# MINERAL RESOURCE ESTIMATE COPAQUIRE PROJECT



Región de Tarapacá Provincia de Iquique Region I CHILE

Latitude 20° 55.5' S Longitude 68° 53.5 W

Prepared for International PBX Ventures Ltd.

By

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# 1 SUMMARY AND CONCLUSIONS

The Copaquire property consists of six mining exploitation concessions located in Region I, Provincia de Iquique, northern Chile, about 1,450 kilometres north of Santiago and approximately 15 kilometres west of the Collahuasi and Quebrada Blanco producing mines.

Minera IPBX Limitada (IPBX), a wholly-owned Chilean subsidiary of International PBX Ventures Ltd. of Vancouver, Canada entered into an option to purchase agreement in January 2004 with the two private Chilean companies, namely Sociedad Legal Minera Macate Primera de Hautacondo and Compănia Minera Huatacondo Sociedad Contractural Minera, that hold a 100% undivided interest. The 100% interest can be acquired, subject to a 2% NSR held by the vendors, for cash payments totalling US \$2.1 million by July 16, 2008. The NSR can be purchased for US \$2 million.

The Copaquire district was worked during the late 1800's with estimated production of about 180,000 tons grading about 3.0% copper. Placermetal (1976 – 1977) completed surface chip sampling and drilled 9 diamond drill holes testing the main molybdenum showings at Cerro Moly in the SW part of the Copaquire system. In 1993, Cominco completed 15 RC holes in the Sulfato Zone. Minera IPBX Limitada began work on the concessions in 2004 including reconnaissance mapping and sampling and an IP survey. From 2005 to September 2007, IPBX completed 69 core holes on the property, 48 of which were drilled to test the Cero Moly zone.

The Copaquire alteration system, host to porphyry copper-molybdenum mineralization, covers at least 6 to 8 km<sup>2</sup> at the north end of the Chuquicamata-El Abra-Quebrada Blanca-Collahuasi horst block. Copaquire exhibits classic concentric alteration zones and fault related veinlet stockworks and breccias in a quartz monzonite intrusive situated in close proximity to the north-south trending West Fissure Zone. The exposed part of the Copaquire system is similar in size to the Rosario system at Collahuasi which contains published resources of 3.1 billion tonnes grading 0.8% Cu and 0.015% Mo.

Resource estimation was constrained by a 3-dimensional solid model developed from geological and analytical data. Block size was 24x24x24 metres and grade estimation was carried out by the ordinary kriging using 12 metre downhole drill composites. Blocks were estimated in three passes using incremental search distances of 50, 100 and 200 metres. Composites containing sample grades exceeding 0.36% Mo or 1% Cu were limited in influence to the first pass. Tonnes were calculated using median SG values for the major lithologies based on 126 measurements of drill core. No blocks were classified as measured due to wide sample spacing and lack of precise topographic data. In order to be classified as indicated, a block was required to have at least 5 composites within a radius of 100 metres which was the maximum variogram range. If the distance to the nearest composite was greater than the block dimension then more than one hole was also required. All other estimated blocks were assigned to the inferred category which required a minimum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites within a 200 metre search distance with a maximum of 4 composites permitted from a single drill hole.

The table below presents the Copaquire resource estimate at a range of cutoff grades.

	Cutoff Grade	Tonnes >	Ave Gra	rage de	Contain	ed Metal
	(Mo%) Cut		Mo %	Cu %	lbs Mo	lbs Cu
Indicated	0.02	183,200,000	0.046	0.107	185,800,000	432,200,000
	0.03	160,000,000	0.049	0.106	172,800,000	373,800,000
	0.04	98,000,000	0.058	0.097	125,300,000	209,500,000
Inferred	0.02	212,800,000	0.041	0.097	192,400,000	455,100,000
	0.03	193,400,000	0.043	0.096	183,300,000	409,300,000
	0.04	110,200,000	0.049	0.094	119,100,000	228,400,000

#### Table 1-1 2007 Cerro Moly mineral resource estimate

# 2 INTRODUCTION AND TERMS OF REFERENCE

The author of this report has been retained by International PBX Ventures Ltd. ("IPBX") to prepare a resource estimate on the Cerro Moly deposit. This technical report has been prepared in compliance with the requirements of National Instrument 43-101 and Form 43-101F1 and is intended to be used as supporting documentation to be filed with the British Columbia Securities Commission and as a basis for a preliminary assessment.

The author visited the Copaquire property on May 17, 2007. The site inspection included examination of drill sites, drill core, surface outcrops and the sample preparation facility. The author has also reviewed the geological information from previous programs and other relevant data available in the La Serena and Vancouver offices. The author is of the opinion that the programs and the data have been conducted and gathered in a professional and ethical manner and conforms to standards acceptable within the industry.

# 3 DISCLAIMER

The mineral resource estimates referred to within this document include the use of inferred resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It cannot be assumed that all or any part of an Inferred Mineral Resource will ever be upgraded to a higher category.

This report includes technical information, which requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, GeoSim does not consider them to be material.

## 4 PROPERTY DESCRIPTION AND LOCATION

## 4.1 Location

The location of the Copaquire Property on the pre-Cordiera, a rolling up-land plateau of northern Chile, Region I, Provincia de Iquique, Administrative Región de Tarapacá, is illustrated on Figure 4-1. The Copaquire Property lies about 1,450 km north of Santiago, and 125 kilometres south-east of the city of Iquique. The claim block centre is at approximately 7,687,700N and 510,500E (Grid Reference: UTM Zone 19S, South American (SA) 56 Provisional); geodetic coordinates, with respect to ellipsoid 1924 International, pursuant to the area 1:50,000 topographc maps, are Latitude 20 55' 30" S and Longitude 68 53' 30" W.



Figure 4-1 Location Map

## 4.2 Mineral Rights

The property consists of 6 contiguous fully constituted exploitation concessions as listed in Table 4-1 and illustrated on Figure 4-2 in UTM grid reference, Zone 19S, WGS 84. According to Minera IPBX Limitada the concessions have been legally surveyed in accordance with the Chilean Mining Code. The concessions cover an area of 1457 hectares and extend approximately 6.5 km EW and 7.5 km in the NS direction.

Concession name	Concession Status	Area ha	Concession number (ROL Nacional)	2004 Tax (CP)	2005 Tax CP
Copaquire 1 to 950	Mensura Constituida	875	012036004-0	2581425	2641275
Condorito 1 to 995	Mensura Constituida	449	012030001-6	1324640	1355352
Don Andres Cinco 1 to 11	Mensura Constituida	88	012030378-3	259618	265637
Tutankhamen 1, 2 and 3	Mensura Constituida	15	012030026-1	44253	45279
Isabel 1, 2 and 3	Mensura Constituida	15	012030024-5	44253	45279
Jorgecito 1, 2 and 3	Mensura Constituida	15	012030025-3	44253	45279

#### Table 4-1 Copaquire exploitation concessions

#### Notes:

1) According to a legal title opinion by Lopez & Ashton Ltda (2004) the exploitation concessions listed in Table 1 are comprised of concessions, each having an area of 5 hectares, as follows;

- a) Copaquire 1-950 consists of: "COPAQUIRE 6 to 9, 38 to 51, 68 to 83, 100 to 115, 131 to 147, 162, 179, 193 to 211, 225 to 235, 237 to 243, 258 to 275, 291 to 307, and 324 to 330" for a total of 175 concessions covering an area of 870 hectares and "COPAQUIRE 236" area of 5 hectares.
- b) Condorito 1 to 995 consists of: "CONDORITO 413, 488, 513, 588, 613, 688, 710 to 722, 779 to 792, 808 to 822, 879 to 894, 906 to 922 and 979 to 990" with a total of 93 concessions and an area of 465 hectares
- c) "DON ANDRES CINCO 1 TO 11" with a total of 11 concessions and an area of 88 hectares, and
- d) "Tutankhamen 1, 2 and 3"; "Isabel 1, 2 and 3" and "Jorgecito 1, 2 and 3" with a total of 9 concessions and an area of 45 hectares.
- 2) 2004 and 2005 taxes have been paid. Chilean Pesos (currently \$1CDN =450 CP)
- 3) All the claims are surveyed, and of the "exploitation-granted" class
- 4) Claims are identified on Figures 2 and 3 by their concession names
- 5) Total area for the 6 concessions is 1,457 hectares

6) The gap between the north boundary of the Copaquire 1 to 950 and the south boundary of the Condorito 1 to 995 concessions, illustrated on Figures 2 and 3, is, according to Minera IPBX Limitada a "survey fraction" and pursuant to the Chilean Mining Code, is owned by the owners of the adjoining exploitation concessions.



Figure 4-2 Concession Location Map

Ownership details of the abovementioned claims were supplied by Minera IPBX Limitada and have not been independently verified by the author. According to documentation from Lopez & Ashton Ltda, legal counsel to Minera IPBX Limitada, dated February 3, 2004, the claims are 100% owned by two companies, in good standing, incorporated in the Republic of Chile, namely a) Sociedad Legal Minera

Macate Primera de Huatacondo and b) Compănia Minera Huatacondo Sociedad Contractural Minera. Minera IPBX Limitada, a wholly-owned subsidiary of International PBX Ventures Ltd. was incorporated in Chile in March of 1997, and has the right to earn a 100% interest in the exploitation concessions listed in Table 1 in Item 6(c) hereof. International PBX Ventures Ltd. is a public company incorporated in Canada, with office address at Suite 209, 475 Howe Street, Vancouver, BC, Canada, V6C 2B3.

According to Minera IPBX Limitada the only obligations the concessions are subject to are the payment of annual taxes and the obligations pursuant to an option to purchase agreement as set forth herein in Item 6(g). Taxes have been paid for 2004.and 2005. Taxes on exploitation concessions in Chile are due annually on March 31st.

In regards to the expiration of the concessions, they can be retained in good standing in perpetuity provided the annual taxes are paid, since they are exploitation concessions.

On January 8th, 2004 Minera IPBX Limitada signed a letter of intent for a unilateral option to purchase agreement with Sociedad Legal Minera Macate Primera de Huatacondo and Compãnia Minera Huatacondo Sociedad Contractural Minera, both private Chilean companies owned and controlled by the Escala family of Santiago, Chile, regarding the mining claims listed in Table 1 in Item 6(c) hereof. The formal agreement was signed on January 16th, 2004.

