GEOLOGICAL EVALUATION

MINAS DE ORO SAN MARTIN

PROPERTY

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1.0 SUMMARY AND CONCLUSIONS

Mr. Michael G. Parr, Principal Geologist of Lithotech Limitada (LITHOTECH) and its associate Mr. Richard A. Jeanne were invited by Mr. Glenn Schmitz to conduct an independent technical review of his gold assets located in the III Region of Chile referred to as the Minas de Oro San Martin gold property. The following summarises the authors' comments and conclusions:

It is the opinion of the authors that the exploration concept and the property held by Mr. Glenn Schmitz has merit and that it warrants further exploration.

While the exploration to date has not yet delimited an orebody with a mineral resource that can be classified according to international standards, there are very encouraging indicators that support the proposed exploration. These include the results of recent surface sampling carried out on the property as well as historical records from the Dieciocho Mine and processing plant which bought ore grading at least 50 g/t. The nearby Dulinea and Chanchita mines, located on the property, also reportedly sent ore grading 400 g/t and 240 g/t respectively to the plant.

A staged exploration programme is recommended for the property; stage I is target definition involving compilation and interpretation of all existing data supported by geological mapping and additional sampling. This will be followed by stage II, target drilling. The cost of this work is broken down by stages; stage I is projected to cost US$98,125 and stage II US$456,200 for a total cost of US$554,325.

Stage I, Target Definition: This will entail the processing of all existing data into a GIS database. Once this data is in hand it will be evaluated in order to assist in the mapping and sampling of the property. A geological map of the property will be generated at a suitable scale that identifies the major lithological units, the significant structures and the location of all mineral occurrences and abandoned workings.

Stage II, Target Drilling: The above work is expected to generate at least five targets of merit which will be drill tested. Because the mineralization is confined to veins the geological information generated by Reverse Circulation (RC) drilling will be adequate. Each target will be tested with at least three holes. Two shallow holes will be used to confirm the interpreted rake of the ore shoots and a deeper, third drill hole will test the tenor of the down-rake projection. A total of 2,000 meters of drilling has been budgeted.

2.0 INTRODUCTION AND TERMS OF REFERENCE

In March, 2012, Mr. Michael G. Parr, Principal Geologist of LITHOTECH and its associate Mr. Richard A. Jeanne were invited by Mr. Glenn Schmitz to conduct an independent technical review of the Minas de Oro San Martin property located in the III

Region of Chile. This report comprises an independent technical review by the authors of the exploration potential of the property which is held by the client, Mr. Glenn Schmitz by duly registered exploration concessions.

The following is a general outline of the work performed:

1. LITHOTECH and its associate reviewed data and reports provided by the client as well as public domain and in-house reports at LITHOTECH's office in La Serena

2. A site visit by the authors was conducted on 7th March, 2012.

3. Site visits by Mr. Michael G. Parr to review the historical mine workings, the local geology and structures that controlled the localization of the gold mineralization were made during January and June, 2010. A reconnaissance sampling programme was also carried out in January, 2011. Additional visits were made in December, 2011 and January, 2012 to review a comprehensive field sampling programme.

4. This report summarizes findings and recommendations, as well as overall project potential.

5. This document was coauthored and reviewed by Mr. R. A. Jeanne CPG to 43-101 document standards.

This report is based upon discussions with the client, site visits to the property and a review of information and reports provided by the client during February and March, 2012 including the following:

Floyd, H., Project Carrizalillo, III and IV Regions, Chile, June, 2007.

Parr, M. G., The Property Minas de Oro San Martin, III Region, Chile, prepared for Mr. Glenn Schmitz, June, 2010.

Parr, M. G., Minas de Oro San Martin; Exploration Programme and Budget, May, 2011.

Tapia, M., Field Notes; Sampling Programme, February, 2012.

Parr, M. G., Minas de Oro San Martin; Exploration Programme, March, 2012

3.0 DISCLAIMER

It was not within the scope of this assignment to independently verify the legal status or ownership of the mineral properties. The client provided general information concerning the location and current tenure status of the mineral concessions.

For reference purposes, property boundaries have been drawn on the geological map. However, within these boundaries are located small, third party mining properties. The legal status of these properties is unknown to the authors.

Although there is no current exploration activity and the properties are in the early stages of exploration a site evaluation was carried out during the second week of March, 2012 by the Qualified Person, Richard A. Jeanne.

The analytical work was carried out to industry standards by ALS Minerals, La Serena. Mr. Michael G. Parr supervised sample collection and was responsible for submittal to the laboratory.

4.0 CHILE OVERVIEW, REGULATIONS AND PROPERTY DESCRIPTION

The first section is a general overview of Chile which is followed by sections on the Chilean mining sector and the mining regulations that apply to exploration tenements. Next is a section that outlines some of the regulations covering environmental issues, water and surface rights. The final section lists the pedimentos and mensuras that make up the properties.

4.1 History and Background Information

Chile is 4,300 km long (north to south) and on average only 175 km wide (east to west), resulting in a varied climate ranging from the Atacama Desert in the north, the world's driest, through a Mediterranean climate in the central region to a snowy alpine climate in the south, with glaciers, fjords and lakes.

The country has a land area of 756,096 km^2. The capital city is Santiago and the population is approximately 16 million consisting largely of people of mixed Spanish and indigenous descent. Chile is relatively free of crime and official corruption.

Chile had Latin America's fastest-growing economy in the 1990s and has weathered recent regional economic instability reasonably well. It faces the challenges of having to further diversify its copper-dependent economy and make more advances in narrowing its wealth gap.

The current president is Mr. Sebastian Piñera. Piñera won the second round of presidential elections in December, 2009, promising to reduce unemployment and to boost economic growth. His government is expected to follow generally in line with the policies of the previous president, Ms. Michelle Bachelet. Although Piñera was an opposition candidate from the centre-right, he has made an effort to include many from Bachelet's coalition team, mostly comprising Christian Democrats. It is generally thought that Piñera, himself a successful businessman, will be favourable toward sustained economic development.

In February of 2010, an 8.8 magnitude earthquake (Richter scale) struck the area of Concepción and the surrounding area in central-southern Chile. The area suffered widespread destruction of primarily older buildings and houses. Unemployment in the area has increased, but it is generally expected that as the area rebuilds, there will be a significant inflow of capital and manpower to meet the pressing needs. This may prove positive for exploration projects in the area as well.

Major industries in Chile are copper, other minerals, foodstuffs, fish processing, iron and steel, wood and wood products, transport equipment, cement, and textiles; with copper, fish, fruits, paper and pulp, chemicals and wine being the main export commodities.

Chile's Gross Domestic Product (GDP) forecast growth for 2011 is 6.5 percent. The Global Competitiveness Index for 2011-2012 ranks Chile as being the 31st most competitive country in the world and first in Latin America. It ranks 17th in regard to foreign competition.

4.2 Chilean Mining Sector

Chile is by far the world's largest copper producing country. The next largest producer is the U.S.A. The copper belt in Chile hosts the largest copper deposits in the world. It follows a north-south trend along the deep-seated West Fissure Fault system. This copper belt, which is shared with Argentina and Peru, contains approximately 30% of the world's identified copper reserves. The Andes copper deposits also contain other valuable minerals such as molybdenum, gold and silver which are co-products and by-products of the copper refining process and Chile is also the world's largest molybdenum producer accounting for approximately 25% of world production. Fine Copper production in Chile during 2010 was 5,419,000 metric tonnes, an increase of 0.5% over 2009 and represented 34% of the total world market.

Mining contributes approximately 10% of the total GDP and over 40% of all Chilean exports. Chile exported US$42.63 billion of primary copper in 2011, up 6% from 2010. The state-owned mining company, Codelco, is the world's largest copper producer, but privately owned mines (including those with international ownership) account for about half of Chile's copper production and have been increasing their share of the market steadily over the past few years.

Apart from copper mining, Chile also produces other metallic commodities such as iron, lead and zinc, gold and silver. There is currently no production of uranium in Chile.

Mining operations in Chile are subject to an annual 17% tax on net income.

During 2006, the Chilean government put into place a system of mining royalties based on the earnings obtained from the sale of mineral products. This royalty is briefly described as follows:

- For mineral producers whose annual sales exceed the equivalent of 50,000 metric tonnes of fine copper, a 5% royalty is assessed.
- For mineral producers whose annual sales are between the equivalent of 12,000 and up to 50,000 metric tonnes of fine copper, a variable royalty is applied:
    - >12,000 to 15,000 tonnes = 0.5% royalty
    - >15,000 to 20,000 tonnes = 1.0% royalty
    - >20,000 to 25,000 tonnes = 1.5% royalty
    - >25,000 to 30,000 tonnes = 2.0% royalty
    - >40,000 to 50,000 tonnes = 4.5% royalty

For those producers whose equivalent sales are less than 12,000 tonnes of fine copper, no royalty is levied.

In order to calculate the royalty, the equivalent value of a tonne of fine copper is determined according to the average value of Grade A copper during the respective time period, quoted on the London Metals Stock Exchange. This value must be published within the first 30 days of each year by the Chilean Copper Commission (COCHILCO).

4.3 Chilean Mining Regulations

Mineral rights and tenure procedure in Chile are governed by the Constitutional law on Mining Concessions (Law No. 18,097), first published in the Official Gazette on January 21, 1982 and later incorporated with amendments in Law No. 18,248, known as the Mining Code, which was published in the Official Gazette on October 14, 1983. Mineral concessions are of two types: mineral exploration concessions are called "*pedimentos*"; and mining or exploitation concessions are referred to as "*manifestaciones*".

Exploration Concessions ("Pedimentos"): The titleholder of an exploration concession has the right to carry out all types of mining exploration activities within the area of the concession. Exploration concessions can overlap or be granted over the same area of land; however, the rights granted by an exploration concession can only be exercised by the titleholder with the earliest dated exploration concession over a particular area.

For each exploration concession the titleholder must pay an annual fee of approximately US$1.70 per hectare to the Chilean Treasury and exploration concessions are granted for two years. At the end of this period, they may (i) be renewed as an exploration concession for two further years in which case at least 50% of the surface area must be renounced, or (ii) be converted, totally or partially, into exploitation concessions.

A titleholder with the earliest dated exploration concession has a preferential right to an exploitation concession in the area covered by the exploration concession, over any third parties with a later dated exploration concession for that area or without an exploration concession at all and must oppose any applications made by third parties for exploitation concessions within the area for the exploration concession to remain valid.

Exploitation (Mining) Concessions: The titleholder of an exploitation concession is granted the right to explore and exploit the minerals located within the area of the concession and to take ownership of the minerals that are extracted. Exploitation concessions can overlap or be granted over the same area of land; however, the rights granted by an exploitation concession can only be exercised by the titleholder with the earliest dated exploitation concession over a particular area.

Exploitation Concessions are of indefinite duration and an annual fee is payable to the Chilean Treasury in relation to each exploitation concession of approximately US$5 per hectare.

Where a titleholder of an exploration concession has applied to convert the exploration concession into an exploitation concession, the application for the exploitation concession and the exploitation concession itself is back-dated to the date of the exploration concession.

A titleholder to an exploitation concession must apply to annul or cancel any exploitation concessions which overlap with the area covered by its exploitation concession within a certain time period in order for the exploitation concession to remain valid.

4.4 Permits & Environmental Liabilities

The following issues will need to be addressed following a positive assessment to proceed with exploration and/or exploitation. They include environmental permitting requirements, water rights and surface ownership.

4.4.1 Environmental Considerations

Law No. 19,300 "Ley de Bases del Medio Ambiente" (published in the official Gazette on March 9, 1994) governs environmental protection in Chile and establishes the legal requirement for projects or activities that are "susceptible to causing an environmental impact" to submit to a process of environmental impact evaluation prior to beginning such activities. In the case of the mining industry, exploration activities are included.

