

Technical Report on the Cerro Amarillo Project, Mendoza Province, Argentina



NI 43-101 Report

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Qualified Persons:

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1 SUMMARY

This Technical Report describes the results of the exploration undertaken by Meryllion Resources Corporation (Meryllion) on their Cerro Amarillo Cu-(Mo-Au) project in west central Argentina during the austral summer field campaigns of 2011/2012 and 2013/2014. The project comprises five distinct porphyry style intrusive-hydrothermal systems, namely:

- Cerro Apero;
- Vaca de Cobre;
- Cerro Choro;
- Cajon Grande, and
- La Blanca.

Substantial mineralisation of several styles has been identified at surface in each system except at Cerro Choro.

LOCATION AND INFRASTRUCTURE

The Cerro Amarillo property covers an area of 168 km², and is located along the border with Chile in southern Mendoza Province in the Department (County) of Malargüe. The property lies in the mountains of the Andean Cordillera at an average elevation of 3,000 MASL and has a relative relief of some 1,800 m from 2,000 MASL to 3,800 MASL. Much of the project area receives snow from May to November each year resulting in a practical field season of some five months from about early December to late April. The town of Malargüe is the nearest major service centre lying some 53 km southeast of the property. The town is the seat of local government and is also a service centre for the petroleum industry. It hosts the province's only technical mining school and is served by a towered airport with a 2,650 m paved runway.

Public roads pass to both the north and west of the property, although there are no vehicular roads or tracks within the property boundaries; all access to date has been via horseback, on foot, or by helicopter. Ample water resources for the project can be found either on the property or in the Rio Grande which flows along the western boundary of the property. High voltage transmission lines lie within reasonable distance from the project area to support future mine development.

DESCRIPTION OF PROPERTY

The Cerro Amarillo property comprises five *cateos* or exploration concessions and one *mina* or mining claim. Meryllion has access to 100% of the mineral title through an exploration-with-option-to-purchase agreement with the underlying mineral rights owners, and has exclusive rights to engage in exploration activities for up to 76 months starting in 2010 by paying US\$ 700,000 in fees (US\$ 300,000 paid). On exercise of the option, the Company will pay an additional US\$ 2.5 million as a final purchase price. The owners of the property will also be entitled to a 1% NSR which Meryllion may purchase for US\$ 3.0 million. The Company has granted an additional royalty of 1% NSR to Fitzcarraldo Ventures Inc, half of which may be purchased back for US\$ 500,000 until September 2018.

SUMMARY OF EXPLORATION WORK

Meryllion operates in Argentina through its wholly owned subsidiaries Meryllion Minerals Corporation and Meryllion Argentina SA, and the Company carried out the fieldwork under a provincial resolution issued by competent authority of the Province of Mendoza. Under the Mining Code, landowners or surface rights owners within the concession area must be notified, and exploration activities require acceptance by the property owner. Meryllion notified the surface rights owners, and received written permission to carry out the work. The exploration was carried out over two field season, 2011/2012 and 2013/2014, and comprised:

- prospecting and sampling over much of the property;
- detailed mapping over Cerro Apero, Vaca de Cobre, Cerro Choro, Cajon Grande, and La Blanca;
- geochemical sampling on grids over Cajon Grande and Vaca de Cobre as well as talus sampling along scree slopes and crests at la Blanca and Cerro Choro;
- induced polarisation surveying over Cajon Grande and Cerro Apero; and,
- helicopter-borne magnetic and radiometric surveying over the entire Cerro Amarillo property.

This work led to the discovery of the La Blanca, Vaca de Cobre, and Cerro Choro porphyry systems in addition to the better definition of mineralisation at the previously known Cerro Apero and Cajon Grande systems.

GEOLOGY AND MINERALISATION

These porphyry systems are clustered along a northeast-trending structural corridor traversing the property which lies along the southern extension of the orogen-parallel, Miocene-Pliocene metallogenic belt that also hosts the El Teniente, Los Bronces, Los Pelambres, and Altar porphyry copper deposits.

The project area covers part of the northwest margin of the Neuquén Basin which developed as a back-arc rift during late Triassic time and then filled with a transgressive sedimentary sequence during the Jurassic and Cretaceous time. The Neuquén Basin was subsequently intruded by intermediate igneous rocks and covered by associated volcanics during two periods of magmatic activity from the late Miocene to early Pliocene. Large porphyry style mineralisation systems are known to be associated with both magmatic events. An east-west compressional tectonic regime developed during the late Miocene and continued into the early Pliocene epochs. The compressional tectonics reversed movement on many of the basin development structures and generated some new north trending thrusts and folds.

Geology within the project area includes an eastern domain of acid volcanics that represent basement to the Neuquén Basin, a central domain of sediments that represent the lower parts of the Basin fill and a western domain of andesites that represent the Miocene-Pliocene volcanic activity. The sediments and volcanics have shallow westerly dips. Boundaries between the domains may represent unconformable contacts or thrust faults. A suite of dioritic to dacitic porphyry intrusives occurs in several small complexes that intrude all three domains. These intrusives are thought to represent the Pliocene igneous event.

Large scale "porphyry style" hydrothermal alteration and mineralisation systems are associated with four of the five identified intrusive complexes on the property. These systems are: the Cajon Grande, Vaca De Cobre, La Blanca and Cerro Apero prospects. All four prospects contain intrusive hosted stockworks and hydrothermal breccia. Skarn style mineralisation has developed at the Cerro Apero and Cajon Grande prospects where intrusives have intersected carbonate bearing stratigraphy. Similar skarns may have developed at the La Blanca prospect below the current level of exposure. The mineralised porphyry complexes define a remarkably linear northeast trend that is at a high angle to north trending regional structures. This trend may reflect a crustal level structure that has controlled magma transport for the intrusive complexes. Such transcurrent structures are thought to be important in controlling the location of many major porphyry mineralisation systems in plate margin environments.

RECOMMENDATION AND PLANNED PROGRAM

All four mineralisation systems have good potential to contain substantial copper, gold and, possibly, molybdenum mineralisation. Surface exploration to date has identified targets worthy of drill testing in each of the four major prospects. A series of fourteen drill holes totalling 5,300 m has been planned to test these targets. Because of the nature of the terrain and the fact that there are no roads or tracks on the property, the drill campaign will utilize helicopter-portable rigs, and experienced helicopter support will be critical to the successful completion of the program. A suitable base of operations will need to be established on the property to support helicopter operations, drilling, logging, and on-going exploration activities. The anticipated cost of the recommended first stage drill program is estimated by Meryllion to be US\$ 5.3 million. An Environmental Impact Report for Stage II Exploration (ie, drilling operations) has been submitted to the relevant authorities of the Province of Mendoza and is awaiting ratification.

2 INTRODUCTION

TERMS OF REFERENCE

Meryllion Resources Corporation ("Meryllion" or the "Company") is a public company listed on the TSX-Venture Exchange under the ticker symbol MYR. The Company, through its wholly owned subsidiaries Meryllion Minerals Corporation ("MMC") and Meryllion Argentina SA ("MAS"), has the rights to two mineral projects in Argentina, namely Cerro Amarillo and Providencia.

The purpose of this Technical Report is to have a 43-101 compliant Technical Report on public record for the Company's Cerro Amarillo Project. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects, and independent consultants Mr Nicholas Tate (NMT) and Mr Anthony Watts (AHW) were retained by the Company to prepare the Technical Report.

SOURCES OF INFORMATION

Preparation of this report has involved compilation of data from MAS's exploration campaigns as well as from previous exploration on the property as provided to the authors by MAS. In addition, the authors have had complete access to the database developed by MAS for the project. Published reports, maps and journal articles have also been used to describe the regional geology and deposit models.

The senior author, NMT, has completed three campaigns of mapping on the property (February 21st 2008 to March 14th 2008, December 1st 2013 to December 13th 2013, and January 26th 2014 to February 21st 2014), while the second author, AHW, has reviewed previous geophysical exploration carried out on the property, has undertaken the processing and interpretation of regional magnetic data, and was responsible for monitoring the induced polarisation and helicopter-borne magnetic/spectrometric surveys on and over the property; furthermore, he carried out a site visit from January 19th 2014 to January 22nd 2014.

In addition, the authors have held discussions with the following MAS personnel:

- Dr Willem Fuchter, PGeo, President & CEO of MAS
- Mr Eugenio Ponte, Lic, Vice President MAS
- Mr Jose Antonio Cires, BSc Eng, Project Geologist MAS
- Ms Vanesa Fernandez, Field Geologist MAS
- Mr Jorge Bengochea, Lic, Independent Consulting Geologist and underlying Mineral Rights Owner of the Cerro Amarillo property.

Messrs Tate and Watts are responsible for the preparation of all sections of this report with NMT having concentrated particularly on the Geology, Geochemistry, and Exploration content and AHW on the Geophysics and Exploration sections. Both authors are independent of Meryllion by the definition stated in NI 43-101.

The documentation reviewed is listed at the end of this report in Section 19 References.

LIST OF ABBREVIATIONS

Units of measurement used in this report conform to the SI (metric) system. All currency in this report is US dollars (US\$) unless otherwise noted.

μ	micron
°C	degree Celsius
°F	degree Fahrenheit
μ g	microgram
cm	centimetre
d	day
q	gram
Ğ	giga (billion)
g/t	gram per tonne
ĥa	hectare
k	kilo (thousand)
kg	kilogram
km	kilometre
km²	square kilometre
kV	kilovolt
kW	kilowatt
L	Litre
m	Metre
Μ	mega (million)
m²	square metre
MASL	metres above sea level
mm	millimetre
m³/s	cubic metres per second
mm/yr	millimetre per year
oz	Troy ounce (31.1035g)
ppm	part per million
RL	relative elevation
S	second
t	metric tonne
V	volt
W	watt
yr	year

US\$ Ma	United States dollar million years
MVR	Mervilion Resources Corporation
MMC	Meryllion Minerals Corporation
MAS	Meryllion Argentina S.A.
UTM	Universal Transverse Mercator
WGS84	World Geodetic System 84
IP	Induced Polarisation
EIR	Environmental Impact Report
NSR	Net Smelter Return
UBC	University of British Columbia
TSX	Toronto Stock Exchange

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by the authors for Meryllion Resources Corporation. The information, conclusions, and opinions contained herein are based on:

- Information available to the authors at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by Meryllion, MMC, and MAS and other third party sources.

For the purpose of this report, the authors have relied on ownership information provided by Meryllion. The Qualified Persons have relied on an opinion by Zaballa Carchio Abogados (2014) of Buenos Aires, Argentina, for the information on Section 4 that described the Company's ownership interest in the Cerro Amarillo Project as well as the summaries of the Argentinean legal framework for mineral exploration. The authors have not researched property title or mineral rights for the Cerro Amarillo project and express no opinion as to the ownership status of the property.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

The Cerro Amarillo property is a porphyry Cu(Mo-Au) project situated in southern Mendoza Province, west central Argentina (Figure 4-1), near the ski resort of Las Leñas in the Department (County) of Malargüe. The property covers an area of some 16,754 ha (Figure 4-2), and contains a cluster of five porphyry systems (Cerro Apero, Vaca de Cobre, Cerro Choro, Cajon Grande, and La Blanca) and an additional three colour/alteration anomalies. The five porphyry prospects lie in a northeast-trending corridor with Cerro Apero and Vaca de Cobre in the northeast, Cerro Choro and Cajon Grande in the centre, and La Blanca in the southwest of the 14 km x 12 km property.

The property consists of six mineral titles, the approximate centre of which is 35° 18' 15.3" S latitude and 70° 11' 31.6" W longitude or Universal Transverse Mercator (UTM) coordinate 391,619 m E and 6,092,577 m N referencing the World Geodetic System established in 1984 and updated in 2004 (WGS84) Zone 19 S (Figure 4-2).





LAND TENURE

In Argentina, individual provinces regulate the mining law as defined by the Mining Code that is administered by the federal government. Provinces grant mineral concessions and enforce compliance through additional provincial statutes. Two types of mineral titles are granted:

- A *cateo* or exploration concession which is granted for a limited area (up to 10,000 ha in units of 500 ha) for a limited amount of time, and
- A mina (mine) or exploitation concession/mining claim.

The *cateo* may be held for a maximum of 1,100 days but must be reduced incrementally at 300 days and 700 days after the concession is granted. If a mineral discovery is made within the area and term of the concession, a written declaration of discovery (*manifestación*) is submitted to the relevant authorities who then issue a perpetual property right in the form of a *mina* subject to the payment of an annual fee (*canon*), and carrying out an agreed-upon minimum investment. An owner of a *mina* who is in compliance with these conditions may freely exploit or dispose of the mining claim. In addition to these requirements, and prior to any activity, an environmental report must be filed with, and approved by, the provincial mining authorities. Such reports are required at the prospecting, exploration, and development/exploitation stages, as well as on a bi-annual basis as long as the concession remains valid.

The Cerro Amarillo property comprises five contiguous *cateos* and one *mina*, the details of which are summarized in Table 4-1 and Figure 4-2.





TABLE 4-1 CERRO AMARILLO PROJECT MINERAL TENURES Meryllion Resources Corporation – Cerro Amarillo Project

Title Code	Property Type	Area (ha)
2815E2005	Cateo	4,382.1
141P1994	Cateo	2,400
2043B1999	Cateo	3,961.44
98B1993	Mina	72
2044B1999	Cateo	3,440
3707B2012	Cateo	2,570.4
	Total Area	16,753.94*

^(*) This does not include the overlapping 72 ha of the mina 98B1993 within cateo 2043B1999

With respect to time limits, *Mina* 98B1993 has been granted in perpetuity subject to the payment of annual fees or *canons* which Zaballa Carchio Abogados (2014) reported to have been fully paid up as of March 2014. In the case of *Cateos* 2815E2005 and 2043B2012, the concessions have been registered but the granting resolution, which triggers the start of the time limits described above, has not yet been issued. *Cateos* 141P1994, 20143B1999, and 2044B1999 have been registered and granted; however, the relevant provincial mining authorities have suspended the time limits under Provincial Resolutions No 81/09 and 85/09 until the EIR has been issued. Term limits on all five cateos, can, therefore, be considered to begin when the EIR/Stage II Report and Resolution have received ratification as described below.

AGREEMENTS, ROYALTIES, AND ENCUMBERENCES

The rights to the above mineral concessions were acquired by Meryllion from the underlying title holders, Mr Jorge Bengochea and Mrs Lydia Espizua, under an exploration-with-option-to-purchase agreement entered into in October 2010 and amended in early 2012. Under the terms of this agreement, the Company has the exclusive right to engage in exploration activities on the properties for up to 76 months before exercising its option to acquire a 100% interest in the properties. The option is exercisable by the Company at any time; however, so long as the exploration program is

ongoing, Meryllion will make payments to the owners of the property, which will total US\$ 700k as follows:

- US\$ 25k paid in 2010
- US\$ 50k paid in 2011
- US\$ 50k paid in 2012
- US\$ 75k paid in 2013
- US\$ 100k paid in 2014
- US\$ 150k payable in 2015
- US\$ 250k payable in 2016

On exercise of the option, the Company will pay a final purchase price of US\$ 2.5M. The owners of the property will also be entitled to a 1% NSR in the event the properties are placed into commercial production, which the Company may purchase for US\$ 3.0M. Meryllion has granted an additional NSR royalty of 1% NSR to Fitzcarraldo Ventures Inc (FVI). The Company has the right to buy half of the FVI NSR for US\$ 500k until September 2018.

Under the Mining Code, landowners or surface rights owners within the concession area (see Figure 4-3) must be notified, and exploration activities require acceptance by the property owner. Accordingly, Meryllion notified the surface rights owners, Nieves de Mendoza SA, and received written permission to carry out the work for the 2013/2014 season from its wholly owned operating company, Valles de Las Leñas SA.

ENVIRONMENTAL OBLIGATIONS AND PERMITTING

The plan of work was also filed with competent authority in the Province of Mendoza. The holders of mineral rights are obliged under the Mining Code to submit Environmental Impact Reports (EIRs) prior to commencing prospection, exploration or exploitation, and to submit additional reports every two years. There are essentially three levels of permitting:

- Prospecting (non-invasive exploration activities) requiring an EIR Stage I Report;
- Exploration (drilling, trenching, and advanced exploration) requiring an EIR Stage II Report;

 Production (development, construction, and exploitation) – requiring an EIR Stage III Report.

The program that Meryllion had originally submitted formed part of a broader application to undertake future drilling operations on the property (Stage II) for which the Directorates of both Mines and Environment required additional exploration data in order to better assess the application. They issued the necessary Provincial Resolutions (No 1/14 and 4/14) for this additional exploration work to proceed, and the consequent results of this work, which form the basis of this Technical Report, have subsequently also been submitted to the provincial authorities as part of the complete EIR Stage II Report. Pursuant to provincial legislation in Mendoza, the EIR Stage II Report and consequent Provincial Resolution granting permission to drill must receive congressional ratification. The Company is currently working with local provincial authorities to obtain the congressional approval required to conduct its 2014/2015 drill campaign. An inspection of the exploration activities on the property was undertaken by the Directorate of Mines at the end of January 2014.

Meryllion's legal counsel in Argentina, Zaballa Carchio Abogados (2014) has undertaken a legal due diligence on the mineral concessions and have issued a legal opinion which concludes that the properties are in good standing with no restrictions or embargoes attached to them and that all contractual obligations have been met.



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5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Cerro Amarillo property is situated in southern Mendoza Province, west central Argentina, near the ski resort of Las Leñas in the Department (County) of Malargüe. The Cerro Amarillo property lies some 450 road kilometres from the provincial capital, Mendoza, or some 210 km from the province's second largest city San Rafael. Both Mendoza and San Rafael are serviced by daily commercial flights from Buenos Aires.

The nearest major town to the Cerro Amarillo property is the town of Malargüe which lies at the foot of the Andes some 53 km directly southeast of the property, 62 km from Las Leñas, and some 450 km from Mendoza along National Route 40 (Figure 5-1). Malargüe is a town of 29,000 inhabitants, and is the seat of local government. It is also a service town for the petroleum industry working the oil and gas fields of southern Mendoza. The Province's only technical mining school, from which about 50 students graduate each year, is situated in Malargüe, and the town also hosts a number of national and international academic research stations and observatories. It is served by a towered airport with a 2,650 m runway capable of receiving commercial jets.

The Cerro Amarillo property can be accessed either on horseback (Photo 5-1) from the Las Leñas ski resort to the northeast in approximately 6 hours or by road from Malargüe via Valle Noble directly west of the property (Figure 5-1). There are no roads or tracks on the Cerro Amarillo property.

