

**RED METAL RESOURCES LTD.**

**NI 43-101 TECHNICAL REPORT ON THE  
FARELLON PROJECT  
REGION III, CHILE**

**January 15, 2010**

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## 1.0 SUMMARY

Red Metal Resources Ltd. (Red Metal) has acquired the Farellon property and has retained Micon International Limited (Micon) to write a Technical Report in support of its acquisition and recent exploration program. Exploration of the Farellon project is at an early stage and at this point is insufficient to conduct a resource estimate.

Red Metal's Farellon project is located in the Province of Huasco, third region of Chile, Región de Atacama. The project is situated 75 km northwest of the city of Vallenar, 20 km west of the Pan-American Highway, 150 km south of the city of Copiapo and approximately 700 km north of the Chilean capital of Santiago, in the coastal Cordillera. The Farellon property lies within the Atacama Desert, considered the driest place on earth. The Atacama Desert is bound to the west by the Chilean Coast Range and to the east by the Andes.

The Farellon project is comprised of a north-south oriented mining concession, Farellon Uno al Ocho, which measures approximately 1.7 km north-south by 0.5 km east-west, and three contiguous concessions wrapping around the Farellon Uno al Ocho concession, approximately 1.5 km to the north and 1.5 km east. The three concessions consist of three rectangular parcels of land, two of which are approximately 2 km by 1 km and one which is approximately 3 km by 1 km. The two areas cover a total area of 796 ha. The total annual 2009 concession tax for the Farellon property was US \$6,285.

The Llanos de Challe national park, which was created in July, 1994, covers the southern 750 m of the Farellon Una al Ocho concession. According to the Mining Code of Chile, in order to mine or complete any exploration work within the park boundaries, Red Metal will be required to get written authorization from the government. Red Metal has requested advice on this issue from its Chilean mining lawyer which is pending.

The patented mining concessions are registered in the name of and owned 100% by Minera Polymet Limitada (Polymet), a 99% owned subsidiary of Red Metal. The Chilean subsidiary of Red Metal was incorporated as Polymet by means of a public deed dated July 16, 2007 and granted before the Notary Public Mr. Ricardo Alvares Pizarro. The incorporation was registered in the same year, in folio 153 N° 65 at the Commerce Registry kept by the Real Estate Registrar of Vallenar and published in the Official Gazette on August 13, 2007.

Red Metal acquired the Farellon property through an assignment agreement between Polymet and Minera Farellon Limitada (Minera Farellon) dated September 25, 2007 and amended on November 20, 2007. Under the assignment agreement, Minera Farellon agreed to assign to Polymet its option to buy the Farellon property. Polymet acquired the option on April 25, 2008, and assumed all of Minera Farellon's rights and obligations under the Farellon option agreement on the same day. Red Metal exercised the option and bought the property from the vendor on April 25, 2008. Red Metal owes a royalty equal to 1.5% of the net smelter return that it receives from the property to a maximum of US \$600,000. The royalty is payable monthly and is subject to a monthly minimum of US \$1,000 when Red Metal starts selling any minerals it extracts from the property.

Chile is divided into three major physiographic units running north-south, the Coastal cordillera, the Central valley and the High cordillera (Andes). The Farellon property is located within the Coastal cordillera which lies on the western margin of Chile and extends from the southern Peruvian border to Puerto Montt in southern Chile.

The Farellon property lies on the western margin of the northern portion of the Chilean Coastal cordillera at the contact between Paleozoic metasediments and late Jurassic diorites and monzodiorites.

The Farellon property lies over the sheared contact of Paleozoic metasediments in the western portion and Jurassic diorite in the eastern portion. The contact between the metasediments and the diorite is a mylonitic sheared contact striking north-northeast and dipping approximately 65 degrees to the northwest. The metasediments are composed of quartz-feldspar-hornblende gneisses. The diorite underlying the eastern portion of the project area has been extensively intruded by intermediate mafic dykes oriented northeasterly. 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 always appears to be tectonic.

The contact zone between the metasediments and the diorites is a mylonitic shear zone ranging from 5 to 15 m in width and host to mineralized quartz-calcite veins. To the north the veins splay off to the east into the diorites. The southern concession of the Farellon property covers a 1.7 km section along strike of the sheared contact and the northern claims overlie a further 0.75 km of the sheared contact, as well as a 1.7 km section of the veining splayed into the diorite.

The alteration associated with the shear zone is comprised of sulphidized quartz-calcite veins with an intense pyrite-serecrite-biotite alteration halo. In places, there is massive siderite and ankerite alteration.

Vein type, plutonic hosted IOCG deposits such as Carrizal Alto and by extension the Farellon property are characterized by a distinct mineralogy that includes not only copper and gold but also cobalt, nickel, arsenic, molybdenum and uranium. All of the IOCG deposits are partially defined by their iron content in the form of either magnetite or hematite. Typically the vein deposits of the coastal Cordillera are chalcopyrite, actinolite and magnetite deposits (Ruiz, 1962).

Copper mineralization on the Farellon 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 goethite clay matrix. Alteration includes actinolite, biotite, serecrite, epidote, quartz and carbonate.

Mining in the region was historically focused on the Carrizal Alto area to the north of the main Farellon property. However, the Farellon project was mined on a limited basis during the 1940's when Carrizal Alto had for the most part already shut down. Very little

information regarding the mining has survived but there is a small amount of historical data located in the Servicio Nacional de Geología Y Minera (Sernageomin) national archives in Santiago.

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. It is estimated that during this period, in excess of 3 million tonnes with grades in excess of 5% copper and widths of 8 m were extracted, and there was also a large quantity of direct shipping ore at 12% copper. At one time there was a considerable body of tails present to support to these figures but the high gold and copper prices over the last few years have led to the trucking and reprocessing of this material. A brief revival of the mines occurred in the 1930's, but little work has occurred since.

Red Metal conducted a short geological mapping program over the Cecil and Burghley claims to better define future exploration targets. The mapping was completed during May and June, 2009. Red Metal followed up the mapping program with a 5 hole reverse circulation (RC) drilling program, totalling 725 m, in September, 2009. Red Metal has spent an estimated total of CDN \$104,632 on the Farellon project between its acquisition and October 31, 2009. Table 1.1 summarizes the September, 2009 drilling program details.

**Table 1.1**  
**Summary of the September, 2009 Reverse Circulation Drilling Program**

Hole Number	UTM Coordinates			Azimuth (°)	Dip (°)	Depth (m)	Comments
	Easting	Northern	Elevation (m)				
FAR-09-A	309,086	6,888,591	550	131	-65	125	Twin of FAR-96-22.
FAR-09-B	309,125	6,888,709	560	95	-65	100	Twin of FAR-96-09.
FAR-09-C	309,127	6,888,922	555	105	-65	145	Continuity between sections.
FAR-09-D	308,955	6,888,696	539	95	-65	287	Test of depth extent.
FAR-09-E	309,133	6,888,645	551	Vertical	-90	68	Twin FAR-96-21.
<b>Total</b>						<b>725</b>	

Table provided by Red Metal Resources Ltd.

The drilling program was designed for the most part to twin a number of 1996 Minera Stamford S.A. (Minera Stamford) drill holes in order to verify the data acquired by the earlier drilling. Further drill holes were also designed to explore the down dip potential of the previously identified mineralized zones. One drill hole tested 100 m below the known mineralization and one drill hole tested continuity of mineralization between previously drilled sections. All of the 2009 drilling was conducted outside the National Park boundaries.

Sampling was conducted on one metre intervals which is generally the industry standard sampling practice for RC drilling. Sampling started at the collar of the hole and proceeded to the bottom of the drill hole on one metre increments. Generally the sample recovery was good to excellent.

Micon reviewed the samples and sampling procedures undertaken by Red Metal at the Farellon property during the 2009 drilling program. Micon believes that the samples are representative of the geology encountered in the drilling program and that the samples were taken in such a manner as to minimize any sampling bias.

Red Metal's Quality Assurance/Quality Control (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 QA/QC sample is inserted in every 25 samples and it alternates between standards, blanks and laboratory duplicates.

Micon has reviewed with Red Metal's initial QA/QC protocols and generally agrees with them. However, as the exploration programs continue at the Farellon project and/or other projects, refinements to the program should be undertaken to ensure that Red Metal is following the August, 2000 CIM Exploration Best Practices Guidelines.

The significant assays for Red Metal's 2009 exploration drilling program have been summarized in Table 1.2. Currently the significant assays are reported as core lengths since the true width of the mineralized zone has not been established.

**Table 1.2**  
**Summary of the Significant Assays for the 2009 Exploration Drilling Program on the Farellon Project**

Drill Hole Number	Assay Interval (m)			Assay Grade		
		From	To	Core Length	Gold (ppm)	Copper (%)
FAR-09-A		31	34	3.0	0.81	1.99
		79	109	30.0	0.18	0.62
		97	106	9.0	0.44	1.63
FAR-09-B		56	96	40.0	0.27	0.55
	Including	56	63	7.0	0.22	0.66
		74	96	22.0	0.42	0.79
FAR-09-C	Including	75	86	11.0	0.67	1.35
		73	103	30.0	0.79	0.55
FAR-09-D	Including	77	82	5.0	4.16	2.57
		95	134	39.0	0.11	0.58
FAR-09-E	Including	95	103	8.0	0.33	2.02
		25	30	5.0	0.54	1.35
		65	68	3.0	0.58	1.46

Table provided by Red Metal Resources Ltd.

The results of Red Metal's 2009 exploration drilling program to twin a number of Minera Samford's 1996 drill holes have confirmed the general location and tenor of the mineralization located during the 1996 drilling program. However, in two of the drill holes (FAR-09-A and FAR-09-E) the disparity between the historical 1996 gold assays and the current 2009 gold assays merits further investigation during the next phase of exploration. In the case of FAR-09-E, the disparity between the historical 1996 and 2009 assays also occurs in the copper assays and this will also need to be further investigated during the next phase of drilling. In all cases where disparities exists, the recent 2009 drilling produced lower assays than the earlier Minera Stamford drilling.

In general, the 2009 drilling program identified that the copper and gold mineralization at the Farellon project exhibited a direct correlation in both location and relative intensity with the results of earlier drilling. Further exploration programs will therefore be able to build on this observation in outlining the relative location and spacing of further drill holes.

All drill holes during the 2009 drilling program intersected oxide facies mineralization with only minor amounts of sulphides observed (FAR-09-D).

Based on the positive results from Red Metal's first exploration program on the Farellon property it plans to conduct further exploration. Red Metal's next phase of exploration will consist of approximately 1,200 m of diamond drilling. The diamond drilling is necessary to assist in defining the structural controls on the mineralization which may have been misinterpreted in the past due to the limited geological information gained during the RC drilling. The program will also assist in defining the depth and nature of the sulphide mineralization. If the next phase of drilling is successful Red Metal proposes to conduct a much larger phase of exploration which would consist of diamond and RC drilling, geophysical surveys and further geological mapping.

A geophysical survey using both magnetics and induced polarization (IP) will help identify further mineralized structures on the property that may not have been noticed in the historic mapping. A phase two drill program would be at defined spacing to outline the continuity of mineralization, leading to a 3D model and initial resource estimation. The depth of the drilling would be dependent on the results of the phase one drill program

The budget for the two phases of exploration would consist of expenditures totalling approximately US \$217,000 for the first phase and US \$1,879,000 for the second phase.

Micon has reviewed Red Metal's proposal for further exploration on its Farellon property and recommends that Red Metal conducts the exploration program as proposed, subject to funding and any other matters which may cause the program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

Through its acquisition of the Farellon project, Red Metal has acquired a property with the potential to yield significant copper and gold mineralization. Micon agrees with the general direction of Red Metal's initial and proposed exploration programs for the project and makes the following additional recommendations for the property:

- 1) Micon recommends that, in the case where a disparity exists between the historical 1996 and 2009 gold assays for the twinned holes (FAR-96-022/FAR-09-A and FAR-96-021/FAR-09-E), Red Metal should undertake further metallic screen assays. The metallic screen assays will assist in determining what the potential nugget effect is for the gold assays. Additionally, any gold assays which exhibit significant differences between the historical and current assays for twinned holes should automatically be

flagged for re-assay by the primary laboratory and are potential candidates for assaying by a secondary laboratory.

- 2) Micon recommends that, in the case where a disparity exists between the historical 1996 and 2009 copper assays for the twinned holes (FAR-96-021/FAR-09-E), Red Metal should undertake further metallic screen assays to determine if it has encountered any metallic copper in this portion of the deposit. Additionally, any copper assays which exhibit significant differences between the historical and current assays for twinned holes should automatically be flagged for re-assay by the primary laboratory and are potential candidates for assaying by a secondary laboratory.
- 3) Micon recommends that Red Metal should add a screened metallic assay protocol to its QC/QC program as a secondary check if high grade assays of gold or copper are encountered during future exploration programs or if there is a significant difference between the primary and secondary assays for both field duplicate and check samples.
- 4) Micon recommends that, for future drilling programs, Red Metal acquires either some local unmineralized rock material or old bricks which can be crushed and used as the blank material for the purposes of sample analysis. The use of the crushed local rock material or bricks will act as a better blind blank sample than a purchased blank pulp.
- 5) Micon recommends that, in future programs, Red Metal substitutes its current assay laboratory crush duplicate with a true field duplicate where the duplicate sample is generated as part of initial field sampling process. The use of a field duplicate is a much better test of the assay laboratory's overall process from preparation through assaying, since a crush duplicate will not necessarily pick up any errors in the preparation process.
- 6) Micon recommends that Red Metal designates a secondary assay laboratory to re-assay a portion of between 5% and 10% of the samples assayed by Acme. This additional sampling procedure would act as a secondary check on the results produced by Acme.

Red Metal is in the position of having acquired a portion of a major historical mining district in Chile that has not been subjected fully to modern exploration concepts and technology. The Farellon property holds the potential for the discovery of mineralized deposits of similar character and grade as those exploited in the district in the past.

The Farellon project should be considered to be an early stage exploration project upon which Red Metal has begun to conduct exploration in order to gain a further understanding of the nature and extent of the mineralization located on the property.

## 2.0 INTRODUCTION AND TERMS OF REFERENCE

At the request of Ms. Caitlin Jeffs, President and CEO of Red Metal Resources Ltd. (Red Metal), Micon International Limited (Micon) has been retained to provide an independent summary and review of the previous exploration on the Farellon project located in Region 3 of Chile and to comment on the propriety of Red Metal's initial 2009 exploration program and the proposed budget for further work. This report presents a review of the previous work in order to offer an opinion as to whether the project merits the exploration expenditures proposed by Red Metal. It does not constitute an audit of any previously estimated mineral resources on the Farellon property.

The geological setting of the property, mineralization style and occurrences, and exploration history were described in reports that were prepared by Ulriksen (1991), Floyd (1995), Terence Willsted and Associates (1997), as well as in various government and other publications listed in Section 21 "References". The relevant sections of those reports are reproduced herein.

The term "Farellon project" refers to the immediate area surrounding historical workings and the area which was the focus of previous drilling by Minera Stamford S.A. (Minera Stamford). The term "Farellon property" refers to the entire land package acquired by Red Metal.

The qualified person responsible for the preparation of this report and the opinion on the propriety of the proposed exploration program is William J. Lewis, P.Geo. (APEGBC #20333, APEGM #20480, NAPEGG #1450, APGO #1522).

Red Metal's first exploration drilling program on the Farellon property was conducted in September, 2009. A total of 5 reverse circulation holes, totalling 725 m, were drilled during the program. The exploration program and drilling are discussed in detail in Section 10 and Section 11 of this report.

All currency amounts are stated in Chilean pesos, Canadian dollars or US dollars with commodity prices typically expressed in US dollars. Quantities are generally stated in Système International d'Unités (SI units), the standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, grams (g) and grams per metric tonne (g/t) for metal grades. Gold and silver grades may also be expressed in parts per million (ppm) or parts per billion (ppb) and their quantities may also be reported in troy ounces (ounces, oz), a common practice in the mining industry. Copper, zinc, lead and cobalt grades are generally reported in percent (%). Table 2.1 provides a list of the various abbreviations used throughout this report. Appendix 1 provides a glossary of terms which may be encountered in this report.

Micon's site visit to the Farellon property occurred from October 3 to 7, 2009. During this visit, a review of the exploration program and Quality Assurance/Quality Control (QA/QC) procedures was conducted.

**Table 2.1  
List of the Abbreviations**

Name	Abbreviation	Name	Abbreviation
Acre(s) (imperial)	ac	Million years	Ma
Canadian Institute of Mining, Metallurgy and Petroleum	CIM	Million metric tonnes per year	Mt/y
Canadian National Instrument 43-101	NI 43-101	Milligram(s)	mg
Centimetre(s)	cm	Millimetre(s)	mm
Day	d	North American Datum	NAD
Degree(s)	°	Net present value	NPV
Degrees Celsius	°C	Net smelter return	NSR
Digital elevation model	DEM	Not available/applicable	n.a.
Dollar(s), Canadian and US	\$, CDN\$ and US \$	Ounces	oz
Foot or Feet (imperial units))	ft	Ounces per year	oz/y
Gram(s)	g	Parts per billion	ppb
Grams per metric tonne	g/t	Parts per million	ppm
Greater than	>	Percent(age)	%
Ground magnetic survey	GMS	Pincock, Allen & Holt	PAH
Hectare(s)	ha	Pound(s)	lb
Internal rate of return	IRR	Qualified Person	QP
Kilogram(s)	kg	Quality Assurance/Quality Control	QA/QC
Kilometre(s)	km	Red Metal Resources Ltd.	Red Metal
Less than	<	Second	s
Litre(s)	L	Specific gravity	SG
Metre(s)	m	Système International d'Unités	SI
Micon International Limited	Micon	Ton(s) (short)	ton
Mile(s)	mi	Tons (short) per day	tons/d
Million tonnes	Mt	Tonne (metric)	t
Million ounces	Moz	Tonnes (metric) per day	t/d

Micon was accompanied during the visit to the Farellon project by Harry Floyd, a consulting geologist to Red Metal and Kevin Mitchell, who is Red Metal's operations manager in Chile. Three grab samples from the reverse circulation drilling were also taken to independently verify the mineralization encountered during the drilling program.

The review of the Farellon project was based on published material researched by Micon, as well as data, professional opinions and unpublished material originally submitted to Micon by the professional staff of Red Metal or its consultants. In addition to Red Metal's data on the Farellon project, it supplied copies of the previous reports on the project area by various operators for Micon's use in examining and compiling the information for this report.

Micon does not have nor has had previously any material interest in the companies mentioned in this report or related entities or interests. The relationship with the companies is solely a professional association between the client and the independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this Technical Report.

This report follows the format and guidelines of Form 43-101F1, Technical Report for National Instrument 43-101, Standards of Disclosure for Mineral Projects, and its Companion Policy NI 43-101CP, as amended by the Canadian Securities Administrators on December 23, 2005.

This report is intended to be used by Red Metal subject to the terms and conditions of its agreement with Micon. That agreement permits Red Metal to file this report as an NI 43-101 Technical Report with the Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at that party's sole risk.

### 3.0 RELIANCE ON OTHER EXPERTS

Micon has reviewed and analyzed data provided by Red Metal, its consultants and previous operators of the Farellon project, and has drawn its own conclusions therefrom, augmented by its earlier direct field examination. Micon has not carried out any independent exploration work, drilled any holes or carried out an extensive program of sampling and assaying on the property. However, during the 2009 field visit for Red Metal, Micon did collect three samples from the Farellon reverse circulation rejects. Micon's sampling was not intended to duplicate the volume of data collected by Red Metal or its predecessors; however, it was adequate to independently confirm the presence of the relevant mineralization on the property.

While exercising all reasonable diligence in checking, confirming and testing it, Micon has relied upon Red Metal's presentation of the project data from previous operators for the Farellon property in formulating its opinion.

The various agreements under which Red Metal holds title to the mineral concessions for the project have not been reviewed by Micon and Micon 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 remediation have been made where required by NI 43-101. Micon offers no opinion on the state of the environment on the properties. The statements are provided for information purposes only.

The descriptions of geology, mineralization, exploration and mineral resource estimation methodology used in this report were originally taken from reports prepared by various companies or their contracted consultants for the Farellon project. The conclusions of this report rely on data available in published and unpublished reports supplied by the various companies which have conducted the exploration on the properties and or information supplied originally by Red Metal. Micon has no reason to doubt the validity of this information.

Micon is pleased to acknowledge the helpful cooperation of Red Metal's management, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

The maps and tables for this report were reproduced or derived from reports written by various state organizations or for various companies which have conducted exploration programs on the property.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

Red Metal's Farellon project is composed of two separate groups of mineral concessions which are not contiguous but lie within the historical Carrizal Alto mining district and southwest of the Carrizal Alto mine.

Red Metal's Farellon project is located in the Province of Huasco, third region of Chile, Región de Atacama. The project is situated 75 km northwest of the city of Vallenar, 20 km west of the Pan-American Highway, 150 km south of the city of Copiapo and approximately 700 km north of the Chilean capital of Santiago, in the coastal Cordillera. The UTM coordinates for the project site are 6,888,800S, 309,150E using the provisional South American Datum 1956 (PSA56), or at a latitude and longitude of 28°05'00"S, 70°55'00"W. The project is approximately 550 m above sea level. The location of the Farellon project is shown in Figure 4.1.

The exploration program on the property targets the copper-gold-cobalt mineralization located in a number of mantos and veins within the host rocks.

