interest in the search for porphyry-type mineral bodies. However, an exploration model must be performed in view of the different porphyry deposits that exist in the region.

Six drill holes by Polar Star in 2009 and 2011 are located on the perimeter of the Arrieros property. Their locations are shown in Figure 16 and the data from the drill holes is indicated in Table 4 taken from the database provided by Revelo. No information on lithology, mineralization and hydrothermal alteration, or chemical analyses, have been recorded regarding the RC drill holes included in the table, because these drill holes have only cut gravel cover materials or rock with no evidences of interest. According to azimuth data, the MODD-59-11 drillhole begins in the Montezuma area and ends at the Arrieros property. The MORC01-09 drilling is the opposite.

Table 4. Location data of the drillholes in the Arrieros property

Hole_ID	East	North	Elevation	TD	Azimuth	Dip	Units	Type	Year	Datum
MODD59-11	510937	7492420	2885	337.9	85°	-45°	meters	DD	2011	PSAD56
MORC01-09	511198	7497603	2891	197	270°	-65°	meters	RC	2009	PSAD56
MORC11-09	512649	7491205	2803	300	0°	-90°	meters	RC	2009	PSAD56
MORC12-09	513899	7491207	2764	200	0°	-90°	meters	RC	2009	PSAD56
MORC13-09	513808	7500608	2776	200	0°	-90°	meters	RC	2009	PSAD56
MORC14-09	514399	7500613	2764	18	0°	-90°	meters	RC	2009	PSAD56

Hole MODD11-59 cut Paleozoic granitic rocks from the start (Table 5). Existing logging shows the presence of a fault at 78-79.3 m, which puts the granitoid in contact with colluvium at depth until the end of the hole. Possibly the clastic unit mentioned is related to conglomerates and breccias of Miocene-Holocene age, deposited lately on the porphyry systems after their emplacement in the Eocene-Oligocene and then exhumation and subsequent processes of oxidation and supergene enrichment in the Oligocene-Middle Miocene. The base of this clastic unit can host occurrences of exotic copper mineralization, as has been described in the Centinela and Chuquicamata districts.

Table 5. Summary of the geology and assays of the MODD59-11 drilling

Drilling	Section_m	Lithology	Alteration	% Hm	Cu_ppm	Mo_ppm	Pb_ppm	Zn_ppm
MODD59-11	0-51.8	Granite	Sericite-Chlorite	3	4.55	1.52	9.03	50.41
MODD59-11	51.8-53.4	Fault	Sericite-Chlorite	7	2.50	2.81	21.90	263.00
MODD59-11	53.4-78	Granite	Sericite-Chlorite	7	3.14	1.15	8.73	62.50
MODD59-11	78-79.3	Fault	Sericite-Chlorite	10	31.80	1.35	9.20	64.00
MODD59-11	79.3-96	Colluvium	Sericite-Chlorite	10	9.05	1.00	8.05	65.33
MODD59-11	96-111	Colluvium	Clay	10	16.28	2.96	9.70	68.60
MODD59-11	111-338	Colluvium	Unaltered	3	35.04	2.04	13.29	96.30

The chemical assays of MODD59-11 indicate anomalous contents in zinc, with average values of 85 ppm Zn and some sections of 2-20 m of ~100 ppm Zn with rare values up to 263 and 398 ppm Zn over 2 m. These, together with the sericite-chlorite alteration described in drill logs, suggests the drilling is peripheral to a mineralized porphyry-type hydrothermal system according to a conceptual model such as that proposed by Sillitoe (2010).

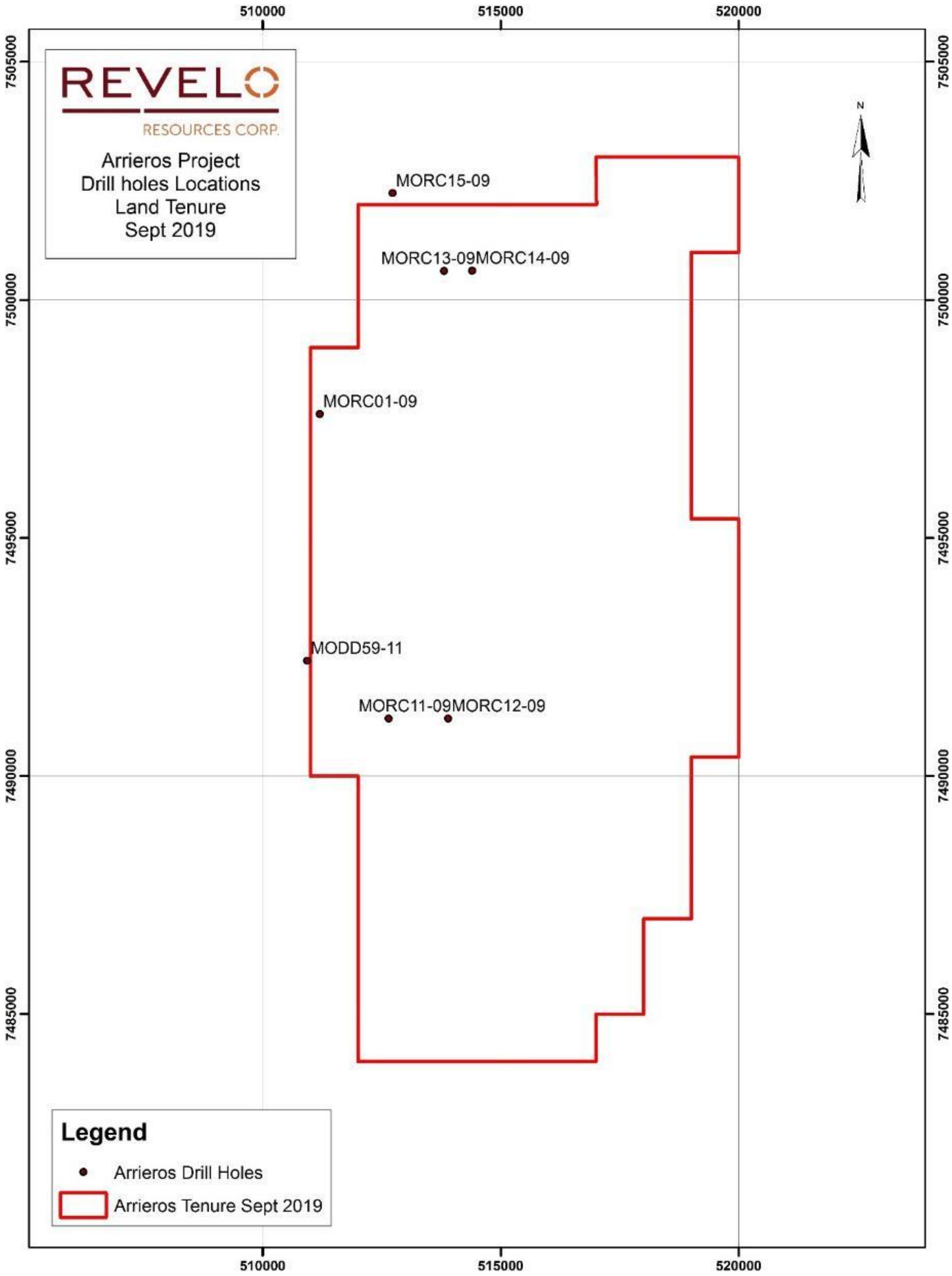


Figure 16. Location of drilling by Polar Star in the Arrieros property

MODD59-11 was completely reviewed during the author's visit to the project site. A quick-log including lithology and intensities for various factors (from 1 to 5 – trace, weak, moderate, strong, and intense) including alteration, mineralization, veining, limonites (capping) and faulting was compiled in Excel format for each 3 m interval (Appendix 3). A faulted contact between a Paleozoic granitoide and Holocene gravels occurs between 116 m and 149 m, where an important presence of gypsum in the form of veining, veins and cement of tectonic breccias is observed. The gravels are polymictic and composed of coarse-grained matrix and clast-supported conglomerates and breccias with volcanic and granitic clasts in a coarse-grained sandy matrix. Gypsum appears as main cement of clasts and matrix. The granitoide is light pink in colour and has a coarse-grained equigranular phaneritic texture with quartz, feldspar, plagioclase and some interstitial biotite. It shows evidences of intermediate argillic alteration, including some veins of quartz-carbonate-goethite in a smectite-illite-carbonate background. The contact is oxidized with a greater presence of hematite, possibly due to the oxidation of mafic minerals and weak pyrite. The fault is probably part of the western limit of a young basin, which has had recent subsident activity. Its position coincides with a northeast structural lineament that is projected from Target B of the Montezuma project, 5 km southwest, where it was identified as part of the Centinela fault system controlling the development of porphyry-type alteration and mineralization.

Only evidence of the presence of gravels was observed during the review of the MORC11-09, MORC12-09 and MORC14-09 drill holes (Appendix 3). MORC01-09 and MORC13-09 both cut a coarse-grained granite (likely Paleozoic) affected by intermediate argillic alteration characterised by smectite-illite-carbonate-hematite, and are both possibly located towards the periphery of a porphyry type hydrothermal alteration zone. These rock units and hydrothermal alteration patterns are typical in the northern part of Arrieros, according to various points observed during the project technical inspection visit. In the mentioned area, Paleozoic granitic and Jurassic calcareous rocks host thick north-south carbonate veins with coarse dissemination of copper oxides, as well as quartz-tourmaline structures containing anomalous values in copper-molybdenum-gold according to sampling data.

Information provided by Revelo, indicates that the northern and western borders of the Arrieros property have been important historic exploration targets with significant rock and soil sampling by both Polar Star and Newmont (Figure 17). Independently processed rock data shows significant anomalous values in copper-molybdenum-gold at the northeast vertex of the property, where high contents up to 0.127-0.415 % Cu, 54.5-171.5 ppm Mo and 0.142-0.486 g/t Au occur in an approximate area of 1.3 x 1.3 km open to the north and south (Figure 18). The project has a good rock geochemical base, including 79 samples from Polar Star and 44 from Newmont with ICP-Aqua Regia of 48-51 elements assays (fire assay for gold), which can be levelled to carry out litho-geochemistry to aid in vectorization. Although it is not the objective of this report to study the data in depth, as an example it is possible to indicate that a group of samples has values of 0.2-0.4 and 0-0.4 for the K / Al and Na / Al molar ratios respectively, which preliminary confirm that the rocks on the northern and western edges of the Arrieros are affected by phyllic hydrothermal alteration, possibly associated with the development of a porphyry system in the vicinity.

The soil samples are more complex. Some of these were obtained using certain special protocols applied by Polar Star due to the "caliche" present in the surficial gravel cover materials. According to Walker (2014), samples collected in excavations for electrical contacts along IP lines followed a certain procedure as follows: “*sub-sample A was taken* *from the alluvial/colluvial cover, sub-sample B at its interface with the caliche, sub-sample C from the caliche and sub-sample D from the residual soil/weathered bedrock at the bottom of the IP pits as they were dug*”. Not all sample sites were excavated to weathered bedrock.

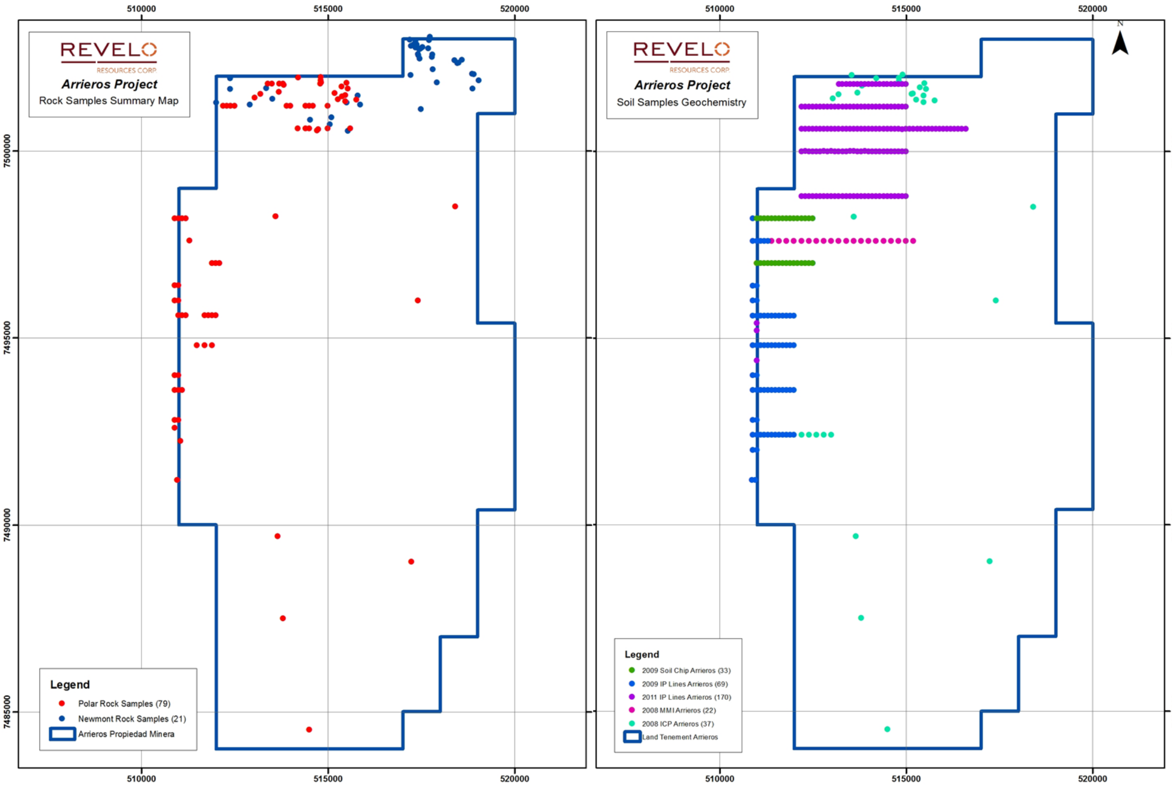


Figure 17. Rock (left) and soil (right) sampling by Polar Star and Newmont at Arrieros

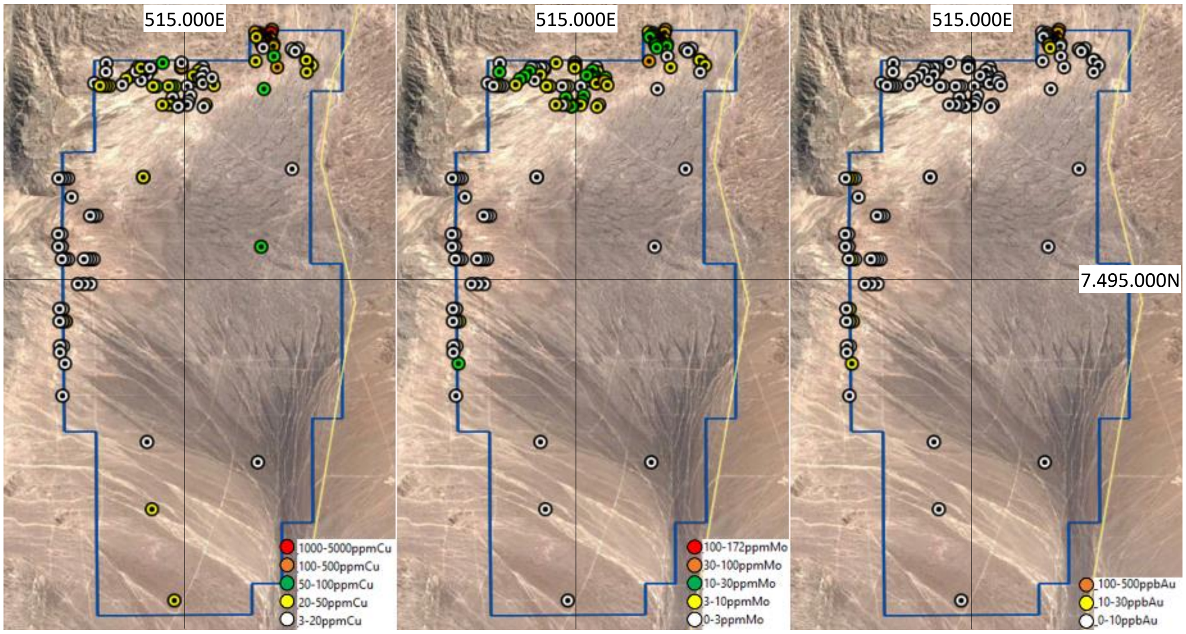


Figure 18. Rock Cu-Mo-Au geochemistry at Arrieros property

Walker (2014) also indicates that: "*All samples were collected by PSR staff, bagged, tagged and sealed on site and then shipped directly to ALS, Coquimbo, Chile, where they were dried and screened to obtain a -80 mesh sample which was homogenised and then analysed for gold by fire assay pre-concentration, Atomic Absorption ("AA") finish and 48 other elements, including silver, by the Inductively Coupled Argon Plasma ("ICP") technique following Agua Regia digestion". The statistical analysis "indicated that the D sub-samples produced the most cohesive anomalies", with background/anomaly threshold values of "Cu 100 ppm, Mo 5 ppm, Au 25 ppb, Ag 0.5 ppm, As 75 ppm, Pb 50 ppm and Zn 200 ppm", "principle elements associated with the local porphyry systems*".

The D horizon data, collected on IP lines in 2009 and 2011, have been treated independently by the author to have a preliminary idea about the location and type of the anomalies they generate. The distribution of copper and molybdenum values show anomalous zones in the northern part of the property (Figure 19), possibly as part of a Cu-Mo porphyry type hydrothermal system. The gold contents are mainly low in this group of assays. The highest values of 10-20 ppb Au are located on the western edge of Arrieros, suggesting that they may be associated with the "lithocap" environment of the Montezuma hydrothermal alteration zones to the immediate west of the Arrieros project area. The rest of the soil geochemical data shows low values in the elements traditionally used to vector porphyry develops, so they are not presented here. Despite this, it is highly recommended to use these data appropriately to vector towards areas of high prospective value.

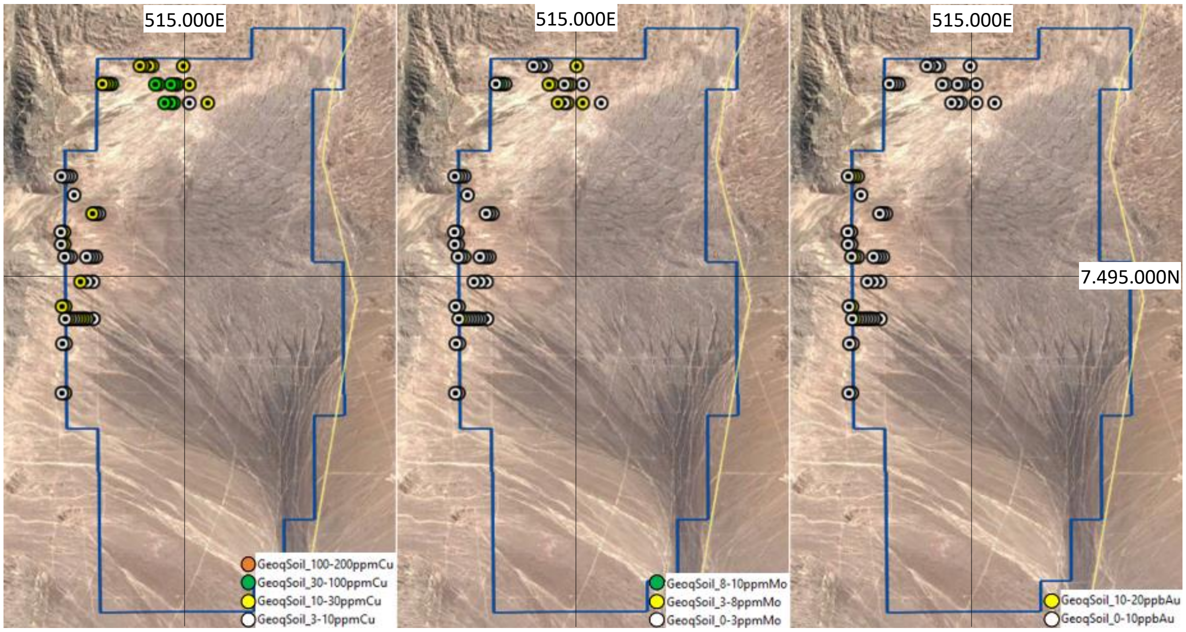


Figure 19. Soil Cu-Mo-Au geochemistry on IP lines at Arrieros property

6.3. Historical mineral resources/reserves estimations

No estimation on mineral resources and reserves has been conducted in the property. Arrieros is an initial stage exploration project where only the first mapping, geophysics, sampling and drilling works have been carried out previously.

6.4. Production from the property

No production, exploitation or benefit related to any mineral product or element has been made by Revelo and its predecessors from the Arrieros property, and there is no evidence of historic production. On the northeast vertex of the area there is evidence of minor historic production from old artisanal diggings, with minor occurrences of copper oxide mineralization on a northwest structure that seems to have continuity to a target area on the neighbouring Montezuma project area called Melissa. These small diggings are more related to prospectors than producers.

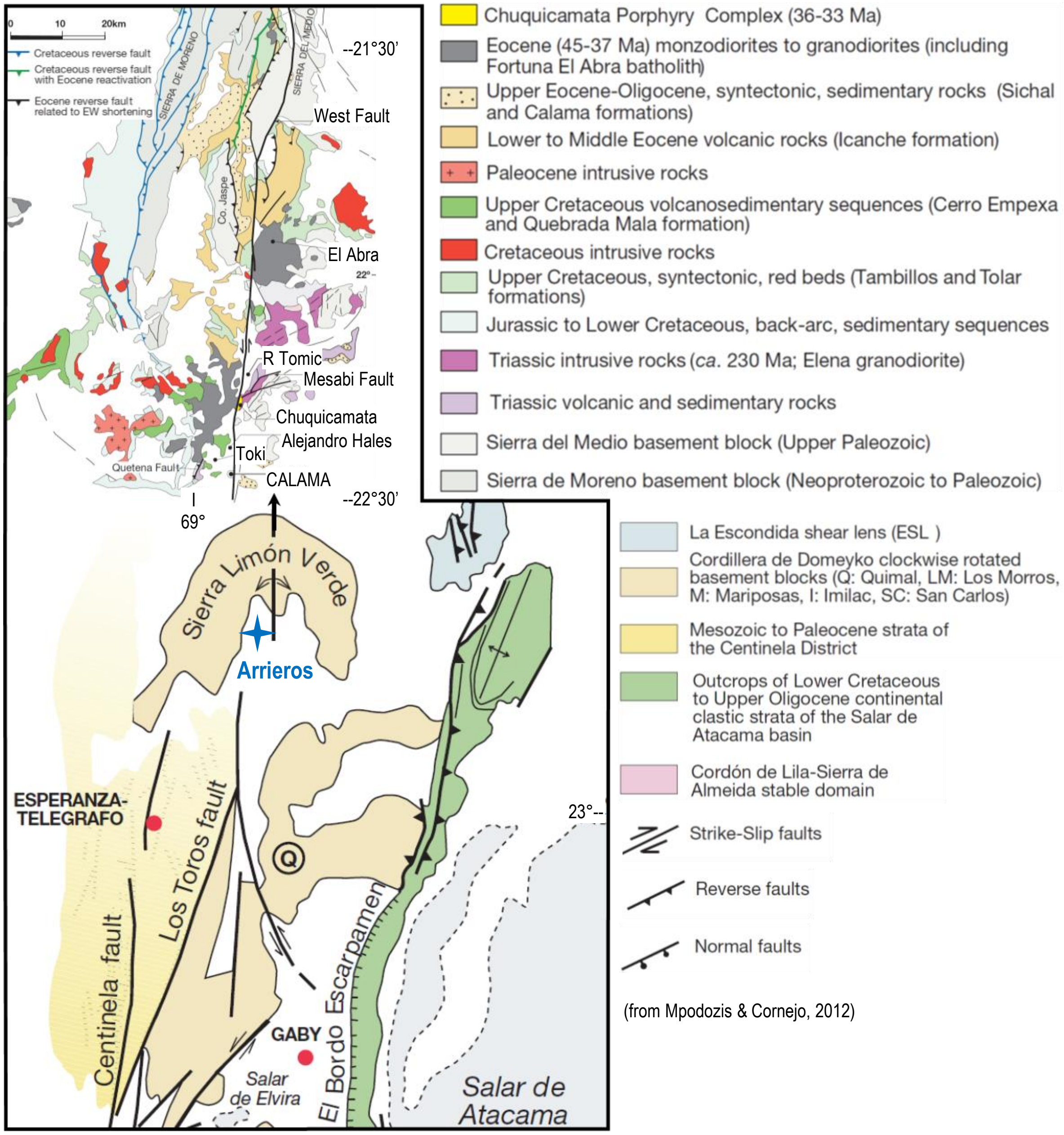
7. GEOLOGICAL SETTING AND MINERALIZATION

7.1. Regional geology

Arrieros is in the Cordillera de Domeyko, a generalized north-south block of volcanic, sedimentary, metamorphic and intrusive rocks from Paleozoic to recent age which were affected by a complex tectonic history (Figure 20). This history includes episodes of extension, tectonic inversion, dextral and sinistral transpression, the development of fold-thrust belts, block rotation, crustal shortening, uplift, emplacement of porphyry systems in at least three main events together with their subsequent exhumation, oxidation and supergene enrichment (Mpodozis & Cornejo et al., 2012). Most of these events are related to the Incaic tectonic phase in the Middle Eocene-Early Oligocene, although episodes related to older phases such as K-T in the Upper Cretaceous-Paleocene (Cornejo et al., 2003) and Peruvian in the middle part of the Upper Cretaceous have been documented. In most cases and as a common factor, segments of the Domeyko fault system have been involved with these tectonic events.

One of the oldest rocks in the region is a group of intrusions of granitic, granodioritic, tonalitic and dioritic composition, which outcrop to the east, north and west of Arrieros as part of the Limón Verde Complex (Marinovic & Lahsen, 1984). In the Chuquicamata area, these are known as Mesa Granite, East Granodiorite and Elena Granodiorite (Ossandón et al., 2001). Radiometric ages indicate emplacement from the Carboniferous, Carboniferous-Permian to the Middle-Late Triassic (Marinovic & Lahsen, 1984; Mpodozis & Cornejo, 2012; Zentilli et al., 2018), associated with a subduction-related magmatic arc developed within accreted terrains. These are part of a large volume of Paleozoic intrusions and felsic volcanic rocks located along the western margins of South America, including currently sub-economic porphyry systems, the development of which was followed by rifting related to the Pangea dispersal in the Middle Triassic-Early Jurassic (Mpodozis & Cornejo, 2012).

Late Mississippian and Early Permian intrusions affect Neoproterozoic (?) to Permian sedimentary, volcanic and metamorphic sequences along the Limon Verde mountain range (Morandé, 2014) that flanks the Arrieros property to the east, north and west. The oldest sediments were possibly deposited in the western margin of Gondwana, during its separation from Laurentia after the breakup of Rodinia in the late Neoproterozoic (Mpodozis & Cornejo, 2012). These are part of the Middle/Late Devonian to Early Carboniferous First Stage (Figure 21) of the Gondwanan evolution in Chile (Charrier et al., 2007).

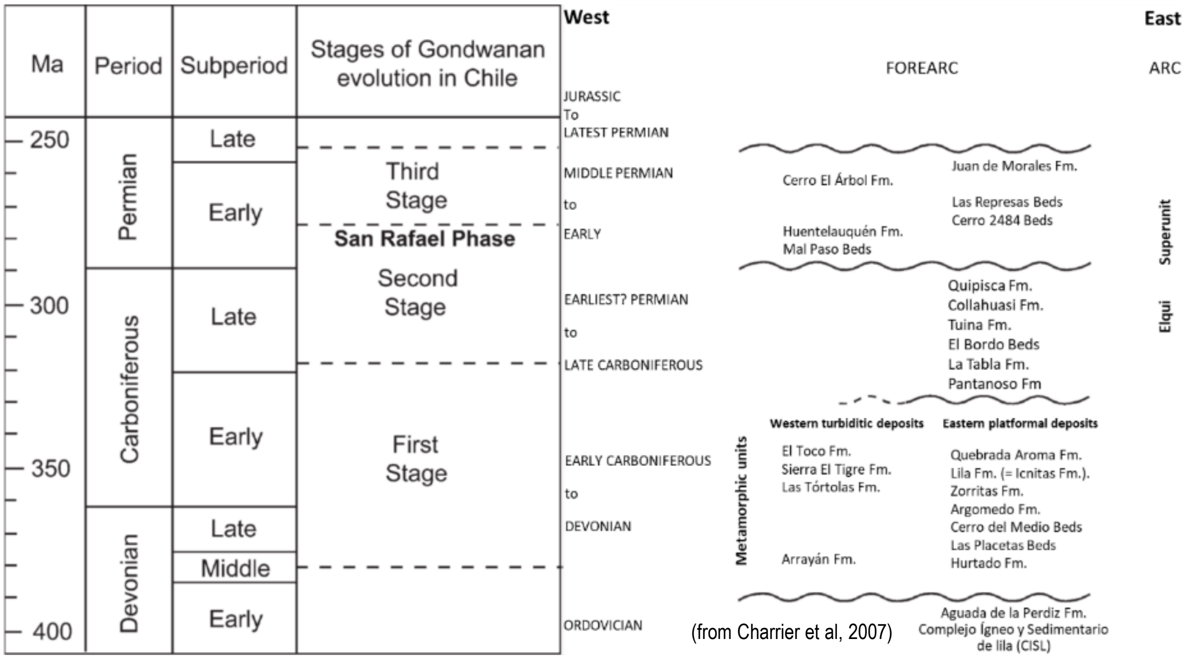


(from Mpodozis & Cornejo, 2012)

Figure 20. Tectonic elements of the Domeyko range in the Esperanza-Chuquicamata area

The metamorphic complex of Sierra Limón Verde is essentially composed of a north-northeast 12 x 2 km belt of schists and amphibolites. These have psamo-pelitic and intraplate basaltic Carboniferous-Permian protoliths, confirmed by detrital zircon, metamorphosed under high pressure and high temperature conditions at 20-70 km depth and quickly exhumed during the Triassic (Soto, 2013). These protoliths, as well the volcanic rocks of the area, are included in the Carboniferous-Permian Agua Dulce Formation (Morandé, 2014) and its equivalent Collahuasi Formation to the north, and are part of the Second Stage of the Gondwanan Tectonic Cycle in Chile (Charrier et al., 2007).

