# Independent Technical Report on the Carrizal Cu-Co-Au Property

Carrizal Alto Mining District, III Region de Atacama, Chile Centred: 308750 mE and 6895000 mN (PSAD56 /UTM Zone 19 Southern Hemisphere)



Prepared for:

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Dated: November 28, 2020



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## 1 Summary

## 1.1 Property Description and Ownership

The Carrizal Cu-Co-Au Property (the "Carrizal Property" or "Property") is located about 700 km north of Chile's capital city of Santiago, in Region III, referred to as the "Region de Atacama". The Property lies within the Carrizal Alto Mining District, straddling the border between Huasco and Copiapo provinces, approximately 75 km northwest of the City of Vallenar, 150 km south of Copiapo, and 20 km west of the Pan-American Highway. The centre of the Property is situated at coordinates 308750 mE and 6895000 mN (PSAD56 / UTM Zone 19, Southern Hemisphere).

The Carrizal Cu-Co-Au Property has historically been subdivided into two separate projects, namely the Perth and Farellón project areas, representing roughly the northern and southern halves of the Carrizal Property, respectively. The Property consists of six exploration concessions ('pedimentos'), nine mining concessions ('mensuras'), and two mensuras that are in progress. The Property covers a total area of 3,488 hectares (2,280 ha in the Perth Project and 1,234 ha in the Farellón Project).

Red Metal Resources Ltd. ("Red Metal") owns all of the concessions in the Carrizal Cu-Co-Au Property through right of title, in Red Metal's wholly-owned subsidiary, Minera Polymet S.G.A. The surface rights of the Carrizal Property are owned by the Chilean government, however if the Property is developed and mined at a later date, the surface rights will need to be secured as part of the permitting process. Surface rights are rented to mines for the life of the mine by the Chilean government and claim holders have legal unimpeded access to their pedimentos and mensuras.

#### 1.2 Geology and Mineralization

The Carrizal Cu-Co-Au Property lies within the Coastal Cordillera physiographic area, on the western margin of Chile. The Coastal Cordillera formed in the Mesozoic Era as major plutonic complexes were emplaced into arc and intra-arc volcanic and underlying Paleozoic metasedimentary rocks (Hitzman, 2000). This time period also saw development of the NW-trending brittle Atacama fault system, followed by widespread extension-induced tilting. Sedimentary sequences accumulated immediately east of the Mesozoic arc terrane in a series of interconnected, predominantly marine, back-arc basins. Early- to mid-Jurassic through mid-Cretaceous volcanism and plutonism throughout the Coastal Cordillera and immediately adjoining regions are generally considered to have taken place under variably extensional conditions in response to retreating subduction boundaries (slab roll-back) and steep, Mariana-type subduction (Hitzman, 2000).

The Property covers two distinct contact zones between Paleozoic metasedimentary rocks (shales, phyllites and quartz-feldspar schists/gneisses) in the central section, and late-Jurassic diorites and monzodiorites to the northwest and southeast. The sedimentary rocks have a strong NNE-striking shallow foliation, dipping ~40° to the southeast. The intrusive rocks towards the southeast corner of the Property, in the Farellón Project area, belong to the Canto del Agua Formation and consist of diorite and gabbro hosting many NE-oriented intermediate-mafic dykes. These diorites are known to host extensive veining with copper and gold mineralization (Arevalo and Welkner, 2003). The southern contact zone between the metasedimentary rocks and the diorite is expressed as a mylonitic shear zone ranging between 5 m and 15 m in width, striking NNE,



and dipping  $\sim$ 65 $^{\circ}$  to the northwest. This shear zone is host to mineralized quartz-calcite veins that splay off to the east into the diorites of the adjacent Carrizal Alto Mine area.

The Perth Project area at the northern end of the Carrizal Property, hosts a significant NS-trending vein swarm. Although these veins pinch and swell, they are generally 2 m wide and have been measured up to 6 m in width. Individual veins can be traced from a few hundred metres to greater than 2 km in length. Most of the surface veins identified thus far lie within the metasedimentary rocks, however several veins have been traced crosscutting the northern metasediment-granodiorite contact.

The Property occurs within the Central Andean IOCG Province (Sillitoe, 2003). Vein-type, plutonic-hosted iron oxide-copper gold ("IOCG") deposits such as Carrizal Alto, and by extension the contiguous Carrizal Cu-Co-Au Property, are characterized by a distinct mineralogy that includes not only copper and gold, but also cobalt, nickel, arsenic, molybdenum, and uranium (Sillitoe, 2003; Clark, 1974). All of the IOCG deposits in the region are partially defined by their iron content in the form of either magnetite or hematite (Sillitoe, 2003).

A variety of alteration assemblages has been noted in the Chilean IOCG deposits according to whether or not the deposits are hematite- or magnetite-dominated:

- 1. Magnetite-rich veins contain appreciable actinolite, biotite and quartz, as well as local apatite, clinopyroxene, garnet, hematite and K-feldspar, and possess narrow alteration haloes containing one or more of actinolite, biotite, albite, K-feldspar, epidote, quartz, chlorite, sericite and scapolite.
- 2. Hematite-rich veins tend to contain sericite and/or chlorite, with or without K-feldspar or albite, and possess alteration haloes characterised by these same minerals (Sillitoe, 2003). Typically, the vein deposits of the coastal Cordillera are chalcopyrite, actinolite and magnetite deposits (Ruiz, 1962).

Carrizal Alto, just east of the Carrizal Property, has historically been known as a significant cobalt deposit (Ruiz, 1962; Clark, 1974) and has reported cobalt grades of up to 0.5% Co in the form of cobaltiferous arsenopyrite (Sillitoe, 2003; Ruiz, 1962), carrollite (CuCo<sub>2</sub>S<sub>4</sub>), and other cobalt sulphides (Clark, 1974). Copper mineralization on the Carrizal Property consists of malachite and chrysocolla in the oxide zone, and chalcopyrite in the sulphide zone.

#### 1.3 Status of Exploration

Over the past three years, Red Metal has collected data from bulk sampling efforts (underground exploration workings and rock sampling) conducted by artisanal miners on the Carrizal Property.

#### 1.4 Qualified Person's Conclusions and Recommendations

The Farellón and Perth project areas, collectively making up the Carrizal Cu-Co-Au Property, represent a substantial land holding for Red Metal Resources Ltd. This Property is located within a historical mining district in Chile that was a prolific past-producer, shut down due to economic conditions rather than the exhausting of the deposit. Additionally, the Property has only undergone limited modern exploration, which has so far demonstrated the potential of the Property to host a mineralized deposit.

Red Metal conducted exploration and drilling programs between 2008 and 2018, with the latest information stemming from bulk sampling efforts by a contract artisanal miner. This work resulted in 11,265 tonnes of



sulphide-mineralized material with an average grade of 1.67% Cu, 5.8 g/t Ag, and 0.21 g/t Au, as well as 1,813 tonnes of oxide mineralized material with an average grade of 1.56% Cu. The La Empressa Nacional de Mineria ("ENAMI") processing facility did not have the capacity to recover cobalt, however three grab samples taken from the same location as the bulk sampling yielded between 0.09% and 0.12% Co (Red Metal personal communication). Red Metal has not conducted any work on the Property since 2018 and specifically since the site visit by the Author in 2018.

Drilling on the Property has yielded significant Cu-Co-Au mineralization, with Red Metal confirming and extending the mineralization both in the down-dip direction and along strike in their 2011 and 2013-2014 programs. In their 2012 assessment, Micon reviewed Red Metal's 2011 QA/QC protocols and determined that the August 2000 CIM Exploration Best Practices Guidelines were followed (Lewis, 2012).

The Carrizal Property is considered to be a mid-stage exploration project upon which Red Metal can continue performing exploration and drilling activities in order to further identify the nature and extent of the mineralization in and around the shear zone.

Based on the positive results from Red Metal's multiple exploration programs on the Farellón Project area, it is recommended that Red Metal approach further exploration in two phases. The first phase will consist of a 3,000 m drilling program to test the primary mineralization at depth that has thus far only been intersected in a few drill holes and determine the potential of the cobalt mineralization in the sulphide zone. If the first phase continues to return positive results, a second phase 20,000 m drilling program (RC and core) would be conducted in order to test down to 400 m depth with enough intercepts to complete an initial mineral resource estimate. Further recommendations that should be considered during exploration on the Carrizal Property include the following:

- 1) It is recommended that any assaying that is done for cobalt should employ a sodium peroxide fusion method, rather than the more commonly used 4-acid digestion. This method has the advantage of more completely extracting cobalt from the pulverized sample, by transforming all metal-sulphide bonds into metal-oxide bonds, thereby increasing the amount of cobalt available in solution. It is also faster and safer, as it doesn't require the use of a two-stage process requiring highly corrosive hydrofluoric acid (HF).
- 2) Standard Quality Assurance / Quality Control ("QA/QC") procedures for the minerals industry is that a secondary assay laboratory be used to re-assay a portion of between 5% and 10% of the samples assayed by the primary lab used. This additional sampling procedure would act as a secondary check on the results produced by the primary laboratory.
- 3) Considering the silver results from the artisanal mining, sampling should be completed for silver mineralization as well as copper, cobalt, and gold.
- 4) It is recommended that if the artisanal mining operation continues, a multi-tonne metallurgical sample be taken to determine any potential issues with the sulphide ore and the potential recoveries of copper, cobalt, gold and silver.
- 5) It is recommended that Red Metal build a covered facility in which to store its samples on the Carrizal Property, in order to preserve samples from the effects of weather.

## 2 Introduction

## 2.1 Issuer for Whom the Technical Report is Written

Dr. Scott Jobin-Bevans (P.Geo.), was engaged by the Issuer, Red Metal Resources Ltd. ("Red Metal"), to prepare an Independent Technical Report for its Carrizal Cu-Co-Au Property (the "Carrizal Property" or "Property"), located in the Carrizal Alto Mining District of northern Chile, Atacama III Region.

The Technical Report is compliant with National Instrument 43-101 ("NI 43-101"), companion policy NI 43-101CP, and Form 43-101F. Dr. Jobin-Bevans (the "Author") serves as the Independent Qualified Person ("QP") in accordance with Sections 1.5 and 5.1 of NI 43-101CP (Companion Policy) in that there is no circumstance that, in the opinion of a reasonable person aware of all relevant facts, could interfere with the QP's judgment regarding the preparation of the Technical Report. Dr. Jobin-Bevans is a member in good standing of the Association of Professional Geoscientists of Ontario (APGO #0183). A Certificate of Author is provided in Appendix 1.

The QP's scope of work entailed reviewing available historical information, visiting the Property, inspecting underground exploratory workings, verifying the location of historic surface drill holes and current property markers, collecting verification samples, and analysing these samples for Cu, Au, Co, and Ag. The QP also summarized these findings and provided recommendations for future exploration work on the Property.

## 2.2 Purpose of the Technical Report

The purpose of this Technical Report is to provide an independent review of Red Metal's Carrizal Cu-Co-Au Property in northern Chile and verify the validity of the historical database. Red Metal Resources Ltd. is applying to be listed on a Canadian stock exchange, and as such, this report will be used to comply with regulatory requirements.

Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at the party's sole risk. The data supporting the statements made in this report have been examined for accuracy and completeness by the Author.

#### 2.3 Sources of Information and Data

In conducting this study, the Author consulted and utilized various sources of information and data, including government publications, and historical files provided to him by the Issuer, Red Metal Resources Ltd. A list of the various sources used to prepare the current report is given in Section 20, 'References'.

## 2.4 Details of the Personal Inspection on the Property by the Qualified Person

Dr. Jobin-Bevans (P.Geo.), Principal Geoscientist from Caracle Creek International Consulting Inc. ("Caracle Creek"), visited the Carrizal Cu-Co-Au Property in northern Chile, on January 13<sup>th</sup>, 2018. The purpose of this site visit was to review work conducted on the Property since the last NI 43-101 report was completed (Lewis, 2012), investigate access, infrastructure, geology, mineralization, environmental and social impact issues, and to meet with representatives of the contract miner working on the Property.



During the site visit, underground exploration workings were examined, photographs and GPS points taken, some property boundary markers were identified, and a total of 6 grab rock samples ("verification samples") were collected for analysis (Figures 1, 2 and 3).

Time on site was spent with Kevin Mitchell Jr., Logistics and Mine Administrator for Minera Farellón, the mining contractor that worked on the Property from 2008 to 2019. During this time, Kevin Mitchell, Sr. held a contract to mine on the Farellón Project area from the Issuer, Red Metal Resources Ltd. Mr. Mitchell Sr. paid Red Metal a royalty. Mr. Mitchell Sr. in turn had a contract directly with ENAMI to process the mined material. Mr. Mitchell Sr. cancelled the contract to mine in January 2018. Also, on site was Ramon Delgado, an experienced miner and prospector who has spent most of his life working in the region and in the region of the Property.

It was deemed unnecessary to visit the Perth Project area during the site visit, but highlights were discussed with personnel.



Figure 1 - North Mine portal access with Mr. Delgado (left), the Author and QP, Dr. Jobin-Bevans (centre), and Mr. Mitchell Jr. (right) (photo by Dr. Jobin-Bevans).



Figure 2 - Mineralized rocks from underground at the North Mine, Level 7 (photo by Dr. Jobin-Bevans).



Figure 3 - Main mineralization structure from underground exploratory workings in the South Mine, and the site of rock sample FS-02 (photo by Dr. Jobin-Bevans).

## 2.5 Terms of Reference, Units of Measure, Currency

A glossary of terms is provided in Table 1 and units of measure in Table 2. The Metric System or SI System is the primary system of measure and length used in this Report with lengths generally expressed in kilometres, metres and centimetres; volume as cubic metres; mass as metric tonnes (t); area as hectares (ha); and zinc, copper and lead grades as percent (%) or parts per million (ppm). Precious metal grades, such as gold and silver, are generally expressed as gram/tonne (g/t) but may also be in parts per billion (ppb) or parts per million (ppm).

Table 1 - Glossary of Terms.

Term	Meaning	Term	Meaning
AEM	Airborne Electromagnetic	Na	sodium
Ag	Silver	Na₂O	sodium oxide
Al	Aluminum	NE	northeast
$Al_2O_3$	aluminum oxide	NI	National Instrument
AW	apparent width	Ni	nickel
As	Arsenic	NSR	net smelter return
Au	Gold	NTS	National Topographic System
Ba	Barium	Р	phosphorous
Be	Beryllium	$P_2O_5$	phosphorous oxide
Bi	Bismuth	Pb	Lead
С	carbon dioxide	Pd	Palladium
Ca	Calcium	рН	Acidity
CaO	calcium oxide	Pt	platinum
Cd	Cadmium	QA/QC	Quality Assurance/Quality Control
Со	Cobalt	S	south
CO <sub>2</sub>	carbon dioxide	S	sulfur
Cr	Chromium	Sb	antimony
Cr <sub>2</sub> O <sub>3</sub>	chromium oxide	SE	southeast
Cu	Copper	Se	selenium
DDH	diamond drill hole	SiO <sub>2</sub>	silicon oxide
DW	drilled width	Sn	tin
E	East	SO <sub>2</sub>	sulphur dioxide
EM	electromagnetic	Sr	strontium
Fe	Iron	Sum	summation
Fe <sub>2</sub> O <sub>3</sub>	iron oxide (ferric oxide- hematite)	SW	southwest
Fe <sub>3</sub> O <sub>4</sub>	iron oxide (ferrous oxide- magnetite)	Ti	titanium
HLEM	horizontal loop electromagnetic	TiO <sub>2</sub>	titanium oxide
H <sub>2</sub> O	hydrogen oxide (water)	TI	thallium
IP	induced polarization	TW	true width
K	Potassium	U	uranium
K <sub>2</sub> O	potassium oxide	U <sub>3</sub> O <sub>8</sub>	uranium oxide (yellowcake)
Li	Lithium	UTM	Universal Transverse Mercator
LOI	loss on ignition (total H <sub>2</sub> O,	V	vanadium



	CO <sub>2</sub> and SO <sub>2</sub> content)	·	
Mg	Magnesium	$V_2O_5$	vanadium oxide
MgO	magnesium oxide	VLF	very low frequency
Mn	Manganese	VLF-EM	very low frequency-electromagnetic
MnO	manganese oxide	W	west
Мо	Molybdenum	Υ	yttrium
Mt	millions of tonnes	Zn	zinc
N	north		
NE	northeast		
NW	northwest		
S	south		

Table 2 - Units of Measure.

Units of Measure	Abbreviation	Units of Measure	Abbreviation
Above mean sea level	amsl	Litre	L
Ampere	Α	Litres per minute	L/m
Annum (year)	a	Megabytes per second	Mb/s
Billion years ago	Ga	Megapascal	MPa
British thermal unit	Btu	Megavolt-ampere	MVA
Candela	cd	Megawatt	MW
Carat	ct	Metre	m
Carats per hundred tonnes	cpht	Metres above sea level	masl
Carats per tonne	cpt	Metres per minute	m/min
Centimetre	cm	Metres per second	m/s
Cubic centimetre	cm <sup>3</sup>	Metric ton (tonne)	t
Cubic feet per second	ft <sup>3</sup> /s or cfs	Micrometre (micron)	μm
Cubic foot	ft <sup>3</sup>	Microsiemens (electrical)	μs
Cubic inch	in <sup>3</sup>	Miles per hour	mph
Cubic metre	m³	Milliamperes	mA
Cubic yard	yd³	Milligram	mg
Day	d	Milligrams per litre	mg/L
Days per week	d/wk	Millilitre	mL
Days per year (annum)	d/a	Millimetre	mm
Dead weight tonnes	DWT	Million	M
Decibel adjusted	dBa	Million tonnes	Mt
Decibel	dB	Minute (plane angle)	ı
Degree	0	Minute (time)	min
Degrees Celsius	°C	Month	mo
Degrees Fahrenheit	°F	Newton	N
Diameter	Ø	Newtons per metre	N/m
Dry metric ton	dmt	Ohm (electrical)	Ω
Foot	ft	Ounce	OZ
Gallon	gal	Parts per billion	ppb
Gallons per minute (US)	gpm	Parts per million	ppm
Gigajoule	GJ	Pascal	Pa
Gram	g	Pascals per second	Pa/s
Grams per litre	g/L	Percent	%



Gram per tonne	g/t	Percent moisture (relative humidity)	% RH
Greater than	>	Phase (electrical)	Ph
Hectare (10,000 m2)	ha	Pound(s)	lb
Hertz	Hz	Pounds per square inch	psi
Horsepower	hp	Power factor	pF
Hour	h (not hr)	Quart	qt
Hours per day	h/d	Revolutions per minute	rpm
Hours per week	h/wk	Second (plane angle)	П
Hours per year	h/a	Second (time)	S
Inch	"(symbol, not ")	Short ton (2,000 lb)	st
Joule	J	Short ton (US)	t
Joules per kilowatt-hour	J/kWh	Short tons per day (US)	tpd
Kelvin	K	Short tons per hour (US)	tph
Kilo (thousand)	k	Short tons per year (US)	tpy
Kilocalorie	kcal	Specific gravity (g/cm³)	SG
Kilogram	kg	Square centimetre	cm <sup>2</sup>
Kilograms per cubic metre	kg/m³	Square foot	ft <sup>2</sup>
Kilograms per hour	kg/h	Square inch	in <sup>2</sup>
Kilograms per square metre	kg/m <sup>2</sup>	Square kilometre	km²
Kilojoule	kJ	Square metre	m <sup>2</sup>
Kilometre	km	Thousand tonnes	kt
Kilometres per hour	km/h	Tonne (1,000 kg)	t
Kilonewton	kN	Tonnes per day	t/d
Kilopascal	kPa	Tonnes per hour	t/h
Kilovolt	kV	Tonnes per year	t/a
Kilovolt-ampere	kVA	Total dissolved solids	TDS
Kilovolts	kV	Total suspended solids	TSS
Kilowatt	kW	Volt	V
Kilowatt hour	kWh	Week	wk
Kilowatt hours per short ton (US)	kWh/st	Weight/weight	w/w
Kilowatt hours per tonne (metric ton)	kWh/t	Wet metric ton	wmt
Kilowatt hours per year	kWh/a	Yard	yd
Kilowatts adjusted for motor efficiency	kWe	Year (annum)	a
Less than	<	Year	yr

Many of the geologic publications and more recent work assessment files now use the SI system but older work assessment files almost exclusively refer to the Imperial System. Metals and mineral acronyms in this report conform to mineral industry accepted usage. One gram/tonne = 1 ppm (part per million) = 1000 ppb (part per billion). Other abbreviations include oz/t = troy ounce per short ton, used to express concentration of precious metals such as gold; Moz = million ounces; and lb/t = pound/short ton.

Dollars are expressed in Canadian currency (CAD\$) unless otherwise noted. Base and certain industrial metal and mineral prices are stated as US\$ per tonne (US\$/t), precious metal prices are stated in US\$ per troy ounce (US\$/oz) and uranium and certain industrial metal, and mineral prices are stated in US\$ per pound (US\$/lb).



Unless otherwise noted, Universal Transverse Mercator ("UTM") coordinates are provided using PSAD56 Zone 19 Southern Hemisphere.

## 3 Reliance on Other Experts

While exercising all reasonable diligence in checking, confirming and testing, the Author has relied upon Red Metal's presentation of its project data in formulating his opinion.

The agreements under which Red Metal holds title to the mineral claims for this project have not been reviewed by the Author, and the Author offers no legal opinion as to the validity of the mineral title claimed. A description of the Property, and ownership thereof, is provided for general information purposes only.

Comments on the state of environmental conditions, liability, and estimated costs have been made where required by NI 43-101. The Author offers no opinion on the state of the environment on the Property. The statements are provided for information purposes only.

The descriptions of geology, mineralization and exploration used in this report are taken from government documents, peer-reviewed journals, the NI 43-101 completed in 2012 by Micon (Lewis, 2012), and through discussions held with the Issuer and/or its representatives. The conclusions of this report rely on data available in published and unpublished reports and information provided by Red Metal. The information provided to Red Metal was supplied by reputable companies or government agencies and the Author has no reason to doubt their validity. All source materials are included in Section 20, "References".

Some of the figures and tables for this report were supplied to the Author by Red Metal. All of the photographs were taken by the Author of this report during the site visit. In the cases where figures or tables were supplied by other individuals or Red Metal, they are referenced below the inserted item.

## 4 Property Location and Description

## 4.1 Area and Location of the Property

The Carrizal Property is located about 700 km north of Chile's capital city of Santiago, in Region III, referred to as the "Region de Atacama". The Property lies within the Carrizal Alto Mining District, straddling the border between Huasco and Copiapo provinces, approximately 75 km northwest of the City of Vallenar, 150 km south of Copiapo, and 20 km west of the Pan-American Highway (Figure 4). The centre of the Carrizal Property is situated at coordinates 308750 mE and 6895000 mN (PSAD56 Zone 19, Southern Hemisphere).