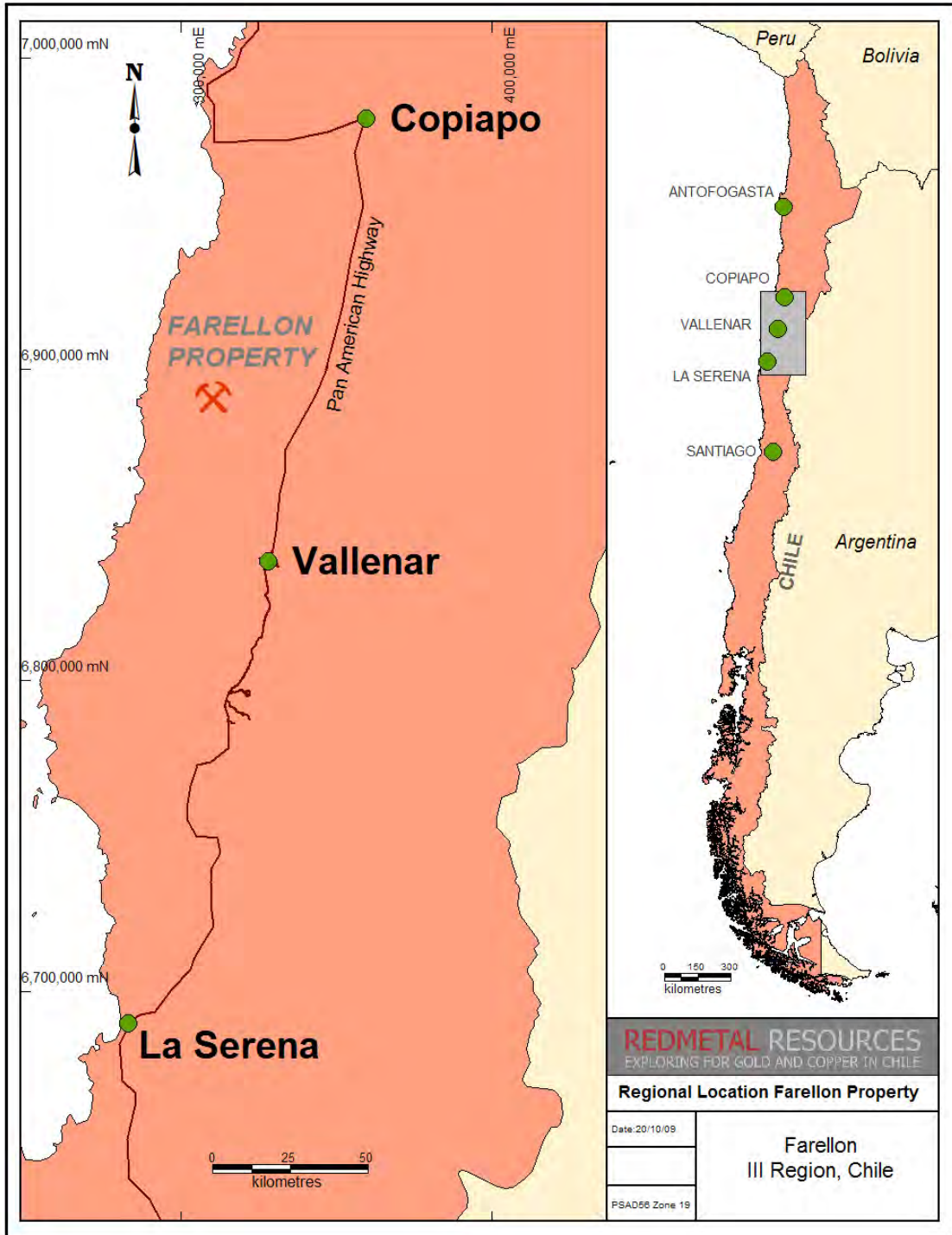
The Farellon project is comprised of a north-south oriented mining concession, Farellon Uno al Ocho, which measures approximately 1.7 km north-south by 0.5 km east-west, and three contiguous concessions wrapping around the Farellon Uno al Ocho concession, approximately 1.5 km to the north and 1.5 km east. The three concessions consist of three rectangular parcels of land, two of which are approximately 2 km by 1 km and one which is approximately 3 km by 1 km. The two areas cover a total area of 796 ha. The total annual 2009 concession tax for the Farellon property was US \$6,285. See Figure 4.2 for a map showing the location of the mineral concessions for the Farellon property. Table 4.1 summarizes the relevant information regarding the individual mineral concessions.

The patented mining concessions are registered in the name of and owned 100% by Minera Polymet Limitada (Polymet), a 99% owned subsidiary of Red Metal. The Chilean subsidiary of Red Metal was incorporated as Polymet by means of a public deed dated July 16, 2007 and granted before the Notary Public Mr. Ricardo Alvares Pizarro. The incorporation was registered in the same year, in folio 153 N° 65 at the Commerce Registry kept by the Real Estate Registrar of Vallenar and published in the Official Gazette on August 13, 2007.

Red Metal acquired the Farellon property through an assignment agreement between Polymet and Minera Farellon Limitada (Minera Farellon) dated September 25, 2007 and amended on November 20, 2007. Under the assignment agreement, Minera Farellon agreed to assign to Polymet its option to buy the Farellon property for US \$250,000 payable by April 30, 2008. Polymet paid Minera Farellon for the assignment on April 25, 2008, and assumed all of Minera Farellon's rights and obligations under the Farellon option agreement on the same day. Red Metal exercised the option and bought the property from the vendor for US \$300,000 on April 25, 2008. Red Metal owes a royalty equal to 1.5% of the net smelter return that it receives from the property to a maximum of US \$600,000. The royalty is

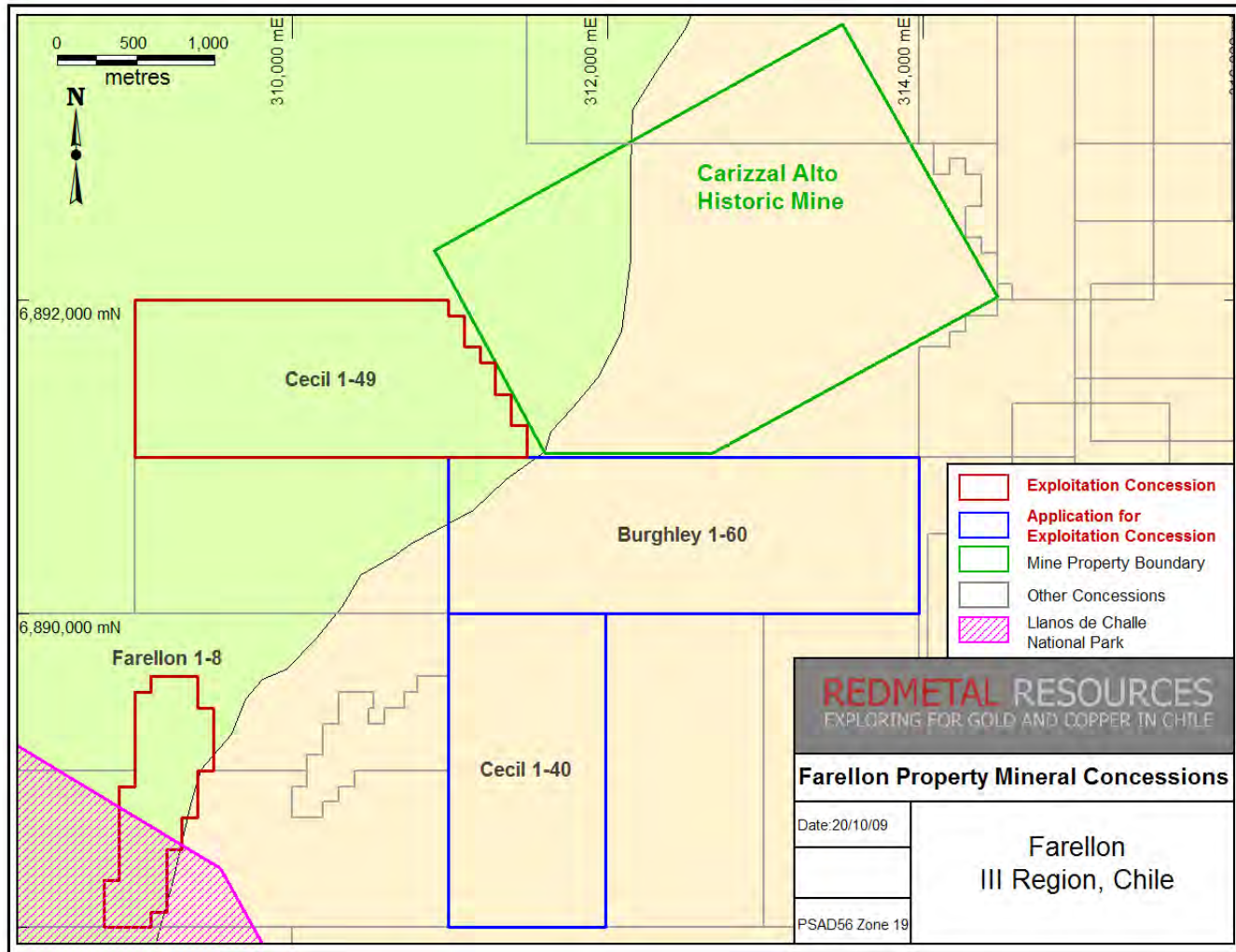
payable monthly and is subject to a monthly minimum of US \$1,000 when Red Metal starts selling any minerals it extracts from the property.

**Figure 4.1**  
**Farellon Project Location Map**



Map provided by Red Metal Resources Ltd.

**Figure 4.2**  
**Farellon Project Mineral Concession Map, Carrizal Alto Sector (as of October 31, 2009)**



Map provided by Red Metal Resources Ltd.

**Table 4.1**  
**Summary of Mineral Concession Information for the Farellon Project (as of October 31, 2009)**

Concession Name	Concession Type	Concession Number	Date Granted	Date Expires	Area (ha)	Annual Tax		
						(Pesos)*	(US \$)**	(CDN\$)***
Farellon Alto Uno al Ocho	Exploitation/Mensura	3303-0156-2		These claims do not expire as long as annual taxes are paid.	66	147,168	253	292
Cecil 1 to 49	Exploitation/Mensura	12627			230	1,799,232	3,383**	3,654***
Cecil 1 - 40	Solicitud de Mensura/Application to Exploitation	24068			200	615,672	1,060	1,266
Burghley 1 - 60	Solicitud de Mensura/Application to Exploitation	24069			300	923,508	1,589	1,897
<b>Total</b>					<b>796</b>	<b>3,485,580</b>	<b>6,285</b>	<b>7,109</b>
Notes	*The Peso amount changes slightly each year based on an internal Chilean inflationary rate (UTM), taxes are due in March.							
	**Estimated at October 31, 2009 using an exchange rate of 531.79 Chilean pesos to 1 US dollar.							
	***Estimated in October 31, 2009 using an exchange rate of 1.08 Canadian dollars to 1 US dollar.							

Table provided by Red Metal Resources Ltd.

The status of the mineral rights, surface rights and details of agreements, have not been reviewed by Micon and Micon 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.

#### **4.1 MINERAL RIGHTS IN CHILE**

Chile's current mining and land tenure policies were incorporated into law 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. The state owns all mineral resources, but exploration and exploitation of these resources is permitted through 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, mining and exploration, and three possible stages of a concession to get from an exploration concession to a mining concession: pedimento, manfestacion and mensura. An exploration concession 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.

Exploration and exploitation mining rights in Chile are acquired in the following stages:

##### **4.1.1 Pedimento**

A pedimento is an initial exploration concession the position of which is well defined by UTM coordinates which define 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 2 years. At the end of the 2 year period it may; a) be reduced in size by at least 50% and renewed for an additional 2 years or b) entered in the process to establish a permanent concession by converting it into a manifestation. 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 its concession in accordance with the Mining Code and the applicable regulations.

##### **4.1.2 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 manfestacion. A manfestacion is valid for 220 days and prior to the 220 day expiry date the owner must make a request to upgrade to a mensura.

### 4.1.3 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 must certify the constitution of the claim as a mensura (equivalent to a patented claim). 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 remate (auction sale), 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.

The Mining Code of Chile guarantees the owners 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) thorough the civil court system, if necessary, by agreeing to indemnify the surface owner for the court determined value of the surface area.

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 the 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 Farellon property, as all of the historic drill holes intersected water at about 100 m. Water which infiltrates the old mine workings as well as any other water found within the Farellon 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 approximately one metre 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. The water code is in the process of being reviewed and revised by the Chilean government.

## **4.2 ENVIRONMENTAL**

Red Metal has not applied for any environmental permits on the Farellon 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 Farellon Una al Ocho concession. According to the Mining Code of Chile, in order to mine or complete any exploration work within the park boundaries, Red Metal will be required to get written authorization from the government. Red Metal has requested advice on this issue from its Chilean mining lawyer.

Micon is unaware of any outstanding environmental liabilities attached to the Farellon project and is unable to comment on any remediation which may have been undertaken by previous companies. However, since the Farellon project is adjacent to a Chilean National Park, stricter environmental regulations or oversight may be applied to any work permits for the project.

## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

The Farellon project is readily accessible from 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 (approximately 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 old slag dumps and plant ruins there is a right hand turn which takes the traveller 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 property. There are numerous gravel roads in the area, so a guide is necessary to access the property the first time. The old Farellon mine workings which are situated on the western slopes of the Cerro Azucar are located approximately 8 km from the turn-off.

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

The city of Copiapo is 150 km to the north and is the general supply centre for the growing mining industry in the region. A 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 project 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. La Empresa Nacional de Minería (ENAMI) currently operates a 35,000 t/d 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. 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. Teck Resources Limited's (Teck) Relincho project and the El Morro project currently held 30% by New Gold Incorporated (New Gold) and 70% by Xstrata PLC (Xstrata). Xstrata is currently in the process of selling its 70% interest in the project.

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.

See Figures 5.1 and 5.2 for views of the topography on the Farellon property.

**Figure 5.1**  
**View of the Farellon Property looking towards Cerro Pan de Azucar**



Photograph taken by Harry Floyd, September, 2009.

**Figure 5.2**  
**A General View of the Farellon Property Topography**



Photograph taken by Harry Floyd, September, 2009.

The Farellon property lies within the Atacama Desert, considered the driest place on earth. The Atacama Desert is bound to the west by the Chilean Coast Range and to the east by the Andes. In the winter, fog moving in from the coast provides enough moisture for some cacti and lichens to grow. Any rainfall is primarily in winter and averages 12 mm annually in Copiapo. Average daily temperatures in summer 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.

The Corporacion National de Forestal notes that the Llanos de Challe national park has 208 recognized species of flora, 18 of which are at risk, while 3 of them categorized as endangered, 11 vulnerable, 2 rare, 1 inadequately known and 1 undefined. The park also has 81 recognized species of fauna, 22 of which are at risk, while 4 are categorized as endangered, 4 vulnerable, 2 rare, 3 inadequately defined, 8 not known and 1 extinct.

The Farellon 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 Farellon property the regional topography opens into the plain of the La Joula and Algarrobo valleys, which cover a gently sloping catchment area of about 1,000 square kilometres (sq km), before entering the foothills of the High Cordillera.

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.

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 project area.

## 6.0 HISTORY

Mining has played an important role in the economy of Chile with copper mining forming the cornerstone of a substantial portion of the employment for its population. However, historically it has been the Coastal Cordillera which has been the most significant mineral producing zone in Chile. This zone extends for over 2,500 km from south of Valparaiso northward to the Peruvian boarder, and ranges from 50 to 100 km in width.

Gold, silver and copper were mined from high grade deposits commencing in the 16<sup>th</sup> century.

Mining in the region was historically focused on the Carrizal Alto area to the north of the main Farellon property. However, the Farellon property was mined on a limited basis during the 1940's when Carrizal Alto had for the most part already shut down. There is very little information regarding the mining but a few plans of the limited underground mining have survived. Some of the historical data for the Farellon project can be found in the Sernageomin national archives in Santiago.

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. It is estimated that during this period, in excess of 3 million tonnes with grades in excess of 5% copper and widths of 8 m were extracted, and there was also a large quantity of direct shipping ore at 12% copper. At one time there was a considerable body of tails present to support these figures but the high gold and copper prices over the last few years have led to the trucking and reprocessing of this material. A brief revival of the mines occurred in the 1930's, but little work has occurred since.

Principal of the north-east trending veins are the Mina Grande and Armonia vein systems. Both were worked extensively, e.g., at Mina Grande workings extended for 2.5 km as a nearly continuous line of pits, collapsed stopes, narrow open cuts and numerous shafts. The Armonia vein system is similar and extends for 1.8 km. Oxidation depths ranged from 50 m to 150 m and, judging from remnants, many of the veins were probably worked to this depth and abandoned as sulphides were reached.

In the most productive zone at Mina Grande, which stretched for 1.5 km, the vein is up to 15 m thick and composed of quartz, sericite, chalcopryrite and pyrite. Amphibole - rich seams occur towards the diorite wall rock, which itself frequently contains chalcopryrite and pyrite impregnations and smaller veins. The central and western end of the reefs was also particularly rich in cobalt and values in excess of 1% are reported. Preliminary sampling of the workings indicates that cobalt is depleted near the surface.

The main producing mine 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 m to 15

m. The deepest workings reached 600 m and several slag dumps remain at old sites of local smelters treating the sulphide ores.

Bulk mineable epithermal and copper porphyry deposits have dominated the geological exploration scene since the 1970's. A number of old mining camps in the coastal zone of northern and central Chile have been revived by this activity, such as El Guanaco and Andacollo. 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.

With the rise in gold prices in the seventies, most of the gold tailings in Chile were retreated and the recent gold prices have sent most of the remaining tailings for treatment. The recent rise in copper prices over the last couple of years has led to the retreatment of a number of copper tailings, as well as most of the low grade dumps.

## 6.1 PREVIOUS EXPLORATION PROGRAMS

Oliver Resources, an Irish based company, through its Chilean subsidiary Oliver Resources Chile Ltda. commenced exploration in the region in 1990 but withdrew at an early stage for corporate reasons. Oliver Resources is believed to have conducted a stream sediment program but no results have been located. Stream sediment work for gold and copper around Carrizal Alto would be of dubious value, due to widespread contamination by the prior mining activities. A March, 1991 report for Oliver Resources reports the results of sampling of the Farellon Alto and Bajo mine dumps, as summarized in Table 6.1

**Table 6.1**  
**Summary of the Farellon Alto and Bajo Mine Dump Sampling**

Sample Number	Assay Results			Location
	Gold (g/t)	Silver (g/t)	Copper (%)	
058	0.91	---	0.75	Farellon Alto mine dump
059	4.92	3.0	2.26	Farellon Alto mine dump
062	2.78	---	2.68	Farellon Bajo mine dump
063	1.37	2.0	4.00	Farellon Bajo mine dump
064	0.83	1.0	2.76	Farellon Bajo mine dump
065	3.08	2.0	5.36	Farellon Bajo mine dump

Table derived from the 1991 report by O'Sullivan.

In the early 1990's a Chilean group, Minera Stamford S.A. (Minera Stamford), owned the Azucar property which was a large group of mineral and mining concessions in the area that included the Farellon concessions. In 1994, Minera Stamford formed a joint venture with an Australian mining company called Metalsearch. From 1991 to 1997 exploration by the joint venture on the Azucar property included geological mapping, rock chip sampling, soil geochemistry, reverse circulation (RC) drilling and metallurgical samples. The remaining exploration records covering this work are incomplete.

Geological mapping of the Azucar project showed a northeast trending sheared contact between gneisses and diorites. The sheared zone is between 50 to 200 m wide and contains significant consistent mineralization along a 2,000 m strike length.

Minera Stamford collected 152 rock chip and dump samples from any areas with signs of mining activity along the northeast trending mineralized shear zone. A total of 36 samples fall within Red Metal's Farellon property. Only gold, copper and cobalt results can be found from this sampling. The highest gold sample within the Farellon property is 13.50 g/t, the highest copper result is 6.15% and the highest cobalt result is 0.68%. The sampling shows consistent mineralization in a shear zone crossing the length of the Farellon property.

A total of 591 soil samples were taken by Minera Stamford, but no related records can be found of this work.

A reverse circulation (RC) drill program of 39 holes totalling 6,486 m was completed between 1996 and 1997 on the Azucar property. However, only 22 drill holes totalling 3,918 m fall within the Farellon property. The drilling was conducted at irregular intervals along the mineralized shear and the holes were sampled at regular one metre sample intervals along their entire length. Red Metal has only been able to obtain gold, copper and cobalt results from this drilling program. The drilling confirmed mineralization in the shear zone down to a vertical depth of approximately 200 m. The highest gold result was 21.03 g/t, the highest copper result was 9.21% and the best cobalt result was 0.58% (all of these results are over one metre). Figure 6.1 depicts the locations of the Minera Stamford drill holes on the Farellon property. Figure 6.2 is a section showing the mineralization on the Farellon project intersected by Minera Stamford drill holes FAR-96-13, FAR-96-20 and FAR-96-21.

Table 6.2 summarizes the 1996 to 1997 Minera Stamford RC drill hole statistics for the Farellon project. Table 6.3 summarizes the significant 1996 to 1997 Minera Stamford RC drill hole intervals for the Farellon project.

Minera Stamford indicates in its May, 2000 report that “*routinely each RC metre was split and sampled conventionally although there was no wet sample collection system available, which was unfortunate as 14 of the holes*” on the Azucar project encountered large volumes of water. Minera Stamford does indicate that the water could have resulted in many of the mineralized samples being washed out.