Pursuant to the abovementioned agreement, the vendors agree to sell, cede, assign and transfer to Minera IPBX Limitada the abovementioned exploitation concessions provided Minera IPBX Limitada make the following option payments;

1.	On signing of a letter of	intent	US\$	5,000
2.	On signing of the formal	agreement	US\$	20,000
3.	On July 16th, 2004	0	US\$	25,000
4.	On January 16th, 2005		US\$	25,000
5.	On July 16th, 2005		US\$	25,000
6.	On January 16th, 2006		US\$	25,000
7.	On July 16, 2006		US\$5	600,000
8.	On July 16, 2007		US\$7	′50,000
9.	On July 16, 2008		US\$7	′50,000
	Ū.			
		Total	US\$2	2,100,000

Upon Minera IPBX Limitada making payments totalling US\$2,100,000 then Minera IPBX Limitada will hold a 100% interest in the exploitation concessions, listed in Table 1 in Item 6(c) hereof, and the vendors will retain a 2% NSR subject to a buy out by Minera IPBX Limitada for US\$2,000,000 or alternatively for US\$1,000,000 per percentage point.

In addition, Minera IPBX Limitada agreed to endeavour to complete US\$1.5 million worth of work on the property by September 2008, however are not obliged to incur exploration expenditures to earn their interest.

According to Minera IPBX Limitada all due payments pursuant to the option to purchase agreement listed above have been made.

In addition to the terms of the abovementioned legal agreement, according to Minera IPBX Limitada the only other encumbrance on the property is payment of taxes, due annually on March 31st, pursuant to the Chilean Mining Code.

## 4.3 Permits & Environmental Liabilities

Adits, pits and trenches were excavated on many mineralized zones on the property prior to involvement by Minera IPBX Limitada. Minera IPBX Limitada has re-cleared some access roads in order to carry out drilling. According to Minera IPBX Limitada, under the Mining and Environmental Laws of Chile, all mining activity that occurred on the property prior to the involvement of the current operator does not carry any environmental liability to the current operator. Despite some existing shallow ground disturbances, the author is not aware of any existing specific environmental liabilities. Given that the area is very dry, practically void of vegetation, of little value for agricultural or farming uses and lacks permanent residents there is very little for exploration or development to impact upon.

# 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 Access, Local Resources and Infrastructure

The area is well served with roads that branch off the roads servicing the mining operations at Quebrada Blanca and Collahuasi. Several small communities, Pozo Almonte and Guatacondo, with limited goods and services are present within approximately 50 kilometres of the property.

The community of Iquique, on the Pacific coast, is 125 kilometres to the northwest and currently serves the Quebrada Blanca and Collahuasi mining operations with supplies personnel and deep sea port facilities for shipping. Iquique is linked to Santiago and other communities in northern Chile by the Pan American highway, a regularly scheduled commercial airline and commercial bus operators.

Some process water is available in the Guatacondo and Copaquire creeks (a flow rate of about 450 litres per second has been roughly estimated) however the local area is generally arid. If the local creeks and ground water supply is insufficient for mining and milling then water will need to be piped to site. The property has sufficient size to accommodate a mining operation without any negative impact on the environment. Permanent residents do not live on or within the area of the property.

The Pan-American Highway and three phase high tension electrical power are located 55 kilometres to the west. The historic mining towns of Pica and Pozo Almonte are 50 and 90 kilometres respectively to the northwest and the Collahuasi copper mine is twenty kilometres to the east of the Copaquire propery which may be a potential alternate power source.

## 5.2 Physiography

The property is located in the Chilean pre-Cordiera, a rolling up-land plateau between 4,000 and 4,500 metres elevation that is locally strongly dissected by large creeks (quebradas) which can give rise to local rough terrain. The eastern half of the property covers the confluence between the westerly draining Guatacondo-Copaquire creeks and southerly draining El Sulfato creek at elevations between 3,500 and 4,000 metres. The area is desert like; very dry, with minimal rainfall. The property is nearly void of vegetation however, desert cactus vegetation occurs locally on some mountain slopes whereas various grasses and shrubs occur sporadically in stream valleys.

The local climate is generally arid with summer temperatures ranging from 10°C to over 25°C and in winter from a few degrees below zero to 15°C. Rainfall is very sparse and occurs mainly during January,

February and March. During some exceptional years there are light snow falls during June and July. Exploration and mining can be carried out on this property throughout the year.

## 6 HISTORY

## 6.1 Prior ownership and ownership changes

Mr. Keighley registered the Condorito 1-995 concessions in 1960 and the Copaquire 1-950 concessions in 1961. In 1965 Sociedad Minera del Norte (NORMINA), owned, in part at least, by Mr. Keigley explored the area.

In 1976 the concessions "Condorito 1-995 " and "Copaquire 1-950" were owned by Sociedad Legal Minera Copaquire Primera de Tetas de Copaquire and said company transferred them to Sociedad Contractual Minera Placermetal de Copaquire on September 29, 1976.

December 16, 1977 and January 10, 1978, "Sociedad Contractual Minera Placermetal de Copaquire returned the concessions "Condorito 1-995" and most of "Copaquire 1-950" to the owners of Sociedad Legal Minera Copaquire Primera de Tetas de Copaquire who registered them in the name of the new company "Sociedad Legal Minera Macate Primera de Huatacondo".

Cominco explored the concessions during 1993 however the property was retained in the name of the vendors.

In 1994 Minera IPBX Limitada entered into an option to purchase agreement with the vendors. This included obtaining a legal title opinion on the property subject to the option to purchase agreement. The title opinion traces the concessions from initial registration to the current owners and includes dates, locations, and page numbers where registrations of property changes were recorded. The 43-101 technical report by Robinson (2005) documents this in greater detail.

## 6.2 Production, exploration and development by previous and current owners

Copaquire is a well mineralized district known to have been worked in the late 1800's with a significant record of copper production estimated to be in the order of 180,000 tons grading about 3.0% copper mainly from high grade veins within the structures and mantos in the leached cap.

The Sulfato mine situated in Quebrada Sulfato at 511350E, 7686370N (grid reference: UTM Zone 19S, WGS84) was held under lease from 1996 to 1998 by Campañia Minera Tamentica. Underground sampling was carried out. A vertical cross-section through the Sulfato mine obtained from Minera IPBX Limitada, assuming the section was neither reduced nor enlarged and the numerical scale is accurate, follows. The mine workings consist of two main adits, separated by 200 vertical metres, driven horizontally into the side of the mountain for 850m and 650m respectively. Five additional adits, each approximately 100 vertical metres higher up the mountain, were driven horizontally into the mountain for distances that varies from 20m to 200m. Adits driven into the mountain cover some 900 vertical metres. The vertical section indicates that a mineralized zone extends horizontally into the mountain for about 900 metres from the face of the mountain and follows the slope of the mountain.

The Marta Mine is situated at 509325E and 7685550N (grid reference: UTM Zone 19S, WGS84). According to Minera IPBX Limitada the existence, or possible whereabouts, of historical records for this deposit has not been determined.

In 1965 Sociedad Minera Del Norte (NORMINA) contracted an independent consultant to evaluate its Copaquire molybdenum property. Two chip samples, over 2,700 feet and 1,100 feet, respectively, were collected some 2,000 feet apart on opposite sides of an identified mineralized zone. Mr. Keighley was a principle of NORMINA (Lindley, 1965). Mr. Keighley registered the "Copaquire 1 to 950" properties in 1961 and the "Condorito 1 to 995" properties in 1960 as stated previously in Item 8(a) hereof.

In 1976 and 1977 Compañia Minera Placermetal completed stream sediment and rock chip sampling programs and drilled 9 diamond drill holes, illustrated on Figure 9 totalling 2,128 metres to a maximum depth of 500 metres to test the main zone of molybdenum showings in the Cerro Moly phyllic core. From Minera IPBX Limitada the author obtained a compilation of the drill hole assay data and only a few pages of the Placermetal report. The Placermetal drill logs were not obtained by the author.

In 1993 Cominco Resources Chile drilled 18 widely spaced, shallow RC drill holes. Ten of these drill holes totally 1,536 metres were collared on the Copaquire property exploitation concessions, currently held by Minera IPBX Limitada under an option to purchase agreement, and tested a 2 km<sup>2</sup> area of the northeast, Sulfato phyllic core (Figure 9). Minera IPBX Limitada provided the author with a copy of the drill logs, and compiled assay data.

Minera IPBX Limitada during the period of February to April 2005 carried out an orientation reconnaissance drainage geochemical program which involved the collection of samples from the main tributaries draining into quebradas Sulfato, Copaquire and Guatacondo. The principle aim of this program was to determine the effectiveness of this type of sampling on the Copaquire property.

During the period February to May 2005 Minera IPBX Limitada completed 5.7 kilometres of Induced Polarisation (IP) geophysical surveys, stream sediment sampling, talus sampling and drilled 12 diamond drill holes totaling 3,885 metres. Eight of these drill holes were collared in the Cerro Moly area and four were collared in the Sulfato area east and north of Cerro Moly.

In 2006 IBPX completed 26 core holes totaling 6,985 metres on the Sulfato and Cerro Moly zones.

## 6.3 Historic Resource Estimates

There are no mineral resource or mineral reserve estimates completed on any area encompassed by the Copaquire Property that conform to the CIM guidelines of August 20, 2000 or NI43-101.

In 1965, A. H. Lindley, Jr., consultant to NORMINA, concluded that a mineralized zone 200 feet thick above the valley floor contained an inferred resource of some 50,000,000 short tons averaging 0.13% molybdenum.

A resource of 30 million tons grading 0.20% copper and 0.15% molybdenum was been reported by Camus (2003).  $\ .$ 

# 7 GEOLOGICAL SETTING

## 7.1 Regional Geology

The Copaquire property covers approximately 14.7 sq. km in the eastern part of Region I. The geology of northern Chile can be divided in three longitudinal belts. The eastern belt is the Central Volcanic part of the Upper Tertiary to Quaternary Los Andes volcanics made up of ignimbrites and strata volcanoes along the Chilean and Bolivian border. The central part is composed of Upper Carboniferous to Triassic

andesite to rhyolite volcanics intruded by batholiths. These Paleozoic basement rocks are interpreted as the continuation of the Cordillera de Domeyko which is characterized by NE and NS faults that hosts major porphyry deposits in the belt. The western contact of the Paleozoic rocks is a major fault system. The western belt is made of of Paleozoic and possibly pre-Paleozoic, Mesozoic and Cenozoic rocks. The belt is characterized by inverse faults that have moved blocks of Paleozoic rocks over sequences of Mesozoic and Cenozoic rocks.

The oldest rocks in the district are a metamorphic package composed mostly of Paleazoic metasediments intruded by Upper Paleozoic quartz-diorite batholiths. Succeeding this possible arc-trench sequence is a Jurassic and possibly a Cretaceous arc-trench assemblage each now represented mainly by quartz diorite-granodiorite batholiths. These older rocks are grouped together as pre-Tertiary on the regional geology map (Figure 7-1) as they form only a small part of the arch-trench environment in which the porphyry copper deposits of this horst block occur.

In the vicinity of Copaquire, Jurassic pelitic shelf sediments are the dominant rock type. These consist largely of black carbonaceous shales with local irregular sand strata throughout the sequence. At some time prior to the mid-Tertiary, strong regional east-west compressive forces produced tight north-south trending folds in these sediments, with some overturning near the Copaquire stock. Although regional in its scope, the metamorphic effects produced by this event appear to be slight with no metamorphic minerals megascopically visible in the folded sediments.