The Carrizal Property has historically been subdivided into two separate project areas, namely the Perth and Farellón projects, representing roughly the northern and southern halves of the Carrizal Property, respectively. The Carrizal Property consists of six (6) exploration concessions ('pedimentos'), nine (9) mining concessions ('mensuras'), and two (2) mensuras that are in progress (Table 3). The Property covers a total area of 3,488 hectares with 2,280 ha in the Perth Project and 1,234 ha in the Farellón Project (Figures 5, 6, and 7).



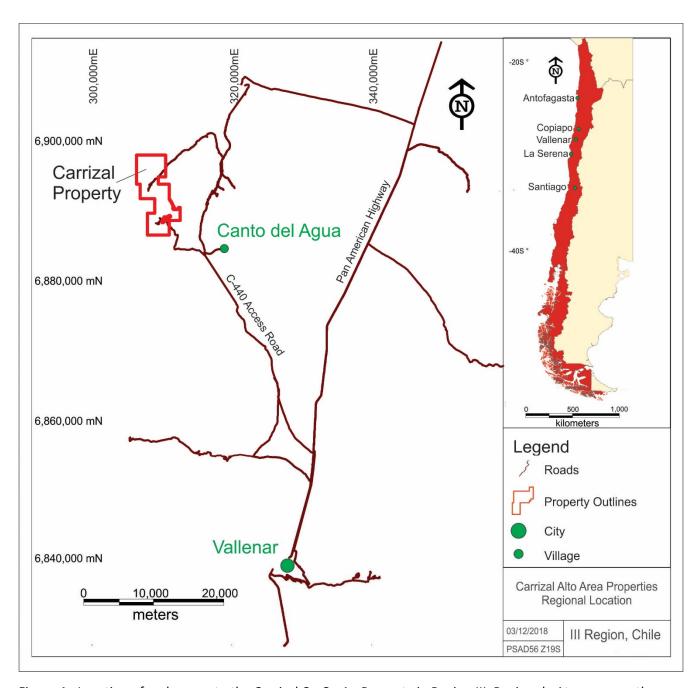


Figure 4 - Location of and access to the Carrizal Cu-Co-Au Property in Region III, Region de Atacama, northern Chile (figure provided by Red Metal).

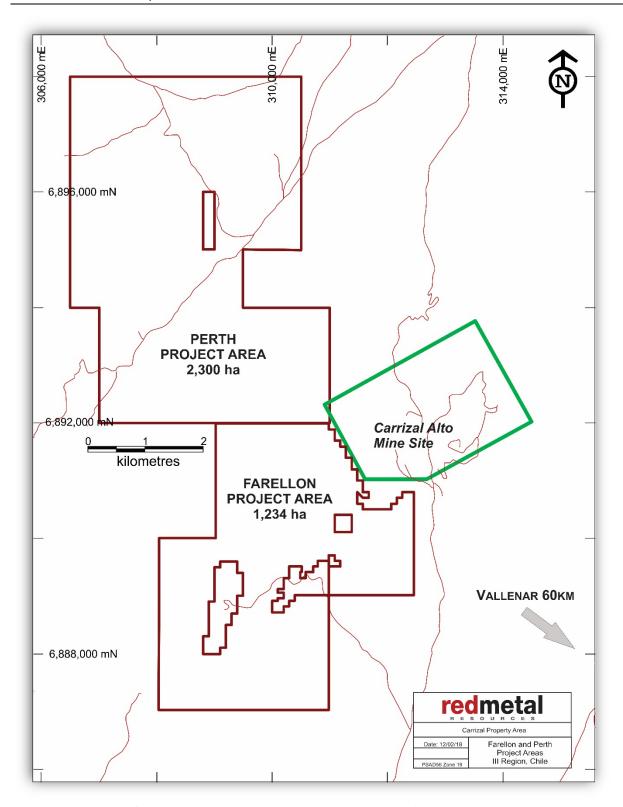


Figure 5 - Location of the Farellón and Perth projects claim blocks of the Carrizal Cu-Co-Au Property, Region III, Region de Atacama, northern Chile (figure provided by Red Metal).

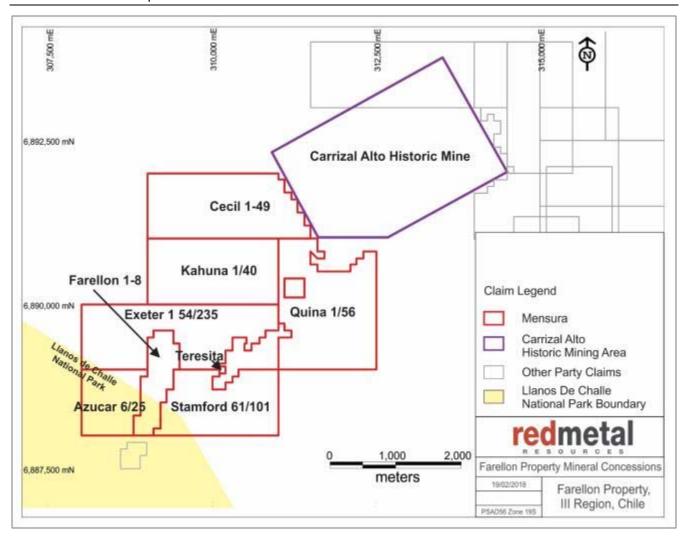


Figure 6 - Claims in the southern portion of the Carrizal Property referred to as the Farellón Project area (figure provided by Red Metal).

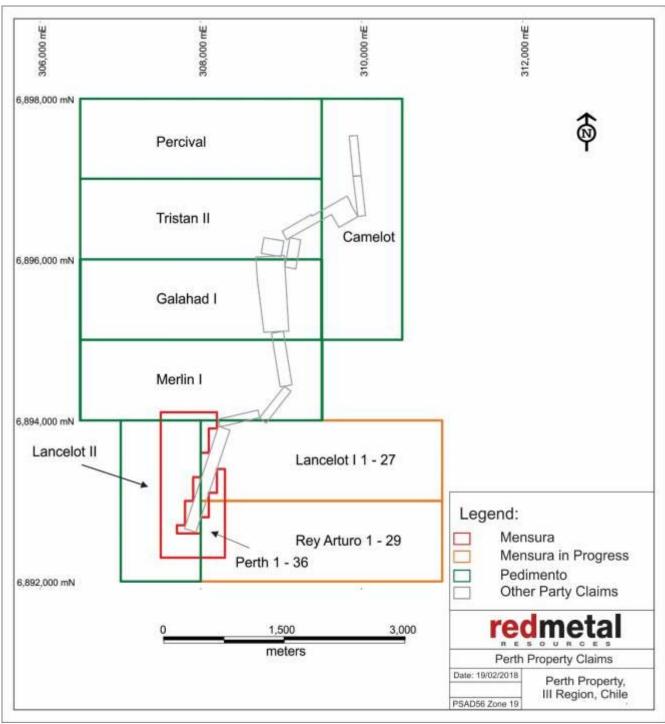


Figure 7 - Claims in the northern portion of the Carrizal Property referred to as the Perth Project area (figure provided by Red Metal).

Table 3 - Summary of mineral concession Information for the Farellón Project (as of March 2019).

Concession Nover	Composition Trans	Concession	Annual Taxes			
Concession Name	Concession Type	Number	Pesos*	US\$**	CDN\$***	
Southern claim block (Farell	outhern claim block (Farellón Project)					
Farellón Alto 1-8	Mensura	033030156-2	\$194,960	\$292	\$383	
Cecil 1-49	Mensura	033030329-8	\$1,111,272	\$1,667	\$2,181	
Azúcar 6-25	Mensura	033030342-5	\$428,912	\$643	\$842	
Kahuna 1-40	Mensura	033030360-3	\$974,800	\$1,462	\$1,913	
Stamford 61-101	Mensura	033030334-4	\$804,210	\$1,206	\$1,579	
Teresita	Mensura	033030361-1	\$4,874	\$7	\$10	
Quina 1-56	Mensura	033030398-0	\$1,223,374	\$1,835	\$2,401	
Exeter 1-54	Mensura	033030336-0	\$1,145,390	\$1,718	\$2,248	
Northern claim block (Perth	Project)					
Perth 1-36	Mensura	033030383-2	\$531,266	\$797	\$1,043	
Rey Arturo 1-30	Mensura in progress	033021983-1	\$1,296,648	\$1,945	\$2,545	
Lancelot II 1-40	Pedimento		\$161,406	\$242	\$317	
Lancelot I 1-27	Mensura in progress	033020283-2	\$1,267,240	\$1,901	\$2,488	
Tristan II B1-4,A1-60	Pedimento		\$246,690	\$370	\$484	
Galahad I C,B1-3,A1-44	Pedimento		\$246,690	\$370	\$484	
Camelot 1-60	Pedimento		\$246,690	\$370	\$484	
Percival 41-60	Pedimento		\$245,000	\$368	\$481	
Merlin I B1-10,A1-48	Pedimento		\$246,690	\$370	\$484	
Summary						
9 mensuras, 2 mensuras in progress, 6 pedimentos					\$20,368	

<sup>\*</sup>The Peso amount changes slightly each year based on an internal Chilean inflationary rate (UTM); taxes are due every March.

Table provided by Red Metal

#### 4.2 Mineral Tenure

Chile's current mining and land tenure policies were incorporated into laws in 1982 and amended in 1983. The laws were established to secure the property rights of both domestic and foreign investors to stimulate mining development in Chile. While the state owns all mineral resources, exploration and exploitation of these resources is permitted by acquiring mining concessions which are granted by the courts according to the law.

Concessions are defined by UTM coordinates representing the centre-point of the concession and dimensions (in metres) in north-south and east-west directions. There are two kinds of concessions, exploration and exploitation, and three possible stages of a concession to get from an exploration concession to an exploitation (mining) concession: (1) 'pedimento', (2) 'manifestacion', and (3) 'mensura' (see below for descriptions). An



<sup>\*\*</sup>Estimated February 16, 2018 using an exchange rate of 593.7 Chilean pesos 1 US dollar.

<sup>\*\*\*</sup>Estimated February 16, 2018 using an exchange rate of 1.25 Canadian dollars to 1 US dollar.

exploration concession ('pedimento') can be placed on any area, whereas the survey to establish a permanent exploitation concession ('mensura') can only be effected on "free" areas where no other mensuras exist.

#### 4.2.1 Pedimento

A pedimento is an initial exploration concession with well-defined UTM coordinates delineating the north-south and east-west boundaries. The minimum size of a pedimento is 100 ha and the maximum is 5,000 ha, with a maximum length-to-width ratio of 5:1. A pedimento is valid for a maximum period of two years. At the end of the two year period it can either be reduced in size by at least 50% and renewed for an additional two years or, entered into the process to establish a permanent concession by converting it into a 'manifestacion'. New pedimentos are allowed to overlap pre-existing pedimentos, however, the pedimento with the earliest filing date always takes precedence providing the concession holder maintains their concession in accordance with the Mining Code and the applicable regulations.

#### 4.2.2 Manifestacion

Before a pedimento expires, or at any stage during its two year life (including the first day the pedimento is registered), it may be converted to a manifestacion. A manifestacion is valid for 220 days, and then prior to the expiry date, the owner must request an upgrade to a mensura.

#### 4.2.3 Mensura

Prior to the expiration of a manifestacion, the owner must request a survey (mensura). After acceptance of the Survey Request ('Solicitud de Mensura'), the owner has approximately 12 months to have the concession surveyed by a government licensed surveyor. The surrounding concession owners may witness the survey, which is subsequently described in a legal format and presented to the National Mining Service (Sernageomin) for technical review, which includes field inspection and verification. Following the technical approval by Sernageomin, the file returns to a judge of the appropriate jurisdiction, who dictates the constitution of the claim as a mensura (equivalent to a patented claim in Canada). Once constituted, an abstract describing the claim is published in Chile's official mining bulletin (published weekly), and 30 days later the claim can be inscribed in the appropriate Mining Registry ('Conservador de Minas').

Once constituted, a mensura is a permanent property right, with no expiration date. As long as the annual fees ('patentes') are paid in a timely manner (from March to May of each year), clear title and ownership of the mineral rights is assured in perpetuity. Failure to pay the annual patentes for an extended period can result in the concession being listed for auction sale ('remate'), wherein a third party may acquire a concession for the payment of back taxes owed (plus a penalty payment). In such a case, the claim is included in a list published 30 days prior to the auction and the owner has the possibility of paying the back taxes plus penalty and thus removing the claim from the auction list.

## 4.3 Issuer's Title or Interest in the Property

Red Metal Resources Ltd. owns 100% all of the concessions in the Carrizal Cu-Co-Au Property, through right of title and in Red Metal's wholly-owned subsidiary, Minera Polymet S.G.A. Some of the concessions are subject to certain underlying royalties (Table 4). Certificates for the concessions are provided in Appendix 2. There are four types of certificates for the 17 concessions:



- Certificado de Vigencia (Certificate of Validity): Document that certifies that there is no note or marginal annotations apart from the first registration that the company has terminated. It is usually required to verify that the company is still in force, whether for bank procedures, tenders, contracts, etc.
- 2. Certificado de Hipotecas y Gravámenes (Mortgage and Liens Certificate): It is a certificate that includes the liens that affect real estate such as mortgages, easements, usufructs, etc., and prohibitions such as embargoes, banking or SERVIU impediments to sell, among others. This certificate is generally requested by banks or buyers, to carry out a study of titles of a property that will be sold or transferred.
- 3. **Certificado de Prohibiciones e Interdicciones** (Prohibitions and Interdictions Certificate): The technical name of the previous concept is "Certificate of the Records of Mortgages, Encumbrances and Prohibitions of a Property", which includes prohibitions and interdictions.
- 4. **Certificado de Dominio Vigente** (Valid Domain Certificate): It is an authorized copy of an inscription, which indicates who is the current owner of a property. Usually this document is requested by banks or buyers, to carry out the study of titles of a property that will be sold.

## 4.4 Surface Rights and Legal Access

The surface rights of the Carrizal Property are owned by the Chilean government. If the Property is developed and mined at a later date, the surface rights will have to be secured as part of the permitting process. Surface rights are rented to mines for the life of the mine by the Chilean government. Claim holders have legal, unimpeded access to their pedimentos and mensuras.

## 4.5 Other Land Tenure Agreements

There are pre-existing Net Smelter Return Royalties ("NSR") on the properties as outlined in Table 4. There are no other land tenure agreements regarding the Carrizal Property known to the Author. To date, only the existing mensuras and mensuras that are in progress have been surveyed by the Chilean government. The remaining concessions which are exploration pedimentos do not require a survey until an application has been made to transfer them to mensuras.

Table 4 - Pre-existing NSRs on concessions from the Carrizal Property. Table provided by Red Metal

Concession Name	Concession Type	Concession Number	NSR	Buy Back
	Southern claim blo	ock (Farellón)		
Farellón Alto 1-8	Mensura	033030156-2	1.5*	\$600,000
Cecil 1-49	Mensura	033030329-8		
Azúcar 6-25	Mensura	033030342-5		



Concession Name	Concession Type	Concession Number	NSR	Buy Back	
Kahuna 1-40	Mensura	033030360-3			
Stamford 61-101	Mensura	033030334-4			
Teresita	Mensura	033030361-1			
Quina 1-56	Mensura	033030398-0	1.5*	\$1,500,000	
Exeter 1-54	Mensura	033030336-0	1.5*	\$750,000	
	Northern claim b	lock (Perth)			
Perth 1-36	Mensura	033030383-2			
Rey Arturo 1-30	Mensura in progress	033021983-1			
Lancelot II 1-40	Pedimento				
Lancelot I 1-27	Mensura in progress	033020283-2			
Tristan II B1-4,A1-60	Pedimento				
Galahad I C,B1-3,A1-44	Pedimento				
Camelot 1-60	Pedimento				
Percival 41-60	Pedimento				
Merlin I B1-10,A1-48	Pedimento				
*can be bought back for US\$600.000					

can be bought back for US\$600.000



<sup>\*\*</sup>can be bought back for US\$1,500.000

<sup>\*\*\*</sup>can be bought back for US\$750,000

#### 4.6 Environmental Liabilities

To the best of the Author's knowledge, there are no known environmental liabilities within the Carrizal Property. The Author is unable to comment on any remediation which may have been undertaken by previous companies. Red Metal has not applied for any environmental permits on the Property and has been advised that none of the exploration work completed to date requires an environmental permit. For all exploration work in Chile, any damage done to the land must be repaired.

The Llanos de Challe National Park, which was created in July 1994, covers the southern 750 m of the Farellón Una al Ocho concession. According to the Mining Code of Chile, to mine or complete any exploration work within the park boundaries, Red Metal will be required to get written authorization from the Chilean government.

## 4.7 Exploration Plans and Permits

At this stage of exploration, there is no requirement to hold an exploration permit. When more advanced work is undertaken, an exploration permit will be required and applied for by Red Metal.

## 4.8 Any Other Significant Risks Affecting the Ability to Perform Work

As of the Effective Date of this Report (June 30, 2019), the Author is not aware of any other significant factors that may affect access, title, or the right to work on the Carrizal Property by Red Metal.

## 5 Accessibility, Climate, Local Resources, Infrastructure, Physiography

## 5.1 Accessibility

The Carrizal Property is readily accessible from the City of Vallenar, Chile, via both paved and well-maintained dirt roads. Access is primarily gained by taking the Pan-American highway (Ruta 5) north from Vallenar to the Carrizal turn-off (about 20 km north). From the turn-off, follow the well-maintained dirt road to the CMP Cerro Colorado iron mine where one turns right (north) and continues to Canto del Agua. Just prior to the historic slag dumps and historic plant ruins there is a right-hand turn which heads towards Carrizal Alto. Follow the road towards Carrizal Alto for approximately 3 km prior to turning left (west) onto a dirt side road which leads directly to the Carrizal Property. There are numerous gravel roads in the area, so a guide is recommended to access the Property, especially on the initial visit. The historic Farellón Mine workings, situated on the western slopes of the Cerro Azucar, are located about 8 km from the turn-off.

The Mining Code of Chile guarantees the owner of mining concessions the right-of-access to the surface area required for their exploration and exploitation. This right is normally obtained by a voluntary agreement between the mineral claim owner and the surface owner. The mining company may obtain the rights of way ('Servidumbre') through the civil court system, if necessary, by agreeing to indemnify the surface owner for the court determined value of the surface area.

## 5.2 Climate and Operating Season

The Carrizal Property lies within the Atacama Desert, considered the driest nonpolar place in the World. The Atacama Desert is bound to the west by the Chilean Coast Range mountains and to the east by the Andes



mountains. In the winter, fog moving in from the coast provides enough moisture for some cacti and lichens to grow. Any rainfall is primarily in the winter, and averages 12 mm annually in Copiapo to the north. Average daily temperatures in the summer months range from 10° to 35°C and from 0° to 15°C in the winter months. In general, exploration programs can be conducted throughout the year.

## 5.3 Infrastructure, Local Resources, Power, Water, Personnel, Potential Tailings Storage, Waste Disposal, Heap Leach Pads, Processing Plant Sites

There is no infrastructure located on the Property other than the historic underground workings and gravel roads. Cellular telephone service is available at all peak elevations on the Property.

The major population centres for the region are Copiapo and Vallenar, with 130,000 and 60,000 inhabitants, respectively. Both population centres have fairly modern facilities with high tension power lines and a fibre optic communication line located parallel to the Pan-American highway.

The City of Copiapo, 150 km to the north, is the general supply centre for the growing mining industry in the region. The Paipote copper smelter, which services the region as well as other areas, is located in Copiapo. The City of Vallenar is situated 70 km southeast of the Property and is the closest major centre for the area.

Copiapo has daily air and bus services to Santiago and other centres. Vallenar has daily bus services as well but the closest airport is located in the coastal city of La Serena to the south. There is a small airport close to Vallenar but this airstrip only services private flights.

ENAMI currently operates a 35,000 tonnes per day toll crushing facility with an attached heap leach operation in Vallenar. This facility is used by a number of small mining operations to process their ore and ENAMI pays the miners for the ore depending on the tonnage and grade of the material shipped to the plant and based on monthly published payment schedules. All of the concentrates are sent to the Paipote smelter in Copiapo.

Vallenar is the closest community to Barrick Gold Corporation's ("Barrick Gold") Pascua Lama project and the Nueva Union project that is a 50/50 joint venture between Teck and Goldcorp.

Airstrips for light aircraft are located at Tololo Pampa, 13 km south of Canto del Agua and at Carrizal Bajo. However, the current state of repair of these airstrips is not known.

The Chilean mining industry is extremely well developed, with the country being a major producer of copper, iron ore and other metals. Mining supplies and equipment as well as a highly trained technical and professional workforce are available in Chile, and major international mining companies operating in Chile have little requirement for expatriate employees. A number of international exploration and mining service companies and engineering firms also operate in Chile and provide excellent geological and logistical support to foreign companies. An experienced labour force is available in the town of Vallenar, as well as within the surrounding communities.

The concessions have both rights and obligations as defined by a Constitutional Organic Law (enacted in 1982). Concessions can be mortgaged or transferred, and the holder has full ownership rights and is entitled to obtain the rights of way for exploration and exploitation. The concession holder has the right to use, for mining purposes, any water flows which infiltrate any mining workings. In addition, the concession holder has the right



to defend his ownership against state and third parties. An exploration concession is obtained by a claims filing and includes all minerals that may exist within its area.

Water is located on the Property, as all of the historic drill holes intersected water at about 100 metres. Water which infiltrates the old mine workings as well as any other water found within the Carrizal mineral concessions can be used for exploration, exploitation or processing. Water which does not infiltrate mine workings can be obtained from Canto del Agua, approximately 10 km from the Property. Canto del Agua is situated in a small valley where the water table lies about 1 m underground. To obtain water from Canto del Agua, Red Metal would have to apply for a water usage permit according to the Chilean Water Code.

## 5.4 Physiography

The Carrizal Property is located near the commencement of the steeply sided river bed valley of the Quebrada Carrizal channel, which flows directly to the coastal village of Carrizal Bajo. Immediately to the east of the Property, the regional topography opens into the plain of the La Joula and Algarrobo Valleys, which cover a gently sloping catchment area of approximately 1,000 km², before entering the foothills of the High Cordillera.