For the Quality Assurance/Quality Control program the May, 2000 Minera Stamford report mentioned the following:

*“Gold was assayed by MIBK extraction and fire assay whereas copper and cobalt were assayed by AAS. A sub-set of 153 samples were assayed for gold by bottle roll cyanide leaching of 4 kg passing No 10 sieve followed by fire assay of residue. These assays produced an enhancement of about 30% gold in mineralized sections and it is recommended to extend this program. Two check samples and one standard sample were routinely assayed per 34 assays by Acme Labs. Another check was carried out by assaying as routine the re-sampled bottle roll material. Assay variations were within acceptable limits.”*

**Figure 6.1**  
Location Map of the Minera Stamford Drill Holes on the Farellon Property

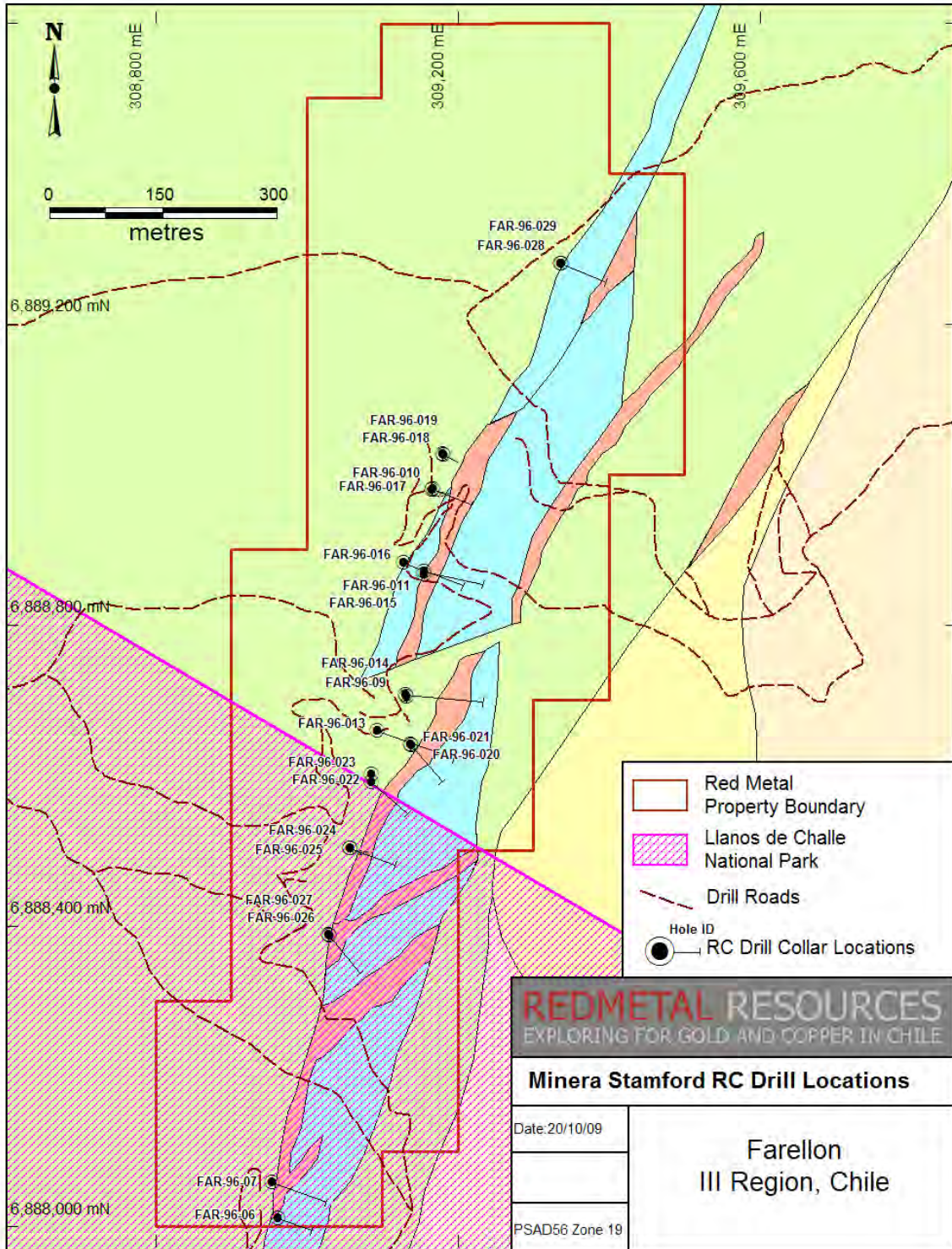


Figure provided by Red Metal Resources Ltd.

**Figure 6.2**  
Section Indicating the Mineralization Encountered on the Section Covered by Minera Stamford Drill Holes FAR-96-13, FAR-96-20 and FAR-96-21

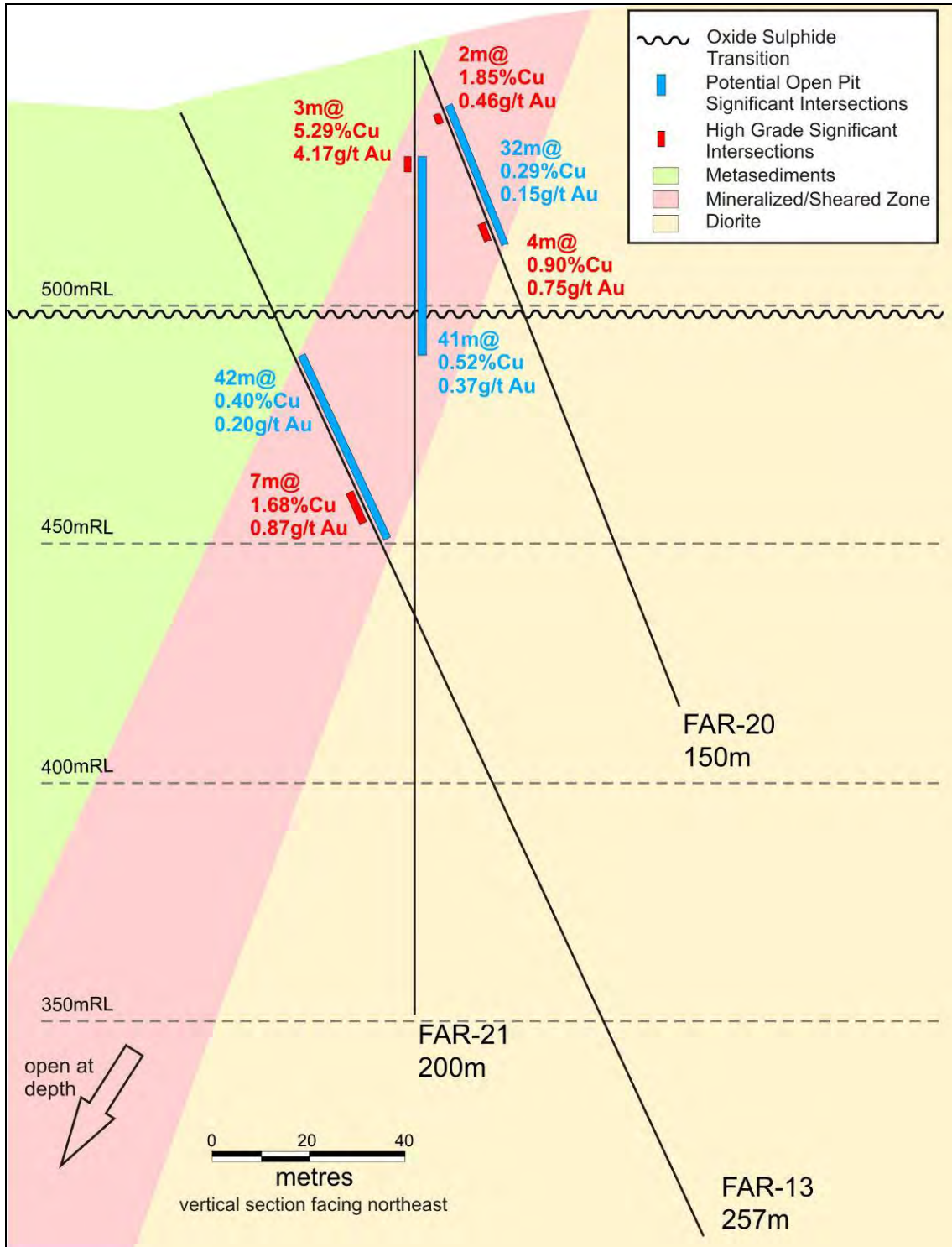


Figure provided by Red Metal Resources Ltd.

**Table 6.2**  
**Summary of 1996 to 1997 Minera Stamford Reverse Circulation Drill Hole Statistics for the F Farellon Project**

Hole Number	UTM Coordinates			Azimuth (°)	Dip (°)	Depth (m)
	Easting	Northern	Elevation (m)			
FAR-96-06	308962.3	6888011	573	110	-62	100
FAR-96-07	308954.21	6888059	560	110	-62	163
FAR-96-09	309131.2	6888706.2	552	95	-65	242
FAR-96-010	309167.31	6888979.9	557	112	-75	211
FAR-96-011	309155.51	6888869.8	565	102	-62	169
FAR-96-013	309092.8	6888659.19	540	110	-65	257
FAR-96-014	309131.5	6888703.4	552	90	-90	203
FAR-96-015	309155	6888867.2	565	90	-90	200
FAR-96-016	309128.3	6888882.2	565	111	-65	200
FAR-96-017	309165.4	6888979.3	557	90	-90	200
FAR-96-018	309181	6889025.6	562	115	-65	51
FAR-96-019	309180	6889026	562	90	-90	200
FAR-96-020	309138.71	6888639.8	553	140	-65	150
FAR-96-021	309137.91	6888640.7	553	90	-90	200
FAR-96-022	309086.1	6888591	564	131	-65	150
FAR-96-023	309085.3	6888600.89	564	90	-90	200
FAR-96-024	309057.61	6888502.8	544	110	-65	150
FAR-96-025	309056.61	6888503	544	90	-90	172
FAR-96-026	309029.91	6888386.5	544	140	-65	150
FAR-96-027	309029.3	6888387.2	544	90	-90	199
FAR-96-028	309337.51	6889279.4	500	112	-65	150
FAR-96-029	309336.5	6889280	500	90	-90	201
<b>Total</b>						<b>3,918</b>

Table provided by Red Metal Resources Ltd.

**Table 6.3**  
**Summary of Significant 1996 to 1997 Minera Stamford Reverse Circulation Drill Hole Intervals for the Farellon Project**

Drill Hole	Significant Interval (m)			Assay Results		
	From	To	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	1.00	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	0.90	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
	100	108	8	3.72	2.49	0.06

Drill Hole	Significant Interval (m)			Assay Results		
	From	To	Length	Gold (g/t)	Copper (%)	Cobalt (%)
FAR-96-023	50	53	3	0.48	1.10	0.06
	59	64	5	0.28	0.78	0.03
	132	147	15	0.60	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
	82	87	5	0.09	0.96	0.01

Table provided by Red Metal Resources Ltd.

The Minera Stamford report indicates that for geological presentation and correlation purposes it applied the following cut-off grades:

- “Gold >100 ppb i.e. 0.1 g/t.”
- “Copper >100 ppm i.e. 0.01 %.”
- “Cobalt > 100 ppm i.e. 0.01% or 0.1 kg/t.”

*“On the cross-sections only those intervals exceeding 0.5 g/t gold, 0.5% copper or 0.4 kg/t cobalt singly or combined to a unit value of USD \$18.00/ tonne have been presented with assay details. The mineralized intervals are plotted on the sections in their raw form with no attempt to present them from a mining perspective. However it is clear even with this approach that economically viable intersections are present on most cross-sections.”*

The Farellon workings are in metamorphics within the sheared metamorphic/tonalite contact zone which is about 200 m wide here. The workings are large but restricted to the oxide zone and range from 1 to 20 m wide. A sample taken by Minera Stamford, of the wallrock and quartz veined metamorphics returned 3.0% copper, 1.4 g/t gold, 0.08% cobalt, 1.1% arsenic.

The lower Farellon 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% copper, 2.4 g/t gold, 0.02% cobalt. Of particular interest is a sample taken over a 20 m width of the contact zone comprised of silicified and carbonate veined metamorphic material which assayed 0.4% copper, 0.23 g/t gold, 0.02% cobalt. A 20 t trial parcel of material from the Farellon workings in the 1950’s is reported to have returned over 1% cobalt.

## 6.2 HISTORICAL RESOURCE ESTIMATES AND PRODUCTION

There are no formal historical resource estimates on the Farellon project. However, a number of old letter style 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 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.

*“Positive Ore”*

	Tons	Grade							
		Cu (%)	Au (g/t)	Ag	CaO (%)	SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	S
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
<b>Total</b>	<b>12,666</b>	<b>2.9</b>	<b>1.1</b>	<b>4.4</b>	<b>44.7</b>	<b>4.7</b>	<b>9.9</b>	<b>2.2</b>	<b>0.7</b>

Derived from the 1949 and 1963 reports in the Senageomin files, Chile.

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 following grades.

*“Waste”*

Tons	Cu	Au	Ag	CaO	FeO	MgO	SiO <sub>2</sub>
500	2.20	1.0	10.0	45.98	5.29	0.60	2.50

Derived from the 1949 and 1963 reports in the Senageomin files, Chile.

*“Extractions”*

	Tons	Cu	Au	Ag	CaO	FeO	MgO	SiO <sub>2</sub>
Veta Pique*	810							
Veta Naciente*	510							
<b>Total</b>	<b>1,320</b>	<b>2.3</b>	<b>1.0</b>	<b>5.0</b>	<b>45.07</b>	<b>6.54</b>	<b>0.22</b>	<b>3.0</b>

\*Note: Veta Pique = Shaft vein and Veta Naciente = Outcrop vein.

Derived from the 1949 and 1963 reports in the Senageomin files, Chile.

The 1963 report mentions that 8 samples were taken from the accessible workings in both veins. The summary of the assay results for the 8 samples as tabulated in the report is reproduced below.

Sample Number	Vein	Length (m)	Grade						
			Cu	Au	Ag	CaO	FeO	MgO	SiO <sub>2</sub>
1	Veta Pique	2.50	1.80	0.5	5.0	47.89	6.54	0.27	1.34
2	Veta Pique	2.45	6.90	1.0	20.0	31.14	13.77	0.30	2.00
3	Veta Pique	3.00	3.00	1.0	10.0	46.43	5.86	0.26	2.50
4	Veta Pique	1.00	1.20	0.2	5.0	31.52	3.49	0.30	25.66
5	Veta Naciente	2.00	2.40	0.5	5.0	47.99	5.52	0.32	1.50
6	Veta Naciente	1.80	3.00	1.0	5.0	38.25	6.09	0.23	17.84

Sample Number	Vein	Length (m)	Grade						
			Cu	Au	Ag	CaO	FeO	MgO	SiO <sub>2</sub>
7	Veta Pique	1.70	1.70	0.5	3.0	43.77	4.51	0.28	10.00
8	Veta Naciente	0.80	1.60	0.5	3.0	28.80	3.71	0.23	29.54
<b>Total*</b>		<b>1.8</b>	<b>2.10</b>	<b>0.6</b>	<b>5</b>	<b>40.66</b>	<b>5.10</b>	<b>0.27</b>	<b>12.62</b>

Note\*: The arithmetic average for the total in the table excludes Sample 2.  
Derived from the 1963 report in the Senageomin files, Chile.

As in the previous tables, no units of measurement were provided in the 1963 report for the assay grades. The report noted that the high SiO<sub>2</sub> contained in the average was due to the very high grade for the SiO<sub>2</sub> reported in samples 4, 6, 7 and 8. Micon has not attempted to verify the sampling mentioned in 1963 as the workings are not entirely accessible and there is no sample location map upon which to attempt to duplicate the samples. The sampling mentioned in the historical reports will need to be verified by sampling the mineralization in the underground workings if they become accessible and it is safe for work to be carried out in them. However, Micon believes that the verification of the mineralization on the Farellon project can be more efficiently accomplished by conducting further drilling at this time.

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 Farellon project.

As mentioned previously a small amount of historical production has occurred on the Farellon 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. Micon does not believe that the historical discrepancies are of any consequence to the current exploration on the Farellon property but, has noted them for the sake of clarity should someone review the old files.

## 7.0 GEOLOGICAL SETTING

### 7.1 REGIONAL GEOLOGY

Chile is divided into three major physiographic units running north-south, the Coastal cordillera, the Central valley and the High cordillera (Andes). The Farellon property is located within the Coastal cordillera which lies on the western margin of Chile and extends from the southern Peruvian border to Puerto Montt in southern Chile.

There are five main geological elements in the Coastal cordillera;

- 1) Early Cretaceous back-arc basin marine carbonates in the east.
- 2) A late Jurassic to early Cretaceous calc-alkaline volcanic arc in the central part of the region.
- 3) The early Cretaceous coastal batholith to the west (Marschik, 2001).
- 4) The Atacama fault zone to the west (Marschik, 2001).
- 5) The Paleozoic basement metasediments along the western margin (Hitzman, 2000).

The formation of the Coastal cordillera is as follows:

- In the Coastal cordillera of northern Chile, major Mesozoic plutonic complexes are emplaced into broadly contemporaneous arc and intra-arc volcanics and underlying penetratively deformed metasedimentary units of Palaeozoic age.
- The northwest trending Atacama brittle fault system of northern Chile, was active during the Mesozoic volcanism and plutonism.
- Widespread extension induced tilting of the volcano-sedimentary sequences.
- Immediately east of the Mesozoic arc terrane of the Coastal cordillera in northern Chile, sedimentary sequences accumulated 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 Farellon property lies on the western margin of the northern portion of the Chilean Coastal cordillera at the contact between Paleozoic metasediments and late Jurassic diorites

and monzodiorites. Figure 7.1 is a map of the regional geology surrounding the Farellon property.

Paleozoic metasediments are from the Chanaral Metamorphic Complex comprised of shales, phyllites and schists. The sediments have a strong north-northeast striking shallow foliation of not more than 40° dip.

The diorites are from the Canto del Agua formation which consists of diorites and gabbros and is known to host extensive veining with copper and gold mineralization (Arevalo and Welkner, 2003).

## **7.2 PROPERTY GEOLOGY**

### **7.2.1 Geology**

The Farellon property lies over the sheared contact of Paleozoic metasediments in the western portion and Jurassic diorite in the eastern portion. The contact between the metasediments and the diorite is a mylonitic sheared contact striking north-northeast and dipping approximately 65 degrees to the northwest. The metasediments are composed of quartz-feldspar-hornblende gneisses (Minera Stamford, 2000). The diorite underlying the eastern portion of the project area has been extensively intruded by intermediate mafic dykes oriented northeasterly. 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 always appears to be tectonic (Willsted, 1997). Figure 7.2 is a map of the local geology immediately surrounding the Farellon property.

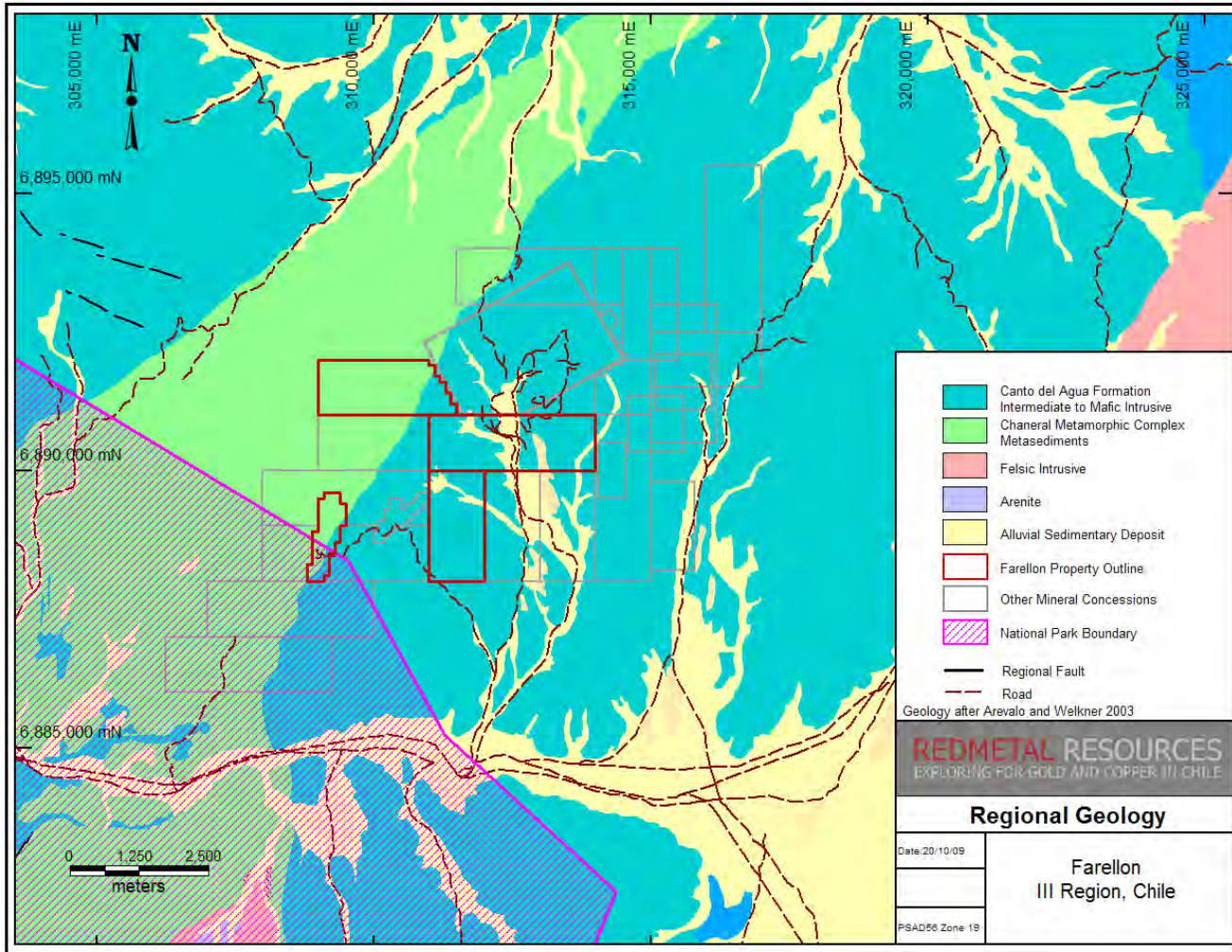
### **7.2.2 Structure**

The contact zone between the metasediments and the diorites is a mylonitic shear zone ranging from 5 to 15 m in width and host to mineralized quartz-calcite veins. To the north the veins splay off to the east into the diorites. The southern concession of the Farellon property covers a 1.7 km section along strike of the sheared contact and the northern claims overlie a further 0.75 km of the sheared contact, as well as a 1.7 km section of the veining splayed into the diorite.