Meryllion has carried out most of the work over the last two field season on horseback and established temporary flycamps at Boca de Los Cajones, Cerro Apero, Cajon Grande, and La Blanca for the duration of the field campaigns (Figure 5-2 and Photo 5-2); however, the recent IP surveys conducted on the property during the 2013/2014 field season were supported by helicopter.





















PHYSIOGRAPHY

The project area lies in the Andean Cordillera some 45 km in from the eastern foothills (Figure 5-1). The region is locally described as *montañosa* (mountaneous), and the terrain is generally steep and rugged with an average elevation on the property of 3,000 MASL (Photo 5-3). The property has a relative relief of about 1,800 m with elevations of 2,000 MASL at Valle Noble along the western boundary to some 3,800 MASL at the tallest peak at Rincon de La Laguna within the property (Figure 5-3).

The property lies largely within the Rio Grande catchment area although the very northeastern corner drains into the Rio Salado basin through the Arroyo El Desecho. The project area is incised by four substantial canyons: Cajon de los Oscuros in the northwest, and Cajon Grande, Cajon Chico, and Cajon del Infiernillo draining the southern half of the property (Figure 5-3). Laguna Cajon Grande is a modestly sized lake lying at the foot of Cerro Cajon Grande.

CLIMATE

The Cerro Amarillo property lies in a snowfield, and for this reason the austral summer field season is relatively short generally lasting from the early December to late April.

The area is formally described as *Árido Andino Puneño* or Dry Andean High Plains which is generally characteristic of terrains above 3,000 MASL along the Andean chain in these latitudes. Strong winds are common, and precipitation is in the order of about 800 mm/yr, with frequent snow storms in winter; summers are pleasant with very little rainfall. Temperatures range from -5 °C to +15 °C in the summer and -20 °C to +5 °C in the winter.

Soils are poorly developed in the area, and virtually no vegetation cover has been able to establish itself on the peaks and slopes of this mountainous region. However, vegetation specially adapted to the strong winds and cold temperatures, and fed by local





springs or melt waters has developed along some pediments and valley/canyon floors. These pastures are exploited by local herders of goats and cattle (known locally as *baqueanos*) who have negotiated grazing rights from the surface rights owners; they drive their herds up to successively higher pastures starting in the austral spring and retreat from the mountain in the early autumn. Meryllion has worked closely with the *baqueanos* who also provide horses and mules for the field campaigns and assist field personnel with exploration activities.

INFRASTRUCTURE & LOCAL RESOURCES

While there are no roads or tracks on the property, the area in which the Cerro Amarillo property is located is well served by roads (Figure 5-1). National Route 40 provides the main route into the region, and is a well maintained sealed road. Branching off this towards the west and servicing Las Leñas is Provincial Route 222 which is also a sealed road; a well-trodden horse path some three kilometres short of Las Leñas provides access to the property. The project area can also be reached from the west by following National Route 145 off Route 40 at Bardas Blancas some 65 km south of the town of Malargüe to the village of La Loicas. From there, Provincial Route 226 leads northwards along the Rio Grande towards the border post on the Chilean frontier; this gravel road is maintained during the summer season and is open to traffic from November to April.

The electric power distribution network is shown in Figure 5-4. The 500 kV and 220 kV high voltage transmission lines lie within reasonable distance (170 km and 145 km respectively) from the project area while 133 kV and 33 kV (50 km and 18 km respectively) lines are located within relatively short distances from the property.

Ample water resources for the project can be found either on the property to support exploration and drilling activities or from the Rio Grande (Figure 5-5) which is one of the principal rivers in the region should the project be further developed. The Rio Grande has its origin at the confluence of the Cobre and Tordillo rivers to the north of the property and has a length of 275 km. It has an average flow of 107 m³/s and is one of the major tributaries to the Rio Colorado which flows out into the Atlantic south of Bahia Blanca. Meryllion has completed two water sampling campaigns over the property during the last few years (Bengochea and Tognoli, 2011 and Bengochea et al, 2014); in addition, the Mendoza Department of Irrigation has, as part of the permit to drill application (EIR Stage II), provided the Directorates of Mining and Environment with a sectorial report defining the Company's responsibilities with respect to water management during the exploration campaign.

Valle Noble which is situated along the western boundary of the property provides a suitable potential site for the location of a processing plant and tailings storage facilities should this be required.

The town of Malargüe provides a convenient base for the project both currently as well as in the future. It has provided a source for local temporary labour as well as various services and supplies during the exploration campaigns; in addition, Meryllion established a temporary field office in the town. In the future, the town could play a major role in support of operations as a site to house personnel and to provide support services. The Mining School provides a ready source of mining technicians and technical personnel, and the town is linked to the fiber optic communications network (Figure 5-6).













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6 HISTORY

Mineralisation on the Cerro Amarillo property was first discovered by Minera Aguilar (St Joe Minerals) in 1970 from follow-up of stream geochemistry. Initially, the work concentrated around the Cerro Apero prospect on the Cerro Amarillo property and was then extended to include the Cajon Grande prospect some seven kilometres to the southwest by Solitario in 1995. In early 2014, Meryllion discovered an additional mineralized porphyry system at La Blanca prospect along the western margin of the property, and identified the Vaca de Cobre mineralized porphyry soon thereafter. Details of the work carried out on the property since its discovery are as follows:

- 1970 –1973 St Joe undertook geological mapping, surface geochemical sampling, and geophysical surveying (27 km of IP) of the Cerro Apero colour anomaly (Bengochea, 2002).
- 1994 1995 Solitario carried out further rock geochemistry (109 samples) and additional geological reconnaissance, and identified further mineralisation at Cajon Grande (Lara, 1994).
- 1995 1996 Phelps Dodge undertook thin section petrography, reconnaissance mapping, and limited rock chip sampling (94 samples) of the Cajon Grande anomaly (Garrido De La Barra and Gardner, 1996).
- 1996 1997 BHP carried out further rock chip sampling of Cerro Apero anomaly (114 samples).
- 1998 Billiton (Kirk, 1998) undertook a ground magnetic survey (22 km) over the Cerro Apero prospect in addition to confirmatory and orientation geochemistry (117 samples).
- 1999 IMA repeated two of the St Joe IP lines (4.2 km), and reprocessed a further four lines from the Aguilar IP survey (Bengochea 2002; Constitution, 2008).
- 2000 OreGalore held the option on Cerro Amarillo and compiled all data but did not undertake any additional fieldwork.
- 2001 2003 MIM/Xstrata (Gonzales, 2002) carried out work on the neighbouring property, Infiernillo, to the east (MIM, 2005), and subsequently extended the work to cover the Cerro Apero prospect. They took an additional 30 grab samples, and carried out a further 4.2 line kilometres of dipole-dipole IP on three lines over the Cerro Apero prospect. MIM also flew approximately 500 line kilometres of helicopter magnetics over the eastern

part of the Cerro Amarillo property covering the Cerro Apero prospect and its environs.

- 2006 Latin American Minerals briefly held the option; they undertook some confirmatory samples and carried out an analysis of satellite images (Palma, 2006).
- 2008 2009 Constitution Mining (Constitution, 2008) carried out detailed mapping over Cerro Apero and reconnaissance mapping over Cajon Grande. The work was undertaken by the senior author (Tate, 2008), and this work resulted in the development of a drill proposal for a 1st Stage Drilling Program at Cerro Apero.
- 2011 2012 Meryllion undertook detailed mapping at Cajon Grande and prospected the La Blanca alteration anomaly (Flood, 2012; Echeveste and Del Blanco, 2012). This work, also, resulted in a drill proposal for 1st stage drilling at Cajon Grande.
- 2013 2014 Meryllion continued work on the project (Cires and Fernandez, 2013), and carried out detailed mapping over the La Blanca prospect and identified three mineralized breccia zones related to a porphyry intrusion. In addition, a fourth porphyry systems was identified at Vaca de Cobre along the eastern boundary of the Cerro Amarillo property and a previously unrecognized system of muted alteration and vein sets associated with intrusive activity was discovered at Cerro Choro (Tate, 2014a and 2014b). The Company also carried out induced polarisation (IP) surveys over Cerro Apero and Cajon Grande (Imrie and Perera, 2014; Sharpe et al, 2014; Watts, 2014), and undertook geochemical sampling over La Blanca (east), Cajon Grande, Cerro Choro, and Vaca de Cobre (Bloom, 2014). The whole property was covered by a helicopter-borne magnetic and radiometric survey (Manoukian, 2014; Watts, 2014). The results from this are the subject of this report and are further discussed in Section 9.

From the initial discovery of mineralisation at Cerro Apero in the northeast of the Cerro Amarillo property in 1970, successive exploration efforts have led to the identification of a cluster of mineralized porphyry systems to the southwest, all of them located along an apparent northeast-trending structural corridor.
7 GEOLOGICAL SETTING AND MINERALISATION

7.1 REGIONAL CONTEXT

The Cerro Amarillo property is a Cu-(Mo-Au) porphyry project located in west central Argentina along the Andean chain of South America. The world's greatest concentration of porphyry copper deposits lies along this mountain chain (Figure 7-1-1) and occurs in several orogen-parallel belts (Figure 7-1-2). These metallogenic belts formed at discrete times from the Cretaceous to the Pliocene (Camus and Dilles, 2001; Sillitoe and Perelló, 2005). While porphyry deposits are distributed along the whole length of the Andean cordillera, three districts of "behemoth" deposits (as defined by the National Academy of Sciences, 1975) are located in southern Peru (Cuajone, Quellaveco, Toquepala), northern Chile (Collahuasi, Chuquicamata, Escondida), and central Chile (Los Pelambres, Los Bronces/Rio Blanco, El Teniente) as shown in Figure 7-1-1.

The Cerro Amarillo project, which is located some 18 km from the border with Chile and includes a cluster of five porphyry occurrences, lies along the southern extension of the late Miocene-early Pliocene metallogenic belt that includes the El Teniente, Rio Blanco/Los Bronces, Los Pelambres-El Pachon, and the recently discovered Altar porphyry Cu-(Mo-Au) deposits as well as many other porphyry occurrences (Figure 7-1-3). This metallogenic belt straddles the boundary between two major Andean tectonic segments: the Southern Volcanic Zone to the south and the Flat-Slab segment (28° – 33° S) to the north. The Southern Volcanic Zone is characterized by a subduction angle of 30° and relatively thin crust (35–40 km) while the Flat-Slab segment, in contrast, is characterized by a subduction angle of 5° to 10° and thicker crust (55–65 km). The steeper angle of subduction in the Southern Volcanic Zone allows for present-day active volcanism, whereas the Flat-Slab segment is inactive. Also, tears which may develop in the slab along the transition from flat to steep subduction can result in asthenosphere traversing the slab and entering the overlying wedge (cf, Sasso, 1997).

This may produce devolatilization of the slab which, together with the mantle-derived metals source, provided the requisite large volumes of water, sulphur, copper, and chlorine for porphyry deposit genesis.







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7.2 DISTRICT GEOLOGY

The Cerro Amarillo property covers part of the northwest margin of the Neuquén Basin which developed as a back-arc rift on a basement of Choiyoi Group rocks during late Triassic time and then filled with a transgressive sedimentary sequence during Jurassic and Cretaceous time. Miocene to Pliocene magmatism (Figure 7-2-1) which characterizes the Los Pelambres-Rio Blanco-El Teniente metallogenic belt, south of latitude 31° S, can be divided into two episodes (Sillitoe and Perelló, 2005) that include:

- early to late Miocene tholeitic to calc-alkaline basaltic through dacitic to rhyolitic rocks along with granodiorite pluton and porphyry copper bearing stock emplacement between 12-8 Ma, and
- late Miocene to early Pliocene (~7.5 4.5 Ma) porphyry formation at El Teniente and Los Bronces-Río Blanco, and, possibly, at Cerro Amarillo (Figure 7-2-1).

Compressional deformation as evidenced by thrust faults and reverse faults that formed at the end of the first episode and continued moving through much of the second episode. The major structure, which probably controlled emplacement of the mineralized porphyry systems at Cerro Amarillo is the Las Leñas fault, a 60 km long, north to south striking arcuate thrust fault (Bengochea, 2002). The fault has a possible vertical displacement of more than two kilometres and is located directly east of the Cerro Amarillo property (Figure 7-2-2). It is suspected that this is a steeply dipping ancient extensional structure, formed in the Permian to Triassic, and reactivated in the Miocene under a compressional tectonic regime.

The district geology is shown in Figure 7-2-2a and Figure 7-2-2b shows the legend.











7.3 PROPERTY GEOLOGY

Three distinct sequences of rocks outcrop on the property separated by unconformable contacts (Figure 7-3-1):

- The eastern side of the property is occupied by acid to intermediate volcanics that are probably part of the Permo-Triassic Choiyoi Group. This group is considered to be the basement for the Neuquén Basin.
- A north-northeast trending band across the centre of the property is occupied by Jurassic sediments that represent the early fill of the Neuquén Basin (predominantly Cuyo group).
- The northwest section of the property is occupied by a sequence of thick bedded andesitic lavas and pyroclastics that represent the Miocene Huincan Volcanics that lie unconformably over the Neuquén Basin.

The entire sequence is intruded by a series of dioritic to dacitic plugs that are probably of Miocene to Pliocene age. Small remnants of Quaternary basalt flows are present on the modern surface.

Within the property, the Choiyoi Group is characterised by a chaotic mixture of dacitic to rhyolitic lithic tuffs, ignimbrites, agglomerates and flows. Minor andesites have also been observed. The volcanics rarely show any evidence of bedding. An area of sinter-like sediments was mapped in one location. The thickness of this unit is unknown because the lower contact has not been observed within the property. These rocks are thought to represent volcanic activity during the break-up of the Gondwana supercontinent. (Heredia et al, 2002).

Overlying the Choiyoi Group is a well bedded sequence of dark red coloured andesitic to dacitic tuffs and ignimbrites. The sudden change in composition and deposition style suggests the lower contact of this unit is unconformable. The lowermost member of this unit is a distinctive red tuff with a recessive weathering pattern. Green and brown coloured Ignimbrites become more common up-sequence. The ignimbrites form vertical cliff faces in outcrop. This unit thins progressively northward. These volcanics probably represent part of the Pre-Cuyo group. This group is thought to have been deposited in half-graben

type basins that developed in the early rifting stages of development of the Neuquén Basin (Late Triassic or earliest Jurassic) (Ramos, 1988).

The ignimbrites are overlain by a sequence of thin bedded volcanoclastic siltstones. Minor dolomitic sandstone lenses occur near the base of this sequence. Fossils of shallow marine organisms are common near the basal contact. These rocks are converted to hard, dark coloured hornfels in the vicinity of intrusives. This sequence is probably equivalent to the mid Jurassic Cuyo Group. The siltstones probably represent the Bardas Blancas formation or laterally equivalent Los Molles Formation. The dolomitic sands near the base may represent the Chachil Formation.

Within the property, a separate unit was mapped at the top of the Bardas Blancas Formation. This unit is characterised by carbonaceous-calcareous siltstones and minor limestone lenses up to 1 m thick. The transition from the underlying volcaniclastic siltstones is difficult to define so the mapped boundary is somewhat uncertain. In the vicinity of intrusive bodies, this unit is converted to calcsilicate hornfels with 2 to 5% disseminated pyrite. The upper boundary of this unit is formed by the limestone of the La Manga Formation. The La Manga formation is a persistent limestone layer that ranges up to 30 m thick. In the northern part of the property it occurs as a detrital conglomerate of limestone clasts. Elsewhere it has bedded textures, but is commonly overprinted by marble or skarn. This unit hosts the majority of skarn mineralisation at the Cerro Apero and Cajon Grande prospects. A thin (<30 m ?) carbonaceous-calcareous siltstone unit occurs immediately above the limestone. It is best exposed in the northern part of the property. This unit does not appear to have any obvious equivalents in published stratigraphic columns. It may represent facies variation within the La Manga Formation.

The La Manga Formation is overlain by massive to bedded gypsum that represents the late Jurassic Auquilco Formation. The thickness of this formation varies dramatically across the property because it has been deformed into diapiric dome structures. Sink holes commonly develop in areas where the gypsum is covered by scree or glacial till. The largest exposed sections are over 200 m thick. In other areas this formation may be very thin or absent. An exposure to the north of the Cajon Grande prospect appears to contain an internal unit of limestone approximately 30 m thick although this may be a structural repetition of the La Manga Formation.

The gypsum is overlain by a sequence of bedded redbed siltstones and sandstones that probably represent part of the late Jurassic Tordillo Formation. This sequence reaches a maximum thickness of approximately 200 m near the centre of the property and thins to the north and south. The red colour, lack of fossils and common cavities after gypsum crystals suggest subaerial deposition in an arid environment. This environment reflects the overall transgressive sequence of sedimentation during the back-arc stage of the Neuquén Basin. Within the property, an unconformity removes the upper parts of the Tordillo formation and the remainder of the Cretaceous sedimentary sequence that represents the post-rift and foreland stages of basin development.

Above the unconformity, there is a sequence of andesitic crystal-lithic tuffs, agglomerates and lavas. Vague, large scale, bedding with gentle westerly dips is visible in some outcrops. These rocks probably represent the late Miocene to early Pliocene Huincan volcanics. The top of the andesitic volcanic unit is not exposed within the license area.

A series of porphyry plugs intrudes all of the units described above. The plugs range from quartz diorite to granodiorite in composition. They are characterised by crowded plagioclase crystals and large hornblende phenocrysts in a fine grained matrix. Some members of the suite also contain biotite phenocrysts. Quartz phenocrysts are present in most varieties, ranging from trace to about 15%. These intrusives typically occur as small irregular plugs, less than 1 km in diameter. The plugs commonly include several texturally distinct phases with similar compositions. Sills are also common intruding the Jurassic sediments. The largest sill extends at least 3 km along strike and is up to 100 m thick. Intrusive plugs from this suite have spatially associated "porphyry style" alteration and mineralisation systems at all of the major prospects within the property.

Smaller plugs, dykes and sills ranging from dacite to rhyolite in composition commonly occur in close proximity to the dioritic plugs. The sills of this suite are characterised by columnar cooling joints perpendicular to the intrusive contacts. Flow banding is common in the rhyolitic variants. A few dykes of dacite have been observed cutting the dioritic plugs, suggesting that the more acid intrusives are younger than the diorites.

An unusual plug or sill of fine grained hornblende porphyry occurs immediately northeast of the Cajon Grande prospect. This body has distinctive vertical, columnar cooling joints. It generates a very strong aeromagnetic anomaly due to magnetite replacement of all mafic minerals, but it has no associated mineralisation.

A small flow dome complex of Quaternary basalt has been extruded on a ridge to the east of the Cajon Grande prospect and remnants of basalt flows can be found in surrounding creek valleys.