The system of evaluation of environmental impact is regulated by a set of more specific rules and requirements that are laid out in Decree No. 30 entitled

"Reglamento del Sistema de Evaluacion de Impacto Ambiental", which is dated March 27, 1997 and was published in the Official Gazette April 3, 1997.

The law is not explicit as to which kinds of exploration activities are susceptible to causing an environmental impact and the mining industry has had to make its own interpretation. The current industry consensus is that programs involving significant ground disturbance such as in the case of road construction, trenching, pitting, drilling or exploratory mining should enter the environmental impact evaluation system, whereas for more preliminary work such as mapping, geochemical sampling, and geophysical surveys, it is unnecessary.

The Declaration of Environmental Impact must be submitted to the "Comision Regional del Medio Ambiente" (COREMA) or to the "Comision Nacional del Medio Ambiente" (CONAMA) in the case of projects that have a broader inter-regional scope. The information contained within this document must be sufficient to permit the regulatory organizations responsible to judge whether the proposed impact falls within the norms of environmental quality and emissions in place at the time.

If the authorities responsible judge that the proposed activity presents a risk to the population because of the quantity and nature of effluents, emissions or residues that will be produced, then an Environmental Impact Study must be prepared. The Environmental Impact Study is a much more involved and comprehensive document generally intended for industrial activities and is normally not required before proceeding with a typical mineral exploration program. The norm has been that unless the exploration program is being conducted within a park, or threatens to destroy cultural or archaeological heritage or protected flora or fauna, a Declaration of Environmental Impact is sufficient.

The "Sociedad Nacional de Mineria" (SONAMI), the national organization that represents the private mining sector in Chile, presented and approved an Environmental Policy on August 2, 1994, which lays out a set of general criteria and environmental practice guidelines for companies and individuals engaged in mineral exploration activities, to assist them in preparing Declarations of Environmental Impact and in planning for the requirements of abandonment.

4.4.2 Water Rights

The right to exploit surface and underground waters in Chile is governed by the "Codigo de Aguas" (Water Code), which was established as legislation by Decree No. 1,122 dated August 13, 1981 and published in the Official Gazette on October 29, 1981. The official text of the Water Code currently in use was approved by Decree No. 677 on June 22, 1993 and published in September of that year. A water rights application may take 6 months to 2 years to be granted and permits for water rights will consider the impact to other users. Often it is more expedient to arrange to use water that is held by existing water rights.

The right to use water that is encountered during mining or mineral exploration work is addressed by Article 56, Paragraph 2 of the Water Code and supported by Articles 110 and 111 of the Mining Code. This right is extended to individuals and companies who are the owners of valid exploitation or exploration concessions and who find groundwater in process of mining or exploration work. The water must be needed for the exploration or exploitation work on the mineral concession where it is found.

Purchasing water from the nearby communities would be anticipated in the event of drilling at the properties. Water needed for future mining and processing activities would probably require a water resource study and the acquisition of new or existing rights.

4.4.3 Surface Rights

Future mining and mineral processing facilities will require the acquisition of surface rights within the project area. Note that the owner of the mineral rights has legal precedent over the owner of the surface rights.

4.5 Property Description

The concessions, which make up the Minas de Oro San Martin property are pedimentos that have been either granted "Sentencia Constitutiva" or are in the process of being granted. They are held in the name of Glenn Patrick Schmitz as Geneva 1 through 13 and as Amelia 15, Amelia 16, Amelia 17, Amelia 18 and Amelia 24, see Table 1. Note that within this contiguous block of pedimentos are small "mensuras" owned by third parties. A title search will be needed in order to determine the status and ownership of these "mensuras".

Each individual concession is defined by its midpoint and by its dimensions in the north-south and east-west directions. All concessions are rectangular and the midpoint is the intersection of two diagonal lines joining the vertices of the rectangle. The midpoint must be identified in the concession application in UTM coordinates using the Provisional South American Datum 1956 (this is the datum and coordinate system used in official topographic maps published in Chile by the Instituto Geografica y Militar.

Name	UTM Location Mid-point Northing	Easting	Orientation	Size	Rol Expediente.
Amelia 15	6,774,500.00	275,500.00	North-South	300	Pending
Amelia 16	6,774,500.00	276,500.00	North-South	300	Pending
Amelia 17	6,774,500.00	277,500.00	North-South	300	V-26.272-2010
Amelia 18	6,774,500.00	278,500.00	North-South	300	V-26.273-2010
Amelia 24	6,771,500.00	275,500.00	North-South	300	V-26.269-2010
Geneva 1	6,771,500.00	276,500.00	North-South	300	V-26216-2010
Geneva 2	6,771,500.00	277,500.00	North-South	300	V-26.217-2010
Geneva 3	6,771,500.00	278,500.00	North-South	300	V-26218-2010
Geneva 4	6,773,500.00	279,500.00	North-South	300	V-26.219-2010
Geneva 5	6,773,500.00	280,500.00	North-South	300	V-26.220-2010
Geneva 6	6,773,500.00	281,500.00	North-South	300	V-26221-2010
Geneva 7	6,773,500.00	282,500.00	North-South	300	V-26222-2010
Geneva 8	6,773,500.00	283,500.00	North-South	300	V-26.223-2010
Geneva 9	6,773,500.00	284,500.00	North-South	300	V-26.224-2010
Geneva 10	6,771,500.00	280,500.00	East- West	300	V-26.225-2010
Geneva 11	6,771,500.00	283,500.00	East- West	300	Pending
Geneva 12	6,770,500.00	280,500.00	East- West	300	V-26226-2010
Geneva 13	6,770,500.00	283,500.00	East- West	300	Pending

Table 1. Pedimentos of the Minas de Oro San Martin Property.

5.0 LOCATION, ACCESS, INFRASTRUCTURE, CLIMATE AND PHYSIOGRAPHY

The property is characterized as having good access and nearby infrastructure as well as a climate that is conducive to year round exploration or exploitation.

5.1 Location, Access and Infrastructure

The property is located in the III Region of northern Chile. The region is served by two major population centres; Copiapó in the north and Vallenar in the south. Copiapó is a city of 125,000 inhabitants (2002 census) with a daily jet service to Santiago. It is a major mining centre which services the Candelaria mine (Freeport), the Mantos Verde mine (Anglo), the Mina Maricunga mine (Kinross) and the La Coipa mine (Mantos de Oro). Vallenar is a thriving town of approximately 44,000 inhabitants (2002 census) and is growing as an important mining centre, being the local office of Compania Minera del Pacifico, which mines and ships iron ore from several iron mines. It will also prosper from the proposed development of Barrick's Pasqua - Lama gold deposit and Goldcorp's La Fortuna copper - gold porphyry deposit.

The property is located approximately 550 kilometers north of Santiago and 75 kilometers southwest of the town of Vallenar, see Figure 1. The approximate centre of the property is located at UTM coordinates 281,000 E and 6,772,500 N (Provisional South American Datum 1956, UTM Zone 19 South).

To access the property, drive south approximately 55 kilometers from the town of Vallenar along the paved Pan American Highway until Domeyko; from there drive along a well maintained gravel road in a southwest direction towards Carizalillo for 70 kilometers. From here most of the property is accessible by a network of old mining roads and bulldozer tracks. The total driving time from Vallenar is approximately 1.5 hours.

Figure 1. Location map of the Minas de Oro San Martin Property.

5.2 Climate and Physiography

The property lies between 400 and 1,000 meters above sea level within the Coastal Cordillera. Relief is moderate with gently rolling hills except where drainage incision has formed small, local canyons.

The climate is arid but the area is frequently subject to low level clouds and mist drifting into the valleys from the nearby coast. Precipitation averages less than 10 centimeters per year. Vegetation comprises sparse shrubs and cactus within the quebradas. Both the location and the climate of the property area will afford year-round mining under favorable conditions in the event the property advances to the exploitation stage.

6.0 REGIONAL GEOLOGICAL SETTING

The Minas De Oro San Martin Property is situated close to the western margin of the Cretaceous age Coastal Batholith at the contact between the Triassic Canto del Agua and the Jurassic La Negra Formations, Figure 2.

Figure 2. Regional Geology of the Minas de Oro San Martin Property. The Coastal Batholith is coloured red; the Triassic Canto del Agua Formation dark blue and the Jurassic La Negra Formation Pale blue.

6.1 Regional Tectonic Setting

This section of the report provides a synthesis of the tectonic evolution of this belt. Subduction at the western margin of the South American plate has dominated the structural and magmatic evolution of the Central Andes since the beginning of the Jurassic. The resumption of subduction at this time marked the breakup of Pangea-Gondwana and the beginning of the Andean Tectonic Cycle (Mpodozis and Allmendinger, 1993).

During the Jurassic to Early Cretaceous, prior to 127Ma, South America was stationary relative to the mantle, the subduction boundary was retreating and extensional deformation characterized the overriding plate. A composite system of magmatic arcs and related back-arc basins prevailed during an episode of intracontinental rifting, spreading and subsidence along the western continental margin. The convergence direction during this period is inferred to have been generally perpendicular to the arc. Alternating periods of predominantly volcanism or plutonism reflect changes in the rate of subduction. A reduced subduction rate would lead to dormancy in the extensional fault systems and an increase in subduction rate would have resulted in their reactivation (Dallmeyer et al, 1996).

A transition from extensional dip-slip to transpressive sinistral strike-slip tectonics at the Andean plate boundary at about 126Ma suggests a change in the convergence rate and vector. This is inferred to have reduced the rate of subduction boundary retreat and led to the onset of oblique subduction. This transition was coeval with the initiation of the opening of the South Atlantic and may reflect global plate reorganization (Dallmeyer et al, 1996).

Reactivation of extensional tectonics occurred from 106 -103Ma in northern Chile and is interpreted as a temporary return to more perpendicular convergence. This event was followed by another transition to sinistral strike-slip deformation, marking the resumption of oblique subduction (Dallmeyer et al, 1996).

Late Cretaceous recorded a major tectonic change at the Andean Plate boundary. This resulted in destruction of the back-arc basins and left a series of eastward migrating continental magmatic arcs as the dominant tectonic element (Mpodozis and Ramos, 1990). This change was related to more rapid opening of the South Atlantic and initiation of more rapid westward drift of the South American plate. From this time onward through the Tertiary, changes in the velocity and direction of plate convergence determined the various deformational events in the Andes. Migration of the magmatic arc eastward with time is a consequence of the relative rates of drift of the South American plate and subduction at its western margin, with the continent essentially overriding its subduction zone (Mpodozis and Allmendinger, 1993).

6.2 Geological Framework

At the beginning of the Jurassic the paleogeographic configuration of the coastal range comprised a north-south trending marine and subaerial volcanic chain and marine back-arc basin system situated along the western edge of the South American continental plate (Espinoza, et al, 1996).

The Jurassic to Early Cretaceous arc back-arc basin system in northern Chile is divided into 2 segments. The northernmost segment extends from Arica (about latitude 21° S) to Chañaral (about latitude 27° S) and consists of the La Negra arc and the Tarapaca back-arc basin (Mpodozis and Ramos, 1990). The southern segment of the Jurassic to Early Cretaceous arc back arc-basin system extends south from latitude 27° S to latitude 33° S.