## 6 History

## 6.1 Introduction and Regional History

Mining has played an important role in Chile's economy starting in the 16<sup>th</sup> century, with gold, silver and copper being mined from high grade deposits. Copper mining in particular, has employed a significant portion of the population both directly and indirectly over the last 100 years. Historically, the most significant mineral producing zone in Chile has been the Coastal Cordillera, ranging between 50 and 100 km wide, extending over 2,500 km from Valparaiso in the south, northward to the Peruvian boarder.

The Carrizal Alto Mine area is located within this prolific Coastal Cordilleran range, in the Atacama III Region of northern Chile, between Copiapo and Vallenar. Historical records indicate that copper mining commenced at Carrizal Alto in the 1820's and continued on a significant scale mostly by British companies until 1891, when disastrous flooding occurred, and mines closed. The historical reports indicate that the larger mines were obtaining good grades over significant widths in the bottom workings at the time of closure. Very little information regarding mining has survived, but there is a small amount of historical data located in the SERNAGEOMIN National Archives in Santiago, Chile. Up until 1891, mining at the Carrizal Alto Mine site produced over 3 million tonnes of copper ore, grading between 5 and 15% Cu (National Archives in Santiago, Chile). There was also a large quantity of direct shipping ore at 12% Cu. At one time there was a considerable body of tailings present to support these figures, however this material has been reprocessed and depleted due to the high prices of gold and copper over the last few years.

The Carrizal Alto Mine area contains a series of northeast-trending shear structures, including the principal vein systems of 'Mina Grande' and 'Armonia'. Both vein systems have been worked extensively. The Mina Grande shear contains workings that extend for over 2.5 km as a nearly continuous line of pits, collapsed stopes, narrow open cuts and numerous shafts. The Armonia vein system is similar, extending for 1.8 km. Oxidation depths range from 50 to 150 m, and judging from remnant material, many of the veins were probably worked to this depth and then abandoned as sulphide mineralization was reached.



In the most productive zone at Mina Grande (which stretches for 1.5 km), the mineralized vein reached 15 m in width and is composed of quartz, sericite, chalcopyrite and pyrite. Amphibole-rich seams occur proximal to the diorite wall rock, which also frequently contains chalcopyrite and pyrite-bearing impregnations and smaller veins. The main producing mine in the Carrizal Alto Mine area was the Veta Principal on the Mina Grande shear, which was mined to a depth of 400 m along a strike of 1.8 km and over a width varying from 2-15 m. The deepest workings reached 600 metres. Several slag dumps remain at old sites of local smelters treating the sulphide ores. Carrizal Alto, despite spectacular past production from the Capote, Mina Grande, and Armonia mines, has remained virtually untouched since the brief gold revival of the 1930's.

The current Carrizal Property is comprised of two contiguous blocks, namely the *Farellón* to the south and *Perth* to the north (*see* Figure 5). Both of these blocks border the historically-productive Carrizal Alto Mine to the east, sharing geological and mineralogical attributes, and for consistency, the historical names have been retained.

## 6.2 Farellón Project Area

The Farellón block of concessions, which are contiguous with the Carrizal Alto Mine area, was mined on a limited basis in the 1940's. Very little information remains from this time period, except for a few plans of the limited underground mining (SERNAGEOMIN National Archives, Santiago, Chile).

In 1963, eight samples were taken from two high grade veins from the accessible workings within the Farellón Project area, namely Veta Pique and Veta Naciente (Table 5). These samples were analysed for copper, gold, silver, and gangue oxides. Unfortunately, no units of measure were provided in the 1963 report accompanying the assay grades, although weight percent is most likely for copper. In conjunction with historic records from the 1940's, this information was incorporated into a mineral resource estimate (see below).

In the 2010 Technical Report by Micon on Red Metal's Farellón Property (which corresponds roughly to the current Farellón Project area), the Author stated that "no attempt was made to verify the sampling program of 1963, as the workings were not entirely accessible and there is no sample location map upon which to attempt to duplicate the samples" (Lewis, 2010).

Table 5 - Grades of Cu, Au, and Ag from veins of the Farellón Project.

Sample Number	Vein	Length (m)	Metal Grade (%)/Oxides (wt%)						
			Cu	Au	Ag	CaO	FeO	MgO	SiO <sub>2</sub>
1	Veta Pique	2.5	1.8	0.5	5	47.89	6.54	0.27	1.34
2	Veta Pique	2.45	6.9	1.0	20	31.14	13.77	0.30	2.00
3	Veta Pique	3.0	3.0	1.0	10	46.43	5.86	0.26	2.50
4	Veta Pique	1.0	1.2	0.2	5	31.52	3.49	0.30	25.66
5	Veta Naciente	2.0	2.4	0.5	5	47.99	5.52	0.32	1.50
6	Veta Naciente	1.8	3.0	1.0	5	38.25	6.09	0.23	17.84
7	Veta Pique	1.7	1.7	0.5	3	43.77	4.51	0.28	10.00
8	Veta Naciente	0.8	1.6	0.5	3	28.8	3.71	0.23	29.54



*Total:	1.8	2.1	0.6	5	40.66	5.10	0.27	12.62	

Note\*: arithmetic average for the total excludes Sample 2; information from 1963 report in SERNAGEOMIN files, National Archives, Chile.

Oliver Resources, an Irish based company, through its Chilean subsidiary Oliver Resources Chile Ltda., briefly explored the Farellón Property in 1990 with a stream sediment sampling program and sampling of the Farellón Alto and Bajo mine dumps.

The Farellón Property was incorporated into a larger land package called the Azucar Project in the 1990's, owned by Minera Stamford S.A. (Minera Stamford), a Chilean exploration company. In a joint venture with Metalsearch, an Australian company, exploration on these concessions included geological mapping, rock chip sampling, soil geochemistry, reverse circulation ("RC") drilling and metallurgical sampling. Geological mapping of the Azucar Project showed a NE-trending sheared contact 50 to 200 m wide, containing significant consistent mineralization along a 2 km strike length.

Minera Stamford collected 152 rock chip and dump samples from prospective areas along the mineralized shear zone, of which 36 samples fell within the boundary of the Farellón Project. Samples were analyzed for gold, copper and cobalt. The highest gold sample within the Farellón Property was 13.50 g/t Au, the highest copper result was 6.15% Cu, and the highest cobalt result was 0.68% Co. Results of this, and other sampling programs conducted on the Farellón Project area are included in Figures 8, 9, and 10, showing Cu, Au, and Co concentrations, respectively. A total of 591 soil samples were also taken by Minera Stamford, but no records of this work have been located.



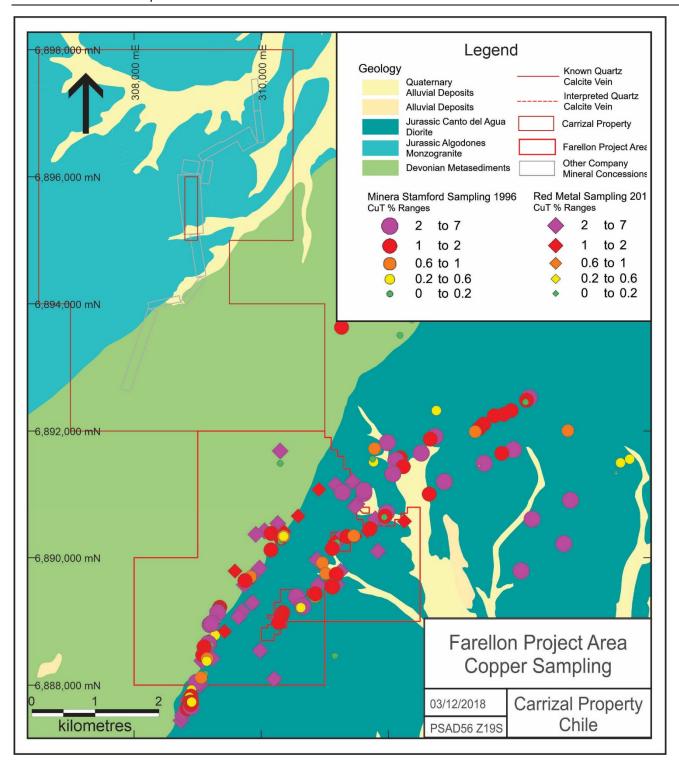


Figure 8 - Results of sampling programs in the Farellón Project area, showing copper concentrations (Geology based on Arevelo and Welkner, 2003; figure provided by Red Metal).

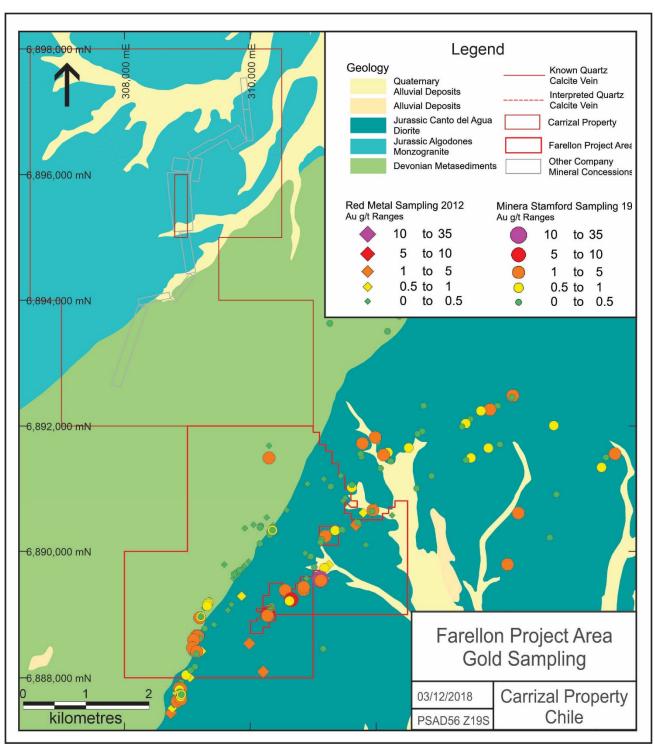


Figure 9 - Results of sampling programs in the Farellón Project area, showing gold concentrations (Geology based on Arevelo and Welkner, 2003; figure provided by Red Metal).

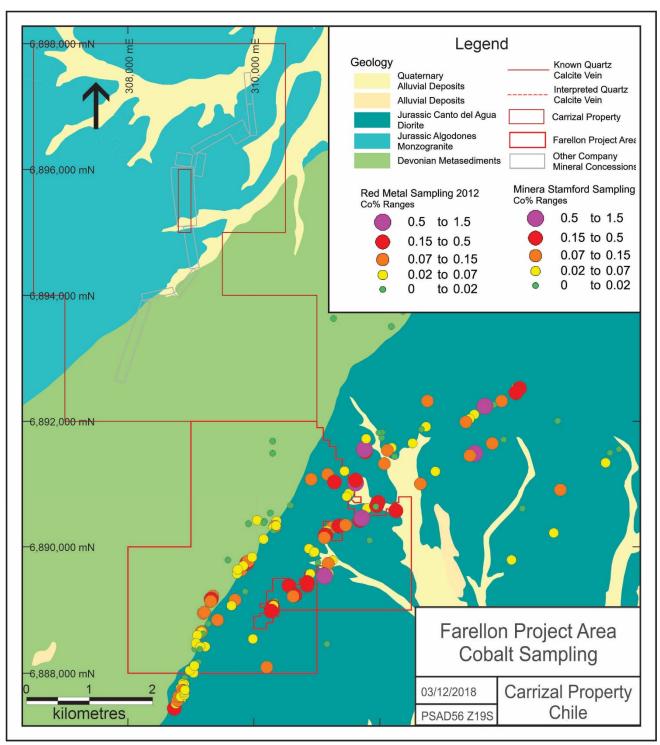


Figure 10 - Results of sampling programs in the Farellón Project area, showing cobalt concentrations (Geology based on Arevelo and Welkner, 2003; figure provided by Red Metal).

#### 6.2.1 Historical Drilling

Locations of historical drill hole collars for the Farellón Project in the south and Perth Project in the north are provided in Figure 11.

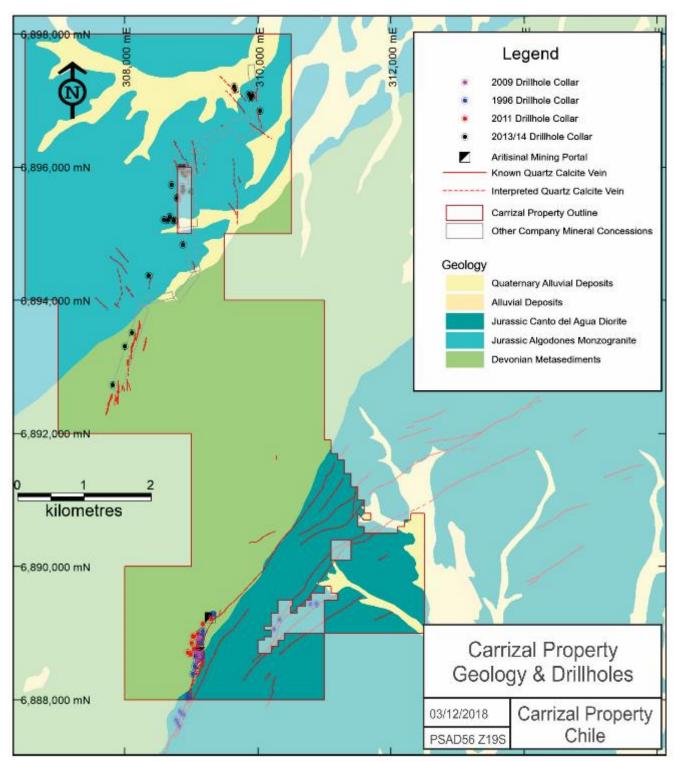


Figure 11 - Drill hole collar locations on the Carrizal Property as of December 2018 with Farellón Project in the south and Perth Project in the north (Geology from Arevelo and Welkner, 2003; figure provided by Red Metal).

A reverse circulation drilling program of 33 holes totaling 6,486 m was completed between 1996 and 1997 targeting the shear zone on the Azucar property by the JV between Minera Stamford and Metalsearch. Twenty-two (22) of these holes were located within the Farellón Project area, representing a total of 3,918 metres (Table 6). Drill holes were placed at irregular intervals along the mineralized shear zone, and the holes were sampled at regular 1 m intervals along their entire length. Results of this drill campaign confirmed the consistent presence of mineralization in the shear zone, to a vertical depth of about 200 m. As shown in Table 7, the highest gold concentration was 21.03 g/t Au, the highest copper result was 9.21% Cu, and the highest cobalt result was 0.58% Co (all results are over 1 m intervals).

Table 6 - Summary of the 1996 Minera Stamford-Metalsearch JV reverse circulation drill hole statistics, Farellón Project area.

Hole Number	Ų	JTM Coordi	nates	Azimuth (°)	Dip (°)	Depth (m)	
Hole Number	Easting	Northern	Elevation (m)	Azimutii ( )	DIP ( )		
FAR-96-06	308962.3	6888011	573	110	-62	100	
FAR-96-07	308954.2	6888059	560	110	-62	163	
FAR-96-09	309131.2	6888706	552	95	-65	242	
FAR-96-010	309167.3	6888980	557	112	-75	211	
FAR-96-011	309155.5	6888870	565	102	-62	169	
FAR-96-013	309092.8	6888659	540	110	-65	257	
FAR-96-014	309131.5	6888703	552	90	-90	203	
FAR-96-015	309155	6888867	565	90	-90	200	
FAR-96-016	309128.3	6888882	565	111	-65	200	
FAR-96-017	309165.4	6888979	557	90	-90	200	
FAR-96-018	309181	6889026	562	115	-65	51	
FAR-96-019	309180	6889026	562	90	-90	200	
FAR-96-020	309138.7	6888640	553	140	-65	150	
FAR-96-021	309137.9	6888641	553	90	-90	200	
FAR-96-022	309086.1	6888591	564	131	-65	150	
FAR-96-023	309085.3	6888601	564	90	-90	200	
FAR-96-024	309057.6	6888503	544	110	-65	150	
FAR-96-025	309056.6	6888503	544	90	-90	172	
FAR-96-026	309029.9	6888387	544	140	-65	150	
FAR-96-027	309029.3	6888387	544	90	-90	199	
FAR-96-028	309337.5	6889279	500	112	-65	150	
FAR-96-029	309336.5	6889280	500	90	-90	201	
Total:	_	_		_		3,918	

Table provided by Red Metal



Table 7 - Summary of significant intercepts from the 1996-1997 RC drilling program by Minera Stamford and Metalsearch, Farellón Project area.

Drill Hole	Significa	nt Interv	al (m)	Assay Results				
Drill Hole	From (m)	To (m)	Length	Gold (g/t)	Copper (%)	Cobalt (%)		
FAR-96-06	49	54	5	0.15	0.73	0.01		
FAR-96-07	25	34	9	0.38	1.05	0.02		
FAR-96-09	57	84	27	0.51	0.91	0.03		
FAR-96-010	31	36	5	1	0.68	0.04		
FAR-96-011	20	26	6	0.67	0.46	0.02		
FAR-96-013	86	93	7	0.87	1.68	0.04		
FAR-96-014	77	83	6	0.66	0.85	0.06		
FAR-96-015	59	79	20	0.99	0.98	0.06		
	99	109	10	0.18	1.02	0.03		
FAR-96-016	24	26	2	0.95	1.57	0.02		
	64	70	6	0.73	0.81	0.07		
FAR-96-020	14	16	2	0.46	1.85	0.05		
	39	43	4	0.75	0.9	0.03		
FAR-96-021	22	25	3	4.17	5.29	0.11		
FAR-96-022	29	39	10	1.53	1.31	0.04		
FAR-96-022	100	108	8	3.72	2.49	0.06		
	50	53	3	0.48	1.1	0.06		
FAR-96-023	59	64	5	0.28	0.78	0.03		
	132	147	15	0.6	1.42	0.03		
FAR-96-024	33	36	3	0.94	2.89	0.06		
FAR-96-025	65	85	20	0.97	1.22	0.02		
FAR-96-028	55	58	3	0.12	0.52	0.06		
FAR-96-029	30	34	4	0.18	1.15	0.07		

Table provided by Red Metal

The historic Farellón workings are in metamorphic units within the sheared metamorphic/tonalite contact zone which is about 200 m wide. The workings are large but restricted to the oxide zone and range from 1-20 m wide. A sample of the wall rock and quartz veined metamorphic rocks taken by Minera Stamford returned 3.0% Cu, 1.4 g/t Au, 0.08% Co, and 1.1% As.

The lower Farellón workings are several hundred metres to the south and associated with massive siderite. A sample collected by Minera Stamford of the lode material returned 5.6% Cu, 2.4 g/t Au, 0.02% Co. A 20 tonne trial parcel of material from the Farellón workings in the 1950's is reported to have returned over 1% Co.

Red Metal Resources Ltd. acquired the rights to the Farellón Property on April 25, 2008, upon its Chilean subsidiary exercising the option to buy the Project from Minera Farellón. Red Metal completed five RC drill holes in 2009, totalling 725 m and using a Tramrock Dx40 RC rig (Table 8). This larger rig necessitated widening



existing roads rehabilitating access to old drill pads. The drilling program was designed to twin some of the Minera Stamford 1996-1997 drill holes for data verification, as no geological information was recovered from the Minera Stamford drilling program and assays were not accompanied by laboratory certificates. One drill hole tested 100 m below the known mineralization, and another hole tested continuity of mineralization between previously drilled sections.

Table 8 - Summary of RC drill hole parameters, Red Metal's 2009 drilling program, Farellón Project.

Drill Hole	ι	JTM Coordina	tes	Azimuth	Dip	Depth	_
Number	Easting (m)	Northern (m)	Elevation (m)	(°)	(°)	(m)	Comments
FAR-09-A	309086	6888591	550	131	-65	125	twinning FAR-96-22
FAR-09-B	309125	6888709	560	95	-65	100	twinning FAR-96-09
FAR-09-C	309127	6888922	555	105	-65	145	testing continuity
FAR-09-D	308955	6888696	539	95	-65	287	testing depth extent of
FAR-09-E	309133	6888645	551	Vertical	-90	68	twinning FAR-96-21
Total:						725	

Table provided by Red Metal

Collar locations and azimuths for the 2009 drilling were surveyed using a total station surveying tool. Each drill hole had approximately 1.5 m of blue PVC piping added to it as a surface pre-collar which was cemented into place to permanently denote the drill hole location. Downhole surveys were completed on all drill holes from the 2009 program and on six drill holes from the 1996-1997 Minera Stamford program (holes 9, 14, 20, 21, 22, and 23). Surveying of all historic drill holes surrounding the current drilling was attempted, but some of the holes were caved and the survey tool was unable to be lowered into the hole.

Significant intervals calculated from the RC drilling program by Red Metal are provided in Table 9. Intervals are reported as core lengths, as the true width of the mineralized zones have not been determined.

Table 9 - Summary of significant intercepts from Red Metal's 2009 RC drilling program, Farellon Project.

Drill Hole		Assay I	nterval (ı	n)	Assay Grade			
Number		From (m)	To (m)	Core Length (m)	Gold (g/t)	Copper (%)	Cobalt (%)	
		32	37	5	0.59	1.3	0.02	
FAR-09-A		97	106	9	0.44	1.63	0.04	
	including	103	106	3	0.48	2.49	0.07	
		56	96	40	0.27	0.55	0.02	
FAR-09-B	including	60	63	7	0.46	1.42	0.04	
		75	87	12	0.71	1.28	0.03	
FAR-09-C		77	82	5	4.16	2.57	0.05	
FAR-09-D		95	134	39	0.11	0.58	0.01	
FAR-09-D	including	95	103	8	0.33	2.02	0.02	
FAR-09-E		25	30	5	0.54	1.35	0.02	
FAR-U9-E		65	68	3	0.58	1.46	0.06	



Results from the 2009 drilling confirmed the general location and tenor of the mineralization determined during the 1996-1997 Minera Stamford drilling program, however the 2009 program was not able to reproduce the historical gold assays within holes FAR-09-A and FAR-09-E, designed to duplicate historical holes FAR-96-22 and FAR-96-21, respectively. In the case of FAR-09-E, the disparity between the historical 1996-1997 and 2009 assays was also found with respect to copper. All drill holes during the 2009 drilling program intersected oxide facies mineralization with only minor amounts of sulphide (e.g., hole FAR-09-D).

In 2011, Red Metal completed a second drilling program, consisting of nine RC holes and two combined RC/diamond drill (core) holes (Table 10). Chips and core recovered consisted of 2,050 m of RC drilled, and 183 m of diamond (core), for a total of 2,233 metres. The program was designed to expand the known mineralized zone down-dip to 200 m vertical depth, extend the known mineralized strike length of the overall deposit to 700 m, and infill large gaps with holes drilled at 75 m spacing. Two of the drill holes finished with diamond drill core, providing information to better define the structural controls on mineralization.