Radiometric dating of volcanics and intrusives in surrounding districts has yielded dates ranging from 19.4 Ma to 4.8 Ma (Late Miocene to early Pliocene) (Mescua, 2011).

An interpreted cross section is shown in Figure 7-3-2.





7.4 STRUCTURE

A series of north-northeast trending normal faults developed during the rifting phase of the Neuquén Basin (late Triassic). Movement along these faults was inverted during compressional deformation during late Cretaceous time. Some of the faults were converted into thrusts and duplex structures which generally have west-over-east movement (Figure 7-4-1).

The Cretaceous compression and reversal of basin development faults produced folds with north-northeast trending axes. These structures have been studied in detail in the foreland portion of the Neuquén Basin (east of the property) because they form trap structures for oil. Geological sections controlled by oil drilling and seismic data clearly show the nature of the structures. Although the bulk of the compression occurred during Cretaceous time (prior to the intrusive and mineralisation activity), some compression is still under way. Consequently, some of the mineralisation systems may have been affected by folding and or thrust movement.

Some of the published geological maps covering the property area indicate a large thrust fault (Las Leñas Fault) immediately east of the property. The rocks within the property form the upper plate of this thrust. The Choiyoi Formation exposed along the eastern margin of the property represents part of the basement rocks that have been thrust over younger rocks to the east. Very few faults are have been mapped in outcrop, but a number of distinct NE-trending lineaments are evident in satellite imagery and digital elevation models. These lineaments represent steep dipping faults. It is also possible that there are subsidiary splays of the Las Leñas fault that are sub-parallel to bedding within the property. The unconformities at the top of the Choiyoi group and the base of the Huincan Volcanics may have been reactivated as thrusts of this type.

The Jurassic sedimentary rocks within the property have a general shallow westerly dip, but small scale folds are exposed in several locations. Many of the small folds are drag folds associated with faults. Orientations of mineralised veins generally do not reflect the orientations of large scale structures. Easterly strikes and steep dips are most common. This suggests that the veins developed after the major regional structures had become inactive. Figure 7-4-2 shows a map of vein orientations indicates that each prospect has one or two consistent vein orientations, but there are variations between prospects.











7.5 MINERALISATION

Cu-(Mo-Au) mineralisation on the Cerro Amarillo property has been recognized at five porphyry occurrences currently identified on the property (Figure 7-3-1). These porphyry complexes are:

- Cerro Apero
- Vaca de Cobre
- Cerro Choro
- Cajon Grande, and
- La Blanca

The five porphyry occurrences lie in a northeast-trending corridor with Cerro Amarillo in the northeast, Vaca de Cobre on the eastern boundary, Cerro Choro and Cajon Grande in the centre, and La Blanca in the southwest of the 14 x 12 km property (Figure 7-3-1). Substantial mineralisation of several styles has been identified at surface in each system except at Cerro Choro.

CERRO APERO

The Cerro Apero occurrence in the NE quadrant of the Cerro Amarillo property is the "discovery outcrop" of the property and was discovered in 1970. It is centred on a plug of fine grained granodiorite porphyry approximately 300 m in diameter (Figure 7-5-1). A small plug of fine grained quartz-diorite outcrops near the centre of the plug. The prospect forms a prominent cone shaped hill because the altered porphyries at the centre of the system are resistant to erosion. Several irregular plugs of dacite porphyry are scattered around the dioritic plug out to a radius of approximately 1 km. A dyke of dacite porphyry cuts across the granodiorite porphyry plug. At the current level of exposure the porphyries intrude calcareous siltstones from the upper parts of the Bardas Blancas formation and limestone of the La Manga Formation. Small remnants of gypsum from the Auquilco Formation are present on the west side of the main prospect hill.

The prospect includes stockwork, disseminated, skarn, breccia and vein style mineralisation. The granodioritic plug has abundant "A" type quartz-magnetite stockworks and strong magnetite-quartz-biotite "potassic" alteration. Chalcopyrite occurs in the

stockworks and disseminated in the altered intrusive. The quartz-diorite plug at the core of the system is approximately 70 m in diameter. It has similar alteration, but only minor stockworks and disseminated mineralisation. Fresh sulphides are visible at surface in the intrusive rocks. Consequently, the supergene zone is likely to be thin and poorly developed in this area. However, the intrusive complex is enclosed within a shell of hydrothermal breccia approximately 600 x 900 m in plan. The breccia is polymict with a matrix of altered rock flour. The breccia is overprinted by strong phyllic alteration with up to 10% pyrite, particularly in the matrix. A lack of open space suggests primary mineralisation is likely to be relatively weak in the breccia. There are some pods of breccia with open space infill, particularly near to the contact with the core intrusive. The strong phyllic alteration in the breccias will allow deep weathering and the pyrite will provide abundant nuclei to precipitate copper in the supergene zone. Copper leached from the breccia and the intrusive complex is likely to have reprecipitated in this zone (see Figure 7-5-2).

Previous rockchip samples indicate the best copper and gold grades occur along the western margin of the intrusive complex within the intrusives and in the adjacent breccia. The intrusives and breccias with quartz-biotite magnetite alteration have a high magnetic susceptibility and aeromagnetic data shows a distinct positive anomaly over the centre of the prospect. However, inversion modelling suggests that the source body for the anomaly extends only to a shallow depth. This may reflect rapid narrowing of the intrusives with depth, overprint of the potassic alteration by magnetically destructive alteration (eg phyllic as seen in the surrounding breccia) or possibly truncation of the intrusive complex by a low angle fault. In any of these cases, the extent of copper mineralisation is likely to reduce with depth.

The sedimentary sequence surrounding the complex dips approximately 15° to the west. The limestone of the La Manga formation has been converted to garnet + sulphide skarn where it is intersected by the intrusive-breccia complex. The skarn layer is approximately 20 m thick. As a result of the shallow dip, the skarn outcrops as an almost complete annulus around the prospect hill. The skarn includes some lenses of semi massive sulphide that weather to form gossan in outcrop. Calcareous units above and below the La Manga formation are converted to calcsilicate hornfels in the vicinity of the complex. Some of these rocks have abundant disseminated pyrite. The host limestone unit dips beneath the surface on the southwest side of the hill. Recent IP survey work indicates a

low resistivity layer in this area that may represent sulphide rich skarn. Several baritesiderite-hematite veins and breccia lenses outcrop in the periphery of the system. Previous rockchip samples from the largest vein have reported values of 1-30 g/t Au.

Cerro Apero and its associated color anomaly are shown in Photo 7-5-1.















VACA DE COBRE

The Vaca De Cobre prospect is centred on a dioritic intrusive complex approximately 400 m in diameter (Figure 7-5-3). Preliminary mapping has identified microgranodiorite and microdiorite porphyries in the complex. The texture of the porphyries is variable and it is likely that more detailed mapping will resolve a more complex intrusive history. At the current level of exposure, the porphyries intrude dacitic to andesitic lithic tuffs and ignimbrites of the Pre-Cuyo Group and the Choiyoi Group. Both intrusive phases are affected by weak to moderate chlorite + magnetite alteration. Some of the chlorite appears to be a retrograde product after secondary biotite (indicating early potassic facies alteration). This alteration extends up to 100 m into the volcanic host rocks surrounding the porphyry complex. Weak phyllic and albite-pyrite alteration extends several hundred metres to the north and east of the complex (Photo 7-5-2). Stockwork "A" type quartzmagnetite veins were observed in both intrusive phases, but they are much more common in the microgranodiorite porphyry. Some outcrops contain up to 10% vein material by volume. A breccia body approximately 100 m long and 40 m wide was mapped within the microgranodiorite, near the northwest margin of the complex. The breccia has angular fragments and magnetite + chlorite infill. The breccia has strong albite-pyrite alteration. The full extent of the breccia is unknown because the boundaries are obscured by scree.

Mineralisation occurs principally as chalcopyrite replacing magnetite in the stockwork veins, breccia and alteration, particularly where the potassic alteration is partially overprinted by chlorite or albite-pyrite assemblages. Chalcopyrite was also observed as disseminated grains in the quartz rich intrusive. This may represent replacement of primary magnetite or small miarolitic cavities. Traces of chalcopyrite were also observed in magnetite veinlets that extend up to 100 m outside the intrusive complex. Many of the chalcopyrite grains observed in outcrop are coated with a thin layer of chalcocite, suggesting supergene enrichment processes have been active. Secondary copper minerals (malachite + azurite) were observed on some fractures (Figure 7-5-4).

Systematic 50 x 50 m spaced scree and rockchip sampling over the intrusive complex indicates that is has consistent strongly anomalous copper mineralisation in both intrusive phases. Gold, silver and molybdenum values are insignificant. A few weakly anomalous gold results have been returned from rockchip samples around the northern margin of the prospect.

Minor outcrops of mineralised silicate (garnet) skarn were mapped to the east of the intrusive complex, but the La Manga formation has been removed by erosion in the vicinity of the intrusive complex so there is little potential for skarn mineralisation at this prospect.

Aeromagnetic data shows a strong, isolated anomaly over the intrusive complex. Inversion modelling suggests that the source of the main anomaly extends for a depth of at least 1000 m. Two smaller, magnetic anomalies occur approximately 800 m east and west of the main anomaly. These have not yet been investigated with mapping. The small surface area of this system combined with large inferred vertical extent suggests some geological similarities with the narrow pipe-like porphyries of the Goonumbla district in New South Wales, Australia (Heithersay et al, 1990).













CERRO CHORO

The Cerro Choro prospect is a previously unrecognized system of muted alteration and vein sets. It is centred on an irregular diorite porphyry plug approximately 1.5 km in diameter (Figure 7-5-5). At the current level of exposure the porphyry intrudes the lower siltstones of the Bardas Blancas Formation and the ignimbrites of the Pre-Cuyo group. Several sills of porphyry extend away from the central plug along bedding planes. Internal detail of the porphyry intrusive is not well understood because extreme topography in this area has limited the access for mapping.

Mineralisation at Cerro Choro is also poorly understood at this stage. Preliminary traverses have identified quartz-carbonate sulphide veins with silver, gold, lead, zinc mineralisation. These veins resemble the peripheral veins on the eastern side of the Cajon Grande prospect. These veins have easterly strikes and near vertical dips. Multiple parallel structures of this orientation were observed from a helicopter on the steep eastern slopes of this prospect. The veins have narrow phyllic alteration halos. The remainder of the diorite porphyry was weak pervasive propylitic alteration in the areas mapped. A series of sheeted pyrite veinlets were also noted on one traverse, but samples of this set returned only weakly anomalous silver assays (Figure 7-5-6).

Scree sampling has identified a zone of strongly anomalous copper + gold on the southwestern side of the complex. The element association in this zone is similar to the stockwork style mineralisation observed within the porphyry complex at Cajon Grande except that it has coincident anomalous molybdenum. Further mapping is required to investigate the source of this anomaly.

The rugged nature of this prospect as well as its muted alteration is shown inPhoto7-5-3.













CAJON GRANDE

The Cajon Grande porphyry system appears to be one of the most prospective occurrences on the Cerro Amarillo property. This prospect is centred on a complex of dioritic porphyry intrusives approximately 2 km long x 1 km wide, elongated in a northeast direction (Figure 7-5-7 and Photo 7-5-4 and 7-5-5). The majority of the complex is occupied by a medium grained hornblende quartz diorite porphyry. Numerous small areas of microdiorite porphyry with similar composition outcrop at the northeast and southwest ends of the complex. Relationships between the two intrusive phases are convoluted and commonly conflicting suggesting close timing of the intrusive events. Most commonly, the medium grained phase is seen to cut the fine grained phase.

At the current exposure level, the porphyry complex intrudes the Jurassic sedimentary sequence including the upper parts of the Bardas Blancas formation (calcareous siltstones), the La Manga Formation (limestone) and the Auquilco Formation (gypsum). Limestones in the vicinity of the complex are converted to silicate skarn (mostly garnet), magnetite skarn and marble. The calcareous siltstones are converted to calcsilicate hornfels.

Mineralisation includes copper+gold as stockwork veins within the diorite porphyries at the southwestern end of the complex, copper+gold in skarns around the western side of the intrusives and silver, gold, lead & zinc in veins hosted by sediments on the eastern and northern sides of the intrusive complex. The mineralisation within the intrusives is dominated by sub-parallel sheeted veinlets of quartz-magnetite-actinolite, garnet and chalcopyrite. Minor large veins and breccias have been observed with similar infill. Areas with this type of mineralisation are generally affected by moderate to strong albitemagnetite alteration. This style of mineralisation is most abundant in the older microdiorite intrusive phase at the southern end of the complex over an area approximately 600 m in diameter. Veins were rarely observed in the younger medium grained quartz diorite porphyry that makes up the remainder of the complex. Systematic scree sampling (see geochemistry section) indicates that the area with stockworks contains consistent strongly anomalous values of copper and gold. The potential volume of this mineralisation and low potential strip ratio make this an attractive exploration target.

Outcrops of skarn have been mapped at several locations around the margins of the porphyry complex. At the northern end, the skarns include lenses of magnetite and

gossan after sulphide in close proximity to the intrusive contact. More distal outcrops are dominated by garnet. The skarns with evidence of sulphide have returned significant rockchip assays up to 7.9% Cu, 0.449 ppm Au and 27.2 ppm Ag. The skarn outcrops at the southern end of the complex are dominated by garnet. To the east of the porphyry complex, the La Manga formation that hosts the skarns has been removed by erosion. To the south and west of the complex, the La Manga formation dips beneath the surface and the contact with the porphyry complex is covered by scree and glacial till. Aeromagnetic data indicates strong magnetic anomalies in these areas suggesting that substantial magnetite skarns may be preserved at relatively shallow depths. Given the high copper grades obtained from surface rockchip samples, these areas represent attractive exploration drilling targets.

The peripheral veins that occur in the sediments to the east and north of the porphyry complex have siderite, barite, galena, sphalerite, chalcopyrite, sulphosalts and quartz infill. The veins are typically 10 cm to 1 m thick and with vertical dips and easterly strikes. Rockchip samples of these veins commonly return high grades of silver, lead, zinc and occasionally gold. A sample from the largest vein located to date (sample number 1,686) returned 2,450 ppm Ag, 6.93 ppm Au, 20% Pb, 2.4% Cu 0.13% Zn and 3,660 ppm As. In general the veins are too small to mine individually although the largest vein suggests there may be substantial shoots that could have potential for underground mining. A few areas with multiple parallel veins of this type have been identified, but the veins are generally too thin (5-20 cm) and too widely spaced (10-20 m between veins) to represent a bulk mining target.

An outcrop of hydrothermal breccia occurs within one of the parallel vein sets immediately east of the porphyry complex. It is approximately 50 m wide with an easterly strike and vertical dip. The strike length is unknown due to glacial scree surrounding the outcrop. The breccia has similar infill to the veins, but a higher proportion of quartz and less sulphide. Rockchip assays have returned only weakly anomalous copper values.
















LA BLANCA

The La Blanca prospect is centred on 2 x 1 km dioritic porphyry intrusive complex (Figure 7-5-9 and Photo 7-5-6). Several other dioritic porphyry plugs occur within a 2 km radius of the main complex. The full extent of the complex is unknown because extreme topography has limited access for geological mapping; however, the diorites intrude andesitic crystal-lithic tuffs, agglomerates and flows of the Huincan Volcanics. Agglomerates and volcanic breccias are common in the Huincan Volcanics. The volcanic breccias are distinguished from hydrothermal breccias by lack of hydrothermal infill minerals and weak pervasive propylitic alteration. Bedding is occasionally evident at an outcrop scale.

The dominant phase of the intrusive complex is a light grey medium grained biotitehornblende-quartz diorite with a vaguely porphyritic texture. This phase is characterised by 5-8% biotite phenocrysts with lesser hornblende phenocrysts. Small dykes of a leucocratic diorite were commonly observed cutting the biotite diorite. The leucocratic phase contains abundant large miarolitic cavities filled with quartz, biotite, pyrite and chalcopyrite. These rocks strongly suggest that the source of copper mineralisation in this prospect is exsolution of metal-rich fluids from a crystallising magma. No significant areas of this phase were mapped at surface, but it represents an attractive target for future exploration. Significant sized intrusive bodies of this phase may have well mineralised stockwork, breccia or skarn mineralisation in close proximity.

The remainder of the complex is occupied by a dark grey, microdiorite porphyry with 10-20% feldspar phenocrysts and 2-3% hornblende phenocrysts. There are a number of dacite quartz porphyry plugs in the peripheral parts of the prospect area. These rocks are characterised by sparse feldspar and quartz phenocrysts in a fine grained matrix. Some of these intrusives also have hornblende phenocrysts.

Mineralisation is dominated by a 600 x 400 m hydrothermal breccia body (LB1) within the diorite porphyry complex, while several satellite breccia bodies (LB2 – LB5) have been mapped in the peripheral parts of the prospect area (Figure 7-5-10).

The main breccia body (LB1) is a polymict hydrothermal breccia. Clasts include various dioritic porphyries and a distinctive dacite porphyry with large quartz phenocrysts that has not been observed elsewhere in outcrop. The clasts range up to several metres in size.

Most clasts are angular shapes, suggesting minimal milling during breccia formation. The breccia changes progressively to a crackle or "jigsaw" texture near the margins. This type of fracturing extends up to 100 m beyond the mapped margins of the breccia body. Most of the breccia is clast supported with a matrix of sulphide and rock flour that has been altered to sericite and quartz. Minor open space infill between fragments was observed near the southern margin of the breccia. Infill minerals include specular hematite, quartz, sulphides, carbonate, and gypsum (generally in that order). The identity of the sulphides is not yet clear as almost all outcrops and float are oxidised to gossan. The breccia body is exposed over an altitude range of approximately 400 m. The proportion of gypsum infill in the breccia increases with altitude. Veins and small breccia bodies observed at higher altitudes to the east have almost exclusive gypsum infill. A large andesite porphyry dyke intrudes the breccia near the southern end of the outcrop area. The margins of the dyke are brecciated indicating that the breccia was still active during the intrusion of the dyke. The breccia on the margins of the dyke generally has more open space infill than the rest of the breccia. Several examples of secondary copper minerals (malachite and azurite) were observed in this material. Rockchip samples from accessible parts of the LB1 breccia (mostly near the southern end) returned strongly anomalous copper up to 3,750 ppm Cu and weakly anomalous gold up to 0.0646 ppm Au.

Alteration within the breccia is strong pervasive phyllic facies (sericite-quartz-carbonatepyrite). This facies extends out into the crackle breccia zone. The rocks surrounding the crackle zone are affected by strong pervasive albite-pyrite alteration. In both the phyllic and albitic facies, all mafic minerals, including magnetite, are converted to pyrite. This produces a distinct low in the RTP magnetic image (Figure 7-5-9).