The La Negra Formation comprises more than 10,000 meters of tholeiitic to calc-alkaline olivine basalt, basaltic andesite and andesite lavas and pyroclastics with intercalations of marine clastic and volcaniclastic sediments (Losert, 1974 and Buchelt and Tellez, 1988). The volcanic series also includes basaltic to andesitic subvolcanic plugs and dikes and intrusives of gabbroic granodioritic composition (Sillitoe, 2003)

Deposition of the La Negra Formation extended from the Middle to Late Jurassic. It consists of a series of relatively thin amygdaloidal flows with partially eroded scoriaceous or brecciated flow tops in-filled with volcaniclastic sediments and tuffs. Some authors have interpreted these rocks as a volcanic arc while others have suggested that they were erupted into an ensialic back-arc basin. The gabbros, diorites and granodiorites intruding the volcanic pile range in age from 202-103Ma and show five distinct eastward younging ages (Boric et al, 1985).

Varying degrees of regional alteration of the La Negra Formation, involving the association of epidote, chlorite, calcite, actinolite, quartz, hematite, albite, prehnite and pumpellyite, have been documented and are interpreted as low-grade burial metamorphism. The alteration is controlled by the primary permeability of the lavas.

East of the La Negra volcanic succession lies the Tarapaca back-arc basin, which during the Jurassic, received marine sedimentation. A north to south marine regression resulted in the basin being filled with continental red beds by the late Early Cretaceous.

The volcanic/plutonic cycle is repeated in the Early Cretaceous with deposition of the Bandurias Group volcanic sequence to the east of the La Negra volcanic belt followed by emplacement of Early Cretaceous plutons which are coeval with the beginning of strike-slip deformation on the Atacama Fault System beginning at about 126Ma (Dallmeyer et al, 1996).

The southern segment of the Jurassic to Early Cretaceous arc back-arc basin system extends south from latitude 27° S to latitude 33° S. It is within this southern segment that the properties are located. This segment comprises a Jurassic magmatic arc, the Central Chile “aborted” marginal basin, and the Aconcagua back-arc sedimentary platform (Mpodozis and Ramos 1990). The marginal basin is referred to as “aborted” because, despite eruption into the basin of large volumes of flood basalts, no oceanic lithosphere was formed and the basin failed to evolve into a marginal basin sensu stricto (Aberg, et al, 1984).

This segment had completed one cycle of volcanic arc and basin development by the end of the Jurassic and a new cycle began in the Early Cretaceous with formation of a volcanic arc and an ensialic trough. The Early Cretaceous arc formed on eroded Jurassic rocks and pre-Andean basement within the continental margin and material from it was deposited into the trough to the east (Aberg, et at, 1984).

The environment of deposition within the marginal basin changed over time from shallow marine to alternating shallow marine and continental. During the early part of the Middle Cretaceous, turbidites, limestones and continental sediments intercalated with dacitic ignimbrites and basaltic flows were deposited on the western side of the basin. A 2000-meter thick sequence of marine clastics, limestone and gypsum intercalated with dacitic tuff and basaltic lava was deposited on the eastern side of the basin.

During the Early Cretaceous, a thick sequence of mafic to intermediate lavas was erupted on the western side of the basin with flood basalts in the lower and middle parts of the sequence and andesitic flow breccias in the upper parts. This volcanism continued into the Middle Cretaceous.

Rapid subsidence of the basin and rapid accumulation of volcanic material maintained the depositional surface close to sea level (Aberg, et al, 1984). Large volumes of volcanic rocks were erupted during a period of crustal extension and attenuation giving rise to an elevated thermal gradient, which, combined with the rapid subsidence, caused pervasive burial metamorphism of the volcanic pile (Mpodozis and Ramos, 1990).

At the beginning of the Late Cretaceous the marginal basin began filling with continental clastics and subaerial andesitic volcanics. The rocks of the marginal basin were intruded by large granodioritic plutons and magmatic activity continued into the Miocene in discrete, eastwardly younging belts (Rivano, et al, 1985).

6.3 Lower Cretaceous Stratigraphy

Sequences of volcanic and intercalated and interfingering sedimentary rocks representing the Early Cretaceous arc and back-arc basin of the central portion of the arc are traced nearly continuously from north of Copiapó to south of La Serena. The composite Coastal Batholith, comprised principally of Early to Late Cretaceous granodiorites, diorites and quartz diorites, intruded the volcanic arc and the western side of the back arc basin throughout the axis of the arc.

To the west lie mainly metasediments, volcanics and intrusives that make up the Pre-Andean Paleozoic/Mesozoic basement to the arc and volcanics and intrusives of the earlier cycle Jurassic volcanic arc. To the east lie continental sediments and volcanics marking the destruction of the back-arc basin and eastward migration of the magmatic arc commencing in the Late Cretaceous.

6.4 The Coastal Batholith

As mentioned above, the Atacama fault has played a significant role in the development of the Coastal Cordillera. It is oblique subduction that is responsible for the development of the Atacama strike-slip fault which is parallel to the trench. It is also responsible for the ascent and emplacement of the arc granitoid of the Coastal Batholith during Jurassic and Early Cretaceous.

The Coastal Batholith is a composite batholith with magma series that include metaluminous calcic, calc alkaline, alkali calcic and quartz alkalic and compositions that range from diorite to granite. It ranges in age from upper Jurassic (the 148Ma San Juan Pluton) to middle Cretaceous (the 96Ma Santa Gracia Pluton). Within this range the major body of the batholith was emplaced between 130Ma and 115Ma. Generally it decreases in age from west to east. The western (older) part of the batholith intrudes upper Paleozoic rocks whilst the eastern (younger) part of the batholith is emplaced into upper Mesozoic rocks.

6.5 Significant Mineral Deposits

Within the above geological setting the Atacama fault system has influenced the development of several types of significant ore deposits; the Los Colorados, El Algarrobo and El Romeral iron mines, the Dos Amigos porphyry copper mine, the Candelaria and Mantos Verde IOCG mines and the Mantos Blancos volcanic-hosted, stratabound copper-silver mine. In addition to the above, numerous small gold mines are located along associated structures within the Atacama fault zone.

Porphyry Copper systems: Dos Amigos deposit type (Cretaceous age, small, calc-alkaline intrusive system with minor development of an enrichment blanket and with gold credits, supergene 5M tons @ 1.0% Cu & 0.25 g/t Au, hypogene 36M tons @ 0.3% Cu & 0.26 g/t Au).

Iron "Only" IOCG's: Romeral deposit type (medium sized, early Cretaceous, immiscible iron oxide associated with diorite compositional stage of magma differentiation, El Romeral 200M tons @ 50 +/-% Fe and Los Colorados 245M tons @ 48% Fe). Associated with calcic (tholeiitic) parent magmas.

Attractive IOCG Systems: Candelaria deposit type (cupriferous iron oxide mantos & feeders in volcanic rocks, 470M tons @ 0.95% Cu & 0.22 g/t Au). Mantos Verde type (hematite breccias in regional fault zone "jogs", >500M tons @ 0.5% Cu & 0.1 g/t Au). Associated with high potassium parent magmas.

Less Attractive IOCG Systems: Cerro Negro deposit type (cupriferous iron oxide mantos, 94M tons @ 0.57% Cu and 0.1 g/t Au). Associated with calcic (tholeiitic) parent magmas.

Volcanic Hosted, Stratabound Cu-Ag Systems: Mantos Blancos - El Soldado deposit type (volcanic-hosted, in excess of 200M tons @ 1.0% Cu & 10 g/t Ag).

Shear Hosted Gold systems: El Peñon deposit type (low sulfidation, silver-gold vein system, in excess of 16M tons @ 7.79 g/t Au & 217 g/t Ag).

Sedimentary Hosted, Ag-base metal Systems: Chañarcillo deposit type (limestone hosted mantos and veins, historical production reported as 2,500 metric tons of silver)

7.0 THE PROPERTY GEOLOGY

The following summary description of the geology is based on observations made on the property augmented by geological maps published by SERNAGEOMIN. The property is underlain by the Canto del Agua Formation to the west (blue) and the La Negra Formation to the east (green), see Figure 3.

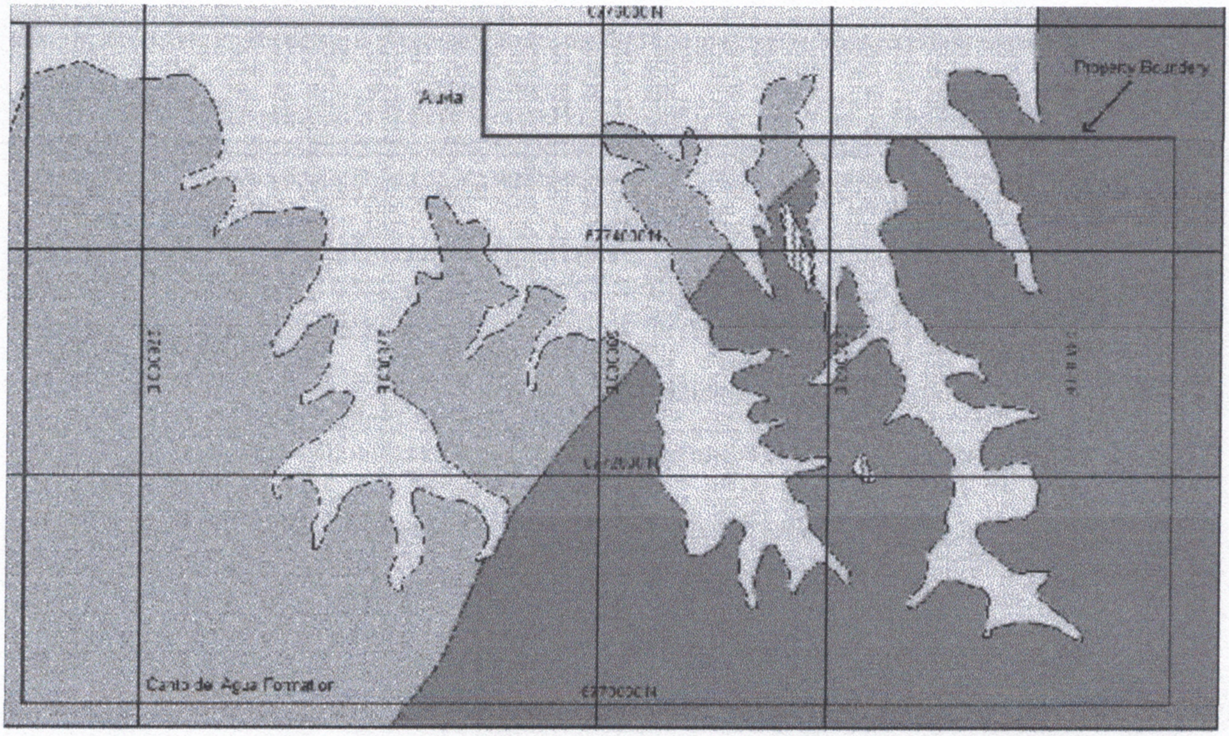

Figure 3. Geological map of the property; Canto del Agua Formation to the west (blue) and the La Negra Formation to the east (green) and old workings brown; concession boundary in red.

7.1 Canto Del Agua Formation

The Canto del Agua Formation is Triassic to Lower Jurassic in age and is made up dominantly of a sequence of marine clastic sedimentary rocks developed on a basal conglomerate containing clasts of quartz and quartzite. These units host the mineralization and are cut by andesitic dykes of unknown age.

7.2 La Negra Formation (formerly the Bandurias Formation)

The La Negra Formation is Upper Jurassic in age and was originally referred to as the Bandurias Formation which was assigned an age of Upper Jurassic to Lower Cretaceous. It is made up dominantly of a sequence of continental volcanics with intercalated volcano-sedimentary rocks; fine grained epiclastics, limestones, cherts and iron formation. To the east of the Dieciocho Mine the sequence is intruded by a medium-grained diorite of unknown age. These units also host mineralization.

7.3 Structure

The dominant structure is a fault that bisects the property. It is oriented sub northeast and passes about one kilometer to the east of the Dieciocho Mine. It juxtaposes the Canto del Agua Formation to the west against the La Negra Formation to the east.