Few batholiths were formed in the Tertiary although numerous smaller Tertiary plutons can be identified. The known porphyry copper deposits of the area are associated with the smaller plutons of this younger phase of igneous activity. Most are too small to be plotted on figure 7-1 and as far as is known most are post arc-trench and in this sense post tectonic.

#### 7.1.1 Regional Structural Setting

The Copaquire Property is located within the Collahuasi porphyry district at the north end of the Chuquicamata-El Abra-Quebrada Blanca-Collahuasi horst block. The area is cut and displaced by N-S, right lateral reverse faults.

In the Middle Eocene - Early Oligocene an important deformational (the Domeyko Fault System) event involved continental margin perpendicular shortening and margin-parallel transcurrent movement. The Domeyko Fault System are divided into three segements from N to S; the West Fault, Sierra de Varas and Siera Castillo - La Terna. Each segment of the Domeyko Fault System has its own particular chronology and kinematic. The deformation associated with the formation of the West Fault created the crustal conditions related to the generation of volatile-rich porphyry copper type magmas, as well as channeling their emplacement to shallow crustal levels and focusing their mineralizing fluids. Porphyry copper deposits of 42 to 31 Ma are associated and located along all segments of the Domeyko Fault System.

The West Fault (strike-slip) marks the western edge of the Chuquicamata porphyry deposit (approximately 135 km to the S of the Copaquire property) appears to continue to the N just west of El Abra deposit (approximately 110 km S of the Copaquire property). This structure is within the central belt and continues at least a further 50 km to the north. The Eocene Challo Fault is sub-parallel to the West Fault. It is a basement-bounding reverse fault that is located a considerable distance to the W of the younger West Fault. However, to the north the fault lies within the West fault zone, probably being reactivated during activity of the West Fault either as a subsidiary fault or as as the master strand of it.



The Challo Fault appears to continue N through to the Collahuasi district. The main fault passing through the Copaquire property is interpreted as being the Challo Fault.

Figure 7-1 Regional Geology (after Holister and Bernstein, 1975)

## 7.2 Local and Property Geology

The sedimentary rocks underlying the Copaquire Property are Jurassic pelitic shelf sediments. They consist largely of black carbonaceous shales with local irregular sand strata throughout the sequence. Pre mid-Tertiary regional east-west compressive produced tight north-south trending folds in these

sediments, with some overturning within the Copaquire concessions. No visible metamorphic minerals have been identified in the folded sediments by this regional metamorphic event.

A sequence of Cretaceous, predominantly unaltered, andesitic lavas, agglomerates and red to purple gray epiclastic mudstones of generally terrestrial deposition are exposed in the eastern part of the property

Numerous smaller Tertiary plutons have been identified in the Collahausi district. The known porphyry copper deposits in the district are associated with these smaller plutons.

The Jurassic sediments in the Copaquire area are intruded by Early Tertiary granodioritic/quartz monzonite porphyry stock(s). The granodiorite/quartz monzonite porphyry that crops out on the Cerro Moly ridge contains euhedral to subhedral quartz phenocrysts, altered orthoclase, plagioclase and biotite phenocrysts.

Igneous, hydrothermal and tectonic breccias have been identified within the granodioritic/quartz monzonite porphyry stock on the Cerro Moly ridge. The most extensive breccia development is along the south-eastern side of the stock.

The Jurassic meta-sandstones and meta-shales hosting the granodiorite/quartz monzonite stock exhibit bleaching and incipient biotite hornfelsing with local calc-silicate and garnet skarns developed proximal to the intrusive contacts and more commonly as roof pendants within the granodiorite/quartz monzonite on Cerro Moly ridge. Skarn development is generally weak.

The granodiorite/quartz monzonite stock is separated from the Cretaceous sediments by a northerly trending younger fault zone (Sulfato) sub-parallel to the regional Challo Fault and is probably related to it. Several small dioritic plugs and dykes intrude this sequence east of the fault and produce local zones of propylitic and argillic alteration but elsewhere the Cretaceous sequence is essentially unaltered.

The geology in the vicinity of the Cerro Moly zone is shown in Figure 7-1.

#### 7.2.1 Alteration

The Copaquire property covers two zones of hydrothermal alteration i.e. Copaquire and Marta. Both have similar characteristics however, the former is the most explored and best documented hence a description of its alteration patterns will suffice for both.

The Copaquire system covers an area of about 7 square kilometers and encompasses potassic, phyllic, argillic and propylitic phases of alteration and as such possesses all the alteration characteristics ascribed to typical calc-alkaline porphyry copper systems. A leached cap and secondary chalcocite blanket, more typical of Andean porphyry systems like the nearby Collahuasi deposit, is exposed in the Sulfato area to the north of Cerro Moly ridge.

#### Potassic Alteration

Potassic alteration is recognizable principally in the drill core from the Cerro Moly area from the junction of quebradas Copaquire and Guatacondo eastwards to the Sulfato fault and affects the granodiorite/quartz monzonite, hornfelsed Jurassic sediments and the local breccias. The potassic alteration consists of incipient biotisation of hornblende phenocrysts and quartz-potassium feldsparbiotite veinlets and patches. These veinlets are multi-directional and can also contain molybdenite, magnetite and anhydrite.

#### Phyllic Alteration

Phyllic alteration is recognized from pervasive, veinlet and fracture controlled aggregates of sericite and quartz and is generally accompanied by pyrite, chalcopyrite and molybdenite. It has been identified in outcrop and drill core west of the Sulfato fault. Quartz-molydenite veins in this zone can reach widths of 5-10 cm. Tourmaline veinlets and rosettes also occur locally with quartz.

#### Argillic Alteration

Argillic alteration is identified from kaolinisation of feldspars in the porphyritic intrusive and local pervasive matrix alteration. This alteration occurs mainly in structures within and west of the Sulfato fault. Supergene weathering of the phyllic alteration east of the Sulfato fault has also produced a significant pervasive argillic overprint. Pyrite is a common accessory mineral in this alteration, particularly in the northern Sulfato area.

#### Propylitic Alteration

A propylitic alteration is characterized by the development of chlorite, pyrite and subordinate epidote in patches, dissemination and veinlets.

#### Calc-silicate hornfels and skarn

Calc-silicate hornfelses and skarns are irregularly developed in the Jurassic sediments occurring as roof pendants in the granodiorite/quartz monzonite of the Cerro Moly and Sulfato areas and along the south and southwest flanks of Cerro Moly. This alteration type varies from biotite hornfelsing in the more pelitic sediments to quartz-potassium feldspar hornfelses to incipient pyroxene-garnet skarns. The intensity of alteration increases towards the intrusive and is most intense within the roof pendants.

The constant changes between the propylitic, phyllic and potassic alteration logged in drill core suggests that the overall alteration of the area is of moderate to high pH and temperature on the junction of the three alteration fields.

#### 7.2.2 Structure

The dominant fault on Copaquire property is the north-south trending and essentially vertically dipping right lateral Sulfato fault that cuts all rock types (Figure 7-2). Other smaller sub-parallel faults with similar sense of movement has developed an acutely bifurcated and anastamosed system. Conjugate northeasterly trending tensional faults, joints, veins and veinlet swarms attend the Sufato fault system, particularly in the Cerro Moly area. At surface these northeasterly structures appear to dominate the copper-molybdenum mineralised veinlets. However, in the drill holes a true multi-directional veinlet

stockwork hosts the mineralization. Field relationships between this intrusive and the Sulfato fault suggest pre, intra and post intrusion movement with the west block moving north. A dip slip component to the faulting results in relative east block down movement.

![](_page_17_Figure_2.jpeg)

Figure 7-2 Property Geology – Cerro Moly Zone

## 8 DEPOSIT TYPE

On the Copaquire property, Minera IPBX Limitada is exploring a circum-Pacific style porphyry copper - molybdenum deposit similar to other Andean porphyry systems in the region. The Quebrada Blanca and Collahuasi producers are within 15 kilometres of the property.

# 9 MINERALIZATION

Although exploration of the Copaquire system is still incomplete it appears that molybdenite and chalcopyrite are the principle hypogene ore minerals. Both minerals occur as fracture fillings in veinlets or as cementing minerals in breccias along with quartz, pyrite and sericite in the hypogene zone. Minor alunite and gypsum occur in some veins in the argillic zone. Disseminated molybdenite and chalcopyrite occur locally in the zones of more intense veining however pyrite is universally present as disseminations.

Molybdenite tends to be concentrated in quartz-pyrite-molybdenite filled fractures in the quartz monzonite west of the Sulfato fault but can occur anywhere in the Copaquire stock. Pyrite is abundantly present with chalcopyrite in the phyllic zone, particularly east of the Sulfato fault.

At surface copper occurs as the sulpho-salts; brocanthite, chrysocolla, malachite and atacamite where as molybdenum occurs predominantly as molybdenite and minor ferro-molybdite. Drilling by Cominco and IPBX in the Sulfato phyllic zone encountered sooty chalcosite disseminations and patches plus coatings on pyrite and minor chalcopyrite over a large area below an acid leached cap indicating the development of a large secondary enrichment zone.

# 10 EXPLORATION

Details of historic exploration work are discussed in Section 6 and documented in the previous Technical Report (Robinson, 2005). Data from the drilling carried out by Placermetal or Cominco was not used in the present resource estimation.

# 11 DRILLING

Three drilling phases has been concluded on the Copaquire project by PBX through the company's wholly owned Chilean subsidiary IPBX since 2005. The initial diamond drilling phase was carried out on both the Cerro Moly and Sulfato Norte zones between February and May 2005 with 12 holes (8 on Cerro Moly and 4 on Sulfato Norte) for a total of 3884.7 m. The second phase was reverse circulation drilling and was completed between August and October 2006 when 18 holes were drilled in Sulfato Sur and Norte areas totaling 4642 m. The ongoing diamond drilling on Cerro Molly comprises the third Phase. It began in October 2006 and by mid September 2007, 34 holes had been completed for a total of 11851.6 m.

The following table presents a summary of the core drilling carried out by IPBX on the Copaquire project since 2005 that was available at the time of the present study. Earlier drilling by Placermetal and Teck Cominco was not used in the resource estimate.

	Cerro Moly Zone		Sulfato Zone		Total	
Year	Holes Drilled	Total Metres	Holes Drilled	Total Metres	Holes Drilled	Total Metres
2005	8	2609.9	4	1274.8	12	3884.7
2006	7	1813.06	18	4642	25	6455.06
2007 (Jan-Sep)	34	10038.5	-		34	10038.5
Combined	49	14461.46	22	5916.8	71	20378.26

Table 11-1 Drilling Summary 2005-Sept 2007

As of September 24, 2007, assay results for Cu and Mo had been received for a total of 5914 intervals from the Cerro Moly zone representing 12695.1 metres of drill core. Although results from holes CQ-66, 67, 70 and 71 were not yet available, the geologic logs were used to assist in the interpretation.