Marine sedimentary sequences of the Juan de Morales and Cerro El Arbol formations are exposed more to the north and south of Arrieros, and represent a major paleogeographic change with respect to the predecessor events, and are included in the Third Stage of the Early Permian to Middle-Late (?) Permian Gondwanan Cycle in Chile (Charrier et al., 2007). The units deposited in a shallow platform environment occupied the same place within the forearc basin as the First Stage (Middle/Late Devonian to Early Carboniferous).



(from Charrier et al, 2007)

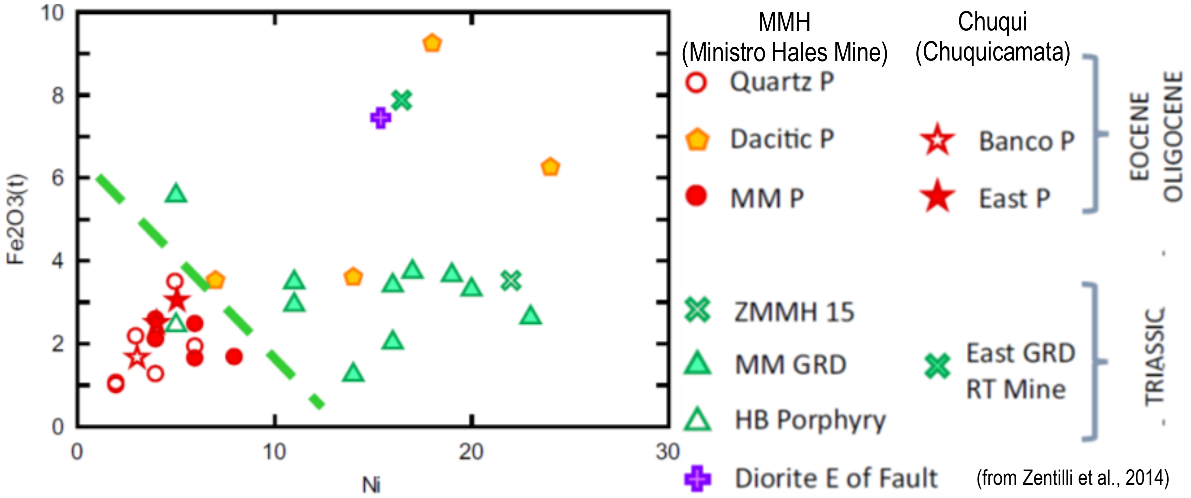
Figure 21. Three-stage subdivision of the Gondwanan tectonic cycle and stratigraphic units

Triassic (Middle?-Late to early Jurassic?) intrusions in the MMH-Chuquicamata area, and its volcanic equivalents of the Choiyoi Group to the east and south in Argentina and Chile, represent the continuation of the magmatic activity in the region as part of great volumes of felsic intrusive and volcanic rocks emplaced along the western margins of South America. Charrier et al (2007) define this period of time as the Pre-Andean Tectonic Cycle (Latest Permian–earliest Jurassic), between the assembly of Gondwana and the initial processes of its later brake-up. The conditions were dominated by the interruption of the subduction along the continental margin, and the installation of a rifting environment controlled by north-northwest structures separated by grabens or half-grabens and horsts formed under normal faulting, strike-slip and pull-apart mechanisms (Charrier et al., 2007). These conditions were favoured by heat accumulation in the lower crust and the liberation of magma along NW-trending zones of weakness inherited from Proterozoic and Paleozoic sutures.

Whole rock geochemistry from Triassic and Eocene intrusives of the Chuquicamata district reveals that these rocks are almost indistinguishable in major, minor and trace-element composition (Zentilli et al., 2014). The study concludes that the Triassic rocks are higher in Fe and Ni (Figure 22) and contain more than 15 wt% Al_2O_3 and less than 0.33 wt% TiO_2, while the Eocene MMH Porphyry contains identifiable megacrystals of sphene (titanite).

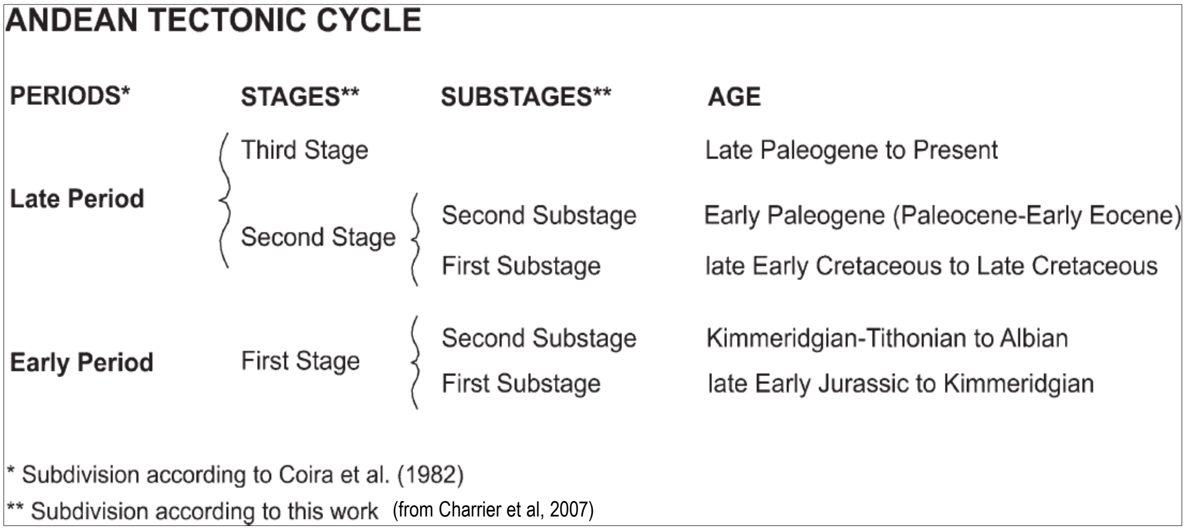
Marine and continental sediments of Early Jurassic to Early Cretaceous age, including the Quinchamale and Quehuita formations north of Chuquicamata, the Cerritos Bayos and Moctezuma formations in the Sierra Limon Verde area, and the Caracoles Group south of the Esperanza mine, are part of a back-arc basin developed in the region during the First

Stage of the Early Period of the Andean Tectonic Cycle (Figure 23; Charrier et al., 2007). These units and other equivalents have a lateral relationship with volcanic rocks of the La Negra Formation along the Coastal Belt to the west, which include a sequence of rhyolites, dacites, andesites and epiclastic rocks related to the early stages of a magmatic arc installed on the current coastal edge. Radiometric ages indicate that this unit was developed in the Lower-Middle Jurassic during the 180-170 Ma period (Mpodozis et al., 2014), and was subsequently affected by calc-alkaline plutonic units in the 180, 174-169, 169-160, 155-150 and 148-140 Ma periods under extensional regimes.



(from Zentilli et al., 2014)

Figure 22. Volatile-free plot to distinguish Triassic & Eocene-Oligocene intrusions at MMH



ANDEAN TECTONIC CYCLE

PERIODS*	STAGES**	SUBSTAGES**	AGE
Late Period	Third Stage		Late Paleogene to Present
	Second Stage	Second Substage	Early Paleogene (Paleocene-Early Eocene)
		First Substage	late Early Cretaceous to Late Cretaceous
Early Period	First Stage	Second Substage	Kimmeridgian-Tithonian to Albian
		First Substage	late Early Jurassic to Kimmeridgian

* Subdivision according to Coira et al. (1982)

** Subdivision according to this work (from Charrier et al, 2007)

Figure 23. Subdivision in stages of the 190-million-year-long Andean Tectonic Cycle in Chile

In the coastal range region, the Atacama fault zone was formed at approximately 125 Ma (Mpodozis et al., 2014). This marks the timing of the extensional regime and its transition to sinistral shear, as well as changes in the regional stress directions and the development of copper mineralization related to porphyry, IOCG and Manto deposits along the Coastal Belt.

Along the Cordillera de Domeyko, the marine sequences show events of transgression-regression with conglomerates and sandstones at the base, limestones and deep-sea anoxic fine-grained sediments in the middle (Toarcian?), and red beds including gypsum horizons of Kimmeridgian and Oxfordian ages, all representing the First Substage. Footprints of different dinosaur groups (teropods, sauropods, ornitopods) are exposed in the upper part of the Chacarilla Formation (Rubilar-Rogers et al., 2008). Some sequences continue into the Neocomian, which are considered part of the Second Substage according to the division of Charrier et al (2007) for the Andean Tectonic Cycle. Thick successions (~1000-2600 m) suggest rapidly subsiding conditions for the arc and its back-arc basin.

The extensional Early Jurassic-Early Cretaceous sediments and volcanics are affected by uplift, erosion, folding and thrusting. This was the result of the tectonic inversion of the back-arc basin during a compressive event in the Upper Cretaceous, related to the Peruvian tectonic phase that created a major unconformity in the region at about 86-83 Ma according to Ireland (2010). This episode can be related to dextral oblique convergence between the Pacific oceanic and the South American continental plates (Charrier et al., 2007), stronger coupling between both plates, and high production of oceanic crust. As consequences, the magmatic arc migrated considerably eastwards, a continental foreland basin was formed to the east and a rather wide forearc region west of the arc was produced.

Late Cretaceous period is also associated with extensional episodes, with magmatic activity including major plutons and abundant volcanic rocks of andesitic to dacitic-rhyolitic composition, commonly associated with large calderas. These were accumulated in a series of north-south, fault-controlled extensional basins in the magmatic arc region (Charrier et al., 2007), where the Cerro Empexa (83-68 Ma; Blanco & Tomlinson, 2013) north of Chuquicamata, Quebrada Mala in the Esperanza area, and Llanta in El Salvador district, are the best known examples in the north of Chile. To the north of the Chuquicamata region, the Early Jurassic-Early Cretaceous sequences are typically unconformably overlain by the latest Cretaceous andesitic volcanic and continental sedimentary Cerro Empexa Formation. Likewise, a 500-1000 m andesitic sequence of the late Early Cretaceous Cuesta Montecristo Volcanites and Guacate unit (Lira, 1991), which precedes the eastward migration of the arc, can be observed in contact with the Cerro Empexa Formation.

Upper Cretaceous sedimentary and magmatic extensional basins have a regional unconformity relationship with the Early Paleogene deposits, which is known as the K-T (Cornejo et al., 2003) or the Incaic Phase I (Charrier et al., 2007) at 65-62 Ma. Paleocene-Early Eocene porphyry Cu-Mo-(Au) systems were developed in the north of Chile, such as the Cerro Colorado (52-50 Ma; Bouzari & Clark, 2006), Spence (57 Ma; Rowland, 2001), Sierra Gorda (60-57 Ma; Shaver et al., 2009) and Lomas Bayas (58-57 Ma; Singer et al., 2008) deposits, some of them possibly emplaced under syn-tectonic conditions related to the K-T event. However, most could be related to neutral and slightly extensional stress conditions associated with high angle subduction and thin crust (Mpodozis & Cornejo, 2012). After this event, extension resumed during the Paleogene, though with less intensity compared with the Early to Late Cretaceous extension events, and is associated with abundant volcanic and shallow plutonic activity.

In the Chuquicamata-Esperanza region, which includes Arrieros, the new Tertiary extensional basins were occupied by andesitic to dacitic volcanic and volcaniclastic sequences of the Icanche and Cinchado formations, as well as by underlying red continental detrital deposits of the Tolar and Tambillo formations (Charier et al., 2007). To the south of Antofagasta, equivalent units are related to calderas and domes including (from north to south) the volcanic-plutonic complexes at Pampa Lorca, Sierra Jardín, El Salvador, Cachiyuyo, Carrizalillo, Lomas Bayas, El Durazno and Bellavista (Rivera & Falcon, 2000), amongst others. Some of these structures were later reactivated, such as the El Salvador caldera (65-58 Ma) where northwest, west-northwest and northeast faults were re-used for the development of the El Salvador Cu-Mo-Au porphyry system in the middle Eocene (44-41 Ma), according to Cornejo et al. (1997). This magmatic and tectonic reactivation is related to the Incaic, or Incaic II or main Incaic Phase (Charrier et al., 2007), a compressive tectonic event in the middle Eocene-early Oligocene (45-33 Ma) responsible for the (re-)generation of the Domeyko fault system and the related-emplacement of major porphyry Cu-Mo-Au and Cu-Mo systems, including some of the world's largest copper mines, in the north of Chile (Mpodozis & Cornejo, 2012).

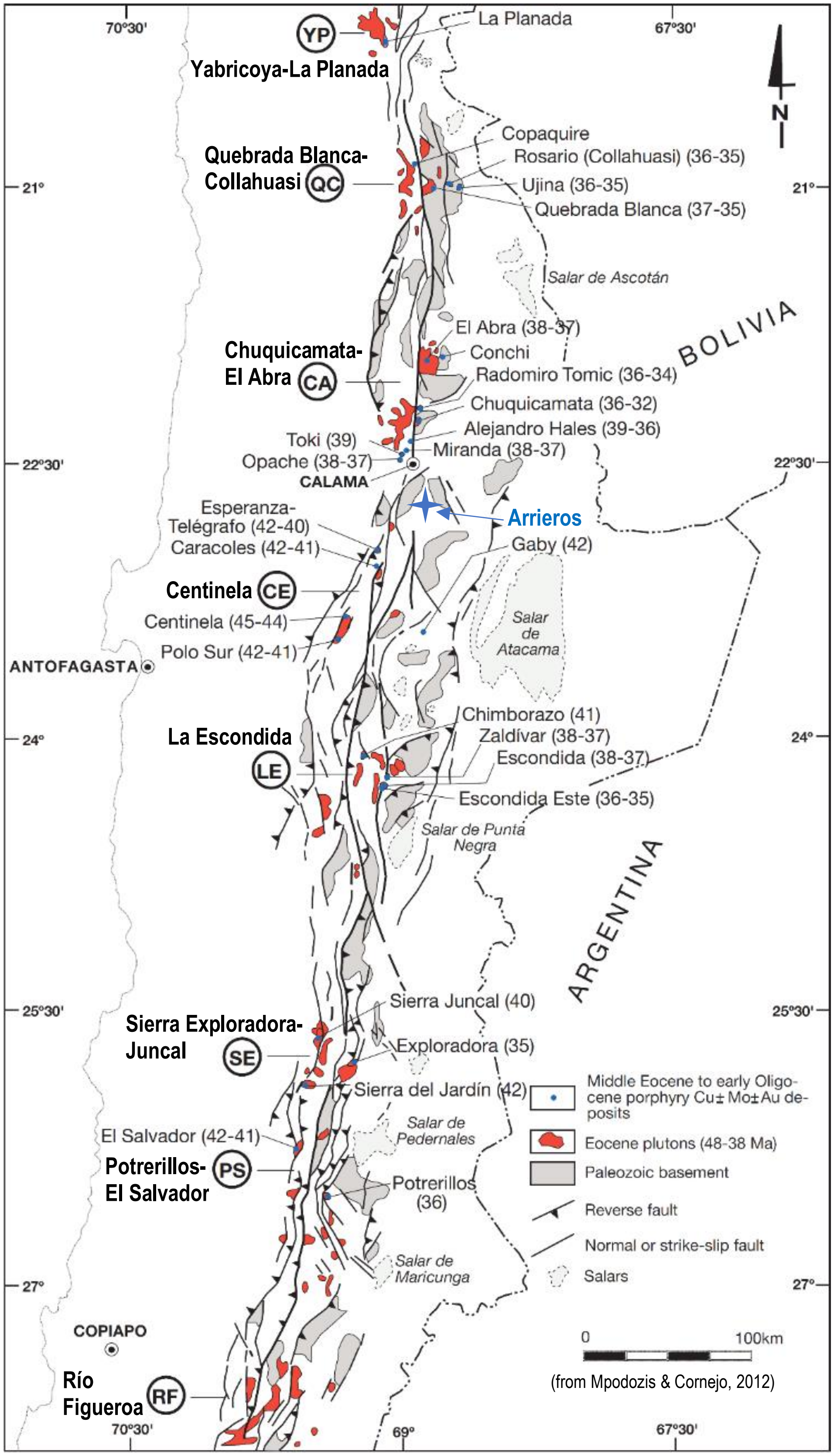
The Domeyko fault system is a generalized north-south, >1,000 km long (20° to 27° S) and 40-60 km wide zone of deformation which exposes basement blocks (Figure 24). It is a complex sub-parallel array of strike-slip, normal, and reverse faults, together with thin- and thick-skinned folds and thrusts, extending along the Cordillera de Domeyko in northern Chile (Mpodozis & Cornejo, 2012). Evidence for both left- and right-lateral displacements, including reversals in the sense of shear, has been reported along different parts of the fault zone. It was exhumed between 50 and 30 million years ago, in association with surface tectonic uplift and profound erosion, a time that immediately precedes and overlaps with the emplacement of giant porphyry copper deposits (Maksaev & Zentilli, 1999). The erosional products of the uplift, including exotic copper deposits, were accumulated in syn-tectonic basins east and west of the area of deformation. Clockwise rotations in the north of Chile coincide with this event of deformation.

Incaic Phase deformation along the Domeyko fault zone correlates well with a peak of high convergence rates associated with a considerable reduction of convergence obliquity between oceanic and continental tectonic plates at approximately 45 Ma (Charrier et al., 2007). Although some traces of the Domeyko fault zone could be inherited from the marine Mesozoic basin, the system was possibly generated where a thermally weakened domain was nucleated along the Eocene-Oligocene magmatic arc. Its activation seems also related to the generation of the Arica elbow or Bolivian orocline (Mpodozis & Cornejo, 2012), which explains the clockwise rotations (Figure 25).

Six porphyry Cu-Mo belt are distributed in Chile, Argentina and southern Peru (Camus, 2003), from the Carboniferous to the Pliocene. The oldest associated with the Gondwanic tectonic cycle, while the remaining five developed during the Andean tectonic cycle.

7.2. Local geology

The Arrieros property is geologically located within the Sierra Limón Verde (SLM), a north-south tectonic block well known since the publication of the Calama regional geology (Marinovic & Lahsen, 1984) that integrated several studies in the area. The SLM geology is dominated by a group of coarse-grained intrusions (Figure 26), known as the Limón Verde Intrusive Complex (LVIC), composed of granites, granodiorites, tonalites and diorites of Carboniferous-Permian age according to Marinovic & Lahsen (1984). Recent studies indicate that the complex is made up of at least two events; one Lower Carboniferous or Mississippian of 325-322 Ma and another Upper Carboniferous-Lower Permian of 300-287 Ma (Morandé, 2014). The first has discrete outcrops and predominates towards the south of the SLM, in Cerro Esperanza and Llano Quenante, where it is composed of rhyolitic porphyries, syeno-granites and syenites. The later event dominates the SLM geology, where Morandé (2014) distinguished diorites, tonalites and rhyolitic porphyries to the north, monzo-granites and diorites to the south, and granodiorites and bimodal complexes to the west.



(from Mpodozis & Cornejo, 2012)

Figure 24. Main traces of the Domeyko fault zone, Paleozoic terrains and Eocene intrusions

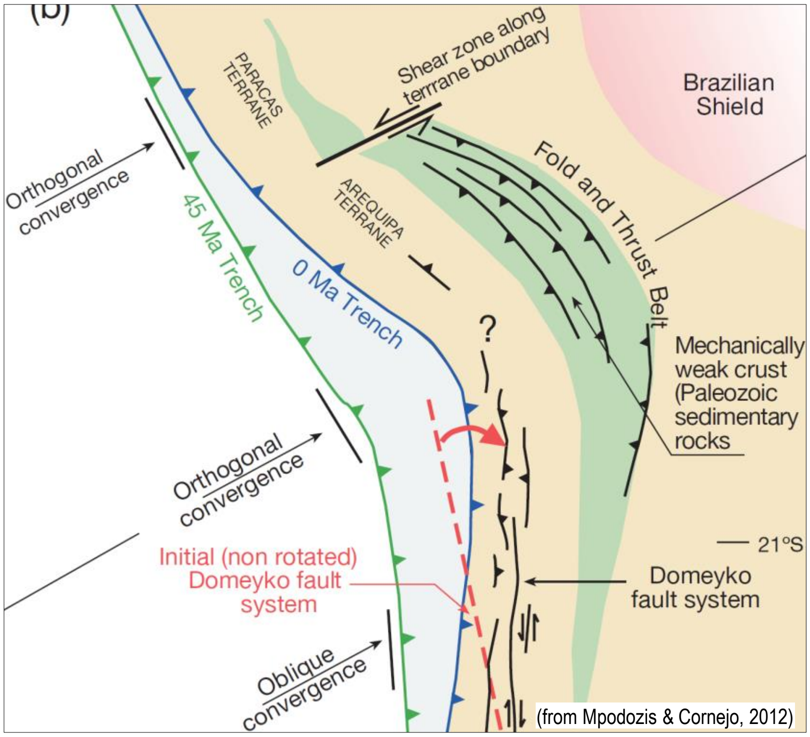


Figure 25. Convergence course and strike-slip movements along the Domeyko fault system

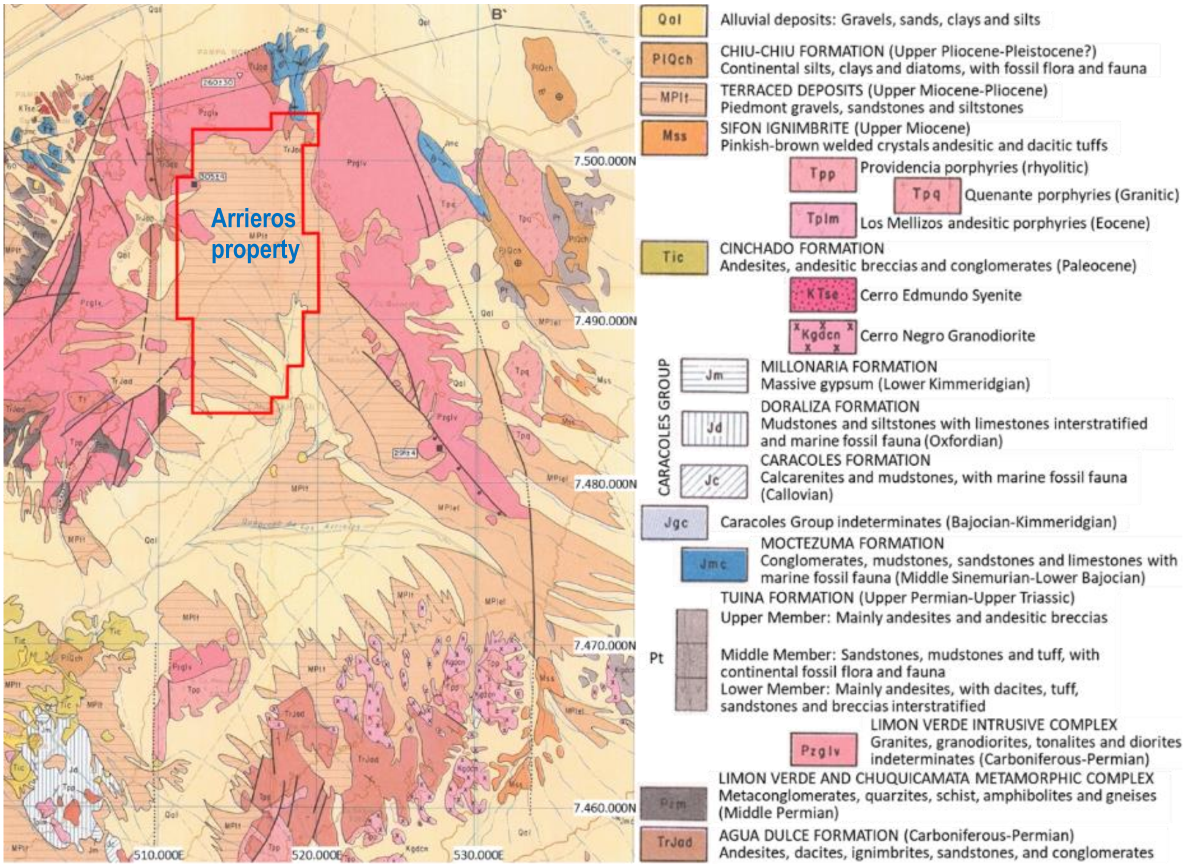
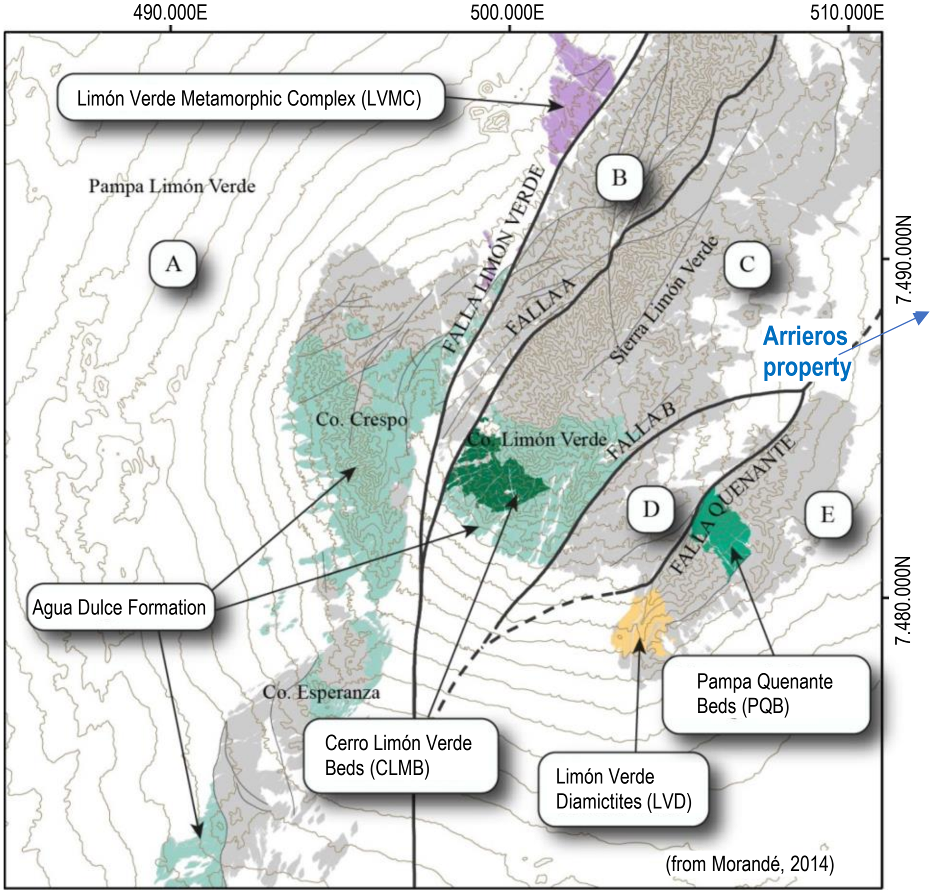


Figure 26. Geology of the Sierra Limón Verde area (modified from Marinovic & Lahsen 1984)

In the Sierra Limón Verde area itself, to the west of the Arrieros property, the LVIC is in intrusive and fault contact with a series of sedimentary, volcanic and metamorphic rock sequences. These correspond to the Limón Verde Diamictites (Upper Proterozoic?), Pampa Quenante Beds (Devonian-Carboniferous?), Cerro Limón Verde Beds (Devonian-Carboniferous), Agua Dulce Formation (Carboniferous-Permian) and Limón Verde Metamorphic Complex (Middle Permian), partially described by Marinovic & Lahsen (1984) and studied in detail by Morandé (2014) (Figure 27). Diamictites outcrop at the southern end of the SLM, as a roof-pendant of metasedimentary rocks composed of 1,500 m of matrix-supported conglomerates and sandstones affected by a spaced foliation parallel to bedding, east-west to northeast oriented and vertical to strongly dipping to the southeast. Radiometric ages based on detrital zircons indicate a maximum of ~1064 Ma, suggesting a Grenvillian source and deposition between the Neoproterozoic and Carboniferous (Morandé, 2014).



(from Morandé, 2014)

Figure 27. Stratified and metamorphic units and structural domains of Sierra Limon Verde

The Pampa Quenante Beds are composed of quartziferous meta-arenites, some amphibole-rich schist lenses and calcareous meta-arenites, affected by a high degree of recrystallization and well-developed foliation, trending north-south and dipping 60°E. Radiometric dating of detrital zircons suggests that the siliciclastic sequence was deposited during the Devonian-Carboniferous and derived from an Ordovician source (Morandé. 2014). Equivalent results were obtained for the Cerro Limón Verde Beds, a folded metasedimentary sequence of quartz-arenites, matrix-supported conglomerates, volcaniclastic sandstones, siltstones and mudstones, unconformably overlain by felsic volcanic rocks of the Agua Dulce Formation (Morandé, 2014).

Two U-Pb (zircon) ages were obtained by Morandé (2014) in the Agua Dulce Formation in the southern part of the SLM; namely 298.91 + 5.1 / -4.8 Ma and 301.42 + 4.20 / -4.20 Ma at the Carboniferous-Permian boundary. The unit is described as a 1,500 m sequence of dacitic tuffs, rhyolitic pyroclastic breccias, rhyolitic porphyries and andesitic to andesitic-basaltic porphyries, in intrusive and fault contact with Permian and Carboniferous plutons.

Finally, the Limón Verde Metamorphic Complex (LVMH) is composed of schists and amphibolites, which constitute a north-northeast belt 7.5 km long and 1.5 km wide on the west flank of the Limón Verde fault (Figure 27). It is in contact with Carboniferous-Permian granodiorites and bimodal complexes of the LVIC to the east, while to the west it is covered by Miocene sequences (Morandé, 2014). The unit was formed from psamo-pelitic and intraplate basaltic protoliths (Soto, 2013), affected by high pressures and high temperatures at 20-70 km depth with a metamorphic peak at 280-270 Ma (Middle Permian).

To the north, northwest and northeast, granodiorites of the LMIC are covered by continental-transitional to marine rocks of the Early Jurassic Moctezuma Formation. The sequence is composed of conglomerates, mudstones, sandstones and limestones, from which marine fossil fauna indicates Sinemurian-lower Toarcian ages (Marinovic & Lahsen, 1984). Regionally, this unit underlies the Cerritos Bayos Formation to the west and the Caracoles Group to the south and is possibly located at the eastern border of the marine back-arc basin developed during the Early Jurassic-Early Cretaceous in the north of Chile. The unit is arranged in a north-south to northwest direction, and dips between vertical or gently to the south, which is due to the development of folding related to the Peruvian compressive tectonic phases in the Upper Cretaceous (86-83 Ma), K-T event in Cretaceous-Paleocene boundary (65-62 Ma) and Incaic Phase in the Eocene-Oligocene (45-34 Ma).