### **7.2.3 Alteration**

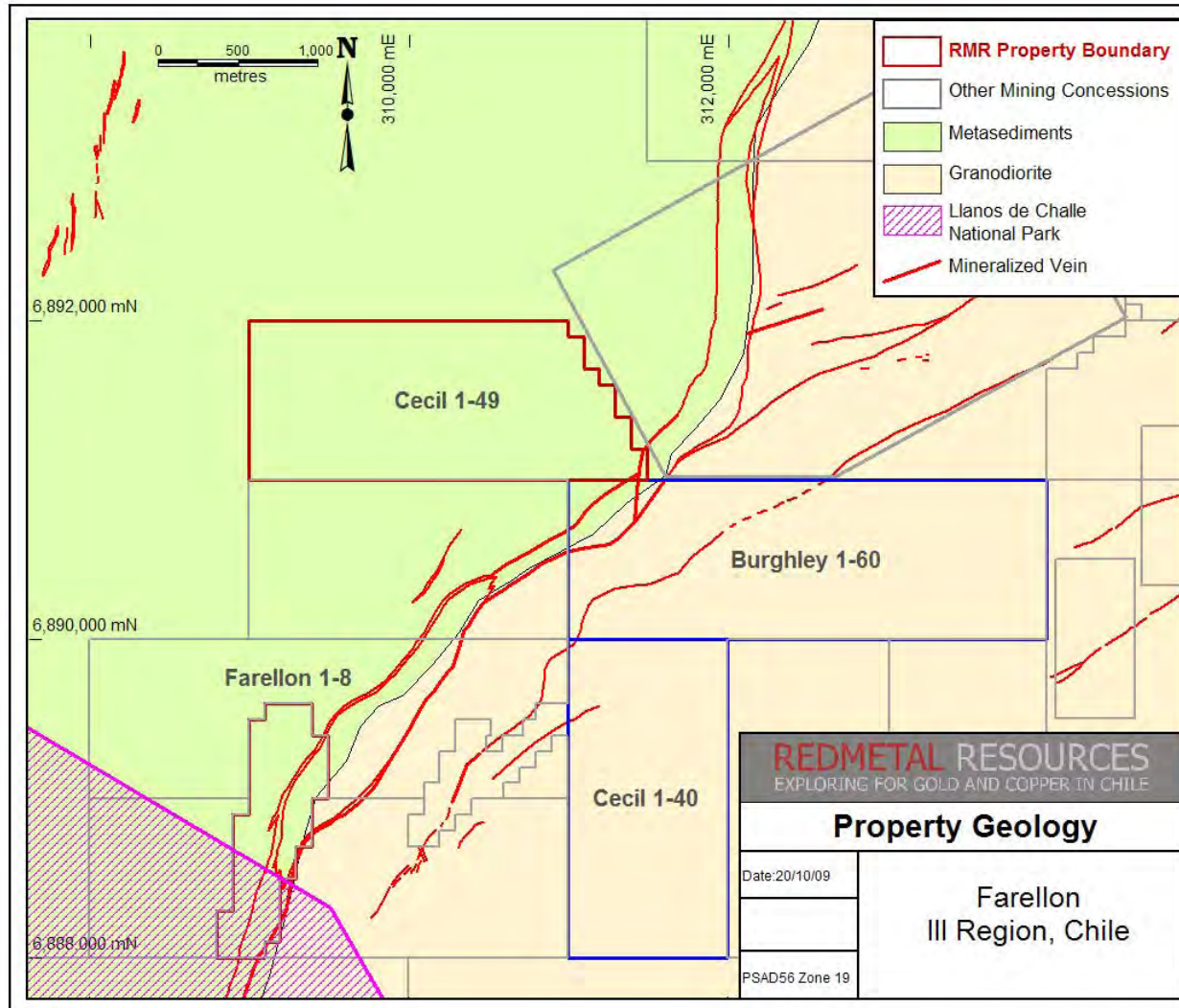
The alteration associated with the shear zone is comprised of sulphidized quartz-calcite veins with an intense pyrite-sericite-biotite alteration halo. In places, there is massive siderite and ankerite alteration (Minera Stamford, 2000).

**Figure 7.1**  
**Regional Map of the Geology Surrounding the Farellon Property**



Map provided by Red Metal Resources Ltd.

**Figure 7.2**  
**Map of the Local Geology Surrounding the Farellon Property**



Map provided by Red Metal Resources Ltd.

## 8.0 DEPOSIT TYPES

Iron oxide-copper gold (IOCG) deposits cover a broad spectrum of deposits. The deposit type in northern Chile has been clearly defined in Sillitoe, 2003 as follows.

*“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 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 mantle-type copper and small porphyry copper deposits to create 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-Au-Co-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 palaeodepths, extensive zones of barren pyritic feldspar-destructive alteration may be indicators of concealed IOCG deposits.”*

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 Chanaral (26°S) (Hitzman, 2000).

The Farellon property lies well within the Chilean IOCG belt and fits many of the tectonic and mineralogical definitions outlined by Sillitoe. The Farellon 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.

## 9.0 MINERALIZATION

Vein type, plutonic hosted IOCG deposits such as Carrizal Alto and by extension the Farellon property are characterized by a distinct mineralogy that includes not only copper and gold but also cobalt, nickel, arsenic, molybdenum and uranium (Sillitoe, 2003). All of the IOCG deposits are partially defined by their iron content in the form of either magnetite or hematite. A variety of alteration assemblages has been noted in the Chilean deposits according to whether or not the deposits are hematite or magnetite dominated. The 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. The hematite-rich veins tend to contain sericite and/or chlorite, with or without K-feldspar or albite, and to possess alteration haloes characterized (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 north along strike from the Farellon property (Figure 7.2), has historically been known as a significant cobalt deposit (Ruiz, 1962) and has returned cobalt grades of up to 0.5% in the form of cobaltiferous arsenopyrite (Sillitoe, 2003, Ruiz, 1962). Copper mineralization on the Farellon 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 goethite clay matrix (Willsted, 1997, Floyd, 2009). Alteration includes actinolite, biotite, sericite, epidote, quartz and carbonate alteration.

## **10.0 EXPLORATION**

A description of the historical exploration work conducted on the property is provided in Section 6.1.

Red Metal first acquired the rights to the Farellon property on April 25, 2008 upon its Chilean subsidiary exercising the option to buy the property from Minera Farellon. Red Metal has started an initial exploration program to determine the full potential of the property.

### **10.1 RED METAL EXPLORATION (VERIFICATION) PROGRAM**

#### **10.1.1 Geological Mapping Program**

Red Metal conducted a short geological mapping program over the Cecil and Burghley claims to better define future exploration targets. Mapping was completed by a Red Metal geologist and geotechnician during May and June, 2009.

The Burghley claim is located within the upper Cretaceous pluton. Mineralized veins appear in diorite host rocks, running approximately northeast-southwest. A swarm of intermediate to mafic dykes runs approximately north-south throughout the area. Epidote alteration was prevalent with areas adjacent to mineralization displaying chlorite and sericite alteration. A few locations showed biotite alteration. Many mineralized areas are accompanied with a calcareous filling matrix. Veins are predominant in the eastern end of the property and shears/faults are more prevalent towards the west. Mineralized veins and faults strike approximately 224° and dip -60°. Copper oxide mineralization in the form of malachite and copper wad was seen in numerous areas.

#### **10.1.2 September, 2009 Drilling Program**

Red Metal's first exploration drilling program of 5 reverse circulation holes, totalling 725 m, was conducted in September, 2009.

The drilling program was designed for the most part to twin a number of Minera Stamford drill holes from the 1990's in order to verify the data acquired by the earlier drilling. No geological information was recovered from the Minera Stamford drill program and assays were not verified by any laboratory certificates. One drill hole tested 100 metres below the known mineralization and one drill hole tested continuity of mineralization between previously drilled sections.

It should be noted that all of the drilling conducted by Red Metal in September, 2009 was outside the National Park boundaries.

### 10.1.3 Red Metal Expenditures on the Farellon Property

For the period ending on October 31, 2009, an estimated total of CDN \$104,632.06 has been spent on the Farellon project by Red Metal since acquiring the project (Table 10.1).

**Table 10.1**  
**Farellon Project Exploration and Property Expenditures**

Item	Cost		Comments
	(US \$)	(CND\$)	
Accommodation	1,323.90	1,409.88	Office and house rental for drill program.
Assays	28,008.66	29,616.36	Acme Laboratory.
Equipment rental	2,397.95	2,571.34	Drill pad and drill road building.
Drilling	43,392.30	45,713.79	PerfoAndes Ltda.
Surveying	5,410.89	5,792.35	Comprobe downhole surveys.
Field supplies	1,176.63	1,234.54	Bags, trays, etc.
Labour	14,268.32	15,299.46	Contract geologist, project manager, and geotech.
Meals	704.06	752.63	Meals for drillers, geologists and tech during the drill program.
Travel and transportation	2,105.33	2,241.70	Truck and expenses for contract geologist.
<b>Total</b>	<b>98,788.04</b>	<b>104,632.06</b>	

Expenditures provided by Red Metal Resources Ltd.

## 10.2 RED METAL EXPLORATION TARGETS

The main target on the Farellon property is the mineralized shear contact between the diorites and the metasediments. The shear zone has been interpreted to host several parallel, mineralized lenses that have been drilled at sporadic spacing along the 1.7 km strike length on the Farellon Uno al Ocho claim. An initial geological mapping program on the Cecil and Burghley claims to the north has identified several veins splaying off the main mineralized shear structure and into the diorite (Figure 7.2).

## 11.0 DRILLING

A description of the historical drilling conducted on the property is provided in Section 6.1. Red Metal conducted its first exploration drilling program on the Farellon property in September, 2009 and this program is discussed in detail below.

### 11.1 2009 EXPLORATION DRILLING PROGRAM, GENERAL DISCUSSION

Red Metal's first exploration drilling program of 5 reverse circulation holes, totalling 725 m, was conducted in September, 2009. Table 11.1 summarizes the details of the September, 2009 drilling program. Figure 11.1 indicates the locations of both the 1996 Minera Stamford and the 2009 Red Metal drill holes.

**Table 11.1**  
**Summary of the September, 2009 Reverse Circulation Drilling Program**

Hole Number	UTM Coordinates			Azimuth (°)	Dip (°)	Depth (m)	Comments
	Easting	Northern	Elevation (m)				
FAR-09-A	309,086	6,888,591	550	131	-65	125	Twin of FAR-96-22.
FAR-09-B	309,125	6,888,709	560	95	-65	100	Twin of FAR-96-09.
FAR-09-C	309,127	6,888,922	555	105	-65	145	Continuity between sections
FAR-09-D	308,955	6,888,696	539	95	-65	287	Test of depth extent
FAR-09-E	309,133	6,888,645	551	Vertical	-90	68	Twin FAR-96-21.
<b>Total</b>						<b>725</b>	

Table provided by Red Metal Resources Ltd.

The drilling company in Chile used by Red Metal to conduct the drilling program was PerfoAndes Limitada which is based in the community of Tierra Amarilla just south of the city of Copiapo. The drilling contractor is an independent contractor with no direct interest in Red Metal or its 99% owned Chilean subsidiary Polymet.

The drilling was completed using a Tramrock Dx40 RC rig which is larger than the T4 drill rig used during the Minera Stamford drilling program in the 1990's. As a result Red Metal had to widen the existing roads on the property as well as rehabilitate access to some of the old drilling pads.

The drilling program was designed for the most part to twin a number of Minera Stamford drill holes from the 1990's in order to verify the data acquired by the earlier drilling. No geological information was recovered from the Minera Stamford drill program and assays were not verified by any laboratory certificates. One drill hole tested 100 m below the known mineralization and one drill hole tested continuity of mineralization between previously drilled sections.

**Figure 11.1**  
**Location Map of the 1996 Minera Stamford and 2009 Red Metal Drill Holes on the Farellon Project**

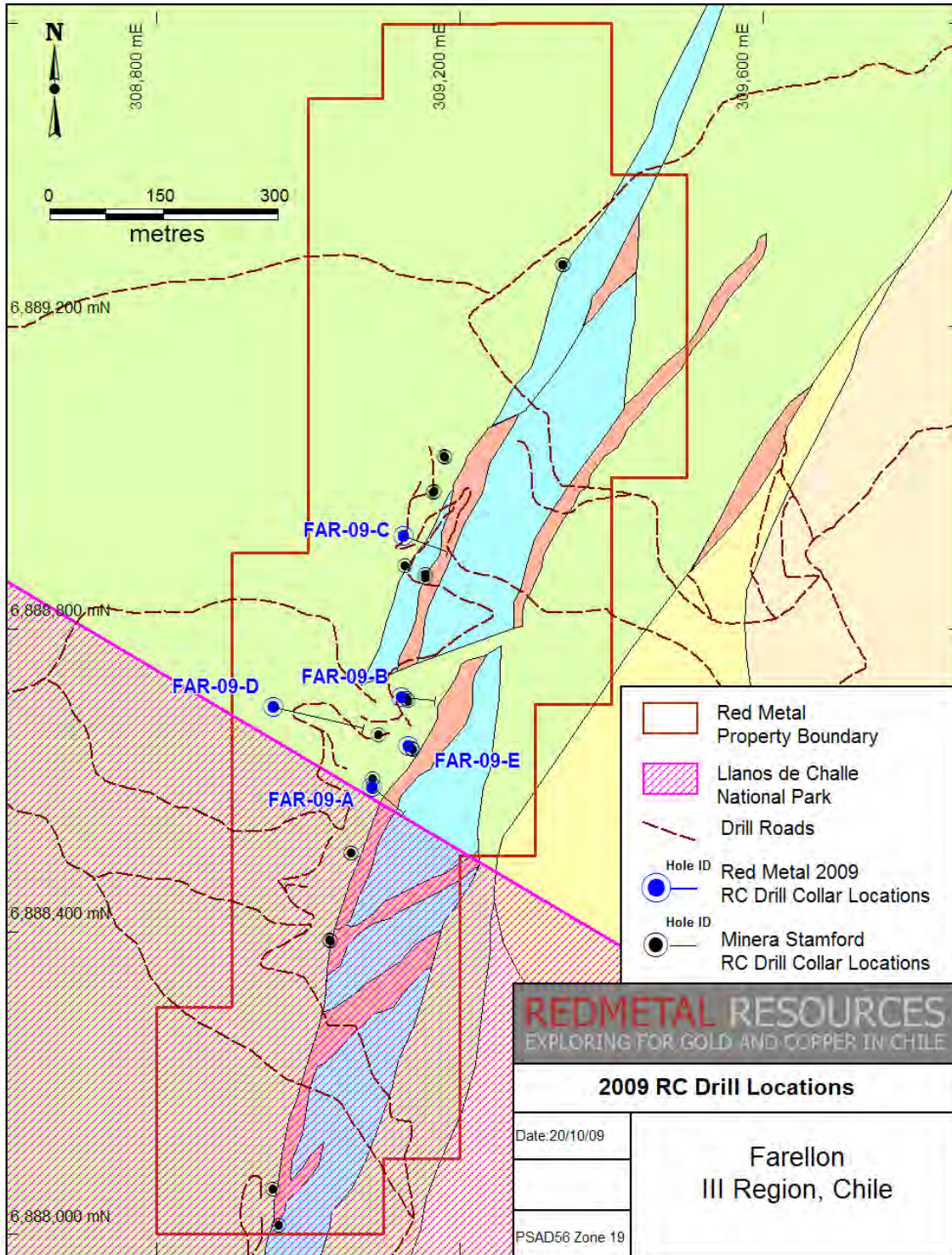


Figure provided by Red Metal Resources Ltd.

A fair amount of time was spent lining up the drill rig at each site in order to obtain the correct azimuth bearing. However, some compromises were made in the practical logistics in order to situate the drill rig in the correct position or as close as possible, while still remaining as faithful as possible to the azimuth bearing. See Figure 11.2 for the set-up on drill hole FAR-09-D.

**Figure 11.2**  
**Set-up on Drill Hole FAR-09-D on the Farellon Project in September, 2009**



Photograph taken by Harry Floyd, September, 2009.

Collar locations and azimuths for the 2009 drilling were surveyed in by Jorge Gallo from Vallenar using a total station surveying tool. Red Metal contracted Comprobe Ltda. (Comprobe) which is based in Copiapo to complete downhole surveys using a digital gyroscope. Comprobe uses a GirscoPIO DG 29 digital gryroscope. Downhole surveys were completed on all drill holes from the 2009 program and on six drill holes from 1996 to 1997 drill program by Minera Stamford, 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. Figure 11.3 is a view of one of the drill holes in the process of being surveyed by Comprobe.

In addition each drill hole has 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. Figure 11.4 shows the PVC piping being added as the surface pre-collar to drill hole FAR-09-D.

**Figure 11.3**  
**Drill Hole in the Process of Being Surveyed by Comprobe on the Farellon Property**



Photograph taken by Harry Floyd, September, 2009.

**Figure 11.4**  
**PVC Piping being added as a Surface Pre-collar to Drill Hole FAR-09-D**



Photograph taken by Harry Floyd, September, 2009.

## 11.2 DISCUSSION OF THE DRILLING PROGRAM RESULTS

The following section will provide a short discussion regarding each of Red Metal's drill holes and the results obtained by each hole. This section will also discuss the overall program results in light of the original objectives of the 2009 exploration program. A simple lithologic description is tabulated for each drill hole in this section. However, for a complete lithologic description of the geology encountered the actual drill logs should be referenced.

### 11.2.1 Drill Hole FAR-09-A

Drill hole FAR-09-A was drilled to twin hole FAR-96-022 drilled previously by Minera Stamford. Drill hole FAR-96-022 was drilled to a depth of 150 m with the last 25 m appearing to be drilled in poorly mineralized or un-mineralized rock. Therefore, Red Metal only drilled FAR-09-A to a depth of 125 m while still intersecting the targeted mineralization. This hole is located close to the park boundary. Table 11.2 summarizes the lithologic description for drill hole FAR-09-A.

**Table 11.2**  
**Summary of the Lithological Details for Reverse Circulation Drill Hole FAR-09-A**

Drill Hole Number	Interval (m)			Lithology Description
	From	To	Length	
FAR-09-A	0	5	5	Metamorphic, carbonate stockwork.
	5	6	1	Dyke of granitoid composition.
	6	8	2	Green schist facies
	8	10	2	Quartzite.
	10	23	13	Green schist facies.
	23	24	1	Quartzite.
	24	32	8	Green schist facies with increasing carbonate content in the matrix and stockwork.
	32	38	6	Massive carbonate, siderite and calcite.
	38	42	4	Quartzite.
	42	52	10	Green schist facies.
	52	53	1	Massive siderite.
	53	70	17	Quartz + feldspar assorted intrusive and porphyries.
	70	72	2	Massive carbonate, siderite + calcite.
	72	80	8	Mixed quartz, felsic intrusive
	80	83	3	Massive carbonate, siderite, calcite plus some free quartz.
	83	97	14	Mixed greenschist facies and intrusives.
97	103	6	Massive carbonate.	
103	104	1	Massive siderite surrounding a mildly porphyritic mafic hypabyssal unit.	
104	106	2	Massive siderite.	
106	115	9	Quartz, felsic intrusive.	
115	116	1	Grey carbonate.	
116	125	9	Assorted porphyries.	
<b>Total Depth</b>		<b>125</b>	<b>End of Hole</b>	

Table provided by Red Metal Resources Ltd.

The drilling assay results graphically shown in Figure 11.5 indicate that the mineralization intersected in FAR-09-A matches the approximate intensity and depths of the mineralization intersected in FAR-96-022. Copper intersections in both drill holes are relatively close, the peak copper result in FAR-96-022 is 4.69% over 1 m and the peak result in FAR-09-A is 5.26% over 1 m. Gold assay results are elevated in both drill holes, but results from the 1996 drilling are significantly higher. FAR-96-022 recovered a peak assay of 21 g/t over 1 m and the highest gold result in FAR-09-A is 1.39 g/t over 1 m. Gold results are elevated in the same areas in both drill holes, but the 2009 intersections do not show as strong gold mineralization as the 1996 drilling. This disparity in the gold assays could be due to the gold mineralization exhibiting a strong nugget effect or as a result of varying drilling techniques and QA/QC practices between the 1996 and 2009. Micon recommends that the disparity in the gold assays be investigated further during the next exploration program.

The geological log for FAR-09-A indicates that the mineralization is associated with intense carbonate alteration and weak to moderate quartz alteration at the contact between greenschist facies metasediments and a weakly porphyritic mafic intrusive.