The size, character, alteration and infill of the LB1 pipe are a close analogue to the Kidston breccia pipe in north Queensland, Australia (Baker, 1987). In particular, the Kidston pipe was found to have well defined vertical zoning of infill mineral species. The upper parts of the pipe were barren where infill was dominated by carbonate minerals. Pyrite content increased with depth. Gold mineralisation was best developed in a zone where the predominant sulphide species changed from pyrite to base metal sulphides. By analogy with the Kidston pipe, any gold rich zone within the LB1 breccia should be preserved beneath the lowest altitude exposures.

Acid generation during oxidation combined with inherent permeability in the LB1 breccia have resulted in deep weathering. Abundant sulphide in the matrix and alteration of the breccia will provide a good substrate to re-precipitate copper that has been leached from the oxide zone. Consequently there is likely to be a substantial copper upgrade in the supergene weathering zone within the breccia.

The large scale of the LB1 breccia and the extensive halo of alteration indicate a substantial source of hydrothermal fluid. In many porphyry style mineralisation systems, hydrothermal breccia pipes are closely associated with intrusive bodies containing classical "A" type stockwork style mineralisation and potassic alteration. None of the mapped intrusives at the La Blanca prospect contain significant mineralisation of this type. However, sparse "A" type veins were noted in the biotite diorite on the northern margin of the LB1 breccia and many of the fragments of dacite quartz porphyry within the breccia contain abundant "A" type quartz stockworks. No copper minerals were observed in these veins and none would be expected in the phyllic alteration zone. However, the presence of the veins and the evidence of a large hydrothermal system suggest potential for mineralisation in a potassic alteration zone that has not yet been discovered.

The LB2 breccia body occurs 1.5 km south-southwest of the LB1 breccia. It is approximately 150 m long and 100 m wide. In detail the shape is very complex consisting of interconnected lenses and pods. The breccia host and fragments are andesitic volcanics of the Huincan volcanics. Infill is predominantly comb textured quartz and gossan after sulphide. Alteration within the breccia is mostly phyllic with minor areas of albite-pyrite facies. The surrounding area has moderate propylitic alteration. The area of magnetite destruction in the breccia is not large enough to make a significant depression in the magnetic data. Rockchip samples from the LB2 breccia returned weakly anomalous copper values. Two samples of vein material adjacent to the breccia returned up to 8,590 ppm Cu.

The LB3 breccia occurs 1 km south of LB1. It has a core characterised by gossan infill after sulphide and a crescent shaped rim on the east side characterised by specular hematite + chlorite infill. The combined body is approximately 60 m in diameter. It occurs within a small complex of diorite porphyry and microdiorite approximately 250 m in diameter. The full extent of this complex is unknown because mapping access is limited by extreme topography. Fragments within both breccias are angular and there is little fine

material in spaces between the fragments. Consequently the majority of space between fragments is filled with hydrothermal minerals. The sulphide fill breccia has moderate phyllic alteration. The hematite-chlorite breccia has moderate propylitic alteration. The surrounding intrusives have weak propylitic alteration. The system has no distinctive magnetic signature. A rockchip sample from the sulphide breccia returned 0.457 ppm Au and 25.3 ppm Cu. A rockchip sample from the hematite-chlorite breccia returned no anomalous values. The breccias have no significant signature in aeromagnetic data. While this breccia body is too small to be economically significant, it does demonstrate the potential for significant gold grades in breccias for the system as a whole.

The LB4 breccia occurs 2.3 km east-southeast of the LB1 breccia. It is approximately 200 m long and 90 m wide, elongated in an easterly direction. The surrounding rocks are all andesitic volcanics. The breccia is dominated by crackle and jigsaw textures with small irregular lenses of polymict breccia. Infill is mostly gossan after sulphide. Alteration within the breccia is mostly phyllic facies with minor albite-pyrite facies. The surrounding volcanics are affected by propylitic facies alteration with some areas of potassic (biotite magnetite) facies to the east of the breccia. Rockchip samples from the breccia returned weakly anomalous copper and gold values. A float sample of andesite immediately south of the breccia returned 1,835 ppm Cu.

The LB5 breccia occurs 3.6 km southeast of the LB1 breccia. It is approximately 400 m long and 50 m wide, elongated in a north-easterly direction. It occurs along the margin of a dacite porphyry plug that is approximately 600 m long and 200 m wide. It is outside the defined margins of the La Blanca prospect and since it is spatially associated with a dacitic intrusive, it may be part of a separate mineralisation system. The breccia includes a narrow zone of rotational breccia along the contact of the intrusive, but it varies to crackle breccia over a short distance into the intrusive. The matrix is composed of altered rock flour and pyrite. No evidence of open space infill was observed. The breccia is overprinted by strong phyllic alteration. The adjacent dacite porphyry is affected by strong albite-pyrite facies alteration. At the current level of exposure, the intrusive-breccia complex intersects the La Manga Formation limestone. The limestone is altered to marble over a large area. On the contact with the breccia, a 2-5 m zone of semi massive pyrite alteration has developed in the marble. Three rockchip samples collected across the contact between the breccia and the pyrite alteration zone returned weakly anomalous copper and gold in

the semi massive sulphide (285 ppm Cu & 0.0415 ppm Au) and no significant values in the breccia.

Numerous small dykes of aplitic intrusive with miarolitic cavities were noted cutting the diorites at the La Blanca prospect. A selective sample of the miarolitic infill from this material (sample number 1,616) returned 0.731 ppm Au, 551 ppm Cu, 0.335 ppm Ag.











8 DEPOSIT TYPES

Five substantial mineralisation systems have been identified within the License area. Each of these systems is centred on a cluster of small, quartz-bearing diorite porphyry intrusives and includes one or more of the mineralisation styles commonly associated with calcalkaline "porphyry Cu-Au" mineralisation systems. Using the classification system developed by the British Columbia Geological Survey (BCGS, see Lefebure & Ray, 1995), the mineralisation styles associated with each system are as follows:

CERRO APERO

L04 Porphyry Cu+/-Mo+/-Au. K01 Copper Skarn I05 Polymetallic veins Ag-Pb-Zn+/-Au

The system is centred on a small complex of quartz-diorite porphyry intrusives with quartzbiotite alteration. The intrusive complex is enclosed in a shell of hydrothermal breccia. The porphyry+breccia complex intrudes a shallow dipping limestone unit.

The intrusives at the core of the system are overprinted by potassic (quartz-biotitemagnetite) alteration. The enclosing breccia is affected by strong phyllic (quartz-sericitepyrite) alteration. The limestones are converted to garnet, epidote, sulphide, hematite and magnetite skarns. Surrounding sediments and volcanics are affected by propylitic (albitechlorite-pyrite-carbonate) alteration out to a radius of approximately 3 km.

The intrusives contain "A" type stockwork quartz-magnetite-chalcopyrite veins and disseminated chalcopyrite in at the core of the system (L04 class). The surrounding hydrothermal breccia contains sulphide mineralisation (mostly pyrite) occurring as breccia infill and alteration. This style is included as part of the L04 class in the BCGS classification system.

Copper skarn mineralisation (K01) has developed in an annulus around the complex extending outward from the breccia-limestone contact. Mineralisation in the skarn is

concentrated in lenses of sulphide (mostly pyrite?) that are parallel to bedding and oxidised to gossan at surface.

Polymetallic veins (I05 class) occur on the northern side of the system out to a radius of approximately 1.3 km. The veins have infill of barite and galena with lesser quartz and sphalerite. Rockchip assays indicate that they also contain significant silver and gold.

VACA DE COBRE

L04 Porphyry Cu+/-Mo+/-Au.

The system is centred on a small complex of quartz-diorite porphyries intruding acid to intermediate volcanics. Biotite-magnetite alteration overprints the intrusives and immediately adjacent volcanics.. Weak phyllic (sericite-pyrite) and sodic (albite-pyrite) alteration extends out to a distance of approximately 2 km on the northern side of the system.

Mineralisation occurs as "A" type stockwork quartz-magnetite-chalcopyrite veins and disseminated chalcopyrite within the diorites. Minor chalcopyrite occurs in magnetite veinlets in the surrounding volcanics. A breccia within the diorite complex has infill of magnetite, chlorite and chalcopyrite. The stockwork, disseminated and breccia styles of mineralisation are all considered to be part of the L04 class.

CERRO CHORO

105 Polymetallic veins Ag-Pb-Zn+/-Au L04 Porphyry Cu+/-Mo+/-Au.

The system is centred on an irregular quartz diorite porphyry plug with several large sills that extend along bedding planes of the enclosing sediments and volcanics.

Pervasive propylitic alteration (chlorite-carbonate-pyrite) affects most of the diorite.

Mineralisation occurs as widely spaced veins filled with quartz, calcite, barite, pyrite, sphalerite and hematite. Assays indicate they also contain significant gold, silver and copper. These veins are considered to be I05 class.

Sheeted stockworks with pyrite + quartz infill have been observed, but assays indicate they contain only weak silver mineralisation.

Systematic talus sampling has identified a significant area with anomalous Cu-Au-Mo association at the southern end of this system. This suggests the system may also include a centre of L04 class porphyry mineralisation.

CAJON GRANDE

L04 Porphyry Cu+/-Mo+/-Au. K01 Copper Skarn I05 Polymetallic veins Ag-Pb-Zn+/-Au

The system has stockwork quartz-magnetite-actinolite-chalcopyrite veins and disseminated chalcopyrite in quartz-diorite porphyry intrusives with albite-magnetite alteration at the core of the system (L04). Pods of breccia with magnetite-actinolite-chalcopyrite infill also occur within the porphyry. This style of mineralisation is considered part of the L04 class.

The porphyry complex intrudes a shallow dipping limestone unit. Copper skarn (K01) has developed in a crescent around the north, west and south of the complex extending outward from the porphyry-limestone contact. Garnet and actinolite are the predominant gangue minerals in the skarn with lesser magnetite. Mineralisation in the skarn occurs as veins and pods of sulphide cutting or replacing the gangue minerals.

Polymetallic veins (I05 class) occur on the northern, eastern and southern sides of the system out to a radius of approximately 4 km. The veins have infill of siderite, barite, quartz and galena with lesser arsenopyrite and sphalerite Rockchip assays indicate that they also contain large amounts of silver and significant gold + copper.

LA BLANCA

L04 Porphyry Cu+/-Mo+/-Au. K01 Copper Skarn (Inferred)

The system is dominated by a large breccia body within a complex of quartz diorite porphyries. Breccia fragments include the host diorite, a quartz dacite porphyry and andesite porphyry. Infill between the fragments is dominantly pyrite with lesser quartz, hematite, calcite and gypsum. The breccia is overprinted by strong phyllic (sericite-quartz-pyrite) alteration. A large halo of sodic (albite-pyrite) alteration surrounds the breccia. Some of the adjacent porphyries and volcanics have pervasive potassic (biotite-magnetite) alteration. Several smaller breccia bodies with similar infill and alteration occur out to a radius of approximately 3 km from the main breccia body.

Mineralisation occurs as pyrite + chalcopyrite infill and alteration in the breccia. Stockwork "A" type quartz veins occur in some of the diorite intrusives and are abundant in some of the quartz dacite porphyry fragments within the breccia. Although these veins are unmineralised, they are diagnostic of hydrothermal fluid evolution from a crystallising magma. Small aplitic dykes with abundant miarolitic cavities are commonly observed cutting the diorite porphyries. The cavities are filled with quartz, chlorite, pyrite and chalcopyrite. Rockchip assays indicate that there is also significant gold in the cavities. This confirms that fluid evolving from a magma in the system carries copper + gold mineralisation.

Although no mineralised stockworks have yet been discovered at surface, the intrusive types, alteration, vein styles and evidence of magmatic fluid evolution suggest that the breccia is part of a classical calc-alkaline porphyry Cu-Au system that would fit in the L04 class. Interpretation of geological mapping data suggests that this system should intersect limestone of the La Manga Formation at depth and this is likely to result in copper skarn style mineralisation (class K01).

9 EXPLORATION

The exploration data on which this Technical Report is based were collected over two campaigns during the field seasons of 2011/2012 and 2013/2014, and also included the results from the 2007/2008 campaign with which the senior author was involved. The work consisted of:

- Detailed geological mapping, prospecting and grab-sampling in support of the mapping over Cerro Apero, Vaca de Cobre, Cerro Choro, Cajon Grande and La Blanca (Tate, 2008 and 2014b; Flood, 2012);
- Geochemical surveying over grids at Cajon Grande and Vaca de Cobre, and talus sampling along scree slopes and crests at La Blanca East and Cerro Choro (Bloom, 2014);
- Ground geophysics in the form of induced polarisation (IP) surveying conducted over Cajon Grande and Cerro Apero (Imrie and Perera, 2014; Watts, 2014); and,
- Helicopter-borne magnetic and radiometric surveying over the Cerro Amarillo property in order to define the porphyry systems and their associated alteration zones (Manoukian, 2014; Watts, 2014).

The results of this work are discussed below, and have led to the development of a drill proposal. In addition, an EIR/Stage II application has been submitted to the relevant authorities so that a Stage 1 drilling program can be conducted on approval of the application.

9.1 PREPARATION OF BASE MAPS

Meryllion engaged PhotoSat Information Ltd of Vancouver Canada to acquire high resolution (>0.50 m) stereo multispectral image and generate 1 m, 5 m, 10 m and 50 m contours, resulting in a detailed DEM for a 231 km² area over and surrounding the 167 km² Cerro Amarillo property.

PhotoSat acquired the data from Digital Globe Inc, and the final images were collected from the WorldView-2 satellite in February 2012 (see Figure 9-1-1). However, prior to acquisition of the image from the satellite, Meryllion positioned five target crosses within the 231 km² area which were surveyed using differential GPS and tied into the PASMA network of surveyed points (Marino, 2012). The crosses were laid out to PhotoSat specifications (Photo 9-1-1) as documented by Fernandez (2012), and the survey data were collected in the Posgar 94 system which incorporates the Gauss Kruger projection with the WGS84 datum. The area with targets was then overflown by the WorldView-2 system and data were acquired. These data were subsequently processed together with the ground survey information and transformed from an ellipsoidal to an orthometric format, with the subsequent DEMs being generated in orthometric form.

In addition, PhotoSat also provided orthorectified 14 band ASTER images as well as the full 8-band multispectral imagery (coastal/blue/green/yellow/red/red edge/NIR1/NIR2) from the same scene. Meryllion also processed several scenes from Landsat 5, Landsat 7 ETM+ and Landsat 8. All these images have been compiled to provide accurate base maps, and have been utilized for the identification of alteration anomalies and geological boundaries.

Figure 9-1-2 shows the rugged topography within the property and its environs, while Figure 9-1-3 demonstrates the usefulness of some of the images for identifying alteration zones.

















9.2 DETAILED GEOLOGICAL MAPPING AND PROSPECTING

Detailed mapping of the property (Photo 9-2-1) has been undertaken by the senior author over three field campaigns (February 2008, December 2013 and January-February 2014). Mr. Zachary Flood (2012) undertook additional detailed mapping around Cajon Grande in February-March 2012. The mapping was carried out within the property using handheld computers with built in GPS receivers (Trimble Nomads) running Discover Mobile software for data collection. Figure 9-2-1 illustrates the mapping traverse coverage for the 2013/2014 campaign; traverses undertaken during the 2008 and 2012 campaigns over Cerro Apero and Cajon Grande were not recorded but were similar in the density of coverage. Interpretation was assisted with WorldView-2 satellite imagery and other remotely sensed images described in the previous section.

The results of the mapping (Tate, 2008 and 2014b; Flood, 2012) not only led to the current geological coverage as detailed in the section on Geology (Section 7), but resulted in the detailed mapping of the Cerro Apero and Cajon Grande prospects. Furthermore, this work led to the discovery and identification of three additional mineralized porphyry systems at La Blanca, Vaca de Cobre and Cerro Choro. These five porphyry occurrences, all centred on dioritic intrusive complexes, are shown in Figure 9-2-1. While the prospects contain differing styles of mineralisation, all are common parts of "porphyry style" mineralisation systems. They are summarized in Section 7 of this report.



MERYLLION

RESOURCES





9.3 AIRBORNE MAGNETIC / RADIOMETRIC SURVEY

Many geologists both in Argentina and Chile are aware that one of the important metallotects controlling the location of porphyry deposits along the Andean chain is the intersection of north-trending Andean structures with broadly-trending E-W structural corridors. In this regard, Behn et al (2001) proposed that the transverse EW magnetic anomalies they observe in virtually all the significant porphyry camps in Chile, are ... "the magnetic response to the loci of emplacement of intrusive bodies of batholithic size along paths of the advancing magmatic front of an active continental margin".... One of the examples they use is the Quebrada Blanca - Collahuasi porphyry copper district where it is quite clear that there is a significant local E-W fabric transverse(orthogonal) to the general N-S alignment of copper deposits in Chile. In addition, other lines of geological evidence suggest that the Cerro Amarillo property lies on the extension of the EI Teniente - Los Bronces mineral district. In order to give relevancy to this possibility as well as to give context to the geological setting of Cerro Amarillo, Meryllion decided to acquire the regional magnetic data available for this region, and commissioned the second author to process, evaluate, and interpret these data (Watts, 2014) in preparation for the planning and interpretation of the helicopter-borne magnetic and radiometric survey.

The digital dataset which was acquired from SEGEMAR (Servicio Geológico Minero de Argentina) is a ~12,000 km subset of a larger 26,000 line-kilometre survey flown by Geodatos of Chile for Codelco Exploration in 1997. The SEGEMAR aeromagnetic dataset includes Geosoft formatted grids of DTM, Total Field Magnetics(TMI), and Reduction-to-the-Pole (RTP) Magnetics.

Figure 9-3-1 is a RTP map which has been shaded to emphasise the magnetic fabric clearly indicates the N-S alignment of the Cerro Amarillo property with the El Teniente (110 km North) and Los Bronces (250 km North) copper deposits. At a more local scale (Figure 9-3-2 showing TMI and RTP respectively), the transverse fabric that Behn et al (2001) found ubiquitous in their study of all the major Chilean copper mining camps is demonstrated. Note that the centre of magnetic RTP "bullseye" on the Cerro Amarillo property is located in the SW corner of the property, underlying the La Blanca Prospect.