A minor but economically important set of structures host the gold and copper-gold mineralization within a calcite-quartz-iron oxide gangue. The Dieciocho Mine is hosted by a system of veins oriented north 55° east, dipping south east. The conjugate set is oriented north 50° west, dipping south west and hosts both copper and gold.

8.0 PREVIOUS WORK

The bulk of the previous exploitation of gold in the area came from artesanal surface and placer mining. Consequently production records are either incomplete or non-existent.

8.1 Historical Exploitation

Gold mining in the district to the east of Carrizalillo took place between 1939 and 1955 and focussed on high grade vein deposits that were mined close to the surface and placer deposits located in Quebrada Carrizalillo. The Dieciocho Mine was the principal past producer in the district as well as the site of the plant for processing gold. The surface workings exploit several veins located in sub-parallel structures and extend about 400 meters along strike.

Most of the mines were located around the Dieciocho Mine and plant which bought ore grading at least 50 g/t as grades less than that were deemed too low to process. Estimates for the grade of the ore sent from the Dulcinea mine are 400 g/t and for the Chanchita mine 240 g/t. As the price of gold dropped the plant was forced to close and the mines were abandoned.

Photo 1. The Dieciocho Mine and Plant Site looking to the southeast showing the plant site to the left and the mine workings to the right. The pale brown "sand" to the lower left of the plant tower is the mine tailings.

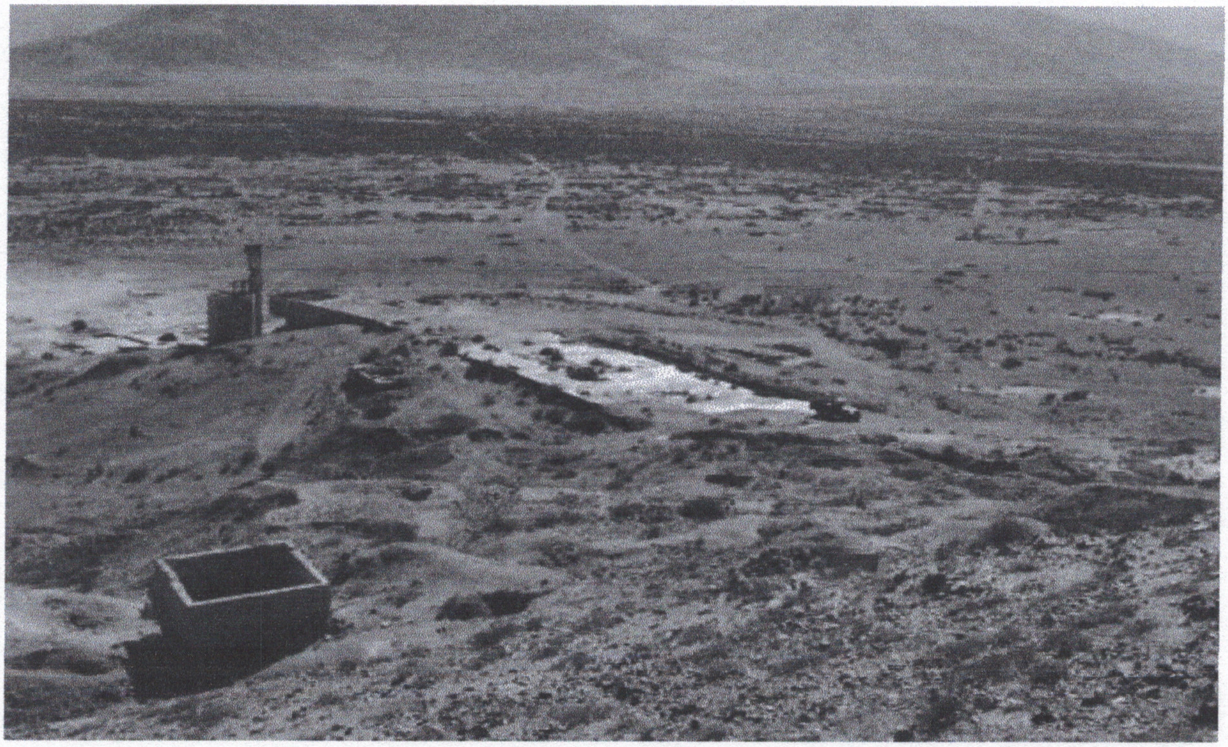

Photo 2. The Dieciocho Mine and Plant Site looking to the northwest. The remains of the townsite can be seen to the right above the truck. Again the mine tailings are the brownish "sand" to the left of the plant tower.

Photo 3. The lower adit driven due south into the old mine workings.

Photo 4. A surface mine working showing the nature of the structure that hosts the auriferous veins. The structure strikes due northeast-southwest and dips at about 35 degrees southeast into the hillside.

8.2 Recent Exploration

To the best of the author's knowledge no systematic exploration has been carried out on the property beyond the ubiquitous sampling of available dumps and workings by unknown parties. There are no indications that drilling has been carried out.

In January, 2011 a two day reconnaissance sampling programme was carried out by Mr. Michael G. Parr who collected 15 samples which were analysed at ALS Minerals laboratory in La Serena. This was followed up in December, 2011 and January, 2012 with a comprehensive sampling programme of all known workings on the property. In total 358 samples were collected and also analysed at ALS Minerals laboratory in La Serena. The sample locations with gold and copper values are shown on Figures 4 and 5 respectively. Selected sample results and locations from this sampling programme are shown in the tables and photographs below.

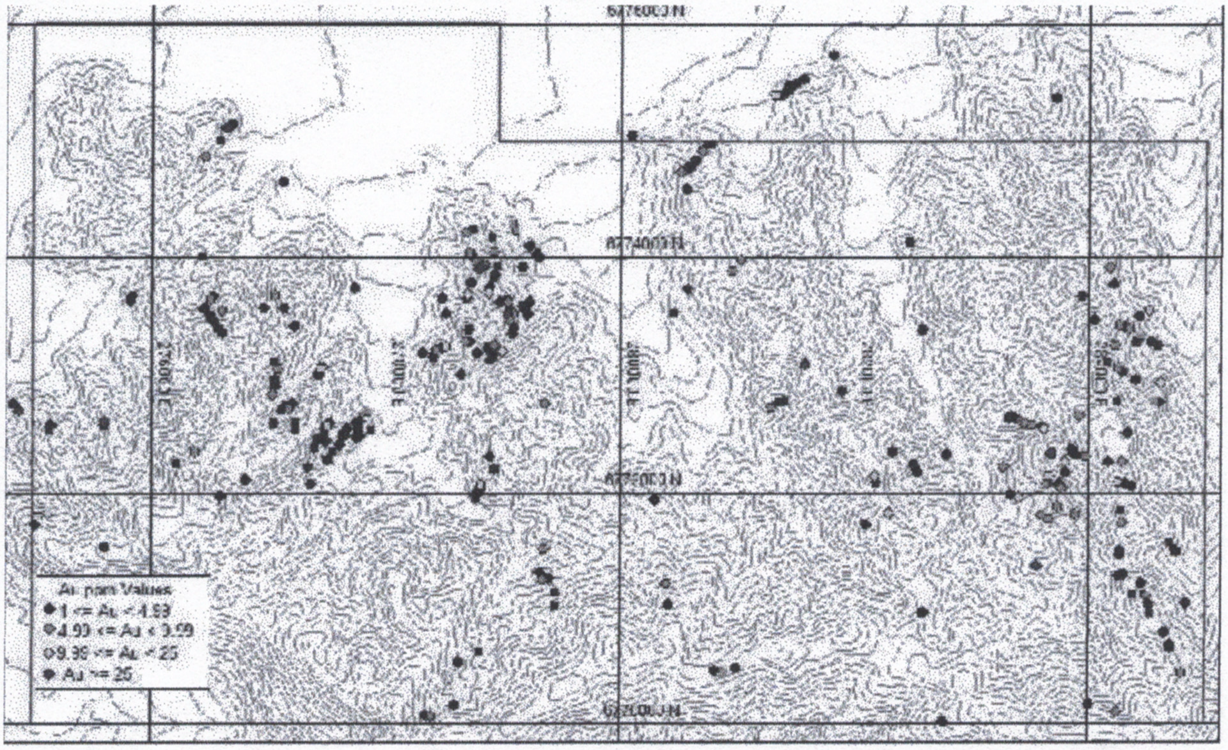

Figure 4. Sample location map showing gold values.

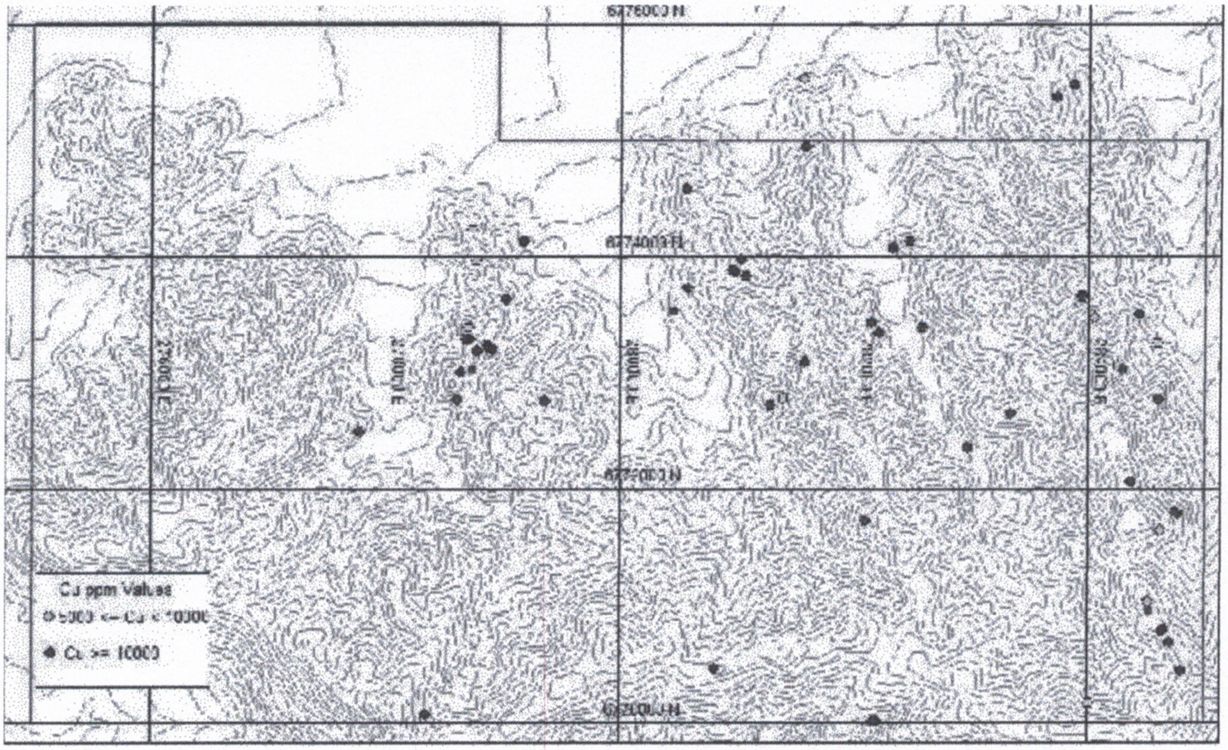

Figure 5. Sample location map showing copper values.