Reported core recovery during the IPBX drill programs has been very good, generally averaging between 95 and 97%.

Drill hole locations for the holes drilled on the Cerro Moly zone are shown in Figure 11-1. Figure 11-2 shows hole CQ-52 in progress.

![](_page_19_Figure_4.jpeg)

Figure 11-1 Drill hole plan - Cerro Moly zone

![](_page_20_Picture_1.jpeg)

Figure 11-2 Hole CQ-52 in progress - view looking NE

### 11.1 Collar Surveying

Drill hole collar positions for the IPBX diamond drill holes were surveyed in September 2007 by Eagle Mapping Sudamerica S.A. in UTM coordinates using the WGS-84 datum. The measurements were made using 3 Trimble GPS stations. Each station was comprised of one reception unit, and one compact antenna. Collar locations of the holes drilled in the Cerro Moly area are shown in Figure 11-1.

### 11.2 Downhole Surveying

Down-hole surveys had not been performed prior to 2007. During 2007, unsuccessful attempts were made to survey previous holes. To date, seven holes have had down-hole survey measurements performed using a Reflex single-shot instrument. The three vertical holes tested showed minor deviation of less than 0.6 degrees in inclination per 100 metres. Inclined holes between -50 and -60 degrees showed varying deviations with azimuths between 0.3 and 2.2 degrees/100 metres and inclinations between 0.8 and 3.4m degrees/100 metres. None of the horizontal holes were surveyed.

# 12 SAMPLING METHOD AND APPROACH

All three drilling phases have been carried out from IPBX's camp in Quebrada Hutacondo to the south of Cerro Molly (Figure 11-1). By September the camp had the capacity to house approximately 40 people in portable container units. The drilling contractor, Major Drilling Chile S.A, has normally 25 people in camp and IPBX has 6. In addition there are 5 people divided between the catering and heavy equipmet

contractor. The camp is fenced with gates at both the east and west end of camp. The gates are approximately 2 m double gates that are normally kept open. No people live within the project boundaries and the nearast village is approximately 20 km W of camp.

Sampling collection and procedures has been slightly different during the two diamond drilling phases as described below. While the sample collection and procedure for the Reverse Circulation is not included as the drilling was done to the north of the Cerro Moly molybdenite resource the duplicate and check data is included since the larger database produce statistically higher reliability.

## 12.1 2005 Diamond Drilling

At the drilling sites the drill core is placed in wooden boxes by employees of Major, who have instructions not to allow anyone but the Company's geological/technical staff to inspect or handle the core boxes. Core boxes are numbered by the drillers at the drill, and wooden blocks with marked depth are placed at the end of each run. Core recovery is measured at the drill under the supervision of IPBX personnel. The boxes are closed and sealed at the drill and transported to the IPBX camp by IPBX personnel. In camp the core are logged by IPBX's geologists and marked in 3 metre intervals for sampling.

Each 3 metre interval is assigned a unique one to six digit sample number. Upon completion of logging the core boxes are moved to the sample preparation facility within the camp's fenced area. The marked core intervals are cut longitudinally in half using a diamond saw. Samples intervals are standardized at 3 metres starting at the bedrock contact and continue to the end of the hole. One half of the cut core is collected for the sample and then placed in heavy duty plastic sample bags. A tag with the assigned sample number is included with the sample and stapled to the bag during the closing/sealing of the bag by folding the upper part of the bag 3 to 4 times and securing with 6 to 8 staples along the folded part. The remaining portion of the core is returned to the core box. The core boxes are stacked by hole in the open on a cement slab adjacent to the logging and cutting areas inside the fenced area.

The half core samples were packed in groups of ten in larger sacks that are closed with a thin rope and trucked approximately 160 km from camp to the village Pozo Almonte on the Pan American Highway by IPBX personnel. From Pozo Almonte the sample sacks were shipped by Pullman Cargo bus lines to the ALS Patagonia sample preparation facility in Antofagasto. The shipping methods that were used during 2005 are considered adequate and secure.

## 12.2 2006 & 2007 Diamond Drilling

As in 2005 the core boxes are numbered by the drillers at the drill, and wooden blocks with marked depth are placed at the end of each run. The boxes are closed and sealed at the drill and transported to the IPBX camp by IPBX personnel. In camp, drill hole number, box number and core interval are painted on one end of the wooden boxes with black paint on white background. The drill core is marked, recovery is recorded, and the core in every box is photographed and subsequently logged by company geologists. Starting with hole CQ-31 in October 2006, the drill core has been marked in 2 metre intervals for sampling. The geologist logging the core then marks the final sample intervals which may be more than or less than 2 metres depending of reduction from HQ to NQ size core, geological contacts or the last interval.

Each sample interval is assigned a unique four to six digit sample number from a sample tag booklets (two part tags with the same unique number). The marked core intervals are cut longitudinally in half using a diamond saw. One half of the cut core is collected for the sample and then placed in heavy duty

plastic sample bags. One of the two part tag assigned to the sample is included with the sample and stapled to the bag during the closing/sealing of the bag by folding the upper part of the bag 3 to 4 times and securing with 6 to 8 staples along the folded part. The remaining portion of the core is returned to the core box and the other part of the assigned tag is stapled in the core boxes at the end of each interval. The core boxes are stacked by hole number in the open on a cement slab adjacent to the logging and cutting areas inside the fenced area.

The half core samples were packed in groups of five in larger sacks that are closed with a thin rope. Two methods have been used for shipping the samples to ALS Patagonia prep-lab in Antofagasto. The sacks were trucked approximately 160 km from camp to the village Pozo Almonte on the Pan American Highway by by IPBX personnel. From Pozo Almonte the sample sacks were shipped by TURBUS bus lines to the ALS Patagonia sample preparation facility in Antofagasto. Alternatively IPBX contacts ALS Patagonia sample preparation facility in Antofagasto and requests pickup of the samples. ALS Patagonia then sends a 5 tonnes truck to camp for the pick up. Shipping of samples is generally done once a week, and since August 2007 only the ALS Patagonia pick up has been used. The shipping methods used since October 2006 to date are considered adequate and secure.

## 13 SAMPLE PREPARATION, ANALYSES AND SECURITY 13.1 Quality Assurance / Quality Control Program

During 2005 diamond drilling no standards or blanks was inserted in the sample submissions. Following the completion of the the 12 holes, 61 pulps were re-analyzed at ALS Patagonia.

For the period October 2006 to June 2006 no standards or blanks was inserted in the sample submissions.

Minera IPBX implemented a full quality control program at Copaqure in June 2007 starting with hole CQ-56 and continuing for all subsequent holes with the exception of CQ-57. This includes regular insertion of standards, blanks and duplicates into the sample stream.

In all cases, the standards and blank samples are submitted with a false description. The standards are not truly "blind" as they are pulps in a sequence of core and coarse rock chips. In the ALS Patagonia work orders they are identified as pulps. However, they are blind when they arrive at the analyzing station at the laboratory. The blanks are considered "blind" since coarse rock chip are similar to core samples.

ALS Patagonia hard copy sample submission sheets are prepared and submitted with each shipment. In addition, electronical Excel files are distributed with IPBX and PBX with hole, from, to, width and core size information.

#### 13.1.1 Standards

A molybdenum reference standard, CDN-MoS-1, was purchased in 2007 from CDN Resource Laboratories Ltd. and transported directly to IPBX office in la Serena, Chile by PBX president Gary Medford. The Recommended value and the "Between Lab" Two Standard Deviations was 0.065 %Mo  $\pm$  0.008 %. This standard has been inserted at an overall frequency of one commercial standard every 21.9 sample for total 123 standards in the 2,698 samples with results received by October 31, 2007 including hole CQ-73 (Figure 13-1).

![](_page_23_Figure_1.jpeg)

Figure 13-1 Sample sequence chart - Standard CDN-MoS-1

For standards, the accepted range should be the accepted value plus or minus two standard deviations and less than 5% of the results from the submitted standard material should fall outside these limits. Results received to date for Mo indicate that the laboratory results are acceptable with only 1 sample approaching the two standard deviation level and no evidence of significant bias.

In June 2007 it was decided to prepare three project site standards (M1, M2 and M3) with varying Mo grade within the range of Mo values received to date. Ten coarse rejects were selected for each project standard in order to achieve composited grades of approximately 0.020%, 0.060% and 0.147% Mo respectively. The samples were shipped to ALS Patagonia for preparation and homogenization. Following the homogenization ALS Patagonia prepared 50 g sample bags to get 640 M1, 810 M2 and 980 M3 standards. ALS Patagonia shipped 80 standards for M1, M2 and M3 to PBX's to PBX's Metallurgical Consultant Frank Wright who distributed 10 bags from each sample to ALS Chemex Ltd., ACME Labs and Assayers Canada of Vancouver, BC and SGS of Toronto, ON for round robin testing. The results of the round robin testing were comparable with the results from the round robin of CDN Resource Labs CDN-MoS-1 standard.

For Cu and Mo the % RSD range from 4.43% to 9.85% which are acceptable for a project standard considering the %RSD for the commercial standard MoS-1 is 6.49%. The % RSD for Re range between 6.21% and 17.96%, but considering the overall low grades of Re and the grade consistency of the individual laboratories that has %RSD between 2.64% to 12.51% the Re results must also be considered acceptable. It is concluded that the Round Robin results of the Project Standards M1, M2 and M3 are according to industry standards and that these standards can be used for QA/QC purposes

The Round Robin return returned results defined the Project standards as:

#### M1: 0.0204% Mo, 0.2154% Cu, 0.0469 g/t Re

#### M2: 0.0598% Mo, 0.1373% Cu, 0.0984 g/t Re

#### M3: 0.1254% Mo, 0.0791% Cu, 0.2742 g/t Re

Insertion of project standards started in mid September 2007 with holes CQ-70 and CQ-71 and 5 standards (3 M1 and 2 M3) were inserted in the 305 samples from these two holes. At the time of the present study, analytical results had not been received from these drill holes.

#### 13.1.2 Blanks

Blank material was collected from unaltered and visibly un-mineralized diorite/andesite outcrops located approximately 2 km east of the camp. Coarse rock chips (up to 10 cm) were collected and divided into 5 kg samples and inserted following obviously mineralized or potential higher grade mineralized intervals. Insertion of blanks started in late August 2007 with hole CQ-66. To date results have been received for 1,159 samples from holes CQ-66 to CQ-73 excluding CQ-67 with 39 blanks or one blank every 29.5 samples. No round robin testing of the blank material was carried out.