**Figure 11.5**  
**Comparison of the Drilling Results for Drill Holes FAR-96-022 and FAR-09-A**

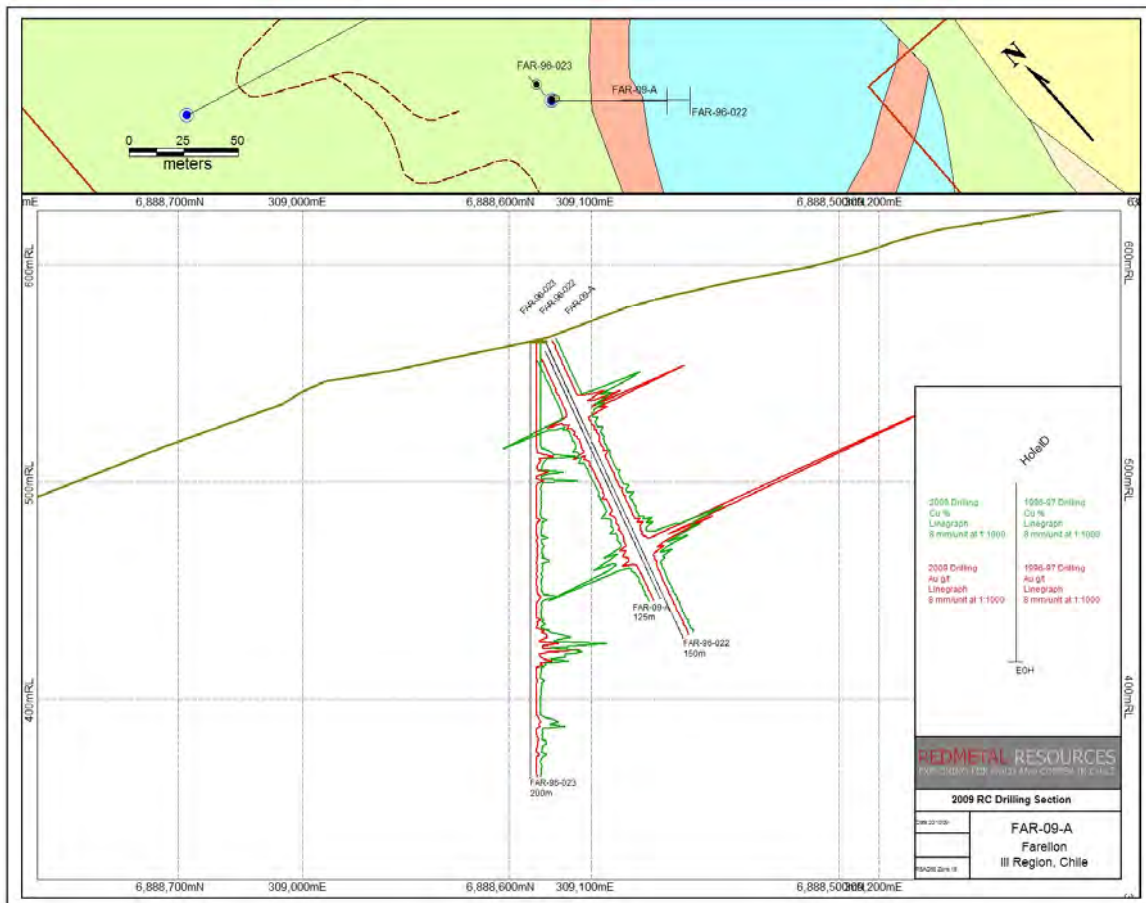


Figure provided by Red Metal Resources Ltd.

### 11.2.2 Drill Hole FAR-09-B

Drill hole FAR-09-B was planned to be drilled to a depth of 175 m to twin hole FAR-96-09 drilled previously by Minera Stamford. However, the drill logs and assays for hole FAR-96-09 indicated that it failed to encounter mineralization beyond 84 m and Red Metal decided to shorten the hole to 100 m. Table 11.3 summarizes the lithologic description for drill hole FAR-09-B.

**Table 11.3**  
**Summary of the Lithological Details for Reverse Circulation Drill Hole FAR-09-B**

Drill Hole Number	Interval (m)			Lithology Description
	From	To	Length	
FAR-09-B	0	48	48	Greenschist facies.
	48	49	1	Greenish brown carbonate.
	49	50	1	Quartz feldspar porphyry schist
	50	52	2	A matrix of the meta-sediment is predominantly carbonates – possibly carbonate replacement.
	52	54	2	Aphatic mafic dyke.
	54	59	5	Metamorphic green schist facies.
	59	60	1	Fine crystalline mafic porphyry.
	60	61	1	Felsic to intermediate porphyry.
	61	62	1	Quartz and siderite.
	62	63	1	Fine crystalline micro porphyry.
	63	64	1	Green diorite porphyry dyke.
	64	71		Metamorphics.
	71	79		Carbonate dominated.
	79	80		Grey green aphanitic dyke.
	80	88		Carbonate dominated. Hit water in the hole at 88 m.
	88	89		Fault gouge – clay material.
89	94		Carbonate dominated.	
94	97		Greenschist facies – metamorphics with carbonate stockwork.	
97	100		Mafic porphyry.	
<b>Total Depth</b>		<b>100</b>	<b>End of Hole</b>	

Table provided by Red Metal Resources Ltd.

Results of the drilling graphically shown in Figure 11.6 indicate that the mineralization intersected in FAR-09-B matches the approximate intensity and depths of the mineralization intersected in FAR-96-009. Copper intersections in both drill holes are similar with a peak result of 4.44% copper in FAR-96-009 and a peak result of 3.33% in FAR-09-B. Gold results are also similar with a peak of 1.54 g/t over 1 m in FAR-96-009 and 1.41g/t in FAR-09-B.

The mineralization in FAR-09-B is concentrated in the altered and sheared contact between the greenschist facies metasediments and a porphyritic to aphanitic intermediate to mafic intrusive. The mineralization is associated with quartz calcite alteration.

**Figure 11.6**  
**Comparison of the Drilling Results for Drill Holes FAR-96-009 and FAR-09-B**

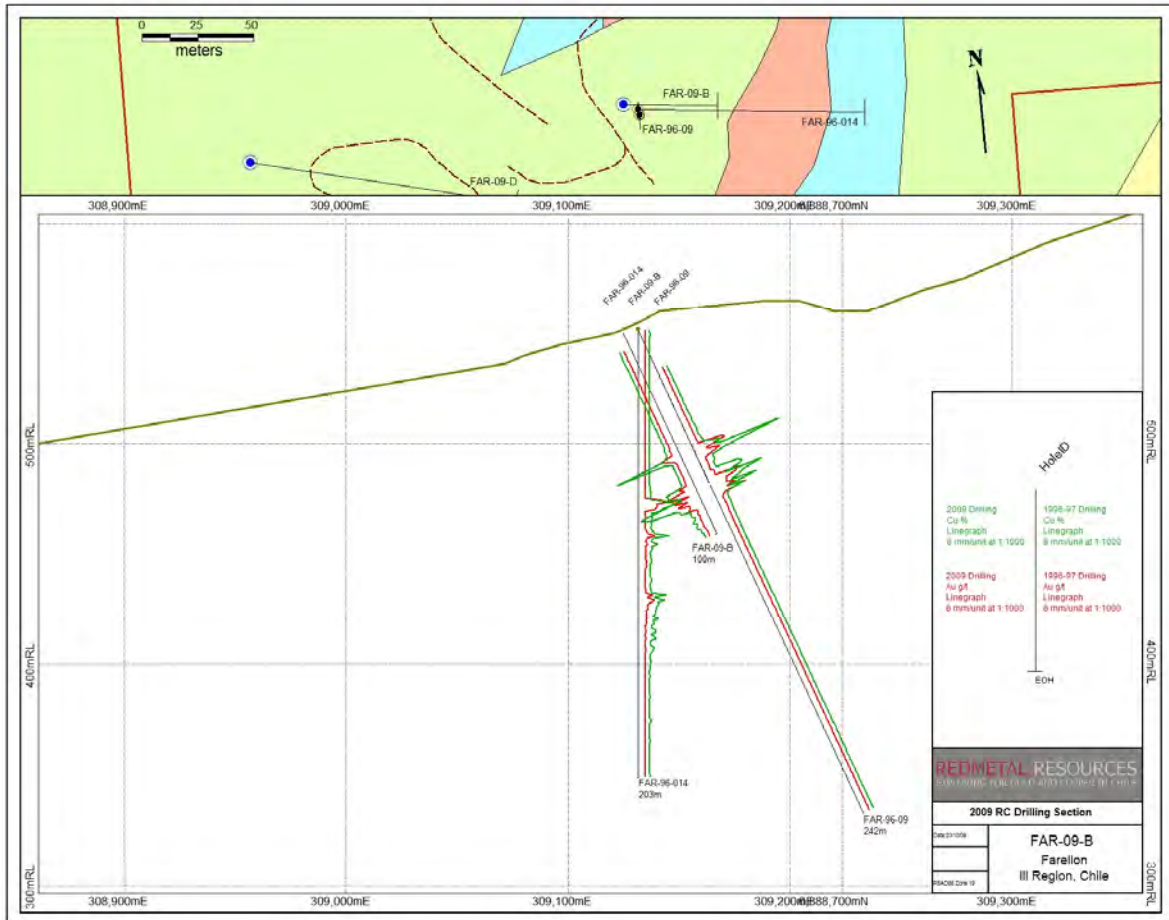


Figure provided by Red Metal Resources Ltd.

### 11.2.3 Drill Hole FAR-09-C

Drill hole FAR-09-C was drilled to intersect the down dip mineralization encountered by the Minera Stamford holes FAR-96-11, - 15 and -16. However, the original location of the drill hole was changed due to the lack of suitable equipment needed to build a new drill pad. This necessitated an increase in the length of the drill hole in order to intersect the down dip mineralization located in holes FAR-96-11, - 15 and -16. Table 11.4 summarizes the lithologic description for drill hole FAR-09-C.

FAR-09-C lies approximately 40 m along strike from FAR-96-11, -15 and -16 and intersected mineralization approximately 20 m down dip. To drill a deeper intersection a significant amount of roadwork will be required and, depending on the results of further work on the deposit, this may be undertaken at some point in the future.

**Table 11.4**  
**Summary of the Lithological Details for Reverse Circulation Drill Hole FAR-09-C**

Drill Hole Number	Interval (m)			Lithology Description
	From	To	Length	
FAR-09-C	0	1	1	Mixed soils and platform material..
	1	15	14	Mixed greenschist facies.
	15	18	3	Felsic dyke.
	18	35	17	Greenschist facies and mixed porphyryies with varying carbonate content.
	35	39	4	Greenish brown carbonate.
	39	73	34	Strongly carbonate dominated including zones of massive siderite.
	73	93	20	Generally massive siderite
	93	108	15	Mixed porphyritic material generally with moderate to high carbonate content.
	108	132	24	Dominated by fine crystalline carbonate replacement.
	132	145	13	Granodiorite dominated with carbonate stringers and some replacement.
<b>Total Depth</b>		<b>145</b>		<b>End of Hole</b>

Table provided by Red Metal Resources Ltd.

The assay results obtained from drill hole FAR-09-C imply that the mineralization is consistent along strike and down dip. The intersection in FAR-09-C consists of intense copper and gold mineralization that is stronger, but narrower, than the intersections encountered during the 1996 drilling. The most significant interval in FAR-09-C is 5 m grading 2.57% copper and 4.16 g/t gold including a one metre interval of 6.15% copper and 13.6 g/t gold. Figure 11.7 depicts graphically the mineralization encountered in drill hole FAR-09-C along with the 1996 results for drill holes FAR-96-11, -15 and -16.

The log for drill hole FAR-09-C appears to imply that the mineralization occurs at the centre of a 20 m wide massive carbonate vein, which is located at the contact between greenschist facies metasediments and a granodiorite. Further work will be required to test both the carbonate vein and the down dip extension of the mineralization encountered in FAR-09-C.

#### **11.2.4 Drill Hole FAR-09-D**

Drill hole FAR-09-D was originally planned to be drilled to 300 m to target the down dip extension of the mineralization intersected in drill holes FAR-96-013, -020 and -021. However, the percussion bit had to be changed for a tri-cone bit due to the water encountered in the hole and the lower portion of the hole hit the very hard Cretaceous granodiorite intrusive which contributed to bit failure at 287 m. Table 11.5 summarizes the lithologic description for drill hole FAR-09-D.

**Figure 11.7**  
**Comparison of the Drilling Results for Drill Holes FAR-96-11, -15 and -16 and FAR-09-C**

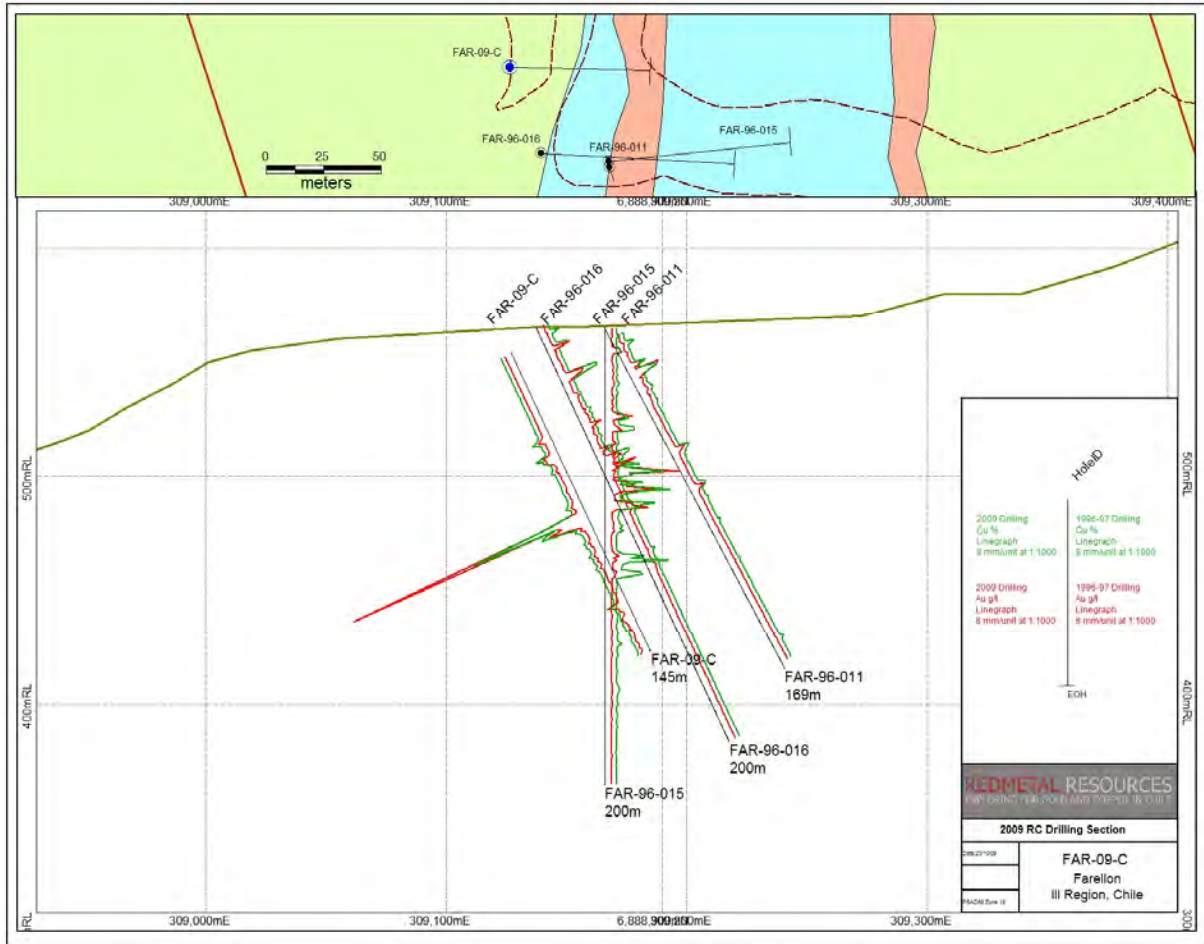


Figure provided by Red Metal Resources Ltd.

**Table 11.5**  
**Summary of the Lithological Details for Reverse Circulation Drill Hole FAR-09-D**

Drill Hole Number	Interval (m)			Lithology Description
	From	To	Length	
FAR-09-D	0	2	2	Mixed soils and stream sediments.
	2	24	22	Mixed greenschist facies and quartzites.
	24	27	3	Mafic dyke.
	27	65	38	Mixed greenschist facies, quartzites and porphyries with some carbonate content.
	65	66	1	Greenish grey aphanitic carbonate.
	66	82	16	Mixed greenschist facies, quartzites and porphyries with some carbonate content.
	82	86	4	Carbonate dominated.
	86	95	9	Mixed greenschist facies, quartzites and porphyries with some carbonate content.
	95	106	11	Assorted styles of carbonate mineralization.
	106	108	2	Carbonate epidote mix.

Drill Hole Number	Interval (m)			Lithology Description
	From	To	Length	
	108	109	1	Fine crystalline quartz feldspar. and siderite.
	109	124	15	Fine crystalline carbonate dominated.
	124	135	11	Massive carbonate.
	135	145	10	Mixed porphyries with variations of carbonate content.
	145	147	2	Mafic dyke.
	147	151	4	Mixed porphyries with some carbonate content.
	151	176	25	Dominated by fine crystalline carbonates.
	176	194	18	Quartzite and mixed porphyries.
	194	287	93	Dominated by diorite intrusive with local variations and carbonate stringers.
<b>Total Depth</b>		<b>287</b>		<b>End of Hole</b>

Table provided by Red Metal Resources Ltd.

Drill hole FAR-09-D intersected significant gold and copper mineralization at a depth of 95 m which was much shallower than the expected 250 m depth that was interpreted and no significant mineralization was intersected deeper in the drill hole. There are two possible interpretations to account for this current drilling result:

- 1) The mineralization is dipping more shallowly than previously interpreted, at approximately  $-30^{\circ}$  instead of  $-65^{\circ}$ .
- 2) The mineralization encountered in FAR-09-D is a previously unrecorded mineralized structure and the down dip extension of the mineralization encountered in the 1996 drilling was not intersected due to the bit failure.

The mineralized intersection encountered in FAR-09-D is similar in width and intensity to mineralization cut by the 1996 drill holes. However, further drilling will need to be undertaken to clarify whether or not the mineralization encountered in the 2009 drilling belongs to the same mineralized structure cross-cut by the 1996 drilling.

The lithological description of the drill hole indicates that the mineralization is encountered at the contact between the greenschist facies metasediments and a dioritic intrusive.

Figure 11.8 depicts graphically the mineralization encountered in drill hole FAR-09-D along with the 1996 results for drill holes FAR-96-11, -15 and -16.

### 11.2.5 Drill Hole FAR-09-E

Drill hole FAR-09-E was drilled to twin the Minera Stamford hole FAR-96-21 and confirm the mineralization located by the historical drill hole. Table 11.6 summarizes the lithologic description for drill hole FAR-09-E.

**Figure 11.8**  
Comparison of the Drilling Results for Drill Holes FAR-96-013, -020 and -021 and FAR-09-D and -E

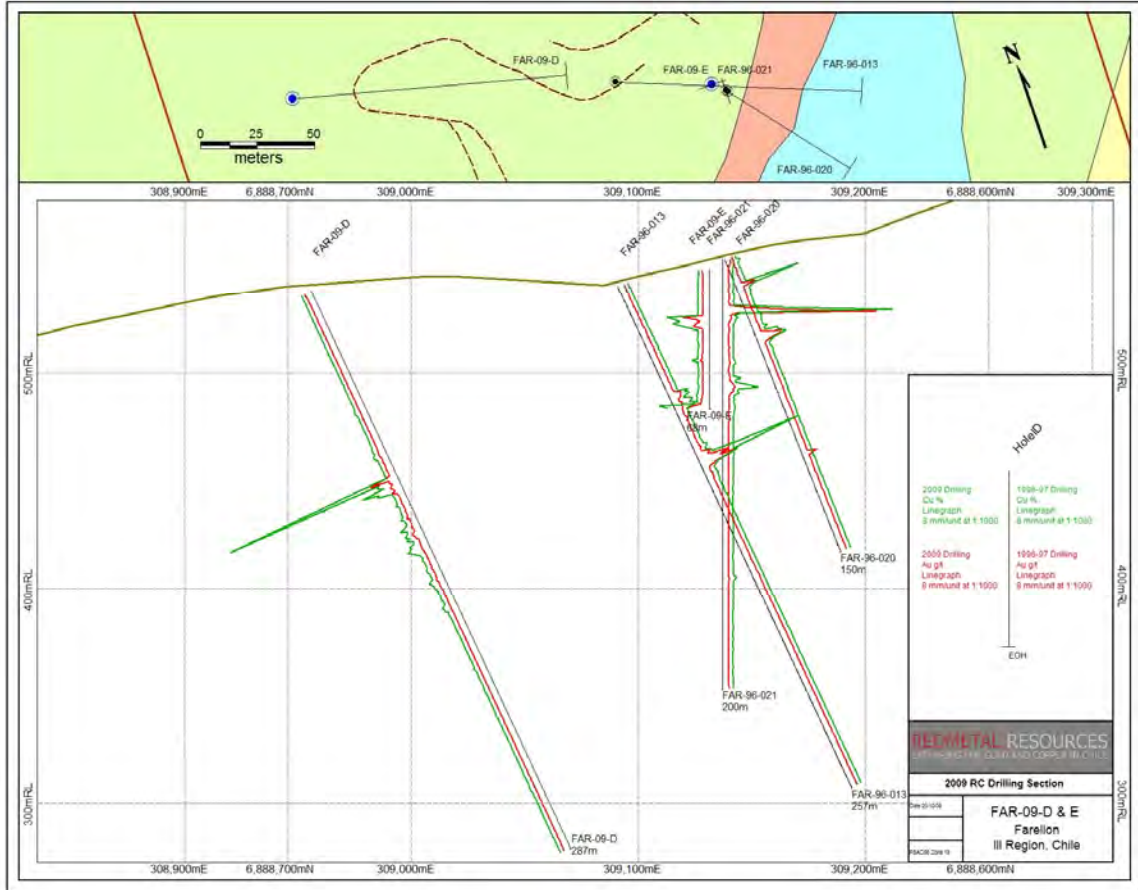


Figure provided by Red Metal Resources Ltd.