Smpl	Au	Ag	As	Co	Cu	Fe	Mn	Mo	Pb	Zn
	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
1277	<0.2	0.19	41	58	2150	49.6	182	1	0	10
1274	<0.2	0.21	164	24	110	43.5	54	4	1	4
1367	5.6	2.24	1270	122	2140	35.8	310	9	19	74
1355	6.1	1.01	2300	63	728	32.2	342	15	243	174
1388	1.7	0.93	2700	126	581	32.2	129	1	4	15
1451	0.8	0.32	128	197	47300	29.4	491	2	2	16
1379	1.4	2.97	5700	1280	23100	28.3	3190	5	1	287
1321	7	1.67	3320	76	1355	28.2	176	7	40	79
1254	0.5	0.92	139	50	1025	27.0	93	6	13	37
1300	1.9	0.76	1720	456	27400	25.9	411	14	66	73
1320	2.1	2.16	2990	37	2060	25.6	57	17	38	153
1389	2.2	0.25	4110	71	703	25.6	160	1	5	34
1434	4	6.46	>10000	168	24100	25.1	2570	11	64	123

Table 2. Samples with Iron values greater than 25%.

Photo 5. Location of sample 1277 taken from an iron-rich manto which returned an iron value of 49.6%.

Smpl	Au	Ag	As	Co	Cu	Fe	Mn	Mo	Pb	Zn
	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
1352	>25	0.88	4490	23	340	19.6	1060	6	4	62
1361	>25	10.1	>10000	4	369	8.4	99	3	249	23
1427	>25	25	4910	14	187	1.6	560	1	3	6
1465	>25	0.67	>10000	23	84	5.7	950	2	212	27
1560	>25	5.11	455	25	32	2.3	590	1	77	26
1569	>25	0.64	912	40	41	5.4	754	2	10	16
1577	>25	2.9	222	8	34	1.4	564	0	7	15
1580	>25	8.65	1620	1230	44300	9.4	3130	3	4	71
1304	23.4	1.1	3140	78	506	23.0	81	9	3	24
1332	23.4	1.82	>10000	84	2170	20.0	120	22	31	67
1341	22.5	3.91	2640	44	818	22.7	2490	11	109	125
1563	21.3	1.19	188.5	146	50	5.8	577	3	5	18
1503	20.5	0.4	3240	31	44	6.1	1210	2	117	43
1458	18.2	0.97	3120	20	3690	4.0	1170	3	200	52
1464	17.9	2.87	2460	28	920	3.4	775	1	236	126
1567	14.7	0.96	262	10	577	9.3	6430	5	7	29
1462	14.1	0.23	3060	76	92	3.6	1070	1	237	80
1265	13.2	0.92	6780	26	130	5.1	919	2	258	244
1344	12.9	1.55	4890	28	336	18.2	465	2	53	193
1519	12.1	1.21	3260	10	36	2.5	676	1	104	42
1485	11.6	0.3	>10000	141	609	10.1	1340	5	33	59
1338	11.5	2.04	4770	45	586	13.5	222	7	11	76
1268	11.2	0.86	>10000	24	737	20.0	103	1	40	15
1520	11	0.34	2440	14	22	2.8	1080	1	165	36
1568	10.9	0.44	232	48	1920	7.5	5040	7	6	16
1336	10.8	1.19	9930	155	2690	12.6	895	4	10	60
1309	10.2	0.99	>10000	24	346	11.1	201	2	2	28
1440	10.1	0.96	9270	11	482	9.9	144	2	16	28

Table 3. Samples with Gold values greater than 10ppm.

Photo 6. Location of sample 1465 which returned a gold value greater than 25ppm.

Smpl	Au	Ag	As	Co	Cu	Fe	Mn	Mo	Pb	Zn
	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
1423	3.9	3.03	562	58	55200	6.2	753	18	31	334
1451	0.8	0.32	128	197	47300	29.4	491	2	2	16
1580	>25	8.65	1620	1230	44300	9.4	3130	3	4	71
1417	3.1	1.76	>10000	610	42100	17.0	4650	9	8	98
1422	1.2	1.06	1210	371	42100	23.6	1540	3	4	79
1328	1.9	0.73	154	201	40100	10.1	242	6	48	162
1584	6.3	0.97	5260	2380	39800	15.7	6550	8	7	204
1375	2	3.02	870	216	39700	9.3	2920	8	2	169
1299	0.5	8.8	701	95	35700	14.0	155	20	392	223
1329	0.6	2.83	143	118	35700	10.6	398	4	30	105
1472	2.3	9.45	1480	60	34900	16.2	3980	4	12	227
1490	0.2	1.22	279	12	32200	3.8	186	2	4	6
1378	0.8	1.99	369	111	30900	15.3	284	11	3	39
1587	5.2	5.01	9560	689	29900	15.1	4640	3	10	619
1377	0.7	1.16	650	167	29500	7.0	1880	2	1	44
1433	3.1	2.28	>10000	891	29400	23.7	12800	16	8	97
1492	0.6	0.76	3470	1210	29300	9.5	2390	5	1	35
1372	0.3	0.73	76.4	30	27600	5.8	448	2	1	50
1371	4.5	4.24	>10000	473	27500	14.9	638	2	3	47
1300	1.9	0.76	1720	456	27400	25.9	411	14	66	73
1364	6.1	1.83	8420	164	27200	16.7	1020	17	12	25
1376	0.9	0.28	2590	1785	27200	6.1	1300	1	2	60
1263	4	0.17	691	231	26800	6.9	1060	1	1	108
1331	2.4	2.08	115	155	26500	17.6	160	3	3	63
1585	1.5	4.09	1950	120	25800	17.4	1740	9	16	103
1383	9	0.8	>10000	3260	25300	13.6	3110	12	6	74

Table 4. Samples with Copper values greater than 2.5%.

Photo 7. Location of sample 1423 which returned a copper value of 5.52%.

Photo 8. Location of sample 1580 which returned a gold value greater than 25ppm and a copper value of 4.43%.

9.0 MINERALIZATION

This section is a general overview of the nature of the mineralization present on the Minas de Oro Property as seen on reconnaissance visits and augmented by available reports. Generally the mineralization is in veins although mantos are also present. Both veins and mantos are sheared along their contacts. The absolute age of the mineralization is unknown. However, an age younger than the host rocks and contemporaneous with the Lower Cretaceous intrusives to the east of the property is inferred.

Except for the massive magnetite mantos most of the exposed mineralization is within the oxidized and leached, upper part of the vein. Essentially no samples of unoxidized material have been collected as indicated by the sulfur values which are generally less than 0.25%. The dominant mineralogy of the veins and mantos is quartz-calcite-magnetite-hematite-iron oxides as the gange with minor amounts of chalcopyrite, copper oxides and gold, see Photo 9. The nature of the gold mineralization is unknown. This mineralogy is reflected in the geochemistry of the vein samples.

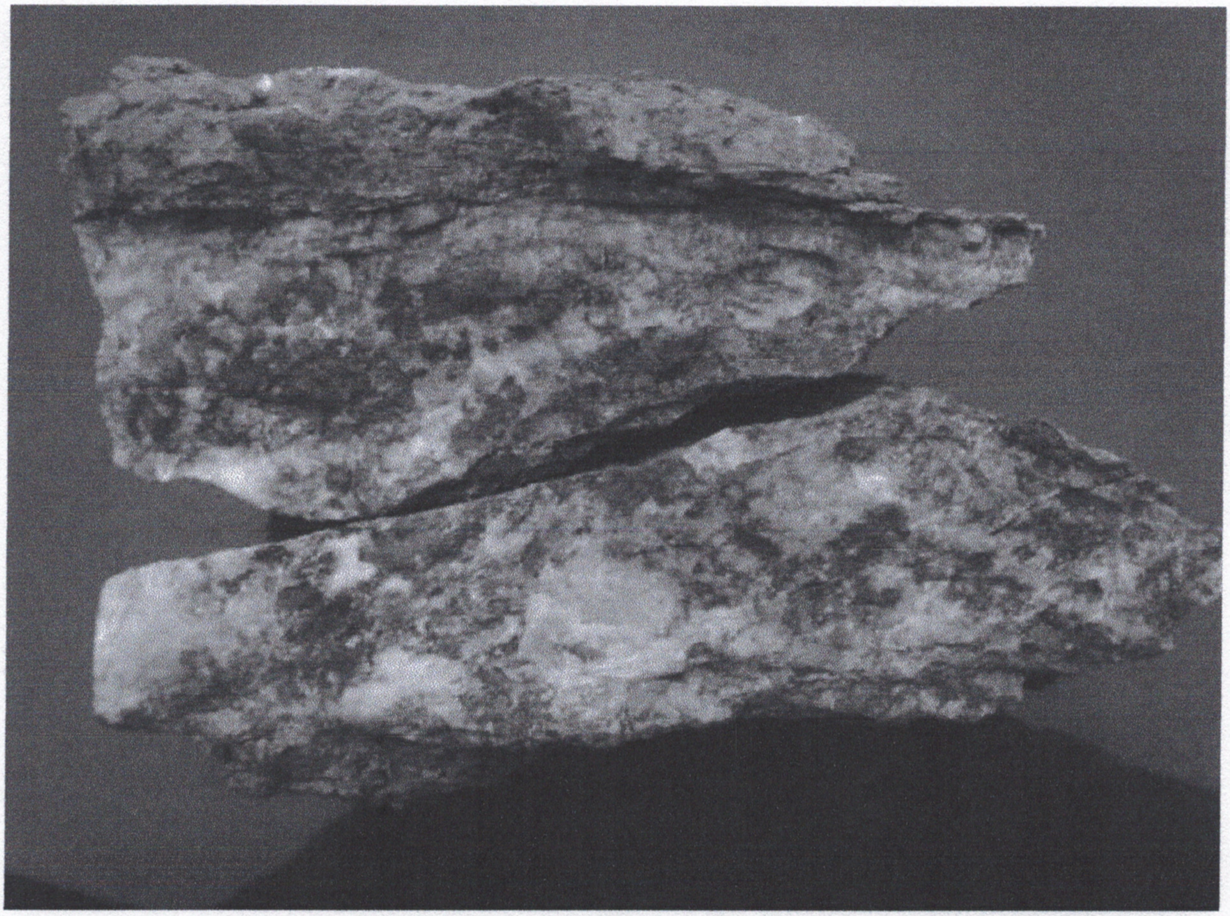

Photo 9. A typical vein sample, SM03, grading 2.3ppm gold within a gange of quartz, calcite, chlorite, hematite and iron oxides. The sample also contains minor disseminated pyrite.

10.0 FUTURE POTENTIAL

Reported historical grades of ore from the mines in the area are quite exceptional. However, these figures should be treated with some caution since ore was generally mined from the upper, enriched, part of the deposit and hand sorted in order to produce a higher grade product that was sent to the plant for processing.

Traditionally, the reason artesanal mining produced from the upper, oxidized zone of the deposit was because here grades were higher due to negative enrichment brought about by the remobilization of the gold and the removal, through leaching, of gange minerals. This process also tended to generate coarse grained gold due to the leaching and reprecipitation process. Obviously, this was far easier to recover with the techniques available at the time than the fine grained gold that tended to occur as primary mineralization. Today, beneficiation techniques no longer have to rely on traditional gravity separation and amalgamation to recover fine-grained gold. Now leaching can be used which greatly improves recoveries and reduces cost allowing for the ability to mine lower grade mineralization.

Finally, these zones were favoured because in most cases they could be mined without the use of explosives. This not only reduced costs but it also eliminated the need for specialized equipment and a power source but also the people with the skills to operate that equipment.

Two lines of approach will be used on the property to explore for additional mineralization. One will be to define ore shoots that persist beneath the depth of previous mining or are along strike and beyond the mining limits of known past producers. The second approach will be to explore for "blind" ore shoots whose surface expression was of little interest to previous miners due to constraints on width or grade.