Analyses of the 39 blanks returned average grades of 49 ppm Cu, 7 ppm Mo and 0.015 ppm Re. Four samples with anomalous Cu values above 100 ppm suggest that there could be 'between sample' contaminations in the sample preparation in both the Antofagasta and la Serena sample preparation facilities. Since none of these four samples exhibited elevated Mo or Re values it was concluded that the blank material likely contained minor amounts of Cu locally. Since the level of Cu is low and the element of principal economic interest is Mo (that is present in only trace amounts) it is concluded that the results are acceptable for monitoring of contamination in sample preparation for this stage of drilling. However, it is recommended that a more suitable material be acquired and tested to be used for blank insertions.

#### 13.1.3 Sample Storage

In 2005 it was decided to ship the coarse rejects back to camp following completion of analysis. Upon arrival in camp the sample bags with the coarse rejects were removed from the shipping sacks and organized according to sample numbers and stored on hard packed dirt outside the camp fence. This practice continued during 2006 and the first half of 2007. During review of the coarse rejects storage in August of 2007 it was observed that the sample bags slowly detoriated in the direct sun light. As a result it was decided to re-bag all the coarse rejects and ship them to la Serena and store them in a warehouse rented by IPBX in August 2007. The re-bagging was completed in late September and 4,080 sample rejects have been shipped to the La Serena warehouse. All coarse rejects from 2005 have been lost. Of the recovered samples; 1,826 are from the Reverse Circulation drilling of the Sulfato area in holes CQ-13 to CQ-30 to the immediate north of the Cerro Moly mineralization in August to October 2006. The remaining 2,254 samples are from diamond drill holes CQ-31 to CQ-60. There were 4,053 samples in these 30 holes which mean that 1,799 or 44.4% of the coarse rejects from the diamond drilling of the Cerro Moly are unusable due to improper storage.

Presently, the sacks of coarse rejects are shipped from the ALS Patagonia facility in Antofagasta to IPBXs' warehouse in La Serena.

The sample pulps have principally been stored in the main ALS Patagonia facility in La Serena. Some pulp boxes have been returned to the project site and have been subsequently shipped to the La Serena warehouse. Following the organization of the coarse rejects brought there from camp and Antofagasta, the pulps and coarse rejects from La Serena will be brought to the warehouse and organized. It has been established that there are no pulps for some of the 2005 diamond drill holes. To date it has not been possible to establish how many pulps from the diamond drilling of Cerro Moly have been lost to either order of discharge by ALS or return to camp where the boxes and paper sample bags have been destroyed by sun exposure. This can only be determined following arrival and organization in the IPBX warehouse since pulps and rejects from several other projects are among the pulps and rejects stored by ALS Patagonia for IPBX in their La Serena facility.

## 13.2 Laboratory Procedures

All sample preparation and analysis is performed by ALS Patagonia, principally in their sample preparation in Antofagasta. On occasion the samples are forwarded to ALS Patagonia's main facility in La Serena for sample preparation during high work load periods in Antofagasta. Sample weights are recorded by ALS Patagonia upon arrival in the sample preparation facility. Following sample preparation all pulps are sent to ALS Patagonia's main facility in La Serena. In 2005 and between October 2006 and June 2007 the samples were analyzed in La Serena by the Atomic Absorption technique. Since June 2007 the pulps have been forwarded to ALS Chemex Ltd. in Vancouver for analysis by the mass spectrometer ICP technique.

For sample tracking purposes all samples receive are barcoded upon arrival at ALS Patagonias' facilities in Antofagasta or La Serena. Following registration in the laboratorys' tracking system the samples are dried to remove excessive moisture. The dry samples are crushed in an industry standard jaw crusher to 85% < 2 mm. The sample is then split with a Jones riffle splitter to separate a 250 g subsample from the coarse sample (coarse reject). The 250 g subsample is pulverized in an industry standard pulverizer to > 85% - 200 mesh (75 micron).

ALS Patagonia is a division of ALS Chemex Ltd. and both are registered to ISO9001:2000 for the "provision of assay and geochemical analytical services". ALS Patagonia and ALS Chemex Ltd. have their own internal QA/QC program and an excellent reputation.

#### 13.2.1 Analytical Procedures Prior to June 2007

The samples submitted for analysis were routinely analyzed by the ALS Group trace level multi-acid digestion geochemical procedure – ME-AA61. The prepared sample (0.25 g) is weighed into a Teflon beaker and digested with perchloric, hydrofluoric and concentrated nitric acids, and then evaporated to dryness. The residue is re-dissolved in hydrochloric acid and subsequently analyzed for Mo and Cu by atomic absorption spectrometry. In most cases, this four acid digestion is able to quantitatively dissolve nearly all elements for the majority of geological materials.

For samples with results above the ME-AA61 detection limits for Mo and Cu of 10,000 ppm or 1.0% additional analysis by the ALS Group Assay ores and high grade procedure - ME-AA62. The prepared sample (0.4) g is digested with nitric, perchloric, and hydrofluoric acids, and then evaporated to dryness. Hydrochloric acid is added for further digestion, and the sample is again taken to dryness. The residue is dissolved in nitric and hydrochloric acids and transferred to a volumetric flask (100 or 250) mL. The resulting solution is diluted to volume with de-mineralized water, mixed and then analyzed by atomic absorption spectrometry against matrix-matched standards.

Since January 2006 ALS Patagonia has supplied results of their own QA/QC programs of standards and blanks. While the data routinely is reviewed it has not been entered for statistical or graph review and evaluation.

In March 2007 PBX decided to analyze selected samples for Rhenium by Ultra-Trace Level Method using ICP MS and ICP-AES geochemical procedure – ME-MS61. The prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, silver and tungsten and diluted accordingly. Samples meeting this criterion are then analyzed by inductively coupled plasma-mass spectrometry. Results are corrected for spectral interelement interferences. Four acid digestions are able to dissolve most minerals; however, although the term "near-total" is used, depending on the sample matrix, not all elements are quantitatively extracted.

#### 13.2.2 Analytical Procedure since June 2007

Following analysis of 304 samples for Re by ME-MS61 it was concluded that Re could be economically significant. Since ME-MS61 also give results for Mo and Cu a limited comparison of the two analytical procedures was carried out on 10 samples in June 2007. The results of this limited comparison suggest that the two procedures are equally accurate with regards to Mo and Cu results based on the high R2 for Mo of 0.9934 and Cu of 0.9968 as illustrated in Figure 13-2.

Due the excellent correlation between the two procedures it was decided to change the analytical procedure to only ME-MS61 for speed of Re results and to reduce the analytical costs.

![](_page_26_Figure_6.jpeg)

Figure 13-2 Comparison of ME-AA61 and ME-MS61 analytical technique

# **14 DATA VERIFICATION**

As of June, 2007, comparison of check assays against originals and blank monitoring occurs immediately after assays are received from the commercial labs. Industry standard confidence levels for check vs. original and blank assay variability are secured before resource/reserve estimates or news releases containing drill hole assay data are released to the public.

The author audited 10% (586) of the sample intervals in the database against the original assay certificates for Mo and Cu and found no errors.

Additional validation checks were performed when the data was imported to Surpac software for modeling. This included detection of overlapping intervals and any inconsistencies between survey and sample depths. Visual checks were also used to check for errors in downhole surveys.

#### **14.1.1 Pulp Duplicates**

Since no second laboratory pulp checks had been done prior to June 2007, 348 samples were selected from the 7,092 samples in holes CQ-01 to CQ-58 or a samples every 20.4 sample. Unfortunately there were no pulps from holes CQ-01 to CQ-04, CQ-06 and CQ-08 as well top 150 m of CQ-05. To compensate for this it was decided to replace the missing pulps with quarter core prior to a full evaluation of the quarter core duplicates (see Section 14.1.2).

The pulps and quarter core were submitted in two shipments to ACME Analytical Laboratories Ltd. in Vancouver for analysis by Group 1DX mass spectrometry ICP. It was decided to do this analytical technique although the digestion by only Agua Regia is different from the ALS Patagonia's ME-AA61 four acid digestion since the elements of interest Mo and Cu completed digested by hot (95° C) Agua Regia solution.

ACME has had ISO 9002 since 1996 and has implemented quality system complient with ISO 9001:2000 Model for Quality Assurance and ISO 17025 – General Requirements for the Competence of Testing and Calibration.

To date the results are back from 241 of the 315 samples and the results are plotted in Figures 14-1 and 14-2.

![](_page_27_Figure_8.jpeg)

Figure 14-1 Pulp duplicate, Mo - ALS (AA) vs ACME (MS)

![](_page_28_Figure_1.jpeg)

Figure 14-2 Pulp duplicate, Cu - ALS (AA) vs ACME (MS)

Plots of the ALS and ACME results show a very good correlation between the to laboratories results as seen form the  $R^2$  for Mo of 0.98 and Cu of 0.99.

Since no standards were included with the original sample submissions 17 Project Standards were included with the pulp checks for an average of one for every 14.2 pulp check. All the standards results plot within the two standard deviation of each of the three Project standards.

#### 14.1.2 Quarter Core Duplicates

Every 20<sup>th</sup> sample from drill holes CQ-31 to CQ-69 were quartered by diamond saw and the samples analyzed at ALS-Chemex for copper and molybdenum. All samples were from holes drilled on the Cerro Moly zone in 2006/07. A total of 162 samples were analyzed by ICP-AA and the remaining 93 by ICP-MS. The latter method showed better correlation with the original assays for molybdenum as illustrated in the box plots in Figure 13-2.

The data exhibits a widely scattered distribution which is not considered unusual in comparisons of stockwork style molybdenite mineralization in core duplicates. The fact that we are comparing half with quarter core likely compounds this. For the AA data set the mean absolute difference is 0.013% Mo and 0.023% Cu and the average variability expressed as standard deviations are 0.068%Mo and 0.11%Cu. For the ICP-MS data the mean absolute difference is 0.013% Mo and 0.023% Cu and the average variability expressed as standard deviations are 0.068%Mo and 0.11%Cu. For the ICP-MS data the mean absolute difference is 0.013% Mo and 0.023% Cu and the average variability expressed as standard deviations are 0.078%Mo and 0.109%Cu. This indicates that the average difference to be expected between half and quarter core from the same sample interval is 0.013%Mo and 0.1% Cu. Since precision varies with concentration, the difference will be greater or smaller depending on the grade. However, this cannot be considered a true measure of the total random error as the compared volumes are different.

A small relative bias is evident with the original half-core sample on the lower side compared to the quarter core analysis. It is uncertain whether this is due to the difference in sample volume or a loss of proportionally more molybdenite during sawing of the initial core. This does suggest that the original half-core analyses are conservative.

![](_page_29_Figure_1.jpeg)

Figure 14-3 Comparative box plots - duplicate quarter core

![](_page_29_Figure_3.jpeg)

![](_page_29_Figure_4.jpeg)

Figure 14-4 Scatterplots of duplicate quarter core assays for Mo

# **15 ADJACENT PROPERTIES**

Not applicable.