The Permian-Middle Triassic Tuina Formation outcrops to the northeast (Henríquez et al., 2014), possibly under the Moctezuma Formation. This consists of andesites with some intercalations of dacites, sandstones and breccias in a Lower Member; sandstones with red tuffs, mudstones, conglomerates and calcareous arenites inter-bedded in a Middle Member; and andesites, volcanic breccias, basaltic andesites, rhyolites, crystals and lapilli tuffs and some interstratified red sandstones and conglomerates in an Upper Member. The Tuina Formation is part of the pre-Andean Tectonic Cycle, an extensional period with north-northwest to north-west rift basins developed along the continental margins of Gondwana (Charrier et al, 2007). The Tuina area contains sediment-hosted Cu-(Ag)-(Mn) deposits.

A volcanic-sedimentary sequence of andesites, andesitic breccias and conglomerates of Paleocene age and described as Cinchado Formation (Marinovic & Lahsen, 1984), outcrops to the south of Arrieros and up to the Esperanza mine area. A widespread bimodal Paleocene-Early Eocene unit of andesitic to dacitic lava flows and pyroclastics rocks, including rhyolitic tuffs (Perelló et al., 2004), occurs. This volcanic column was developed in a series of north-south extensional basin, latter inverted during the main Incaic tectonic phase and the emplacement of the supergiant Eocene-Oligocene porphyry Cu-Mo-Au/Cu-Mo systems of the Cordillera de Domeyko belt.

Upper Cretaceous-Eocene granitic, andesitic and rhyolitic porphyries, and granodioritic stocks to the southeast affecting the Agua Dulce Formation, are possible predecessors of mineralizing events. All rock types are partially overlain by a thin to deep column of unconsolidated Oligocene-Recent deposits, including the polymictic piedmont gravels and gypcretes of the Tambores Formation (Perelló at al., 2004).

North-south, north-northeast, northeast, north-northwest and northwest faults of the Domeyko system crosscut the area and delineate basins and blocks where some of the described units are in tectonic contact. The Limón Verde and Quenante faults to the west of Arrieros are probably branches of the Centinela system, which to the south is connected with the sinistral transpressional Sierra de Varas and Escondida faults (Mpodozis & Cornejo, 2012). Mpodozis et al. (1993) noted that these structures do not extend north of Sierra Limón Verde and, that the West Fissure Fault System has no clear continuation south of the same geographical feature. Sierra Limon Verde is one of the highest topographic (3500 m.a.s.l.) levels of the Precordillera, consisting almost exclusively of basement rocks limited to the northwest by subcircular faults trending north-northeast to northeast. The displacement to the north of Precordillera segments during the Incaic deformation event was bounded by this rigid buttress, transferring deformation to the east through discreet clockwise rotation of Paleozoic blocks and developing local extensional basins. It exhibits the shape of a north-plunging basement half dome (Mpodozis & Cornejo, 2012).

7.3. Property geology

The geology of Arrieros is extracted from that carried out by Newmont for the Montezuma project (Melgar, 2017). The property largely outlines an area of modern clastic coverage (Figure 28), which is considered part of the Upper Miocene-Pliocene Terraced Deposits unit described by Marinovic & Lahsen (1984). It is made up of coarse grain and matrix-supported unconsolidated breccia and conglomerate clastic accumulations, cemented by gypsum. Where cemented by gypsum, these have been described as "caliche", but it would be an incorrect term due to the predominant lack of calcareous components. The composition of clasts suggests a granitic, dacitic, rhyolitic and andesitic provenance. The presence of gypsum could be related to capillary action due to the weathering of underlying sulphur-rich rocks, which suggests that the clasts and or subsoil rocks have been affected by hydrothermal alteration and at least pyritic mineralization. The clastic column at depth, could include other unconsolidated deposits such as the Tambores formation and Miocene ignimbritic flows, as in other similar basins.

At the northern and western edges of the Arrieros property, Newmont geologists recognized granitic rocks from the Carboniferous-Permian Limón Verde Intrusive Complex (LVIC). The granites occur as stocks and dikes of pinkish-orange colour, showing a coarse grain equigranular texture with K-feldspar and quartz dominant, plagioclase, lesser biotite and subordinate hornblende. An alteration map made by Newmont geologists and described by Melgar (2017), indicates these rocks are affected by chlorite-sericite, “patches” of QSP (Quartz-Sericite-Pyrite) alteration and isolated occurrences of green-clay. However, according to the geology released by Revelo, these alteration types might be better described as porphyry-type intermediate argillic alteration, including selective green smectite-illite, low-crystallinity fine grain white mica or illite, some carbonate and quartz-carbonate veins, weak chlorite, hematite and scarce goethite after pyrite.

In the northwest, granites are spatially related with granodiorite and tonalite facies of the LMIC, which constitute the predominant rocks in that sector (Melgar, 2017). Here, that unit is related to "enclaves" of quartz monzonites, microgranites, diorites and granites. In addition, in this sector the granodiorite-tonalite domain cuts and is in contact across a north-south fault with rhyolitic flows of the Agua Dulce Formation. The rocks are mainly affected by chlorite-sericite alteration, including some “patches” of QSP, chlorite and propylitic alteration (chlorite–epidote ±carbonates ±magnetite ±pyrite) associations according to Melgar (2017). Some of these, such us chlorite and some propylitic, were described as related to regional metamorphism by the Newmont geologists. Information from Revelo indicates weak propylitic (chlorite-epidote-sphene-specularite) and "patches" of intermediate argillic (illite-smectite-carbonate-quartz) in north-south and west-northwest structures.

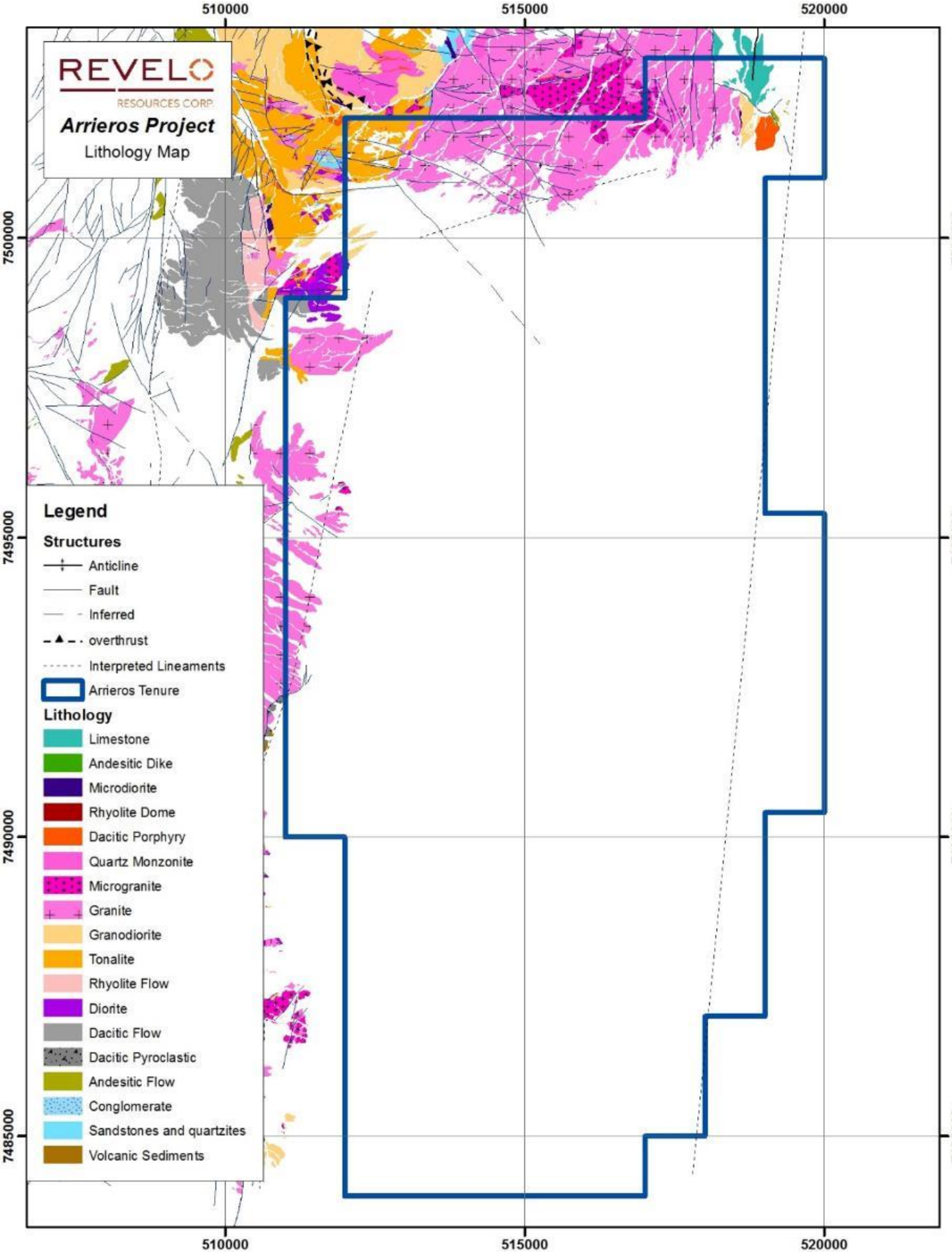


Figure 28. Geological map of the Arrieros property (taken from Melgar, 2017)

Discrete outcrops of siliciclastic rocks have been identified to the north of the Arrieros property, between the granitic intrusive domain to the east and the granodioritic-tonalitic to the west (Figure 28). These are comprised of conglomerates, sandstones and quartzites, which were included in the Devonian-Carboniferous Cerro Limón Verde unit. Rocks displaying siliceous hornfels occur due to a certain degree of metasomatism.

Calcareous rocks of the Moctezuma Formation (Lower Jurassic) are exposed at the northeast vertex of the property. The sedimentary column is placed in contact by faulting with granites, granodiorites and a dacitic porphyry of the LMIC. To the northwest, the sequence transgressively overlies the intrusive Carboniferous-Permian unit. These rocks are affected by some grade of recrystallization.

Thick north-south veins of carbonates (siderite-ankerite-kutnohorite) cut the calcareous rocks at the northeast vertex of the Arrieros property, where they contain some copper oxides occurrence as evidenced by the presence of historic artisanal workings.

The Arrieros property is cut by some northwest faults and lineaments (Figure 28), probably related to a normal fault system recognized to the southeast between the Llano Quenante and Llano El Quimal (Marinovic and Lahsen, 1984). These control a Sierra Limón Verde basement block to the northeast, while to the southwest they delimit a modern subsiding basin, which further west is part of the Llano Quenante and Arrieros pampa.

Along the western margin and southwest vertex of the property, some traces of north-northeast to northeast fault systems can be observed. These, also with some similar faults at the northeast vertex of Arrieros, are probably part of the Centinela and El Toro systems that are important controls on the Centinela district porphyry copper deposits to the southwest. The easternmost El Toro fault uplifts basement to the east on Jurassic marine calcareous (Caracoles Group) and volcanic (Cinchado Formation) rocks to the west. The Centinela system develops duplex arrays that control monzo-dioritic to granodioritic stocks and mineralized dacitic porphyry intrusions at Esperanza-Telégrafo/Centinela-Polo Sur (Mpodozis et al., 2009) within the Centinela District.

On the eastern edge of the property, Revelo recognized a north-northeast lineament that further south correlates with a set of north-south faults mapped in the Cerro Providencia and Cerro El Bordo area (Marinovic & Lahsen, 1984; Mpodozis et al., 1993a). Likewise, this coincides with the north plunging axis of the Sierra Limón Verde basement dome proposed by Mpodozis & Cornejo (2012) to explain the clockwise block rotation in the region.

7.4. Property mineralized zones, host rocks, control and extents

Direct evidence of mineralization has not been reported for the Arrieros property.

During the technical visit to the project site, an approximate area of 150 x 150 m with small mineral occurrences including copper oxides was observed at the northeast corner of the property (Appendix 3). These consist of a series of historic surface workings made by artisanal prospectors (Picture 5), and have not been rock sampled in recent times. Evidence for copper oxides occur associated with thick north-south carbonate structures hosted in Jurassic calcareous rocks, which are located close to a north-northwest lineament at the contact between these rocks and Paleozoic basement. It is not the objective of this report to describe these mineral occurrences in depth, but it is highly recommended that they be studied in detail to define their meaning and prospective value.

Picture 5. Surface digs with copper oxides at the northeast vertex of Arrieros

The rock geochemical database indicates that four samples collected by Newmont geologists reached contents of 0.127-0.415% Cu, located at the northeast vertex of the Arrieros property, about 1.3 km west-northwest of the previously described zone. The values are significant and suggest the presence of visible copper minerals. However, there are no detailed descriptions of those occurrences and samples.

The mentioned four copper values have spatial relationship with four samples that reached contents of 142-486 ppb Au. One sample contains 171.5 ppm Mo, which is considered very anomalous and of ore-grade magnitude. The samples are distributed over an approximate area of 600 x 600 m, which was not described in detail or drill-tested by Newmont. Evidence of quartz-tourmaline structures were observed in the area during the inspection of the project site, but more field work and details will be required to define its prospective interest in the context of the Arrieros property and the imminence of future exploration works.

8. DEPOSIT TYPES

8.1. Deposit type explored

Arrieros has seen limited exploration for porphyry copper systems by predecessors Newmont and Polar Star, as well as by other companies that have controlled the property in the past. Future exploration should continue with a similar objective. However, because the Arrieros property consists of an area obscured by post-mineral cover materials, and is mainly without rock outcrops, indirect exploration techniques must be considered.

The Arrieros property is located along the Eocene-Oligocene porphyry copper belt of northern Chile, between the Esperanza deposit and mine (Antofagasta Minerals Centinela district) to the south and the Chuquicamata deposit and mine (CODELCO Chuquicamata division) to the north, in one of the most fertile segments of the Domeyko fault system. The geological models of these two closest well-known porphyry deposits are commonly taken into account by the companies that explore in the belt and, therefore, they represent a public and very low-cost indirect exploration tool. Its mere use does not ensure discovery.

Although the Chuquicamata and Esperanza deposits are located along the same belt, they are separated by an approximate straight line distance of 70 km, and both deposits have geological differences such as volume and mineral grade, age, mineralogy, structural control, host-rock and others which are described below. Some of these characteristics could be present in Arrieros, mainly concealed and some perhaps subexposed.

The author highly recommends using a mineral deposit model, which can be very useful to understand the information generated by exploration activities. The diagrams presented below are highly summarized examples taken directly from the available literature, so they can be improved, and other alternatives might also be considered. Paleocene examples such as Spence and Sierra Gorda, to the west, are recommended to be not considered for now because the regional and district information indicate the property is in the Eocene-Oligocene porphyry belt. Increasingly, machine-learning techniques are being used to manage, interprets and value exploration information, and might be considered for Arrieros.

8.2. Chuquicamata

The following summary of the Chuquicamata geology is based on the model presented by Ossandón et al (2001) and the references therein. About 2,035 Mt averaging 1.54 % Cu has been mined from the Chuquicamata, and some 6,450 Mt at 0.55 % Cu remains in the main orebody. The total geologic resource is estimated in 64,1 Mt Cu. Chuquicamata is part of a porphyry complex that extends along ~ 30 km of the West Fissure fault (Figure 29), and located to the east of that regional discontinuity. The porphyry complex includes the Chuquicamata Norte and Radamiro Tomic porphyry systems, at the intersection with the north-northeast Mesabi fault. The West Fissure controls the contact between a basement block to the east, including the Este and Mesa granodiorites, the Agua Dulce Formation and an Igneous-Metamorphic Complex, and to the west the Eocene-Oligocene Los Picos Diorite and Fortuna Granodiorite, the Eocene Arca Formation and the Jurassic Caracoles Group.

Chuquicamata is a 3.5 km long by 0.5-1.0 km wide and possibly 2 km deep porphyry Cu-Mo system, highly anomalous in arsenic (As) and zinc (Zn), mainly hosted by the Chuqui porphyry complex (East, Fine Texture, West and Banco porphyries). This is composed of ~2 mm average porphyry texture of subhedral plagioclase, quartz, K feldspar, biotite and hornblende phenocrysts in a fine grain to aplitic groundmass of quartz, K feldspar and biotite with sphene and magnetite as accessories. The earliest East porphyry, the main host rock to mineralization, is coarser grained than the less mineralized late porphyritic Banco porphyry. In the north central portion of the mining open pit, euhedral K feldspar mega crystals up to 2 cm occur. The predecessor o early intrusive (Fortuna Intrusive Complex including Fiesta Granodiorite, San Lorenzo granodioritic porphyry, and Tetera aplitic porphyry) contains only low-grade mineralization. All the oldest rocks along the east edge of the open pit are essentially barren.

A large proportion of the copper mineralization at Chuquicamata is contained in veins and veinlets, as typically occurs in porphyry systems, which have been opened and mineralized more than once. Early-stage veinlets of quartz and quartz-K feldspar are barren or contain only very minor sulphide. These are cut by 5 cm wide quartz veins containing minor molybdenite and traces of chalcopyrite, which in turn are truncated by the 1 m wide "blue" veins with abundant molybdenite. The main-stage veins and veinlets contain pyrite, chalcopyrite, bornite, and digenite, with the earliest of these being mainly pyritic, where the presence of quartz is less and the halos of sericitic alteration increase. Late main-stage veins contain enargite ± pyrite and minor sphalerite, and the latest veins contain coarse grained covellite (to 1 mm) and digenite with and without pyrite. A paragenetic sequence in terms of A, B and D veins has not yet been widely accepted.

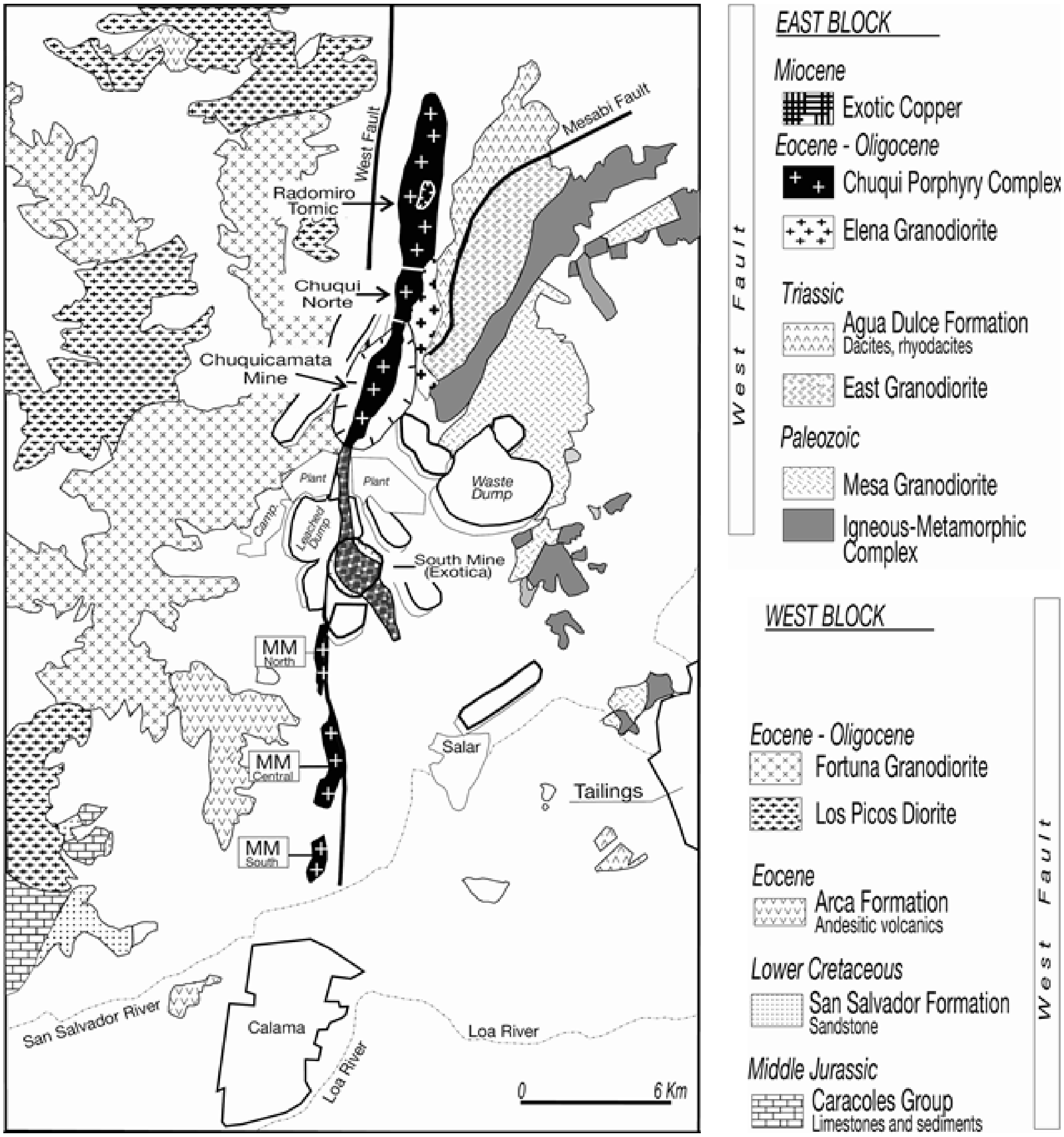
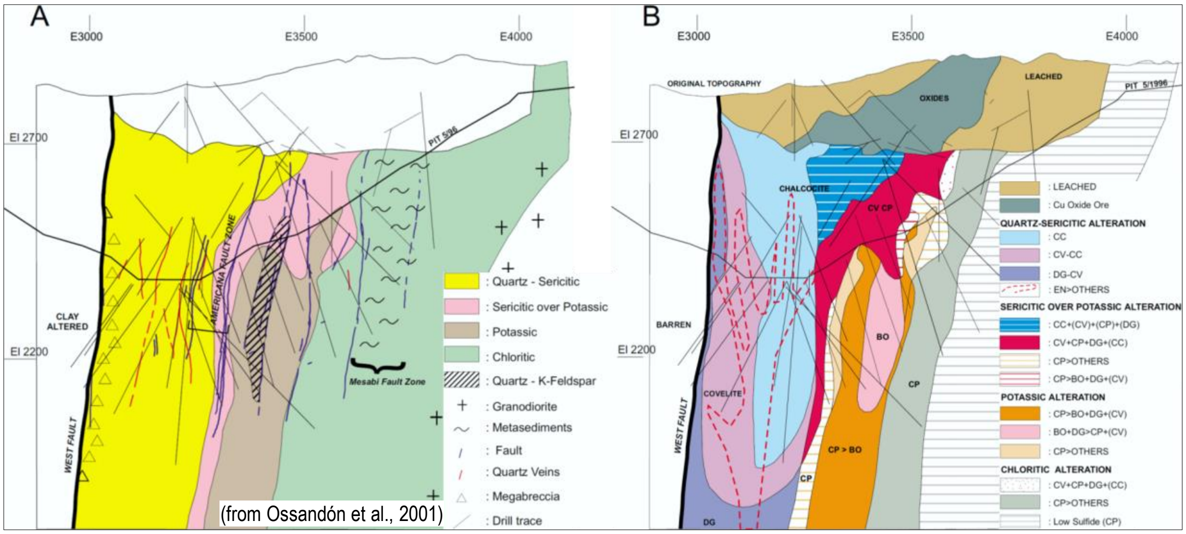


Figure 29. Major geologic units of the Chuquicamata district (from Ossandón et al., 2001)

The Chuquicamata leached capping and most of the pre-existing oxide ore have been mined after about 100 years of uninterrupted mining operations. Primary sulphides are now exposed, where pyrite is abundant and widespread due to its relationship with the main mineralisation event. Supergene chalcocite and covellite are still present and remain as strong supergene enrichment minerals at depth, associated with intense sericitic alteration in the central and southern parts of the pit. Abundant hypogene chalcocite (including djurleite and digenite) and covellite also occur at depth. Enargite defines a dominant copper sulphide zone close the West Fissure fault (Figure 30).



(from Ossandón et al., 2001)

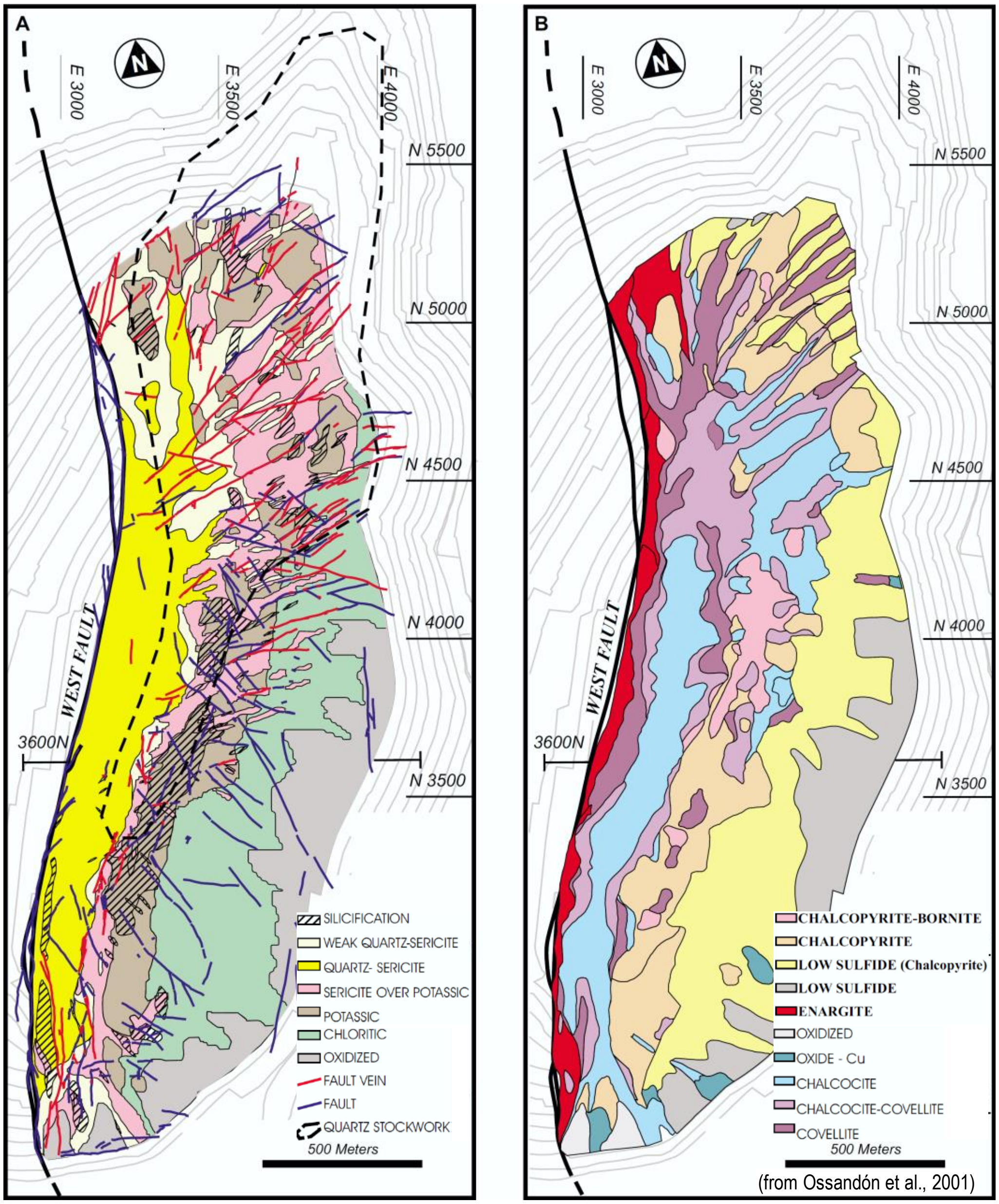
Figure 30. Alteration and mineralisation east-west 3600-N Sections of Chuquicamata

K feldspar, quartz and K feldspar-quartz veinlets, secondary biotite in veinlets and biotite replacing hornblende phenocrysts, with anhydrite variably hydrated to gypsum, defines the earliest potassic event of alteration and mineralization. Quartz and quartz-K feldspar veins carry mostly no sulfide or minor disseminated molybdenite-chalcopyrite, while the K feldspar-biotite domains contain sparse disseminations of chalcopyrite-bornite. A quartz-K feldspar zone across the potassic zone has been described as KSil (or silicification). It is a white-grey steeply dipping west domain trending 20°E and distributed along a 2 km long x 200 m wide x 500 m deep zone. Chalcopyrite-bornite without pyrite is the dominant in the potassic zone, first one predominant over the second. The quartz-K feldspar zone coincides with bornite-digenite-chalcopyrite, the centre of early-stage sulphide zonation.

Propylitic associations including chlorite-epidote-specular hematite are superimposed on the eastern edge of the potassic alteration zone (Figure 31). Specularite veinlets cut biotite-magnetite-chalcopyrite veinlets and are cut by chalcopyrite-pyrite veinlets. The abundance of sulphide decreases within the chloritic/propylitic zone to less than 0.5 volume percent, but pyrite is still subordinate and there is no a pyritic halo as occurs in other porphyry deposits.

Molybdenite is important at Chuquicamata, mostly disseminated in quartz veins. Some < 1 cm wide veins cut early-stage quartz and quartz-K feldspar veinlets. The 0.5-1 m thick “blue” quartz-molybdenite veins, where molybdenite is very noticeable, are late and commonly banded due to shearing of originally coarse-grained quartz that produced concentrations of molybdenite. Pyrite-sericite main-stage veins cut quartz-molybdenite veins.

Quartz-sericite alteration, accompanied by pyrite of the main stage of mineralization, obliterates the early assemblages at the western side of the ore deposit along the West fault (Figure 27). Sulphide veins of pyrite with varying proportions of quartz, Cu-Fe sulphides (bornite and chalcopyrite), enargite, tennantite and sphalerite show typically sericitic alteration halos. This event cuts quartz-molybdenite veins and is analogous to “D” veins described in other porphyry deposits. Principal vein assemblages are pyrite-chalcopyrite-bornite, pyrite-bornite-digenite ± enargite, and pyrite-digenite-covellite ± enargite. Pyrite is the only sulphide in some veinlets and enargite-pyrite veins are dominant within much of the quartz-sericite zone and along a brecciated band alongside the West Fissure fault. In this zone, pyrite is >3.5% by vol based on Fe assays. The sequence appears to be pyrite-chalcopyrite-bornite → pyrite-bornite-digenite → pyrite-digenite-covellite, with enargite deposited relatively late. This sulphide was observed during early operational stages at the northeast uppermost part of the ore deposit. Chalcocite, digenite, and covellite, along with pyrite and enargite, are the dominant sulfides in the western part of the orebody, with secondary chalcocite extending to the greatest depth. Fine-grained covellite increases relative to chalcocite downwards, although relatively coarse grained covellite with digenite and locally anhydrite is clearly hypogene at depth. Primary covellite, without presence of pyrite and associated with digenite, some anhydrite and red hematite, with anomalous values in zinc relate to sphalerite, is part of a late event.