Realistically it is impossible to estimate the grade of the primary ore or the tonnage that can be readily mined since this obviously depends on the grade of the ore. However, estimates can be made of available tonnage based on average widths, strike length and down-dip projection. Although this is a simple exercise in geometry it suffers from the ease with which the parameters can be changed to obtain whatever tonnage figure is required.

I believe a more realistic approach to assessing the potential of these veins is not only to compare them to similar deposits in the Coastal Belt of Chile but to analogues occurring in similar geological settings in other countries. To this end, multi-element analyses obtained from samples collected on the property were compared to a world wide data base in order to classify and compare them to known deposits. The results of this work indicated that the vein mineralization is probably related to metaluminous calcic magmatism. Examples of world class deposits which are formed from this type of magma are the Mother Lode of California, the Juneau district in Alaska and the Ashanti gold fields of Ghana.

11.0 EXPLORATION PROPOSAL AND BUDGET

The following staged exploration programme is proposed. The first stage will be target selection involving the compilation and interpretation of all existing data followed by support field work. The final stage will be drill testing. The cost of this work is broken down by stages; stage I is projected to cost US$98,125 and stage II US$456,200 for a total cost of US$554,325.

Stage I: Target Definition

The following steps are recommended:

Generate a GIS system database: This should be done using a georeferenced image as a base. The available *Google* image is of very poor quality. However, it may be possible to source a better quality image from elsewhere. If this is not possible then it will be necessary to purchase the image from a provider (Quickbird, Geoeye etc.). To the best of the authors' knowledge all available geological and property evaluation reports that have been generated by third parties have been acquired. However, these will need to be incorporated into the database along with all data generated by MOSM.

Roadwork and Access: We believe that the results obtained to date justify the construction of access roads into areas that are obvious drill targets. Although there will be an initial "upfront" cost this will be more than recovered down the road in the time saved by the ease of access of people and machinery.

Geological Mapping: A geological map of the property at a scale of 1:10,000 that identifies the major lithological units and the significant structures has been obtained. Mapping of significant mineral occurrences at an appropriate scale needs to be performed in areas that have returned significant results from the reconnaissance sampling programme. Attention needs to be paid to the vein geometry and structural control over the distribution of the observed mineralization.

Safety Issues: All surface and underground workings that are of immediate interest should be made safe prior to access on an as needed basis. Some of this work can be carried out with the same equipment that is being used to build access roads.

Additional Sampling: This will be carried out in areas of interest after the excavation of selected shallow trenching across the vein and as rock chip/channel sampling of accessible underground workings.

Acquisition of Necessary Permits: Enquiries will be made to determine if any permits are required to proceed with the above. Generally, permits are not necessary when working in areas of existing workings were roads already exist and only require "brushing out" to be made usable.

Stage I: Budget

The cost of the above exploration programme is summarized in the table below. It is projected to take four months to complete at a cost of US$98,125.

Time Line	Mapping, Sampling, Road Works			Report Prep	
	Month 1	Month 2	Month 3	Month 4	TOTAL
Salaries and Labour					
Principal Geologist (Average 15 days/month @ US$700/day)	10,500	10,500	10,500	8,250	39,750
Field Helper (20 days/month @ US$75/day)	750	1,500	1,500	0	3,750
Office Overhead					
In-Country Management Fee US$1500	1,500	1,500	1,500	1,500	6,000
Technical Support (average 5 days/month @ US$200/day)	1,200	800	800	1,200	4,000
Consumables, communication etc.	150	150	150	150	600
Taxes, 10% withholding	195	230	230	120	775
Field Expenses					
Road Works	0	5,000	5,000	0	10,000
Field Vehicle @ US$2900/month incl IVA	1,450	2,900	2,900	0	7,250
Meals (US$25/person/day, 20days/month)	500	1,000	1,000	0	2,500
Accomodation (US$40/day 20 days/month)	400	800	800	0	2,000
Consumables: fuel, sample bags, misc supplies.	200	300	300	100	900
Analytical					
Whole Rock (average 5/month @ US$60 each)	0	300	300	0	600
Multi Element (average 100/month @ US$30 each)	1,000	3,000	3,000	0	7,000
Alteration studies, PIMA, petrology	0	0	1,000	0	1,000
Land Holding					
Patentes	6,000	3,000	0	0	9,000
Title work	3,000	0	0	0	3,000
MONTHLY TOTAL	26,845	30,980	28,980	11,320	98,125
CUMULATIVE TOTAL	26,845	57,825	86,805	98,125	98,125

Table 5: Exploration Budget Summary; Stage I, Target Definition.

Stage II: Target Drilling

The above work is expected to generate at least five targets of merit which will be drill tested to varying degrees. Because the mineralization is confined to veins the geological information generated by Reverse Circulation (RC) drilling will be adequate since this method generates large samples that minimise the "nugget effect" problem that is usually inherent when sampling gold veins.

Each target will be tested with three to five holes. Two to three shallow holes will be used to confirm the interpreted rake of the ore shoots and one or two deeper holes will test the tenor of the down-rake projection. A total of 2,000 meters of drilling has been budgeted.

Stage II: Budget

The cost of the above exploration programme is summarized in the table below. It is expected to take two months to complete at a cost of US$456,200.

Time Line	RC Drilling	Report Prep	
	Month 1	Month 3	TOTAL
Salaries and Labour			
Principal Geologist (30 days @ US$700/day)	21,000	10,500	31,500
Drill supervision/sample handling, 4 people/day @ US$75/day/person	9,000	0	9,000
Office Overhead			
In-Country Management Fee US$2000	2,000	2,000	4,000
Technical Support (average 5 days/month @ US$200/day)	1,000	1,000	2,000
Consumables, communication etc.	150	150	300
Taxes, 10% withholding	1,000	100	1,100
Field Expenses			
Field Vehicles 2 @ US$2900/month incl IVA	5,800	0	5,800
Meals principal geol(US$25/person/day, 30days)	750	0	750
Accomodation/office principal geol (US$40/day 30days)	1,200	0	1,200
Accommodation, drill supervision/samplers, cabin US$100/day	3,000	0	3,000
Meals, drill supervision/samplers, US$20/person/day	2,400	0	2,400
Consumables: fuel, sample bags, misc supplies.	150	0	150
Drilling			
Mob-Demob	10,000	0	10,000
Dozer work	25,000	0	25,000
RC Drilling 4 targets, 500m/target (2000m @ US$150/m all-in)	300,000	0	300,000
Analytical 2000 samples @ US$30 each	60,000	0	60,000
MONTHLY TOTAL	442,450	13,750	456,200
CUMULATIVE TOTAL	442,450	456,200	456,200

Table 6: Exploration Budget Summary; Stage II, Target Drilling.

Note:-
1. An exchange rate of CLP480 = US$ has been used.
2. Local taxes (income, goods and services) are included were appropriate.

11.0 REFERENCES

Aberg, G., Aguirre, L., Levi, B., and Nystrom, J., 1984, Spreading, Subsidence, and Generation of Ensialic Marginal Basins: An Example from the Early Cretaceous of Central Chile, in: Kokelaar, B.P., and Howells, M.F. (Ends.), Marginal Basin Geology: Geological Society of London, Special Publication 16, 185-193.

Boric, R., Diaz, F., and Maksaev, V., 1985, Magmatic Events and Related Metallogenesis in the Antofagasta Region, Northern Chile: Santiago, Departmento de Geologia, Universidad de Chile, Communicaciones, 35, 37-40.

Buchelt, M. and Tellez, C., 1988, The Jurassic La Negra Formation in the Area of Antofagasta, Northern Chile (Lithology, Petrology, Geochemistry), in: The Southern Central Andes, H., Bahlburg, C. Brietkreuz, and P. Giese (eds.): Springer, Lecture Notes in Earth Sciences, 17, 171-182.

Dallmeyer, R.D., Brown, M., Grocett, J., Taylor, G.K., and Treloar, P.J., 1996, Mesozoic Magmatic and Tectonic Events Within the Andean Plate Boundary Zone, 26°-27°30', North Chile: Constraints from $^{40}Ar/^{39}Ar$ Mineral Ages: Journal of Geology, 104, 19-40.

Emparan, C.C. and Pineda, G.F., 1999, Area Condoriaco-Rividavia, Region Coquimbo, Mapas Geologicos: No. 12, Instituto Geografica y Militar, Santiago, Chile.

Espinoza, S., Veliz, H., Esquivel, L., Arias, J., and Moraga B., 1996, The Cupriferous Province of the Coastal Range, Northern Chile, in Andean Copper Deposits: New Discoveries, Mineralization, Styles and Metallogeny, Soc. Econ. Geologists Special Publication No. 5, F. Camus, R.H. Sillitoe, and R. Peterson (Eds.), 19-32.

Mpodozis, C. and Allmendinger, R.W., 1993, Extensional Tectonics, Cretaceous Andes, Northern Chile, (27°S): Geol. Soc. Am. Bull., 105, 1462-1477.

Mpodozis, C. and Ramos, V., 1990, The Andes of Chile and Argentina: Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series, 11, 59-90.

Rivano, S., Sepulveda, M., Herve, M., and Puig, A., 1985, Geocronologia K-Ar de las rocas intrusives entre los 31°-32° latitud Sur, Chile: Revista Geologica de Chile, 24, 63-74.

Sillitoe, R.H., 2003, Iron oxide-copper-gold deposits: An Andean view, Mineralium Deposita, 38, 787-812.

APPENDIX I

CERTIFICATE OF QUALIFIED PERSON
Richard A. Jeanne, CPG

I, Richard A. Jeanne, of 3055 Natalie Street, Reno, Nevada 89509 USA, do hereby certify that:

1. I am a Consulting Geologist contracted by Glenn Patrick Schmitz.

2. I am a graduate of Northern Arizona University, Flagstaff with a degree in Geology (B.S., 1972), and Boston University, with a degree in Geology, (M. A. 1976).

3. I am a Certified Professional Geologist (CPG #08397) with the American Institute of Professional Geologists.

4. I have worked as a geologist for over 35 since my graduation from undergraduate university.

5. My relevant experience for the purpose of the technical report is:

Geologist, U.S. Geological Survey	1972-1973
Rock Mechanics Lab Technician, University of Arizona	1977-1979
Geologist, Southwest Exploration Associates	1979-1980
Geologist, University of Arizona, Mine Reclamation Center	1980-1981
Director, Office of Natural Resources, Hopi Tribe	1981-1982
Consultant/Senior Geologist, C.R. Exploration Company	1982-1985
Senior Exploration Geologist, Echo Bay Exploration Inc.	1985-1990
Consulting Geologist	1990-2003
Senior Exploration Geologist, Kinross Gold	2003-2005
Consulting Geologist	2005-2012

6. I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101. This technical report is based on my personal review of information provided by the issuer's representative.

7. I am responsible for the overall content of the technical report entitled: "Geological Evaluation, Minas de Oro San Martin Property Report, Prepared for Glenn Schmitz", dated 21st April, 2012.

8. I have had no prior involvement with the properties that are the subject of this technical report.

9. I visited the Property on 7th March, 2012.

10. I am independent of Minas de Oro San Martin and Mr. Glenn Schmitz as described in section 1.4 of NI 43-101.

11. I have read NI 43-101, Form 43-101F1 and this technical report has been prepared in compliance therewith.

12. 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.

Dated at Chile Chico, XI Region, Chile, this 21st day of April, 2012.

Richard A. Jeanne
Consulting Geologist

APPENDIX II

AUTHOR QUALIFICATIONS

Richard Jeanne

Work experience

During and following undergraduate school, Richard worked for the U. S. Geological Survey mapping in the Belt group in Montana and later on the north rim of the Grand Canyon in Arizona.