# 16 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical test work has been carried out on material from the Copaquire property to date.

## 17 MINERAL RESOURCE ESTIMATE 17.1 Databases – General Description

Data from the 2005-2007 Copaquire drilling programs has been compiled in a Microsoft Excel file and imported into a Microsoft Access database used by Surpac Vision software for deposit modeling and resource estimation. The database consists of collar location data, downhole surveys, and interval tables for lithology, alteration, mineralization, structure and assays. The Cerro Moly portion of the database used for the present resource estimate contained 5914 analyses for Cu and Mo and 2032 analyses for Re.

Alteration and Lithology codes used in the database are tabulated in Tables 17-1 and 17-2.

	J	
Code	Lithology	
0	Overburden	
MnQ	Quartz Monzonite	
BH	Hydrothermal Breccia	
BI	Igneous Breccia	
BM	Marble Breccia	
PA	Andesite Porphry	
PFQ	Quartz Feldspar Porphyry	
PQM	Quartz Monzonite Porphry	
AR	Metasediments	

Table 17-1 Lithologic codes

#### Table 17-2 Alteration codes

Primary Alteration	Sub- type	Code	Description
	RF	0	Fresh rock
PP	PP	1	Propilitic
	AR	2	Argilic
	QAr	2	Quartz-Argilic
	QS	2	Quartz-Sericite
OS/Ara	Ser	2	Sericite
QUAIY	KSQ	2	K-Ser-Qz
	Q	2	Quartz
	Sil	2	Silicification
	CI	2/3	Clorite
Pot	К	3	Potasic (K)
rot	QCB	3	Sil-Clo-Bio
Sk	Sk-R	4	Skarn-retrograde
UN	Sk-P	4	Skarn-prograde

The descriptive statistics for the analyzed intervals within the Cerro Moly zone domain used in the present resource model are shown in Table 17-3. Frequency distributions of molybdenum, copper and rhenium are illustrated in Figure 17-1 to 17-3.

The histogram for molybdenum (Figure 17-1) approaches log normal distribution with no strong bimodality evident. Histograms for Cu and Re also show strongly skewed distributions but no bimodal character (Figures 17-2 and 3).

			Re
	Mo (%)	Cu (%)	(ppm)
Count	3495	3495	1011
Minimum value	0.001	0.000	0.002
Maximum value	1.255	2.680	1.485
Mean	0.049	0.118	0.106
Variance	0.004	0.017	0.018
Standard Deviation	0.062	0.129	0.134
Coefficient of variation	1.275	1.098	1.261
Skewness	6.459	4.848	3.816
Kurtosis	78.815	61.813	24.664
25.0 Percentile	0.017	0.036	0.035
50.0 Percentile			
(median)	0.032	0.080	0.064
75.0 Percentile	0.058	0.159	0.124
90.0 Percentile	0.098	0.260	0.231
95.0 Percentile	0.148	0.335	0.353
98.0 Percentile	0.201	0.459	0.561
99.0 Percentile	0.286	0.565	0.691

Table 17-3 Statistics of assays within Cerro Moly zone

![](_page_32_Figure_4.jpeg)

Figure 17-1 Frequency distribution of Mo in assay intervals

![](_page_33_Figure_1.jpeg)

Figure 17-2 Frequency distribution of Cu in assay intervals

![](_page_33_Figure_3.jpeg)

Figure 17-3 Frequency distribution of Re in assay intervals

Satistics for raw assay data within the Cerro Moly zone broken down by major lithologies are illustrated as comparative box plots (Figures 17-4 and 5). Lithologies not shown had too few analyses to be statistically meaningful. Molybdenum shows little variation between lithologies and alteration types while copper tends to be lower in concentration in the main intrusive unit (MnQ).

![](_page_34_Figure_1.jpeg)

Figure 17-4 Comparative box plots by lithology and alteration – Molybdenum

![](_page_34_Figure_3.jpeg)

Figure 17-5 Comparative box plots by lithology and alteration – Copper

![](_page_35_Figure_1.jpeg)

Figure 17-6 Comparative box plots by lithology and alteration – Rhenium

Rhenium was not included in the resource estimation as only 34% of the intervals were analyzed.

## 17.2 Topography

Low resolution topography (10m contours) used for the present study was generated by PhotoSat Information Ltd. of Vancouver, B.C. The contours were manually modified to better conform with surveyed drill hole collars and access roads.

In September 2007, Eagle Mapping Sudamerica S.A. was contracted to produce a detailed topographic map based on new aerial photographs.

## 17.3 Density

A total of 126 core samples from the 2007 drilling program were measured for specific gravity at ALS Chemex using the water immersion method. Samples were coated with paraffin prior to measureming. The statistics for the major rock units are shown in Table 17-4.

	Metasediments	Intrusive	Breccias
n	38	65	17
min	2.28	2.38	2.54
max	3.14	4.03	3.11
mean	2.73	2.64	2.76
median	2.72	2.62	2.74

Table 17-4 Specific Gravity Statistics

The median values were selected as representative of the major lithologies.

## 17.4 Geologic Model

The intrusive and breccia zone contacts were modeled in Leapfrog<sup>©</sup> software, a proprietary 3D geological modeling package that allows rapid construction of geological and grade-shell wireframes directly from drillhole data. In this study, surface mapping data points were used as an additional control on the geologic model and shells were created by indicator kriging of the lithology codes. The resulting models were imported to Surpac and used for block coding. Specific gravity values corresponding to each lithology were then assigned to each block. The blocks coded by lithology are illustrated in Figure 17-7.

![](_page_36_Figure_3.jpeg)

Figure 17-7 Block model geologic coding

## 17.5 Zone Constraints

The molybdenum/copper mineralization overlaps the intrusive/sedimentary contacts and it was deemed necessary to create a gradeshell or isosurface to constrain the block grade estimation. The modeling was done in Leapfrog<sup>©</sup> using 2 metre gold composites generated from drillhole assays supplemented with surface and underground sampling data. The data was put through a Gaussian transform and modeled using ordinary kriging with a maximum search distance of 200 metres. The isosurfaces were constrained by topography. Hard boundaries were not used between the intrusives, breccias and metasediments as examination of the Mo and Cu grades across lithologic contacts showed no significant variation.

![](_page_37_Figure_1.jpeg)

Figure 17-8 Cerro Moly zone domain based on 0.02% Mo gradeshell

## 17.6 Extreme Grades

Grade distribution of Mo and Cu in drill hole data was examined to determine if grade capping or special treatment of high outliers was warranted. Decile analysis shows that neither element has more than 40% of the contained metal in the upper decile (Figure 17-9) and the upper percentile contains less than 10%. Log probability plots show scattered outliers above levels of 0.36% Mo and 1% Cu (Figures 17-10 and 11).

It was concluded that capping or cutting of high values was not warranted for the Cerro Moly zone. However, grades exceeding 0.36% Mo and 1% Cu were given a limited range of influence during grade estimation.

![](_page_38_Figure_1.jpeg)

Figure 17-9 Decile analyses for Mo and Cu

![](_page_38_Figure_3.jpeg)

Figure 17-10 Log probability distribution plot of Mo assays in Cerro Moly zone

![](_page_39_Figure_1.jpeg)

Figure 17-11 Log probability distribution plot of Cu assays in Cerro Moly zone

## 17.7 Compositing

Raw assay intervals were composited on 12 metre downhole intervals for molybdenum and copper honouring the gradeshell boundary. The descriptive statistics for the composites are shown in table 17-5.

	Mo (%)	Cu (%)
Number of samples	623	623
Minimum value	0.005	0.002
Maximum value	0.354	0.557
Mean	0.049	0.115
Variance	0.001	0.01
Standard Deviation	0.037	0.098
Coefficient of variation	0.743	0.857
Skewness	2.455	1.693
Kurtosis	13.331	6.548
25.0 Percentile	0.025	0.042
50.0 Percentile (median)	0.038	0.086
75.0 Percentile	0.062	0.157
90.0 Percentile	0.094	0.239
95.0 Percentile	0.123	0.314
98.0 Percentile	0.158	0.413
99.0 Percentile	0.186	0.511

Table 17-5 Summar	y statistics for all 12	metre composites
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![](_page_40_Figure_1.jpeg)

Figure 17-Frequency distribution of Mo in composites

![](_page_40_Figure_3.jpeg)

Figure 17-12 Frequency distribution of Cu in composites

## 17.8 Variogram Analysis

Directional semi-variograms and variogram maps for molybdenum and copper were generated from the composite data and analyzed for spatial anisotropy. No anisotropy was identified from the present data set and simple spherical models were fitted to pairwise relative semi-variograms for both elements (Figures 17-9 to 11). Maximum variogram ranges were 100 m. for Mo and 108 m. for Cu.

![](_page_41_Figure_1.jpeg)

Figure 17-13 Semi-variogram model for Mo

![](_page_41_Figure_3.jpeg)

Figure 17-14 Semi variogram model for Cu

Variogram model parameters are summarized in Table 17-6.

	3				
Item	Direction	Туре	со	c1	a1
Мо	Isotropic	sph	0.15	0.121	100
Cu	Isotropic	sph	0.101	0.312	108

#### Table 17-6 Semi-variogram models

## 17.9 Block Model and Grade Estimation Procedures

A block model was created in Surpac Vision software using a block size of  $24 \times 24 \times 12$  metres. The model extents are shown in Table 17-5.

#### Table 17-7 Block Model Extents

	Min	Max	Dist	size	# blocks
x	510700	511708	1008	24	42
у	7685300	7686620	1320	24	55
z	2950	3862	912	24	38

Blocks were estimated by ordinary kriging in three passes within the zone domain. Composites exceeding 0.36% Mo or 1% Cu were limited in influence to the first pass. Search parameters are summarized in Table 17-6.

Table 17-8 Model search parameters

Pass	Distance (m)	Min Composites	Max Composites	Max Comps/hole	
1	50	5	20	4	
2	100	5	20	4	
3	200	4	20	4	

The following figures illustrate the grade distribution for Mo and Cu in a plan section and perspective views.

![](_page_43_Figure_1.jpeg)

Figure 17-15 Block model views - molybdenum grade

![](_page_44_Figure_1.jpeg)

Figure 17-16 Block model views - copper grade

The following figures illustrate grade distribution for Mo and Cu on the 3502 level showing the comparison with composite grades.