Collar locations and azimuths for the 2011 drilling were surveyed using a hand held GPS. Red Metal used a magnetic REFLEX EZ-TRAC instrument to complete downhole surveys using a digital remote gyroscope. Downhole surveys were completed on all 11 drill holes from the 2011 program every 50-100 m down-hole, so most drill holes had at least three readings taken along with the one at the surface. Due to the high magnetic susceptibility of the subsurface, the azimuth reading, and the magnetic readout gave inaccurate results Therefore only the down-hole dip could be recorded with any level of confidence. The significant assays provided in Table 11 are reported as core lengths as the true width of the mineralized zone was not established.

Table 10 - Survey information from Red Metal's 2011 combined RC/diamond drilling program.

	UTM (	Coordinates (	PSAD 56)				
Drill Hole Number	Easting (m)	Northern (m)	Elevation (masl)	Azimuth (°)	Dip (°)	Depth (m)	Comments
FA-11-001	309298	6889226	499	130	-65	101	
FA-11-002	309180	6889140	508	130	-65	228	
FA-11-003	308992	6888677	517	130	-60	200	
FA-11-004	309095	6888808	513	130	-65	200	
FA-11-005	309041	6888760	497	130	-60	143	Abandoned at 143 m
FA-11-006	309113	6888870	556	130	-80	200	
FA-11-007	309113	6888870	556	130	-60	162	
FA-11-008	309104	6888984	531	130	-65	200	
FA-11-009	308955	6888710	536	130	-65	247	Diamond 200-247 m
FA-11-010	309007	6888852	528	130	-60	300	Diamond 164-300 m
FA-11-011	309031	6888950	541	130	-65	252	
				Total:		2,233	



Table 11 - Significant intercepts from Red Metal's 2011 drilling program on the Farellón Project.

		Assay I	nterval (ı	m)		Assay Grade			
Drill Hole Number		From (m)	To (m)	Core Length (m)	Gold (ppm)	Copper (%)	Cobalt (%)		
FA-11-001		36	49	13	0.35	2.51	0.06		
171 11 001	including	36	44	8	0.53	3.95	0.09		
FA-11-002	Zone fault	ed off, no si	gnificant	intercepts					
FA-11-003		150	155	5	0.28	0.4	0.03		
FA-11-004		141	145	4	0.01	0.73	0.01		
FA-11-005		124	133	9	0.26	0.84	0.02		
17(11 003	Hole lost in mineralization								
FA-11-006		80	112	32	0.99	1.35	0.02		
FA-11-007		64	70	6	0.7	0.66	0.07		
FA-11-008		98	102	4	0.26	0.85	0.01		
FA-11-009		202	211.55	9.55	0.42	0.95	0.05		
FA-11-010	_	179.13	183	3.87	0.39	0.5	0.05		
FA-11-011		54	56	2	0.48	0.97	0.03		

Table provided by Red Metal

Drilling returned copper results as high as 8.86% Cu, with 0.80 g/t Au over 1 m (FA-11-001), and 5.35 g/t Au, 4.77% Cu, and 0.024% Co over a 2 m interval (FA-11-006). There was evidence of pinching and swelling in the mineralized vein structures, as significant intercepts ranging in width from 2 m to 32 metres. Ten of the 11 drill holes contained significant intercepts (Table 11). Drill hole FA-11-002 did not intersect the interpreted mineralized zone, likely due to a misinterpretation of localized fault off-set of the mineralized vein. Select drill hole sections from the 2011 drilling program are presented in Figures 12 through 17, all taken from Lewis (2012).



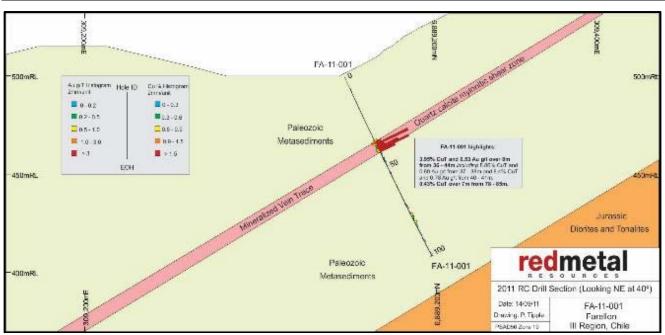


Figure 12 - Drill hole section for FA-11-001 (from Red Metal and Lewis (2012)).

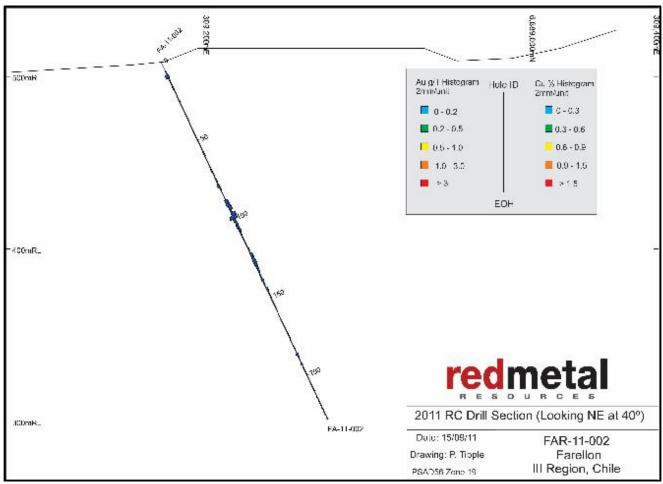


Figure 13 - Drill section for FA-11-002 (from Red Metal and Lewis (2012)).



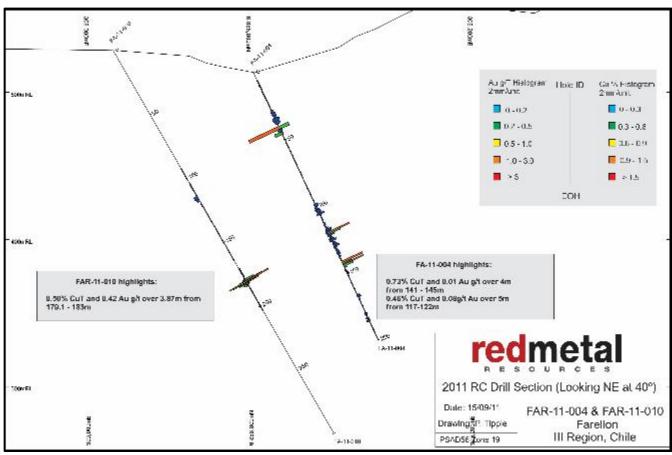


Figure 14 - Drill hole section for FA-11-004 and -010 (from Red Metal and Lewis (2012)).

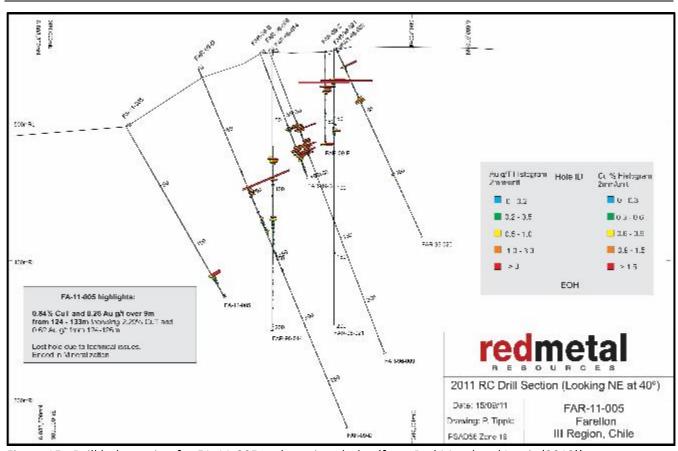


Figure 15 - Drill hole section for FA-11-005 and previous holes (from Red Metal and Lewis (2012)).



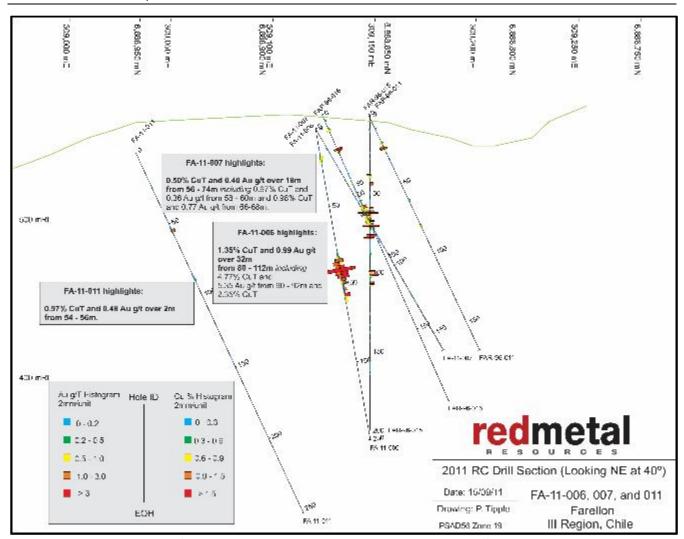


Figure 16 - Drill hole section for FA-11-006, -007, and -011, and historical holes (from Red Metal and Lewis (2012)).

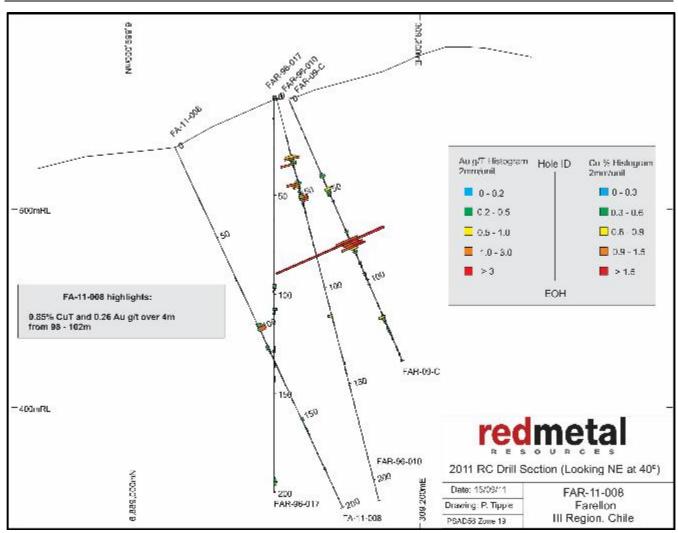


Figure 17 - Drill hole section for FA-11-008, as well as historical holes (from Red Metal and Lewis (2012)).

All significant intercepts from the 2011 drilling program were dominated by supergene oxide mineralization from surface to approximately 150 m depth. Sulphide mineralization was minimal within this shallow depth range, becoming more abundant as the transition to the hypogene zone approached below approximately 150 m depth. This transition zone was highly variable depending on faulting, groundwater flow pathways, and variable elevation. Below 150 m, hypogene conditions dominated, resulting in abundant sulphide mineralization, as seen in drill holes FA-11-003 (177-182 m), FA-11-009 (202-211.55 m), and FA-11-010 (179.13-183 m). Supergene mineralization was dominated by malachite, chrysocolla, and copper ± gold within goethite and limonite iron oxides. Alteration haloes were associated with supergene mineralization such as carbonate, limonite, hematite, goethite, and manganese oxide. Other alteration minerals were present, such as chlorite, epidote, actinolite, biotite, and sericite, however these minerals were not related to the supergene mineralization.

Hypogene mineralization was dominated by chalcopyrite with associated gold. Chalcopyrite occurred as amorphous blebs and lesser disseminations hosted in massive, sometimes vuggy quartz and calcite. A good example was found in drill core from hole FA-11-009 within the mineralized intersection between 202 m and

211.55 metres. The mineralized intersections broadly occur along the regional lithological boundary shear zone between overlying Paleozoic metasediments to the west and underlying Jurassic intrusives to the east.

Most of the 2011 drill holes did not pass through the lithological boundaries, even after drilling through the mineralized structures. Therefore, it was interpreted that this mineralization occurs in close proximity to the lithological boundaries, but that the mineralized structures do not exactly follow the contact and instead occur as splays and faults emanating off the major structural boundary.

The 2011 drilling results confirmed that mineralization is still present down-dip of the intersections identified during the previous drilling campaign and are still open at depth. The infill drilling confirmed that the mineralization had significant grades and initiated the process of outlining a consistent 75 m spacing between drill holes. The 2011 drilling results also indicated that the significant grades for the copper and gold mineralization were still open along strike to the northeast and southwest, as demonstrated by hole FA-11-001, which was drilled towards the northwest. All drill holes during the 2011 drilling program intersected oxide facies mineralization with the only significant intercepts bearing sulphides in holes FA-11-003 and FA-11-009. The supergene-hypogene transition occurred anywhere between 50 m and 150 m and appeared to be dependent on local fracturing and faulting.

A mapping and sampling program was conducted on the Farellón Property in 2012, covering the contact zone between the metasediments and the diorite. The main focus of this program was to ascertain the nature of the veins occurring within each major rock type, and to determine whether any major differences existed in vein structure, mineralogy, alteration, size, and geochemical composition. Over 1,270 mapping sites were visited, with information such as major rock type and mineralization recorded. Of these sites, 56 samples were selected and submitted for geochemical analysis (see Figures 8, 9 and 10). The range of total copper achieved by this sampling program was between 1.17% and 5.78% Cu, with between 50% and 99% of that representing copper sulphide mineralization. These samples also contained from 19-2465 ppm Co, and from 0.02-2.87 g/t Au.

Two diamond drill holes were completed in 2013 by Perfoandes on behalf of Red Metal totalling 116 m (45 m in the first hole, 71 m in the second). The first hole (F13-001) was located 28 m north of FAR-11-001 on a 45° bearing. Drill core was selectively sampled (16 m sampled from FAR-13-001 and 15 m sampled from FAR-13-002), and analysed for gold, total copper and soluble copper. A significant intersection was encountered in each drill hole, returning 0.7% Cu and 0.2 g/t Au over 6 metres. The second hole recorded 1.75% Cu and 0.25 g/t Au over 9 metres. These results confirmed similar findings from FAR-11-001, which was collared 28 m to the south. Both holes recorded the change in mineralogy from dominantly ankerite and other carbonates to more quartz-dominant, containing pyrite and chalcopyrite mineralization.

In 2014, Red Metal entered into a contract with a Chilean artisanal miner allowing the artisanal miner to extract mineralized material on the Farellón property in return for a 10% net sales royalty. In January 2015, the artisanal miner began selling mineralized material to ENAMI, the Chilean national mining company. To date, approximately 11,265 tonnes of sulphide-mineralized material with an average grade of 1.67% Cu, 5.8 g/t Ag and 0.21 g/t Au, as well as 1,813 tonnes of oxide mineralized material with an average grade of 1.56% Cu has been sold to ENAMI. The ENAMI processing facility currently does not have the capability of recovering cobalt and therefore the artisanal miner did not regularly analyse for cobalt. Three grab samples taken from the same



location as the mined mineralized material (Level 7 - 70 m level), were analysed for gold, copper, and cobalt, with results shown in Table 12.

Table 12 - Level 7 sampling.

70 metre Level Sampling*							
Gold (ppm)	Copper (%T)	Cobalt (%)					
n/a	2.86	0.12					
n/a	1.43	0.07					
2.2	6.8	0.11					

<sup>\*</sup>Grab samples are selective in nature and random in size and may not be representative of mineralization characteristics. n/a = not analyzed.

Table provided by Red Metal

The Kahuna concession, part of the Farellón Project area, was historically held by Vector Mining, a private company, and optioned to Catalina Resources PLC ("Catalina"), a private UK registered mineral exploration company. Catalina conducted a geophysical exploration program in order to determine whether the mineralized structures to the northeast, exploited in the Carrizal Alto mine, extended into the Kahuna area, to determine whether any such structures were associated with possible sulphide mineralization, and to define drill targets for a subsequent phase of work. The survey area was traversed in detail and a geological map was prepared showing all the different lithologies and previous mine workings. Two target areas were defined; one within the diorite intrusive hosting the high-grade mineralization at the old Carrizal Alto mine, the other in the surrounding metamorphic sediments. Two ground geophysical surveys, induced polarisation ("IP") and magnetometry, were completed in May 2007, confirming the continuity of the mineral-bearing structures between Carrizal Alto and the Kahuna area, allowing for the definition of sites for follow-up drilling.

The ground magnetic survey was completed on a grid measuring 1.2 by 3.2 line kilometres. A total of 70 line-km were surveyed on lines spaced 50 m apart. In the IP survey a total of 27 line-km of data were acquired with a gradient array. Three one km lines were surveyed in a more detailed follow-up survey with a multi-array consisting of both pole-dipole and multi-bipole gradient array (Note: In a bipole array, the two transmitting electrodes are placed so far apart that the electric field from them can be considered a field from two separate poles). The principal orientation of the shear zones was confirmed to be to the northeast towards Carrizal Alto where similar structures were exploited previously for copper and cobalt. However, there are also several trends to the northwest interpreted to be fault zones that offset the mineralized shear zones slightly. A north-south trend is probably due to dykes. A strong IP anomaly was located in the western portion of the survey area. The IP anomaly correlated with a shallow strongly conductive zone known to be associated with mineralization developed on the margin of the intrusive and exposed in shallow workings. Despite positive results warranting further attention, Catalina eventually dropped the option to the Kahuna Property, and it returned to Vector Mining.



## 6.3 Perth Project Area

The northern concessions of the Carrizal Property have historically been called the Perth Project, or the Irene claim. There are numerous artisanal workings throughout this section of the Carrizal Property. The Puenta Negra Mine area contains the Argentina and Dos Amigos veins, with the most significant workings on the Perth Project occurring at the Argentina shaft (Figure 18). Unfortunately, no historic mining records have been located for the Argentina and Dos Amigos veins.

In the 1990's the Cachina Grande area of the Carrizal Alto received some attention. The Cachina Grande area is underlain by Paleozoic metasediments to the west of the dioritic-hosted Carrizal Alto. In 1991, seven samples from the Cachina Grande area were taken for the report on the Carrizal Alto mining district by Oliver Resources (Ulriksen, 1991). Samples were taken from the Argentina old workings vein 1.8 m, resulting in a range of Cu between 1.76% and 3.4% Cu, and between 0.05 g/t and 1.22 g/t Au. Samples taken from the Dos Amigos North dump were grab samples and ranged between 0.46% and 0.83% Cu, and between 1.29 g/t and 3.41 g/t Au.

Appleton Resources Ltd. optioned the Perth Project in 2007 and completed a surface grab sampling program with Red Metal covering 12 veins identified on the southern portion of the project area, as part of a NI 43-101-compliant report on their Perth Caliza Property, which includes the southern portion of the current Perth project area (Butrenchuk, 2008). Results of this sampling program, as well as other sampling programs discussed below, are illustrated in Figures 19, 20, and 21, highlighting copper and gold results. Significant results from the 56 sample program by Appleton Resources in 2007 include total copper between 0.01% and 11.4% Cu, and between 0.01 g/t and 10.7 g/t Au and up to 0.186% Co.



Figure 18 - Argentina Shaft and Headframe in the northern Perth Project area (photo provided by Red Metal).

In 2011, Red Metal conducted another sampling program, collecting 129 samples from its Perth Project, and analysing for total copper, soluble copper, gold, and cobalt. Results show total copper ranging between 0.01% to 11.36% Cu (Figure 20), gold ranging between 0.01 g/t to 29.93 g/t Au (Figure 21), and cobalt ranging between 2 ppm to 6933 ppm Co.

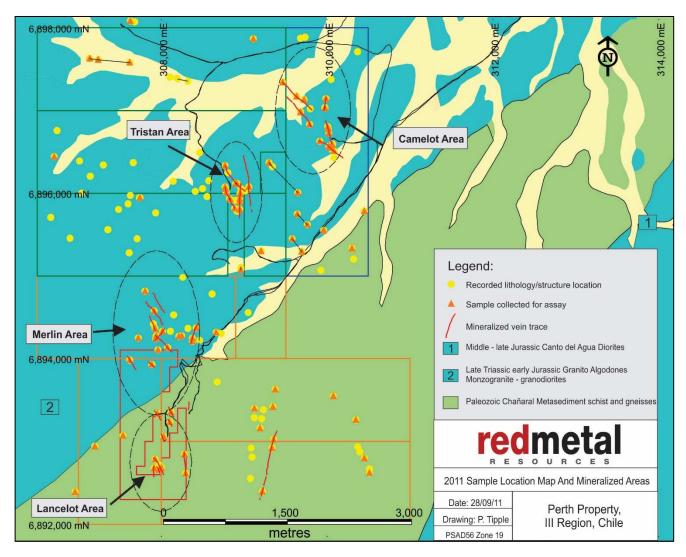


Figure 19 – Location of the 2011 sampling in the Perth Project area (figure provided by Red Metal).

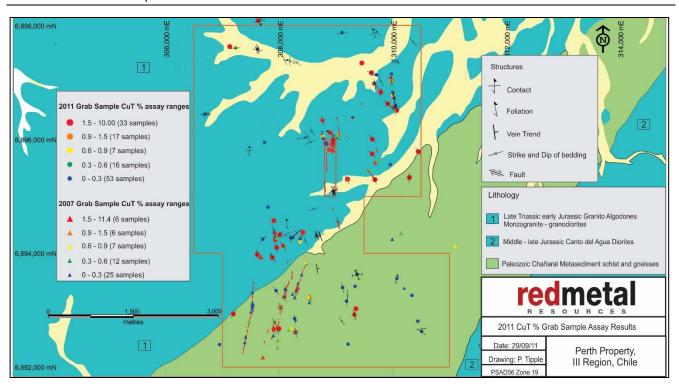


Figure 20 – Results for CuT from the 2011 sampling in the Perth Project area (figure provided by Red Metal).

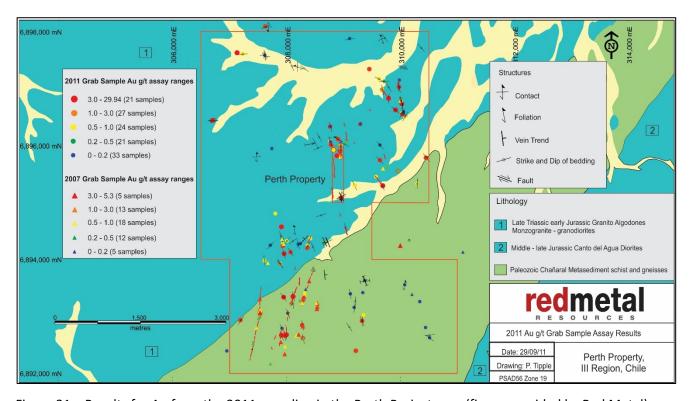


Figure 21 – Results for Au from the 2011 sampling in the Perth Project area (figure provided by Red Metal).