On the basis of these encouraging results, Meryllion decided to conduct an airborne magnetic and radiometric survey over the entire project area (see Figure 9-3-3). New-Sense Geophysics Ltd (NSG) of Markham, Canada carried out the detailed helicopterborne aeromagnetic and radiometric survey in the month of April 2014. The survey was carried out using an AeroSpatiale 350 B3 high performance helicopter (Photo 9-3-1). A total of 1,448 line kilometres (including tie lines) were flown at a nominal flight-line spacing of 175 m, in a North-South flight direction, and with a mean survey height clearance of 30 m. The topography in the survey area varies over 1800 m, (from 2000 MASL to 3800 MASL), much of which is severely dissected terrain, especially in the western half of the survey, ie, the La Blanca area. This presents a major challenge both in the air and on the ground. Nevertheless, the helicopter geophysical survey was safely completed with more than 80% of survey flown within the 30-50 m terrain clearance specification set for the survey. It is only within the deeply incised valleys in the NW and SE corners of the survey area that flight clearance exceeded 100 m for any appreciable length. Full details related to instrumentation, survey procedures and processing of this survey are documented in a logistics report supplied by New-Sense (Manoukian, 2014).

The total field magnetic data collected by the survey has been reduced-to-the-pole (RTP), which is standard procedure in those parts of the world having a low magnetic inclination (in this case -36° S), so as to correct for asymmetric profile patterns over vertical structures. This product is presented as a color-shaded map in Figure 9-3-4, and shows that all five of the primary prospect areas are associated with distinctive magnetic features, the most prominent being the complex multi-faceted anomalies associated with the La Blanca and Cajon Grande prospects, the remaining three exhibiting a much simpler, discrete appearance. It is also apparent from the dendritic appearance of the RTP image in area north of La Blanca that there is a significant contribution from the terrain in this area. This type of pattern is unavoidable when flying over extreme and magnetically active topography. As Nabighian et al (2005) explain: ... "Magnetic anomalies produced by the magnetic effects of rocks that form topography are called topographic anomalies or magnetic terrain effects ... and should not be confused with the effects produced by irregular terrain clearance. They are easily recognized by the strong correlation of the anomaly shapes to topography".... This phenomenon has the effect of emphasizing shallow, and therefore high-amplitude, magnetic sources at the expense of deeper and therefore more subtle bodies. While a proportion of this near-surface activity may be of some potential exploration significance (eg, the near-surface expressions of the Vaca de Cobre and Cerro Apero prospects), this near-surface activity in the La Blanca and Cajon Grande areas tends to mask the contribution of deeper magnetic, and potentially large intrusive bodies.

In order to accentuate the deeper sources in the dataset, two different but complementary methodologies were employed. The first is a simple upward continuation of the RTP data to plane 500 m above topography and this product is displayed in Figure 9-3-5. The second, more complex and computer-intensive approach adopted was to carry out a 3D magnetic inversion of the data using the University of British Columbia MAG3D program. Inversion is a process whereby geophysical data is used to construct the most likely distribution of physical properties beneath the surface, and the 3D magnetic Inversion is a technique which transforms the observed magnetic data (ie, SEGEMAR or NewSense data) into 3D images of magnetic susceptibility of the subsurface that can be integrated with geological observations in order to validate what is observed. With reference to the upward continued map, the correlation with topography caused by the near-surface magnetic material has been significantly reduced and the underlying regional structural trends become quite obvious.

Previous workers, (Flood, 2012; Garrido de La Barra and Gardner, 1996) have recognized two major orthogonal structural trends in the Cerro Amarillo area, the NNW-striking Rio Grande trend and the ENE-trending Cerro Amarillo trend, and these two trends are readily identified in the upward continued map. They are also in general agreement with interpretation of the regional magnetics though the boundaries in that interpretation are obviously not as well defined as in the present survey. Of potential exploration significance is that all five of the primary prospects on the property are contained within the Cerro Amarillo trend, starting with La Blanca to the west and ending with Vaca de Cobre to the east. This is also in general agreement with the observations of Behn et al (2001) that all significant Cu-porphyry deposits in Chile are associated with transverse magnetic domains.

The MAG3D inversion process was carried out on the entire property using a 50 m cellsize for the 3D inversion mesh. The topographic input into the 3D inversion was obtained by subtracting the helicopter radar-altimeter data from the GPS-derived barometric flight height. The resulting DEM shows reasonable correspondence with existing DEMs for the property considering the interpolation required between the 175 m spaced lines. An initial inversion using an unfiltered TMI grid produced unsatisfactory results ostensibly due to the high-amplitude, high-frequency near-surface response caused by the ubiquitous near-surface magnetite in the western half of the survey area coupled with extreme topographic changes. Ultimately, it was decided to apply an upward continuation of 100 m to this grid, which then had a 1st-order polynomial (linear) surface subtracted in order to correct for the property-wide positive gradient in the survey grid, as evidenced by the enhanced background in the NE corner of the property and the depressed background in the SW corner of the RTP map.

The resultant inversion is presented in a series of figures, with Figure 9-3-6 representative of the entire property, and Figures 9-3-7 and 9-3-8 focused on the five primary prospects. Because of the abundance of low-to-moderate near-surface susceptibility "chatter" still apparent in the inversion result, and in spite of the careful processing steps outlined above, the data are presented as a series of four relatively elevated susceptibility iso-shells using an increasing opacity, and ranging from a minimum cut-off of 0.1 SI (grey) units to a maximum of 0.175 (red) SI. It was judged that these four iso-shells best represent the most significant magnetic bodies/sources within the project area.

Figure 9-3-6 is a plan view of the MAG3D iso-shell representation of the inversion which clearly demonstrates the Cajon Grande/La Blanca area to be a locus of deep-seated magnetic activity and by inference a source of significant hydrothermal activity. The two major structural trends noted in the upward continued map are also well defined in this representation. The form and extent, both vertical and horizontal, of the MAG3D iso-shells in the Cajon Grande/La Blanca area (Figure 9-3-7) are quite different from those observed in the Cerro Apero / Vaca de Cobre area (Figure 9-3-8). The former area exhibits a complex interwoven "web" of magnetic bodies, which in places extend from surface to a depth of at least 1,800 MASL, which in the case of La Blanca implies a vertical dimension of at least 1.6 km in places. The dominant trend of these bodies is in both the N-S and ENE direction, and many appear to coalesce at depth. Note that all the MAG3D figures presented have been truncated at 1,800 MASL, with the highest point being approximately 3,800 MASL.

The nature of the Cerro Apero / Vaca de Cobre magnetic bodies (Figure 9-3-8) can best be described as discrete, and much less complex than La Blanca / Cajon Grande, and in

the case of Cerro Apero, the source of magnetic response appears to be depth limited, ie a primary "bowl-shaped" feature extending from surface to 250 m below surface. The Vaca de Cobre prospect is associated with a very discrete, cylindrical body which could have at least 1 km of depth extent. Maximum plan dimensions appear to be approximately 300 m x 300 m.

By comparison, the iso-shell entities in the Cajon Grande/La Blanca area measure in the range of kilometres in both vertical and lateral extent. One area of note outside of the established prospect shapes defined by color alteration observed in remote-sensed data is immediately north of La Blanca where a dense cluster of magnetic bodies almost equal to the La Blanca complex is portrayed. It appears that owing to extreme terrain in this area not much mapping or prospecting has taken place, and has mapped in general as andesite porphyry. It is expected that if it is possible to access this area, breccia pipes similar to those recently discovered in the La Blanca area will be uncovered.

Finally, in comparing the main aspects of the regional magnetics to the current property scale interpretation, it is clear (and to be expected) that the tight-draped 175m-spaced detail survey provides more information than the regional data especially with respect to those magnetic sources that are within one kilometre of surface. Nevertheless, the regional survey accurately defined the La Blanca/Cajon Grande area as the likely epicentre of hydrothermal activity on the Cerro Amarillo property, and consequently provides additional motivation to focus more on the magnetic complex in the La Blanca / Cajon Grande area.

With respect to the data which was collected simultaneously, only the potassium count results are presented here as potassium provides the greatest contribution to the Total Count parameter. The potassium response over the survey area (Figure 9-3-9) can be divided into three relatively distinct categories: the eastern third is dominated by an elevated potassium count, the centre of the area by zone of mixed potassium response, and finally a western third which is depleted in potassium, this reflects acid volcanic, sediment and andesitic volcanic rock type belts as described in geology section. The La Blanca and La Blanca North area is extensively depleted possibly suggesting one is higher up in the porphyry Cu alteration model and suspect this is the result from sodic alteration in this system rather than classical phyllic which has high potassium content. It is interesting to note that Cajon Grande exhibits both depletion and enhancement, while



Cerro Apero is again clearly depleted. Vaca de Cobre also shows depletion even though it falls within an area that is regionally elevated and also has some evidence of sodic alteration in the periphery of the system.














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9.4 GEOCHEMICAL SAMPLING AND ANALYSIS

GEOCHEMICAL DATABASE

The Meryllion geochemical database comprises some 2,065 samples. The large majority of these (1,629 samples) were taken by Meryllion during the 2011/2012 and 2013/2014 campaigns (Figure 9-4-5), and the senior author supervised the Constitution Mining sampling program (143 samples) during the mapping campaign undertaken in 2008. Meryllion has all the original certificates and results which were transmitted electronically from these campaigns, and has entered the results from the campaigns of BHP and Phelps Dodge (293 samples) from the 1996 and 1993 campaigns respectively as reported by them in various reports (Kirk, 1998; Lara, 1994; Martinez, 1997).

Surface rock samples were generally collected by Meryllion and previous operators in support of prospecting and with a focus on assessing mineralisation found on regional traverses (Photo 9-4-1). In addition, talus samples were collected during the 2013/2014 campaign at regular intervals on several grids to provide better localized, target definition for subsequent drill testing (Photo 9-4-2). As a consequence, the geochemical database consists of several data sets collected by different operators, with different analytical methods and two sample types. Detection limits are variable. For example (Figure 9-4-1) there are two "plateaus" in the data where approximately 10% of the samples are reported as 0.0025 ppm (or half the 5 ppb detection limit) or 0.01 ppm (half the detection limit for a fire assay method).

NORMALIZATION / LEVELING

Changes in detection limit are common in project databases and do not prohibit use of any data. However, elements with data affected by changes in detection limit should be interpreted appropriately.

One set of samples, from the 2011/2012 campaign, were analyzed with a 4-acid digest whereas all the other samples were analyzed with an aqua regia digest. Both aqua regia (HNO₃ and HCI) and 4-acid digestions are effective at dissolving sulphides, Fe/Mn oxides and other minerals. Therefore elements generally associated with sulphides (i.e. Ag, As,

Bi, Cu, Mo, Pb, Zn) are expected to report similar concentrations regardless of how samples were digested.

Figure 9-4-2 shows probability plots for different years on the same graph, and restricted to samples falling within the same central structural corridor along which the porphyry occurrences are located (in order to reduce the effect of spatial distribution). The blue line (for the 2011/2012 field season) overlies the lines for other years, showing that the 4-acid digestion results have a similar range and distribution as the aqua regia results.

Elements associated with silicates (i.e. Mg, Fe) may be slightly elevated relative for 4acid digestions relative to aqua regia digests. Elements commonly associated with resistate minerals, such as Ta (or Nb) in tantalite or columbite as examples, are not released by aqua regia digestion but can be partially digested with a 4-acid digest. Tantalum values are much higher for samples submitted for analysis in 2012 because of the difference in digestion procedures. Figure 9-4-2 also shows that Au was determined with different detection limits for the 2012-2014 samples but values greater than 5 ppb Au do not demonstrate any bias for 2012 and 2014. The low bias for Au concentrations in 2013 may be related to where samples were collected and not necessarily analytical method.

In 2008, Constitution Mining analyzed rock samples for gold using both a 50 fire assay method and the aqua regia ICPMS method. The data are compared in Figure 9-4-3.

The lower detection limit for ME-MS41 (the aqua regia digest method) was 0.2 ppm in 2008 and the detection limit for the fire assay was 0.005 ppm. The results show generally good correspondence with the fire assay gold values trending towards higher values. The principal risk is understating the gold values due to the very small size of the sample (0.5 g) analysed for the ME-MS41 method. As an example, there are five samples on the graph for 2008 samples where values for the ME-MS41 method were at detection limit (<0.02 converted to 0.01) but the gold by fire assay was higher. For the purposes of regional exploration, the aqua regia ICPMS results are acceptable but a larger sample size is preferred. The detection limit for Au in 2013/2014 was 0.0002 ppm (or 0.2 ppb).













The other major factor in combining the geochemical data sets is the talus and rock samples. Probability plots, for samples from the central corridor, were used to assess differences between sample types. The central area of the licences, where both rock and talus samples were collected was selected to study the differences between element distribution. A total of 375 rock samples and 751 talus samples were included in the study; only aqua regia data were used.

Figure 9-4-4 (top) shows the cumulative frequency plots for rock and talus samples. Levelling was applied to create "ranked" variables based on z-scores. The new ZLog variable is a measurement how far the reported result is from the mean. A value greater than 2.0 means that the reported value is more than 2 standard deviations above the mean (i.e. the 96.5 percentile). A value of less than -2.0 means that the reported value is less than two standard deviations below the mean. Figure 9-4-4 (bottom) shows that the calculated ZLog values have the same distribution after leveling is applied.

Data for all rock samples, including historical sampling (pre-2008) were levelled against talus samples for only the elements available pre-2008 (Au, Ag, As, Cu, Mo, Pb and Zn).

Metal values tend to be higher in rock samples than talus samples. Median values can be similar or within 5 to 10 times higher in rocks relative to talus samples. However, the 95th percentile values are often 10 times higher in rocks than talus samples. There are several reasons for the differences in the range of element concentrations:

- Rock samples are not collected systematically and are focused on assessment of visible mineralisation/alteration zones;
- Talus samples were collected systematically along ridges and on grids;
- Talus samples have more surface area and therefore are more susceptible to weathering and erosion; mobile elements such as Cu will be impacted more than immobile elements like Au.





STATISTICS

Univariate statistics were calculated for approximately 50 elements where aqua regia data exist. There are 1023 rock samples and 750 talus samples. The univariate statistics were used to:

- Set "anomalous" values based on the 95th and 98th percentiles;
- Identify two mineralized samples with over-range Bi and Sb values which are excluded from multi-element statistics; and
- Eliminate B, Pd and Pt from further study due to high proportion of values at detection limit.

A series of probability plots were reviewed to determine which elements were least affected by the difference in acid digestion. It was determined that there is a bias of higher values for 4-acid digestion values, relative to aqua regia digest data for the following elements:

- Major elements Al, Ti, Na, K and to a lesser extent Mg and Ca;
- "Immobile elements" Be, Ba, Li, Sc, V, Rb, Sr, Y, Zr, Nb, Hf, Ta and W
- Hg is not reported by 4-acid digestion.

RESULTS

Many elements in the database for Cerro Amarillo do not appear to be significantly impacted by the difference in aqua regia and 4-acid digestion. The 22 variables that do not appear to be seriously impacted by the difference in aqua regia and 4-acid digestion include: Ag, As, Au, Bi, Cd, Co, Cr (?), Cs, Cu, Fe, Ge, In, Mn, Mo, Ni, P, Pb, S, Sb, Se, Te and Zn. Many of these elements are often associated with sulphides which are as readily dissolved by aqua regia and 4-acid digestion procedures.

Rock and talus samples results have identified a series of Cu-Mo-Au anomalies at Cerro Apero (Figure 9-4-6), Vaca de Cobre (Figure 9-4-7) and Cajon Grande (Figure 9-4-8). Summary statistics for individual prospects are shown in Table 9-4-1. Gridded colored anomalies for Cu based on these statistics are shown for Cerro Apero (Figure 9-4-9) and Vaca de Cobre (Figure 9-4-10). In addition, a "bubble map" showing graduated circles

symbolizing relative values based on these statistics is shown for Cu at Cajon Grande (Figure 9-4-11). These geochemical anomalies together with geological and geophysical data, have clearly defined targets for drill testing. Similarly, "bubble maps" showing Cu-Au anomalies are shown for La Blanca (Figure 9-4-12) and Cerro Choro (Figure 9-4-13); these anomalies will require further follow-up work. Moreover, since most samples have been analysed for up to 50 elements, some of these variables can be used to better understand zonation of the porphyry-style deposits, differentiate deposit styles, and rank targets.

Furthermore, elements identified as useful for prioritizing targets include:

- Ag-Cu-Pb-Zn ± Cd, Mn (massive sulphide association);
- As-Bi-Pb-Fe-Ca ± Sb (a mineralisation halo association); and
- Ag-Au-Bi-Cu-Mo (a Cu-Au porphyry association);
- Au + U-Hf-Zr-Th-Nb (a resistate mineral association or possibly felsic/intrusive component).
- AI-Mg-P-Sc-V-Co (variation in mafic mineral proportions/assemblage);
- AI-K-Mg ± Sr, Fe, Se (possible sedimentary component); and
- Hf-Nb-Sn-Th-U-Ti-U-Zr (resistate suite).