**Table 11.6**  
Summary of the Lithological Details for Reverse Circulation Drill Hole FAR-09-E

Drill Hole Number	Interval (m)			Lithology Description
	From	To	Length	
FAR-09-E	0	3	3	Mixed drill platform material.
	3	14	11	Greenschist facies metamorphic.
	14	25	11	Greenschist facies with considerable carbonate.
	25	32	7	Massive carbonate dominated material siderite and calcite.
	32	50	18	Greenschist facies with local carbonate stockwork.
	50	52	2	Highly siliceous zone (quartzite).
	52	53	1	Mafic mildly porphyritic hypabyssal unit.
	54	61	7	Greenschist facies.
	61	62	1	Green, mafic aphanitic, dyke.
	62	63	1	Greenschist facies.
<b>Total Depth</b>		<b>68</b>		<b>End of Hole</b>

Table provided by Red Metal Resources Ltd.

Results of the drilling graphically shown in Figure 11.8 indicate that the mineralization intersected in FAR-09-E matches the approximate depths encountered in drill hole FAR-96-021 but grades are significantly lower in FAR-09-E compared to the 1996 drilling. The peak copper result in FAR-96-021 is 9.21% over 1 m and the peak result for FAR-09-E is 2.27% over 1 m. Gold assay results are elevated in both drill holes, but results from the 1996 drilling are significantly higher, FAR-96-021 recovered a peak assay of 8.53 g/t over 1 m while the highest gold result for FAR-09-E is 1.14 g/t over 1 m. The drill hole stopped in mineralization and so the full width and intensity was not completely tested. However, the disparity in the results could be due to the varying drilling techniques and QA/QC practices between the 1996 and 2009 programs, as well.

In the case of the copper mineralization the disparity could be due to the full width and intensity of the mineralization not being drilled but other factors related to the QA/QC should be investigated as well. In the case of the gold mineralization it could be due to the gold mineralization exhibiting a strong nugget effect. Micon recommends that that drill hole FAR-09-E be deepened until well below the mineralization intersected by the surrounding 1996 drill holes.

The lithology description for drill hole FAR-09-E indicates that the mineralization is associated with intense carbonate alteration. However, due to the hole ending in mineralization, it is not clear if there is a footwall intrusive unit as indicated in the other drill holes.

The significant assays for Red Metal's 2009 exploration drilling program have been summarized in Table 11.7. At this time the significant assays are reported as core lengths as the true width of the mineralized zone has not been established.

**Table 11.7**  
**Summary of the Significant Assays for the 2009 Exploration Drilling Program on the Farellon Project**

Drill Hole Number	Assay Interval (m)			Assay Grade		
		From	To	Core Length	Gold (ppm)	Copper (%)
FAR-09-A		31	34	3.0	0.81	1.99
		79	109	30.0	0.18	0.62
		97	106	9.0	0.44	1.63
FAR-09-B		56	96	40.0	0.27	0.55
	including	56	63	7.0	0.22	0.66
		74	96	22.0	0.42	0.79
	including	75	86	11.0	0.67	1.35
FAR-09-C		73	103	30.0	0.79	0.55
	including	77	82	5.0	4.16	2.57
FAR-09-D		95	134	39.0	0.11	0.58
	including	95	103	8.0	0.33	2.02
FAR-09-E		25	30	5.0	0.54	1.35
		65	68	3.0	0.58	1.46

Table provided by Red Metal Resources Ltd.

The results of Red Metal's 2009 exploration drilling program to twin a number of Minera Samford's 1996 drill holes have confirmed the general location and tenor of the mineralization located during the 1996 drilling program. However, in two of the drill holes (FAR-09-A and FAR-09-E) the disparity between the historical 1996 gold assays and the current 2009 gold assays merits further investigation during the next phase of exploration. In the case of FAR-09-E, the disparity between the historical 1996 and 2009 assays also occurs in the copper assays and this will also need to be further investigated during the next phase of drilling.

In general, the 2009 drilling program identified that the copper and gold mineralization located at the Farellon project exhibited a direct correlation to the earlier results in both location and relative intensity. Further exploration programs will therefore be able to build on this observation in outlining the relative location and spacing of further drill holes.

All drill holes during the 2009 drilling program intersected oxide facies mineralization with only minor amounts of sulphides observed (FAR-09-D). Once the general trend of the mineralization is established it is expected that Red Metal will conduct some drilling in order to identify the oxide/sulphide interface at the Farellon project.

## 12.0 SAMPLING METHOD AND APPROACH

Red Metal conducted its first drilling program on the Farellon project in September, 2009. The drilling program consisted of 5 RC holes, totalling 725 m. Sampling was conducted on one metre intervals which is generally the industry standard sampling practice for RC drilling. Sampling started at the collar of the hole and proceeded to the toe or bottom of the drill hole on one metre increments. Generally the sample recovery was good to excellent.

The cuttings for each one metre sample were 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 4 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. See Figure 12.1 for a view of the cyclone and sampling setup on hole FAR-09-B.

**Figure 12.1**  
**Sampling 2009 Drill Hole FAR-09-B on the Farellon Project**



Photograph taken by Harry Floyd, September, 2009.

Red Metal's significant assay results for the 2009 drilling program have been summarized in Table 11.7. At this time the significant assays are reported as core lengths as the true width of the mineralized zone has not been established.

While RC drilling is a common drilling method there are a number of potential problems which may affect the results from this type of drilling. The general problems which may be encountered with RC drilling are as follows:

- The geological contacts are not necessarily well defined because the geologist is relying on a few washed drill chips or cuttings to determine the geological unit encountered. Generally, the contact can be determined with an accuracy of +/- 1 m and while this is adequate when wider geological units are encountered, it may mask smaller geological unit such as narrow veins within a larger unit.
- Smearing of the mineralization between sample intervals and across geological boundaries can occur if there is excessive sloughing of the walls of the drill holes due to unconsolidated material sloughing into the bottom of the hole or if excessive water is encountered which may wash material from the walls into the hole.
- Likewise mineralization may be lost or concentrated if the cuttings are too fine and the fines are either blown away when the hole is being drilled dry or washed away if the hole is being drilled wet.

The RC drilling should always be coupled with a certain amount of diamond drilling to better define the geology and the potential width of the mineralized zone as the project advances. This confirmatory diamond drilling would be used as a secondary check on the results obtained by the RC drilling.

Micon reviewed the samples and sampling procedures undertaken by Red Metal at the Farellon property during the September, 2009 drilling program. Micon believes that the samples are representative of the geology encountered in the drilling program and that the samples were taken in such a manner as to minimize any sampling bias.

### 13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Red Metal has conducted its initial exploration programs on the Farellon project in Chile which it acquired from Minera Farellon in April, 2008. As part of the initial exploration Red Metal conducted a 5 hole RC drilling program in September, 2009. As part of the drilling program Red Metal instituted a QA/QC program to address the security of the samples and integrity of the results from the program.

Sampling of the RC drill holes started at the collar of the hole and proceeded to the toe or bottom of the drill hole on one metre increments. Generally the sample recovery was good to excellent for the 2009 drilling program.

The cuttings for each one metre sample were 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 4 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. Acme Laboratories (Acme) sample tickets were added later and recorded in both the log and the stubs of the ticket book for precise sample control correlation. Washed drill chips or cuttings were also obtained from each sample interval of one metre 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. Figure 13.0 is a view of one of the chip trays for drill hole FAR-09-E containing a mineralized intersection.

Each sample destined for the assay laboratory had a paper ticket stapled on the inside of the bag and the number written twice on each bag with a permanent ink marker. Two rows of staples were used to seal each bag. Each sample was attended to individually and placed in order in poly-woven sacks which were then sealed.

The backup or representative samples for every metre of drilling from the 2009 drill program have been saved in heavy duty sample bag and stored in Canto del Agua at Red Metal's field house. The sample bags have been stored under heavy duty dark tarpaulins to protect them from deterioration under the strong sunlight. All samples have been clearly marked with drill hole and metreage information and an extra sample ticket was stapled to the sample bag.

In the sampling process, after every 25 samples either a blank, a standard or a duplicate was inserted in a rational system so that within each 75 samples, one of each type of the control and check samples was included.

The chip trays and 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. Micon visited the shed during its site visit and noted that it is very secure and that the key is held by the caretaker of the property.

**Figure 13.1**  
**Reverse Circulation Chip Tray for 2009 Drill Hole FAR-09-Et**



Photograph taken by Harry Floyd, September, 2009.

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 Acme in Santiago. Once in Santiago 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. Figure 13.1 summarizes the type and frequency of the QA/QC samples inserted at the various preparation stages.

**Table 13.1**  
**Summary of the Type and Frequency of the QA/QC Samples on the Farellon Project**

Stage	Type	Frequency	Description	Inserted By
After Splitting	Standard	1 per 75 Samples	One of 3 Standards	Red Metal
After Splitting	Blank	1 per 75 Samples	Pulp Blank	Red Metal
After	Crush Duplicate	1 per 75 Samples	Second 50 gm split	Acme Laboratory

Table provided by Red Metal Resources Ltd.

Figure 13.2 summarizes how the QA/QC samples were inserted into the sampling series for the 2009 drilling program.

**Table 13.2**  
**Summary of the Type and Frequency of the QA/QC Samples on the Farellon 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	Crush duplicate of sample 74
076-099	Samples collected and analyzed by geologist
100	Standard 2
101-124	Samples collected and analyzed by geologist
125	Blank pulp
126-149	Samples collected and analyzed by geologist
150	Crush duplicate of sample 149
151-174	Samples collected and analyzed by geologist
175	Standard 3
176-199	Samples collected and analyzed by geologist
200	Blank pulp
201-224	Samples collected and analyzed by geologist
225	Crush duplicate of sample 224

Table provided by Red Metal Resources Ltd.

## 13.1 RED METAL QA/QC PROTOCOL

### 13.1.1 Standard Samples

Red Metal is currently using 3 standards which it purchased for the drilling program. The 3 standards are comprised of 1 gold standard and 2 copper-gold multi-element standards. The gold standard (SG31) was purchased from RockLabs Limited in Auckland, New Zealand and the copper-gold multi-element standards (OREAS 91 and 96) were purchased from Analytical Solutions Ltd. based in Toronto, Canada. Table 13.3 summarizes the assay standards used for Red Metal's 2009 drilling program on the Farellon project as well as the number of each standard sent for analysis.

**Table 13.3**  
**Summary of the Standard Reference Material**

Type of Reference Material	Number of Standards sent	Label	Element	Recommended Value	95% Confidence Level	
					Low	High
Gold standard	3	SG-31	Gold	0.996 ppm	0.985 ppm	1.007 ppm
Copper-Gold multi-element standard	4	OREAS 94	Copper	1.14%	1.12%	1.17%
			Cobalt	23.1 ppm	22.2 ppm	24.0 ppm
Copper-Gold multi-element standard	3	OREAS 96b	Copper	3.93%	3.87%	3.99%
			Cobalt	49.9 ppm	47.6 ppm	52.1 ppm
<b>TOTAL :</b>	<b>10</b>					

Table provided by Red Metal Resources Ltd.

### 13.1.2 Blank Samples

Blank pulp samples were purchased from Accurassay Laboratories in Thunder Bay, Ontario, Canada. The blank pulp samples were inserted sequentially numbered on a ratio of one sample for every 75 samples.

### 13.1.3 Crush Duplicate Samples

Crush duplicates were obtained by requesting that Acme split 1 kg of material after crushing from the indicated sample to be analyzed. An empty sample bag containing the duplicate's sample tag was included in the sample shipment sent to Acme.

## 13.2 RESULTS FROM RED METAL'S 2009 DRILLING PROGRAM

### 13.2.1 Standard Samples

A total of 10 standard reference samples were submitted to Acme in Santiago for analysis during the 2009 drilling program. Table 13.4 summarizes the assay results for these samples. Figures 13.2, 13.3 and 13.4 graphically depict the assay results for each one of the different standard reference samples submitted to the assay laboratory. The number of standard reference samples is statistically too small to support any definitive conclusions. However, the results do appear to indicate that the assay procedures for both copper and gold at Acme in Santiago are 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 13.4**  
Summary of the Assay Results for the Standard Reference Samples Submitted by Red Metal to Acme

Standard Reference Sample ID	Drill Hole Number	Sample Number	Assay Results	
			Copper (%)	Gold (ppm)
SG-31	FAR-09-A	200275	----	0.926
	FAR-09-D	200425	----	0.971
	FAR-09-D	200650	----	0.949
OREAS 94	FAR-09-B	200125	1.105	----
	FAR-09-A	200350	1.163	----
	FAR-09-D	200500	1.115	----
	FAR-09-C	200725	1.131	----
OREAS 96b	FAR-09-E	200200	3.906	----
	FAR-09-D	200575	3.946	----
	FAR-09-C	200800	4.155	----

**Figure 13.2**  
Graph of the Assay Results for Standard Reference Sample SG-31 Submitted by Red Metal to Acme

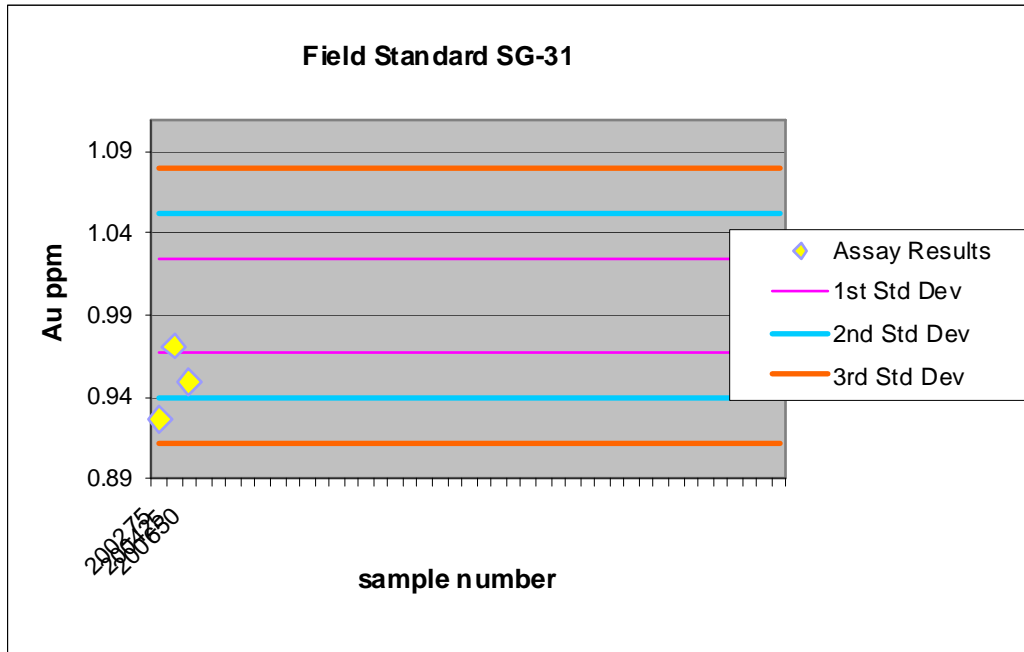


Figure provided by Red Metal Resources Ltd.

**Figure 13.3**  
Graph of the Assay Results for Standard Reference Sample OREAS 94 Submitted by Red Metal to Acme

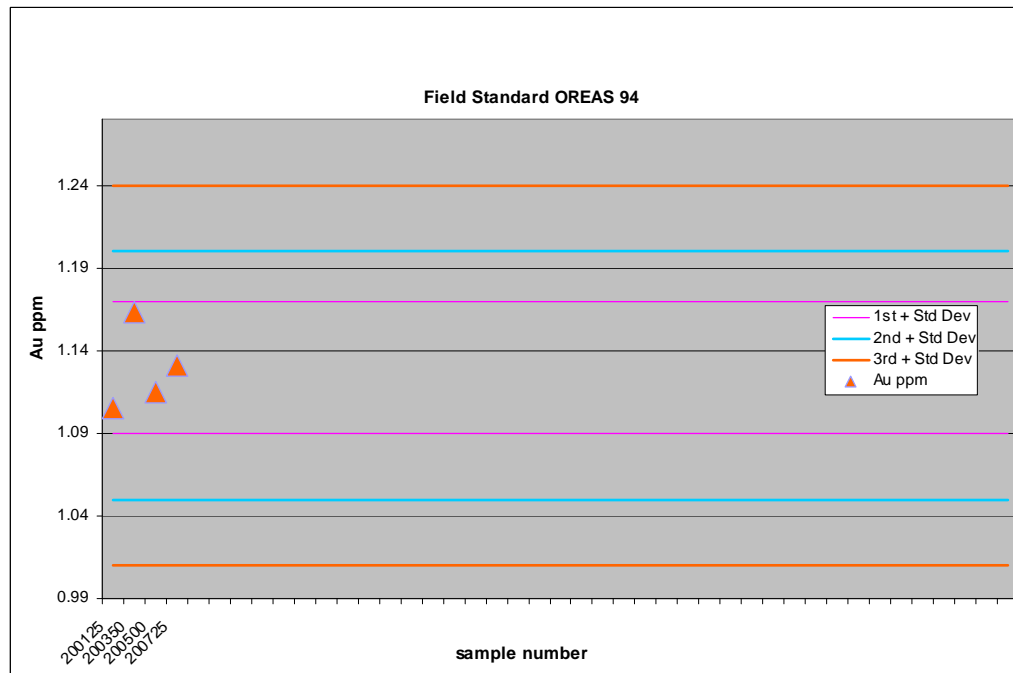


Figure provided by Red Metal Resources Ltd.

**Figure 13.4**  
Graph of the Assay Results for Standard Reference Sample OREAS 96b Submitted by Red Metal to Acme

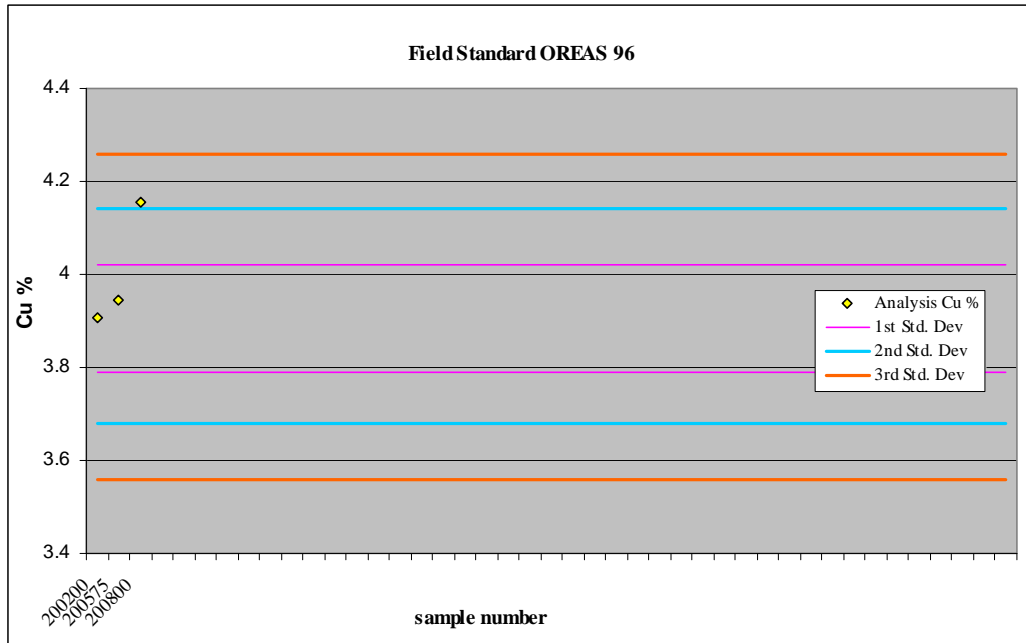


Figure provided by Red Metal Resources Ltd.

### 13.2.2 Results for the Blank Samples

A total of 10 blank samples were submitted to Acme in Santiago for analysis during the 2009 drilling program. Table 13.5 summarizes the assay results for these samples. Figure 13.5 graphically depicts the assay results for the 10 blank samples submitted to the assay laboratory. While 10 samples is statistically too small a number of samples upon which to base any definitive conclusions, all of the samples returned assays below or at the detection limit. Therefore, it appears that the sample preparation at Acme in Santiago 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 13.5**  
Summary of the Assay Results for the Blank Samples Submitted by Red Metal to Acme Laboratories

Drill Hole Number	Sample Number	Assay Results	
		Copper (%)	Gold (ppm)
FAR-09-B	200150	0.001	0.005
FAR-09-E	200225	0.001	0.005
FAR-09-A	200300	0.001	0.005
FAR-09-A	200375	0.001	0.005
FAR-09-D	200450	0.001	0.005
FAR-09-D	200525	0.001	0.005
FAR-09-D	200600	0.001	0.005

Drill Hole Number	Sample Number	Assay Results	
		Copper (%)	Gold (ppm)
FAR-09-D	200675	0.001	0.005
FAR-09-C	200750	0.001	0.005
FAR-09-C	200825	0.001	0.005

**Figure 13.5**  
**Graph of the Assay Results for the Blank Samples Submitted by Red Metal to Acme Laboratories**

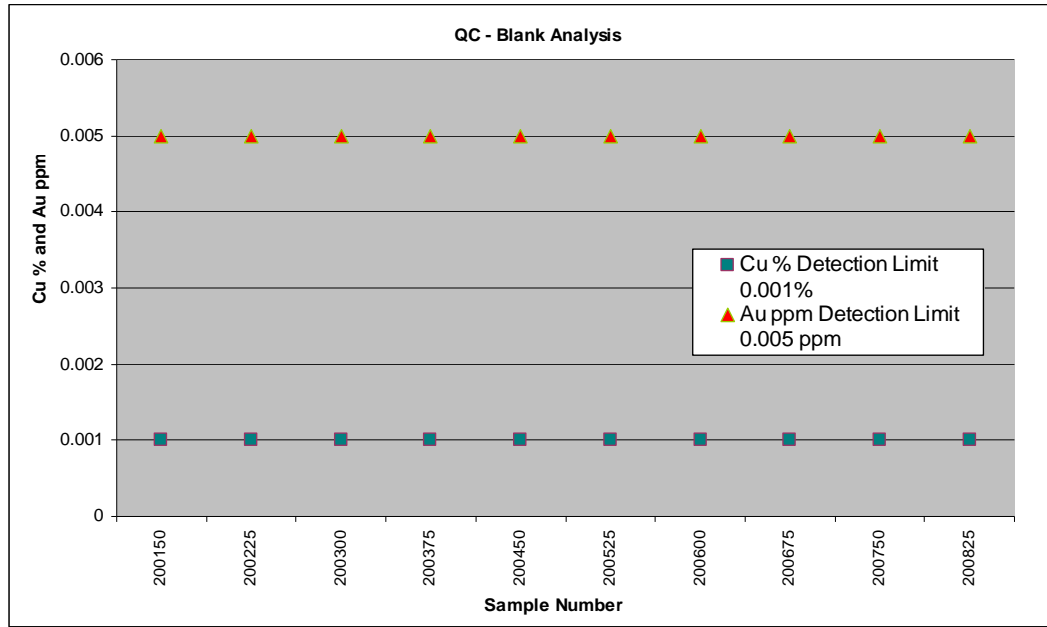


Figure provided by Red Metal Resources Ltd.