In 2013 and 2014, Red Metal optioned the Perth Project area to Mineria Activa, a Chilean private mining company. Mineria Activa conducted a surface sampling, stripping and channel sampling program followed by a two phase drilling program within the Perth Project area.

The surface sampling and stripping program consisted of collecting 762 samples, a combination of grab and chip samples, and analysing them for total copper, soluble copper, gold, and cobalt. Results are included in Figures 22, 23, and 24, for copper, gold, and cobalt, respectively, illustrating a range of copper total results between 0.001% and 7.16% Cu, between 0.005 g/t and 16.5 g/t Au, and between 0.001% and 0.437% Co.

Mineria Activa drilled 30 diamond drill holes on the Perth Project area, and of these 30 holes, only three were entirely on the Red Metal mineral concessions, the remainder targeted a vein that is exposed at surface on a claim owned by another company that runs through the middle of Red Metal's Perth Project area. Of these three drill holes only one, DP-04, intersected any significant mineralization; 1 m grading 2.15 g/t Au, 1.32% Cu and 0.017% Co.



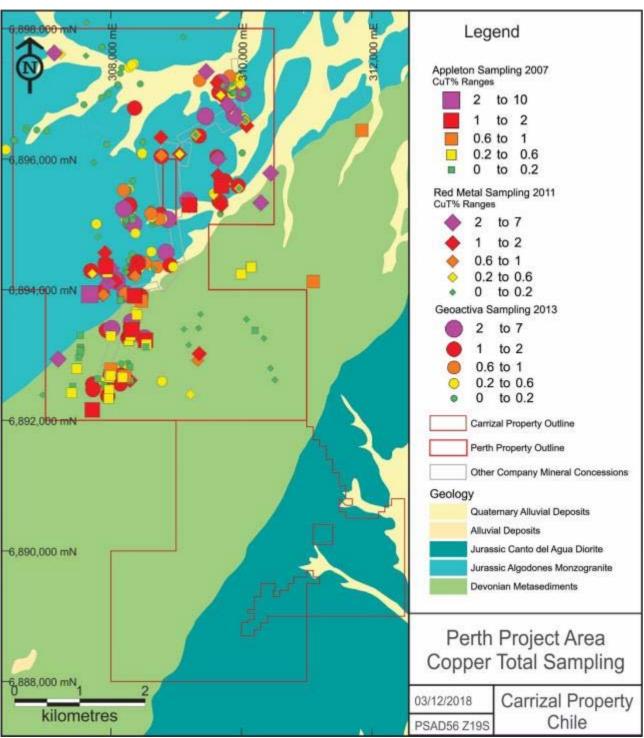


Figure 22 - Results of sampling programs in the Perth Project area, showing copper concentrations (Geology based on Arevelo and Welkner, 2003; figure provided by Red Metal).

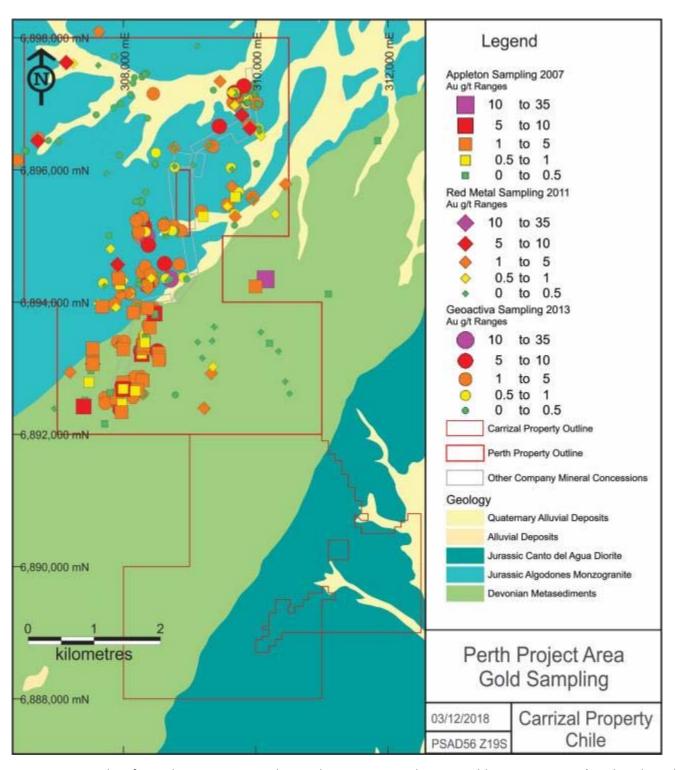


Figure 23 - Results of sampling programs in the Perth Project area, showing gold concentrations (Geology based on Arevelo and Welkner, 2003; figure provided by Red Metal).

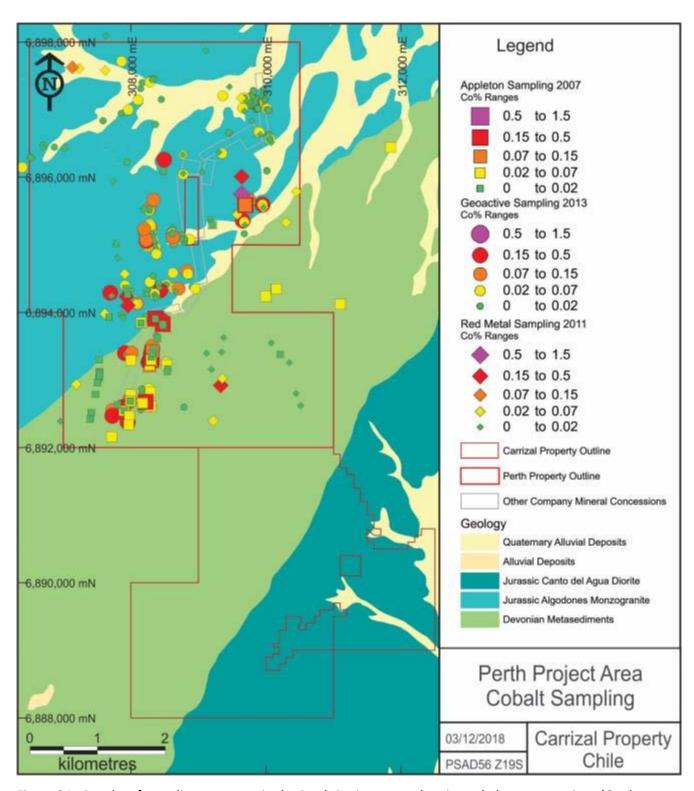


Figure 24 - Results of sampling programs in the Perth Project area, showing cobalt concentrations (Geology based on Arevelo and Welkner, 2003; figure provided by Red Metal).

### 6.4 Historical Resource Estimates and Production

There are no formal historical resource estimates on the Farellón Project. However, a number of old memostyle reports were put together by the provincial engineer for Atacama particularly in 1963. The sources for the 1963 report were other reports dated from 1942 to 1949. In the report it was noted that the deposit consisted of 3 veins in metamorphic rocks and that blocks of material approximately 50 m in length and depth had been extracted. The historical estimates do not conform to the presently accepted CIM standards and definitions, for resource estimates, as required by NI 43-101 regulations.

The 1963 report contained a number of tables which indicated the reserves reported in the previous 1949 report by Ing. Herbert Hornkohl. There are a number of inaccuracies in the tables contained in the 1963 report, most likely related to typing errors, and Micon has attempted to correct these errors by comparing them to the 1949 tables, where applicable. The tables from the reports are reproduced below but not all of the units of measurement were provided for the tabulated grades in the reports. Therefore, Micon has not assigned units of measurement to any grades which are not specified in the reports. After the 1949 study was conducted, the mine was worked and at 1963 there was no visible mineralization (Positive Ore). There were 500 tons of waste and 1,320 tons of extracted material with the grade distribution reported in Tables 13, 14 and 15 (derived from the 1949 and 1963 reports in the Senageomin files, Chile).

Table 13 - Reported "Positive Ore" grades.

		Grade							
	Tons	Cu (%)	Au (g/t)	Ag (g/t)	CaO (wt%)	SiO <sub>2</sub> (wt%)	Fe <sub>2</sub> O <sub>3</sub> (wt%)	Al <sub>2</sub> O <sub>3</sub> (wt%)	S (wt%)
Veta Pique*	5,849	3.1	1.2	3.8	45.3	4.4	7.8	1.6	0.7
Veta Naciente*	6,817	2.7	1.1	4.9	44.1	5.0	11.7	2.7	0.7
Total:	12,666	2.9	1.1	4.4	44.7	4.7	9.9	2.2	0.7

<sup>\*</sup>Note: Veta Pique = Shaft vein and Veta Naciente = Outcrop vein; Table provided by Red Metal

Table 14 - Reported "Waste" grades.

Tons	Cu (%)	Au (g/t)	Ag (g/t)	CaO (wt%)	FeO (wt%)	MgO (wt%)	SiO <sub>2</sub> (wt%)
500	2.20	1.0	10.0	45.98	5.29	0.60	2.50

Table 15 - Reported "Extraction" grades.

	Tons	Cu (%)	Au (g/t)	Ag (g/t)	CaO (wt%)	FeO (wt%)	MgO (wt%)	SiO <sub>2</sub> (wt%)
Veta Pique*	810							
Veta Naciente*	510							
Total:	1,320	2.3	1.0	5.0	45.07	6.54	0.22	3.0

<sup>\*</sup>Note: Veta Pique = Shaft vein and Veta Naciente = Outcrop vein; Table provided by Red Metal



The May 2000 Minera Stamford report mentions a resource estimate, but this is a conceptual resource estimate based on a minimal amount of information. However, Micon has reviewed this conceptual estimate and concluded that it would not meet the criteria necessary for its inclusion in an NI 43-101 report. Therefore, Red Metal should not rely on it as justification for a program of compilation work and further exploration. Further work is required to locate and evaluate the true extent and nature of the mineralization on the Farellón Project.

As mentioned previously a small amount of historical production has occurred on the Farellón Property primarily during the 1940's. However, there are few existing records of the production and there appear to be some discrepancies in the potential size of the waste dumps (1,000 and 500 tons) and grades reported in the material between the 1949 and 1963 reports contained in the archived files.

# 7 Geological Setting and Mineralization

### 7.1 Regional Geology

Chile is divided into three major physiographic units running north-south, namely the Coastal Cordillera, Central Valley (also termed the Central Depression), and the High Cordillera (Andes). The Carrizal Cu-Co-Au Property lies within the Coastal Cordillera, on the western margin of Chile (Figure 25).

There are five main geological units within the Coastal Cordillera, including, (1) early Cretaceous back-arc basin marine carbonates (east); (2) late-Jurassic to early-Cretaceous calc-alkaline volcanic arc rocks (central); (3) early-Cretaceous Coastal batholith (west) (Marschik, 2001); (4) the Atacama fault zone (west) (Marschik, 2001); and, (5) Paleozoic basement metasedimentary rocks along the western margin (Hitzman, 2000). Many of these geological units are shown in Figure 25.

The Coastal Cordillera formed in the Mesozoic Era as major plutonic complexes were emplaced into broadly contemporaneous arc and intra-arc volcanics and underlying Paleozoic deformed metasediments (Hitzman, 2000). This time period also saw development of the NW-trending brittle Atacama fault system, followed by widespread extension-induced tilting. Sedimentary sequences accumulated immediately east of the Mesozoic arc terrane in a series of interconnected, predominantly marine, back-arc basins. Early- to mid-Jurassic through mid-Cretaceous volcanism and plutonism throughout the Coastal Cordillera and immediately adjoining regions are generally considered to have taken place under variably extensional conditions in response to retreating subduction boundaries (slab roll-back) and steep, Mariana-type subduction (Hitzman, 2000).

### 7.2 Local Geology

The Carrizal Cu-Co-Au Property covers two distinct contact zones between Paleozoic metasedimentary rocks in the central section, and late Jurassic diorites and monzodiorites to the northwest and southeast (Figure 26).

Paleozoic metasedimentary rocks belonging to the Chañaral Epimetamorphic Complex are composed of shales, phyllites and quartz-feldspar schists/gneisses (Minera Stamford, 2000). The sedimentary rocks have a strong NNE-striking shallow foliation dipping ~40° southeast. The intrusives towards the southeast corner of the Carrizal Property, in the Farellón Project area, belong to the Canto del Agua formation and consist of diorite and gabbro hosting many NE-oriented intermediate-mafic dykes. These diorites are known to host extensive veining with copper and gold mineralization (Arevalo and Welkner, 2003). Locally, a small stock-like felsic body,



called Pan de Azucar, with lesser satellite dykes, intrudes the diorite. The intrusive relationship between the diorite and metasediments on this south end of the Property always appears to be tectonic (Willsteed, 1997).

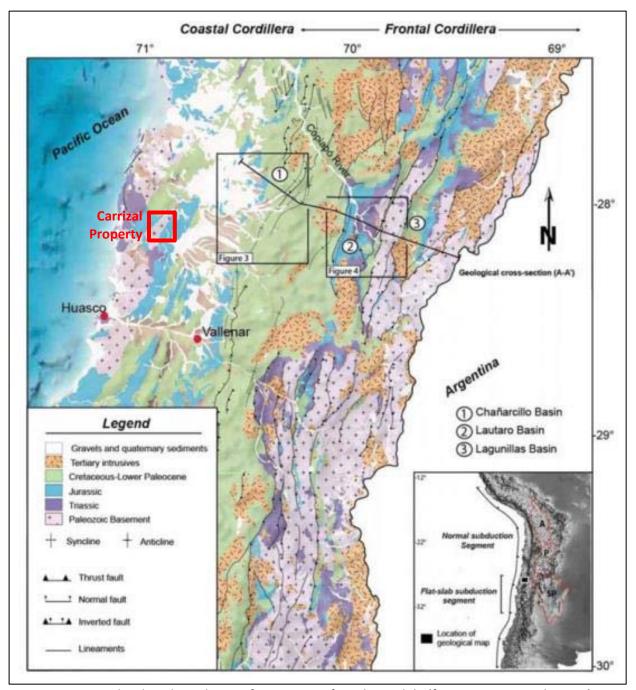


Figure 25 - Generalized geological map of a segment of northern Chile (from Martinez et al., 2017).

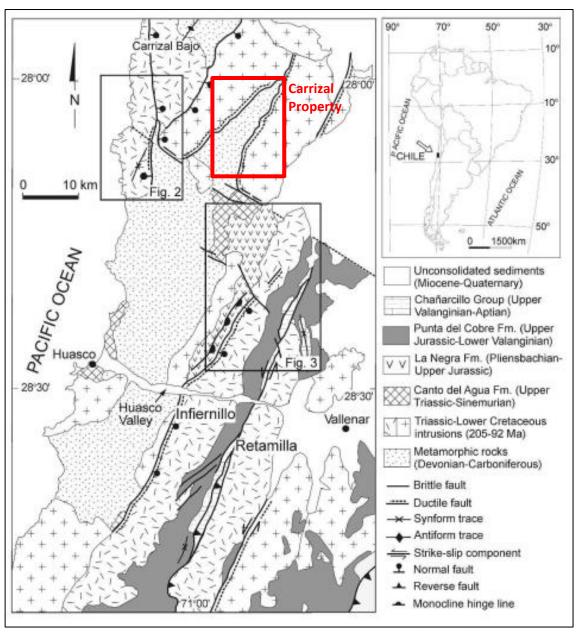


Figure 26 - Local geology surrounding the Carrizal Cu-Co-Au Property (in red) (after Grocott et al., 2009).

# 7.3 Property Geology

The southern contact zone between the metasedimentary rocks and the diorite is a mylonitic shear zone, ranging between 5 m and 15 m in width, striking NNE, and dipping ~65° to the northwest (Figure 27). This shear zone is host to mineralized quartz-calcite veins that splay off to the east into the diorites of the adjacent Carrizal Alto Mine area.

The Perth project area at the northern end of the Carrizal Property, also hosts a significant NS-trending vein swarm (Figure 27). Although these veins pinch and swell, they are generally 2 m wide and have been measured up to 6 m wide. Individual veins can be traced from a few 100 m to greater than 2 km in length. Most of the

veins identified thus far on surface lie within the metasedimentary rocks, however several veins have been traced cross-cutting the northern metasediment-granodiorite contact (Figure 27).

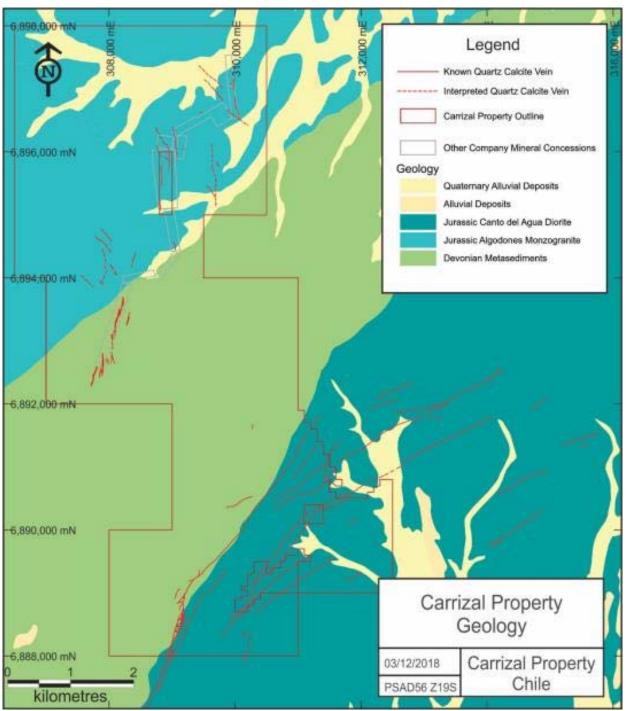


Figure 27 - Property geology of the Carrizal Cu-Co-Au Property, northern Chile (geology after Arevelo and Welkner, 2003; figure provided by Red Metal).

#### 7.4 Mineralization

The Carrizal Property occurs within the Central Andean IOCG Province (Sillitoe, 2003; Figure 28). Vein type, plutonic-hosted IOCG deposits such as Carrizal Alto (highlighted in red on Figure 28), and by extension the contiguous Carrizal Cu-Co-Au Property, are characterized by a distinct mineralogy that includes not only copper and gold but also cobalt, nickel, arsenic, molybdenum, and uranium (Sillitoe, 2003; Clark, 1974). All of the IOCG deposits in the region are partially defined by their iron content in the form of either magnetite or hematite (Sillitoe, 2003).

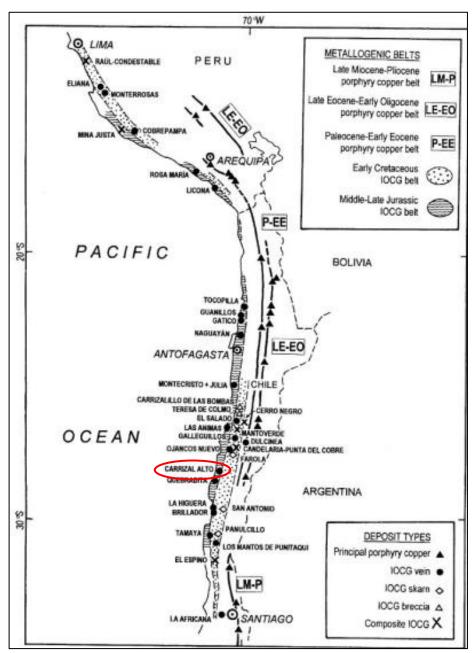


Figure 28 - The Central Andean IOCG Province of northern Chile (Sillitoe, 2003). The Carrizal Alto Mine, directly adjacent to the Carrizal Cu-Co-Au Property, is highlighted (red oval) for reference.

A variety of alteration assemblages has been noted in the Chilean deposits according to whether or not the deposits are hematite or magnetite dominated:

- 1. Magnetite-rich veins contain appreciable actinolite, biotite and quartz, as well as local apatite, clinopyroxene, garnet, hematite and K-feldspar, and possess narrow alteration haloes containing one or more of actinolite, biotite, albite, K-feldspar, epidote, quartz, chlorite, sericite and scapolite.
- 2. Hematite-rich veins tend to contain sericite and/or chlorite, with or without K-feldspar or albite, and to possess alteration haloes characterised (Sillitoe, 2003) by these same minerals. Typically, the vein deposits of the coastal Cordillera are chalcopyrite, actinolite and magnetite deposits (Ruiz, 1962).

Carrizal Alto, just east of the Carrizal Cu-Co-Au Property, has historically been known as a significant cobalt deposit (Ruiz, 1962; Clark, 1974) and has returned cobalt grades of up to 0.5% Co in the form of cobaltiferous arsenopyrite (Sillitoe, 2003; Ruiz, 1962), carrollite, and other cobalt sulphides (Clark, 1974). Copper mineralization on the Carrizal Cu-Co-Au Property consists of malachite and chrysocolla in the oxide zone and chalcopyrite in the sulphide zone. There is some indication that in the oxide zone some of the copper mineralization is tied up in a goethite-bearing clay matrix (Willsteed, 1997; Floyd, 2009).

Alteration associated with the greater shear zone is comprised of actinolite, biotite, sericite, epidote, quartz and carbonate mineralization. The sulphidized quartz-calcite veins occurring within the shear zone can display an intense pyrite-sericite-biotite alteration halo. In places, there is massive siderite and ankerite alteration (Minera Stamford, 2000).

## 8 Deposit Types

The main target on the Carrizal Property is vein-style iron oxide-copper gold ("IOCG") mineralization associated with a shear contact between intrusive diorite and metasedimentary rocks, containing significant amounts of iron oxide, copper, gold and cobalt, distinctive of IOCG deposits in the region (Sillitoe, 2003). IOCG deposits of northern Chile are known to exist in the belt from just south of the town of Vallenar (almost 29°S) to just south of Chañaral (26°S) (Hitzman, 2000). Although this deposit type covers a wide spectrum, the characteristic IOCG deposits of northern Chile have been clearly defined by Sillitoe (2003) as:

"Iron oxide-copper-gold deposits, defined primarily by their elevated magnetite and/or hematite contents, constitute a broad, ill-defined clan related to a variety of tectono-magmatic settings. The youngest and, therefore, most readily understandable IOCG belt is located in the Coastal Cordillera of northern Chile and southern Peru, where it is part of a volcano-plutonic arc of Jurassic through Early Cretaceous age. The arc is characterised by voluminous tholeiitic to calc-alkaline plutonic complexes of gabbro through granodiorite composition and primitive, mantle-derived parentage. Major arc-parallel fault systems developed in response to extension and transtension induced by subduction rollback at the retreating convergent margin. The arc crust was attenuated and subjected to high heat flow. IOCG deposits share the arc with massive magnetite deposits, the copper-deficient end-members of the IOCG clan, as well as with Manto-type copper and small porphyry copper deposits to create a distinctive metallogenic signature."