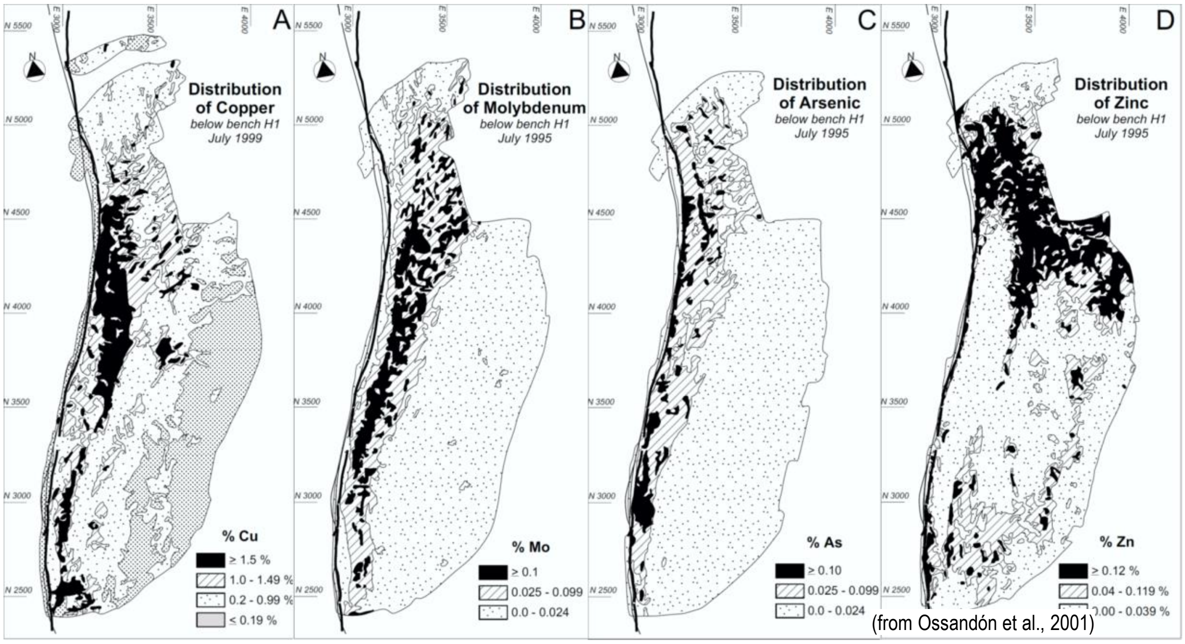


(from Ossandón et al., 2001)

Figure 31. Alteration and mineralization units of the Chuquicamata pit area in 1995

Alunite also occurs locally with pyrite-enargite mineralization. Sphalerite is common in many veins with enargite, including some veinlets that may contain covellite-digenite, associated with late formed northwest structures. Minor tennantite occurs with pyrite-chalcopyrite. Local magnetite has been described together with albite-chlorite alteration, as well as associated with chalcopyrite in the veinlets at the of the Fiesta and San Lorenzo porphyries.

Figure 32 shows copper, molybdenum, arsenic and zinc distribution at the 2697 m elevation in the Chuquicamata open pit in 1995. The contents vary widely between mineralized and non-mineralized zones, which can be very useful to understand the results of the initial exploration of covered porphyry systems. Copper and molybdenum ore-grade values are concentrated close to the western fault, distributed in a 200-500 m wide belt. The zinc shows a preferred concentration to the northeast, clearly peripheral to the main mineral zone.

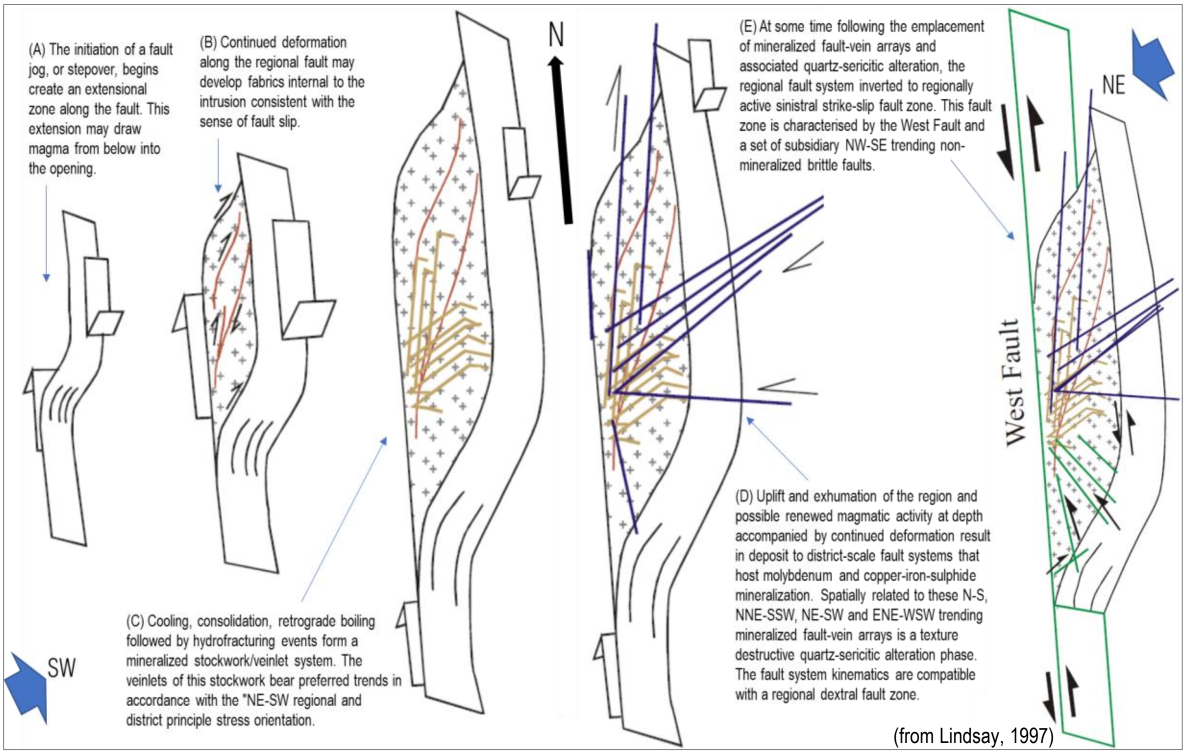


(from Ossandón et al., 2001)

Figure 32. Copper, molybdenum, arsenic, and zinc distribution at open pit 2,697m level

Ossandón et al. (2001) conclude that an age of 31.1 ± 0.2 Ma (40Ar/39Ar, sericite) is consistently indicated for the main stage of mineralization at Chuquicamata porphyry deposit. Biotite and feldspar from the potassic alteration zone yield 40Ar/39Ar ages of 35-34 Ma. A Re-Os age of 34.9 ± 0.17 Ma was obtained in molybdenite from the typical blue quartz vein. U-Pb dating indicate ages of 36-35 M for single grain zircons from the East porphyry. ELA-ICP-MS dating of zircon from the intrusive units reveal preliminary 34.8 ± 0.3 Ma for the East Porphyry, 33.3 ± 0.3 Ma for the West Porphyry, and 33.4 ± 0.4 Ma for the Banco Porphyry. Apatite fission track dating and track length modelling indicate that probably 4 to 5 km of overlying rock were eroded during the exhumation of the Chuquicamata block between 50 Ma and 30 Ma. Fission track dates in apatite within the deposit yield an age of 30 Ma indicating fast cooling. K-Ar dating of alunite estimates the age of supergene enrichment and supergene alteration at 19 to 15 Ma.

Lindsay (1997) proposed that the Chuquicamata complex intruded a dextral strike-slip deformation environment, with the principal maximum stress axis oriented approximately NE-SW. Chuquicamata likely had a fault-controlled emplacement, with the bounding fault systems, the Mesabi and West Fissure faults, have assisted in creating an environment for magma emplacement implying their existence at least by the time of the porphyry development. An initial jog or step-over creates an extensional zone to promote magmatic emplacement (Figure 33), generating ductile conditions at the beginning and then brittle conditions consistently oriented according with the main stress directions. A rapid ascent and emplacement were required to reach upper crustal levels and to develop the porphyritic textures related to the porphyry system. The stress directions were maintained during cooling, consolidation and hydrofracturing, which favoured the development of mineralized stockworks oriented with the main NE-SW regional and district orientations. The area was affected by uplift and exhumation under dextral deformation, which possibly coincided with the development of phyllic alteration and its extensions at depth. Finally, the regional fault system changed to a sinistral strike-slip fault zone. It is possible that the West Fissure fault and the subsidiary structural systems were generated at this time.



(A) The initiation of a fault jog, or stepover, begins create an extensional zone along the fault. This extension may draw magma from below into the opening.

(B) Continued deformation along the regional fault may develop fabrics internal to the intrusion consistent with the sense of fault slip.

(C) Cooling, consolidation, retrograde boiling followed by hydrofracturing events form a mineralized stockwork/veinlet system. The veinlets of this stockwork bear preferred trends in accordance with the "NE-SW regional and district principle stress orientation.

(D) Uplift and exhumation of the region and possible renewed magmatic activity at depth accompanied by continued deformation result in deposit to district-scale fault systems that host molybdenum and copper-iron-sulphide mineralization. Spatially related to these N-S, NNE-SSW, NE-SW and ENE-WSW trending mineralized fault-vein arrays is a texture destructive quartz-sericitic alteration phase. The fault system kinematics are compatible with a regional dextral fault zone.

(E) At some time following the emplacement of mineralized fault-vein arrays and associated quartz-sericitic alteration, the regional fault system inverted to regionally active sinistral strike-slip fault zone. This fault zone is characterised by the West Fault and a set of subsidiary NW-SE trending non-mineralized brittle faults.

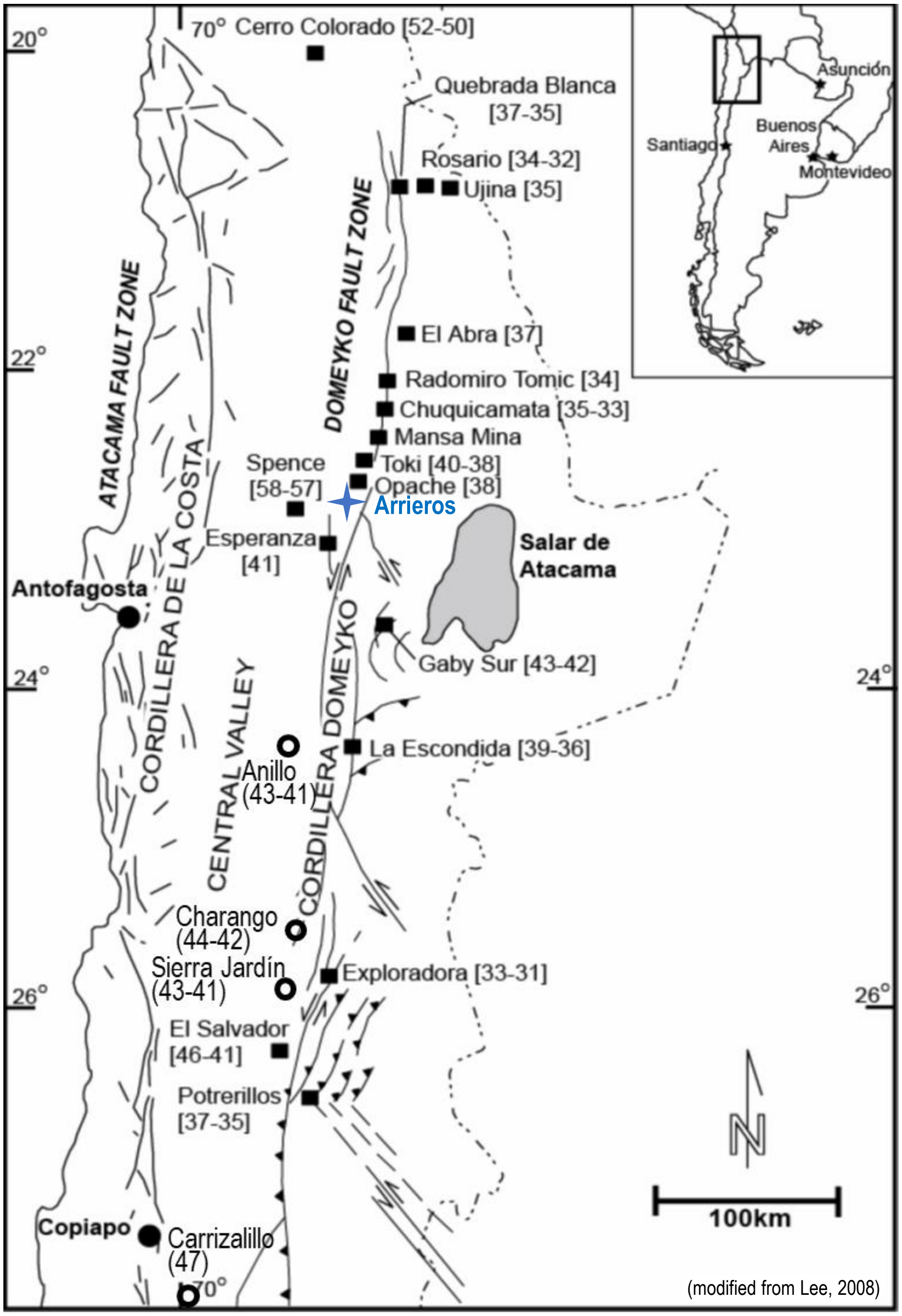
(from Lindsay, 1997)

Figure 33. Proposed tectonic emplacement for the Chuquicamata porphyry Cu-Mo complex

8.3. Esperanza

This summary about the geology of the Esperanza copper-gold deposit is based on Perelló et al. (2004), and references therein, with respect to the discovery of this porphyry system. Copper mineralization was partially exposed with evidence of small-scale mining that was explored by several companies between 1983 and 1992. The potential of the area was appreciated by Anaconda Chile SA in 1999, which with detailed geology, mineral zoning, terrestrial magnetometry and RC drilling (500-600 m) confirmed its discovery in May 2001. The statement of discovery at the time indicated 443 Mt @ 0.63% Cu + 0.26 g/t Au. Today, the Measured + Indicate (M + I) Mineral Resources Estimate (including Ore Reserves) at December 2019 for Centinela Concentrates (sulphides) are of 3023.4 Mt @ 0.41% Cu + 0.013% Mo + 0.14 g/t Au, plus 492.1 Mt @ 0.39% Cu for Centinela Cathodes (Tesoro – oxides), according to the 2019 Annual Report (Antofagasta, 2019).

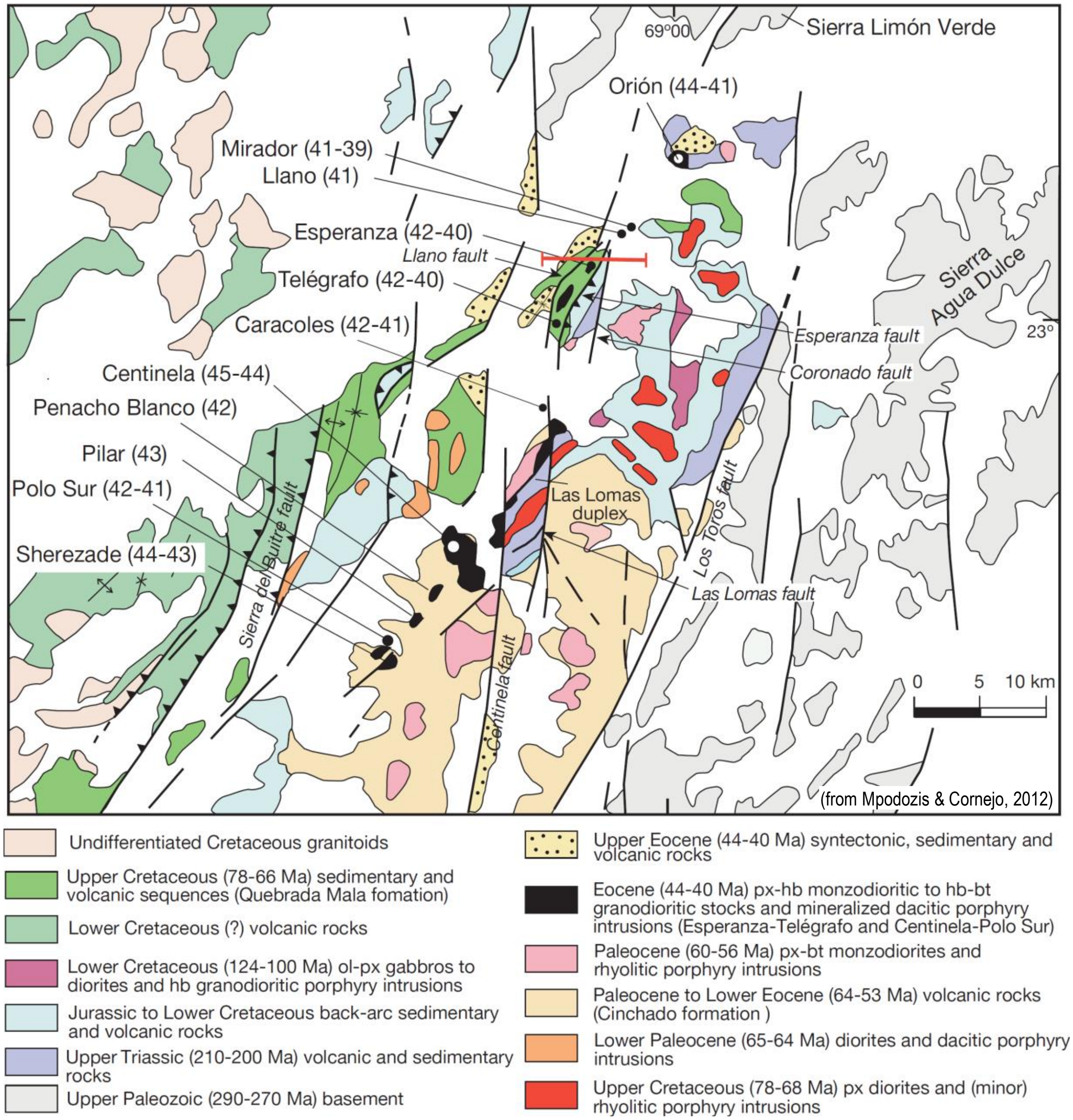
Esperanza is part of the Centinela district in the Pre-cordillera of Antofagasta, about 80 km to the south-southwest of Chuquicamata, in a segment of the Domeyko fault system. Geologic ages and ore compositions indicate that Esperanza is part of a Middle Eocene Cu-Au-Mo porphyry belt, which extends for about 500 km north-south between Esperanza in the north and the Carrizalillo (47 Ma) project in the south (Copiapó). It includes the Gabriela Mistral (43-42 Ma), El Salvador (46-42 Ma), Caracoles (42-41 Ma), Centinela (45-44 Ma), Polo Sur (42-41 Ma) and Sierra Jardín (43 -41 Ma) porphyries, in addition to the Anillo (43-42 Ma), Charango (44-42 Ma) and other projects at exploration stage (Figure 34).



(modified from Lee, 2008)

Figure 34. Middle Eocene and Eocene-Oligocene porphyry deposit and projects north Chile

The Centinela district comprises the Esperanza and the Tesoro (exotic copper oxides) mines, as well as a series of mineral deposits and exploration projects including Mirador, Llano, Telégrafo, Caracoles, Centinela, Penacho Blanco and Polo Sur (Figure 35). The geology is dominated by upper Tertiary unconsolidated to poorly consolidated sediments, composed of Quaternary alluvial and colluvial deposits and Miocene gravels with ignimbritic flow intercalations of the Tambores Formation. Additionally, Upper Paleozoic metamorphic, volcanic and intrusive rocks, as well as Mesozoic sediments and volcanics, and Lower Tertiary volcanic and intrusive units are observed.



(from Mpodozis & Cornejo, 2012)

Figure 35. Geology of the Centinela district and locations of operating mines and projects

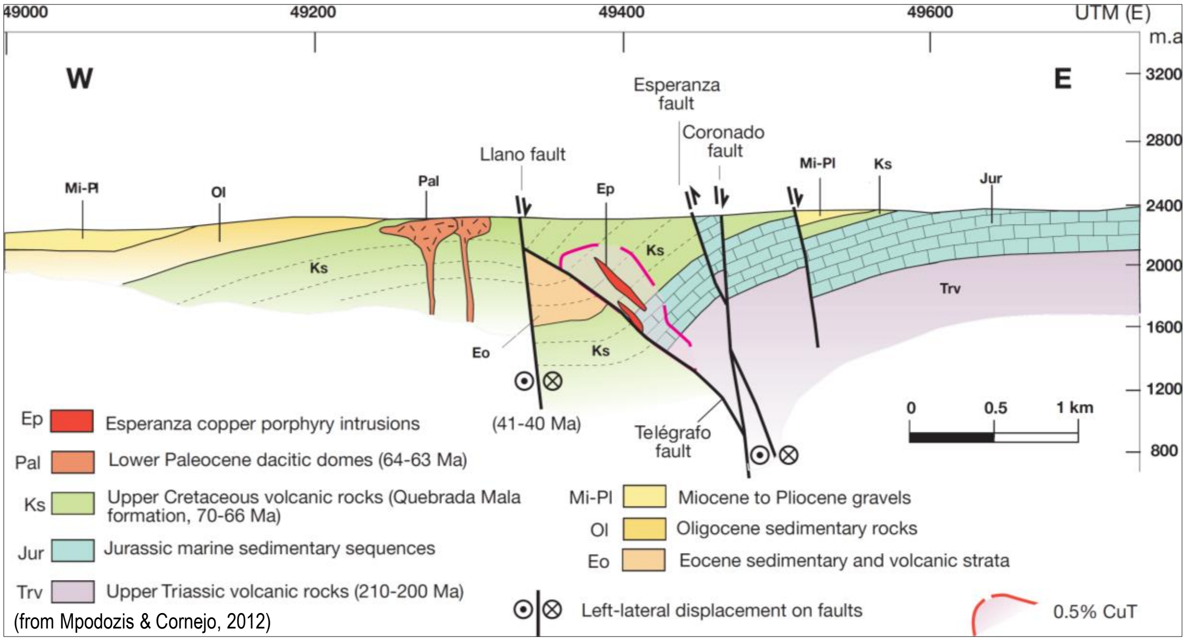
To the north and east, large structural blocks emerge consisting of Devonian-Carboniferous meta-sediments (Sierra Limón Verde area) and Carboniferous-Permian intermediate-acid volcanic and volcanoclastic rocks and sedimentary sequences (Peine Group, El Bordo

Strata and Cas Formation) and Upper Paleozoic granitoids (Limón Verde Intrusive Complex). The basement units, to the south, are overlain by Triassic-Jurassic volcanic and sedimentary sequences consisting of andesites and dacites from the Las Lomas Beds and marine and evaporitic rocks of the Caracoles Group and Llanura Colorada Formation. These units are unconformably overlain by siliclastites and andesites of the Upper Cretaceous Quebrada Mala Formation, which to the north and west are intruded by gabbros, diorites and granitoids from the Paleocene Caracoles Complex and the Sierra del Buitre Batholith. To the east, the reverse north-northeast Los Toros fault uplifts Upper Paleozoic basement units over the Mesozoic and Tertiary rocks during the main Incaic compressive event.

The main structure is the Centinela fault, whose north-south trace is projected for more than 40 km across the district affecting Mesozoic and Tertiary units. In the vicinity of Centinela and Telégrafo it links into northeast faults that dominate the Esperanza area, and are associated with polyphase tectonics and the formation of duplexes related to Eocene dextral strike-slip deformation. One of the outstanding features of the region is the occurrence of fault arrangements with a sigmoid geometry and north-northeast trend, limited by major north-south to north-northeast oriented faults. It defines strike-slip duplex systems such as Esperanza in Llano Caracoles and Las Lomas further south (Figure 35), within which middle Eocene Cu-Au-Mo porphyries are emplaced. The structure is complex due to the temporary superimposition of compressive and strike-slip deformation, including a northwest transfer zone reactivated to sinistral faulting that separates the duplexes. The first phase of strike-slip deformation occurred during Cretaceous-Tertiary times, while the second transpressive stage was in middle Eocene when granodioritic porphyry dikes with copper mineralization were emplaced along larger structures such as the Telégrafo fault (Mpodozis et al., 2009).

Esperanza is the most important known deposit of the Centinela district, and one of most important in northern Chile and a well-known mineral system to be considered as an example for the exploration of Middle Eocene porphyry Cu-Mo-Au deposits in the region. The Esperanza porphyry occurs within green coloured, massive and porphyritic to aphanitic andesitic lavas, breccias, and tuffs of the Upper Cretaceous Quebrada Mala Formation. To the west and south along a 4 km northeast trending corridor, endogenous andesitic and dacitic domes and pyroclastics of the Middle Eocene (45-38 Ma) Cerro Casado Beds occur. The mineral deposit is located between two main branches of the reverse El Llano fault (Figure 36), which is a north-northeast subsidiary of the Domeyko fault system.

Copper-molybdenum-gold mineralization at Esperanza is spatially related to minor quartz-feldspar dykes and stocks of granodioritic composition, which cut andesites and tuffs from the Quebrada Mala Formation where intrusion breccias are developed. These are 8-60 m wide and up to 400 m long, mainly northeast trending, generally irregular in shape, which at depth connect to bodies greater than 600 x 300 m dipping 50° southeast (Figure 36). Inter-mineral quartz-feldspar porphyries show medium-coarse grained porphyritic texture (0.2-0.5 mm), composed of plagioclase, biotite, quartz and hornblende phenocrysts in a microcrystalline groundmass of quartz, K feldspar, plagioclase and biotite. The largest porphyries are granodioritic with a phaneritic groundmass including large interstitial and poikilitic K-feldspar phenocrysts. The smallest are dacitic with aphanitic groundmass and are finer grained. Although Esperanza is made up of numerous intrusive phases, two main ones have been described (Figure 37). An earliest inter-mineral fine-grained porphyry with intense potassic alteration and quartz-magnetite stockworks, and a late coarse-grained porphyry which develops intrusion breccias, including clasts from the early phases and andesites, where veinlets and potassic alteration are absent.



(from Mpodozis & Cornejo, 2012)

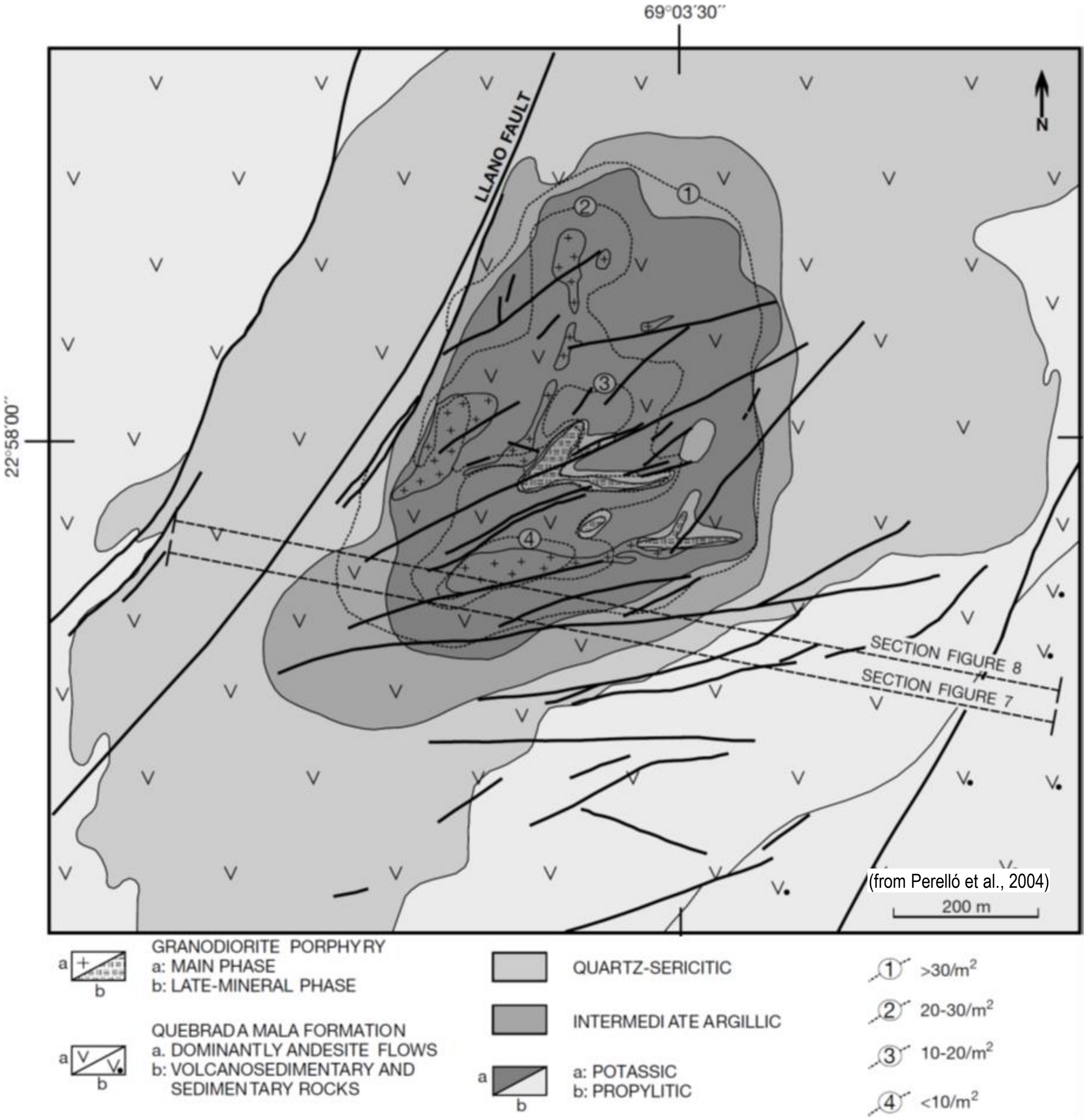
Figure 36. Schematic structural section across the Esperanza porphyry Cu-Mo-Au deposit

Potassic alteration composed of quartz, K-feldspar and biotite with abundant magnetite, anhydrite and minor apatite occurs in the inter-mineral porphyry and surrounding andesites. Graphic quartz-K feldspar intergrowths are common where the potassic alteration development is intense, and is locally brecciated with coarse biotite and anhydrite. Potassic alteration is fine-grained in andesites. Pyrite is scarce.