![](_page_45_Figure_1.jpeg)

Figure 17-17 Comparison of block model and composite molybdenum grades - 3502 Level

![](_page_46_Figure_1.jpeg)

Figure 17-18 Comparison of block model and composite copper grades - 3502 Level

![](_page_47_Figure_1.jpeg)

Figure 17-19 Molybdenum block grades - section 511335 E

![](_page_48_Figure_1.jpeg)

Figure 17-20 Copper block grades - section 511335 E

## 17.10 Mineral Resource Classification

Resource classifications used in this study conform to the following definition from National Instrument 43-101:

#### 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.

#### 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.

The estimated blocks were classified as indicated or inferred based on the three kriging passes utilizing the search parameters shown in Table 17-6. To be classifies as inferred a block was required to be estimated in the first two passes or else have a composited sample within 24 metres (1 block diameter). All remaining estimated blocks were assigned to the inferred category.

![](_page_49_Figure_5.jpeg)

![](_page_49_Figure_6.jpeg)

Figure 17-21 Block model views – classification

![](_page_50_Figure_1.jpeg)

Figure 17-22 Block classification – Level 3502

![](_page_51_Figure_1.jpeg)

Figure 17-23 Block classification – Section 511335 E

## 17.11 Model Validation

Model verification was initially carried out by visual comparison of blocks and sample grades in plan and section views. The estimated block grades showed good correlation with adjacent composite grades.

The mean of the global block grades at zero cutoff compare fairly well with the global means of the composites and raw assay data (Table 17-9).

Itom	Kriged	mean	grades	
nem	mean	comps raw dat		
% Mo	0.043	0.049	0.049	
% Cu	0.10	0.11	0.12	

Table 17-9 Global mean	grade	comparison
------------------------	-------	------------

Model verification included a comparison of kriged to inverse distance  $(ID^2)$  and nearest neighbour estimates. A grade-tonnage chart comparing the block model statistics for the various interpolation methods is shown in Figure 17-24. Only a marginal difference is apparent between the ID3 and kriged block models.

![](_page_52_Figure_2.jpeg)

Figure 17-24 Grade tonnage chart comparing estimation methods

Swath plots were generated to assess the model for global bias by comparing Kriged values with ID<sup>2</sup> and nearest neighbour estimates on 48 metre wide vertical and horizontal panels through the deposit. Results show a good comparison between the three methods, particularly in the main portions of the deposit indicated by the bar charts. (Figures 17-27 to 30)

![](_page_53_Figure_1.jpeg)

Figure 17-25 Swath plot for Mo - vertical slice section at 7685732 North

![](_page_53_Figure_3.jpeg)

Figure 17-26 Swath plot for Cu - vertical slice at section at 7685732 North

![](_page_54_Figure_1.jpeg)

Figure 17-27 Swath Plot for Mo – horizontal slice at 3334-3382m elevation

![](_page_54_Figure_3.jpeg)

Figure 17-28 Swath Plot for Cu – horizontal slice at 3334-3382m elevation

## 17.12 Mineral Resource Summary

The Cerro Moly mineral resource is presented in the following tables reported at molybdenum cut-off grades ranging from 0.02 to 0.04%.

	Cutoff Grade	Tonnes >	Average Grade		Contained Metal	
	Mo%	Cutoff	Mo %	Cu %	lbs Mo	lbs Cu
Indicated	0.02	183,200,000	0.046	0.107	185,800,000	432,200,000
	0.03	160,000,000	0.049	0.106	172,800,000	373,800,000
	0.04	98,000,000	0.058	0.097	125,300,000	209,500,000
Inferred	0.02	212,800,000	0.041	0.097	192,400,000	455,100,000
	0.03	193,400,000	0.043	0.096	183,300,000	409,300,000
	0.04	110,200,000	0.049	0.094	119,100,000	228,400,000

#### Table 17-10 Mineral resource estimate – Cerro Moly deposit

## **18 OTHER RELEVANT DATA AND INFORMATION**

The author is of the opinion that all known relevant technical data and information with regard to the Morrison project has been reviewed and addressed in this Technical Report.

## **19 INTERPRETATION AND CONCLUSIONS**

Exploration drilling to date has defined a mineralized molybdenum zone at Cerro Moly over an area of approximately 48 hectares extending through a vertical elevation of 700 metres. The deposit remains open at depth and along the SW-NE long axis of the mineralized trend. Other boundaries are only partially defined.

# 20 RECOMMENDATIONS

- Infill and definition drilling is warranted in order to upgrade resource classification and establish the ultimate extents of the mineralization.
- A more detailed and accurate topographic basemap is required.
- Downhole surveys should be routinely performed on all drill holes.
- A more suitable blank material should be acquired
- Metallurgical testing is required to assess the potential recovery of Cu, Mo and Rh. If it is established that significant rhenium is recoverable then further analyses of pulps/rejects from past drill programs may be warranted.
- A preliminary assessment study is recommended in order to investigate the economic viability of the project.

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#### **Certificate of Author**

I, Ronald G. Simpson, P.Geo, residing at 1975 Stephens St., Vancouver, British Columbia, V6K 4M7, do hereby certify that:

- 1. I am president of GeoSim Services Inc.
- 2. This certificate applies to the report entitled "Mineral Resource Estimate, Copaquire Project, Chile" dated November 12, 2007.
- 3. I graduated with an Honours Degree of Bachelor of Science in Geology from the University of British Columbia in 1975. I have practiced my profession continuously since 1975. My relevant experience is as follows:
  - 1975-1993 Geologist employed by several mining/exploration companies including Cominco Ltd., Bethlehem Copper Corporation, E & B Explorations Ltd, Mascot Gold Mines Ltd., and Homestake Canada Inc.
  - 1993-1999 Self employed geological consultant specializing in resource estimation and GIS work
  - 1999 Present: President, GeoSim Services Inc.
- 4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (Registered Professional Geoscientist, No. 19513) and a Fellow of the Geological Association of Canada. I am a "qualified person" for the purposes of NI 43-101 due to my experience and current affiliation with a professional organization as defined in NI 43-101.
- 5. I have visited the property on May 17, 2007.
- 6. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43 101.
- 7. I have had no prior involvement with the property that is the subject of the Technical Report.
- 8. I have read National Instrument 43 101 and Form 43 101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 9. 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 the technical report not misleading
- 10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

DATED at Vancouver, British Columbia, this 12th day of November, 2007.

![](_page_58_Picture_18.jpeg)

Ronald G. Simpson, P.Geo.

Appendix I

**Drilling - Site Locations** 

#### IPBX CORE DRILLING 2005-2007

Hole-id	North	East	Elev	Length	Area	Year
CQ-01	7685714.00	511341.00	3508.00	398.10	Cerro Moly	2005
CQ-02	7685714.00	511335.00	3508.00	500.40	Cerro Moly	2005
CQ-03	7686222.00	511097.00	3531.00	400.00	Cerro Moly	2005
CQ-04	7686353.30	511275.34	3561.11	195.85	Cerro Moly	2005
CQ-05	7688029.00	512192.00	3979.00	400.00	Sulfato	2005
CQ-06	7685630.00	511125.00	3503.00	312.00	Cerro Moly	2005
CQ-07	7685729.00	510960.00	3498.00	253.55	Cerro Moly	2005
CQ-08	7685570.00	510985.00	3499.00	250.00	Cerro Moly	2005
CQ-09	7685570.00	510983.00	3499.00	300.00	Cerro Moly	2005
CQ-10	7688027.00	512165.00	3980.00	297.00	Sulfato	2005
CQ-11	7686756.00	511890.00	3792.00	277.60	Sulfato	2005
CQ-12	7686750.00	512335.00	3890.00	300.20	Sulfato	2005
CQ-13	7688028.00	512146.00	3980.00	200.00	Sulfato	2006
CQ-14	7688029.86	512213.29	3973.34	350.00	Sulfato	2006
CQ-15	7687784.75	512232.80	3935.15	300.00	Sulfato	2006
CQ-16	7687784.75	512225.30	3935.15	350.00	Sulfato	2006
CQ-17	7687549.67	512186.27	3912.66	200.00	Sulfato	2006
CQ-18	7687549.67	512181.10	3912.66	200.00	Sulfato	2006
CQ-19	7687549.67	512183.87	3912.66	200.00	Sulfato	2006
CQ-20	7688235.73	512161.24	3976.34	300.00	Sulfato	2006
CQ-21	7688235.73	512159.24	3976.34	342.00	Sulfato	2006
CQ-22	7688420.39	512141.48	3993.97	300.00	Sulfato	2006
CQ-23	7688420.39	512147.68	3993.97	400.00	Sulfato	2006
CQ-24	7686756.00	511901.00	3792.00	250.00	Sulfato	2006
CQ-25	7686929.47	511725.37	3720.97	300.00	Sulfato	2006
CQ-26	7686855.86	511625.68	3708.54	210.00	Sulfato	2006
CQ-27	7686755.44	511650.01	3720.78	204.00	Sulfato	2006
CQ-28	7686632.15	511642.99	3709.36	276.00	Sulfato	2006
CQ-29	7686948.00	511561.00	3691.00	122.00	Sulfato	2006
CQ-30	7686897.68	511553.46	3677.75	138.00	Sulfato	2006
CQ-31	7685630.00	511125.00	3503.00	306.60	Cerro Moly	2006
CQ-32	7685630.00	511126.00	3503.00	381.36	Cerro Moly	2006
CQ-33	7685714.00	511341.00	3508.00	266.20	Cerro Moly	2006
CQ-34	7685630.00	511130.00	3503.00	387.25	Cerro Moly	2006
CQ-35	7685782.28	511486.10	3514.90	60.20	Cerro Moly	2006
CQ-36	7685714.00	511335.00	3508.00	303.05	Cerro Moly	2006
CQ-37	7685780.00	511489.00	3514.90	108.40	Cerro Moly	2006
CQ-38	7685791.00	511625.00	3523.03	413.10	Cerro Moly	2007
CQ-39	7685797.76	511620.83	3523.03	133.40	Cerro Moly	2007
CQ-40	7685797.17	511620.94	3523.03	302.20	Cerro Moly	2007
CQ-41	7685791.45	511625.25	3523.03	335.40	Cerro Moly	2007
CQ-42	7685773.63	511489.25	3514.90	410.50	Cerro Moly	2007
CQ-43	7685774.00	511492.00	3514.90	116.30	Cerro Moly	2007
CQ-44	7685774.00	511489.00	3514.90	396.20	Cerro Moly	2007