"The IOCG deposits display close relations to the plutonic complexes and broadly coeval fault systems. Based on deposit morphology and dictated in part by lithological and structural parameters, they can be separated into several styles: veins, hydrothermal breccias, replacement mantos, calcic skarns and composite deposits



that combine all or many of the preceding types. The vein deposits tend to be hosted by intrusive rocks, especially equigranular gabbrodiorite and diorite, whereas the larger, composite deposits (e.g., Candelaria-Punta del Cobre) occur within volcano-sedimentary sequences up to 2 km from pluton contacts and in intimate association with major orogen-parallel fault systems. Structurally localised IOCG deposits normally share faults and fractures with pre-mineral mafic dykes, many of dioritic composition, thereby further emphasising the close connection with mafic magmatism. The deposits formed in association with sodic, calcic and potassic alteration, either alone or in some combination, reveal evidence of an upward and outward zonation from magnetite-actinolite-apatite to specular hematite-chlorite-sericite and possess Cu-Co-Au-Ni-As-Mo-U-(LREE) (light rare earth element) signature reminiscent of some calcic iron skarns around diorite intrusions. Scant observations suggest that massive calcite veins and, at shallower paleodepths, extensive zones of barren pyritic feldspar-destructive alteration may be indicators of concealed IOCG deposits."

The Carrizal Property lies well within the Chilean IOCG belt and fits many of the tectonic and mineralogical definitions outlined by Sillitoe (2003). The Property is considered to be a vein-style IOCG deposit with significant amounts of iron oxide, copper, gold and cobalt distinctive of IOCG deposits in the region.

The main targets on the Carrizal Property are the two mineralized shear contact zones between the metasediments and diorites (Farellón Project area) and monzodiorites (Perth Project area). The shear zone has been interpreted to host several parallel, mineralized lenses.

## 9 Exploration

Over the past three years, Red Metal has collected data from bulk sampling efforts (underground exploration workings and rock sampling) conducted by contract miners on the Carrizal Property. Red Metal conducted exploration and drilling programs between 2008 and 2018, with the latest information stemming from bulk sampling efforts by a contract artisanal miner. This work resulted in 11,265 tonnes of sulphide-mineralized material with an average grade of 1.67% Cu, 5.8 g/t Ag, and 0.21 g/t Au, as well as 1,813 tonnes of oxide mineralized material with an average grade of 1.56% Cu. The ENAMI processing facility did not have the capacity to recover cobalt, however three grab samples taken from the same location as the bulk sampling yielded between 0.09% and 0.12% Co (Red Metal personal communication, 2019).

Bulk sampling was completed on seven levels to a depth of approximately 95 metres below surface. Samples from levels one to three were heavily oxidized and the vein width was inconsistent. These levels produced 1,813 tonnes of oxide material with an average grade of 1.56% soluble copper. Average grades from levels four to seven are detailed in Figure 29 and represent the total insoluble copper, silver and gold grades recovered from these levels.



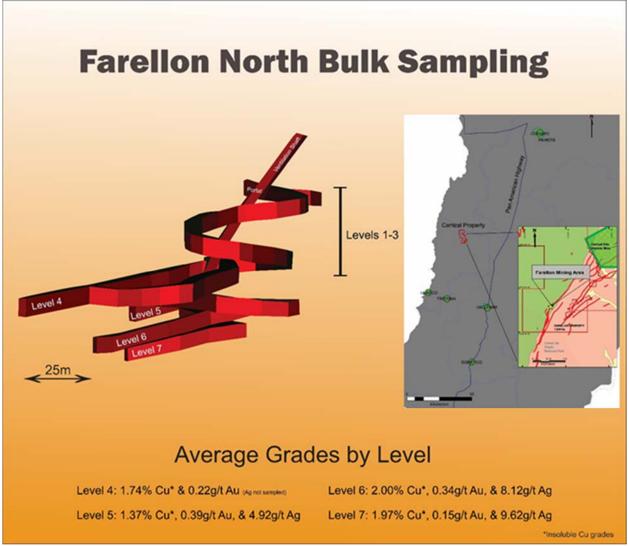


Figure 29 – Bulk sample average grades by underground level (figure provided by Red Metal).

# 10 Drilling

Red Metal has not conducted any drilling activities on the Carrizal Cu-Co-Au Property since 2013 (see Section 6, 'History').

# 11 Sample Preparation, Analysis, and Security

Red Metal conducted its initial exploration program in 2009 (5 RC holes), followed by programs in 2011 (11 RC/core holes) and in 2013 (2 core holes) on the Farellón Project which it acquired from Minera Farellón in April 2008. As part of the 2011 Phase I exploration program Red Metal completed 11 holes (combined RC/diamond core drilling) during July and August. In 2013, Red Metal completed two diamond drill holes on the Project. As part of the 2011 and 2013 drilling programs Red Metal instituted a QA/QC program to address the security of the samples and integrity of the results. What follows is a description of sample preparation,

analysis and security for the 2011 drilling program. The difference in the 2013 program was that no check samples were completed.

Two metre sampling intervals of the RC drill holes started at the collar of the hole and proceeded from the surface down to approximately 20 m above where mineralization was expected to commence (based on modelling projections). At 20 m above where the mineralization was expected to commence, the 2 m sample intervals were reduced 1 metre. By reducing the sampling intervals in the mineralized zones, better constraints were placed to further isolate mineralization intervals and improve mineralization control at depth. This system of 2 m to 1 m sampling intervals was repeated for all holes. FA-11-009 and FA-11-010 still used this RC system but switched to from RC to diamond drilling at 200 m and 164 m, respectively.

The cuttings for each one or two metre sample was obtained from the cyclone and then passed through a splitter. Two samples were obtained for each sample interval in the drilling program; a larger sample (approximately 15 kg) to be used as a backup sample and a smaller sample (from 2 to 5 kg) which was sent to the assay laboratory for analysis. Both plastic sample bags were clearly marked with the drill hole identification letter and the depths of the sample. Geoanalitica Ltda. sample tickets were added later and recorded in both the log and the stubs of the ticket book for precise sample number correlation control. Washed drill chips or cuttings were also obtained from each sample interval of either one or two metres and these were placed in cutting tray boxes to record the geology of each interval. The maintenance of cuttings in a tray box is similar to keeping half the core for each sample interval in a core drilling program.

Each sample destined for the assay laboratory had a paper ticket placed in the sample bags and the number written twice on each bag with a permanent ink marker. Drawstrings were used to secure each cloth sample bag. Each sample was placed with five to seven other individual samples in poly-woven sacks which were then zap-strapped with the Geoanalitica Ltda. address and sample series written in permanent maker on the bag.

The backup or representative samples for every metre of drilling from the 2011 drilling program have been saved in heavy duty sample bags and stored in Vallenar at Red Metal's field house, which is owned by Red Metal's operation manager, Kevin Mitchell. The sample bags have been stored under heavy duty dark tarps to protect the sample bags from deterioration under the strong sunlight. All samples have been clearly marked with drill hole and metreage information as well as an extra sample ticket was stapled to the sample bag.

The chip trays, backup samples as well as the assay samples prior to shipment are stored under lock and key in a shed at Red Metal's field house. The shed is very secure, and the key is held by the property caretaker.

The assay samples contained in the sealed poly-woven sacks are trucked by Red Metal to Vallenar and then shipped via Pullman Cargo to the Geoanalitica Ltda laboratory in Coquimbo. Once in Coquimbo the samples are prepared and assayed.

Red Metal's QA/QC protocol consists of the addition of standards, blanks and laboratory duplicates to the sample stream. These are inserted into the sample series using the same number sequence as the samples themselves. One of the QA/QC check samples is inserted every 25 samples and it alternates between standards, blanks and laboratory duplicates so that within each batch of 75 samples, one sample of each type of control and check samples was included. Table 16 summarizes the type and frequency of the QA/QC samples inserted at the various preparation stages. Table 17 summarizes how the QA/QC samples were inserted into the sampling series for the 2011 drilling program.



Table 16 - Summary of the type and frequency of the QA/QC samples, Farellón Project.

Stage	Туре	Frequency	Description	Inserted By	
After Splitting	Standard	1 per 50 Samples	One of 3 Standards	Red Metal	
After Splitting	Blank	1 per 125 Samples	Pulp Blank	Red Metal	
After	Field Duplicate	1 per 125 Samples	Second 50 g split	Geoanalitica Laboratory	

Table provided by Red Metal

Table 17- Summary of the type and frequency of the QA/QC samples, Farellón Project.

Sample Number	Description of Samples
001-024	Samples collected and analyzed by geologist
025	Standard 1
026-049	Samples collected and analyzed by geologist
050	Blank Pulp
051-074	Samples collected and analyzed by geologist
075	Standard 2
076-099	Samples collected and analyzed by geologist
100	Duplicate of 099 sample
101-124	Samples collected and analyzed by geologist
125	Standard 3
126-149	Samples collected and analyzed by geologist
150	Standard 1
151-174	Samples collected and analyzed by geologist
175	Blank Pulp
176-199	Samples collected and analyzed by geologist
200	Standard 2
201-224	Samples collected and analyzed by geologist
225	Duplicate of 224 sample

Table provided by Red Metal

# 11.1 Standard Reference Samples

Red Metal is currently using three standards which it purchased for the drilling program. The three standards are comprised of one high grade copper standard and two copper-gold multi-element standards. The three standards were purchased from Analytical Solutions Ltd. based in Toronto, Canada. Table 18 summarizes the assay standards used for Red Metal's 2011 drilling program on the Farellón project as well as the number of each standard sent for analysis.

Table 18 - Summary of the Standard Reference Material.

Type of Reference	Number of Standards	Label	Element	Recommended	95% Confidence	
Material	Shipped	Labei	Element	Value	Low	High
High Copper STD	11	OREAS	Copper	1.71%	1.62%	1.79%
Copper-Gold multi-	42	OREAS	Copper	0.166%	0.162%	0.169%
element standard	13	151a	Gold	0.042	0.044	
Copper-Gold multi-	11	OREAS	Copper	0.385%	0.379%	0.391%
element standard	11	152a	Gold	0.116 ppm	0.114	0.118
TOTAL:	35					



#### 11.1.1 Blank Samples

Blank pulp samples were in house blank samples packaged by Red Metal Resources using clean barren quartz. The blank pulp samples were inserted sequentially numbered on ratio of one sample for every 125 samples.

#### 11.1.2 Field Duplicate Samples

Field duplicates were employed by sampling the same interval as the immediate previous sample and treating it as an ordinary sample – bar that it was recorded as a duplicate. The field duplicate samples were inserted sequentially numbered on ratio of one sample for every 125 samples.

### 11.2 QA/QC results – 2011 Drilling Program

### 11.2.1 Results for the Standard Reference Samples

A total of 35 standard reference samples were submitted to Geoanalitica in Coquimbo for analysis during the 2011 drilling program. Table 19 summarizes the assay results for the 35 standard reference samples submitted. Figures 30, 31, 32, 33, and 34 graphically show the level of consistency for the three standards sent to the laboratory for assay to test laboratory calibration. The number of standard reference statistically too small number of samples upon which to normally base any definitive conclusions. However, the results do appear to indicate that the assay procedures for both copper and gold at Geoanalitica is well conducted and in general no assay errors were encountered during the process. Further samples will be required in order to build up enough data statistically to conclusively demonstrate this statement.

Table 19 - Summary of the assay results for the Standard Reference Samples submitted to Geoanalitica.

Standard Reference Sample	Drill Hole Number	Sample Number	Assay	Results
ID	Drill Hole Number	Sample Number	Copper (%)	Gold (ppm)
	FA-11-001	202275	0.16	0.05
	FA-11-002	202725	0.17	0.05
	FA-11-003	201500	0.16	0.05
	FA-11-004	201825	0.16	0.05
	FA-11-006	202575	0.16	0.06
	FA-11-007	261325	0.18	0.07
OREAS 151a	FA-11-008	202075	0.17	0.04
	FA-11-009	201625	0.16	0.05
	FA-11-009	201750	0.17	0.05
	FA-11-010	202525	0.16	0.06
	FA-11-010	202675	0.16	0.05
	FA-11-010	202400	0.17	0.06
	FA-11-011	6525	0.17	0.05
	FA-11-002	201375	0.40	0.11
	FA-11-003	201475	0.40	0.13
	FA-11-004	201875	0.40	0.09
OREAS 152a	FA-11-005	202475	0.39	0.12
UKEAS 152a	FA-11-007	261375	0.40	0.13
	FA-11-008	202125	0.40	0.13
	FA-11-009	202975	0.40	0.12
	FA-11-010	200875	0.39	0.14



Standard Reference Sample	Drill Hala Norshan	Commis Nivershore	Assay Results		
ID	Drill Hole Number	Sample Number	Copper (%)	Gold (ppm)	
	FA-11-010	261550	0.40	0.13	
	FA-11-010	202375	0.40	0.12	
	FA-11-011	202775	0.39	0.13	
	FA-11-001	202325	1.63	0.08	
	FA-11-002	201425	1.68	0.06	
	FA-11-003	201550	1.69	0.08	
	FA-11-004	201925	1.62	0.09	
OREAS 163	FA-11-005	202450	1.62	0.07	
	FA-11-006	202625	1.68	0.07	
	FA-11-009	201725	1.65	0.06	
	FA-11-010	261525	1.70	0.06	
	FA-11-010	261425	1.67	0.08	
	FA-11-010	201975	1.66	0.07	
	FA-11-011	6575	1.68	0.08	

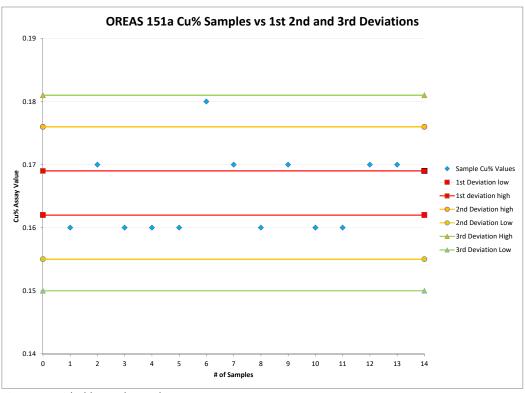


Figure provided by Red Metal

Figure 30 - Graph of copper assay results for Standard Reference Sample OREAS 151a at Geoanalitica.



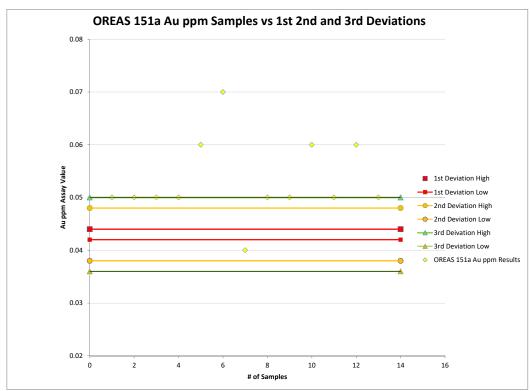


Figure provided by Red Metal

Figure 31 - Graph of gold assay results for Standard Reference Sample OREAS 151a at Geoanalitica.

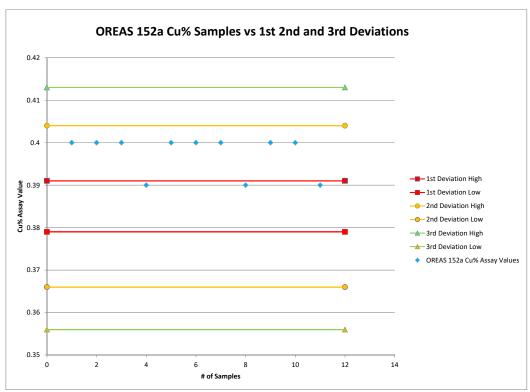


Figure provided by Red Metal

Figure 32 - Graph of copper assay results for Standard Reference Sample OREAS 152a at Geoanalitica.



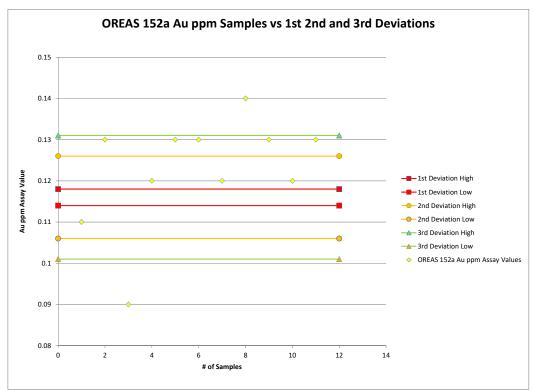


Figure provided by Red Metal

Figure 33 - Graph of gold assay results for Standard Reference Sample OREAS 152a at Geoanalitica.

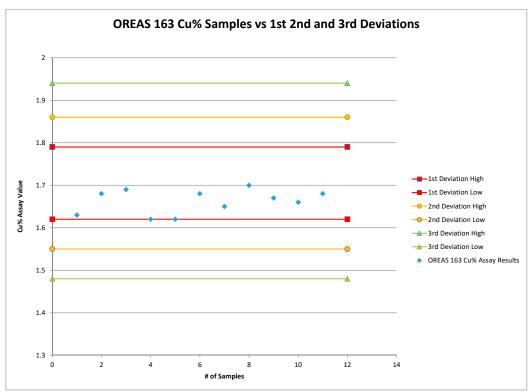


Figure provided by Red Metal

Figure 34 - Graph of copper assay results for Standard Reference Sample OREAS 163 at Geoanalitica.



#### 11.2.2 Results for Blank Samples

A total of 14 blank samples were submitted to Geoanalitica for analysis during the 2011 drilling program. Table 20 summarizes the assay results for the 14 blank samples submitted. Figure 35 graphs the assay results for the 14 blank samples submitted to the laboratory. While 14 samples is statistically a small number of samples upon which to normally base any definitive conclusions all of the samples returned assays below or at the detection limit. Therefore, is appears that the sample preparation at Geoanalitica is well conducted and no contamination or other potential errors were introduced during the sample preparation phase of the assaying process. However, further samples will be required in order to build up enough data statistically to conclusively demonstrate this statement.

Table 20 - Summary of the 2011 assay results for the Blank Samples submitted to Geoanalitica.

Duill Hole Number	Compute Number	Assay Results			
Drill Hole Number	Sample Number	Copper (%)	Gold (ppm)		
FA-11-002	201400	<0.01	<0.01		
FA-11-003	201525	<0.01	<0.01		
FA-11-004	201850	<0.01	<0.01		
FA-11-004	201950	<0.01	<0.01		
FA-11-005	202425	<0.01	<0.01		
FA-11-006	202600	<0.01	<0.01		
FA-11-007	261350	<0.01	<0.01		
FA-11-008	202100	<0.01	<0.01		
FA-11-009	201650	<0.01	<0.01		
FA-11-009	200075	<0.01	<0.01		
FA-11-010	202550	<0.01	<0.01		
FA-11-010	202700	<0.01	<0.01		
FA-11-010	201600	<0.01	<0.01		
FA-11-011	6550	<0.01	<0.01		
FA-11-011	202800	<0.01	<0.01		



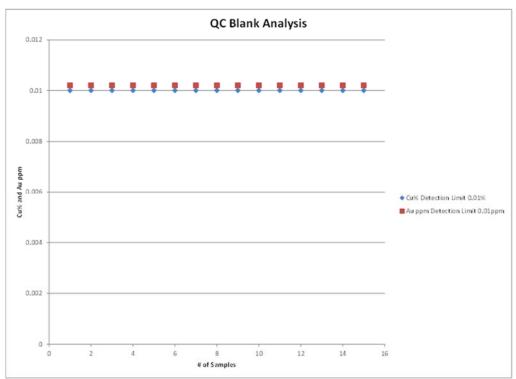


Figure provided by Red Metal

Figure 35 - Graph of the 2011 assay results for the Blank Samples submitted to Geoanalitica.

#### 11.2.3 Results for the Field Duplicate Samples

A total of 11 field duplicate samples were submitted to Geoanalitica for analysis during the 2011 drilling program. Table 21 summarizes the assay results for the 11 field duplicate samples submitted. Figure 36 graphically depicts the assay results for the 11 field duplicate samples submitted to the assay laboratory. At this time the 11 samples are statistically to small number of samples upon which to base any definitive conclusions regarding the repeatability of the sample results at the assay laboratory or the overall QA/QC conducted by Red Metal.

Table 21 - Summary of assay results for the 2011 Field Duplicate Samples submitted to Geoanalitica.

Drill Hole	Sample	Original Assay Results		Duplicate Assay Results		Mean		Absolute Difference	
Number	Number	Copper (%)	Gold (ppm)	Copper (%)	Gold (ppm)	Copper	Gold	Copper	Gold
FA-11-001	202350	0.07	<0.01	0.11	< 0.01	0.09	<0.01	0.04	0
FA-11-002	202703	0.03	0.02	0.01	0.04	0.02	0.03	0.02	0.02
FA-11-003	201575	0.14	0.16	0.13	0.16	0.135	0.16	0.01	0
FA-11-004	201900	0.07	0.01	0.10	0.01	0.085	0.01	0.03	0
FA-11-006	202650	< 0.01	< 0.01	0.02	0.01	0.01	0.01	0.02	0.01
FA-11-007	261400	0.02	0.02	0.02	0.01	0.02	0.015	0	0.01
FA-11-008	202150	0.02	0.01	0.02	< 0.01	0.02	0.01	0	0.01
FA-11-009	203000	< 0.01	0.02	<0.01	0.02	<0.01	0.02	0	0
FA-11-010	200900	0.85	0.33	1.71	0.38	1.28	0.355	0.86	0.05
FA-11-010	261450	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0	0
FA-11-011	6600	0.03	0.02	0.03	0.02	0.03	0.02	0	0



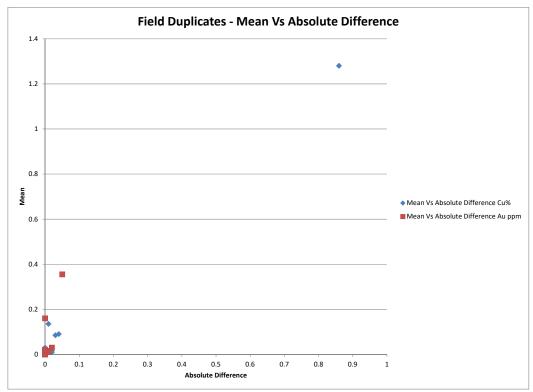


Figure provided by Red Metal

Figure 36 - Graph of assay results for the 2011 Field Duplicate Samples submitted to Geoanalitica.