Several generations of A and B veinlets occur together with the potassic alteration: A-type veinlets typically are made up of quartz-K feldspar and contain anhydrite, magnetite, chalcopyrite and bornite, with biotite notably absent. These veins are millimetres to centimetres in width, with irregular and discontinuous forms. The B-type veinlets are planar and continuous, and are composed of quartz-K feldspar with fine-grained biotite, interstitial anhydrite, magnetite, chalcopyrite, bornite, with traces of molybdenite and pyrite. These veinlets have biotite and chlorite borders and incipient external haloes of K-feldspar and biotite, which tend to be straight and planar in andesites. B-type veinlets are truncated by a second generation of stockwork with quartz, K feldspar, magnetite a fine-grained chalcopyrite and bornite with an incipient to well-developed K-feldspar halo. Magnetite intergrowths with biotite and sulfides occur.

At depths of > 600 m, volcano-sedimentary and calcareous wall-rocks show calc-silicate assemblages around the quartz-feldspar porphyry stock including diopside, hedenbergite and andradite, which occur intergrown with magnetite and sulphides.

Intermediate argillic alteration overprints the potassic core and develops a halo around it (Figures 37 and 38). The assemblage is dominated by quartz and chlorite, but also contains abundant green sericite, illite and smectite, which can be texture destructive resulting in previous alteration associations being partially to totally replaced. This event is associated with veins of quartz, chlorite, sericite, smectite, illite, chalcopyrite and pyrite, with zoned haloes of chlorite, smectite, illite and sericite where the latter is in the centre and chlorite at the border. Possibly intermediate argillic alteration is related to the later phyllic event.



(from Perelló et al., 2004)

Figure 37. Simplified lithological and hydrothermal alteration map of the Esperanza porphyry

Quartz-sericite alteration composed of quartz, white sericite and illite, forms a halo around the intermediate argillic alteration in andesitic wall-rocks. Chlorite is present close to the inner zone and in the outer domain grades to propylitic. D-type veins are characteristic, with planar centimetre to decimetre width veins of quartz, interstitial sericite and coarse grained to massive and continuous pyrite at the centre. A thick sericitic halo is generally well developed. The propylitic zone is comprised of chlorite, calcite, epidote, gypsum and pyrite.

Copper mineralisation is dominated by sulfides (2-4% vol) in A and B-type veinlets and occur zoned around the potassic core, commonly associated with hydrothermal magnetite (5-7% vol estimated for the deposit). The mineralised core is > 0,7% Cu, >0,5 ppm Au and > 0,02% Mo, while the outcropping external zone contains 0.2-0.5% Cu, 0.1-0.3 ppm and 0.01-0.02% Mo. The potassic core outcrops for about 500 m wide and 700 m long trending north-northeast, while the phyllic is 600-1100 m wide and at least 2 km long north-northeast.

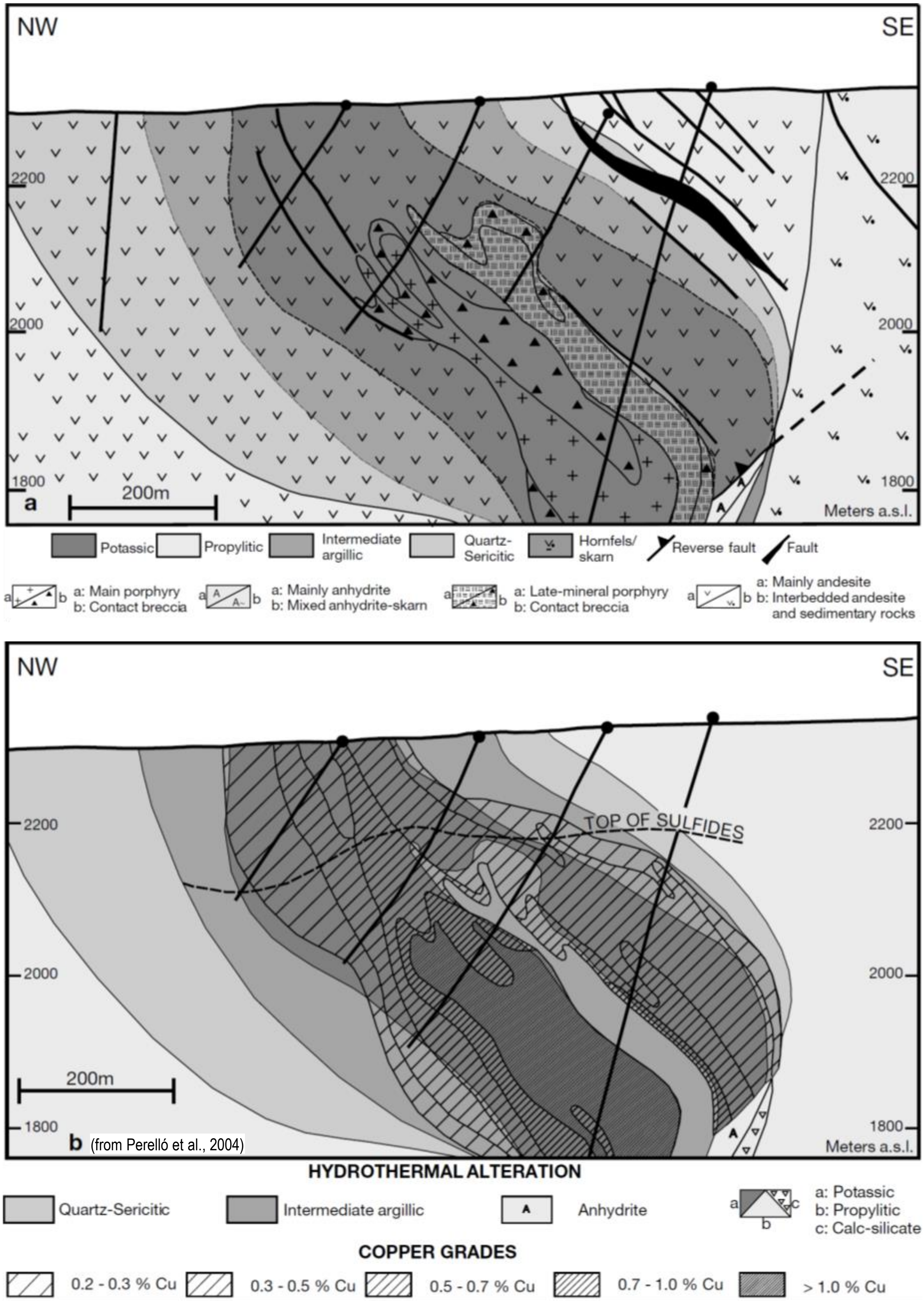


Figure 38. Simplified sections of lithology and alteration of the Esperanza porphyry

9. EXPLORATION

Exploration activities have not yet been carried out by Fireswirl in the Arrieros property.

All information provided in this report regarding geology, geochemistry, geophysics, and drilling is related to past exploration due to Polar Star and Newmont.

10. DRILLING

Six drillings, one DDH and five RC, were carried out by Polar Star in 2009 and 2011 and are mentioned in point 6.2. of this report.

Other RC drillings existing in the property, carried out by unknown third parties and of which Revelo is aware, are reported in point 24 of this report.

11. SAMPLING PREPARATION, ANALYSES AND SECURITY

Sampling and sample preparation, quality assurance, chemical analysis, and quality control activities have not been performed by Fireswirl at the Arrieros property, due to the fact that no exploration activities have been conducted to date.

Existing samples have been collected by Polar Star and Newmont, which are integrated in a database provided by Revelo. Internal technical reports prepared by the mentioned companies, contain the following indications on samples.

Geochemical Surveys by Polar Star (Walker, 2014):

“*Advantage was taken of the necessity to dig holes below the caliche and gravel caps for the IP to access the true residual soils below them hence the soil samples were collected in profile: were present sub-sample A was taken from the alluvial/colluvial cover, sub-sample B at its interface with the caliche, sub-sample C from the caliche and sub-sample D from the residual soil/weathered bedrock at the bottom of the IP pits as they were dug. During the course of the IP surveys 1995 samples were collected across the WFS and EFS trends (Figure 9.3). In addition 510 drainage sediment samples were collected from the overburden free areas of the Sierra Limón Verde hills*”.

“*All samples were collected by PSR staff, bagged, tagged and sealed on site and then shipped directly to ALS, Coquimbo, Chile, where they were dried and screened to obtain a -80 mesh sample which was homogenised and then analysed for gold by fire assay pre-concentration, Atomic Adsorption (“AA”) finish and 48 other elements, including silver, by the Inductively Coupled Argon Plasma (“ICP”) technique following Agua Regia digestion*”.

Rock samples by Polar Star (Walker, 2014):

“*All rock samples were collected by experienced PSR personnel under the supervision of Leopoldo Martinez, Exploration Manager and Miguel Guerrero, District Geologist both with over 25 years of experience sampling and exploring for mineral deposits in Latin America*”.

“*All samples were bagged and sealed on site and shipped directly to ALS laboratory in Antofagasta for preparation and then on to the ALS laboratory in Coquimbo, Chile where they were analyzed for gold (30g sample) by fire assay pre-concentration AA finish and 48* *other elements, including silver, by the ICP technique following Agua Regia digestion. ALS Patagonia S.A. is the Chilean branch of ALSGLOBAL, a well-regarded, independent, international commercial laboratory group with ISO 17025 accreditation and ISO 9001 registration*".

Geochemistry & Laboratory packets by Newmont (Melgar, 2017):

"*The laboratory selected for our rock samples and stream sediment analysis is a commercial and certified laboratory ALS Patagonia. DSG and Bleg samples were analyzed internally with our laboratory in Denver*".

"*The Lab analysis packages selected were "PCKG22" (internal code) that include the following protocols (summary); Drying at 60°C, Crushing to 2mm, split by Riffle, pulverizing to 75 microns, Gold Fire Assays (30grs) analyzed by Atomic Absorption, Multielements by Aqua regia digestion and ICP, upper ore grades analyzed by Atomic Absorption*".

"*In the case of the drilling samples also the "PCKG29" was configured; however, it was not assayed for all the samples due to do not content copper oxide and/or refractory minerals. The difference with the "PCKG22" is the total four acidic digestion instead of just aqua regia to dissolve the refractory minerals*".

"*DSG and BLEG protocols are confidential*".

Standards & QAQC by Newmont (Melgar, 2017):

"*In the Montezuma different standards or CMR (CERTIFIED REFERENCE MATERIALS) were used during the drilling campaign to ensure and evaluated the different process in the laboratory as well to check our procedures during the sampling*".

"*Five different controls were used to ensure the quality and assay of the sampling. Three different standards were used during the drilling program. 1) CMR is inserted each 25 regular samples with different values. The value is selected by the project geologist according the mineralized interval. The control consists in the revision and comparison of the values yielded in the laboratory with the values determined in the certificates of CRM. 2) FINE BLANKS are inserted each 100 regular samples. The control consists in the revision and comparison of the values yielded in the laboratory do not exceed in 4 times the value of the lower limit of detection of the assay method used. It checks the contamination during the analysis. 3) COARSE BLANKS are placed each 50 regular samples. It checks the contamination during the sample preparation. 4) The check samples come from the coarse and pulps rejects obtained from the first laboratory (2% of the total in each), which are sent to a second laboratory in order to verify the reproducibility of the results of the first laboratory. 5) In addition, a field duplicate was sampled from the RCD routinely to check our sample procedure looking for reproducibility of the assay in the sample duplicate*".

"*The QA/QC is checked statistically for all the populations of the samples. An outlier value is reported and the batch is observed until the lab explanation. For all the sample batch sent to the Laboratory ALS Patagonia not issues were observed. A detailed and internal QA/QC reports are prepared by our regional database manager and is communicated periodically to each project. Examples of the QA/QC graphics in Montezuma are shown below*".

12. DATA VERIFICATION

The Arrieros property does not have an information base related to exploration works carried out on this property by Fireswirl that can be verified. Historic data available to the author has been verified in the field, physically (paper) and digitally, web pages and emails, without any limitation, which are appropriate to be used in this technical report. Historic data include:

Mining property: According to queries in the SENAGEOMIN online cadastre (www.catastro.sernageomin.cl) and official mining bulletin (www.boletinoficialdemineria.cl) and information requested from Revelo, mining properties exist and are regularized.

Geological mapping: Marginal coverage at Arrieros. Lithology and alteration maps contain geological units described at regional, district and local levels, some of which were verified with direct field observations and drilling review during the technical visit to project site.

Magnetics data: Revelo has reproduced images of magnetometry (TMI, RTP and AS) equivalent to those contained in previous reports by Polar Star (Walker, 2014) and Newmont (Melgar, 2017). Despite some differences, attributed to parameters of the filters used, new data added over time and updating of the process tool ten years after the first survey, the main magnetic highs and lows and lineaments are in the same place. Revelo has processed Arrieros' magnetic information through independent consultant Rhiannon Morris. The author has had access to emails on that subject. During the technical visit to the project site, the author was able to verify the existence of geophysical lines. The field assistant during that visit, Raúl Segovia, confirmed that he participated in the ground magnetic survey at Arrieros.

IP Chargeability / Resistivity and 3D NewDas: Data only marginal coverage at Arrieros. Revelo has reproduced image equivalents to those contained in previous reports by Polar Star (Walker, 2014) and Newmont (Melgar, 2017). Revelo has contacted to Quantec Geoscience to retrieve IP data collected for Polar Star, which has then been processed through independent consultant Rhiannon Morris. The author has had access to emails on both subjects. During the technical visit to the project site, the author was able to verify the existence of digs, truck tracks and geophysical contacts (aluminium foil paper) regarding the IP lines surveyed. The field assistant during that visit, Raúl Segovia, confirmed that he participated in the Newmont 3D NewDas survey in Arrieros.

Soil and rock geochemistry: Few samples and only marginal coverage at Arrieros. Revelo provided the author an integrated database containing both the Polar Star and Newmont samples, which would have been prepared by the latter. Samples from rock surface, soil, drillings and others are indicated in reports of past exploration. On-site, sampling evidences were observed at Polar Star geophysical excavations and specific points attributed to Newmont. GPS Navigator was used to locate samples, but controls samples were not taken.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

Studies on mineral processing and metallurgical testing have not been conducted by Fireswirl on the Arrieros property.

14. MINERAL RESOURCE ESTIMATES

Mineral Resource Estimates have not been conducted by Fireswirl on the Arrieros property.

15. MINERAL RESERVE ESTIMATES

Additional Requirement for Advanced Property Technical Reports and not included for Arrieros.

16. MINING METHODS

Additional Requirement for Advanced Property Technical Reports and not included for Arrieros.

17. RECOVERY METHODS

Additional Requirement for Advanced Property Technical Reports and not included for Arrieros.

18. PROJECT INFRASTRUCTURE

Additional Requirement for Advanced Property Technical Reports and not included for Arrieros.

19. MARKETS STUDIES AND CONTRACTS

Additional Requirements for Advanced Property Technical Reports and not included for Arrieros.

20. ENVIRONMENTALS STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Additional Requirements for Advanced Property Technical Reports and not included for Arrieros.

21. CAPITAL AND OPERATING COST

Additional Requirements for Advanced Property Technical Reports and not included for Arrieros.

22. ECONOMIC ANALYSIS

Additional Requirements for Advanced Property Technical Reports and not included for Arrieros.

23. ADJACENT PROPERTIES

The Domeyko mountain range in northern Chile is a well-endowed Eocene-Oligocene porphyry belt where several important operating mines are located and where several major and junior companies carry out exploration activities. Cochilco reported 108 exploration companies active with a total of 308 exploration projects during 2019, of which 21% or 67 projects are concentrated in the Antofagasta region and are focused on exploring for copper (Cochilco, 2019). EMSA-Codelco, Antofagasta Minerals (AMSA), BHP, Anglo American, Freeport McMoRan, Rio Tinto, Teck and SQM, among the majors, and Revelo, Solaris, Abraplata between the juniors, are active today.

Three of those projects under exploration are located close to Arrieros (Figure 39), and are considered relevant in terms of the activities that can be carried out at, and the possible results obtained from, any exploration activities at Arrieros. These are the Montezuma Porphyry Block (MPB), the Ricardo Project (RP) and the Arrieros Porphyry Deposit (APD). The Qualified Person has been unable to verify information regarding adjacent properties, and this is information is not necessarily indicative of the presence of copper mineralization on the Arrieros Project that is the subject of the Technical Report.

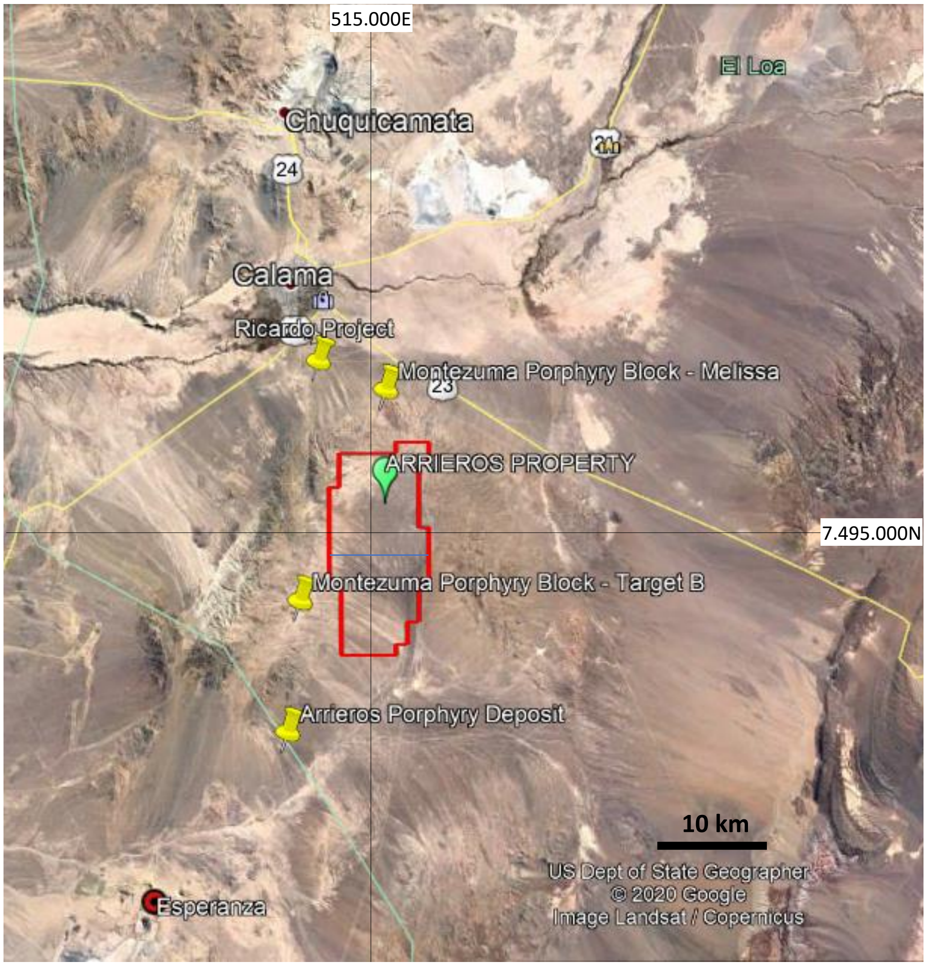


Figure 39. Location of adjacent properties to Arrieros project

23.1. Montezuma Porphyry Block

Montezuma is located adjacent to and immediately west and north of Arrieros. Revelo and predecessor companies have reported exploration results that indicate the existence of porphyry Cu-Mo-Au systems, both in the northeast part of the block (Melissa) (Figure 39) and in the southwest (Targets B and A).

According to progress reports, Melissa comprises a northwest trending red colour anomaly some 3 km long and 400-800 m wide hosted in an Upper Paleozoic granitoid. Intermediate argillic and phyllic alteration dominate (Figure 40), and coincide with the abundant presence of finely disseminated hematite and several surface copper occurrences composed of brocanthite and chalcocite in a series of carbonate-rich north-south structures.

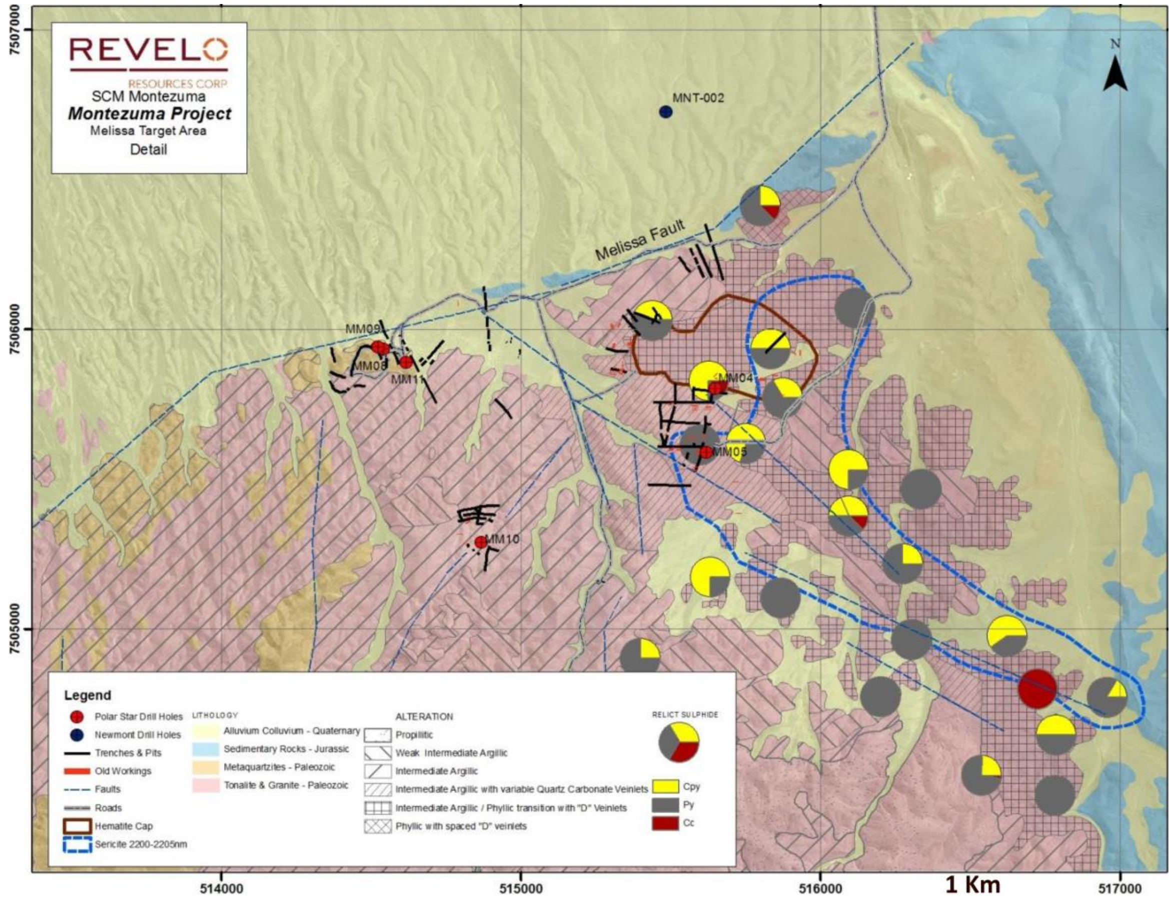


Figure 40. Lithology, hydrothermal alteration and relict sulfide samples at Melissa

Sericite K-Ar ages suggest that phyllic alteration has not reset the Carboniferous-Permian host rock, because carbonate structures with copper oxides also occurs in Jurassic calcareous rocks to the southeast. The Melissa target is a shallow exposed and basement-hosted porphyry system, with some geological similarities to Escondida Este, Pampa Escondida or Escondida Norte located 180 km to the south (see Hervé et al., 2012).

The Melissa hydrothermal alteration zone extends to the northeast end of the Arrieros project. As indicated in chapter 7.4 of this report, that outcropping area contains evidence of carbonate veins with copper oxides and quartz-tourmaline occurrences with ore-grade copper-gold-molybdenum values. It is possible that the overall Melissa trend of hydrothermal alteration and mineral occurrences extends onto the Arrieros property.

Other exploration results reported by Revelo during 2017 indicate the presence of porphyry-related phyllic, advanced argillic and intermediate argillic hydrothermal alteration along a 12 km segment of the Centinela and West Fissure Fault zones with three principal targets at B (south), A (centre) and C (north). Target B exposes a pre-mineral Middle Eocene monzo-dioritic porphyry (43.9±0.2 Ma from a U-Pb zircon age), which cuts clastic rocks of the Centinela Formation and is host at depth to A, B, and D-type veinlets with some ore-grade intersections of copper, gold, and molybdenum. The hydrothermal alteration footprint at Target B is of a similar size to the Esperanza porphyry copper deposit and mine located 30 km to the south-southwest (Figure 41), although Target B appears to be exposed at shallower hydrothermal level than Esperanza.

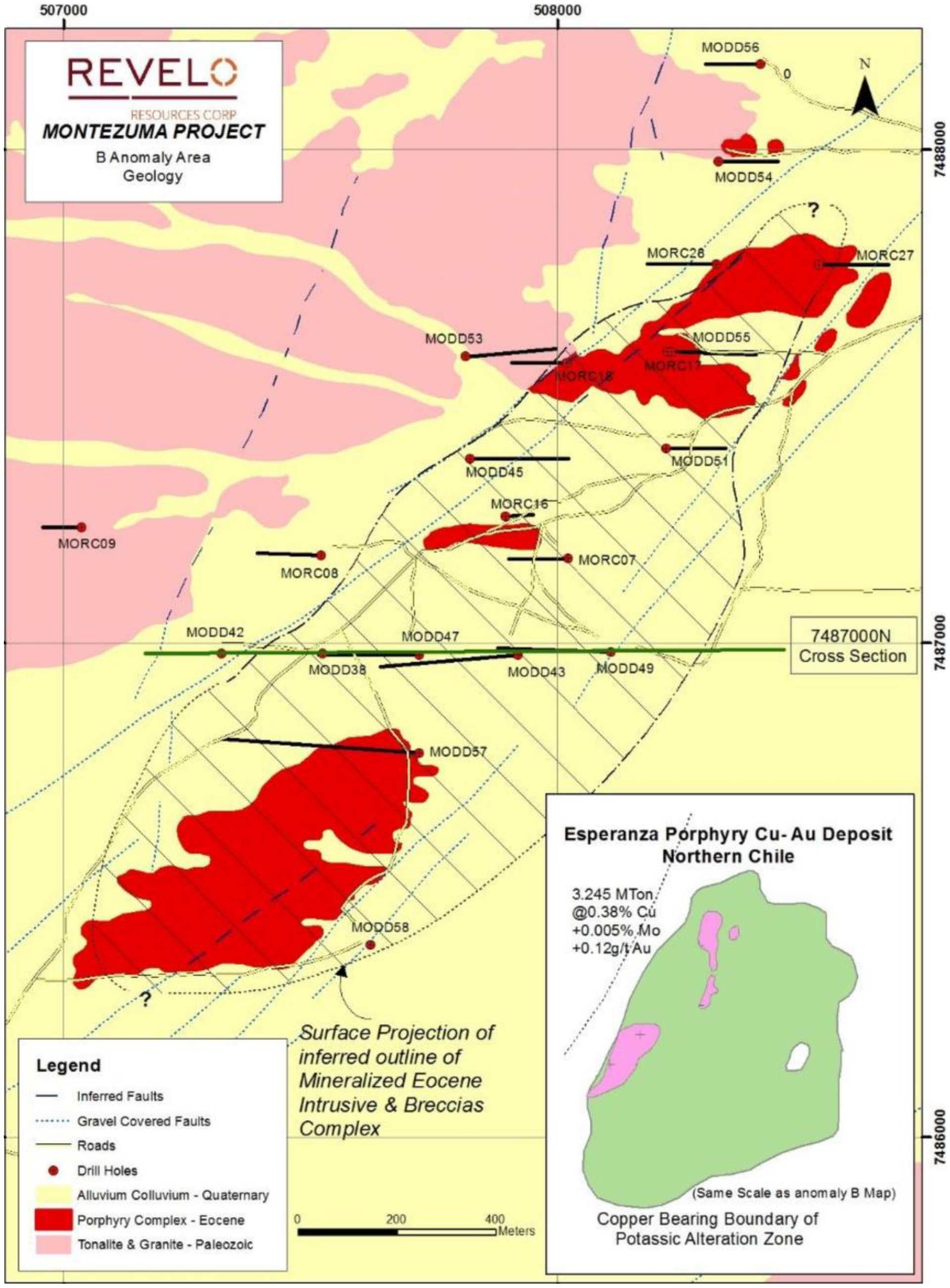


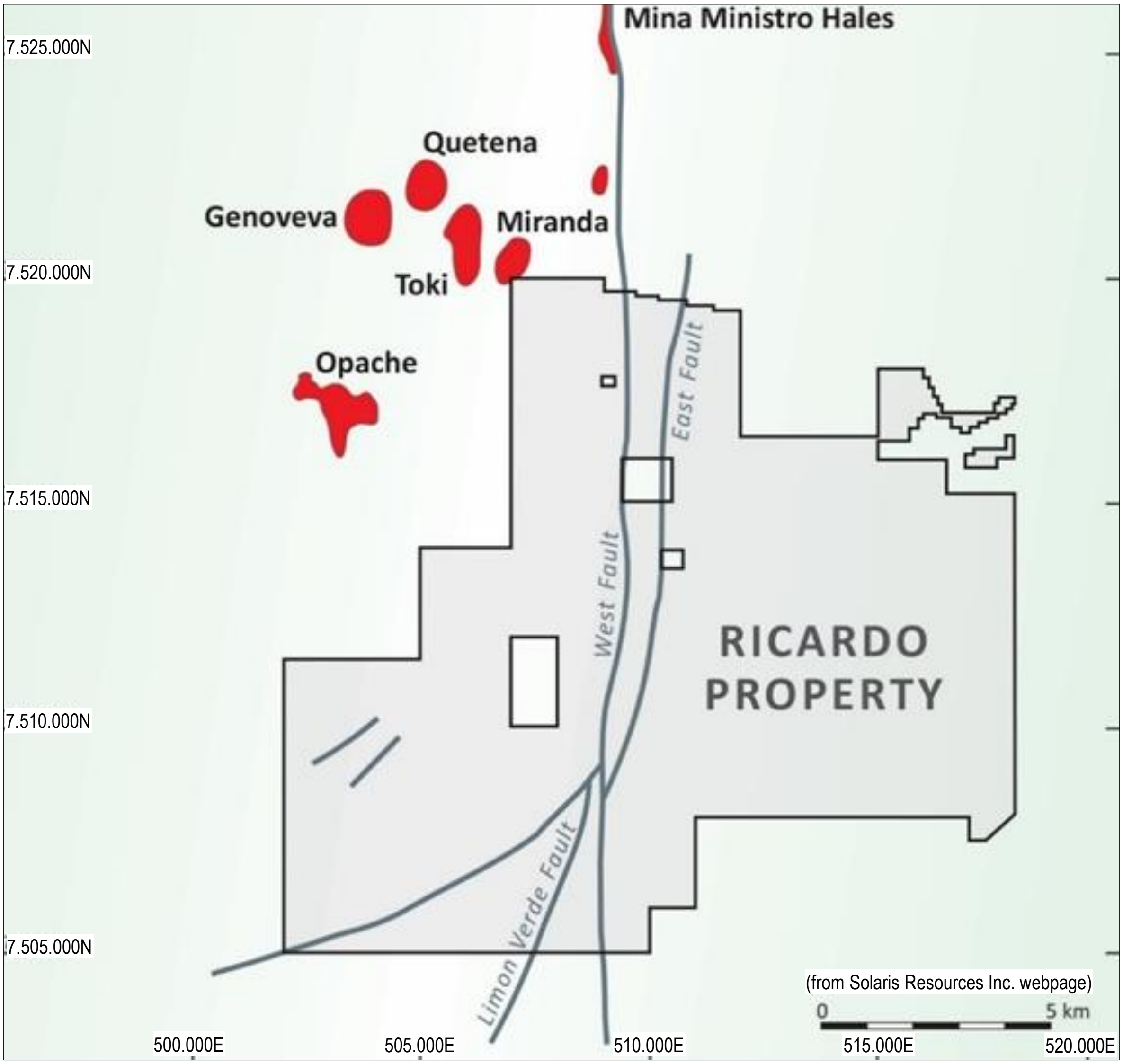
Figure 41. Middle Eocene pre-mineral monzo-dioritic porphyry at Montezuma Target

Some copper oxide occurrences can be observed at surface, including discreet zones of green exotic copper oxides together with and copper sulphates related to the oxidation of enargite from late advanced argillic quartz-pyrophyllite ledges.