TABLE 9-4-1	SUMMARY STATISTICS FOR INDIVIDUAL PROSPECT	S
Meryl	llion Resources Corporation – Cerro Amarillo Project	

Prospect	Sample Type	Field	Count	Minimum	Maximum	Mean	Median	25 %le	50 %le	75 %le	85 %le	95 %le	98 %le
Cerro Apero	Rock	Ag_ppm	310	0.01	42.90	1.14	0.49	0.20	0.49	1.10	1.60	3.40	7.03
		Au_ppm	310	0.0003	3.5287	0.0472	0.0100	0.0025	0.0100	0.0300	0.0500	0.1328	0.2910
		Cu_ppm	310	0.00	14706.00	294.77	93.95	29.13	93.95	238.75	409.25	924.60	1899.20
		Mo_ppm	310	0.00	550.00	9.75	4.00	1.50	4.00	7.00	12.36	25.00	66.84
		Ag_ppm	72	0.02	0.59	0.08	0.07	0.05	0.07	0.09	0.10	0.15	0.28
Vaca de	Taluc	Au_ppm	72	0.0001	0.0207	0.0029	0.0017	0.0009	0.0017	0.0030	0.0041	0.0088	0.0181
Cobre	Talus	Cu_ppm	72	15.55	667.00	246.02	241.50	165.25	241.50	315.00	349.70	427.60	538.88
		Mo_ppm	72	0.35	12.60	3.51	2.73	1.90	2.73	4.31	4.82	9.22	10.89
Cerro Choro	Talus	Ag_ppm	190	0.02	24.70	0.92	0.29	0.09	0.29	0.69	1.09	2.94	6.64
		Au_ppm	190	0.0001	0.2150	0.0055	0.0010	0.0004	0.0010	0.0023	0.0053	0.0156	0.0389
		Cu_ppm	190	2.98	6880.00	112.78	52.25	16.13	52.25	103.00	139.48	256.20	426.64
		Mo_ppm	190	0.19	28.10	1.98	0.73	0.45	0.73	1.31	2.74	10.46	14.95
	Rock	Ag_ppm	82	0.01	2270.00	57.24	0.43	0.08	0.43	2.58	13.24	216.85	575.12
		Au_ppm	82	0.0001	57.3400	1.1189	0.0025	0.0011	0.0025	0.0289	0.2658	2.5718	8.9300
		Cu_ppm	82	0.00	21800.00	1184.64	27.85	9.81	27.85	248.75	1681.00	6957.00	12811.00
		Mo_ppm	82	0.00	173.50	6.81	0.65	0.34	0.65	2.98	6.47	20.96	77.68
	Talus	Ag_ppm	274	0.02	6.92	0.46	0.09	0.04	0.09	0.38	0.76	1.99	4.33
		Au_ppm	274	0.0001	0.9030	0.0230	0.0050	0.0011	0.0050	0.0157	0.0245	0.0809	0.2461
		Cu_ppm	274	16.45	1775.00	155.93	89.35	41.18	89.35	175.63	280.65	521.60	779.54
Cajon		Mo_ppm	274	0.33	57.30	3.48	2.08	1.17	2.08	3.59	5.74	10.88	15.24
Grande	Rock	Ag_ppm	285	0.01	30.00	1.40	0.18	0.07	0.18	0.71	1.96	7.14	15.13
		Au_ppm	285	0.0001	21.2000	0.1723	0.0100	0.0025	0.0100	0.0300	0.0692	0.2540	1.3590
		Cu_ppm	285	1.20	79200.00	1353.85	135.00	50.30	135.00	472.00	991.60	4522.00	9862.40
		Mo_ppm	285	0.18	118.50	4.33	1.00	0.51	1.00	2.31	4.22	25.20	39.08
	Talus	Ag_ppm	89	0.02	2.85	0.15	0.09	0.07	0.09	0.15	0.21	0.27	0.31
La Blanca		Au_ppm	89	0.0016	0.0419	0.0086	0.0068	0.0038	0.0068	0.0110	0.0137	0.0179	0.0349
		Cu_ppm	89	7.97	146.50	46.73	37.70	26.60	37.70	57.40	78.10	115.40	137.24
		Mo_ppm	89	0.59	3.92	2.01	1.78	1.30	1.78	2.67	3.13	3.62	3.77
	Rock	Ag_ppm	112	0.003	5.64	0.24	0.06	0.03	0.06	0.12	0.23	0.94	1.30
		Au_ppm	112	0.0005	1.3700	0.0450	0.0074	0.0035	0.0074	0.0151	0.0282	0.1311	0.6144
		Cu_ppm	112	3.96	3750.00	159.61	40.70	15.60	40.70	97.83	142.35	534.50	1640.74
		Mo_ppm	112	0.18	129.00	4.66	1.56	0.79	1.56	3.10	4.65	15.54	41.99









































9.5 INDUCED POLARISATION / RESISTIVITY SURVEY

An Induced Polarisation/Resisitvity survey was carried out on the Cerro Amarillo property in January, 2014. The purpose of the survey was to attempt to establish approximate dimensions of identified porphyry systems on the Cerro Apero and Cajon Grande prospects, and to define potential mineralisation associated with these systems. The survey was undertaken by Quantec Geoscience of Toronto employing standard, relatively lightweight equipment comprising of a 5 kW IP transmitter and Elrec Pro Receiver. Basic survey parameters consisted of a dipole separation of 100 m and reading n=1->8 along lines employing the pole-dipole array configuration. Standard 2D in-line data were collected for both prospects, and results are presented in this report in psuedo-section, 2D, and 3D formats, the latter two products resulting from the use of the 2D and 3D inversion code developed by the University of British Columbia. In oder to maximize information on the overall geometry of the 2 prospects in question, two roughly orthogonal lines were laid out on each prospect centred on previously mapped mineralized centres (Figure 9-5-1). Approximately 6 km (2 km x 3 km) of coverage was obtained for each prospect for a total survey coverage of 12 km, which was obtained over a 2 week period.

CAJON GRANDE

The results of the IP survey on Cajon Grande are shown on Figures 9-5-2, 9-5-3, and 9-5-4. Figures 9-5-2 and 9-5-3 portray the pseudo-section and corresponding 2D inversion results for L2 (NW direction) and L1 (NE direction) repectively. Note that the inversions have topography incorporated. The five elements presented on each diagram are, from top to bottom, are as follows:

- Apparent Resisivity Pseudo-Section
- 2D Resistivity Inversion
- IP Pseudo-Section
- 2D IP inversion using constant half-space conductivity, and lastly
- 2D IP inversion with 2D resistivity inversion input.

The resistivity referenced IP inversion (bottom) is generally the more diagnostic of the 2D IP inversions. Note that hot colors denote low resistivity, the reverse of the color pallette

for the IP sections. The vertical extent displayed for the depth of investigation in the presented inversion figures is approximately 400 m, and south to the left, north to the right.

From Figure 9-5-2, it can be seen that there are three 3 IP anomalies of interest in the IP inversion of this line which have been labelled A, B, and C. Anomaly A is not fully defined and occurs at the extreme south of the line. This response appears to be associated with low resistivity. There is a suggestion in the geometry of the inversion contours that this feature may in fact outcrop beyond the end of the line, and it should be noted that mineralized veins have been mapped in that area. Anomalies B and C are part of a wide, double-peaked response that for most part lies under the high-point on the line where porphyry breccia has been mapped at surface, but also extends northward. Anomaly B appears to coincide with a pronounced resistivity high, whereas Anomaly C has significantly lower resisitvities associated with it. The IP inversion indicates a depth of at least 200 m to the top of the composite Anomalies B and C.

Anomaly B is also present on L1 in the centre of line (Figure 9-5-3), as would be expected since it is the location where the two orthogonal lines intersect. Similar to L2, there is high resisistivity zone associated with it. About 300 m north of Anomaly B is Anomaly D, which the inversion suggests is at surface; it appears to be flat-lying and approximately 500 m wide. This IP feature corresponds with resistivities less than 50 ohm-metres which, unlike the geometry of the IP anomaly, appears to extend to depth. It also corrresponds with a copper soil geochemical anomaly. Anomaly F is a fairly discrete feature associated with high resistivities similar those observed for Anomaly B. Like Anomaly D, Anomaly F has direct correspondence with an extensive copper talus geochemical anomaly. The source of Anomaly F appears to be not deeper than 50 m. Anomaly E is located at far north end of the line and despite the fact that is has the appearance of being discrete feature it could just be the down-dip extension of Anomaly D though, unlike Anomaly D, it is associated with high resistivities. This anomaly also cannot be discerned in the corresponding IP pseudo-section, which adds further doubt to its validity.

The 3D inversion result using in-line data only from Lines 1 and 2 is presented in Figure 9-5-4 as an isometric view of the UBC voxel, windowed to show the inversion result within a 400 m swath along the survey lines. In this presentation Anomalies A and D described in the 2D IP interpretation stand out, especially Anomaly D. In contrast, Anomaly B which lies under the intersection point of the two survey lines is hidden from view.

CERRO APERO

The results of Cerro Apero are shown in Figures 9-5-5, 9-5-6, and 9-5-7. As is the case at Cajon Grande, two orthogonal lines were laid out over Cerro Apero (Figure 9-5-1), Line L4850E (Figure 9-5-5) and cross line L6100N (Figure 9-5-6).

L4850E is a NS line centred on the main Cerro Apero intrusion and surrounding hydrothermal breccia zone. At least 3 IP anomalies of interest are interpreted on this line (Figure 9-5-5). Anomaly A forms part a 1 km long, buried, sub-horizontal IP trend which appears to be buried at least 50-100 below surface and which commences just south of Cerro Apero breccia pipe and extends all the way south to the end of the line. The Anomaly A portion of this trend is highlighted because it is coincident with a low resistivity zone. Anomaly B is a discrete, small, sub-vertical target about 300 m down-hill from the Cerro Apero breccia pipe. Like Anomaly A, it is associated with low resistivity, but its small size detracts from its potential. Anomaly C is located about 800 m downslope from Cerro Apero breccia pipe and, while the IP response is not as intense as the previously mentioned anomalies it appears to have potential depth extent and is also associated with a significant low resistivity zone which has depth extent, with the resistivities decreasing with depth. The depth to the top of this feature appears to be of the order of 50-100 m. The outcrop area of the breccia zone itself is manifested as high resistivity/low chargeability feature of apparent limited depth extent. A similar geometry is observed in the 3D magnetic inversion for which an approximate thickness of the breccia zone is approximately 250 m.

L6100N is an EW line (Figure 9-5-6) which intersects L4850E at the peak of the hilltopforming Cerro Apero breccia zone (Figure 9-5-7). IP Anomaly D exhibits similar characteristics to Anomaly B on Line 4850E in that it appears to have sub-vertical geometry, extends essentially from surface and appears to have some depth extent. It coincides with low resistivities, especially near-surface. Similar to Anomaly A on the orthogonal L4850E, Anomaly E is interpreted as a sub-horizontal body which extends from about 150 m east of the Cerro Apero breccia pipe outcrop, but underlies the actual breccia outcrop. The breccia outcrop area, as to be expected from the description of L4850E, is characterized by high resistivities and low IP response, with limited depth extent. IP Anomaly F has been highlighted as both an IP and resistivity target, but more so the latter. The IP component of Anomaly F appears to be sub-horizontal and is likely continuous with Anomaly E forming a sheet-like feature that extends for at least 1 km west of the Cerro Apero breccia pipe outcrop. What distinguishes Anomaly F is the pronounced low resistivity association. This low resistivity is essentially blind, with an average depth to the top of the zone of approximately 100 m though the inversion suggests some small podlike "leaks" to surface. This appearance would appear to constitute a prime target for skarn mineralisation.

The 3D inversion of the 2 lines at Cerro Apero (Figure 9-5-7) confirms the overall flat-lying nature of the IP response at Cerro Apero that surrounds the quartz-diorite zone atop the main topographic peak on the Cerro Apero prospect. This polarisable horizon could be related to a mineralized skarn unit.

INTERPRETATION

In summary, the IP survey at Cajon Grande has outlined five IP zones of which three are considered high priority (ie, Anomaly A, B and D). Since the targets lie in an area of intense magnetic activity, it should be cautioned that magnetite can produce a sizeable IP response. Any drilling for the source of Anomaly B should be designed with a potential depth to target of at least 200-250 m in mind. The IP results from the two reconnaissance lines at Cerro Apero appear to have defined a buried blanket-like high chargeability/low resistivity zone extending mostly in all directions from the Cerro Apero breccia outcrop. This layer/zone is interpreted as an approximately 1.76 km² skarn layer surrounding the Cerro Apero porphyry and associated breccia zone. The intrusive and neighbouring breccia pipes do not appear to be anomalously chargeable or conductive.



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9.6 DRILLS TARGETS GENERATED

Fourteen drill holes totalling 5,300 m have been designed to test exploration targets within the Cerro Amarillo project area. The drill targets were generated after consideration of available geological, geochemical and geophysical data and are shown in order of priority. The drill holes are designed to test the style, grade ranges and scale of mineralisation present in each of the major prospects identified within the project to date. The proposed program represents the first round of exploration drilling. Future drilling will be required to define the size and average grade of any mineralisation that is identified by this program.

DH ID	Prospect	E_WGS84	N_WGS84	RL (m)	Azimuth (TN)	Dip	Length (m)
01	Cajon Grande	390,122	6,091,784	3,286	250	-60	400
02	Cajon Grande	390,169	6,091,364	3,071	330	-60	400
03	Cajon Grande	389,414	6,091,925	3,012	90	-60	200
04	Cajon Grande	390,185	6,092,311	3,142	90	-60	200
05	Cajon Grande	390,511	6,090,881	2,868	180	-60	200
06	Cajon Grande	389,413	6,090,957	2,816	90	-60	200
07	Vaca De Cobre	397,633	6,095,059	3,286	180	-60	400
08	Vaca De Cobre	397,627	6,095,263	3,272	180	-60	400
09	La Blanca	385,584	6,090,359	2,822	90	-60	600
10	La Blanca	385,630	6,090,471	2,834	90	-60	600
11	La Blanca	385,751	6,090,660	2,854	90	-60	600
12	Cerro Apero	394,780	6,096,020	3,333	270	-60	400
13	Cerro Apero	394,850	6,096,333	3,213	270	-60	400
14	Cerro Apero	394,164	6,095,941	3,095	90	-60	300

TABLE 9-6-1 PROPOSED DRILLING PROGRAM Meryllion Resources Corporation – Cerro Amarillo Project

Total 5,300
Proposed hole 01

This hole is designed to test an area of porphyry stockwork style mineralisation at the Cajon Grande prospect. The target is a swarm of sub-parallel magnetite-quartzactinolite-chalcopyrite veinlets and several mapped pods of breccia with similar infill. The mineralisation is centred on a mapped plug of micro-quartz-diorite porphyry with pervasive albite-magnetite alteration. The mineralisation occurs within a prominent topographic hill near the centre of the Cajon Grande prospect. The target has a coincident cluster of rockchip samples with strongly anomalous copper and moderately anomalous gold assays. Peripheral zones of anomalous arsenic, lead and zinc suggest that the target represents the core of a geochemically zoned porphyry type mineralisation system. Aeromagnetic data include a strong positive anomaly over the target area which suggests that the magnetite in stockworks and alteration occupy a substantial volume below surface. Induced polarisation data suggest a broad chargeability anomaly with high resistivity at depth in the target area. This suggests disseminated sulphide mineralisation, but may also be due to large amounts of magnetite. The drill site was selected on a moderately sloping area near the peak of the prospect hill. This will minimise site works required for the drill hole and maximise the vertical coverage of the target by the drill hole.

Proposed hole 02

This hole is designed to test the same target as hole 01 at the **Cajon Grande** prospect, but from a lower altitude and alternate orientation. The proposed drill site is on a bench in the scree slope approximately 200 m below the elevation of the first hole. Talus samples from this area returned consistent strongly anomalous copper values and weakly anomalous gold. Geological mapping, magnetic and induced polarisation data suggest that the mineralisation is continuous over the area that has not been geochemically sampled due to extreme topography between this site and proposed hole 01. The total target indicated by all data is approximately 600 m in diameter. The two proposed holes will test the target over a vertical extent of approximately 600 m.

Proposed hole 03

This hole is designed to test potential skarn mineralisation on the western side of the **Cajon Grande** porphyry system. Geological mapping suggests that limestones of the La Manga formation should occur at a shallow depth in this area. The target area is covered

by glacial till, but sink holes expose several outcrops of gypsum of the Auquilco Formation that lies immediately above the La Manga formation and may also include some internal limestone units. These limestones are known to host skarn style mineralisation where they outcrop at the northern end of the Cajon Grande system. Hole 03 is designed to test the limestones where they come into contact with the best mineralised parts of the porphyry intrusive system. The thickness of the limestones and overlying gypsum is unknown in this area so the hole is designed to a nominal depth of 200 m, but may be shorter or longer depending on rocktypes intersected. The calcareous siltstones below the La Manga Formation also have some potential for skarn and replacement style mineralisation so the hole may be continued if significant mineralisation is intersected in these rocks. Aeromagnetic data suggests there are no high magnetic susceptibility rocks that might represent magnetite skarn in the path of the proposed drill hole. However, much of the skarn observed in outcrop is dominated by garnet. Mineralisation has been observed in both garnet and magnetite skarn at surface. Mineralisation may also be associated with retrograde alteration that converts magnetite to sulphide and iron-silicate minerals. The aeromagnetic data indicate a moderate magnetic susceptibility body at a depth of approximately 300 m below and west of the proposed drill collar. The size and intensity of this anomaly suggests that the anomaly may be due to an intrusive rather than a magnetite skarn. Such an intrusive may have added additional heat and hydrothermal fluid for the development of skarn in the target area. The induced polarisation survey over Cajon Grande prospect did not cover this target site. The drill site for hole 03 has been selected in an area of shallow slope to minimise site preparation works.

Proposed hole 04

This hole is also designed to test potential skarn mineralisation on the western side of the **Cajon Grande** porphyry system. The target site is partially covered by glacial till, but a small amount of magnetite skarn float is present between the glacial till and the adjacent intrusive outcrops. Talus and rockchip sampling in this area returned consistent, strongly anomalous copper assays with moderate, erratic gold values. Consistent moderately anomalous molybdenum values in the same area suggest a centre of porphyry style mineralisation in the intrusives. The proposed hole is designed to test potential skarn and replacement style mineralisation developed in limestones of the La Manga Formation and the underlying calcareous sediments. However, it may also test potential for stockwork style mineralisation in the porphyry if the intrusive contact has a shallow westerly dip.

Induced polarisation data in the target area indicate a broad zone of strong chargeability and low resistivity. This response is consistent with a network of interconnected sulphide minerals which is a common mode of occurrence in mineralised skarn systems. Aeromagnetic data suggest that there are no large bodies of magnetite skarn in the path of the proposed hole. However, as mentioned above, the majority of skarn is likely to be dominated by garnet and other silicate or sulphide minerals that have a low magnetic susceptibility. Inversion of the aeromagnetic data indicates a body of high magnetic susceptibility within the intrusive rocks approximately 500 m east of proposed hole 04. This body appears to correspond to a plug of micro-quartz-diorite porphyry identified by surface geological mapping. Rockchip samples from this intrusive and adjacent outcropping skarns have returned strongly anomalous copper, gold and molybdenum assays. This intrusive may have been in contact with the skarn at proposed hole 04 prior to being dissected by younger, medium grained quartz-diorite porphyry. The proposed site for this hole has been selected on a topographic saddle to minimise site preparation and ease helicopter access.

Proposed hole 05

This hole is designed to test potential skarn mineralisation on the southern side of the Cajon Grande porphyry system. Several high amplitude aeromagnetic anomalies occur around the southern margin of the Cajon Grande intrusive complex. Inversion of the magnetic data indicates the sources of the anomalies are high susceptibility rocks that are consistent with substantial bodies of magnetite skarn. Proposed hole 05 targets one of these anomalies. There is no induced polarisation survey coverage of this target. The target site is covered by glacial till, but geologic mapping suggests that limestones of the La Manga Formation should intersect porphyry intrusives near surface in this area. Outcrops of silicate skarn have been mapped approximately 500 m east and west of the proposed drill hole along the contact of the intrusive. The proposed hole plunges to the south to ensure coverage of the anomaly which is partially under the adjacent lake. This orientation is not ideal for traversing the west dipping host sequence, but should be sufficient to test the target due to the shallow dip of the sediments. It will also provide some potential coverage of the vein swarm that outcrops approximately 400m to the east. These veins strike west-northwest with steep northerly dips. The design depth of 200 m should be sufficient to intersect the magnetic target, but final depth may be longer or shorter depending on the stratigraphy intersected. The proposed hole is sited on a crest of glacial till to minimise site preparation and ease access.