### 12 Data Verification

During the 2018 site visit, the Qualified Person verified that the Carrizal Cu-Co-Au Property contains widespread underground workings, and also that bulk sampling has been recently completed. The QP examined all historical data made available relating to historic sampling and drilling within the Carrizal Cu-Co-Au Property, and took six mineralized rock grab samples from the area being bulk sampled and investigated underground, in order to verify the typical grades of Cu, Au, and Co encountered on the Property.

A description of the samples is provided in Table 22 and assay results in Table 23. Assays from grab rock samples collected on the Carrizal Property confirmed the presence of copper (oxide and sulphide phases), gold, silver, and cobalt. In the opinion of the QP, this verification data is adequate for the purposes of this Technical Report, as described in Section 2.2, 'Purpose of the Technical Report'.



Table 22 - Description of verification samples collected on the Farellón claims of the Carrizal Property.

Sample No.	Location	Туре	Alteration/Silicates	Zone	Mineralization
FN-01	Farellón North	Grab – level 7 stockpile on surface	Chlorite; quartz>calcite	Hypogene	chalcopyrite, pyrite
FN-02	Farellón North	Grab – level 7 stockpile on surface	Chlorite; quartz>calcite	Hypogene	chalcopyrite, pyrite
FN-03	Farellón North	Grab – level 7 stockpile on surface	Chlorite; quartz>calcite	Hypogene	chalcopyrite, pyrite
FN-04	Farellón North	Grab – level 7 stockpile on surface	Chlorite; quartz>calcite	Enriched Supergene	chalcopyrite, pyrite, bornite
FS-01	Farellón South	Grab – adit stockpile – roughly 3 years on surface	Oxidized, hematized, limonite	Supergene	cuprite; azurite, malachite
FS-02	Farellón South	Grab – underground, east wall of south drift		Enriched Supergene	chalcocite, chrysocolla

Table 23 - Assay results for verification samples collected on the Farellón claims of the Carrizal Property.

Sample No.	Au	Ag	Cu (total)	Cu (oxide)	Cu (sulphide)	Со	Co
Method	FA-AAS	4ACID-AAS	4ACID-AAS	LIX-AAS	Calc.	FUS-AAS	Calc.
units	ppm	ppm	%	%	%	ppm	%
(Detection Limit)	(-0.01)	(-0.1)	(-0.001)	(-0.001)	(-0.001)	(-1)	(-0.0001)
FN-01	0.46	12.1	2.735	0.119	2.616	17366	1.7366
FN-02	0.25	10.1	5.573	0.076	5.497	578	0.0578
FN-03	0.16	12.3	6.631	0.12	6.511	171	0.0171
FN-04	1.56	28.5	7.145	0.213	6.932	2086	0.2086
FS-01	3.49	5.3	10.62	10.786	0	467	0.0467
FS-02	0.48	2.3	3.538	3.221	0.317	2285	0.2285

## 12.1 Northern Section of the Farellón Project Area

Samples FN-01 through FN-04 were collected from an ore dump near the portal to the North Mine (*see* Figure 1). The ore, reported to be from Level 7 of the mine (hypogene/enriched supergene zones), contained mainly chalcopyrite with lesser bornite (*see* Figure 2).

Assays from samples FN-01 through FN-04 range from 0.16 ppm to 1.56 ppm Au, 10.1 ppm to 28.5 ppm Ag, 2.74% to 7.15% Cu(T); the copper was mainly in sulphide form (*e.g.*, chalcopyrite). The highest concentration of gold and silver were from sample FN-04 which also had the highest sulphide copper concentration. Analyses for cobalt, using the peroxide fusion method, returned concentrations ranging from 0.21% to 1.74% Co.

#### 12.2 Southern Section of the Farellón Project Area

Sample FS-01 was collected from a small stockpile near the old workings (Figure 37Figure ) of the South Mine which had been exposed to the elements for a number of years. This sample was heavily oxidized and contained copper oxides including cuprite, malachite and azurite (supergene zone). Sample FS-02 was collected from the east wall of the south drift in the South Mine Exploration Portal (see Figures 3 and 38). This sample contained chalcocite, chrysocolla, malachite, and azurite (enriched supergene zone).



Figure 37 - Old south mine workings on the Farellón Project area looking north (photo by Dr. Jobin-Bevans).

Assays from sample FS-01 reflect its high copper oxide content reporting 10.62% Cu(T) and averaging 10.70% Cu between the two assay methods used for copper. This sample contained the highest gold concentration at 3.49 ppm Au and assayed 0.05% Co. Sample FS-02 contained 3.54% Cu(T), with relatively low sulphide copper (enriched supergene zone), and 0.23% Co.

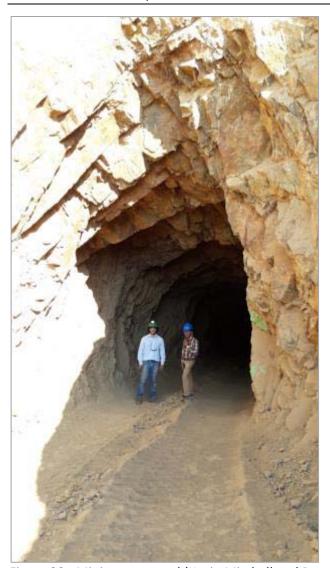


Figure 30 - Mining personnel (Kevin Mitchell and Ramon Delgado) standing in front of the South Mine exploration portal in the Farellón Project area (photo by Dr. Jobin-Bevans).

#### 13 Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing programs have been undertaken on the Carrizal Cu-Co-Au Property for this Technical Report.

#### 14 Mineral Resource Estimates

No mineral resource estimates have been done for the Cu-Co-Au Carrizal Property. As discussed in Section 6, some documentation exists for an historical resource estimates on the Farellón Project area which were conducted prior to February 1, 2001. However, as exploration progresses on the Farellón Project, further economic and technical evaluation of the resource potential for the project will need to be performed in accordance with present industry practices and standards, as set out in NI 43-101.

The historical estimates do not conform to the presently accepted CIM standards and definitions, for resource estimates, as required by NI 43-101 regulations. Red Metal should not rely on the historical resource estimates as justification for a program of compilation work and further exploration. Further work is required to locate and evaluate the true extent and nature of the mineralization on the Farellón Project.

#### 15 Mineral Reserve Estimates

The Project has no historical or current NI 43-101 Mineral Reserves.

#### **16 Mining Methods**

This section is not relevant to the Project.

#### **17 Recovery Methods**

This section is not relevant to the Project.

#### **18 Project Infrastructure**

This section is not relevant to the Project.

#### 19 Market Studies and Contracts

This section is not relevant to the Project.

#### 20 Environmental Studies, Permitting and Social or Community Impact

This section is not relevant to the Project.

#### 21 Capital and Operating Costs

This section is not relevant to the Project.

#### 22 Economic Analysis

This section is not relevant to the Project.



#### 23 Adjacent Properties

The Carrizal Property is adjacent and contiguous to the Carrizal Alto Mine, just to the east; what follows are the details of the operation and its history.

There are no immediately adjacent properties which directly affect the interpretation, evaluation of the mineralization, or anomalies found on the Farellón Project. However, the regional geology is such that there are a number of regional mineralized trends which cross the Farellón Project which Lewis (2012) considers to positively affect the prospectivity of the ground.

#### 23.1 Carrizal Alto Mine

Copper mining commenced at the Carrizal Alto mining district in the 1820's and continued on a significant scale, mostly by British companies, until 1891 when disastrous flooding occurred, and mines closed. Historical reports indicate that the larger mines obtained good grades over significant intervals in the bottom workings when the mines closed. During the 1800's, in excess of 3 million tonnes with grades in excess of 5% Cu and widths of 8 m was extracted as well as there was a large amount of direct shipping material containing 12% Cu. A considerable body of tails and old dumps was present until recently which lent support to these figures. Table 24 summarizes the yearly production between 1862 and 1870.

Table 24 - Summary of Production from the Carrizal Alto Mine (1862 – 1870).

Year	Tons	Copper Grade (%)		
1862	22,479	15.5		
1863	24,900	15.5		
1864	35,245	15.5		
1865	24,032	15.0		
1866	26,159	15.0		
1867	24,547	13.4		
1868	17,802	15.0		
1869	20,300	13.5		
1870	26,600	13.0		
Total:	222,064	_		

Table taken from (Ulriksen, 1991)

#### 24 Other Relevant Data and Information

There is no further relevant data or information needing to be disclosed that is not already part of this NI 43-101 Technical Report in another section.

#### 25 Interpretations and Conclusions

Red Metal conducted exploration and drilling programs between 2008 and 2018, with the latest information stemming from bulk sampling efforts by a contract artisanal miner. This work resulted in 11,265 tonnes of sulphide-mineralized material with an average grade of 1.67% Cu, 5.8 g/t Ag, and 0.21 g/t Au in, as well as 1,813 tonnes of oxide mineralized material with an average grade of 1.56% Cu. The ENAMI processing facility



did not have the capacity to recover cobalt, however three grab samples taken from the same location as the bulk sampling yielded between 0.09% and 0.12% Co (Red Metal personal communication).

Drilling on the Property has yielded significant Cu-Co-Au mineralization, with Red Metal confirming and extending the mineralization both in the down-dip direction and along strike in their 2011 and 2013-2014 programs. In their 2012 assessment, Micon reviewed Red Metal's 2011 QA/QC protocols and determined that the August 2000 CIM Exploration Best Practices Guidelines were followed (Lewis, 2012).

The Carrizal Property is considered to be a mid-stage exploration project upon which Red Metal can continue performing exploration and drilling activities in order to further identify the nature and extent of the mineralization in and around the shear zone. This Property is located within a major historical mining district in northern Chile that has not been fully subjected to modern exploration concepts and technology. The Property holds the potential for the discovery of mineralized deposits of similar character and grade as those exploited in the district in the past.

#### 26 Recommendations

Red Metal has a substantial land holding in a historical mining district in Chile which was a prolific past producer, shut down due to economic conditions, rather than the exhausting of the deposit. Additionally, the Property has only undergone limited modern exploration, which has so far demonstrated the potential of the Property to host a mineralized deposit.

#### 26.1 Further Exploration and Studies

Based on the positive results from the multiple exploration programs on the Farellón Project area, it is recommended that Red Metal approach further exploration in two phases. The first phase will consist of a 3,000 m drilling program to test the primary mineralization at depth that has thus far only been intersected in a few drill holes and determine the potential of the cobalt mineralization in the sulphide zone. If the first phase continues to return positive results, a second phase 20,000 m drilling program would be conducted in order to test down to 400 m depth with enough intercepts to complete an initial mineral resource estimate. The budget for the two phases of exploration is summarized in Table 25.



Table 25 - Carrizal Property Recommended Work Budget.

Budget Item	Total (US\$)	Comments						
Exploration (Phase 1) Sulphide Mineralization Testing								
Drilling	\$240,000	Diamond Drilling @ \$160/metre						
Consulting Geologist	\$42,000	Consulting geologists @ \$650/day						
Geotechnicians	\$10,000	Geotechnicians @ \$200/day						
Heavy Equipment Rental	\$60,000	Drill access road and pad building						
Assays	\$50,000	Assaying @ \$50/sample						
Room & Board	\$7,000	\$100/day per geo & tech						
Travel	\$3,000	flights and travel costs for Geologists						
Trucks & Fuel	\$6,000	Approx. \$4,000 fuel, service etc. for two trucks per month						
Report Writing/updating 3D	\$30,000							
Model	730,000							
10% contingency for	\$50,000	field supplies etc.						
miscellaneous items		neid supplies etc.						
Subtotal (Phase 1)	\$498,000							
Exploration (Phase 2) Delineation of Deposit								
Geophysical surveys	\$250,000	Magnetics and IP						
Consulting Geologist	\$350,000	Consulting geologist @ \$650/day						
Geotechnicians	\$150,000	Geotechnician @ \$200/day						
Heavy equipment rental	\$200,000	building drill pads and access roads						
Assays	\$300,000	Assaying @ \$50/sample						
Diamond Drilling	\$3,200,000	Diamond Drilling @ \$160/metre						
Room & Board	\$100,000	\$100/day per geo & tech						
Travel	\$40,000	flights and travel costs for Geologists						
Trucks & Fuel	\$12,000	Approx. \$4,000 fuel, service etc. for two trucks per month						
3D Model and initial resource	\$100,000	Consultants to build a 3D model required for future						
estimation	7100,000	exploration and resource estimation						
10% contingency for	\$500,000	Field supplies etc.						
miscellaneous items								
Subtotal (Phase 2)	\$5,202,000							
Total US\$ (Both Phases)	\$5,700,000							

#### 26.2 Further Recommendations

The general direction of proposed exploration programs is outlined above. The following further recommendations should be considered during exploration on the Carrizal Property:

1. It is recommended that any assaying that is done for cobalt should employ a sodium peroxide fusion method, rather than the more commonly used 4-acid digestion. This method has the advantage of more completely extracting cobalt from the pulverized sample, by transforming all metal-sulphide bonds into metal-oxide bonds, thereby increasing the amount of cobalt available in solution. It is also faster and safer, as it doesn't require the use of a two-stage process requiring highly corrosive hydrofluoric acid (HF).



- 2. Standard QA/QC procedures for the minerals industry is that a secondary assay laboratory be used to re-assay a portion of between 5% and 10% of the samples assayed by the primary lab used. This additional sampling procedure would act as a secondary check on the results produced by the primary laboratory.
- 3. Considering the silver results from the artisanal mining, sampling should be completed for silver mineralization as well as copper, cobalt, and gold.
- 4. It is recommended that if the artisanal mining operation continues, a multi-tonne metallurgical sample be taken to determine any potential issues with the sulphide ore and the potential recoveries of copper, cobalt, gold and silver.
- 5. It is recommended that Red Metal build a covered facility in which to store its samples on the Carrizal Property, in order to preserve samples from the effects of weather.



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**APPENDIX 1: Certificate of Author** 

[1 page]

#### **CERTIICATE OF AUTHOR**

#### Scott Jobin-Bevans (Ph.D., PMP, P.Geo.)

I, Scott Jobin-Bevans, Ph.D., P.M.P., P.Geo., do hereby certify that:

- 1. I am currently employed as Principal Geoscientist by Caracle Creek International Consulting Inc., 1545 Maley Drive, Ste. 2018, Sudbury, Ontario, Canada, P3A 4R7.
- 2. I am a member in good standing with the Association of Professional Geoscientists of Ontario (#0183).
- 3. This certificate is to accompany the report entitled: "NI 43-101 Independent Technical Report on the Carrizal Cu-Co-Au Property, Northern Chile" ("Technical Report") for Red Metal Resources Ltd., with an Effective Date of June 30, 2019 and a Report Date of March 31, 2020.
- 4. I attained a BSc. (1995) and M.Sc. (1997) in Geology/Earth Science and Economic Geology from the University of Manitoba in Winnipeg, Manitoba, Ontario, and received a Ph.D. from the University of Western Ontario in London, Ontario (2004). I have worked in the mineral exploration industry for almost 30 years and as an exploration geologist for over 22 years with a focus on project generation and management on early- to advanced-stage exploration projects. My international experience has covered commodities in a variety of deposit types, that include precious metals (Au-Ag, PGE), base metals (Cu-Zn-Pb), magmatic sulphides (Ni-Cu-Co), LCT pegmatites, diamonds, vanadium, and graphite.
- 5. I have read the definition of "Qualified Person" as set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I am a "Qualified Person" for the purposes of NI 43-101.
- 6. I personally visited and inspected the Carrizal Cu-Co-Au Property on January 14<sup>th</sup> to 15<sup>th</sup>, 2018, spending a total of approximately 8 hours on the Property and in discussions with project personnel.
- 7. I am solely responsible for all sections in the Technical Report entitled "NI 43-101 Independent Technical Report on the Carrizal Cu-Co-Au Property, Northern Chile" for Red Metal Resources Ltd.
- 8. I am independent of the Issuer for which this report has been written, and independent of the Property, and have had no prior involvement with the Property that is the subject of this Technical Report.
- 9. I have read NI 43-101, Form 43-101F1 and Companion Policy 43-101CP and have prepared this report in compliance with the Instrument, Form, and Companion Policy.
- 10. At the Effective Date of this Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Santiago, Chile, this 31st day of March 2020

Scott Jobin-Bevans, Ph.D., PMP, P.Geo.

**Principal Geoscientist** 

Caracle Creek International Consulting Inc.

#### **APPENDIX 2: Land Tenure**

[54 pages]

Certificado	П	Property	Farellón Alto 1-8	Cecil 1-49	Azúcar 6-25	Kahuna 1-40	Stamford 61-101	Teresita
Vigencia								
Hipotecas y Gravamenes		х	х	Х	Х	х	Х	
Prohibiciones e Interdicciones		х	х	Х	Х	х	Х	
Dominio Vigente			х	x	Х	Х	х	Х
Vigencia Pertenencias Mineras								
Certificado	П	Property	Quina 1-56	Exeter 1-54	Perth 1-36	Rey Arturo 1-30	Lancelot II 1-40	Lancelot I 1-27
Vigencia								
Hipotecas y Gravamenes		х	х		Х	х	х	
Prohibiciones e Interdicciones		х	х		Х	х	Х	
Dominio Vigente			х	х	Х			Х
Vigencia Pertenencias Mineras					Х	х		
Certificado	П	Property	Tristan II B1-4, A1-60	Galahad I C,B1-3, A1-44	Camelot 1-60	Percival 41-60	Merlin I B1-10, A1-48	
Vigencia		x, x	x, x, x	Х	Х			
Hipotecas y Gravamenes		x, x	x, x, x	Х	Х	x, x		
Prohibiciones e Interdicciones						x, x		
Dominio Vigente								
Vigencia Pertenencias Mineras						x, x		

El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "GALAHAD I C", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 487 vuelta número 268 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-



El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de la pertenencia minera denominada "GALAHAD I C", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 487 vuelta número 268, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dicha pertenencia minera le afecte alguna Hipoteca u otro Gravamen.-



El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "GALAHAD I B 1 AL 3", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 485 vuelta número 267 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-



El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de las pertenencias mineras denominadas "GALAHAD I B 1 AL 3", ubicadas en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 485 vuelta número 267, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dichas pertenencias mineras les afecte alguna Hipoteca u otro Gravamen.-



El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "GALAHAD I A 1 AL 44", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 483 vuelta número 266 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-



El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de las pertenencias mineras denominadas "GALAHAD I A 1 AL 44", ubicadas en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 483 vuelta número 266, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dichas pertenencias mineras les afecte alguna Hipoteca u otro Gravamen.-



El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "PERCIVAL 4 1 AL 60", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 481 vuelta número 265 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-



El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de las pertenencias mineras denominadas "PERCIVAL 4 1 AL 60", ubicadas en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 481 vuelta número 265, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dichas pertenencias mineras les afecte alguna Hipoteca u otro Gravamen.-

El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "CAMELOT 1 AL 60", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 479 vuelta número 264 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-

El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de las pertenencias mineras denominadas "CAMELOT 1 AL 60", ubicadas en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 479 vuelta número 264, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dichas pertenencias mineras les afecte alguna Hipoteca u otro Gravamen.-

El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "TRISTAN II B 1 AL 4", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 477 número 263 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-



El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de las pertenencias mineras denominadas "TRISTAN II B 1 AL 4", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 477 número 263, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dichas pertenencias mineras les afecte alguna Hipoteca u otro Gravamen.-



El Conservador de Minas Titular de Copiapó que suscribe, CERTIFICA: Que MINERA POLYMET SPA, es titular del cien por ciento de los derechos sobre la manifestación minera denominada "TRISTAN II A 1 AL 60", ubicada en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 475 número 262 en el Registro de Descubrimientos de este Conservador de Minas, correspondiente al año 2019. Inscripción que se encuentra VIGENTE a la fecha.-



El Conservador de Minas Titular de Copiapó, que suscribe, CERTIFICA: Que revisada la inscripción de la manifestación de las pertenencias mineras denominadas "TRISTAN II A 1 AL 60", ubicadas en la Comuna y Provincia de Copiapó, Tercera Región de Atacama, inscrita en fojas 475 número 262, en el Registro de Descubrimientos del Conservador de Minas, a mi cargo, correspondiente al año 2019, a contar de la fecha de su inscripción, es decir, desde el 05 de Febrero de 2019, No he encontrado que a dichas pertenencias mineras les afecte alguna Hipoteca u otro Gravamen.-



DARIO SILVA MARCHANT
NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,
MINAS Y ARCHIVERO JUDICIAL
FREIRINA-HUASCO
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TELEFONO 51-2518783
EMAIL: notariasilvamarchant@hotmail.com

#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 20 de mayo de 2008 hasta esta fecha, aparece como dueña MINERA POLYMET S.p.A, con relación a las pertenencias mineras, inscritas a su nombre a fojas 132 Nº 26 del Registro de Propiedad del año 2008, denominadas FARELLON ALTO UNO AL OCHO, ubicadas en Sierra Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, CERTIFICO: Que le afecta un contrato de Arrendamiento a favor de Kevin Robert Mitchell, inscrito a fojas 1 Nº 1; y una hipoteca de Primer Grado con clausula de Garantía General, a favor de la Empresa Nacional de Minería, inscrita a fojas 4 Nº2, ambas del Registro de Hipotecas y Gravámenes correspondiente al año 2015.- El Acta de Mensura, se encuentra inscrita a fojas 1 Nº 1 del Registro de Propiedad del año 1943, todas de este Conservador de Minas.-Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

DARIO SILVA MARCHANT

NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,

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# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus indices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, desde el 20 de mayo de 2008 hasta esta fecha, con relación a las pertenencias mineras, denominadas FARELLON ALTO UNO AL OCHO, ubicadas en Sierra Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, inscritas a nombre de MINERA POLYMET S.p.A, a fojas 132 Nº 26 del Registro de Propiedad del año 2008.-CERTIFICO: Que le afecta una prohibición a favor de Kevin Robert Mitchell, inscrita a fojas 2 Nº 2; prohibición a favor de la Empresa Nacional de Minería, inscrita a fojas 3 Nº 3 del Registro de Prohibiciones e Interdicciones, ambas del año 2015; y, una Medida Precautoria, a favor de Compañía Minera Romelio Alday Ltda., inscrita a fojas 122 Nº79 del Registro de Prohibiciones e Interdicciones, año 2018.- El Acta de Mensura se inscribió a fojas 1 Nº 1 del Registro de Propiedad del año 1943, todas de este Conservador de Minas.- Freiriga, 21 de Junio de 2019

DANIELA MOLINA YANEZ

ARCHIVERO SONSERVADOR SUPLENTE

REIR

NOTARIO, CONSERVADORY ARCHIVERO JUDICIAL SUPLENTE FREIRINA-HUASCO

# DARIO SILVA MARCHANT NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO, MINAS Y ARCHIVERO JUDICIAL FREIRINA-HUASCO A. PRAT Nº 502 FREIRINA TELEFONO 51-2518783