### 13.2.3 Crush Duplicate Samples

A total of 9 crush duplicate samples were submitted to Acme in Santiago for analysis during the 2009 drilling program. Table 13.5 summarizes the assay results for these samples. Figure 13.6 graphically depicts the assay results for the 9 crush duplicate samples submitted to the assay laboratory. The 9 samples are statistically too a small number 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. While the repeatability appears acceptable for the 9 samples, this has to be tempered by the knowledge that the duplicate sample originated as part of the original crushed sample and therefore the samples should match to a large degree.

**Table 13.6**  
**Summary of the Assay Results for the Crush Duplicate Samples Submitted by Red Metal to Acme Laboratories**

Drill Hole Number	Sample Number	Original Assay Results		Duplicate Assay Results		Mean		Absolute Difference	
		Copper (%)	Gold (ppm)	Copper (%)	Gold (ppm)	Copper	Gold	Copper	Gold
FAR-09-B	200174	0.569	1.279	0.562	1.107	0.5655	1.193	0.007	0.172
FAR-09-E	200249	0.007	0.005	0.006	0.005	0.0065	0.005	0.001	0.000
FAR-09-A	200324	0.044	0.01	0.044	0.009	0.044	0.0095	0.000	0.001
FAR-09-D	200399	0.004	0.006	0.004	0.005	0.004	0.0055	0.000	0.001
FAR-09-D	200474	0.031	0.013	0.031	0.011	0.031	0.012	0.000	0.002
FAR-09-D	200549	0.086	0.012	0.086	0.014	0.086	0.013	0.000	0.002
FAR-09-D	200624	0.018	0.008	0.017	0.006	0.0175	0.007	0.001	0.002
FAR-09-C	200699	0.002	0.009	0.002	0.009	0.002	0.009	0.000	0.000
FAR-09-C	200774	2.214	2.016	2.377	2.114	2.2955	2.065	0.163	0.098

**Figure 13.6**  
**Graph of the Assay Results for the Crush Duplicate Samples Submitted by Red Metal to Acme Laboratories**

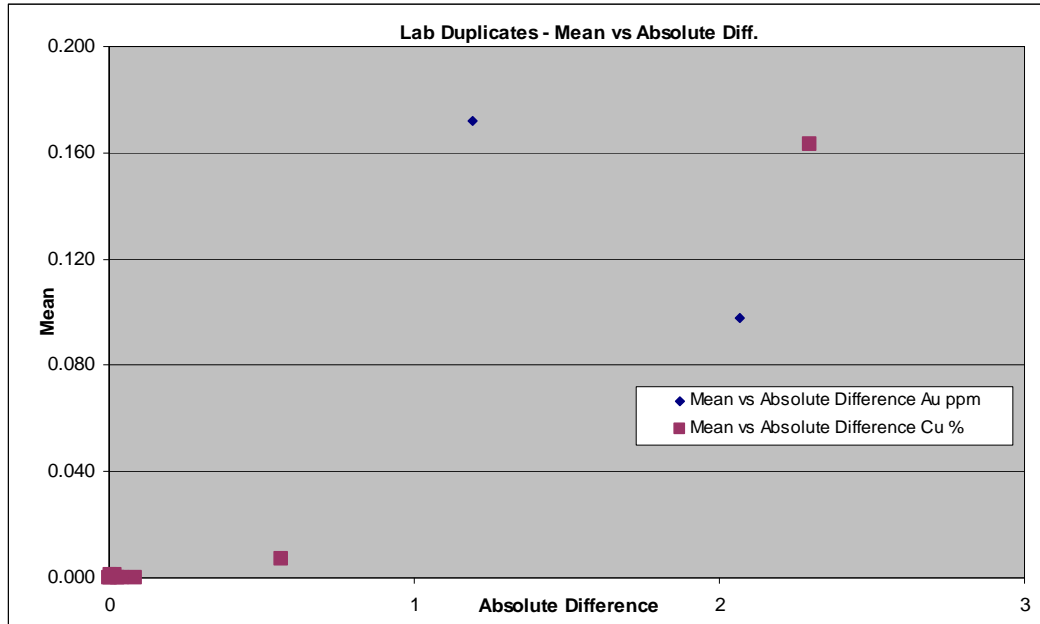


Figure provided by Red Metal Resources Ltd.

### 13.3 MICON COMMENTS REGARDING RED METAL'S 2009 QA/QC PROTOCOLS AND RESULTS

Micon has reviewed Red Metal's initial QA/QC protocols and generally agrees with them. However, as the exploration programs continue at the Farellon project and/or other projects, refinements to the program should be undertaken to ensure that Red Metal is following the August, 2000 CIM Exploration Best Practices Guidelines. Micon also recommends that Red Metal institutes a few additions or changes to its QA/QC protocols.

Micon recommends that, for future drilling programs, Red Metal acquires either some local unmineralized rock material or old bricks which can be crushed and used as the blank material for the purposes of sample analysis. The use of crushed local unmineralized rock material or old bricks will act as a better blind sample to be submitted to the assay laboratory than pulverized material will.

Micon recommends that, in future programs, Red Metal substitutes its crush duplicate with a true field duplicate where the duplicate sample is generated as part of initial field sampling process. The use of a field duplicate is a much better test of its and the assay laboratory's overall preparation process since a crush duplicate will not necessarily pick up any errors in the samples preparation process.

Micon recommends that Red Metal designate a secondary assay laboratory to re-assay a portion of between 5% and 10% of the samples assayed by Acme. This additional sampling procedure would act as a secondary check on the results produced by Acme.

## 14.0 DATA VERIFICATION

Micon conducted its site visit of the Farellon project from October 3 to 7, 2009. During this visit, a review of the exploration program and QA/QC procedures was conducted.

Three grab samples from the reverse circulation drilling were also taken to independently verify the mineralization encountered during the drilling program. Micon's grab samples were obtained from the larger backup sample (approximately 15 kg) retained by Red Metal. Micon's samples were carried back to Canada in the luggage of Mr. Lewis. Table 14.1 summarizes the Micon grab sample information.

**Table 14.1**  
Summary of Micon's Farellon Project Grab Sample Information

Micon Sample Number	Red Metal Sample Number	Location	Sample Interval (m)		
			From	To	Length
62135	200773	Hole FAR-09-C	80	81	1.0
62136	200296	Hole FAR-09-A	32	33	1.0
62137	200297	Hole FAR-09-A	33	34	1.0

Micon arranged for its grab samples to be analyzed for total copper, gold, silver and cobalt. All assaying was conducted by TSL Laboratories Inc. (TSL) of Saskatoon, Saskatchewan. TSL's quality system conforms to the requirements of ISO/IEC Standard 17025 Guidelines. The TSL assay techniques are summarized in Table 14.2. The results of the Micon grab sampling are summarized in Table 14.3. The TSL certificate of analysis is contained in Appendix 2.

**Table 14.2**  
TSL Extraction Techniques used on Micon's Farellon Project Grab Samples

Element Name	Unit	Extraction Technique	Lower Detection Limit	Upper Detection Limit
Gold	ppb	Fire Assay, AA	5	3,000
Silver	ppm	HNO <sub>3</sub> -HCl/AA	1	1,000
Copper	ppm	HNO <sub>3</sub> -HCl/AA	1	5,000
Copper	%	HNO <sub>3</sub> -HF-HClO <sub>4</sub> -HCl/AA	0.01	80
Cobalt	ppm	HNO <sub>3</sub> -HCl/AA	1	5,000

**Table 14.3**  
Assay Results for Micon's Farellon Project Grab Samples

Sample Number	Assay Result				
	Au (ppb)	Ag (ppm)	Cu (ppm)	Cu (%)	Co (ppm)
62135	630	1.9	>5,000	3.68	1,120
62136	800	3.3	>5,000	4.86	380
62137	480	2.4	>5,000	1.17	120
1 ppm = 1 g/tonne = 1,000 ppb = 0.0001 %					
10,000 ppb = 1%					

Table 14.4 compares Micon’s grab sample and Red Metal’s assay results.

**Table 14.4**  
**Comparison of Assay Results for Micon’s Grab Samples and Red Metal’s Samples for the Same Interval**

Micon Sample						Red Metal Sample					
Sample Number	Au (ppm)	Ag (ppm)	Cu (ppm)	Cu (%)	Co (ppm)	Sample Number	Au (ppm)	Ag (ppm)	Cu (ppm)	Cu (%)	Co (ppm)
62135	0.630	1.9	>5,000	3.68	1,120	200773	1.206	1.1	>10,000	1.908	776
62136	0.800	3.3	>5,000	4.86	380	200296	1.392	0.9	>10,000	3.963	506
62137	0.480	2.4	>5,000	1.17	120	200297	0.518	<0.3	>10,000	1.101	150

Micon has compared the assay results obtained from its grab samples of the material retained by Red Metal to the assay results obtained by Red Metal for the same assay interval. Micon notes that while its results for gold are generally lower than the results obtained by Red Metal for the same drill interval, they support the general tenor of Red Metal’s assay results. The differences in the assay results can be accounted for by the size of the sample, with Micon’s grab sample size being considerably smaller than Red Metal’s sample size of 2 to 4 kg, the possible nuggety nature of the gold and silver mineralization and general differences in the assay techniques between TSL and Acme.

During the site visit the drill pads for the current drilling program were visited and a number of the Minera Stamford drill hole collars were located and visited.

In addition, Micon’s reviewed all of the available material on the historical and current Farellon exploration programs, including all the geological data and reports for the project. This information was provided to Micon by Red Metal.

Micon also reviewed Red Metal’s QA/QC program during the site visit to Chile and found that the exploration program and QA/QC program were well run and generally meets the Exploration Best Practices Guidelines as published by the CIM in August, 2000.

## 15.0 ADJACENT PROPERTIES

There are no immediately adjacent properties which directly affect the interpretation, evaluation of the mineralization, or anomalies found on the Farellon property. However, the regional geology is such that there are a number of regional mineralized trends which cross the Farellon property and which Micon considers to positively affect the prospectivity of the ground.

### 15.1 CARRIZAL ALTO

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% copper and widths of 8 m were extracted, and there was also a large amount of direct shipping material containing 12% copper. A considerable body of tails and old dumps was present until recently which lent support to these figures. Table 15.1 summarizes the yearly production between 1862 and 1870.

**Table 15.1**  
**Summary of Carrizal Alto Production from 1862 to 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
<b>Total</b>	<b>222,064</b>	

Table taken from the 1991 Report by Ulriksen.

The principal north-east trending veins are the Mina Grande and Armonia vein systems or shear. Both of these systems were worked extensively, e.g., at Mina Grande the workings extended for 2.5 km as a nearly continuous line of pits, collapsed stopes, narrow open cuts and numerous shafts. The Armonia vein system is similar and extends for 1.8 km. Oxidation depths range from 50 m to 150 m and, judging from remnants, many of the veins were probably worked to these depths and abandoned as sulphide material were reached.

In the most productive zone at the Mina Grande, which stretched for 1.5 km, the vein is up to 15 m thick and is composed of quartz, sericite, chalcopyrite and pyrite. Amphibole rich seams occur towards the diorite wall rock, which itself frequently contains chalcopyrite and pyrite impregnations and smaller veins. The central and western end of the vein was also

particularly rich in cobalt with values in excess of 1% reported. Preliminary sampling of the workings indicates that cobalt is depleted near the surface.

The main producing mine 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 m to 15 m. The deepest workings reached 600 m and several slag dumps remain located around the site of the old local smelter which treated the sulphide ore.

## **15.2 CATALINA RESOURCES PLC – KAHUNA PROPERTY**

Catalina Resources PLC (Catalina) is a private UK registered mineral exploration company. Many, potentially mineralized, vein structures outcrop in the area. The main objective of Catalina's work program was to undertake a geophysical exploration program 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 prepared showing all of 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 polarization (IP) and magnetometry) completed during May, 2007, confirmed the continuity of the mineral-bearing structures between Carrizal Alto and the Kahuna area and have defined sites for follow-up drilling.

The ground magnetic survey was completed on a grid measuring 1.2 km by 3.2 km. A total of 70 km were surveyed on lines spaced 50 m apart. In the IP survey a total of 27 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 arrays.

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 thought to be fault zones that offset the mineralized shear zones slightly. A north-south trend is probably due to dykes.

A strong IP anomaly has been located in the western portion of the survey area. The IP anomaly also correlates with a shallow strongly conductive zone known to be associated with mineralization developed on the margin of the intrusive and exposed in shallow workings and warrants further attention.

Figure 15.1 shows the locations of the historic Carrizal Alto mine and the Catalina Resources property, in relation to the Farellon property.

**Figure 15.1**  
**Farellon Project Location in Relation to Adjacent Properties**

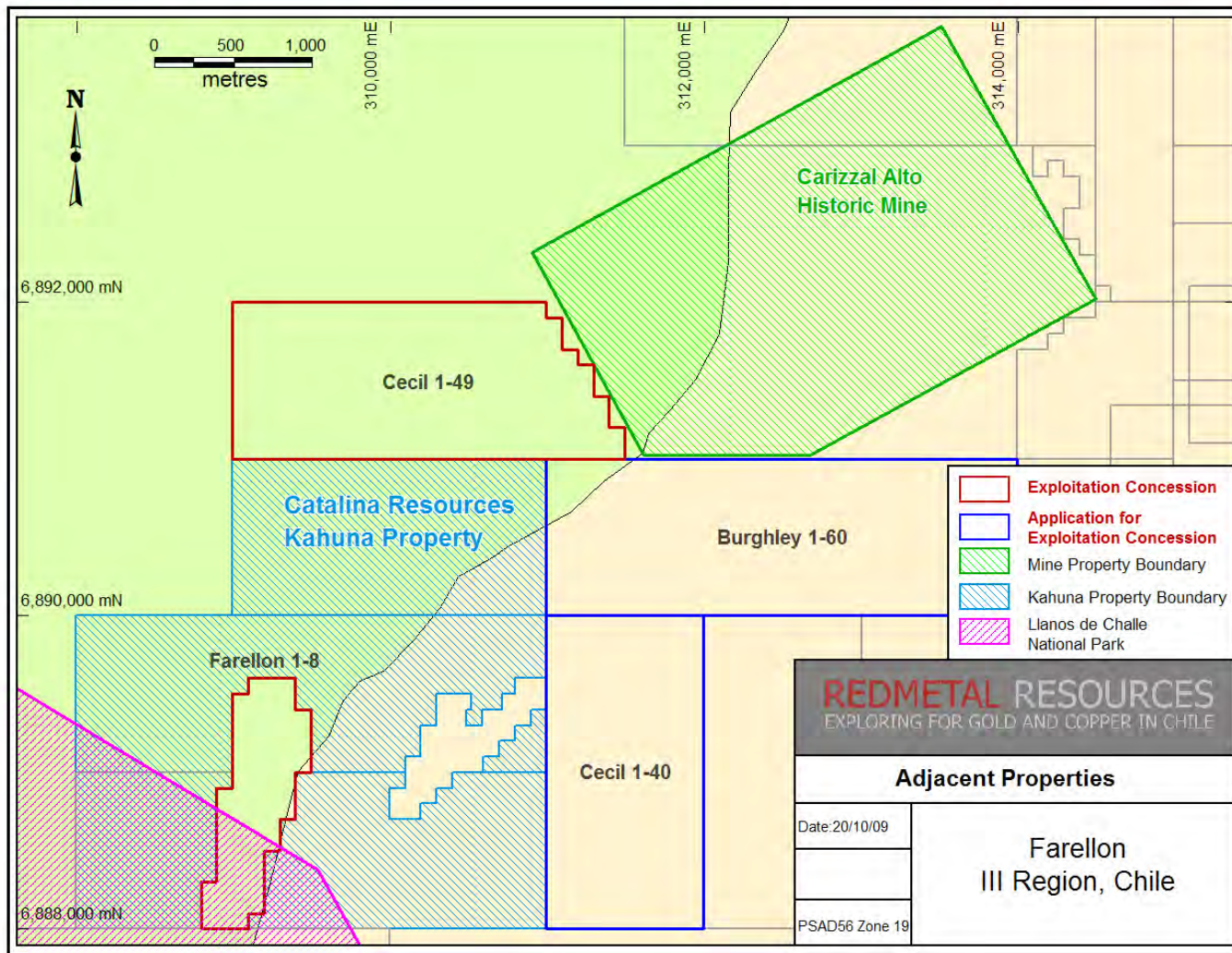


Figure provided by Red Metal Resources Ltd.

## **16.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

Red Metal is not reporting a mineral resource at the Farellon project and has performed no metallurgical testwork on the known mineralization.

Red Metal's focus will be on exploration for new zones of mineralization, in addition to evaluation of the known zones on the Farellon project. Further economic and technical evaluation of treatment options will likely be required in the future.

## **17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

As discussed in Section 6, some documentation exists for historical resource estimates on the Farellon project which were conducted prior to February 1, 2001. However, as exploration progresses on the Farellon 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 Farellon property, and to support an initial resource estimate by Red Metal.

## **18.0 OTHER RELEVANT DATA AND INFORMATION**

All relevant data and information regarding Red Metal's Farellon project is included in other sections of this report.

## 19.0 INTERPRETATION AND CONCLUSIONS

Red Metal first acquired the rights to the Farellon property in April, 2008 upon its Chilean subsidiary exercising the option to buy the property from Minera Farellon. Red Metal has started an initial exploration program to determine the full potential of the property.

Red Metal Resources conducted a short geological mapping program over the Cecil and Burghley claims to better define future exploration targets. The mapping was completed during May and June, 2009. Red Metal followed up the mapping program with a 5 hole RC drilling program, totalling 725 m, in September, 2009. For the period ending on October 31, 2009, Red Metal has spent an estimated total of CDN \$104,632 on the Farellon project since its acquisition.

The drilling program was designed for the most part to twin a number of Minera Stamford drill holes from the 1990's in order to verify the data acquired by the earlier drilling. No geological information was recovered from the Minera Stamford drill program and assays were not verified by any laboratory certificates. One drill hole tested 100 m below the known mineralization and one drill hole tested continuity of mineralization between previously drilled sections. All of the drilling conducted in 2009 was conducted outside the National Park boundaries.

The results of Red Metal's 2009 exploration drilling program to twin a number of Minera Samford's 1996 drill holes have confirmed the general location and tenor of the mineralization located during the 1996 drilling program. However, in two of the drill holes (FAR-09-A and FAR-09-E) the disparity between historical 1996 gold assays and the current 2009 gold assays merits further investigation during the next phase of exploration. In the case of FAR-09-E, the disparity between the historical 1996 and 2009 assays also occurs in the copper assays and this will also need to be further investigated during the next phase of drilling.

In general, the 2009 drilling program identified that the copper and gold mineralization located at the Farellon project exhibited a direct correlation with the earlier results in both location and relative intensity. Further exploration programs will therefore be able to build on this observation in outlining the relative location and spacing of further drill holes.

All drill holes during the 2009 drilling intersected oxide facies mineralization with only minor amounts of sulphides observed (drill hole FAR-09-D). Once the general trend of the mineralization is established it is expected that Red Metal will conduct some drilling in order to identify the oxide/sulphide interface at the Farellon project.

Micon reviewed the drilling and sampling procedures undertaken by Red Metal at the Farellon property during the 2009 program. Micon believes that the samples are representative of the geology encountered in the drilling program and that the samples were taken in such a manner as to minimize any sampling bias.

Micon has reviewed Red Metal's initial QA/QC protocols and generally agrees with them. However, as the exploration programs continue at the Farellon project and/or other projects, refinements to the program should be undertaken to ensure that Red Metal is following the August, 2000 CIM Exploration Best Practices Guidelines.

Through acquiring the Farellon property, Red Metal is in the position of having acquired a portion of a major historical mining district in Chile that has not been subjected fully 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.

The Farellon project should be considered to be an early stage exploration project upon which Red Metal has begun to conduct exploration and drilling in order to gain a further understanding of the nature and extent of the mineralization located on the property.

## 20.0 RECOMMENDATIONS

Red Metal, in its acquisition of the rights to the Farellon property, has been able to acquire a number of mineral concessions in a historical mining district in Chile which was a prolific past producer that was shut down due to economic conditions rather than the exhaustion of the deposits. Additionally, the mining district has for the most part not been subjected to modern exploration techniques. Red Metal has successfully completed its first exploration program on the Farellon property and has started to compile the little remaining historical information as well as its own information into a common database for the project.

Based on the positive results from Red Metal's first exploration program on the Farellon property it plans to conduct further exploration. Red Metal's next phase of exploration will consist of approximately 1,200 m of diamond drilling. The diamond drilling is necessary to assist in defining the structural controls on the mineralization which may have been misinterpreted in the past due to the limited geological information gained during the RC drilling. The program will also assist in defining the depth and nature of the sulphide mineralization. If the next phase of drilling is successful, Red Metal proposes to conduct a much larger phase of exploration which would consist of diamond and RC drilling, geophysical surveys and further geological mapping.