Northeast lineaments cross the Arrieros area, which seem to have continuity with the Los Toros and Llano faults in the Centinela district and may be related to the development of porphyry systems such as that observed at Target B at Montezuma. In post-mineral covered areas, like the case at Arrieros, high resolution indirect tools including natural source AMT that can be free of the conductive effect of the saline surface layer, might be used to detect these potentially mineralized structures.

23.2. Ricardo Project (Figure 42)

In October 2018, Solaris Resources Inc. announced it has optioned the Ricardo property, via its wholly owned subsidiary Minera Ricardo Resources Inc. S.A., to Minera Freeport-McMoRan South America Limitada, allowing Freeport to earn an initial 60% interest in the project by spending $4.2 million in exploration expenditures over two years. The project is adjacent to the north and northwest of the Montezuma Porphyry Block, and covers extensions of the Limon Verde and West Fissure Faults near to the Quetena, Genoveva, Toki, Miranda and Opache porphyries located in the Chuquicamata copper mining district. Exploration results have not been announced since the option agreement was signed.



(from Solaris Resources Inc. webpage)

Figure 42. Location of the Ricardo project along the West Fissure Fault south of Calama

23.3. The Arrieros porphyry deposit

About 10 km southwest of the southern border of the Arrieros property, apparently between the Los Toros fault to the east and Llano fault to the west, a porphyry system that is completely covered by 170-200 m of Miocene-Holocene gravels was discovered by

Antofagasta Minerals (?). The information available is scarce, limited to that contained in a study by Jorquera (2007) on which the data provided here is based (Figure 43).

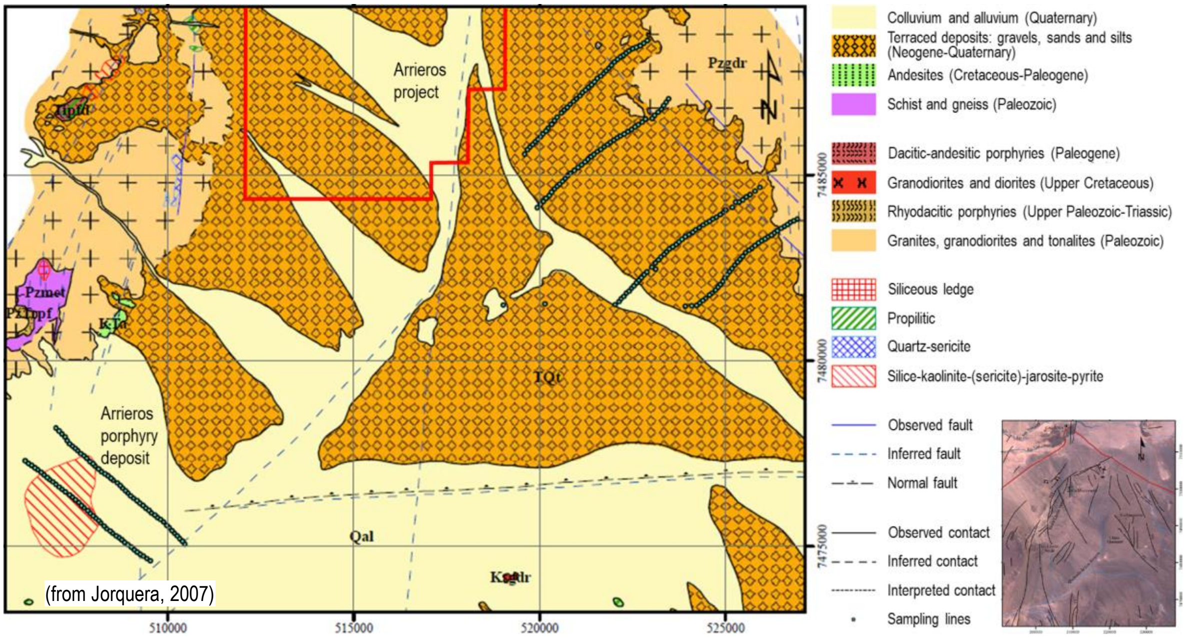


Figure 43. General geology of the Arrieros porphyry deposit north of the Centinela district

The 1.5 x 2 km porphyry system is associated with a quartz-dioritic porphyry intrusion emplaced into Permian-Triassic rocks, which shows evidence of D-type veins of quartz-pyrite with sericite-chlorite haloes related to a quartz-sericite alteration event. This alteration is superimposed on potassic alteration dominated by early biotite with disseminations of pyrite-chalcopyrite (<0.1%), and locally with quartz-K feldspar veins including pyrite (<0.1%) and chalcopyrite (<0.1%). A 0-50 m thick leached-cap zone was recognized in drill holes.

According to the SERNAGEOMIN on-line cadastre on mining concessions, the Arrieros porphyry deposit is covered by exploitation concession owned by Antofagasta Minerals.

24. OTHER RELEVANT DATA AND INFORMATION

The technical inspection of the project site revealed the existence of several drill platforms distributed over the area (Figure 44), some of which appear to be drill holes in search for water, with others apparently reverse circulation drill holes looking for metallic mineralisation, and with others that show no evidence of having been drilled at all. Several drill holes with drill cuttings at surface show only evidence of having cut post-mineral gravels, with no evidence that they cut underlying bedrock. Some drilling platforms do not have any remains of drill cuttings and were likely never drilled. According to this information, and the data provide by Revelo, most of the project area is free of effective drilling and until now the magnetic anomalies delineated within the Arrieros project area by Revelo remain untested. It is recommended that the property is inspected again in order to ensure that all old drill sites have been located. Cuttings samples can be taken for further study.

Some of the drill cuttings present on drilling platforms from these old drill holes were studied by Jorquera (2007) with assays of pH, Na% and others, including molybdenum in water. The data are attached to her report, so they are free and available to be evaluated in order to find some pattern to help in vectorization.

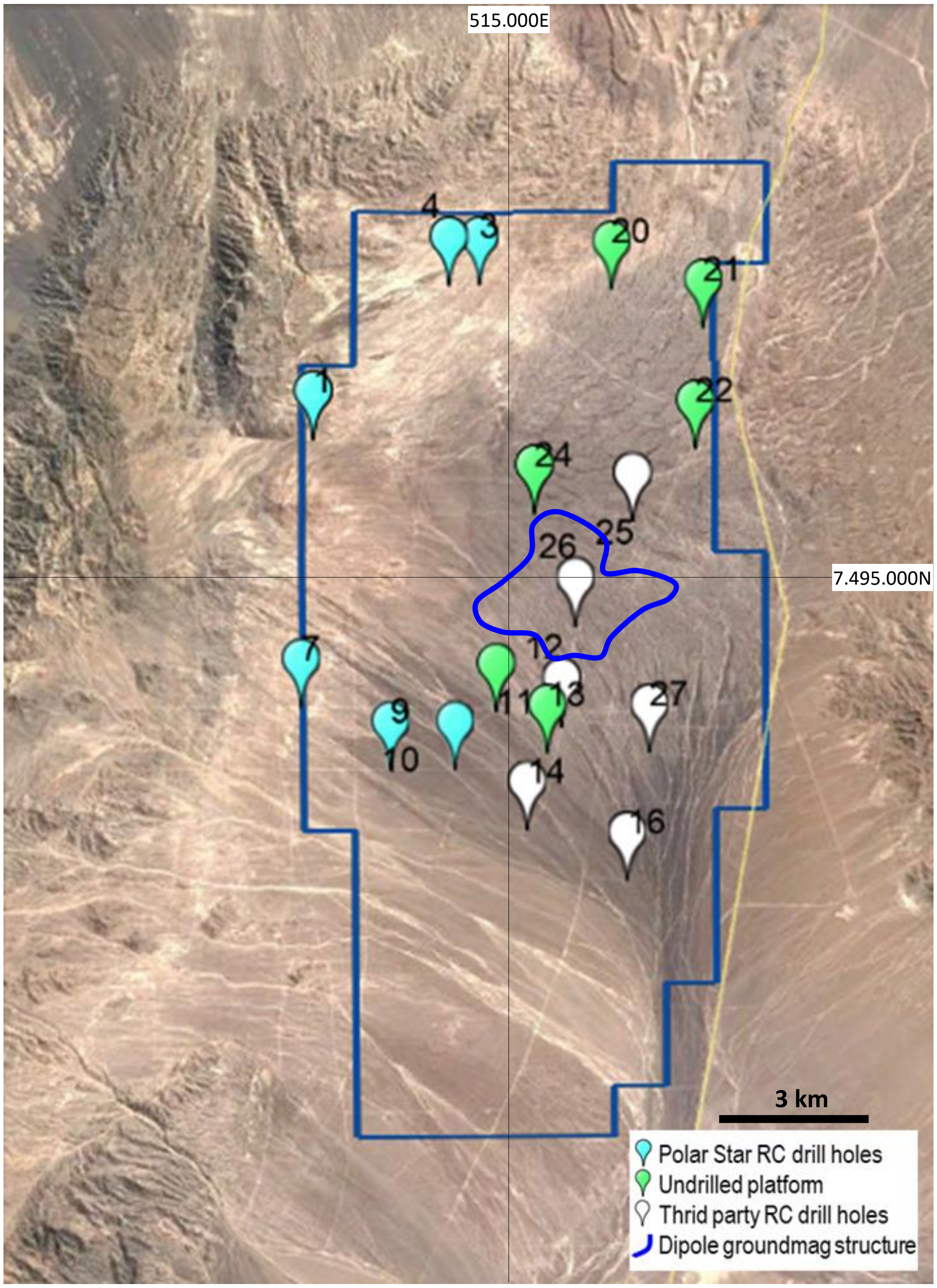


Figure 44. Existing platform and drill holes at the Arrieros property

The Antofagasta Minerals' Arrieros porphyry deposit is located on a magnetic dipole (Jorquera, 2007), initially recognized in an airborne electromagnetic study conducted by Spectrem Air (division of Anglo American Corporation) from a Basler BT-67 Turbo-67 (Turboprop Douglas DC-3) during July 2000. It is possible that the Arrieros property was covered by that flight too, and the data may be available for acquisition and could be useful for further studies. An approach to Anglo American Chile is recommended to ask for this air electromagnetic information and the existing data.

Having access to high-quality and high-resolution magnetic information is considered important in the study of post-mineral gravel-covered areas such as Arrieros. This is also relevant in terms of the deposit-type sought. At the Esperanza porphyry, for example, as previously described, copper-gold mineralization occurs closely associated with the presence of hydrothermal magnetite, so the mineral deposit should stand out as a magnetic high. Perelló et al (2004) indicate in a statement about the discovery of Esperanza: …"*This geologic conclusion was so supported by the results of the recently completed ground-magnetic survey, which showed Esperanza to be associated with a southeast-dipping magnetic signature. Similarly, the intimate relationship between the magnetite content of the quartz veinlets mapped at surface and vein intensity suggested that zones with a higher magnetic response had the potential to be associated with higher grade mineralization than that intersected by previous drilling*"….

Identification of porphyry systems with magnetite-rich potassic cores has been successful in the Casale and Reko Diq districts using the Porphyry Filter Geosoft module, initially developed by Barrick in conjunction with the Centre for Exploration Targeting (CET; see Fu et al., 2010). The ground magnetic information of Arrieros provides good coverage, so the use of this module seems feasible. At first glance, the current RTP image shows several subcircular structures that will surely be thresholds for the Geosoft Porphyry Filter.

The level of hydrothermal exposure and mineralogy of any hypothetical porphyry system have direct influence over the geophysical response. In the case of Esperanza, a magnetite rich-potassic core is exposed approximately at the 2300 m elevation with a good magnetic signal. Chuquicamata outcrops at the 2900 m level, without the presence of magnetite in the potassic alteration (no magnetic information available). Arrieros has elevations of 2700-2830 m in the north and 2600-2700 m in south, so a more eroded system than Chuquicamata and a less eroded system than Esperanza might be expected.

25. INTERPRETATION AND CONCLUSIONS

The Arrieros property is a well-located project in a well-known belt of porphyry deposits, several of which are currently in operation, and some of which are considered to be Giant Ore Deposits (GOD). At least two types of porphyry deposits exist in the belt; Copper-Gold-Molybdenum porphyries of Middle Eocene age (44-41 Ma); and Copper-Molybdenum porphyries of Eocene-Oligocene age (35-31 Ma). According to this regional endowment, the area is classified of high interest. Arrieros is an approximately 18 km long north-south by 8 km wide west-east property, where more of one GOD could occur.

The mentioned Eocene / Eocene-Oligocene porphyry deposits are related to key deformation phases along the Domeyko fault zone, and many of them have been emplaced along certain segments of this structural zone. In some cases, the relationship with clear Domeyko structures is not so evident. Gabriela Mistral could be an example of that condition. Due to the post-mineral cover, these structures are not clearly defined on the Arrieros property, although key faults of the belt occur to the immediate west on the Montezuma property, so the project can be considered currently deficient in terms of a regional tectonic control. This is a priority area that must be improved with additional work.

Arrieros is located within a district of two important known porphyry systems, currently in operation: Esperanza 40 km to the southwest and Chuquicamata 40 km to the north-northwest. Consequently, in district terms, the potential endowment of the property is well supported. Equivalent geological features to those described at Chuquicamata and

Esperanza can also be observed at Arrieros. Of particular importance is the predominance of a Paleozoic basement of granitic rocks around the periphery, as well as the presence of marine Jurassic rocks in the northeast corner. Contacts due to faulting between these units in the area, suggest that at least tectonic episodes of the Upper Cretaceous Peruvian phase. The absence of Tertiary intrusive and volcanic rocks, together with mapped contacts with the oldest terrains through faults, both indicative of Incaic deformation, including the K-T event, is a situation to be improved with further geological mapping, radiometric dating and well documented interpretations.

Rocks of the Cinchado Formation, along with calcareous rocks of the Caracoles Group, emerge about 20 km southwest of Arrieros. These appear to project northeast along the western block of the Los Toros fault, as a generalized magnetic low (TMI, AS, and RTP) that reaches the southern sector and eastern edge of the property according to regional magnetics data. Additional data are required to support that interpretation.

Middle Eocene porphyry intrusions together with coarse-grained sediments of the lower part of the Cinchado Formation are also recognized at Target B at Montezuma, where both units host Cu-Au-Mo porphyry related alteration and mineralisation along a northeast corridor of the Centinela fault. If this evidence is accepted to support the initial idea of a fertile system at Arrieros, then additional work is necessary to identify the controlling structures and hydrothermal evidences of that supposed development.

The detailed geology at Arrieros is difficult to determine as outcrops are limited to rock along the northern border and northwest corner. At the northeast vertex, surface diggings show copper oxides in north-south carbonate veins hosted by Jurassic rocks. These are equivalent to those observed at Melissa at Montezuma. To the west, northwest quartz-tourmaline veins contains ore grade copper-gold-molybdenum values. These define a 600 x 600 m prospective zone of high priority to be studied. Newmont mapping identified potassic alteration at the northeast vertex (Figure 45), which coincides with an analytic signal (AS) magnetic high defined by Revelo. In general, that area shows high responses for the RTP and TMI processes possibly due to the presence of a subvertical intrusive body.

Tourmaline at the northeast vertex of Arrieros is exposed to an elevation of 2700 m. This event has not been described for Chuquicamata or Esperanza, but it is a common episode at other Middle Eocene porphyries in Chile such as El Salvador. In this deposit, tourmaline develops breccias pipe type bodies at Cerro Pelado on the north flank of the Indio Muerto hill, 3.5 km north of the main ore body (Gustafson et al., 2001) and to an elevation of 2800 m. Tourmaline would not occur at Esperanza because this deposit outcrops to a deeper hydrothermal level, where potassic alteration and quartz veinlets are exposed.

Miocene-Holocene gravels cover most of the Arrieros property, so it is impossible to assess its exploration upside through direct observation of alteration/mineralization events. That analysis must be based on the existing ground magnetic data and possibly future geophysical studies. The magnetic map of the Arrieros property is made up of two surveys; a northwest survey by Polar Star in 2009; and the ~60-70% southeast portion completed by Newmont in late 2016. The latter has been conventionally processed by Revelo, to eliminate problematic levelling with northwest data and maximize contrast from the rocks under the gravel coverage. Figure 46 shows the TMI, RTP and AS filters and some initial targets.

The result obtained by Revelo is considered valid for three reasons. First: it was obtained using conventional ground magnetic (groundmag) data processing. Second: the result only highlights magnetic structures that are also present and in the same place when the data is processed as a whole. Third: the information from the southeast sector is better valued because the data has a higher line spacing density. That is, lines spaced every 250 m in the southeast (Melgar, 2017) and every 500 in the northwest (Walker, 2014).

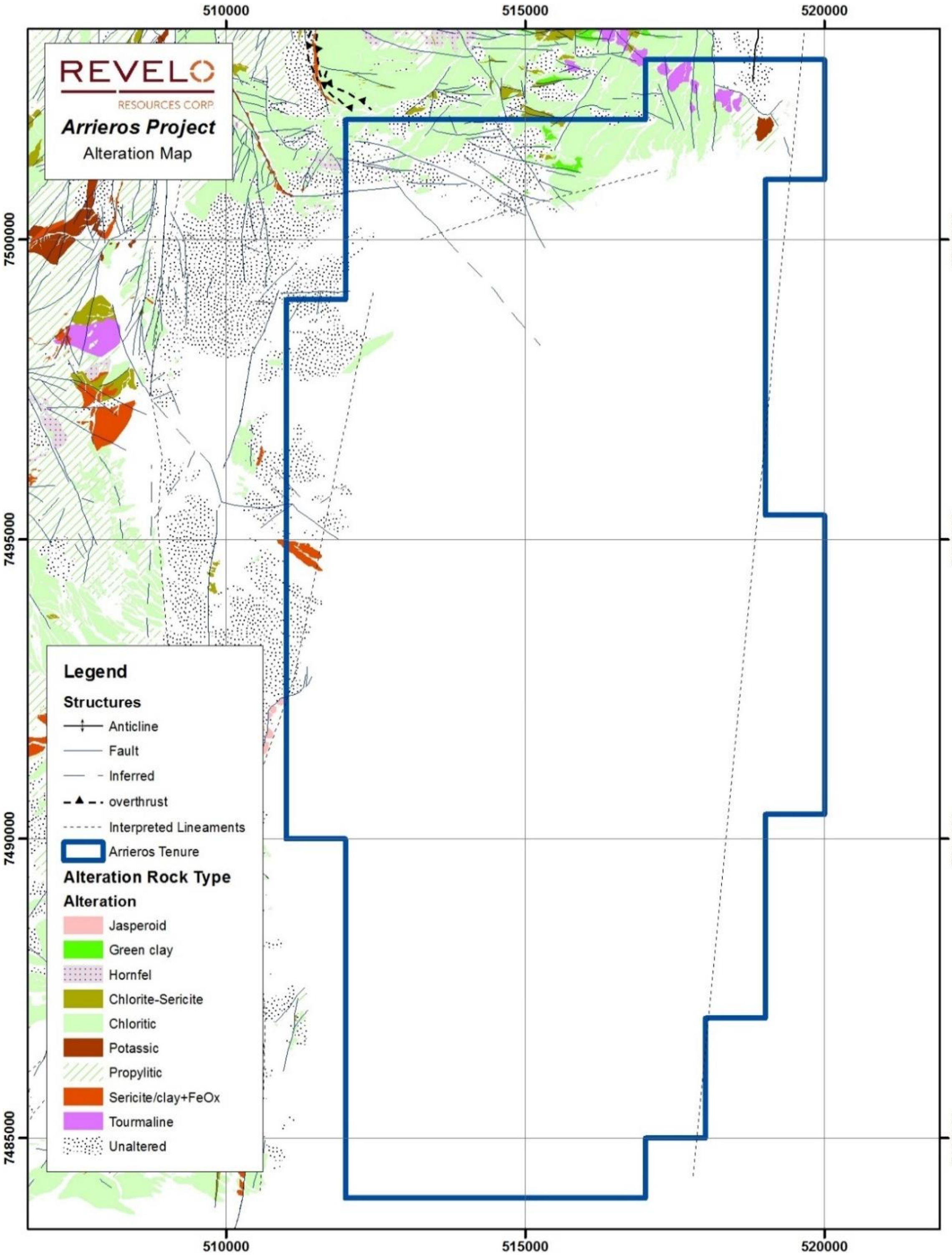


Figure 45. Hydrothermal alteration map of the Arrieros project (from Melgar, 2017)

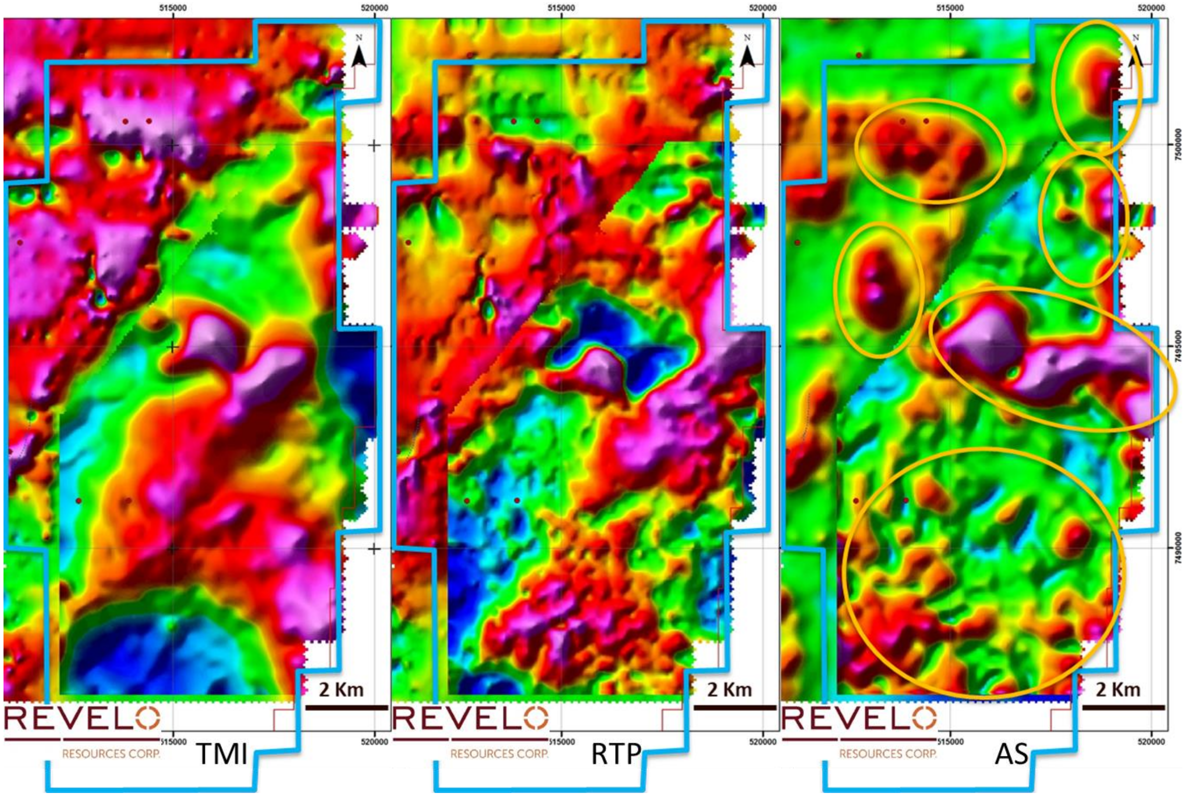
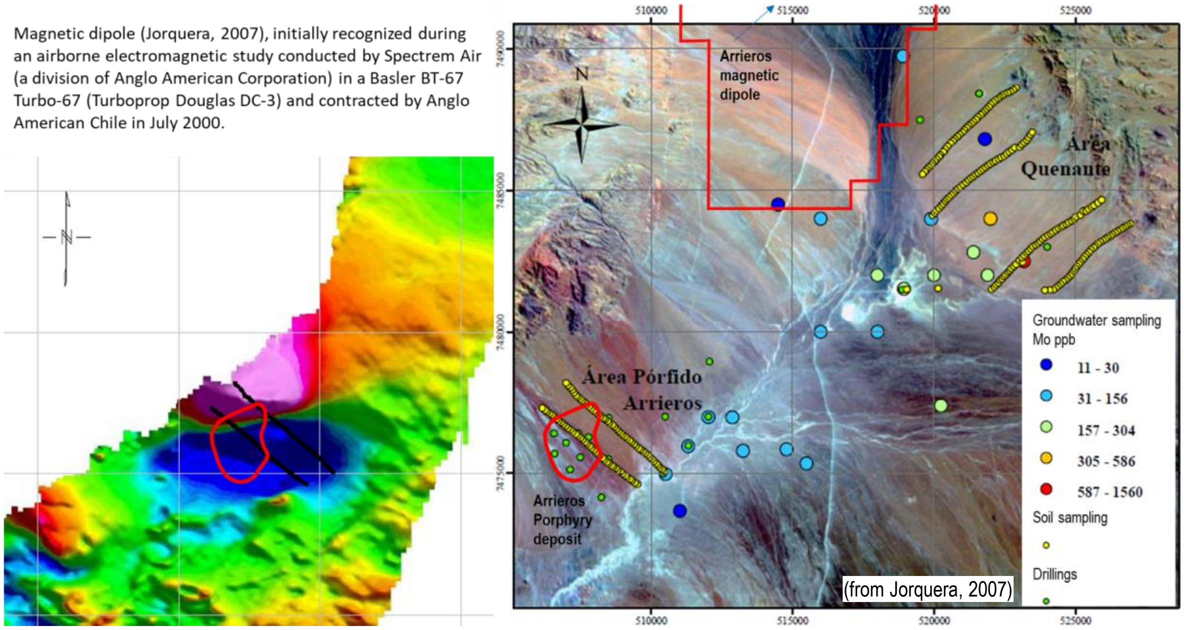


Figure 46. Arrieros groundmag images (TMI, RTP and AS) and initial targets by Revelo

Data processing mechanisms suggest the predominance of northeast structures at Arrieros project. The best defined is located in the central-northwest area, which has continuity towards the southwest until zone B of the Montezuma project. It could easily be interpreted as a fault of the Centinela system, recognized by drill hole MODD59-11 and validated during the technical visit to the project site. The fault trace is slightly displaced to the southeast in the RTP processing, possibly because the structure is dipping at a high angle to the east and is the main subsidence control of the Miocene-Recent gravel basin of the Arrieros. Other northeast structures occur further southeast, possibly related to the El Llano and / or Los Toros fault in the Centinela district. A north-south lineament at the southwest vertex of the property is possibly related to a branch of the West Fissure fault mapped by Revelo at Target B at Montezuma, where no evidence of porphyry type mineralisation and alteration were found. Along the eastern edge of Arrieros, a series of TMI, AS and RTP magnetic highs are aligned north-south. The lineament seems have continuity to the south with a set of faults that limit outcrops of the Cerro Negro granodiorite (Upper Cretaceous?) and Paleocene-Eocene (?) andesitic, granitic and rhyolitic porphyries. This interpretation about the presence of district-level tectonic structures at Arrieros requires additional detailed study to accurately locate the interpreted faults and to evaluate their potential to control porphyry copper mineralisation. Data processing with 3D modelling and its combination with some high resolution electrical geophysical method, possibly AMT, can be valuable in helping define precise interpretations.

In the central part of the Arrieros property, a prominent AS, RTP and TMI magnetic high is approximately centred on the coordinate 7.495.000N-516.000E (UTM-PSAD56), the causative body for which is totally obscured by post-mineral cover. It could correspond to a magmatic body with a subvertical to slightly south dip, according to the relative positions of the AS and RTP magnetic highs. It is connected to a generalized northeast oriented RTP high magnetic, possibly related to a dioritic to quartz monzo-dioritic batholitic intrusion (approximately 14 x 6-8 km). The AS process suggests that this intrusive maintains well-preserved magnetic properties in general, although better in the central part of Arrieros to a 6 x 2 km northwest corridor where the indicated center point is located. The RTP process shows that this magnetic structure, in contact with the northeast lineament of the Centinela fault, has the characteristics of a magnetic dipole with the low in the northeast position. Revelo has attributed this effect to remanence. Alternatively, this contrast can be due to strong magnetization of the host rocks during the intrusive process, or to severe loss of magnetism related to well-developed phyllic alteration at depth. The described magnetic structure is equivalent to that recognized by Spectrem Air about 10 km to the southwest (Jorquera, 2007), where the Arrieros porphyry deposit was discovered (Figure 47).


Magnetic dipole (Jorquera, 2007), initially recognized during an airborne electromagnetic study conducted by Spectrem Air (a division of Anglo American Corporation) in a Basler BT-67 Turbo-67 (Turboprop Douglas DC-3) and contracted by Anglo American Chile in July 2000.