Hole-id	North	East	Elev	Length	Area	Year
CQ-45	7685679.26	510813.46	3489.81	250.60	Cerro Moly	2007
CQ-46	7685684.37	510811.90	3489.70	251.00	Cerro Moly	2007
CQ-47	7685660.56	511232.89	3504.40	354.30	Cerro Moly	2007
CQ-48	7686140.63	511434.54	3716.41	325.10	Cerro Moly	2007
CQ-49	7685660.00	511232.00	3504.40	300.00	Cerro Moly	2007
CQ-50	7686147.27	511429.34	3716.50	175.30	Cerro Moly	2007
CQ-51	7685745.00	511410.00	3513.18	37.75	Cerro Moly	2007
CQ-52	7686146.05	511429.79	3716.50	289.45	Cerro Moly	2007
CQ-53	7685744.86	511408.21	3513.18	165.80	Cerro Moly	2007
CQ-54	7686060.00	511280.00	3730.00	415.00	Cerro Moly	2007
CQ-55	7685744.46	511408.78	3513.18	350.00	Cerro Moly	2007
CQ-56	7686060.00	511280.00	3730.00	456.60	Cerro Moly	2007
CQ-57	7685798.25	511720.35	3520.55	125.35	Cerro Moly	2007
CQ-58	7685760.62	511894.39	3529.04	366.05	Cerro Moly	2007
CQ-59	7685797.09	512028.90	3537.90	427.05	Cerro Moly	2007
CQ-60	7686194.84	511553.17	3733.48	92.30	Cerro Moly	2007
CQ-61	7685754.31	511409.88	3513.18	226.65	Cerro Moly	2007
CQ-62	7685510.58	511148.31	3502.95	382.05	Cerro Moly	2007
CQ-63	7685657.40	511234.71	3504.40	512.00	Cerro Moly	2007
CQ-64	7686290.00	511541.00	3748.66	190.10	Cerro Moly	2007
CQ-65	7685512.00	511151.00	3502.95	242.05	Cerro Moly	2007
CQ-66	7686288.91	511539.16	3748.66	169.50	Cerro Moly	2007
CQ-67	7685536.09	511402.89	3549.20	250.00	Cerro Moly	2007
CQ-68	7685456.00	510855.00	3523.00	480.00	Cerro Moly	2007
CQ-69	7686161.00	511300.00	3689.00	491.70	Cerro Moly	2007
CQ-70	7686178.00	511048.00	3526.00	250.00	Cerro Moly	2007
CQ-71	7685450.68	510852.67	3521.49	355.60	Cerro Moly	2007

Appendix II

Drilling – Significant Intercepts

Hole-id	From (m)	To (m)	Width	Mo %	Cu %	Re ppm
CQ-01	10.50	315.00	304.50	0.089	0.030	
CQ-01	321.00	398.10	77.10	0.053	0.039	
CQ-02	5.70	207.30	201.60	0.063	0.053	
CQ-02	213.30	225.30	12.00	0.041	0.049	
CQ-02	237.30	255.30	18.00	0.067	0.033	
CQ-02	294.30	324.30	30.00	0.051	0.064	
CQ-02	330.30	342.30	12.00	0.051	0.039	
CQ-02	354.30	375.30	21.00	0.026	0.044	
CQ-04	39.00	54.00	15.00	0.035	0.091	
CQ-04	80.15	101.15	21.00	0.052	0.083	
CQ-04	116.15	134.15	18.00	0.033	0.043	
CQ-06	6.00	18.00	12.00	0.038	0.130	
CQ-06	27.00	42.00	15.00	0.066	0.241	
CQ-06	46.75	103.75	57.00	0.077	0.108	
CQ-06	109.75	142.75	33.00	0.057	0.045	
CQ-06	151.75	208.75	57.00	0.064	0.083	
CQ-06	214.75	226.75	12.00	0.028	0.074	
CQ-06	247.75	268.75	21.00	0.179	0.125	
CQ-08	14.50	106.80	92.30	0.041	0.118	
CQ-08	145.80	163.80	18.00	0.054	0.117	
CQ-08	172.80	190.80	18.00	0.039	0.194	
CQ-08	205.80	238.80	33.00	0.032	0.178	
CQ-09	28.60	73.60	45.00	0.082	0.105	
CQ-09	79.40	91.40	12.00	0.028	0.046	
CQ-09	118.40	157.40	39.00	0.041	0.031	
CQ-09	181.40	205.40	24.00	0.076	0.043	
CQ-31	5.55	96.00	90.45	0.082	0.208	
CQ-31	108.00	182.00	74.00	0.054	0.153	
CQ-31	192.00	208.00	16.00	0.031	0.181	
CQ-31	248.00	292.00	44.00	0.031	0.213	
CQ-32	12.00	88.00	76.00	0.059	0.086	
CQ-32	96.00	224.00	128.00	0.040	0.168	
CQ-32	290.00	322.00	32.00	0.030	0.098	
CQ-32	330.00	346.00	16.00	0.025	0.100	
CQ-33	11.20	78.00	66.80	0.051	0.025	
CQ-33	88.00	134.00	46.00	0.056	0.006	
CQ-33	140.00	214.00	74.00	0.049	0.005	
CQ-33	222.00	234.00	12.00	0.025	0.007	
CQ-34	0.00	100.00	100.00	0.078	0.117	
CQ-34	132.00	146.00	14.00	0.073	0.124	
CQ-34	166.00	186.00	20.00	0.108	0.222	
CQ-34	250.00	268.00	18.00	0.090	0.096	
CQ-35	22.00	60.20	38.20	0.051	0.249	
CQ-36	0.00	278.00	278.00	0.061	0.110	
CQ-36	284.00	298.00	14.00	0.035	0.072	
CQ-37	18.00	108.40	90.40	0.061	0.296	
CQ-38	146.00	204.00	58.00	0.032	0.172	
CQ-38	210.00	246.00	36.00	0.058	0.022	
CQ-38	258.00	272.00	14.00	0.030	0.015	
CQ-38	334.00	346.00	12.00	0.068	0.031	
CQ-38	362.00	404.00	42.00	0.130	0.037	

Hole-id	From (m)	To (m)	Width	Mo %	Cu %	Re ppm
CQ-41	186.00	198.00	12.00	0.025	0.100	0.006
CQ-41	208.00	220.00	12.00	0.023	0.152	0.025
CQ-41	248.00	278.00	30.00	0.030	0.236	0.102
CQ-41	284.00	328.00	44.00	0.033	0.122	0.015
CQ-42	20.00	32.00	12.00	0.040	0.306	0.063
CQ-42	40.00	316.00	276.00	0.057	0.097	0.057
CQ-42	338.00	350.00	12.00	0.034	0.028	0.078
CQ-43	62.00	116.20	54.20	0.034	0.097	0.046
CQ-44	28.00	156.00	128.00	0.084	0.133	0.184
CQ-44	166.00	238.00	72.00	0.055	0.040	0.186
CQ-44	244.00	268.00	24.00	0.028	0.077	0.076
CQ-44	274.00	300.00	26.00	0.034	0.025	0.085
CQ-44	312.00	342.00	30.00	0.114	0.035	0.181
CQ-45	46.00	68.00	22.00	0.028	0.110	
CQ-45	130.00	142.00	12.00	0.028	0.106	
CQ-47	0.00	114.00	114.00	0.080	0.108	
CQ-47	148.00	200.00	52.00	0.059	0.174	
CQ-47	212.00	226.00	14.00	0.035	0.351	
CQ-47	250.00	284.00	34.00	0.035	0.206	
CQ-47	308.00	324.00	16.00	0.037	0.328	
CQ-48	12.00	60.00	48.00	0.066	0.349	
CQ-48	68.00	120.00	52.00	0.050	0.048	
CQ-48	126.00	206.00	80.00	0.070	0.064	
CQ-48	228.00	314.00	86.00	0.041	0.037	
CQ-49	0.00	186.00	186.00	0.061	0.101	
CQ-50	11.15	40.00	28.85	0.106	0.343	
CQ-50	50.00	64.00	14.00	0.032	0.136	
CQ-50	90.00	144.00	54.00	0.033	0.096	
CQ-52	14.75	42.00	27.25	0.037	0.148	
CQ-52	74.00	94.00	20.00	0.034	0.336	
CQ-52	100.00	116.00	16.00	0.046	0.108	
CQ-52	122.00	142.00	20.00	0.060	0.082	
CQ-52	148.00	172.00	24.00	0.034	0.070	
CQ-53	38.00	56.00	18.00	0.028	0.261	
CQ-53	100.00	165.80	65.80	0.109	0.053	
CQ-54	36.00	54.00	18.00	0.040	0.266	
CQ-54	60.00	86.00	26.00	0.034	0.247	
CQ-54	94.00	150.00	56.00	0.034	0.262	
CQ-54	178.00	194.00	16.00	0.035	0.118	
CQ-54	204.00	226.00	22.00	0.031	0.095	
CQ-54	232.00	244.00	12.00	0.022	0.072	
CQ-54	296.00	415.00	119.00	0.035	0.074	
CQ-55	7.90	22.00	14.10	0.030	0.174	
CQ-55	112.00	146.00	34.00	0.038	0.290	
	156.00	172.00	16.00	0.026	0.161	
	184.00	248.00	64.00	0.039	0.331	0.000
	16.00	100.00	00.00	0.039	0.249	0.088
CQ-56	168.00	190.00	22.00	0.023	0.183	0.189
	308.00	324.00	10.00	0.001	0.101	0.108
	3/0.00	394.00 120 00	00.01	0.033	0.077	0.000
CQ-00	404.00	400.00 110.00	34.00 106.00	0.044	0.072	0.009
CO_61	12.00	10/ 00	68 00	0.004	0.140	0.191
	120.00	134.00	00.00	0.030	0.001	0.009

Hole-id	From (m)	To (m)	Width	Mo %	Cu %	Re ppm
CQ-61	200.00	216.00	16.00	0.058	0.252	0.121
CQ-62	16.00	164.00	148.00	0.082	0.168	0.165
CQ-62	242.00	270.00	28.00	0.028	0.132	0.042
CQ-63	0.00	268.00	268.00	0.061	0.053	0.098
CQ-63	302.00	466.00	164.00	0.049	0.065	0.071
CQ-63	472.00	492.00	20.00	0.030	0.058	0.043
CQ-64	96.00	158.00	62.00	0.063	0.226	0.130
CQ-64	164.00	190.10	26.10	0.050	0.076	0.137
CQ-65	13.50	38.00	24.50	0.044	0.165	0.098
CQ-65	44.00	72.00	28.00	0.037	0.117	0.107
CQ-68	6.00	46.00	40.00	0.064	0.174	0.105
CQ-68	66.00	86.00	20.00	0.027	0.129	0.064
CQ-68	100.00	112.00	12.00	0.030	0.125	0.069
CQ-68	128.00	154.00	26.00	0.035	0.104	0.065
CQ-68	288.00	302.00	14.00	0.032	0.062	0.039
CQ-68	328.00	340.00	12.00	0.069	0.158	0.079
CQ-69	46.00	60.00	14.00	0.028	0.199	0.145
CQ-69	158.00	170.00	12.00	0.033	0.044	0.054
CQ-69	218.00	234.00	16.00	0.034	0.036	0.041
CQ-69	322.00	370.00	48.00	0.031	0.082	0.056
CQ-69	388.00	400.00	12.00	0.078	0.074	0.134

Significant intervals were calculated using a 0.02% Mo cut-off over a minimum width of 12 metres with maximum internal dilution of 4 metres. Results for holes CQ-66, 67 70 and 71 had not been received at the time of this study.