A geophysical survey using both magnetics and induced polarization (IP) will help identify further mineralized structures on the property that may not have been noticed in the historic mapping. A phase two drill program would be at defined spacing to outline the continuity of mineralization leading to a 3D model and initial resource estimation. The depth of the drilling would be dependent on the results of the phase one drill program

The budget for the two phases of exploration is summarized in Table 20.1.

**Table 20.1**  
**Farellon Project Exploration Budget**

<b>Farellon Budget</b>		
<b>Budget Item</b>	<b>Total (US \$)</b>	<b>Comments</b>
<b>Exploration (Phase 1) Target Delineation and Selective Testing</b>		
Diamond drilling	132,000	Diamond drilling at \$110/metre
Consulting geologist	22,500	Consulting geologist at \$500/day
Geotechnicians	6,750	Geotechnician at \$150/day
Heavy equipment rental	10,000	Drill access road and pad building
Assays	17,500	Assaying at \$25/sample
Room and board	9,000	\$100/day per geo & tech
10% contingency for miscellaneous items	19,775	Field supplies etc.
<b>Subtotal (Phase 1):</b>	<b>217,525</b>	
<b>Exploration (Phase 2) Exploration and Delineation of Discovery</b>		
Geophysical surveys	100,000	Magnetics and IP
Consulting geologist	60,000	Consulting geologist @ \$500/day
Geotechnicians	18,000	Geotechnician at \$150/day
Heavy equipment rental	30,000	Building drill pads and access roads
Assays	250,000	Assaying at \$25/sample
RC drilling	600,000	RC drilling at \$60/metre

<b>Farellon Budget</b>		
<b>Budget Item</b>	<b>Total (US \$)</b>	<b>Comments</b>
Diamond drilling	550,000	Diamond drilling at \$110/metre
3D Model and initial resource estimation	100,000	Consultants to build a 3D model required for future exploration and resource estimation
10% contingency for miscellaneous items	170,800	Field supplies etc.
<b>Subtotal (Phase 2):</b>	<b>1,878,800</b>	
<b>Total US \$ (Both Phases)</b>	<b>2,096,325</b>	

Budget provided by Red Metal Resources Corp.

Micon has reviewed Red Metal's proposal for further exploration on its Farellon property and recommends that Red Metal conducts the exploration program as proposed, subject to funding and any other matters which may cause the program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

Through its acquisition of the Farellon project, Red Metal has acquired a property with the potential to yield significant copper and gold mineralization. Micon agrees with the general direction of Red Metal's initial and proposed exploration programs for the project and makes the following additional recommendations for the property:

- 1) Micon recommends that, in the case where a disparity exists between the historical 1996 and 2009 gold assays for the twinned holes (FAR-96-022/FAR-09-A and FAR-96-021/FAR-09-E), Red Metal should undertake further metallic screen assays. The metallic screen assays will assist in determining what the potential nugget effect is for the gold assays. Additionally, any gold assays which exhibit significant differences between the historical and current assays for twinned holes should automatically be flagged for re-assay by the primary laboratory and are potential candidates for assaying by a secondary laboratory.
- 2) Micon recommends that, in the case where a disparity exists between the historical 1996 and 2009 copper assays for the twinned holes (FAR-96-021/FAR-09-E), Red Metal should undertake further metallic screen assays to determine if it has encountered any metallic copper in this portion of the deposit. Additionally, any copper assays which exhibit significant differences between the historical and current assays for twinned holes should automatically be flagged for re-assay by the primary laboratory and are potential candidates for assaying by a secondary laboratory.
- 3) Micon recommends that Red Metal should add a screened metallic assay protocol to its QC/QC program as a secondary check if high grade assays of gold or copper are encountered during future exploration programs or if there is a significant difference between the primary and secondary assays for both field duplicate and check samples.
- 4) Micon recommends that, for future drilling programs, Red Metal acquires either some local unmineralized rock material or old bricks which can be crushed and used as the

- blank material for the purposes of sample analysis. The use of the crushed local rock material or bricks will act as a better blind blank sample than a purchased blank pulp.
- 5) Micon recommends that, in future programs, Red Metal substitutes its current assay laboratory crush duplicate with a true field duplicate where the duplicate sample is generated as part of the initial field sampling process. The use of a field duplicate is a much better test of the assay laboratory's overall process from preparation through assaying, since a crush duplicate will not necessarily pick up any errors in the preparation process.
  - 6) Micon recommends that Red Metal designate a secondary assay laboratory to re-assay a portion of between 5% and 10% of the samples assayed by Acme. This additional sampling procedure would act as a secondary check on the results produced by Acme.

MICON INTERNATIONAL LIMITED

*"William J. Lewis"*

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January 15, 2010

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**CERTIFICATE OF AUTHOR  
WILLIAM J. LEWIS**

As the author of this report on the Farellon Property of Red Metal Resources Ltd., in Region III, Chile, I, William J. Lewis do hereby certify that:

- 1) I am employed by, and carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail [wlewis@micon-international.com](mailto:wlewis@micon-international.com);
- 2) I hold the following academic qualifications:  
  
B.Sc. (Geology) University of British Columbia 1985
- 3) I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of Manitoba (membership # 20480); as well, I am a member in good standing of several other technical associations and societies, including:
  - Association of Professional Engineers and Geoscientists of British Columbia (Membership # 20333)
  - Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (Membership # 1450)
  - Association of Professional Geoscientists of Ontario (Membership #1522)
  - The Geological Association of Canada (Associate Member # A5975)
  - The Canadian Institute of Mining, Metallurgy and Petroleum (Member # 94758)
- 4) I have worked as a geologist in the minerals industry for 25 years;
- 5) I am familiar with NI 43-101 and, by reason of education, experience and professional registration; I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 4 years as an exploration geologist looking for gold and base metal deposits, more than 11 years as a mine geologist in underground mines and 5 years as a surficial geologist and consulting geologist on precious and base metals and industrial minerals;
- 6) I conducted a site visit to the Farellon property in Chile between October 3 and 7, 2009. During the site visit I inspected a number of the current and historical drill pads and collars. I also obtained 3 grab samples from the 2009 drilling rejects and brought them back to Canada to verify the mineralization at the Farellon property.
- 7) As of the date of this certificate 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 this report not misleading;
- 9) I am independent of the parties involved in the transaction for which this report is required, other than providing consulting services;
- 10) I have read the NI 43-101 Instrument and this Technical Report has been prepared in compliance with this Instrument.
- 11) I am responsible for the preparation all sections of this Technical Report dated January 15, 2010 and entitled "NI 43-101 Technical Report on the Farellon Project, Region III, Chile".

Dated this 15 day of January, 2010

*"William J. Lewis"*

William J. Lewis, B.Sc., P.Geo.  
Senior Geologist,

## **APPENDIX 1**

### **GLOSSARY OF MINING TERMS**

## GLOSSARY AND DEFINED TERMS

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The following is a glossary of certain mining terms that may be used in this Technical Report.

### A

Adit	A horizontal passage from the surface into the mine providing access to a mineral deposit.
Ag	Silver.
Arsenopyrite	A tin-white or silver-white to steel-gray orthorhombic mineral: FeAsS.
Assay	A chemical test performed on a sample of ores or minerals to determine the amount of valuable metals contained.
Au	Gold.

### B

Backfill	Waste material used to fill the void created by mining an mineral deposit (orebody).
Back	A term used to denote the roof or ceiling of a mining drift.
Ball mill	A steel cylinder filled with steel balls into which crushed ore is fed. The ball mill is rotated, causing the balls to cascade and grind the ore.
Base metal	Any non-precious metal (eg. copper, lead, zinc, nickel, etc.).
Blasthole	A drill hole in a mine that is filled with explosives in order to blast loose a quantity of rock.
Bulk mining	Any large-scale, mechanized method of mining involving many thousands of tonnes of ore being brought to surface per day.
Bulk sample	A large sample of mineralized rock, frequently hundreds of tonnes, selected in such a manner as to be representative of the potential mineral deposit (orebody) being sampled and used to determine metallurgical characteristics.
Bullion	Metal formed into bars or ingots.
By-product	A secondary metal or mineral product recovered in the milling process.

### C

Cage	Mining term used for an elevator.
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Calcine	Name given to concentrate that is ready for smelting (i.e. the sulphur has been driven off by oxidation).
Chalcopyrite	A sulphide mineral of copper and iron; the most important ore mineral of copper.
Channel sample	A sample composed of pieces of vein or mineral deposit that have been cut out of a small trench or channel, usually about 10 cm wide and 2 cm deep.
Chip sample	A method of sampling a rock exposure whereby a regular series of small chips of rock is broken off along a line across the face, back or walls.
Chute	An opening, usually constructed of timber and equipped with a gate, through which ore is drawn from a stope into mine cars.
CIM	The Canadian Institute of Mining, Metallurgy and Petroleum.
CIM Standards	The CIM definitions and standards for mineral resources and mineral reserves adopted by CIM Council from time to time. Latest version adopted by the CIM Council on December 11, 2005.
Concentrate	A fine, powdery product of the milling process containing a high percentage of valuable metal.
Contact	A geological term used to describe the line or plane along which two different rock formations meet.
Core	The long cylindrical piece of rock, about an inch in diameter, brought to surface by diamond drilling.
Core sample	One or several pieces of whole or split parts of core selected as a sample for analysis or assay.
Cross-cut	A horizontal opening driven from a shaft and (or near) right angles to the strike of a vein or other orebody. The term is also used to signify that a drill hole is crossing the mineralization at or near right angles to it.
Cu	Copper.
Custom smelter	A smelter which processes concentrates from independent mines. Concentrates may be purchased or the smelter may be contracted to do the processing for the independent company.
Cut-off grade	The lowest grade of mineralized rock that qualifies as ore grade in a given deposit, and is also used as the lowest grade below which the mineralized rock currently cannot be profitably exploited. Cut-off grades vary between deposits depending upon the amenability of ore to gold extraction and upon costs of production.
Cyanidation	A method of extracting exposed gold or silver grains from crushed or ground ore by dissolving it in a weak cyanide solution. May be carried out in tanks inside a mill or in heaps of ore out of doors.

Cyanide            A chemical species containing carbon and nitrogen used to dissolve gold and silver from ore.

## **D**

Dacite             The extrusive (volcanic) equivalent of quartz diorite.

Decline            A sloping underground opening for machine access from level to level or from surface; also called a ramp.

Development      Underground work carried out for the purpose of opening up a mineral deposit. Includes shaft sinking, cross-cutting, drifting and raising.

Development drilling

Drilling to establish accurate estimates of mineral resources or reserves.

Dilution           Rock that is, by necessity, removed along with the ore in the mining process, subsequently lowering the grade of the ore.

Diorite             An intrusive igneous rock composed chiefly of sodic plagioclase, hornblende, biotite or pyroxene.

Dip                 The angle at which a vein, structure or rock bed is inclined from the horizontal as measured at right angles to the strike.

Drift                A horizontal or nearly horizontal underground opening driven along a vein to gain access to the deposit.

## **E**

Epithermal         Hydrothermal mineral deposit formed within one kilometre of the earth's surface, in the temperature range of 50° to 200°C.

Epithermal deposit

A mineral deposit consisting of veins and replacement bodies, usually in volcanic or sedimentary rocks, containing precious metals or, more rarely, base metals.

Exploration        Prospecting, sampling, mapping, diamond drilling and other work involved in searching for or defining a mineral deposit.

## **F**

Face                The end of a drift, cross-cut or stope in which work is taking place.

Fault                A break in the Earth's crust caused by tectonic forces which have moved the rock on one side with respect to the other.

Fold                 Any bending or wrinkling of rock strata.

Footwall	The rock on the underside of a vein or mineralized (ore) structure.
Fracture	A break in the rock, the opening of which allows mineral-bearing solutions to enter. A "cross-fracture" is a minor break extending at more-or-less right angles to the direction of the principal fractures.

## **G**

Galena	Lead sulphide, the most common ore mineral of lead.
Grade	Term used to indicate the concentration of an economically desirable mineral or element in its host rock as a function of its relative mass. With gold or silver, this term may be expressed as grams per tonne (g/t) or ounces per tonne (opt or oz/t).
Gram	0.0321507 troy ounces.
g/t	Grams per metric tonne.
gpt	Grams per tonne.

## **H**

Hangingwall	The rock on the upper side of a vein or mineral (ore) deposit.
High grade	Rich mineralization (ore). As a verb, it refers to selective mining of the best mineralization (ore) in a deposit.
Host rock	The rock surrounding a mineral (ore) deposit.
Hydrothermal	Processes associated with heated or superheated water, especially mineralization or alteration.

## **I**

### Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

### Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological

evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

**Intrusive** A body of igneous rock formed by the consolidation of magma intruded into other

## **K**

**km** Kilometre(s). Equal to 0.62 miles.

## **L**

**Leaching** The separation, selective removal or dissolving-out of soluble constituents from a rock or ore body by the natural actions of percolating solutions.

**Level** The horizontal openings on a working horizon in a mine; it is customary to work mines from a shaft, establishing levels at regular intervals, generally about 50 m or more apart.

**Limestone** A bedded, sedimentary deposit consisting chiefly of calcium carbonate.

**Longhole Mining**

One of the mining methods used to conduct bulk tonnage mining underground

## **M**

**m** Metre(s). Equal to 3.28 feet.

**Marble** A metamorphic rock derived from the recrystallization of limestone under intense heat and pressure.

**Measured Mineral Resource**

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

**Metallurgy** The science and art of separating metals and metallic minerals from their ores by mechanical and chemical processes.

Metamorphic	Affected by physical, chemical, and structural processes imposed by depth in the earth's crust.
Mill	A plant in which ore is treated and metals are recovered or prepared for smelting; also a revolving drum used for the grinding of ores in preparation for treatment.
Mine	An excavation on or beneath the surface of the ground from which mineral matter of value is extracted.
Mineral	A naturally occurring homogeneous substance having definite physical properties and chemical composition and, if formed under favorable conditions, a definite crystal form.
Mineral Claim or Concession	That portion of public mineral lands which a party has staked or marked out in accordance with federal or state mining laws to acquire the right to explore for and exploit the minerals under the surface.
Mineralization	The process or processes by which mineral or minerals are introduced into a rock, resulting in a valuable or potentially valuable deposit.
Mineral Resource	A concentration or occurrence of natural, solid, inorganic or fossilized organic material in or on the earth's crust in such form and quantity and of such grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge. The term mineral resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which mineral reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase reasonable prospects for economic extraction implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A mineral resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions, might become economically extractable. The term mineral resource used in this report is a Canadian mining term as defined in accordance with NI 43-101 – Standards of Disclosure for Mineral Projects under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the CIM), Standards on Mineral Resource and Mineral Reserves Definitions and guidelines adopted by the CIM Council on December 11, 2005 (the CIM Standards).

## N

### National Instrument 43-101

Means “Canadian” National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects, Form 43-101F1 and Companion Policy 43-101CP.

### Net Smelter Return

A payment made by a producer of metals based on the value of the gross metal production from the property, less deduction of certain limited costs including smelting, refining, transportation and insurance costs.

## O

**Orebody** A term used to denote the mineralization contained within an economic mineral deposit.

**Outcrop** An exposure of rock or mineral deposit that can be seen on surface, that is, not covered by soil or water.

**Oxidation** A chemical reaction caused by exposure to oxygen that results in a change in the chemical composition of a mineral.

**Ounce** A measure of weight in gold and other precious metals, correctly troy ounces, which weigh 31.1 grams as distinct from an imperial ounce which weigh 28.4 grams.

**oz** Ounce

## P

**Plant** A building or group of buildings in which a process or function is carried out; at a mine site it will include warehouses, hoisting equipment, compressors, maintenance shops, offices and the mill or concentrator.

**Pyrite** A common, pale-bronze or brass-yellow, mineral. Pyrite has a brilliant metallic luster and has been mistaken for gold. Pyrite is the most widespread and abundant of the sulfide minerals and occurs in all kinds of rocks.

## Q

**Qualified Person** Conforms to that definition under NI 43-101 for an individual: (a) to be an engineer or geoscientist with at least five years' experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these; (b) to have experience relevant to the subject matter of the mineral project and the technical report; and (c) to be a member in good standing of a professional association that, among other things, is self-regulatory, has been given authority by statute, admits

members based on their qualifications and experience, requires compliance with professional standards of competence and ethics and has disciplinary powers to suspend or expel a member.

## **R**

Raise	A vertical hole between mine levels used to move ore or waste rock or to provide ventilation or access.
Ramp	An inclined underground tunnel which provides access for exploration or a connection between levels of a mine.
Reclamation	The restoration of a site after mining or exploration activity is completed.
Recovery Rate	A term used in process metallurgy to indicate the proportion of valuable material obtained in the processing of an ore. It is generally stated as a percentage of the material recovered compared to the total material present.
Red Metal	Red Metal Resources Ltd., including, unless the context otherwise requires, the Company's subsidiaries.
Refining	The final stage of metal production in which impurities are removed from the molten metal.
Refractory ore	Ore that resists the action of chemical reagents in the normal treatment processes and which may require pressure leaching or other means to effect the full recovery of the valuable minerals.
Rod mill	A steel cylinder filled with steel rods into which crushed ore is fed. The rod mill is rotated, causing the balls to cascade and grind the ore.

## **S**

Shaft	A vertical passageway to an underground mine for moving personnel, equipment, supplies and material including ore and waste rock.
Shoot	A concentration of mineral values; that part of a vein or zone carrying values of ore grade.
Sill	A term used to denote the floor of a mining level or drift. Also, used to denote a mining level developed on mineralization or orebody.
Skarn	Name for the metamorphic rocks surrounding an igneous intrusive where it comes in contact with a limestone or dolostone formation.
Sphalerite	A zinc sulphide mineral; the most common ore mineral of zinc.
Stockpile	Broken mineralization (ore) heaped on surface, pending treatment or shipment.
Stope	An area in an underground mine where mineralization (ore) is mined.

Strike	The direction, or bearing from true north, of a vein or rock formation measured on a horizontal surface.
Stringer	A narrow vein or irregular filament of a mineral or minerals traversing a rock mass.
Sulphides	A group of minerals which contains sulfur and other metallic element such as copper and zinc. Gold is usually associated with sulphide enrichment in mineral deposits.

## **T**

Tailings	Material rejected from a mill after most of the recoverable valuable minerals have been extracted.
Tailings pond	A low-lying depression used to confine tailings, the prime function of which is to allow enough time for heavy metals to settle out or for cyanide to be destroyed before water is discharged into the local watershed.
Tonne	A metric ton of 1,000 kilograms (2,205 pounds).
Tunnel	A horizontal underground opening, open to the atmosphere at both ends.

## **V**

Vein	A fissure, fault or crack in a rock filled by minerals that have travelled upwards from some deep source.
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## **W**

Wall rocks	Rock units on either side of a mineral deposit (orebody). The hangingwall and footwall rocks of a mineral deposit (orebody).
Waste	Unmineralized, or sometimes mineralized, rock that is not minable at a profit.

## **Z**

Zone	An area of distinct mineralization.
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## **APPENDIX 2**

### **TSL LABORATORIES CERTIFICATE OF ANALYSIS**



2 - 302 48th Street • Saskatoon, SK • S7K 6A4  
P (306) 931-1033 F (306) 242-4717 E info@tsllabs.com

Company: Micon International Ltd.  
Geologist: B. Lewis  
Project: 0955

TSL Report: S35732  
Date Received: Oct 20, 2009  
Date Reported: Oct 28, 2009  
Invoice: 55751

Remarks:

Sample Type:	Number	Size Fraction	Sample Preparation
Rock	3	Reject ~ 70% -10 mesh (1.70 mm)	Crush, Riffle Split, Pulverize
		Pulp ~ 95% -150 mesh (106 µm)	
Pulp	0		None
Pulp Size: ~250 grams			

Standard Procedure:

Samples for Au Fire Assay/AA (ppb) are weighed at 50 grams  
Samples for Au Fire Assay/Gravimetric (g/tonne) are weighed at 1 AT (29.16 grams).  
Samples for Ag (ppm), Base Metals (%) are weighed at 0.5 gram.

Element Name	Unit	Extraction Technique	Lower Detection Limit	Upper Detection Limit
Au	ppb	Fire Assay,AA	5	3000
Ag	ppm	HNO <sub>3</sub> -HCl/AA	1	1000
Cu	ppm	HNO <sub>3</sub> -HCl/AA	1	5000
Cu	%	HNO <sub>3</sub> -HF-HClO <sub>4</sub> -HCl/AA	0.01	80
Co	ppm	HNO <sub>3</sub> -HCl/AA	1	5000

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#2 - 302 48<sup>th</sup> Street · Saskatoon, SK · S7K 6A4  
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**CERTIFICATE OF ANALYSIS**

**SAMPLE(S) FROM** Micon International Ltd.  
Suite 900 - 390 Bay Street  
Toronto, ON M5H 2Y2

**REPORT No.**  
S35732

**SAMPLE(S) OF** 3 Rock/0 Pulp

INVOICE #: 55751  
P.O.:

B. Lewis  
Project:0955

	Au ppb	Ag ppm	Cu ppm	Cu %	Co ppm	File Name
62135	630	1.9	>5000	3.68	1120	S35732
62136	800	3.3	>5000	4.86	380	S35732
62137	480	2.4	>5000	1.17	120	S35732
SH35	1310					S35732
FCM-3		23.0	2720			S35732
TPO-1					185	S35732
HLHZ				.78		S35732

COPIES TO: B. Lewis  
INVOICE TO: Micon International Ltd.

Oct 28/09

SIGNED

Mark Acres - Quality Assurance