Geological Report on Exploration of the Ramaje Ardiente Concession, La Bronca and La Verde Skarn Zones

Municipality of Carbo, Sonora, Mexico

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Summary
The Ramaje Ardiente Project consists of a cluster of mineral concessions encompassing approximately 4,500 hectares in the central part of the state of Sonora, Mexico, ~10 km to the east of the municipality of Carbo. The project area is crossed by a paved road and numerous unmaintained ranch roads.

Within this claim block are many old artesanal mine workings, (approximately 100) developed within skarn, breccias and associated porphyry intrusions. There are two main types of old mine workings, either Cu-Zn rich or Zn-Pb-Ag rich skarns.

This exploration program mostly focused on a historical mineral belt within the Ramaje Ardiente claims know locally as “La Bronca” . 114 rock chip samples were collected from mostly skarn in a northwest trending belt greater than 1 km long and 300m wide. These rock samples contain up to a maximum of 237 gpt silver, 9.52% zinc, 0.205% tungsten, 6.01 % lead, 0.71 % copper.

The principal host to mineralization is garnet skarns. Mineralization consists mostly of oxide mineral species derived from primary sulfide mineral. Observed were zinc oxides of smithsonite and hemimorphite, cerussite as the lead carbonate, the copper oxides chrysocolla, malachite, azurite, pitch limonite, and neotocite. Galena is present in some drill cores and hand samples.

A differentiated sequence of intrusives ranging from diorite porphyry through granodiorite porphyry to quartz porphyry is associated with skarn development and contains mineralization.

Following rock sampling, “scout” drilling of skarn was conducted with a portable gasoline powered drill known colloquially in the mining exploration business as a “Winkie” drill. Two areas were tested with the drill program, the Verde Zone and the La Bronca zone.

Highlights of drilling include the following intervals:

hole	Depth m	Interval m	Ag gpt	Cu %	Pb %	Zn %
BR-1	2.76-7.81	5.05	461		9.22	8.5
includes	6.42-6.64	1.22	1235	0.11	26.24	11.5
and	6.64-7.86	1.22	162		3.08	17.9
BR-3	9.3-11.59	2.29	780		17.9	10.9
BR-5	0-3.66	3.66	73	1.3		1.57

The area has the potential to host 3 different classes of ore deposit:

1) high grade polymetallic "manto" type deposits, in this case dominantly Zn, Ag and Pb, demonstrated in scout drill hole intercepts.
2) bulk tonnage mineable Zn (+/- other metals) in skarns. Drilling and rock chip sampling show widespread disseminated Zn mostly in skarn. The La Bronca skarn contains multiple beds completely replaced by garnet and sulfide minerals over a minimum thickness of 50m. This skarn outcrops over a length of more than 1 km and 300m width but is probably more extensive as it is partially covered by pediment gravel to the northwest.
3) bulk tonnage mineable Cu- Mo deposit within porphyritic intrusive. Stockwork veined quartz porphyry intrusive outcrops in two different areas within the RA project. This porphyry is usually altered to sericite with clay minerals. Primary sulfide minerals have been converted to limonite minerals but originally comprised greater than several volume percent of the initial rock, locally as high as 5%. Limonite mineralogy within porphyry (jarosite, hematite and goethite) and rock chemistry suggest that this leached capping initially contained primary sulfide minerals with a sufficient fraction of copper to potentially host a supergene enriched ore deposit.

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1.0 Introduction

Sonora, Mexico is a large state dominated by agriculture and mining production. Hermosillo, which is the largest city and capital of the state, is increasingly a technological and manufacturing center. Operating large mines within the state of Sonora are the Cananea, La Caridad, and Mariquita open pit copper mines (Grupo Mexico) and La Herradura open pit gold mine (Penoles-Newmont). New mines or projects likely to begin production soon in the state of Sonora include the Mulatos open pit gold mine (Alamos Gold), Piedras Verdes open pit copper mine, (Frontera Copper), Alamo Dorado open pit silver mine (PanAmerican Silver- Corner Bay), Milpillas underground copper mine, (Penoles), Cerro Colorado open pit gold mine, (Sierra Gold) and Noche Buena (Hecla Mining Co.) and the El Chanate gold mine (Capital Gold)

Recently the Ford Motor Co. constructed a large car manufacturing plant in Hermosillo and is now producing. Low labor prices and trained workers make this plant one of the best worldwide automobile manufacturing plants owned by Ford. Railroads, highways, and marine shipping ports all provide excellent access for the state. Electricity and fuel supplies are excellent with an operating copper smelter and molybdenum roaster producing sulfuric acid nearby. Water in parts of the region is in tighter supply and consumption is regulated.

Concessions like Ramaje Ardiente directly benefit from easy access, abundant low cost available workers, and ranch owners that are amenable to mining exploration and development.

2.0 Location and Access of Area Investigated

Carbo is the nearest town to the Project concessions, located approximately 10 kilometers west of the Ramaje Ardiente (RA) concession group (Figure 1). The highway from Carbo east to Rayon essentially bisects the concession area. The town of Carbo was a railroad stop for more than 100 years and still is served by the active line of Ferrocarril Mexico. Population is approximately several thousand people. Loading of iron ore is continuing from rail sidings in Carbo. The region is currently active in agricultural, especially grapes. Carbo is connected by a 2 lane paved state highway continuing 10 km to the west where it joins the four-lane federal freeway system. This intersection is approximately 70 km north of Hermosillo. Carbo has electric power, water wells and laborers.