After completing a master's degree, he entered the PhD program at the University of Arizona in Tucson but after 1 year changed focus from an academic pursuit to a career in industry. He operated U of A's rock mechanics lab, running compression and shear strength tests for a major geological engineering firm on materials from their clients' mines. He also prepared samples and provided instruction and assistance to students in the geological engineering department conducting laboratory exercises.

In 1978 he began working with Southwestern Exploration Associates, Inc (SEA) conducting geological evaluation of volcanic and sediment hosted uranium deposits in New Mexico and detailed alteration and geologic mapping of sediment and volcanic hosted precious metal prospects in Nevada. In addition to fieldwork, duties included project planning, report preparation and field crew supervision. SEA closed in 1980 when the uranium market plunged.

Following the collapse of SEA, Richard worked at the Mine Reclamation Center at the University of Arizona's Department of Arid Land Studies. The center was engaged in administering a federally funded program from the Office of Surface Mining to mitigate health and safety hazards created by abandoned mines on Indian lands. Richard worked on the Hopi Indian Reservation and was eventually hired by the Tribe to direct their Office of Natural Resources. The initial focus of this position was oversight responsibility of the program being carried out by the U of A's Mine Reclamation Center on Tribal lands. Richard also provided technical advice in the area of geology to the Tribal Council during discussions with companies interested in developing the Tribe's natural resources and in lease negotiations with Peabody Coal Company who was mining coal on Tribal lands. The department eventually grew to a staff of about 15 who, in addition to the abandoned mine closures, were responsible for range water and other natural resources on the Reservation.

Following completion of the Hopi Tribe's Abandoned Mine Plan that led to the sealing and site reclamation of 10 abandoned underground coal mines, Richard left the Tribe to return to the precious metals mining industry in Nevada.

From 1982 through 1985 Richard consulted for C. R. Exploration, the precious metals exploration arm of Copper Range Company, based in Michigan. C.R. concentrated its efforts in Nevada where Richard supervised programs on a number of sediment and volcanic hosted gold exploration projects.

In 1985, C. R. Exploration's holdings were purchased by Echo Bay Exploration, Inc and Richard was hired by Echo Bay as a Senior Exploration Geologist. While with Echo Bay, Richard discovered a satellite ore body on the Pan project that doubled the existing resource there, however, Echo Bay opted not to pursue this project. It passed through several owners and is now held by Midway Gold who report a combined measured and indicated resource there of 608,700 ounces gold. In addition to the Pan project, Richard directed the evaluation of more than a dozen other projects in eastern Nevada and western Utah while with Echo Bay.

After 6 years with Echo Bay, Richard was included in a 50% staff reduction and returned to consulting work. In this capacity, he managed numerous precious metal exploration projects in the western U.S. for clients ranging in scale from individuals to major companies.

In the mid 1990's he worked with a close-knit team of eight other geologists on the compilation and interpretation of stratigraphic and structural data for an ore reserve modeling project for Magma Copper at their Robinson porphyry copper/gold deposit near Ely, Nevada. Work at Robinson led to the opportunity to travel to South America where Richard conducted detailed geologic mapping and structural interpretation over a 100 square km area peripheral to the Tintaya mine in southern Peru. Richard consulted at Tintaya off and on as it passed through ownership by Magma Copper, BHP and finally BHP-Billiton.

He conducted a detailed stratigraphic and structural study of a small range of hills outside Oruro, Bolivia to test a structural model proposed by BHP. His analysis showed the model was incorrect, saving the company the cost of property acquisition and drill testing.

In January 2005, Richard began consulting for Xstrata Peru, compiling baseline stratigraphic data on the carbonate host rocks at their Las Bambas project. Following completion of the stratigraphic work, he was kept on through 2007 to map the 336 square km Las Bambas concession.

Beginning in late 2009 and continuing to the present, Richard has returned to South America where he has been working for a Canadian mining company on a copper-silver project near La Serena and a silver-gold property south of Coyhaique.

Education

1969-1972 – Northern Arizona University, B. S. Geology

1973-1976 – Boston University, M. A. Geology

1976-1977 – University of Arizona Attended 1 year in PhD program majoring in stratigraphy

Publications

Cameron, Barry and **Richard A. Jeanne**, 1976, New evidence for glaciation during deposition of the Boston Bay Group, in: Cameron, Barry (ed.), Geology of Southeastern New England, 1976 Annual Meeting. New England Intercollegiate Geological Conference, Boston Meeting, Boston University, Boston, Massachusetts.

Cameron, Barry, **Richard A. Jeanne** and William Schneider, 1975, Further support of Paleozoic glaciation in North America: Geological Society of America, Abstracts with Programs, V. 7, No. 7, pp. 1017-1018.

Gans, P.B., Seedorff, E., Fahey, P.L., Breitrick, R.A., Hasler, R.W., Maher, D.J., **Jeanne, R.A.,** and Shaver, S.A. 2001, Rapid Eocene extension in the Robinson district, White Pine County, Nevada: Constraints from 40Ar-39Ar dating; Geology, v. 29, pp. 475-478

Jeanne, Richard A., 1976, VUE-SEC: A new teaching aid for rotating thin sections with polarized light in a slide projector: Geological Society of America, Abstracts with Programs, V. 8, No. 6, p. 940.

Lucchitta, Ivo and **Jeanne, Richard A.,** 1975, Geologic Map of Part of the Shivwits Plateau, Mohave County, Arizona, *in*: Lucchitta Ivo, The Shivwits Plateau, *in*: Goetz, A.F.H. and others, Application of ERTS images and image processing to regional geologic problems and geologic mapping in Northern Arizona: Technical Report 32-1597 of J.P.L. California Institute of Technology. Pasadena, California, Plate 1, p. 43.

Lucchitta, Ivo and **Richard A. Jeanne**, 2001, Geomorphic features and processes of the Shivwits Plateau, Arizona, and their constraints on the age of western Grand Canyon. *In*: Young, Richard A., and Spamer, Earle E. (eds.), *Colorado River: Origin and evolution; proceedings of a symposium held at Grand Canyon National Park in June, 2000.* Grand Canyon, Arizona: Grand Canyon Association, pp. 65-69. (Grand Canyon Association, Monograph 12.) [2004.]

Seedorff, E., Hasler, R.W., Breitrick, R.A., Fahey, P.L., **Jeanne, R.A.,** Shaver, S.A., Stubbe, P., Troutman, T.W., and Manske, S.L., 1996, Overview of the geology and ore deposits of the Robinson District, with emphasis on its post-mineral structure, *in* Green, S.M., and Struhsacker, E., eds., Geology and ore deposits of the American Cordillera, Great Basin porphyry deposits: Geological Society of Nevada Field Trip Guidebook Compendium, Reno/Spars, NV, p. 87-91.

Seedorff, E., Breitrick, R.A., Hasler, R.A., Fahey, P.L., **Jeanne, R.A.,** Shaver, S.A., Stubbe, P., Troutman, T.W., and Manske, S.L., 1995, Progress on a new structural reconstruction of the Ely porphyry system, Robinson district, White Pine County, Nevada, *in* Geology and Ore Deposits of the American Cordillera—a Symposium, April 10-13, 1995, Reno: Geol. Soc. Nevada, U.S. Geol. Survey, and Sociedad Geologica de Chile, Program with Abstracts, p. 69-70

Shaver, S.A., and **Jeanne, R.A.,** 1995, The geology and evolution of the far eastern side of the Robinson mining district, Ely, Nevada: *in* Geology and Ore Deposits of the American Cordillera—A Symposium, April 10-13, 1995, Reno: Geol. Soc. Nevada, U.S. Geol. Survey, and Sociedad Geologica de Chile, Program with Abstracts, p. 70-71.

Shaver, S.A. and **Jeanne, R.A.** 1996, The geology and evolution of the weakly Au-(Cu)-mineralized far eastern side of the Robinson mining district, Ely, Nevada: *in* Coyner, A.R., and Fahey, P.L., eds., Geology and Ore Deposits of the American Cordillera: Geological Society of Nevada Symposium Proceedings, Reno/Sparks, Nevada, April 1995, p. 1623-1637.

Michael G. Parr

Work History

Michael Parr is a 64 year old geologist who graduated from Liverpool University in 1969. Since then he has spent more than 40 years in the mining and exploration industry, as an employee and principal of two independent consulting companies located in both North and South America. He has worked and lived on both of these continents for most of his life and currently resides close to La Serena, Chile.

Mike started his career as a mine geologist working for INCO in the Thompson Nickel Belt of Manitoba, Canada. After a grounding in the principles of mine exploration and production he transferred to INCO's USA exploration group were he developed his skills as an exploration manager and finally as a senior staff geologist responsible for project generation, evaluations and ore deposit modeling. These positions required extensive fieldwork throughout Canada and the USA and also Brasil.

After 14 years with INCO Mike resigned in order to take on new challenges, to diversify and acquire skills only available outside the corporate environment. It was now possible for him to accept the position of President of Timberline Minerals, a US junior company trading on NASDAQ. In this position he was directly responsible for assessing the exploration potential for gold and uranium within the company's land base as well as the corporate duties required by the SEC. Also, it was possible to participate in the formation of a small consulting group. This started the on going relationship between Mike and MagmaChem that is in its twenty sixth year. During this period emphasis was placed on understanding the fundamental causal relationships between magmas and mineral deposits with respect to their geochemical budget. Once identified, these relationships can be used to assess the mineral potential of a specific geological terrane.

In 1985, Mike joined Boise Cascade Corporation as exploration manager for all their lands in Canada and in the USA, east of the Mississippi. In this position he was responsible for managing the assessment and development of the mineral potential of over two million acres of land owned by the company. This was achieved by attracting joint venture funding through the use of innovative ideas of mineral potential evaluation developed as a consultant with MagmaChem. Before Boise disbanded its exploration group this approach attracted in excess of $20 million in joint venture funding from six companies working in four different regions over seven years.

After leaving Boise Cascade, Mike formed his own USA based consulting company, Cassiopeia and in conjunction with MagmaChem started to develop predictive, three-dimensional element-assemblage zonation models for Carlin type gold systems. Significant advances were also made in understanding differentiation processes within plutons and how they affect ore deposit formation. These ideas were subsequently applied to systems in South America which resulted in relocation to Chile and the formation in 1995, of LITHOTECH with Raymond Jannas. This move facilitated additional work aimed at understanding high sulfidation gold systems and porphyry copper systems by integrating geochemistry with alteration mineralogy. As the director of his consulting company, LITHOTECH his clients have included most of the large companies operating in the Americas such as Phelps Dodge, Rio Tinto Zinc, BHP-Billiton, Antofagasta Minerals and Barrick in addition to the Chilean and Brasilian government owned companies of CODELCO and DOCEGEO respectively.

About half of Mike's exploration activities have been spent in the Archean terrains of Canada, USA and Brasil focusing on base metals, dominantly nickel and also stratabound gold systems. During this time he was directly responsible for the discovery of a significant nickel deposit in northern Canada and the identification of a gold deposit in the US that was subsequently acquired and exploited by INCO. His remaining time has been spent mainly in South America where he has been resident for the past 15 years. Here he has focused on plate margin hydrothermal metal deposits, such as porphyry copper (gold), IOCG's (iron oxide copper gold), skarns and high sulfidation epithermal gold deposits. Mike specializes in metal assemblage zonation and alteration within hydrothermal systems and the application of lithogeochemistry to the search for intrusive hosted metal systems such as porphyry copper deposits.

From 1998 until 2005 Mike's company, LITHOTECH managed exploration in Chile for the Canadian junior, Metallica Resources Inc. (now called New Gold). This management resulted in the discovery of the El Morro porphyry copper gold deposit in 1999 which is currently undergoing feasibility studies by Gold Corp. Also, in 2003 Mike identified the Figueroa Project which was subsequently acquired by Metallica from the Chilean state owned mining company ENAMI. This porphyry copper gold project is presently being evaluated by Antofagasta Minerals and to date has returned positive results. During this period LITHOTECH also consulted for BHP-Billiton on their Escondida Norte Project where it developed an alteration model for the deposit using over 10,000 spectra obtained from PIMA measurements of specially prepared drill samples.