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#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 25 de noviembre de 1996, hasta esta fecha, aparece como dueño MINERA STAMFORD S.A., con relación a las pertenencias mineras, denominadas EXETER 1 AL 54, ubicadas en lugar Cerro Pan de Azúcar, Comuna y Provincia de Huasco, Tercera Región, inscritas a su nombre a fojas 832 N° 598 del Registro de Descubrimientos del año 1996; Certifico: Que, le afecta un Contrato de Promesa Unilateral de Compra u Opción Minera, a favor de Minera Polymet Limitada, inscrita a fojas 12 N° 3 del Registro de Hipotecas y Gravámenes del año 2015.- La Concesión de Explotación, se encuentra inscrita a fojas 8 N° 2 del Registro de Propiedad del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA-HUASCO

# DARIO SILVA MARCHANT NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO, MINAS Y ARCHIVERO JUDICIAL FREIRINA HUASCO A. FRAT Nº 502 FREIRINA TELEFONO 51-2518783

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# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus indices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas **EXETER 1 AL 54**, ubicadas en lugar Cerro Pan de Azúcar, Comuna y Provincia de Huasco, Tercera Región, de propiedad de **MINERA STAMFORD S.A.** inscrita a su nombre a fojas 832 N° 598 del Registro de Descubrimientos de Minas del año 1996; Certifico: Que, le afecta una prohibición, a favor de Minera Polymet Limitada, inscrita a fojas 4 N°4 del Registro de Prohibiciones e Interdicciones del año 2015. La Concesión de Explotación, se encuentra inscrita a fojas 8 N° 2 del Registro de Propiedad del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA-HUASCO

CONSERVADOR

# DARIO SILVA MARCHANT NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO, MINAS Y ARCHIVERO JUDICIAL FREIRINA-HUASCO A. PRAT Nº 502 FREIRINA TELEFONO 51 2518783

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#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 04 de diciembre del año 2013, hasta esta fecha, aparece como dueño MINERA POLYMET LIMITADA, con relación a las pertenencias mineras, denominadas STAMFORD 61 AL 101, ubicadas en Cerro Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, inscritas a su nombre a fojas 597 N° 107 del Registro de Propiedad del año 2013; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La Concesión de Explotación, se encuentra inscrita a fojas 33 N° 5 del Registro de Propiedad, año 1998, ambas de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

DARIO SILVA MARCHANT

NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,

MINAS Y ARCHIVERO JUDICIAL

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# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas STAMFORD 61 AL 101, ubicadas en Cerro Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de MINERA POLYMET LIMITADA, inscritas a su nombre a fojas 597 N° 107 del Registro de Propiedad de Minas del año 2013; Certifico: Que, no le afecta prohibiciones ni embargos. La Concesión de Explotación, se encuentra inscrita a fojas 33 N° 5 del Registro de Propiedad del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

DARIO SILVA MARCHANT

NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,

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#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el veintinueve de Junio de dos mil once hasta esta fecha, aparece como dueño don DAVID MARCUS MITCHELL, con relación a las pertenencias mineras, denominadas QUINA 1 AL 56, ubicadas en Mineral de Carrizal Alto, Comuna de Huasco, Provincia de Huasco, Tercera Región, inscritas a su nombre a fojas 96 N° 26 del Registro de Propiedad del año 2011.-Certifico: Que le afecta un Contrato de Opción de Compra Irrevocable de Concesión Minera, a favor de Minera Polymet Limitada, inscrita a fojas 111 N° 25 del Registro de Hipotecas y Gravámenes, año 2016.- La Concesión de Explotación se inscribió a fojas 96 N° 26 del Registro de Propiedad del año 2011 de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

DARIO SILVA MARCHANT
NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,
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#### CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas QUINA 1 AL 56, ubicadas en Mineral de Carrizal Alto, Comuna y Provincia de Huasco, Tercera Región, a nombre de DAVID MARCUS MITCHELL, inscrita a su nombre a fojas 96 N° 26 del Registro de Propiedad del año 2011.- Certifico: Que le afecta una prohibición a favor de Minera Polymet Limitada, inscrita a fojas 41 N° 14 del Registro de Prohibiciones e Interdicciones, año 2016.- La Concesión de Explotación se encuentra inscrita a fojas 96 N° 26 del Registro de Propiedad del año 2011 de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA-HUASCO DARIO SILVA MARCHANT
NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,
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#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 04 de diciembre del año 2013, hasta esta fecha, aparece como dueño MINERA POLYMET LIMITADA, con relación a las pertenencias mineras, denominadas AZUCAR 6 AL 25, ubicadas en Cerro Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, inscritas a su nombre a fojas 600 N° 110 del Registro de Propiedad del año 2013; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La Concesión de Explotación, se encuentra inscrita a fojas 154 N° 28 del Registro de Propiedad del año 1998, ambas de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

DARIO SILVA MARCHANT
NOTARIO Y CONSERVADORDE BIENES RAICES COMERCIO,
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# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas AZUCAR 6 AL 25, ubicadas en Cerro Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de MINERA POLYMET LIMITADA, inscrita a su nombre a fojas 600 Nº 110 del Registro de Propiedad de Minas del año 2013; Certifico: Que, no le afecta prohibiciones ni embargos. La Concesión de Explotación, se encuentra inscrita a fojas 600 Nº 110 del Registro de Propiedad del año 2013, ambas de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

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### CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, solamente manifestadas, denominadas **MERLIN I B 1 AL 10**, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de **MINERA POLYMET SpA**, inscrita a su nombre a fojas 263 N° 127 del Registro de Descubrimientos de Minas del año 2019; Certifico: Que, no le afecta prohibiciones ni embargos. La manifestación, se encuentra inscrita a fojas 263 N° 127 del Registro de Descubrimientos del año 2019.- Freirina, 20 de junio de 2019

DARIO SILVA MARCHANT

NOTARIO NSERIVADOR RCHIVERO UDICIAL

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL

EMAIL: notariasilvamarchant@hotmail.com

# CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 11 de febrero del año 2019, hasta esta fecha, aparece como dueño MINERA POLYMET SpA, con relación a las pertenencias mineras, solamente manifestadas, denominadas MERLIN I B 1 AL 10, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La manifestación, se encuentra inscrita a fojas 263 Nº 127 del Registro de Descubrimientos, año 2019.- Freirina, 20 de junio de 2019

DARIO SILVA MARCHANT

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL FREIRINA-HUASCO

NOTARIO SONSERVADOR ARCHIVERO SUDICIAL

REIRIN

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#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 11 de febrero del año 2019, hasta esta fecha, aparece como dueño MINERA POLYMET SpA, con relación a las pertenencias mineras, solamente manifestadas, denominadas MERLIN I A 1 AL 48, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La manifestación, se encuentra inscrita a fojas 260 Nº 126 del Registro de Descubrimientos, año 2019.- Freirina, 20 de junio de 2019

DARIO

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL

EMAIL: notariasilvamarchant@hotmail.com

# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, solamente manifestadas, denominadas **MERLIN I A 1 AL 48**, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de **MINERA POLYMET SpA**, inscrita a su nombre a fojas 260 Nº 126 del Registro de Descubrimientos de Minas del año 2019; Certifico: Que, no le afecta prohibiciones ni embargos. La manifestación, se encuentra inscrita a fojas 260 Nº 126 del Registro de Descubrimientos del año 2019.- Freirina, 20 de junio de 2019.

20 de junio de 2019

DARIO SILVA MARCHANT NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL FREIRINA-HUASCO

# CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 11 de febrero del año 2019, hasta esta fecha, aparece como dueño MINERA POLYMET SpA, con relación a las pertenencias mineras, solamente manifestadas, denominadas LANCELOT II 1 AL 40, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La manifestación, se encuentra inscrita a fojas 257 N° 125 del Registro de Descubrimientos, año 2019.- Freirina, 20 de junio de 2019

DARIO SILVA MARCHANT

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL FREIRINA-HUASCO

EMAIL: notariasilvamarchant@hotmail.com

# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, solamente manifestadas, denominadas LANCELOT II 1 AL 40, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de MINERA POLYMET SpA, inscrita a su nombre a fojas 257 N° 125 del Registro de Descubrimientos de Minas del año 2019; Certifico: Que, no le afecta prohibiciones ni embargos. La manifestación, se encuentra inscrita a fojas 257 N° 125 del Registro de Descubrimientos del año 2019.- Freirina, 20 de junio de 2019

DARIO SILVA MARCHANT NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL

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# CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 04 de diciembre del año 2013, hasta esta fecha, aparece como dueño MINERA POLYMET LIMITADA, con relación a la pertenencia minera, denominada TERESITA, ubicada en lugar Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, inscritas a su nombre a fojas 598 Nº 108 del Registro de Propiedad del año 2013; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La Concesión de Explotación, se encuentra inscrita a fojas 160 Nº 29 del Registro de Propiedad, año 1998, ambas de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL

> SUPLENTE FREIRINA-HUASCO

EMAIL: notariasilvamarchant@hotmail.com

#### CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a la pertenencia minera, denominada TERESITA, ubicada en lugar Pan de Azúcar, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de MINERA POLYMET LIMITADA, inscrita a su nombre a fojas 598 Nº 108 del Registro de Propiedad de Minas del año 2013; Certifico: Que, no le afecta prohibiciones ni embargos. La Concesión de Explotación, se encuentra inscrita a fojas 160 Nº 29 del Registro de Propiedad del año 1998.-Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

# CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 11 de septiembre de 2008, hasta esta fecha, aparece como dueña MINERA POLYMET LIMITADA, con relación a las pertenencias mineras, denominadas CECIL 1 AL 49, ubicadas en Quebrada Carrizal Alto, Comuna de Huasco, Provincia de Huasco, Tercera Región, inscritas a su nombre a fojas 185 N° 35 del Registro de Propiedad del año 2008; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La Concesión de Explotación, se encuentra inscrita a fojas 17 N° 3 del Registro de Propiedad, año 1998, ambas de este Conservador de Minas.-Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas CECIL 1 AL 49, ubicadas en Quebrada Carrizal Alto, Comuna de Huasco, Provincia de Huasco, Tercera Región, de propiedad de MINERA POLYMET LIMITADA, inscritas a su nombre a fojas 185 N° 35 del Registro de Propiedad de Minas del año 2008; Certifico: Que, no le afecta prohibiciones ni embargos. La Concesión de Explotación, se encuentra inscrita a fojas 17 N° 3 del Registro de Propiedad del año 1998,- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA-HUASCO

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#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 04 de diciembre del año 2013, hasta esta fecha, aparece como dueña MINERA POLYMET LIMITADA, con relación a las pertenencias mineras, denominadas KAHUNA 1 AL 40, ubicadas en lugar Cerro La Ternera, Comuna de Huasco, Provincia de Huasco, Tercera Región, inscritas a su nombre a fojas 599 Nº 109 del Registro de Propiedad del año 2013; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La Concesión de Explotación, se encuentra inscrita a fojas 142 Nº 26 del Registro de Propiedad, año 1998, ambas de este Conservador de Minas.- Freírina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

MOLIA

TELEFONO 51-2518783
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# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas **KAHUNA 1 AL 40**, ubicadas en lugar Cerro La Ternera, Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de **MINERA POLYMET LIMITADA**, inscritas a su nombre a fojas 599 N° 109 del Registro de Propiedad de Minas del año 2013; Certifico: Que, no le afecta prohibiciones ni embargos. La Concesión de Explotación, se encuentra inscrita a fojas 142 N° 26 del Registro de Propiedad del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

EMAIL: notariasilvamarchant@hotmail.com

#### CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 18 de enero del año 2018, hasta esta fecha, aparece como dueña MINERA POLYMET SpA, con relación a las pertenencias mineras, solamente manifestadas, denominadas REY ARTURO 1 AL 30, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La manifestación, se encuentra inscrita a fojas 92 N° 50 del Registro de Descubrimientos, año 2018.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

NOTARIO

EMAIL: notariasilvamarchant@hotmail.com

# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, solamente manifestadas, denominadas REY ARTURO 1 AL 30, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, de propiedad de MINERA POLYMET SpA, inscrita a su nombre a fojas 92 N° 50 del Registro de Descubrimientos de Minas del año 2018; Certifico: Que, no le afecta prohibiciones ni embargos. La manifestación, se encuentra inscrita a fojas 92 N° 50 del Registro de Descubrimientos del año 2018.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

TELEFONO 51-2518783
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## CERTIFICADO DE HIPOTECAS Y GRAVAMENES

Revisados por sus índices respectivos los Registros de Hipotecas y Gravámenes del Conservador de Minas, a mi cargo, desde el 12 de abril de 2017, hasta esta fecha, aparece como dueña MINERA POLYMET S.p.A, con relación a las pertenencias mineras, denominadas LANCELOT I 1 AL 27, ubicadas en Sector Cerro Punta Alta, Comuna de Freirina, Provincia de Huasco, Tercera Región de Atacama, inscritas a su nombre a fojas 444 Nº 88 del Registro de Propiedad del año 2017; Certifico: Que, no le afecta hipotecas ni gravámenes algunos. La Concesión de Explotación, se encuentra inscrita a fojas 444 Nº 88 del Registro de Propiedad, año 2017, ambas de este Conservador de Minas.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

NOTARIO

SUPLENTE

# CERTIFICADO DE PROHIBICIONES E INTERDICCIONES

Revisados por sus índices respectivos los Registros de Prohibiciones e Interdicciones del Conservador de Minas, a mi cargo, con relación a las pertenencias mineras, denominadas LANCELOT I 1 AL 27, ubicadas en Sector Cerro Punta Alta, Comuna de Freirina, Provincia de Huasco, Tercera Región de Atacama, de propiedad de MINERA POLYMET S.p.A, inscritas a su nombre a fojas 444 N° 88 del Registro de Propiedad de Minas del año 2017; Certifico: Que, no le afecta prohibiciones ni embargos. La Concesión de Explotación, se encuentra inscrita a fojas 444 N° 88 del Registro de Propiedad del año 2017.- Freirina, 21 de junio de 2019

DANIELA MOLINA YANEZ

ARCHIVERO

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

EMAIL: notariasilvamarchant@hotmail.com

# CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 444 N° 88 del Registro de Propiedad de este Conservador de Minas del año 2017, consta que MINERA POLYMET S.p.A, es dueña de las pertenencias mineras, denominadas LANCELOT I 1 AL 27, ubicadas en Sector Cerro Punta Alta, Comuna de Freirina, Provincia de Huasco, Tercera Región de Atacama, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La Concesión de Explotación se encuentra inscrita a fojas 444 N° 88 del Registro de Propiedad del Conservador de Minas del año 2017.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

EMAIL: notariasilvamarchant@hotmail.com

## CERTIFICADO DE VIGENCIA PERTENENCIAS MINERAS

CERTIFICO: Que, por inscripción de fojas 92 N°50 del Registro de Descubrimientos de este Conservador de Minas del año 2018, consta que MINERA POLYMET SpA, es dueña de las pertenencias mineras, solamente manifestadas, denominadas REY ARTURO 1 AL 30, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La manifestación se encuentra inscrita a fojas 92 N° 50 del Registro de Descubrimientos del Conservador de Minas del año 2018.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA-HUASCO

### CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 599 N° 109 del Registro de Propiedad de este Conservador de Minas del año 2013, consta que MINERA POLYMET LIMITADA, es dueña de las pertenencias mineras, denominadas KAHUNA 1 AL 40, ubicadas en lugar Cerro La Ternera, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La Concesión de Explotación se encuentra inscrita a fojas 142 N° 26 del Registro de Propiedad del Conservador de Minas del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA- HUASCO

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# CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 185 N° 35 del Registro de Propiedad de este Conservador de Minas del año 2008, consta que MINERA POLYMET LIMITADA, es dueña de las pertenencias mineras, denominadas CECIL 1 AL 49, ubicadas en Quebrada Carrizal Alto, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La Concesión de Explotación se encuentra inscrita a fojas 17 N° 3 del Registro de Propiedad del Conservador de Minas del año 1998.- Freirina, 21 de junio de

2019

DANIELA MOLINA YAÑEŻ
NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL
SUPLENTE
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#### CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 132 N° 26 del Registro de Propiedad de este Conservador de Minas del año 2008, consta que MINERA POLYMET SpA, es dueña de las pertenencias mineras, denominadas FARELLON ALTO UNO AL OCHO, ubicadas en Sierra Pan de Azúcar, Comuna de Freirina, Provincia de Huasco, Tercera Región de Atacama, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- El Acta de Mensura y Sentencia se encuentra inscrita a fojas 1 N° 1 del Registro de Propiedad del Conservador de Minas del año 1943.- Freirina, 21 de junio de 2019

DANHELA MOLINA YAÑEZ
NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL
SUPLENTE

# CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 598 Nº 108 del Registro de Propiedad de este Conservador de Minas del año 2013, consta que MINERA POLYMET LIMITADA, es dueña de la pertenencia minera, denominada TERESITA, ubicada en lugar Pan de Azúcar, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La Concesión de Explotación se encuentra inscrita a fojas 160 Nº 29 del Registro de Propiedad del Conservador de Minas del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

EMAIL: notariasilvamarchant@hotmail.com

# CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 832 N° 598 del Registro de Descubrimientos de este Conservador de Minas del año 1996, consta que MINERA STAMFORD S.A. es dueña de las pertenencias mineras, denominadas EXETER 1 AL 54, ubicadas en lugar Cerro Pan de Azúcar, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La Concesión de Explotación, se encuentra inscrita a fojas 8 Nº 2 del Registro de Propiedad del Conservador de Minas del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ

A MOLIN

NOTARIO ARCHIVERO

SUPLENTE

EIRINA

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE

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# CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 597 N° 107 del Registro de Propiedad de este Conservador de Minas del año 2013, consta que MINERA POLYMET LIMITADA, es dueña de las pertenencias mineras, denominadas STAMFORD 61 AL 101, ubicadas en Cerro Pan de Azúcar, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La Concesión de Explotación se encuentra inscrita a fojas 33 N° 5 del Registro de Propiedad del Conservador de Minas del año 1998.- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA- HUASCO

EMAIL: notariasilvamarchant@hotmail.com

#### CERTIFICADO DE VIGENCIA PERTENENCIAS MINERAS

CERTIFICO: Que, por inscripción de fojas 257 N°125 del Registro de Descubrimientos de este Conservador de Minas del año 2019, consta que MINERA POLYMET SpA, es dueña de las pertenencias mineras, solamente manifestadas, denominadas LANCELOT II 1 AL 40, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La manifestación se encuentra inscrita a fojas 257 N°125 del Registro de Descubrimientos del Conservador de Minas del año 2019.- Freirina, 20 de junio de 2019

DANIO SILVA MARCHANT NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL FREIRINA-HUASCO

EMAIL: notariasilvamarchant@hotmail.com

#### CERTIFICADO DE VIGENCIA PERTENENCIAS MINERAS

CERTIFICO: Que, por inscripción de fojas 260 Nº126 del Registro de Descubrimientos de este Conservador de Minas del año 2019, consta que MINERA POLYMET SpA, es dueña de las pertenencias mineras, solamente manifestadas, denominadas MERLIN I A 1 AL 48, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.- La manifestación se encuentra inscrita a fojas 260 Nº126 del Registro de Descubrimientos del Conservador de Minas del año 2019.- Freirina, 20 de junio de 2019

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL FREIRINA-HUASCO

AJO SILIA

CONSERVADO

EMAIL: notariasilvamarchant@hotmail.com

#### CERTIFICADO DE VIGENCIA PERTENENCIAS MINERAS

CERTIFICO: Que, por inscripción de fojas 263 Nº127 del Registro de Descubrimientos de este Conservador de Minas del año 2019, consta que MINERA POLYMET SpA, es dueña de las pertenencias mineras, solamente manifestadas, denominadas MERLIN I B 1 AL 10, ubicadas en la Comuna de Huasco, Provincia de Huasco, Tercera Región de Atacama, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones,- La manifestación se encuentra inscrita a fojas 263 Nº127 del Registro de Descubrimientos del Conservador de Minas del año 2019.-Freirina, 20 de junio de 2019

DARIO SILVA MARCHANT

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL

SILV

CONSERVADOR ARCHIVERO

# CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 600 N° 110 del Registro de Propiedad de este Conservador de Minas del año 2013, consta que MINERA POLYMET LIMITADA, es dueña de las pertenencias mineras, denominadas AZUCAR 6 AL 25, ubicadas en Cerro Pan de Azúcar, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ní cancelaciones.- La Concesión de Explotación se encuentra inscrita a fojas 154 N° 28 del Registro de Propiedad del Conservador de Minas del año 1998,- Freirina, 21 de junio de 2019

DANIELA MOLINA YAÑEZ NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL SUPLENTE FREIRINA- HUASCO

EMAIL: notariasilvamarchant@hotmail.com

## CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que por inscripción de fojas 96 N° 26 del Registro de Propiedad de este Conservador de Minas del año 2011, consta que don **DAVID MARCUS MITCHELL**, es dueño de las pertenencias mineras, denominadas **QUINA 1 AL 56**, ubicadas en Mineral de Carrizal Alto, Comuna y Provincia de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.-La Concesión de Explotación, se encuentra inscrita a fojas 96 N° 26 del Registro de Propiedad del Conservador de Minas del año 2011.- Freirina, 21 de junio de 2019

DANIELA MOLINA YANEZ

NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL

SUPLENTE FREIRINA- HUASCO A MOL

## CERTIFICADO DE DOMINIO VIGENTE

CERTIFICO: Que, por inscripción de fojas 36 N° 9 del Registro de Propiedad de este Conservador de Minas del año 2011, consta que **MINERA POLYMET LIMITADA**, es dueña de las pertenencias mineras, denominadas **PERTH 1 AL 36**, ubicadas en lugar Cerro Cachina Grande, Provincia y Comuna de Huasco, Tercera Región, dicha inscripción se encuentra vigente hoy día, sin que tenga al margen notas de transferencia, ni cancelaciones.-La Concesión de Explotación se encuentra inscrita a fojas 7 N° 6 del Registro de Propiedad del Conservador de Minas del año 2003.- Freirina, 02 de abril de 2020

DARIO SILVA MARCHANT NOTARIO, CONSERVADOR Y ARCHIVERO JUDICIAL FREIRINA- HUASCO

EXT-200402-1801-47421
Este documento incorpora una firma electrónica avanzada, según lo indicado en la Ley Nº19.799 y en el Autoacordado de la Excma. Corte Suprema. Su validez puede ser consultada en el sitio Web www.notariosyconservadores.cl con el código de verificación indicado sobre estas líneas.