Proposed hole 06

This hole is also designed to test potential skarn mineralisation on the southern margin of the **Cajon Grande** porphyry system. Aeromagnetic data indicates a high susceptibility body consistent with magnetite skarn at a shallow depth in a location where geologic mapping suggests that limestones of the La Manga formation should intersect the southern contact of the Cajon Grande intrusive complex. Rockchip and talus sampling of the porphyry that outcrops to the north of the proposed drill site has returned consistent strongly anomalous copper and erratic, moderately anomalous gold values indicating a viable source of mineralising hydrothermal fluid for the skarn. An outcrop of silicate skarn has been mapped approximately 600 m to the east of the proposed drill site. Inversion of the aeromagnetic data suggests the anomaly is due to a high susceptibility body that becomes substantially larger with depth. This may indicate a large body of magnetite skarn or strong magnetite alteration and veining in an underlying intrusive body. The designed hole depth of 200 m should be sufficient to test the near surface anomaly, but the hole may be extended to test deeper parts of the anomaly if significant mineralisation is intersected. The hole design plunges to the east to provide maximum coverage of west dipping stratigraphy. The proposed drill site is covered by alluvium and glacial till with minimal slope and easy access.



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Proposed holes 07 and 08

These two hole are designed to test porphyry stockwork style mineralisation in a microgranodiorite porphyry plug at the Vaca De Cobre prospect. Talus and rockchip samples have returned very consistent, strongly anomalous copper assays over the entire outcrop area of the plug and a short distance into the surrounding volcanic rocks. The total anomaly is approximately 550 m in diameter. The same sample set returned consistent weakly anomalous molybdenum and erratic weakly anomalous gold values. Stockwork "A" type guartz-magnetite veinlets occupy up to 10% of the rock volume. A hydrothermal breccia with magnetite infill outcrops near the western margin of the complex. Chalcopyrite occurs as disseminated grains in the veins, breccia, intrusives and surrounding volcanics. The chalcopyrite grains commonly have a thin coating of supergene chalcocite in partially weathered outcrops. Aeromagnetic data for this area contains an isolated anomaly centred on the intrusive complex. Inversion of the magnetic data suggests a high susceptibility source that continues downward for at least 1,000 m. However, this source appears to correlate with a microdiorite plug on the southern margin of the complex. This plug appears to be only weakly mineralised. The microgranodiorite intrusive phase with abundant stockworks appears to be predominantly outside the 0.1 SI unit susceptibility iso-surface of the inversion model. No induced polarisation survey has been conducted over this prospect. Proposed drill holes 07 and 08 are designed to provide a fence of coverage over the full width of the geochemical anomaly to a depth of approximately 300 m. Hole 8 is designed to intersect the breccia body at depth. Hole 07 may also intersect the breccia because its full extent at surface is masked by scree. Both proposed drill sites are located in areas of relatively gentle slope in a topographic saddle that will provide good helicopter access.



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Proposed holes 09, 10 and 11

These three holes are designed to test mineralisation at the LB1 breccia body within the La Blanca prospect. The LB1 breccia is elliptical in plan with a long axis of approximately 600 m and a short axis of approximately 400 m. It is interpreted to be a pipe like body with steep dipping walls. The pipe occurs within a complex of several diorite and quartz-diorite porphyry intrusive phases. Most of the breccia is polymict with angular fragments and a clast supported texture. Infill between fragments is predominantly hydrothermal minerals (pyrite, quartz, gypsum, hematite, calcite) and altered rock dust. Float boulders with coatings of copper carbonate (malachite and azurite) have been observed near the southern end of the pipe. Abundant "A" type quartz veinlets are present in some breccia fragments, but they appear unmineralised. Rockchip samples from the southern end of the breccia have returned erratic strongly anomalous copper and weakly anomalous gold assays. The breccia and adjacent fractured rocks are overprinted by strong phyllic (sericite-quartz-pyrite) alteration. An envelope of albite-pyrite alteration surrounds the phyllic facies. Both phyllic and albitic facies are magnetite destructive and this is reflected in a large negative anomaly in aeromagnetic data over the breccia and surrounding rocks. The composition, texture, mineralisation and alteration of the La Blanca LB1 breccia closely resemble the Kidston breccia pipe in North Queensland. Mineralisation within the Kidston pipe was vertically zoned with the best gold grades occurring below a transition from pyrite to base metal sulphide infill. By analogy the best mineralisation in the LB1 should be below the current level of exposure. Proposed drill holes 09, 10 and 11 are designed to cover most of the width of the pipe in three wide spaced sections. The depth of the holes should be sufficient to identify any vertical zoning of the mineralisation and may also intersect the source of the "A" type stockwork veins in some fragments. Inversion of aeromagnetic data suggest there is a body of moderate to high susceptibility to the east of the breccia pipe on all sections. This may represent an intrusive with secondary magnetite alteration and stockworks similar to those seen at the Cajon Grande prospect. This area has not yet been mapped or sampled due to extreme topography. No induced polarisation surveys have been carried out over the La Blanca prospect. The planned drill hole locations assume that access will be created via a road that climbs the ridge to the northwest of the pipe and cuts along the western margin of the breccia following a contour level. Substantial earthworks may be required to achieve this access. Each site is located on a ridge crest to minimise the risk of falling rocks from the steep terrain above.



Proposed hole 12

This hole is designed to test porphyry style stockwork and breccia mineralisation at the **Cerro Apero** prospect. The prospect is centred on a complex of fine grained quartz diorite porphyry intrusives. The intrusives are surrounded by a shell of hydrothermal breccias. The intrusive and breccia complex has cut through a sedimentary sequence with a shallow westerly dip. The sedimentary sequence includes limestones of the La Manga Formation that have been converted to skarn in the areas close to the contact with the breccia. Stockwork "A" type quartz-magnetite veinlets occur in the dominant intrusive phase (micro-granodiorite porphyry). A small plug of micro-quartz-diorite with very few veins intrudes the main plug. Aeromagnetic data in this area contains a strong positive anomaly over the intrusive complex. However, inversion models suggest that the source only continues to a depth of approximately 250 m. Smaller anomalies on the northern and boundaries of the breccia indicate even shallower sources. Induced polarisation data suggests a zone of high chargeability beneath the base of the magnetic source. Proposed hole 12 will pass through a moderate chargeability section of this inversion model. Chalcopyrite has been observed disseminated in guartz veinlets and in the host intrusives. Some breccias near the intrusive contacts have magnetite infill and alteration. Elsewhere the breccias have gossanous infill after sulphide. This sulphide combined with the porous nature of the breccia should provide a good substrate for supergene copper mineralisation. Lenses of gossan after semi-massive sulphide have been mapped in the skarns surrounding the breccia shell. Veinlet and disseminated sulphide mineralisation also occurs in the skarns and underlying calcsilicate hornfels rocks. Rockchip samples have identified a zone with strongly anomalous copper, moderately anomalous molybdenum and erratic low gold values along the western boundary of the intrusives and within the adjacent breccia. Planned hole 12 is designed to test the stockwork mineralisation in the micro-granodiorite porphyry, the magnetite breccias on the contact and the surrounding sulphide breccias. The hole will also pass through a moderate resistivity low in the vicinity of the intrusive-breccia contact. The hole is sited on the relatively flat ground near the peak of Cerro Apero hill for easy site preparation and helicopter access.

Proposed hole 13

This hole is designed to test a combined magnetic high, chargeability high and resistivity low on the northern side of the **Cerro Apero** prospect. Geological mapping suggests the

target area is within the hydrothermal breccia shell that surrounds the porphyry intrusives. However, Inversion of the aeromagnetic data suggests that the source of the anomaly is a small, high susceptibility body at a very shallow depth. Such a source is likely to be an area of magnetite skarn. A narrow band of skarn and calcsilicate hornfels outcrops around the northern margin of the breccia. The skarn outcrops are dominated by garnet, but include lenses of magnetite and gossan after sulphide. Rockchip sampling in this area has returned moderately anomalous copper, gold and molybdenum assays. The magnetic inversion model suggests that the skarn probably extends beneath the edge of the breccia at a shallow depth. The coincident resistivity low in this area may reflect lenses of semimassive sulphide mineralisation in the skarn. The associated high chargeability may reflect disseminated sulphide in the remainder of the skarn and possibly the adjacent breccia. The proposed drill hole has been designed to pass through the strongest parts of all three anomalies and penetrate a short distance into the sediments beneath the calcsilicate hornfels. The proposed drill site is in an area of moderate slope and will require some site works to prepare a drill pad. Helicopter access is good, with minimal obstruction from topography.

Proposed hole 14

This hole is designed to test skarn mineralisation on the western side of the **Cerro Apero** prospect. Geological mapping indicates garnet skarn with lenses of semi massive sulphide dips at a shallow angle beneath the surface in this area. Limited rockchip sampling of skarn outcrops in adjacent areas has returned weakly anomalous copper, gold and molybdenum assays. Induced polarisation data indicate a large, low resistivity anomaly dipping in the same direction as the sediments. The low resistivity zone is approximately 200m deeper than the projected level of the skarn so it may represent layer of sulphide within the underlying calcsilicate hornfels or a different style of mineralisation. The data indicate that the low resistivity zone has only weak to moderate chargeability, suggesting that the mineralisation is likely to be interconnected sulphides in a semi massive or veinlet form. The proposed drill hole is designed to pass through the mapped skarn layers and the low resistivity zone. The drill site has a moderate topographic slope and will require some site preparation. Helicopter access to the site is clear of obstructions.



MERYLLION

RESOURCES



10 DRILLING

There has been no previous drilling activity on the Cerro Amarillo property.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

GEOCHEMICAL DATA SETS

Meryllion's geochemical database comprises a total of 2,065 samples and consists of several data sets collected by different operators, with different analytical methods and two sample types. The samples were collected over some 20 years with analytical methods and detection limits that are variable. However, of these the great majority were collected by Meryllion (1,629 samples). The database is summarized in Table 11-1.

Year	Sample Type	Number	Gold Analysis	Multi-element Package
Pre-	Rocks	293	Fire Assay	Aqua regia; 7
1996				elements
2008	Rocks	143	Fire Assay	Aqua regia; 51
				elements
2012	Rocks	292	Fire Assay	4-acid; 48 elements
2013	Rocks	136	Aqua regia ICPMS (0.5	Aqua regia; 50
			grams)	elements
2014	Rocks	450	Aqua regia ICPMS (0.5	Aqua regia; 50
			grams)	elements- SUPER
				TRACE
	Talus	751	Aqua regia ICPMS (0.5	Aqua regia; 50
			grams)	elements – SUPER
				TRACE

TABLE 11-1 SUMMARY OF GEOCHEMICAL DATA SETS Meryllion Resources Corporation – Cerro Amarillo Project

GEOCHEMICAL SAMPLING

Surface rock samples were collected by various operators primarily focused on assessing mineralisation found in regional traverses. Talus samples from the 2014 campaign were collected at regular intervals on several grids to provide better localized, target definition. Samples were sieved in the field at 2 and 8 mm, using non-contaminating steel screens for the 2 mm sieve and a plastic bucket with 8 m holes drilled in the bottom for the 8 mm sieve, and the "coarse" fraction between 2

and 8 mm was submitted for analysis. There is substantially no soil profile developed due to the high altitude and low precipitation and the "coarse" fraction was selected for analysis to best reflect rock geochemistry.

SAMPLE PREPARATION AND ANALYSES

Sample preparation and analytical methods are not specified prior to 2008. The methods used by BHP, Phelps Dodge, Solitario and Billiton are assumed to be industry standard for the mid-1990s.

The Meryllion and Constitution Mining samples (1,772 samples) were sent to ALS Minerals in Mendoza, Argentina for sample preparation. Once prepared, the samples were sent to another ALS Minerals laboratory in Vancouver, Canada. Both ALS Minerals laboratories are independent ISO/IEC 17025:2005 accredited and ISO 9001:2008 registered facilities.

At ALS Minerals, samples were crushed and a one kilogram portion was split off and pulverized to 85% passing 75 µm or better. A 0.5 g aliquot was taken from the pulverized material and subjected to aqua regia digestion and then analyzed using a combination of ICP-AES (atomic emission spectroscopy) and ICP-MS (mass spectometry). Any ICP-AES or IPC-MS result exceeding 10,000 ppm for copper, lead or zinc, or over 100 ppm silver, was reanalyzed by aqua regia digestion with AAS or AES analysis. The method codes used are shown in Table 11-2.

Some elements were reported as greater than the upper limit for the method. At total of 18 samples are reported as greater than 10,000 ppm As and one to five samples are reported over 1% for Bi, P and Sb. Eleven samples are reported over 50% Fe and three samples are reported with over 10% S. The upper limits for these elements have minor impact on the multivariate statistical analysis.

TABLE 11-2 SAMPLE PREPARATION AND ANALYTICAL METHODS Meryllion Resources Corporation – Cerro Amarillo Project

Method Code	2012-Description			
WEI-21	Received sample weight			
LOG-22	Sample login – received without bar code			
CRU-31	Fine crushing of rock chip and drill samples 70% <2 mm			
SPL-21	Split sample using a riffle splitter			
PUL-31	Pulverize a split or total samples up to 250 gm to 85% passing 75 microns			
Au-AA24	50 gm Fire Assay with AAS finish (0.005-10 ppm)			
Au-AA26	50 gm Fire Assay with AAS finish (0.01-100 ppm)			
Me-MS61	48 elements by 4-acid digestion, ICP-MS and ICP-AES finish			
Cu-AA62	Ore grade: 4-acid near-total digestion with AAS finish (0.01-50%)			
Pb-AA62	Ore grade: 4-acid near-total digestion with AAS finish (0.001-30%)			
Zn-AA62	Ore grade: 4-acid near-total digestion with AAS finish (0.001-30%)			
2013 and 2014				
PUL-32	Pulverize a 1,000 gm split to 85% passing 75 microns			
ME- MS41L	51 elements by Aqua Regia digestion, ICP-MS and ICP-AES finish			
Ag-OG46	Ore grade: Aqua Regia digestion with ICP-AES or AAS finish (1- 1,500 ppm)			
Ag-GRA21	Ore grade: 30 gm Fire Assay with gravimetric finish (5-10,000 ppm)			
Cu-OG46	G46 Ore grade: Aqua Regia digestion with ICP-AES or AAS finish (0.001-40%)			
Pb-OG46	Ore grade: Aqua Regia digestion with ICP-AES or AAS finish (0.001-20%)			
Zn-OG46	Ore grade: Aqua Regia digestion with ICP-AES or AAS finish (0.001-30%)			

ASSAY QUALITY ASSURANCE / QUALITY CONTROL

There are no quality assurance data for samples collected prior to 2012, representing approximately 20% of the surface geochemistry database. The samples collected prior to 2012 were for regional mapping programs and consisted of grab samples of mineralisation and alteration zones. In most cases, areas of interest have been re-sampled post-2012 and Meryllion data is available to confirm earlier results.

Quality control (QA/QC) samples were included into the sample stream and the resulting data were analyzed internally (Fernandez, 2014) and independently by Ms Lynda Bloom, MSc, PGeo, of Analytical Solutions Ltd of Toronto, Canada. Both reference materials and field duplicates were submitted for analysis.

Reference Materials

A total of 16 reference materials were inserted, eight each of OREAS 132b and CDN-ME-4, were submitted with samples sent for analysis in 2014. The results for Ag, As, Au and Cu are summarized in Table 11-3.

Element (units)	CDN-ME-4*				OREAS-132b**			
	Expected Assay		Observed Assay		Expected Assay		Observed Assay	
	Average	Std. Dev.						
Ag (ppm)	402	12	412.8	7.4	60.3	1.3	61.35	2.20
As (ppm)	n.a.	n.a.	2,084	126	146	3	143.1	6.0
Au (ppm)	2.61	0.15	1.62	0.95	n.a.	n.a.	<0.005	n.a.
Cu (ppm)	18,300	400	18,344	253	488	12	503.6	14.2
* - Au by Fire Assay with AA or ICP finish (30 gm); Ag by Fire Assay with gravimetric finish (30 gm); Ag, Cu and Zn								
by 4-acid digestion with AA or ICP finish								
** - all elements by Aqua Regia digestion with ICP or AAS finish								

TABLE 11-3SUMMARY OF REFERENCE MATERIALSMeryllion Resources Corporation – Cerro Amarillo Project

For elements certified for the reference materials, results fell within expected ranges for the analytical techniques used. The gold certified values for reference material CDN ME-4 were determined by fire assay on a 30 gram charge. Gold results for the ICP- MS Super Trace method (0.5 grams) range from 0.92 to 3.69 g/t which likely reflects the poor homogeneity of the reference material with a 0.5 gram subsample and not necessarily a bias in the laboratory performance.

ALS provides internal quality control data including standards, analytical blanks, solution blanks and pulp duplicates. These data were reviewed and there does not appear to be any consistence biases with respect to the expected values thus validating the Meryllion quality control data.

Field Duplicates

A total of 17 pairs of field duplicates were submitted. The Ag, As, Au and Cu assays for the original and duplicate samples are compared in Figure 11-1. Field duplicates demonstrate reasonable reproducibility and data are considered suitable for exploration targeting.

Summary Assay Quality Assurance/Quality Control

Prior to 2012, no quality control data are available. The company and laboratory quality control programs post-2012 indicate that the geochemical data are suitable for early stage exploration targeting. The analytical method for samples analyzed in 2014 used a small sample aliquot, 0.5 grams, and may under-report gold and silver.





DATA SECURITY

Samples collected by Meryllion were collected in plastic sampling bags which were closed with cable ties after insertion of two sample number tags, one of which was stapled to the inside the bag. The samples bags were stored in larger rice bags and transported off the property to a waiting vehicle at the road by mules (see Photo 11-1). From there, they were transported directly to the laboratory facilities in Mendoza by Company vehicle and driver.

The analytical results were received from the lab in electronic form and directly stored on Meryllion's server in its Buenos Aires Office. This server is backed up daily onto mirror drives as well as weekly onto external drives that are stored off site at the Company manager's premises.

In the authors' opinion, the sample preparation, analytical procedures, and security employed by Meryllion are adequate and comply with industry standards. All of the data are considered valid for regional exploration surveys and drill hole targeting but attention to the variability in the data sets is required when combing them.



12 DATA VERIFICATION

DATABASE CHECKS

Field data collected by Meryllion personnel was undertaken utilizing data loggers with GPS receivers. Discover Mobile and GeoInfoSoI software was loaded onto the loggers, and the software has the option to record various attributes in up to 112 fields. Data from the loggers were downloaded onto field computers loaded with GeoInfo Tools Database on a daily basis and transferred to the Company's server in the Buenos Aires office from time to time whenever appropriate.

On completion of the fieldwork and upon receiving all the analytical results, the validation utility of the GeoInfo Tools Database software was run to check for errors. None were found.