From early 2005 to late 2007 Mike spent most of his time consulting for Xstrata Peru on their Las Bambas Project and related regional exploration. This project, located in the Altiplano of Peru, is currently evaluating the feasibility of three porphyry related copper skarn deposits.

During 2008 Mike managed the ongoing exploration projects of Minera IPBX in Chile with particular emphasis placed on the Copaquire molybdenum - copper deposit. The geological model was reinterpreted involving the relogging of over 15,000 meters of diamond drill core. This was used for the calculation of a 43-101 compliant resource estimate that was carried out during the fourth quarter of 2008.

In addition, since mid-2006 Mike has been working with London based financiers identifying and acquiring a property position over prospective uranium targets in Chile. The resulting company was successfully listed on the London PLUS market during the first quarter of 2008. Mike is an executive director and chief geologist of the company. U3O8 Holdings Plc. has two uranium exploration projects located near Concepcion, in the Bio Bio region of Chile and is presently focused on moving the company to the AIM market. Also, during this time Mike has been carrying out project evaluation and developing grass roots generative projects for various small and medium sized exploration companies.

Education

1965 - 1969: Liverpool University, B.Sc. Geology and Chemistry majors. Field study area was Kong Oskars Land, Greenland and the work was carried out in conjunction with Cambridge University and the Scott Polar Research Institute.

1971 - 1973: Supervisor and management training courses.

1974: Exploration Geochemistry Seminar (5 days) applied to various commodities and sampling media.

1975: Technical writing course (3 days)

1975: NATO funded conference on the Early History of the Earth (UK, 15 days). Participation in conference on all aspects of Archean Geology, extensive field trips, Scotland; restricted entrants.

1978: Mississippi Valley Lead - Zinc deposits conference.

1978: Laterite Symposium (2 days)

1980: Economic evaluation applied to exploration (5 days). Aspects of economics, taxes, cash flows affecting exploration, given by B. W. Mackenzie.

1986: Mineral Industry Costs, NWMA Short Course (3 days).

1987: Sampling of Gold, University of Nevada Short Course (3 days).

Publications

Parr, M. G. & Boben, C., 1985, The Geological Setting of Gold Mineralization Observed at the Scramble Mine, District of Kenora, N. W. Ontario, Abst. I.L.S. XXXI Annual Mtng.

Parr, M. G. & Kuehnbaum, R. M., 1990, The Scramble Mine Gold Deposits. Field Trip Guidebook, CIMM Twelfth Annual District Four Meeting, Thunder Bay, Ontario.

Swan, M. M., Keith, S. B., & **Parr, M. G.**, 1985, Magma Series and their Relationship to Greenstone Gold Metallogeny in the Lake Superior Region. Abst. I. L. S. XXXI Annual Mtng.

APPENDIX III

GLOSSARY OF TERMS

TECHNICAL GLOSSARY

Actinolite	*Mineral composed of hydrous calcium, magnesium and iron silicate*
Albite	*A variety of plagioclase feldspar*
Alkali	*Chemically basic rock.*
Alteration	*Alteration of a rock by geological forces resulting in a change in its chemical or mineralogical composition*
Amphibole	*A group of rock forming silicate minerals that occur most frequently in igneous and metamorphic rocks*
Andesite	*Fine grained igneous extrusive rock, mineralogical equivalent of diorite*
Apatite	*A calcium phosphate mineral*
Argillic	*Pertaining to argillite - a fine grained sediment comprised mainly of clay minerals and fine quartz.*
Assay	*Analysis to determine valuable metal content of a sample.*
Basalt	*A dark coloured, fine grained basic volcanic rock*
Biotite	*A ferro-magnesium silicate mineral*
Breccia	*A rock composed of broken, angular fragments in a fine-grained matrix.*
Brochanthite	*Copper sulphate hydroxide mineral*
Calcareous	*Rocks containing a high proportion of calcite*
Calcic	*Pertaining to calcium*
Calcite	*Calcium carbonate mineral*
Calk-alkalic	*Describing igneous rocks, which are 56-61% silica and the percentages of CaO and of K_2O + Na_2O are equal*
Chalcocite	*Copper sulphide mineral usually found in or near the oxidised zone of copper sulphide deposits*
Chalcopyrite	*Copper iron sulphide mineral commonly found in sulphide veins and disseminated in igneous rocks*
Chip Sampling	*Method of sampling rock by taking 'chips' with a hammer*
Chlorite	*A group of greenish silicate clay minerals, which are hydrothermal alteration products of tuffs, andesites and sediments*
Chrysocolla	*Hydrous copper silicate mineral*
Clinochlore	*Magnesium iron aluminium silicate hydroxide mineral – common member of the chlorite group*
Clinopyroxene	*A member of the pyroxene group of minerals sometimes containing significant calcium*
Codelco	*State copper mining company in Chile*
Continental margin	*At the edge of the Earth's major crustal plates i.e. where continental masses meet oceanic crust.*
Covellite	*Copper sulphide mineral commonly found in zones of secondary enrichment above copper ore deposits*
Cretaceous	*The final geological time period of the Mesozoic Era 140Ma to 65Ma.*
Dacite	*A fine grained igneous rock intermediate in composition between rhyolite and andesite.*
Deformation (Front)	*Alteration such as faulting, folding, shearing, compression or extension of rock formations by tectonic forces*
Diamond Drilling	*Rotary drilling using diamond-set or diamond-impregnated bits to produce a solid continuous core of rock.*

Diopside	Calcium magnesium silicate - an important rock forming mineral in several metamorphic and basic to ultra basic igneous rocks
Diorite	A coarse grained igneous rock consisting of alkali feldspar, some pyroxene and or amphibole with a little quartz
Dip	The angle at which layered rocks, foliation, a fault, or other planar structures, are inclined from the horizontal.
Disseminated	Fine grained mineralisation scattered evenly throughout the rock
Eocene	Geological time period 40-58 Ma
Epidote	Calcium aluminium iron silicate hydroxide mineral
Facies	Unit defined by its geological features
Fault	A fracture (or a zone of fracture) in rock, along which there has been observable displacement between the two adjacent blocks
Ferric	Pertaining to iron
Feldspar	A silicate mineral group, the most important group of rock forming minerals being essential constituents of igneous rocks, present in most metamorphic rocks and in many sedimentary rocks. The most common types are potassic, sodic and calcic
Fold	Bend or buckle in any pre-existing structure in a rock as result of deformation
Foliation	Orientation of minerals in a rock due to deformational processes
Gabbro	A coarse grained igneous rock consisting of calcic feldspar, pyroxene and commonly hornblende and/or olivine
Garnet	Group of aluminium nesosilicate minerals common in highly metamorphosed rocks and in some igneous formations
Geochemistry	Branch of geology that studies the chemical content of rocks
Geophysics	Branch of geology that studies the physics of the Earth
Green schist	A schistose metamorphic rock whose green colour is due to the presence of chlorite, epidote, or actinolite
Haematite	A common iron oxide mineral
Hornfels	A fine grained metamorphic rock
Hydrothermal	The name given to any process associated with igneous activity which involve heated or superheated water
Igneous	Rock type formed by crystallisation from molten rock or magma
Intercalations	Layers that exist between and have been introduced at a later date to the original layers
Intrusive	A general term describing a mass of igneous rock which solidified before reaching surface
Jurassic	Geological time period 210-140 Ma
Limestone	A deep marine sedimentary rock comprised primarily of calcium carbonate derived from shell material
Lithology	The physical characteristics of rock
Magmatic	Pertaining to magma - molten rock
Magnetite	Magnetic greyish black iron oxide mineral
Manto	A flat-lying, bedded deposit; either a sedimentary bed or a replacement strata-bound orebody
Marialite	A sodium aluminium silicate chloride sulphate mineral
Metallogenic	Pertaining to areas characterised by particular assemblages of mineral deposits or by one or more characteristic types of mineralisation
Metasomatism	Alteration in a mineral or rock mass involving a chemical change of the

	substance as opposed to ordinary metamorphism which involves recrystallisation
Miocene	Geological time period 210-140 Ma, part of the Tertiary
Morphology	Branch of geology that studies the characteristics and configuration and evolution of rocks and land forms
Muscovite	Potassium aluminium silicate hydroxide fluoride mineral common in granite and metamorphic rocks
Mylonitic	Pertaining to compact, chert-like rocks without cleavage, but with a streaky or banded structure
Natrolite	Hydrated sodium aluminium silicate mineral
Ore	Mineral bearing rock that contains one or more minerals, at least one of which can be mined and treated profitably under current or immediately foreseeable economic conditions.
Oxide	Soft, weathered rock generally formed by the process of weathering near surface
Paragenesis	The origin of minerals
Phyllic	Usually hydrothermal alteration resulting in chemical and mineralogical change of silicates to a sericite mica dominated assemblage
Plagioclase	A member of the feldspar mineral group that contains considerable sodium and calcium
Pluton	A large body of igneous rock which solidified beneath the Earth's surface
Porphyry	An igneous rock which contains large crystals (phenocrysts) usually of feldspar
Potassic	Pertaining to potassium
Propylitic	Usually refers to a peripheral area or zone where minerals have been chemically changed, characterised by chlorite, sericite, quartz, albite and carbonate minerals
Pyrite	A common iron sulphide mineral.
Pyroxene	A group of crystalline silicate minerals common in igneous and metamorphic rocks
Quartz	Very common silica mineral
Reverse circulation drilling	A drilling method during which rock cuttings or chips are pushed to the surface through an outer tube usually by air (or liquid) pressure from an inner tube
Rhyolite	One of a group of extrusive igneous rocks commonly showing flow textures - the extrusive equivalent of granite
Scapolite	Greyish white mineral intermediate in composition between marialite and meionite
Sericite	A fine grained white micaceous mineral often the product of alteration processes
Skarn	A mineralised body which is the result of an igneous intrusion coming into contact and reacting with limestone or calcareous sediment and causing recrystallisation and mineralogical and chemical alteration
Sodic	Pertaining to sodium
Specularite	A black or grey variety of haematite with a metallic lustre
Stockwork	Mineral deposit comprised of a network of very closely spaced small, irregular veins
Stratigraphy	Branch of geology which studies the sequence or layers of rocks
Strike	The direction or bearing of a bed or layer of rock in the horizontal plane.
Sulphide	Mineral formed with sulphur and often iron

Syntectonically	*Pertaining to mineralisation which formed at the same time as the described geological forces and movements*
Tectono-magmatic	*Relating to major structural and igneous events.*
Thin section	*Fragment of rock or mineral mechanically ground very thinly and mounted between glasses as a microscope slide to enable analysis of the optical properties of each mineral*
Thrust fault	*Low angle reverse fault*
Tonalite	*Intrusive igneous rock consisting of plagioclase feldspar, quartz and amphibole or biotite*
Tourmaline	*A complex borosilicate and hydroxide of aluminium containing iron, magnesium, calcium, lithium and sodium common in igneous and metamorphic rocks*
Trenching	*A means of exposing and sampling near-surface geology by digging a shallow trench*
Vein	*Tabular or sheet like body deposited in openings of fissures, joints or faults in the host rock*
Volcano-sedimentary sequence	*Package of rocks comprising intercalated volcanic and sedimentary rocks*
Volcaniclastic	*Sediment comprised mainly of eroded volcanic material*
Wollastonite	*Calcium silicate mineral common in skarns or contact metamorphic rocks*