(from Jorquera, 2007)

Figure 47. Location of the Arrieros porphyry deposit and magnetic dipole from Spectrem Air

Revelo has defined other areas of interest along the northwest block of the Centinela northeast trending lineament, which should be evaluated in the field. The most striking is that located at the northeast vertex of Arrieros, inside the property, which is spatially related to copper occurrences in north-south carbonate veins, copper-gold-molybdenum contents in quartz-tourmaline structures, and a zone of potassic alteration identified by Newmont, all described previously. Tourmaline could be related to the periphery or shallowest hydrothermal level of a Middle Eocene Esperanza-type porphyry system.

The definition of magnetic highs as a priority objective immediately predisposes exploration in terms of an Esperanza-type geological model. This is a valid and realistic model according to the proximity of Arrieros to this mineral deposit, together with the presence of structures that have continuity between the Centinela district and Arrieros. Depending on the thickness of the gravel cover, a system exposed at a shallower hydrothermal level with predominant development of phyllic alteration might be expected.

Several IP Resistivity / Chargeability anomalies remain undrilled on the western edge of Arrieros. Relevant drill holes have been reviewed and indicate that the geo-electric structures occur within the gravel cover and, therefore, as a first conclusion, is could be that the IP surveys conducted by Polar Star and Newmont (3D New Das IP) have not been successful due to the difficulties of getting electrical current through the caliche salt crust. The values obtained for chargeability and resistivity are mainly low, ~ <6 mV / V and ~ <600 ohm-m / m, which are difficult to associate with rocks affected by mineralization and hydrothermal alteration processes of prospective interest.

Similar conclusions to those indicated above have been established for the Newmont IP 3DNewDas. An east-west section reached the northeast vertex of Arrieros, where there is evidence of copper, gold and molybdenum mineralization. It shows Chargeability and Resistivity of intermediate magnitude, which have continuity to the northwest until the porphyry type hydrothermal alteration zone of Melisa. This site has a series of data that confirm its prospective interest for priority exploration works.

26. RECOMMENDATIONS

Arrieros has a good level of geological information, including a geochemical database (rock and soil), ground magnetometry that covers practically the entire property, some IP Resistivity / Chargeability lines, 1: 10000 scale geology (lithology and alteration) and some radiometric dating at the immediate vicinity. All this information can and should be used in the generation of exploration targets, which Revelo has effectively done. After the expiration of the exploration contract with Newmont regarding Montezuma, which included the Arrieros property at that time, the company took ownership on the property and all the aforementioned information has been appropriately managed to generate the best opportunities for the project. Apart from several targets at Montezuma, the Arrieros property appears to represent a promising target area in terms of the exploration for porphyry copper systems in the Eocene-Oligocene belt of northern Chile. The use of indirect tools is the most appropriate to study the area with gravel cover at Arrieros, including the geological model of the best-known giant porphyry deposits in the vicinity and geophysics.

A pending issue regarding the existing ground magnetics is obtaining a 3D susceptibility model, which should provide information on the depths and inclinations of the magnetic highs that appear as priority objectives at Arrieros. The data from the southeast sector has the required line spacing density to obtain a well-defined 3D model, possibly including estimating the thickness of the gravel column over the central magnetic high and drawing the traces of the main faults that cross the project area. This type of model is more effective if used in combination with some electrical method. In the case of Arrieros, according to the characteristics of the terrain, Natural Source AMT (NSAMT) may be the most appropriate. It can deliver a high-resolution resistivity image to significant depths depending on the resistivity of the terrain. A domain of high resistivity and high magnetic susceptibility, for example, could be associated with a magnetite-rich potassic core, while a high resistivity / low magnetic susceptibility could correspond to a potassic core without magnetite or a phyllic zone with disseminated sulphides.

The results of other electrical methods used to date at Arrieros, such as IP, have been inconsistent due to the difficulties of getting electrical current through the caliche salt crust that covers the project. This experience should be taken into account when deciding which indirect tools are best suited for the project.

The Arrieros ground magnetics base can also be used to generate certainty thresholds with the Geosoft Porphyry Filter module. If the Esperanza deposit type is the preferred geologic model for exploration on the property, then this exercise can be of high prospective value. However, if the expected geologic model is Chuquicamata, without a magnetite-rich potassic core and possibly a magnetics low at the centre, Geosoft can also be used to prepare porphyry models for such a case and replicate it at Arrieros.

Although existing soil and rock samples are located on the northern edge and northeast vertex of the property, they may be helpful in vectoring under the gravel column in the immediate vicinity to categorizing the magnetic highs that are closest to the outcropping area. The use of these samples with litho-geochemical techniques is a pending exercise for Arrieros. K / Al and Na / Al molar rations are useful to define and or validate phyllic, advanced argillic and albite alteration zones. Metallic indexes such as Au+Cu+Mo or Cu+Mo (porphyry), As+Bi+Sb+Tl+Te or As+Sb+Ag+Au (epithermal) and Cd+Mn+Zn or Pb+Zn (periphery) provide insight into the level of hydrothermal exposure. Immobile element ratios can be used to estimate the presence of silica / quartz veinlets (i.e. Ni / Co) and differentiate intrusive rocks (i.e. Sc / Al) in terms of composition and relationship to mineralization, and possible age according to regional data. Proper levelling is necessary first to use the data for the stated purpose. This can be complemented with radiometric ages to have control about the significance of the different magmatic events. It is highly recommended to carry out these complementary studies on the geochemical data before more advanced exploration works to ensure all targets are well supported by the available information.

The geology of the exposed rocks around the Arrieros property is probable focused on different targets, such as Melissa and those along the Centinela and West Fissure faults at Montezuma. Polar Star's IP lines only cover a small portion of the property, and Newmont performed its ground magnetic survey at the end of the option, and there was no follow-up at Arrieros. Thus, it is highly recommended to carry out detailed geological mapping, at 5k scale, including lithology, alteration, mineralisation and structures, of the surrounding rocks with the objective of vectorization towards a concealed porphyry system. Complementary studies such petrography, dating, geochemistry, spectrometry and relict sulphides are recommended. These will also be helpful in delineating exploration objectives about targets defined in subexposed rocks around the post-mineral covered, such as the magnetic highs in the western block of the northeast Centinela lineament and the tourmaline and carbonate structures on the northern edge and northeast vertex of Arrieros.

All the above indicated exploration activities are intended to delineate and categorize potential porphyry copper-related drilling targets, either new targets or as confirmation and improvement of those mentioned in section 25. This phase of work should include a first-pass RC drilling program to test the targets so defined. Some 6 to 10 drill holes of 400-700 m in length are appropriate to test the potential targets that are currently visualized as resulting from the exploration program. These potential targets must be carefully evaluated by experienced geo-scientists, with a thorough analysis and interpretation of the results obtained. The use of a rating matrix by the exploration team members is highly recommended to minimize subjectivity, such as the matrix proposed in Figure 48, which can be adjusted or replaced according to the parameters of the company. In this, the entry is probabilistic in %, while the numbers are the score according to the inverse of the distance squared from 100% in a basic unit of 2 x 2 assumed.

A key decision point (KDP) can be established to recommend a second, follow-up drilling phase (for example if an indicative intersection of at least 50 m @ 0.1-0.2% Cu and or 0.01% Mo and or 0.1-0.2 g / t Au and or 0.02-0.05% As and or 0.03-0.05% Zn according to the peripheral mineralization at Chuquicamata and Esperanza has been cut in the first phase).

The recognition of a leached capping zone in phyllic altered rocks is also considered indicative. A second phase of drilling should aim to follow up the indicative intercept to estimate whether the mineral system has the footprint expected by the company. An approximate timeline of exploration activities and associated costs is included in Table 6 for the two proposed exploration phases at Arrieros.

Figure 48. Example of a rating matrix to prioritize targets delineated to be drill tested

Table 6. Work and costs timeline for two phases of exploration at Arrieros

Phase 1		KDP	Phase 2	
Q4 2020	Q1 2021	Q2 2021	Q3-Q4 2021	Q1 2022
Target delineation	Drill testing	Indicative intercept	Follow up	Interpretation
Permits Surface geology 5k Geochemistry Geophysics Peer-review Drilling objectives	Permits Roads/platforms 5000 m RC drilling Assays Consulting Report	QA/QC Geologic sections Geophysics infill Consulting Peer-review Drilling program	Permits Roads/platforms 10000 m RC/DDH Assays Consulting Report	QAQC Geologic sections Consulting Resource Estimate Report & program KDP to advance
US $ 400,000	US$ 1,500.000	US$ 400,000	US $ 3,000,000	US$ 200,000

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Appendix 1

Certificate of Qualified Competency

Comisión Calificadora de
Competencias en Recursos
y Reservas Mineras

CERTIFICATE OF QUALIFIED COMPETENCY

The Chilean **Comisión Calificadora de Competencias en Recursos y Reservas Mineras**[1], certifies that **Mr. Mario Orrego,** National Id. Nr 9.240.943-0, Geologist, is **Registered Member** in the Public Registry of Competent Persons in Minerals Resources and Reserves, from April 2014, under Nr. 0244, with specialization in **Geology,** and that his competencies and experience as a Competent Person allow to inform and report on mineral deposits up to date.

The Chilean Mining Commission issued this certificate at the request of Mr. Orrego to present:
"NI 43-101 Technical Report of the Arrieros Project Northern Chile".

Gladys Hernández S.
Executive Secretary

Santiago, July 21, 2020
CM – 945 – 07 2020

Information:

a. **The Certificate of Qualified Competency** proves the validity of the party's competencies to inform or report about a specific matter or subject in the context of mining resources and reserves in accordance with the competencies and experience of a Competent Person.

b. **Law No. 20.235, Article 18°**: For the preparation of the technical and public reports, the Competent Persons must adhere strictly to the rules, regulations, criteria and procedures established in the Code, and likewise to all other rules of technical character that the Mining Commission enacts using their legal faculties."

c. **Application of CH 20.235 code** and use of this certificate is the sole responsibility of the person concerned, according to the technical criteria and ethical standards set forth in Law No. 20,235.

d. For all legal purposes, the Certificate of Good Standing shall be valid only for the management requested.

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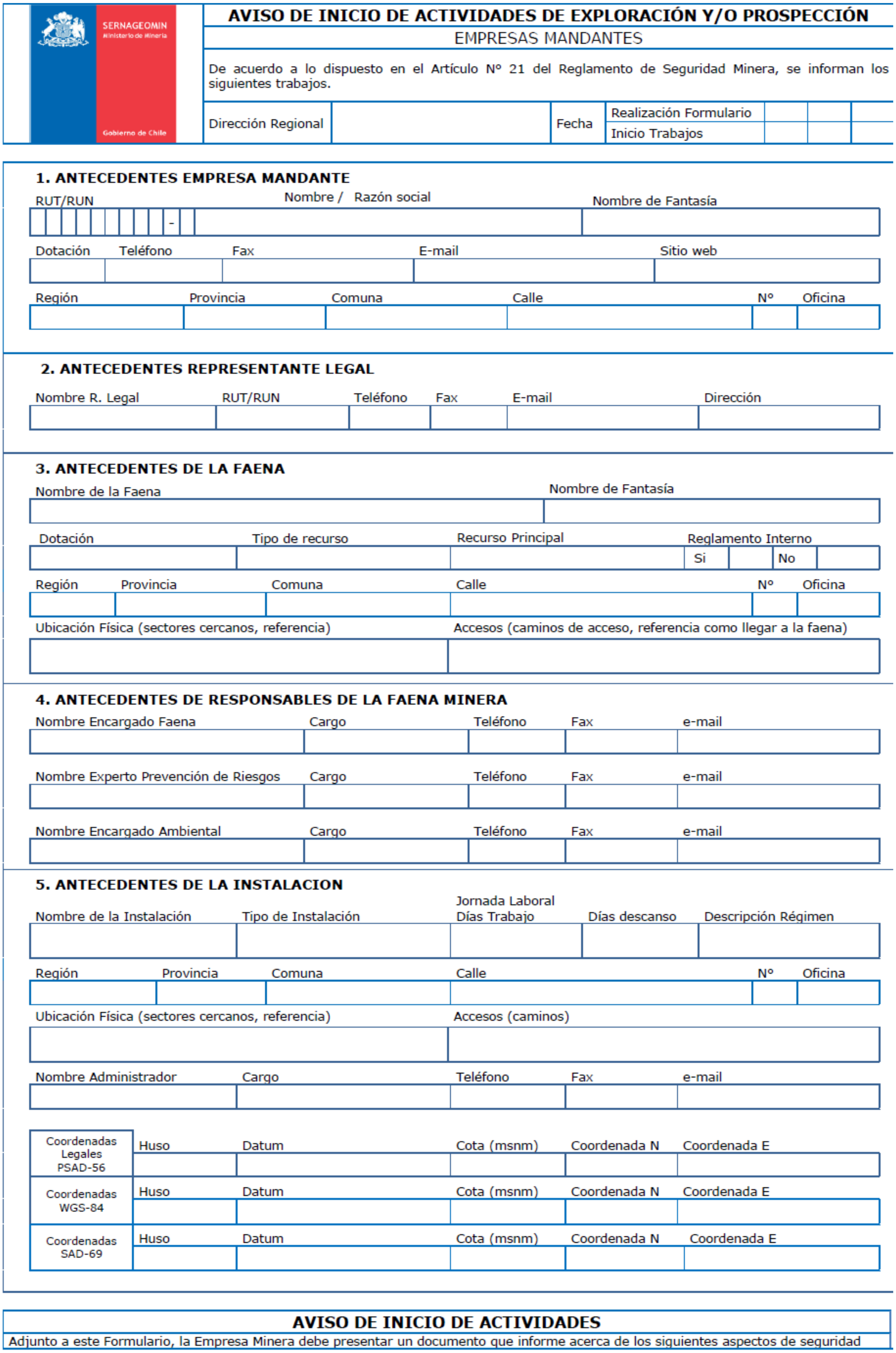
[1] The **Comisión Calificadora de Competencias en Recursos y Reservas Mineras** is a member of the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) that groups the organizations of Australia (JORC), Brasil (CBRR), Canadá (CIM / NI 43-101), Colombia (CCRR), Chile (Comisión Minera CH20235), EEUU (SME), Europa (PERC), India (NACRI), Indonesia (KCMI), Kazakhstan (KAZRC), Mongolia (MPIGM), Rusia (OERN), Sud África (SAMCODES) and Turquia (UMREK, which respond to a common international ruling to inform and report exploration prospects, mining resources and reserves.

Luis Thayer Ojeda 166, oficina 706, Providencia Santiago de Chile   Teléfonos (56)2 22345134 – 22343016

Appendix 2

Form to report to SERNAGEOMIN start of exploration activities

https://www.sernageomin.cl/formularios-seguridad-minera/



SERNAGEOMIN
Ministerio de Minería
Gobierno de Chile

AVISO DE INICIO DE ACTIVIDADES DE EXPLORACIÓN Y/O PROSPECCIÓN

EMPRESAS MANDANTES

De acuerdo a lo dispuesto en el Artículo Nº 21 del Reglamento de Seguridad Minera, se informan los siguientes trabajos.

Dirección Regional		Fecha	Realización Formulario			
			Inicio Trabajos			

1. ANTECEDENTES EMPRESA MANDANTE

RUT/RUN | Nombre / Razón social | Nombre de Fantasía

Dotación | Teléfono | Fax | E-mail | Sitio web

Región | Provincia | Comuna | Calle | Nº | Oficina

2. ANTECEDENTES REPRESENTANTE LEGAL

Nombre R. Legal | RUT/RUN | Teléfono | Fax | E-mail | Dirección

3. ANTECEDENTES DE LA FAENA

Nombre de la Faena | Nombre de Fantasía

Dotación | Tipo de recurso | Recurso Principal | Reglamento Interno: Si ☐ No ☐

Región | Provincia | Comuna | Calle | Nº | Oficina

Ubicación Física (sectores cercanos, referencia) | Accesos (caminos de acceso, referencia como llegar a la faena)

4. ANTECEDENTES DE RESPONSABLES DE LA FAENA MINERA

Nombre Encargado Faena | Cargo | Teléfono | Fax | e-mail

Nombre Experto Prevención de Riesgos | Cargo | Teléfono | Fax | e-mail

Nombre Encargado Ambiental | Cargo | Teléfono | Fax | e-mail

5. ANTECEDENTES DE LA INSTALACION

Nombre de la Instalación | Tipo de Instalación | Jornada Laboral Días Trabajo | Días descanso | Descripción Régimen

Región | Provincia | Comuna | Calle | Nº | Oficina

Ubicación Física (sectores cercanos, referencia) | Accesos (caminos)

Nombre Administrador | Cargo | Teléfono | Fax | e-mail

Coordenadas Legales PSAD-56	Huso	Datum	Cota (msnm)	Coordenada N	Coordenada E
Coordenadas WGS-84	Huso	Datum	Cota (msnm)	Coordenada N	Coordenada E
Coordenadas SAD-69	Huso	Datum	Cota (msnm)	Coordenada N	Coordenada E

AVISO DE INICIO DE ACTIVIDADES

Adjunto a este Formulario, la Empresa Minera debe presentar un documento que informe acerca de los siguientes aspectos de seguridad

ANTECEDENTES GENERALES MÍNIMOS A CONSIDERAR		
1	Nombre del Proyecto	Debe dar referencia al nombre del proyecto de exploración
2	Datos de la Empresa	Debe dar referencia al nombre de la empresa propietaria del proyecto como también si corresponde a la empresa contratista que realice operacionalmente el proyecto. Se solita Nombre, Rut, Domicilio, Comuna, Provincia, Región, Formulario de Administrador Delegado, en caso de pertenecer a una sociedad legal debe identificar al representante legal, Certificado de vigencia de la sociedad y copia del Rut, datos del representante legal y escritura pública o poder simple suscrito ante notario en que conste el poder para actuar a nombre de la empresa minera.
3	Ubicación del Proyecto	Debe dar referencia del sector, comuna, provincia y región donde se encuentra el sector a explorar. Debe además presentar las coordenadas UTM PSAD-56, o SAD-69 según corresponda, Huso 19, en la modalidad de un polígono cerrado.
4	Localización de la faena	Debe proporcionar datos claros que permita ubicar geográficamente el proyecto dando referencias al nombre de las carreteras urbanas y rurales. De existir la posibilidad, anexar ubicación mediante Google Earth. Ejemplo:  Es importante incorporar en este mismo plano o en una copia de él, los puntos donde irán ubicados los sondajes y georreferenciarlos todos en coord. UTM, PSAD-56 o SAD-69. En esta sección también, se debe describir la existencia de recintos o casas aledañas. Se debe estipular la distancia que existe a la casa, recinto o camino público más próximo a la faena.
5	Pertenencia Minera	Debe presentar según sea el caso : • Certificado de dominio vigente otorgado por el Conservador de Minas respectivo. • Contrato de arriendo. • Rol Minero (nombre y coordenadas de la concesión constituida) • Contrato Especial de Operación Petrolera (CEOP), si corresponde.
6	Servidumbre	Mencionar e identificar si se constituyó servidumbre minera y dar antecedentes de quien es propietario del predio superficial.
ANTECEDENTES TÉCNICOS MÍNIMOS A CONSIDERAR		
7	Información técnica y de organización	• Vida útil del proyecto (en semanas, meses o años) • Cantidad de sondajes, Profundidad de sondajes, Diámetro de sondajes • Hectáreas abarcadas en la exploración. • Características de las labores de reconocimiento (dimensiones, sección de la labor, etc.) • Características de los piques de reconocimiento (sección, método constructivo, etc.) • Tipos de sondajes • Intervención de terrenos, áreas verdes • Construcción de plataformas y sus características • Construcción de caminos • Utilización, manipulación y destino final de lodos de perforación • Dotación de personal para la campaña de sondajes (descripción de cargos y funciones) • Explosivos: Almacenamiento, Cantidad, Transporte, tipo y metodología de trabajo. • Equipos y herramientas involucradas en la exploración (Ej.: tipo de sondas, camiones, camionetas, maquinarias, otros equipos a utilizar)
8	Cronograma o Carta Gantt	En esta sección deberá incluir un cronograma de las actividades a desarrollar durante el proyecto de exploraciones. Del mismo modo se puede incorporar una Carta Gantt, describiendo las actividades y los tiempos de realización de cada una de ellas. Con la finalidad de tener una absoluta claridad de los tiempos de desarrollo del proyecto y de sus distintas etapas de ejecución.
9	Equipamiento e instalaciones complementarias	Se debe dar una descripción detallada de las Instalaciones y equipamientos (ejemplo: comedor, casa de cambio, baños, oficinas, área de combustibles, área manejo residuos químicos e industriales, etc.)
10	Prevención de Riesgos	Antecedentes obligatorios que debe contener el proyecto de exploración y deben mantenerse en la faena. • Debe contemplarse en el proyecto un programa de prevención de riesgos a utilizar durante el desarrollo de las actividades, debiendo identificar las actividades o tareas críticas y las medidas que se adoptaran para controlar dichas criticidades. • Toda faena de exploración debe tener como asesor a un experto en prevención de riesgos de SERNAGEOMIN, ya sea de forma parcial o tiempo completo.
11	Plan de Cierre	El resumen de los aspectos técnicos considerados para el Cierre de la Faena Minera.

Fecha estimada para el cese (término) de las actividades en terreno. (dd-mm-aaaa)								
Requiere Autorización Ambiental	Si		No					

Nombre y Firma Representante Legal

Firma
Nombre

Appendix 3

Quick-log of drilling reviewed and point checked during the visit to the project site

DRILLING: MODD59-11 EAST: 510937 NORTH: 7492420 ELEV.: 2885 m DATE: 2011 DATUM: PSAD56 LONG.: 338 m AZ.: 85° INCL.: -45° GEOLOGIST: MOG RIGG:

			ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN			STRUC.				Fe-OXIDES					OBSERVATIONS
m	From	To	Sup	sme-ita-cb	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm		Litho	Brecc	Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
	2	5	2	3																				-0.01	0.02	7.80	2.18	8.5	52		Gr			2	2		1					light pink coarse grain granite
	5	8	2	3																				-0.01	0.04	8.40	1.43	7.6	46		Gr			2	2		1					weak intermediate argillic
	8	11	2	3																				-0.01	0.05	3.80	2.11	8.4	66		Gr			2	2		1					qz-cb irregular subparallel veins 1-5 mm wide
	11	14	2	3																				-0.01	0.03	5.60	1.71	8.7	43		Gr			2	2		1					Trace of magnetism
	14	17	2	3																				0.01	0.04	3.80	1.04	9.2	34		Gr			2	2		1					
20	17	20	2	3																				0.01	0.02	3.60	1.45	8.4	34		Gr			2	2		1					
	20	23	2	3																				0.01	0.01	4.60	1.43	8.1	41		Gr			2			1					
	23	26	2	3																				-0.01	0.03	3.00	1.08	7.7	44		Gr			2			1					
	26	29	2	3																				-0.01	-0.01	2.90	1.26	9.1	45		Gr			3			1					
	29	32	2	3																				-0.01	-0.01	5.00	1.50	9.7	41		Gr			3			1					
	32	35	2	3																				-0.01	0.01	5.50	1.48	10	51		Gr			3			1					
	35	37	3	3																				-0.01	-0.01	3.20	1.10	8.7	32		Gr			4			1		2			Fault zone
40	37	40	3	3																				-0.01	-0.01	2.30	1.50	8.1	46		Gr			4					2			hm dyeing
	40	43	3	3																				-0.01	-0.01	5.10	1.43	10.2	50		Gr			4					2			
	43	46	3	3																				-0.01	-0.01	3.20	1.31	10.3	72		Gr			3					2			
	46	49	3	3																				-0.01	0.02	2.70	1.13	9.7	75		Gr			3					2			
	49	52		3																				-0.01	0.04	6.90	1.32	11.1	85		Gr			3					2			
	52	53	3	3																				-0.01	0.04	2.50	2.81	21.9	263		Gr	Tc		3					3			Tectonic breccia and qz-cb veining
	53	56	3	3																				-0.01	0.03	3.20	1.37	11.5	78		Gr			3			1		2			
	56	59	2	2																				-0.01	0.03	5.10	1.37	7.1	82		Gr			3			1					
	59	62	2	2																				-0.01	0.01	2.70	0.88	7.8	49		Gr			2			1					
	62	65	2	2																				-0.01	-0.01	1.50	1.07	6.7	53		Gr			2			1					
	65	68	2	2																				-0.01	0.03	1.50	1.19	6.6	66		Gr			2								
	68	71	2	2																				-0.01	0.03	1.80	1.36	8.7	80		Gr			2					2			
	71	74	3	3																				-0.01	0.05	5.70	1.09	10.7	48		Gr			3					2			
	74	77	3	3																				-0.01	0.03	3.60	0.89	10.7	44		Gr			3					2			74-74.3 m fault
80	77	80	3	3																				-0.01	0.09	31.80	1.35	9.2	64		Gr			3					2			79-79.3 m fault
	80	83	3	2																				-0.01	0.05	3.00	1.75	10.3	68		Gr			2					2			
	83	86	2	2																				-0.01	0.03	7.50	0.87	6.5	61		Gr			2					2			
	86	89	2	3	3																			-0.01	0.03	2.50	0.59	7.6	69		Gr			2					2			Philic ledge 88.4-88.6 m
	89	92	2	2																				-0.01	0.04	6.50	0.31	6.6	54		Gr			2					2			
	92	95	2	2																				-0.01	0.04	3.00	1.09	8.1	76		Gr			2					2			
	95	98	3																					-0.01	0.04	10.60	1.03	6.1	51		Gr	Tc		4					3			Non-cohesive tectonic breccia
	98	101	4																					-0.01	0.04	17.10	1.16	10	54		Gr	Tc		4					3			
	101	104	4																					-0.01	0.05	17.10	2.81	10.1	65		Gr	Tc		4					3			
	104	107	4																			2		-0.01	0.03	17.10	2.49	10.4	88		Gr	Tc		4					3			Tectonic breccia cemented by gypsum
110	107	110	4																			3		-0.01	0.02	19.50	7.32	11.9	85		Gr			4					3			
	110	113	4																			2		-0.01	0.08	47.00	2.11	17.2	398		Gr			4					3			Not clear relationship
	113	116	4																					-0.01	0.15	38.70	1.70	12.2	198		Gr			5					3			Gouge
	116	119	4																					-0.01	0.09	49.10	1.57	11.1	180					5								
	119	122	4																					-0.01	0.06	51.70	1.46	10.2	94					5								
	122	125	4																					-0.01	0.05	42.70	1.22	8.1	97					5								
	125	128	4																			3		-0.01	0.09	45.40	1.34	9.6	74					5								Gypsum veining and local breccias
	128	131	4																			3		-0.01	0.06	34.10	1.29	9.6	86					5								
	131	134	4																			3		0.03	0.10	35.60	1.45	11.7	69					5								Coarse vein of gypsum with fine dissemination of hm
	134	136	4																			3		-0.01	0.12	40.00	1.61	12.1	81					5								after py
	136	139	4																			3		-0.01	0.09	41.50	1.50	12.6	82					5								
	139	141	4																			3		-0.01	0.05	30.70	1.48	12.3	61					5								
	141	143	4																			3		-0.01	0.12	37.10	1.37	9.6	64					5								
	143	146	4																			3		-0.01	0.07	44.90	1.09	8.1	80					5								Fragments of red fine grain dacitic tuff
	146	149	4																			3		-0.01	0.05	39.20	1.47	9.3	80					5								
	149	152	3																			3		-0.01	0.04	25.50	2.10	7.6	57		Co	Tc		4					2			From 151 m tectonized polymictic and inmature
	152	155	3																			3		-0.01	0.07	28.90	2.55	15.3	78		Co	Tc		4					2			conglomerate-breccias (gravels) cemented by Gypsum
	155	158	3																			3		-0.01	0.05	38.80	2.56	12	78		Co	Tc		4					2			
	158	161	3																			3		-0.01	0.07	43.10	2.33	14.7	107		Co	Tc		4					2			
	161	164	3																			3		-0.01	0.07	38.90	2.15	13	127		Co	Tc		4					2			

DRILLING: MODD59-11 EAST: 510937 NORTH: 7492420 ELEV.: 2885 m DATE: 2011 DATUM: PSAD56 LONG.: 338 m AZ.: 85° INCL.: -45° GEOLOGIST: MOG RIGG:

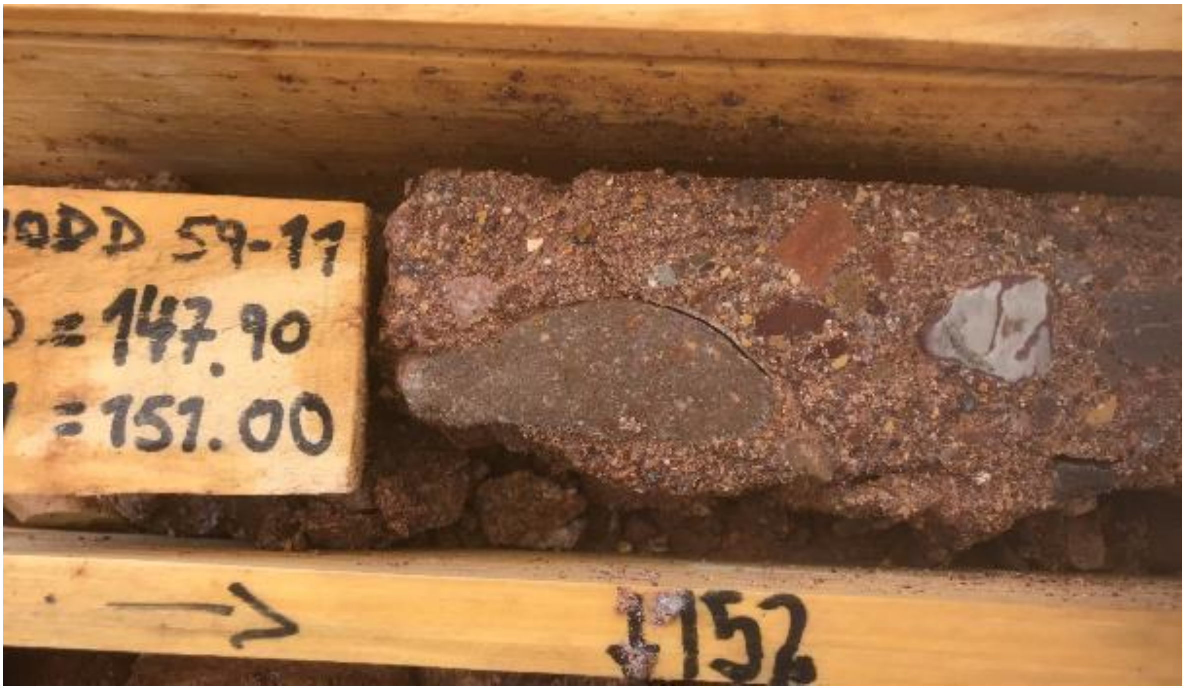
			ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN			STRUC.				Fe-OXIDES					OBSERVATIONS
m	From	To	Sup	sme-ita-cb	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm		Litho	Brecc	Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
	164	167	3																			3		-0.01	0.07	37.90	2.25	13.4	113		Co	Tc		4					2			
170	167	170	3																			3		-0.01	0.06	30.60	1.92	13.5	71		Co	Tc		4					2			
	170	173	3																			3		-0.01	0.05	37.20	2.13	12	87		Co	Tc		4					2			
	173	175	3																			3		-0.01	0.07	29.60	2.41	8.6	60		Co	Tc		4					2			
	175	177	3																			3		-0.01	0.11	39.60	2.10	14.1	119		Co	Tc		4					2			
	177	179	3																			3		-0.01	0.08	34.20	2.16	14.3	112		Co	Tc		4					2			
	179	182	3																			3		-0.01	0.11	31.80	2.29	14.4	134		Co	Tc		4					2			
	182	185	3																			3		0.01	0.06	25.00	1.80	10.1	84		Co	Tc		4					2			
	185	188	3																			3		-0.01	0.04	25.10	1.58	9.9	94		Co	Tc		4					2			
	188	191	3																			3		-0.01	0.06	26.90	1.83	12	84		Co	Tc		4					2			
	191	194	2																			3		-0.01	0.08	28.80	1.62	11.1	84		Co	Tc		4					2			Important presence of gypsum
	194	197	2																			3		-0.01	0.10	31.60	2.11	13	104		Co	Tc		4					2			
200	197	200	2																			3		0.01	0.06	30.30	1.75	13.1	96		Co	Tc		4					2			
	200	203	2																			3		-0.01	0.07	27.40	2.28	11	70		Co	Tc		4					2			
	203	206	2																			3		-0.01	0.08	33.20	1.88	13.1	114		Co	Tc		4					2			
	206	209	2																			3		-0.01	0.06	27.70	1.88	12.2	89		Co	Tc		4					2			
	209	212	2																			3		-0.01	0.07	31.70	1.89	12.5	105		Co	Tc		4					2			
	212	215	2																			3		-0.01	0.07	34.60	1.96	12.4	108		Co	Tc		4					2			
	215	218	2																			3		-0.01	0.07	36.30	2.20	15.8	91		Co	Tc		4					2			
	218	221	2																			3		-0.01	0.06	32.40	2.30	13.4	80		Co	Tc		4					2			
	221	224	2																			3		-0.01	0.08	32.00	2.13	14.2	79		Co	Tc		4					2			
	224	227	2																			3		0.01	0.13	32.40	2.38	16.6	87		Co	Tc		4					2			
230	227	230	2																			3		-0.01	0.06	43.30	2.59	18.9	94		Co	Tc		4					2			
	230	233	2																			3		-0.01	0.06	39.90	2.40	13.2	73		Co	Tc		4					2			
	233	236	4																			3		-0.01	0.08	38.40	2.49	12.8	70		Co	Tc		5								
	236	239	4																			3		0.01	0.04	36.40	1.47	8.6	57		Co	Tc		5								235-257 m gouge
	239	242	4																			3		0.01	0.05	35.20	1.15	8.5	71					5								
	242	244	4																			3		-0.01	0.05	38.10	1.22	10.9	78					5								
	244	248	4																			3		0.01	0.07	44.90	1.53	11.8	73					5								
	248	251	4																			3		-0.01	0.09	47.90	1.65	12.1	65					5								
	251	254	4																			3		0.01	0.20	29.00	1.34	10.7	47					5								252.3 m coarse vein of gypsum in gouge fault
	254	257	4																			3		-0.01	0.07	37.00	1.80	15.4	64					5								
260	257	260	4																			3		0.01	0.19	29.40	2.12	15	78		Co	Tc		4					2			
	260	263	4																			3		-0.01	0.06	38.70	2.60	17.8	93		Co	Tc		4					2			
	263	266	4																			3		-0.01	0.10	25.70	1.75	14.2	115		Co	Tc		4					2			
	266	269	4																			3		-0.01	0.09	27.00	2.06	14.8	102		Co	Tc		4					2			
	269	271																				3		-0.01	0.05	28.00	1.65	13.7	117		Co	Tc		5					2			Fault gouge
	271	273																				3		-0.01	0.09	27.90	1.36	13.1	131		Co	Tc		5					2			
	273	276																				3		0.01	0.10	30.80	1.83	15.1	168		Co	Tc		4					2			
	276	279																				3		-0.01	0.16	43.60	2.30	21.7	125		Co	Tc		4					2			
	279	282																				3		-0.01	0.13	30.30	1.91	14.4	98		Co	Tc		4					2			
	282	285																				3		-0.01	0.06	49.00	2.47	20.7	156		Co	Tc		4					2			
	285	287																				3		-0.01	0.06	53.00	2.28	18.7	122		Co	Tc		4					2			
290	287	290																				3		0.01	0.03	33.70	2.81	16.9	95		Co	Tc		4					2			
	290	293																				3		-0.01	0.04	31.10	2.66	16.8	90		Co	Tc		4					2			
	293	296																				3		-0.01	0.04	27.70	2.47	14.6	78		Co	Tc		4					2			
	296	299																				3		-0.01	0.02	25.80	2.27	12.5	54		Co	Tc		4					2			
	299	302																				3		-0.01	0.02	27.80	3.01	13.9	67		Co	Tc		4					2			
	302	305																				3		-0.01	0.01	31.90	2.93	12.6	63		Co	Tc		4					2			
	305	308																				3		-0.01	-0.01	31.00	2.51	11.8	71		Co	Tc		4					2			
	308	311																				3		-0.01	0.01	39.20	2.14	12.4	76		Co	Tc		4					2			
	311	314																				3		-0.01	0.17	32.60	3.20	12.3	82		Co	Tc		4					2			
	314	317																				3		-0.01	0.02	32.70	2.35	13.3	80		Co	Tc		5					2			
320	317	320																				3		-0.01	0.03	30.90	2.32	14	102		Co	Tc		5					2			
	320	323																				3		-0.01	0.03	32.60	2.42	16.6	119		Co	Tc		5					2			
	323	326																				3		-0.01	0.07	33.90	2.22	16.4	115		Co	Tc		5					2			

DRILLING: MODD59-11 EAST: 510937 NORTH: 7492420 ELEV.: 2885 m DATE: 2011 DATUM: PSAD56 LONG.: 338 m AZ.: 85° INCL.: -45° GEOLOGIST: MOG RIGG:

m	From	To	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Brecc	STRUC.				Fe-OXIDES					OBSERVATIONS
			Sup	sme-ita-cb	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magnetite	Specular.	Hematite	Goethite	Jarosite	
	326	329																				3		-0.01	0.05	37.50	2.21	14.7	109		Co	Tc		5					2			
	329	332																				3		-0.01	0.02	31.80	2.75	17.4	83		Co	Tc		5					2			
	332	335																				3		-0.01	0.07	32.80	3.15	17.3	82		Co	Tc		5					2			
	335	338																				3		-0.01	0.05	32.40	2.56	17.4	89		Co	Tc		5					2			

Pink coarse-grained granite cut by quartz carbonate veinlets and affected by intermediate argillic alteration of smectite-illite-carbonates

Oxidized and faulted contact between granite (red in color) and gravels (pinkish white) at 116 m depth MODD59-11 drilling



Gravels alt 151 m depth MODD59-11drilling at Pampa Arrieros property

Gravel cemented by gypsum at MODD59-11 drilling of Pampa Arrieros property

DRILLING: MORC01-09 EAST: 511198 NORTH: 7497603 ELEV.: 2891 m DATE: 2009 DATUM: PSAD56 LONG.: 160 m AZ.: 270° INCL.: -65° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Breccia	STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Sme-cb	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
																																								Gravels
	2	2															2												Gr											Pink coarse grain granite
	2	2															2												Gr											Weak Intermediate argillic with sme-cb
	2	2															2												Gr											
10	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr									2		Thin veins of cb-go
20	2	2															2												Gr									2		
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr									2		
30	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
40	2	2															2												Gr											
	2	2															2												Gr											
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	2	2															2												Gr									2		
	2	2															2												Gr											
50	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr									2		
	2	2															2												Gr									2		
	2	2															2												Gr									2		
60	2	2															2												Gr									2		
	2	2															2												Gr											
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	2	2															2												Gr									2		
70	2	2															2												Gr											
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100	2	2															2												Gr									2		
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	2	2															2												Gr									2		

DRILLING: MORC01-09 EAST: 511198 NORTH: 7497603 ELEV.: 2891 m DATE: 2009 DATUM: PSAD56 LONG.: 160 m AZ.: 270° INCL.: -65° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Breccia	STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Sme-cb	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magnetite	Specular.	Hematite	Goethite	Jarosite	
	2	2															2												Gr									2		
	2	2															2												Gr											
110	2	2															2												Gr											
	2	2															2												Gr											Pink coarse grain granite affected by Intermediate Argillic
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
120	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
130	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
	2	2															2												Gr											
140	2	2															2												Gr								2			
	2	2															2												Gr								2			Hematite in fractures and impregnations
	2	2															2												Gr								2			Some carbonates in fractures
	2	2															2												Gr								2			
	2	2															2												Gr								2			
150	2	2															2												Gr								2			
	2	2															2												Gr								2			
	2	2															2												Gr								2			
	2	2															2												Gr								2			
	2	2															2												Gr								2			
160	2	2															2												Gr								2			
																																								No drill cutting
170																																								
180																																								
190																																								
200																																								

General view of the MORC01-09 drilling entirely dominated by a pink coarse-grained granite

Granite is affected by Intermediate Argillic alteration including smectite-illite-carbonates

DRILLING: MORC11-09 EAST: 512649 NORTH: 7491205 ELEV.: 2803 m DATE: 2009 DATUM: PSAD56 LONG.: 300 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN			STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Ch-Ep	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm		Litho	Brecci	Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
																													Gv											Polymictic gravels
																													Gv											
																													Gv											
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10																													Gv											
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DRILLING: MORC11-09 EAST: 512649 NORTH: 7491205 ELEV.: 2803 m DATE: 2009 DATUM: PSAD56 LONG.: 300 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Brecci	STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Ch-Ep	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magnetite	Specular.	Hematite	Goethite	Jarosite	
																												Gv											
																												Gv											
110																												Gv											
																												Gv											Polymictic gravels
																												Gv											
																												Gv											
																												Gv											
120																												Gv											
																												Gv											
																												Gv											
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130																												Gv											
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140																												Gv											
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160																												Gv											
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170																												Gv											
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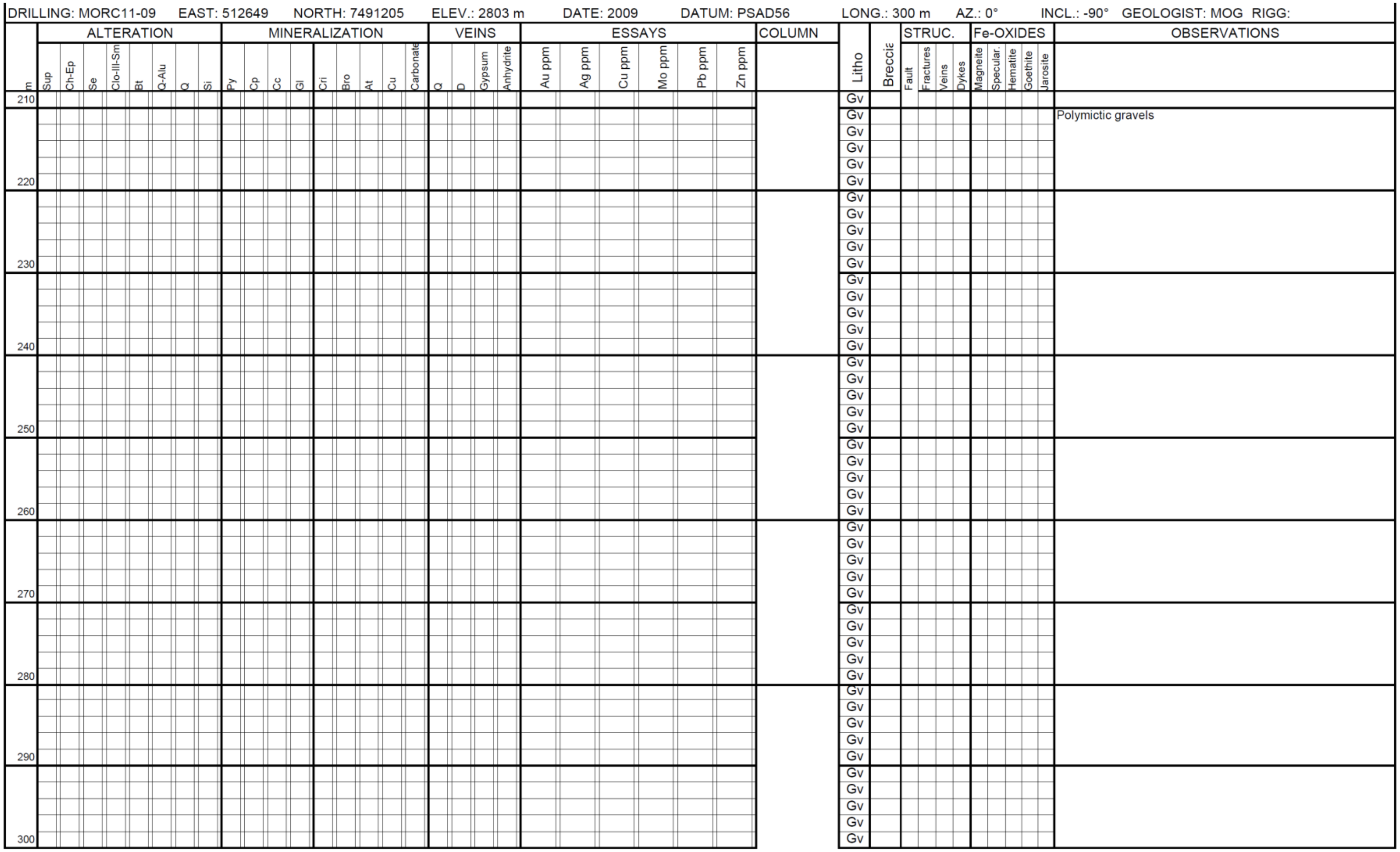

DRILLING: MORC11-09 EAST: 512649 NORTH: 7491205 ELEV.: 2803 m DATE: 2009 DATUM: PSAD56 LONG.: 300 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN			STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Ch-Ep	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm		Litho	Brecci	Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
210																													Gv											
																													Gv											Polymictic gravels
																													Gv											
																													Gv											
																													Gv											
220																													Gv											
																													Gv											
																													Gv											
																													Gv											
																													Gv											
230																													Gv											
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240																													Gv											
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260																													Gv											
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270																													Gv											
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280																													Gv											
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290																													Gv											
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300																													Gv											

General view of the gravels cut by the 300 m depth MORC11-09 drilling

DRILLING: MORC12-09 EAST: 513899 NORTH: 7491207 ELEV.: 2764 m DATE: 2009 DATUM: PSAD56 LONG.: 200 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Breccia	STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Ch-Ep	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
																													Gv												Polymictic gravels
																													Gv												
																													Gv												
																													Gv												
10																													Gv												
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50																													Gv												
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DRILLING: MORC12-09 EAST: 513899 NORTH: 7491207 ELEV.: 2764 m DATE: 2009 DATUM: PSAD56 LONG.: 200 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN			STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Ch-Ep	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm		Litho	Brecci	Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
																													Gv											
																													Gv											
110																													Gv											
																													Gv											Polymictic gravels
																													Gv											
																													Gv											
																													Gv											
120																													Gv											
																													Gv											
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130																													Gv											
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140																													Gv											
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150																													Gv											
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160																													Gv											
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170																													Gv											
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190																													Gv											
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General view of the polymictic gravels cut by the 200 m depth MORC12-09 drilling

Detailed view of the gravels at the end of the MORC12-09 drilling

DRILLING: MORC13-09 EAST: 513808 NORTH: 7500608 ELEV.: 2776 m DATE: 2009 DATUM: PSAD56 LONG.: 200 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN			STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	sme-ita	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm		Litho	Brecci	Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
																													Gv												Monomictic granitic gravels
																													Gv												
																													Gv												
																													Gv												
10																													Gv												
																													Gv												
																													Gv												
	3	2																											Gr												Pink coarse grain granite
	3	2																											Gr												
20	3	2																											Gr												
	3	2																											Gr												
	3	2																											Gr												
	3	3																											Gr												Intermediate argillic including some green smectite
	3	3																											Gr												
30	3	3																											Gr												
	3	3																											Gr												
	3	3																											Gr												
	3	3																											Gr												
	3	3																											Gr												
40	3	3																											Gr										2		Some Go in fractures with minor Mn
	3	3																											Gr										2		
	3	3																											Gr												
	3	3																											Gr									2			
	3	3																											Gr									2			
50	3	3																											Gr									2			
	3	3																											Gr									2			
	3	3																											Gr												
	3	3																											Gr										2		
	3	3																											Gr										2		
60	3	3															2												Gr										2		Carbonate in thin veins with Go-Mn
	3	3															2												Gr										2		
	3	3															2												Gr										2		
	3	3															2												Gr										2		
	3	3															2												Gr										2		
70	3	3															2												Gr										2		
	3	3															2												Gr										2		
	3	3															2												Gr										2		
	3	3															2												Gr												
	3	3															2												Gr												
80	3	3															2												Gr										2		
	3	3															2												Gr									2			
	3	3															2												Gr									2			
	3	3															2												Gr									2			
	3	3															2												Gr									2			
90	3	3															2												Gr									2			
	3	3															2												Gr												
	3	3															2												Gr												
	3	3															2												Gr												
	3	3															2												Gr									2			
100	3	3															2												Gr												
	3	3															2												Gr												
	3	3															2												Gr									2			

DRILLING: MORC13-09 EAST: 513808 NORTH: 7500608 ELEV.: 2776 m DATE: 2009 DATUM: PSAD56 LONG.: 200 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Brecci	STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	sme-ita	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magnetite	Specular.	Hematite	Goethite	Jarosite	
	3	3															2												Gr											
	3	3															2												Gr											
110	3	3															2												Gr								2			
	3	3															2												Gr								2			Pink coarse grain granite affected by Intermediate Argillic
	3	3																											Gr								2			
	3	3																											Gr								2			
	3	3																											Gr								2			
120	3	3																											Gr								2			
	3	3															2												Gr											
	3	3															2												Gr											
	3	3															2												Gr											
	3	3															2												Gr								2			
130	3	3															2												Gr											
	3	3															2												Gr											
	3	3																											Gr									2		
	3	3																											Gr											
	3	3																											Gr											
140	3	3																											Gr									2		
	3	3																											Gr											
	3	3																											Gr											
	3	3																											Gr											
	3	3																											Gr											
150	3	3																											Gr											
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	3	3																											Gr											
	3	3															2												Gr											
160	3	3															2												Gr											
	3	3															2												Gr											
	3	3															2												Gr											
	2	3															2												Gr								2			Red hm in dissemination and impregnation with illite
		3															2												Gr								2			
170		3																											Gr								2			Possibly primary column
		3																											Gr								2			
		3																											Gr								2			
		3																											Gr								2			
		3																											Gr								2			
180		3																											Gr								2			
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190		3																											Gr								2			
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		3																											Gr								2			
200		3																											Gr								2			

General view of the MORC23-09 drilling with contact gravels-granite at 14 m depth

Pink coarse-grained granite affected by intermediate argillic with smectite-illite-carbonates

DRILLING: MORC14-09 EAST: 514399 NORTH: 7500613 ELEV.: 2763 m DATE: 2009 DATUM: PSAD56 LONG.: 18 m AZ.: 0° INCL.: -90° GEOLOGIST: MOG RIGG:

	ALTERATION								MINERALIZATION									VEINS				ESSAYS						COLUMN	Litho	Brecci	STRUC.				Fe-OXIDES					OBSERVATIONS
m	Sup	Ch-Ep	Se	Clo-Ill-Sm	Bt	Q-Alu	Q	Si	Py	Cp	Cc	Gl	Cri	Bro	At	Cu	Carbonate	Q	D	Gypsum	Anhydrite	Au ppm	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm				Fault	Fractures	Veins	Dykes	Magneite	Specular.	Hematite	Goethite	Jarosite	
																													Gv											Polymictic gravels
																													Gv											
																													Gv											
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10																													Gv											
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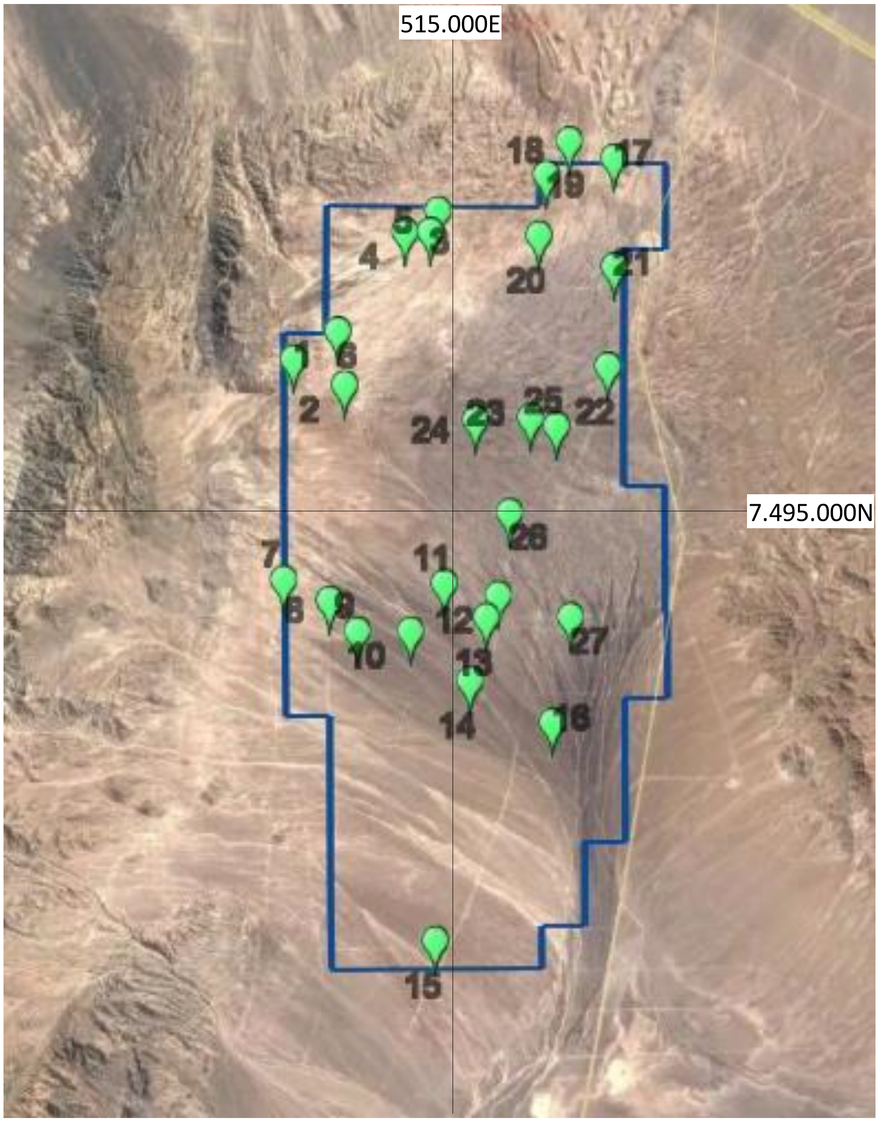
																													Gv											
20																																								

Point	East_WGS84	North_WGS84	East_PSAD56	North_PSAD56	Elevation_m	Observations
1	511019	7497214	511221	7497579	2923	Location of MORC01-09 drilling
2	512219	7496611	512421	7496976	2898	Point in line IP East-West
3	514219	7500224	514421	7500589	2802	Location of the MORC14-09 drilling
4	513628	7500218	513830	7500583	2811	Location of the MORC13-09 drilling
5	514400	7500716	514602	7501081	2780	Pink coarse grained granite affected by fracturing 40°W/80°S
6	512057	7497874	512259	7498239	2890	Pink coarse grained granite affected by fracturing 40°W/60°S and 55°E/50°N
7	510755	7492030	510957	7492395	2881	Location of MODD59-11 drilling
8	511824	7491543	512026	7491908	2834	Old north-south muleteers (arrieros) truck
9	512468	7490813	512670	7491178	2801	Location of MORC11-09 drilling
10	513717	7490815	513919	7491180	2766	Location of MORC12-09 drilling
11	514522	7491938	514724	7492303	2768	Undrilled platform
12	515796	7491650	515998	7492015	2734	Old vertical RC drilling with cuttings in gravels
13	515508	7491134	515710	7491499	2727	Undrilled platform
14	515108	7489642	515310	7490007	2705	Old vertical RC drilling in gravels with geophysics (for water)
15	514241	7483492	514443	7483857	2632	Old Antofagasta-Calama truck out of the property
16	517052	7488647	517254	7489012	2659	Old vertical RC drilling in gravels
17	518557	7501962	518759	7502327	2703	Superficial artisanal cuts in NS/90° carbonate veins with Cu oxides in Jurassic sediments
18	517493	7502378	517695	7502743	2692	Qz-tu 20°W/90° vein with 0.486 g/t Au in coarse grained granitic rock
19	516956	7501570	517158	7501935	2727	Pink medium-coarse grain granite hosting Intermediate Argillic EW/60°S qz-cb-go thin vein
20	516791	7500137	516993	7500502	2779	Undrilled platform
21	518577	7499391	518779	7499756	2773	Undrilled platform
22	518428	7497039	518630	7497404	2791	Undrilled platform
23	516598	7495835	516800	7496200	2824	Evidence of geophysical IP Contact
24	515297	7495783	515499	7496148	2840	Undrilled platform
25	517207	7495634	517409	7495999	2810	Vertical RC drilling in gravels for water
26	516082	7493602	516284	7493967	2782	Vertical RC drilling in gravels with geophysics for water
27	517506	7491139	517708	7491504	2706	RC Vertical drilling in gravels



Location of points inspected at the project site

South-east view of the Arrieros property and location of the MORC01-09 drilling

Shallow digs on an east-west IP line

Location of the MORC14-09 drilling

Location of the MORC13-09 drilling

Outcrop of a coarse-grained granitic rock at the north border of the Arrieros property

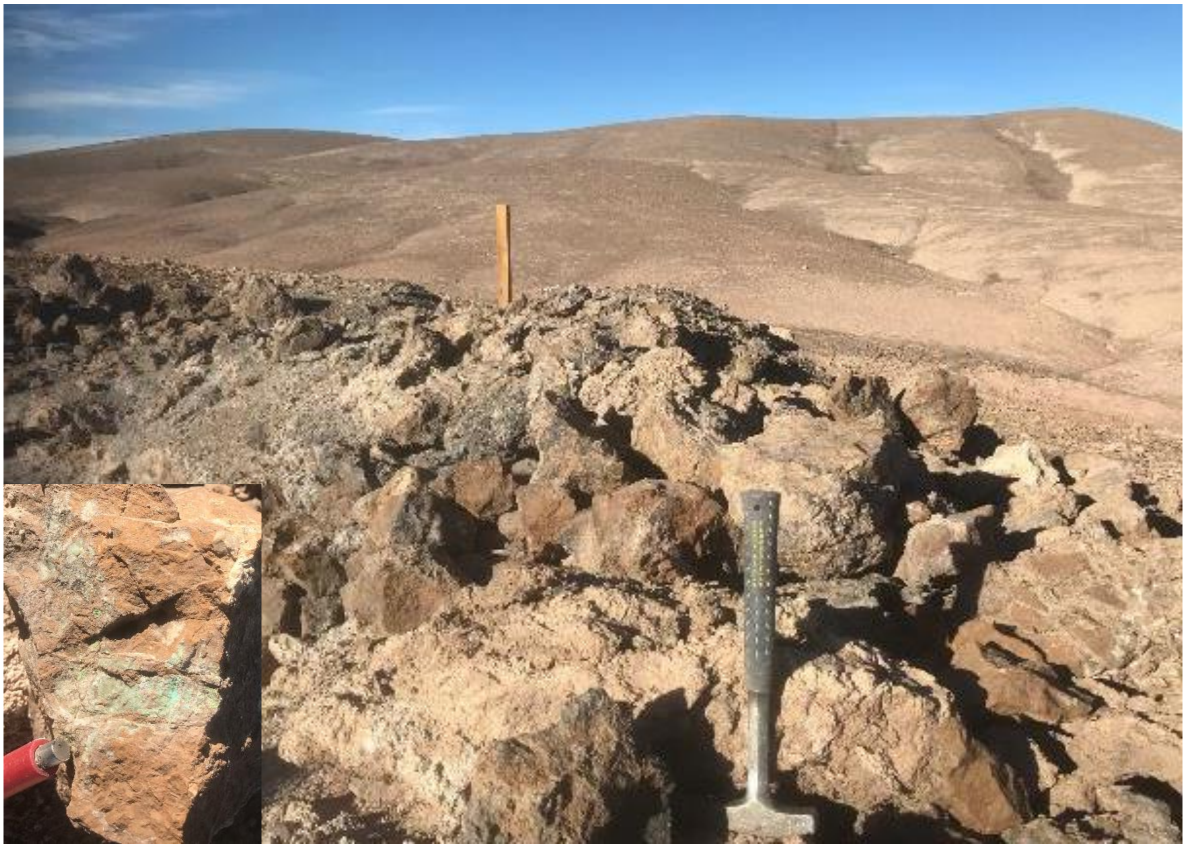
Location of the dipping east MODD59-11 drilling at the west border of the Arrieros property


Old north-south tracks of carts and muleteers


East view of the MORC11-09 drilling location on an east-west IP line

East view of the MORC12-09 drilling location on an east-west IP line

Old vertical RC drilling with cuttings of gravels (point 14 in the table)



Old artisanal cut in a carbonate vein with copper oxides in the northeast corner of Arrieros

Sample with 0.486 g/t Au in a north-northwest quartz-tourmaline brecciated vein in granite

Intermediate argillic quartz-carbonate vein at the north border of the Arrieros property

Remains of a dig with aluminium foil electrodes on an east-west IP line

Vertical RC drilling in gravels with geophysics looking for water (point 26)

Scarce vegetation