GEOCHEMICAL DATABASE

Sample collection, preparation, analysis, and quality control have been described above (Section 11). In addition, the geochemical database was sent to Analytical Solutions Limited of Toronto, who reviewed the data, carried out a quality audit, and reported on it (Bloom, 2014). Bloom concluded that all the data are considered valid for regional exploration surveys and drill hole targeting, but attention to the variability in the data sets is required when combining them (see Section 11).

HELICOPTER-BORNE MAGNETIC AND SPECTROMETRIC DATA

The Cerro Amarillo property and its environs were covered by a helicopter-borne magnetic and gamma-ray spectrometric survey by New-Sense Geophysics Limited of Markham in Canada. Details of the QA/QC procedures are given in the New-Sense report (Manoukian, 2014) and comprise pre-survey calibration tests, daily post-flight data verification checks and quality control utilizing a QC Tools utility by field personnel, and further post-field QA/QC procedures and leveling procedures performed by the Markham-based staff. In addition, the second author was commissioned by Meryllion to monitor the survey on a daily basis, to interact with New-Sense field and office personnel, and to report on the data (Watts, 2014). The survey was performed within contract tolerances.

INDUCED POLARISATION SURVEYS



Quantec Geoscience Ltd of Toronto carried out conventional IP/Resistivity surveying over the Cajon Grande and Cerro Apero prospects within the Cerro Amarillo property. The measured data was transferred from field equipment to notebook computers and subsequently imported into a Geosoft Oasis Montaj IP database where the QC Tool utility allowed the decay curves to be compared and evaluated (Imrie and Perera, 2014). The survey was monitored by Watts (2014), and was performed to contract specifications.



13 MINERAL PROCESSING AND METALLURGICAL TESTING

This section is not applicable.



14 MINERAL RESOURCE ESTIMATE

There are no Mineral Resources for the Project.

15 ADJACENT PROPERTIES

The cluster of mineralized porphyry systems identified at Cerro Amarillo (ie, Cerro Apero, Vaca de Cobre, Cerro Choro, Cajon Grande, and La Blanca) forms part of a late-Miocene, early-Pliocene belt of porphyry Cu-(Mo-Au) deposits as shown in Figure 7-1-2. These include the well-known behemoth deposits of El Teniente, Rio Blanco-Los Bronces, Los Pelambres-El Pachon, and, possibly, the recently discovered Altar resource.

El Teniente (Codelco) is the world's largest copper deposit in terms of contained metal with a pre-mining resource of over 12 billion tonnes of ore grading on average 0.65% Cu, 0.019% Mo, and 0.002 ppm Au (Vry et al, 2010), and lies some 120 km due north of Cerro Amarillo. Rio Blanco-Los-Bronces-Sulfatos (Anglo American) lies a further 130 km north of El Teniente in the same belt, and contains some 5 billion tonnes at 1% Cu and 0.02% Mo (Mutschler et al, 2010), whereas Los Pelambres-El Pachon (Antofagasta and Glencore respectively) at the north end of this metallogenic belt contains 890 million tonnes at 1% Cu, 0.01% Mo, and 0.015 ppm Au (Mutschler et al 2010). Directly north of this cluster lies the Altar deposit (Stillwater Mining) with some 802 million tonnes at 0.42% Cu and 0.059 ppm Au (Zwahlen et al, 2014).

This Neogene metallogenic belt is further defined by a number of porphyry occurrences as are shown in Figure 7-1-3. Occurrences are shown only for the Mendoza Province in the vicinity of Cerro Amarillo, and most of them have not been explored beyond the recognition of copper mineralisation associated with intrusive activity and early stage exploration largely comprising reconnaissance style mapping and grab sampling.

In addition, Yamana's Don Sixto gold project lies some 100 km southeast of the town of Malargue. Don Sixto is a low sulphidation epithermal gold deposit with a measured resource of 20.5 million tonnes at 1.40 g/t Au (Van der Heyden and Yeo, 2007). The project is currently on hold while waiting for permits to be issued.

The authors have been unable to verify the technical information in this section and information set out above is not necessarily indicative of the mineralization on the Cerro Amarillo project.



16 OTHER RELEVANT DATA AND INFORMATION

This section is not applicable.

17 INTERPRETATION AND CONCLUSIONS

This Technical Report has detailed the results of the exploration campaigns undertaken by Meryllion and previous operators on the Cerro Amarillo property in west central Argentina. The compilation, processing, and interpretation of these results has led to a number of conclusions which can be summarised as follows:

- The Cerro Amarillo project consists of a group of five contiguous *cateos* (exploration concessions) and one *mina* (mining claim) with a total area of 16,754 ha (or 167.5 km²) in the Mendoza province of Argentina.
- Five porphyry systems have been identified on the property to date namely, Cerro Apero, Vaca de Cobre, Cerro Choro, Cajon Grande, and La Blanca.
- Cerro Amarillo is located in the Andean mountain chain some 45 km in from the eastern foothills. The terrain is steep with an elevation range of approximately 2,000 MASL to 3,800 MASL. Much of the project area receives snow cover from May to November each year.
- The Andean mountain chain contains large numbers of world class "porphyry style" Cu-Mo-Au deposits in several distinct belts defined by deposit age and metal ratios. The Cerro Amarillo project is located on an extension of a Miocene-Pliocene belt that includes the Los Pelambres, Rio Blanco-Los Bronces, and El Teniente porphyry Cu-(Mo-Au) deposits. Large numbers of smaller deposits and porphyry style prospects confirm that this belt is continuous between the above mentioned deposits and the Cerro Amarillo project area.
- The project area covers part of the northwest margin of the Neuquén Basin which developed as a back-arc rift during late Triassic time and then filled with a transgressive sedimentary sequence during Jurassic and Cretaceous time.
- Parts of the Neuquén Basin were intruded by intermediate igneous rocks and covered by associated volcanics during two periods magmatic activity from 12 - 8 Ma (late Miocene) and 7-4.5 Ma (early Pliocene). Large porphyry style mineralisation systems are known to be associated with both magmatic events.

- An east-west compressional tectonic regime developed during the late Miocene and continued into the early Pliocene epochs. The compressional tectonics reversed movement on many of the basin development structures and generated some new north trending thrusts and folds.
- Geology within the project area includes an eastern domain of acid volcanics that represents basement to the Neuquén Basin, a central domain of sediments that represents the lower parts of the Basin fill and a western domain of andesites that represents the Miocene-Pliocene volcanic activity. The sediments and volcanics have shallow westerly dips. Boundaries between the domains may represent unconformable contacts or thrust faults. A suite of dioritic to dacitic porphyry intrusives occurs in several small complexes that intrude all three domains. These intrusives are thought to represent the Pliocene igneous event.
- Large scale "porphyry style" hydrothermal alteration and mineralisation systems are associated with four of the five intrusive complexes identified to date. These systems are identified as the Cajon Grande, Vaca de Cobre, La Blanca and Cerro Apero prospects. All four prospects contain intrusive hosted stockworks and hydrothermal breccia. Skarn style mineralisation has developed at the Cerro Apero and Cajon Grande prospects where intrusives have intersected carbonate bearing stratigraphy. Similar skarns may have developed at the La Blanca prospect below the current level of exposure.
- All four systems are exposed at a similar altitude of approximately 3,000 MASL. Alteration assemblages, vein textures and geochemical zoning in the systems indicate erosion to a moderate level in the hydrothermal systems. Minor remnants with high level characteristics are present on some of the highest topographic peaks.
- The mineralised porphyry complexes define a remarkably linear northeast trend that is at a high angle to north trending regional structures. This trend may reflect a crustal level structure that has controlled magma transport for the intrusive complexes. Such transcurrent structures are thought to be important in controlling the location of many major porphyry mineralisation systems in plate margin environments.

- All four mineralisation systems have good potential to contain substantial copper, gold and, possibly, molybdenum mineralisation. Surface exploration to date has identified targets worthy of drill testing in each of the four major prospects. A series of fourteen drill holes totaling 5,300 m has been planned to test these targets.
- The Cerro Apero, Cajon Grande and La Blanca prospects were all discovered by follow-up of satellite image colour anomalies using regional mapping and geochemical rockchip sampling. The Vaca de Cobre prospect was discovered by follow-up of a positive aeromagnetic anomaly using similar mapping and sampling methods. These methods have proven highly effective in identifying targets and confirming prospects in the project environment.
- Detailed rockchip sampling has clearly defined geochemical zoning in the larger systems. This allows vectoring toward the centre of the system where large scale stockwork or breccia style mineralisation may be present.
- Detailed analysis of the historical rockchip sample sets has confirmed that the
 results are comparable for major metal elements that are normally associated with
 sulphides despite differing digest methods and limited quality control checks.
 Minor metal elements associated with resistive oxides and silicates show some
 significant differences between data sets. Gold assays are erratic in all data sets
 due to nugget effects and this has been accentuated in batches that used a very
 small assay sample charge. However, sufficiently large numbers of samples have
 been collected on most prospects to identify those areas that have significant gold
 mineralisation.
- Talus sampling of the +2 mm to -8 mm fraction has proven an effective tool for identifying mineralised zones for drill targeting where grid sampling is possible. In very steep terrain, talus sample lines along the base of slope have proven effective in identifying areas of mineralisation in inaccessible areas.
- All of the significant prospects identified to date are coincident with positive magnetic anomalies that reflect primary magnetite in the intrusives and alteration + infill magnetite associated with the hydrothermal systems. Some of the prospects have areas of low magnetic relief associated with magnetite destructive alteration.

Hence aeromagnetic data has proven highly effective in identifying and defining mineralised systems in the project area. Inversion modelling of the aeromagnetic data has also proven a useful tool in understanding the subsurface geology and designing exploration drill holes.

- Radiometric data collected during the aeromagnetic survey has proven a useful tool in mapping rocktypes and alteration. Understanding of the responses from the areas with detailed geological mapping has allowed better interpretation of the areas without mapping and identification of a number of new exploration targets.
- Reconnaissance induced polarisation surveys over the Cerro Apero and Cajon Grande prospects have demonstrated that the method is effective in identifying chargeable and conductive zones beneath the surface despite a challenging operational environment. Future drilling will be required to judge how closely these anomalies reflect mineralisation.

Exploration work to date has successfully identified mineralised systems via ground based follow-up of anomalies in satellite imagery and aeromagnetic data and has provided the basis for a first stage drill program. In addition, the recent acquisitions of high resolution satellite imagery and detailed aeromagnetic data have generated a number of new targets that improve the prospectivity of the unexplored parts of the tenements. These areas require additional ground-based follow-up work.

18 RECOMMENDATIONS

The results of the campaigns of 2007/2008, 2011/2012, and 2013/2014 on which this Technical Report is largely based have resulted in the development of a drill proposal in order to test geological, geochemical, and geophysical targets on the Cerro Apero, Vaca de Cobre, Cajon Grande, and La Blanca prospects. The targets have been discussed in detail in Section 9.4, and a summary of the collar positions is shown in Table 9-6-1 and Figure 18-1.

The objective of this 1st stage drill program is to test the various targets outlined by the work above with a view to intersecting mineralisation over a minable width and a cut-off grade. Because of the nature of the terrain and the fact that there are no roads or tracks on the property, the drill campaign will necessarily have to utilize helicopter-portable rigs, and experienced helicopter support will be critical to the successful completion of the program. In this respect, it is understood that Meryllion has identified a suitable camp site in Valle Noble along the western boundary of the property, and it is recommended that a suitable base of operations be established to support helicopter operations, drilling, logging, and on-going exploration activities. Such support adds to the cost of exploration, and this has been taken into account in the design of the program by Meryllion geologists and management. Anticipated costs for such a program are estimated by Meryllion to be US\$ 5.3 million, the details of which are shown in Table 18-1 below.

TABLE 18-1 ANTICIPATED COSTS FOR DRILLING PROGRAM Meryllion Resources Corporation – Cerro Amarillo Project

ITEM	'000s		
	US\$		
Mineral Property Costs	186		
Permitting	42		
Access	43		
Geology	183		
Geochemistry	134		
Geophysics	100		
Drilling	2264		
Resource Estimation	50		
Engineering & Geotechnical Studies	55		
Technical Reporting	30		
Environmental Assessment	64		
Corporate Social Responsibility	60		
Health & Safety	102		
Personnel	504		
Camp Construction & Maintenance	175		
Camp Running Costs	548		
Field Expenses	37		
Helicopter Support	570		
Transport	140		
Travel	49		
TOTAL	5 336		

It is further recommended that in follow-up of the 1st stage drilling program, a comprehensive program of IP should be undertaken on a regularly-spaced grid over the more accessible prospects of Cerro Apero, Vaca de Cobre, and Cajon Grande. Taking into account the topography on these prospects, and the expense involved in conducted a survey with a conventional IP array, the gradient IP array should be given some

consideration. This array, once setup, requires a crew of 2, and is highly mobile. The drawback is the lack of depth information.

With respect to specific recommendations regarding on-going geochemical work, the following is suggested:

- Sampling and sample handling should follow industry standard protocols. The quality control procedure manual created for Meryllion (Bloom, 2011) will be applicable for the Cerro Amarillo project drilling program.
- Recommended reference materials from an OREAS suite of copper porphyry materials are: 501b, 503b, and 504b. These materials are certified for at least 30 elements and expected values are reported for both aqua regia and 4-acid digestion analytical procedures.
- An aqua regia digest is suitable for the drill core samples. The detection limits of the ME-MS41L method at ALS are too low for a drill program and a method such as ME-ICP41 would be more applicable. Gold should be determined by fire assay.
- It would be useful to build a library of whole rock data for selected representative sample types (i.e. lithium metaborate fusions). These data can be used to assess the degree of alteration, whether intrusions have the same source magma and other geochemical applications.

In summary, the authors consider the proposed first stage target testing drill program to be warranted and recommend that it be carried out.



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20 DATE AND SIGNATURE PAGE

This report titled **"Technical Report on the Cerro Amarillo Project, Mendoza Province, Argentina, NI 43-101 Report"** and dated July 28th, 2014 was prepared and signed by the following authors:

(Signed & Sealed) "Nicholas M. Tate"

Dated at Vientiane, LAOS July 28th, 2014

Nicholas M. Tate, BSc (Hons), AIG Independent Consulting Geologist

(Signed & Sealed) "Anthony H. Watts"

Dated at Toronto, CANADA July 28th, 2014

Anthony H. Watts, BSc, PGeo Independent Consulting Geophysicist

21 CERTIFICATE OF QUALIFIED PERSON

NICHOLAS M. TATE

I, Nicholas M. Tate, BSc (Hons) Geology, as an author of this report entitled "**Technical Report on the Cerro Amarillo Project, Mendoza Province, Argentina, NI 43-101 Report**" prepared for Meryllion Resources Corporation and dated July 28th, 2014, do hereby certify that:

- 1. I am Managing Director of Geomap Laos Co. Ltd. of 31/3 Ban Thatluang Tai, Vientiane Capital, Lao P.D.R.
- 2. I am a graduate of:
 - Flinders University of South Australia in 1982 with a B.Sc. (Geology).
 - James Cook University of North Queensland in 1983 with Honours.
- 3. I am registered as a Professional Geologist with the Australian Institute of Geoscientists (Reg # 2518). I have worked as a geologist for a total of 30 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Independent geological mapping and exploration services professional 1984-2005
 - Managing director of Geomap Laos Co Ltd 2006-2014
 - Geological mapping Wongahulu & Petulu porphyry Cu-Au systems, Indonesia 1996
 - Drill core logging Kidston breccia Au deposit, Australia 1997
 - Geological mapping Bulagidun porphyry-breccia Cu-Au system, Indonesia 1997
 - Geological mapping Frieda River porphyry Cu-Au system, PNG, 1999
 - Geological mapping Cadia porphyry-skarn Cu-Au deposits, Australia 2001
 - Geological mapping Dalain Els porphyry-breccia Cu-Au system, Mongolia 2001
 - Geological mapping Phu Kham porphyry-skarn Cu-Au system, Laos 2004
 - Geological mapping Tuvd breccia-Au system, Mongolia 2007
 - Prospect assessment Put 1 porphyry Cu-Au system, Thailand 2007
 - Geological mapping Cerro Amarillo porphyry-skarn Cu-Au system Argentina 2008
 - Prospect assessment Ok Tedi porphyry-skarn Cu-Au system, PNG 2013
 - Discovery La Blanca porphyry-breccia Cu-Au system Argentina 2013
 - Geological mapping Cajon Grande porphyry-skarn Cu-Au system Argentina 2014
 - Discovery Vaca De Cobre porphyry Cu-Au system Argentina 2013
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

- 5. I visited the Cerro Amarillo Project on 21/02/2008-14/03/2008 and 01/12/2013-13/12/2013 and 26/1/2014-21/2/2014.
- 6. I am responsible for the preparation of all sections of this Technical Report having concentrated particularly on the Geology, Geochemistry, and Exploration content of the report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Section Nos. I am responsible for in the Technical Report contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated 28th day of July, 2014

(Signed & Sealed) "Nicholas M. Tate"

Nicholas M Tate BSc.Geol

ANTHONY H. WATTS

I, Anthony H. Watts, B.Sc, P.Geo, as a co-author of this report entitled **"Technical Report** on the Cerro Amarillo Project, Mendoza Province, Argentina, NI 43-101 Report" prepared for Meryllion Resources Inc and dated July 28th, 2014 do hereby certify that:

- 1. I am an Independent Geophysical Consultant residing at #807, 650 Queens Quay West, Toronto, Ontario M5V 3N2.
- 2. I am a graduate of Rhodes University, Grahamstown, South Africa in 1972 with a B.Sc.
- 3. I am registered as a Professional Geoscientist in the Province of Ontario (#371). I have worked as an exploration geophysicist for a total of 41 years since my graduation. My relevant experience for purpose of the Technical Report is:
 - Part of the team that discovered Ujina porphyry copper deposit (1Bt@0.8% Cu) in Chile.
 - 19 years of experience in using the UBC MAG3D inversion code for mineral exploration, in Canada and Australia
 - 20 years of experience in interpreting IP data using the UBC IP2D and IP3D Programs
 - Explored for IOCG deposits in the Carajas, Brazil, using IP from 2003-2006
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (N43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101
- 5. I visited the Cerro Amarillo Project site, January 19-22, 2014
- 6. I am responsible for the preparation of all sections of this Technical Report having concentrated particularly on the Geophysics and Exploration content of the report.
- 7. I am independent of the issuer applying the test set out in Section 1.5 of NI 43-101
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101 and my section of the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Geophysical Section I am responsible for in the Technical Report



contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated 28th day of July, 2014

(Signed & Sealed) "Anthony H. Watts"

Anthony H. Watts, BSc, PGeo