Within the RA concession area are numerous interconnected primitive roads. Many of these roads are very old and few are maintained, but are overgrown by thorny brush and have small washouts from the intermittent heavy rains. Early in the project these roads were cut open of brush, washouts were hand filled for access, and local cowboys and ranch owners contacted. Private ranch owners or lease holders granted verbal permission to use road access and undertake sampling, drilling, and brush cutting.

Topography of the area of the concessions is gentle to somewhat rolling hills to ridges. The area is densely vegetated with an abundance of very hostile, spiny flora. Commonly observed are jabalina, jackrabbits, bees and rattlesnakes. Several higher ridges occupy the northern central part of the concession trending beyond the concession boundary. The topographic base map is the Carbo Quadrangle (12H-8) published by INEGI at 1 to 50,000 scale. This base map was enlarged to 10,000 and 5000 scales for data plotting and is available in digital form.

The author has not conducted any review or evaluation of the legal status or boundaries of any of the mineral concessions in the area of this study, nor was this asked.

Previous Work

The initial introduction to the concession area was made by Jim Irwin in 2000. The author was employed at that time as Chief Geologist, Mexico Exploration Phelps Dodge Mining Co.. The property had been examined in a preliminary visit by another Phelps Dodge company geologist, Javier Munguia. These field reviews were focused in searching for two types of targets, porphyry copper deposits and oxide zinc deposits. Since 2002 the author has been working as an independent geological consultant with Washington State Registration as Professional Registered Geologist No. 1801.

Reports were found in the Phelps Dodge company files from a program in the hills immediately south of the highway within the Ramaje Ardiente concession by a company that was part of or acquired later by Phelps Dodge, United Verde Copper Co. of Arizona. In the investigation done by United Verde Copper Co., high grade copper veins are described. United Verde performed an early version of electrical geophysics and conducted some drilling in the skarn and porphyry exposed south of the road circa 1929. Drilling had recovery problems and a few copper intercepts are reported. A copy of the M. Herdrick 2000 Phelps Dodge summary report is included for more detailed description of that program (see Apendix). This part of the property contains significant exposures of quartz stockwork veined intrusive and skarns flanking the intrusions.

Exploration in the 1990's on the concession area has mainly been directed by Jim Irwin and was focused on large skarn zones located near the crossing highway and up to 3 km south of the highway. TeckCominco optioned the project in 2002 from Minera El Sahuaro and conducted a detailed rock and soil sampling program with some ground geophysics followed by reverse circulation drilling. This program focussed entirely on the area south of the highway and did not include any of the skarns surveyed in this program, largely because at this time these skarn zones were covered by two internal concessions "La Bronca and "La Bronca II" that were held by Mexican locals and were not included in the option agreement. The recent acquisition by Minera el Sahuaro SA de CV, of the La Bronca and La Bronca II claims by staking have consolidated this claim block and thereby greatly increased the mineralized skarn area held in the RA concessions. This current investigation focused principally on the La Bronca area, although some core holes were also drilled in the Verde zone adjacent to the highway.

Oxidized zinc zones within skarn present viable targets for low cost production by heap leach SX-EW processing (e.g. see Constellation Copper news and feasibility studies for Las Terrazas zinc-copper oxide skarn deposit in Chihauhau, Mexico), utilizing newer hydrometallurgical developments. In addition the recent (2006) increase in the price of zinc to around one dollar (US) per pound has enhanced the value of lower grade, large tonnage, heap leachable zinc deposits, much like large scale open pit porphyry copper deposits.

3.0 Work Performed in 2005 Program

Work was completed with a geologist and three man work crew and consisted of the following:

a. road clearing by hand and hacking from roads sharp roots and stems,
b. line cutting along north south lines,
c. sampling on outcrops at 50 meter or more intervals along lines,
d. reconnaisance geology along brushed lines,
e. scout hole core drilling with Winkie portable drill machine, which produces IEX core 1 3/8" in diameter.

Data was compiled and plotted on 1:5,000 scale topographic enlargements with individual element plots of Pb, Zn, Cu and Ag. Drill core was logged by Roberto Rivera Ibarra and plotted on a computer drafting program with assays.

4.0 Geology of Ramaje Ardiente Concession Area

Rock Types

Sedimentary.
Sedimentary rocks are hosts to intrusions ranging from diorite through granodiorite and granite to leucocratic quartz feldspar porphyry. The sedimentary rocks range from conglomerate, quartzite, and shale to limestone. A calcareous character is common for most sedimentary units including the quartzite. The age of the sedimentary rocks is similar to sequences observed in both the Cambrian near Caborca, and the Cretaceous sequence observed east of Magdelena. Similar packages are observed south near Ures. I believe either age of the sedimentary package is equally plausible, but most workers consider a Cretaceous age to be the most likely.

Volcanics
Volcanics of Cretaceous age rest locally on the sedimentary rocks. The volcanics are a minor part of the areas mapped from andesitic to rhyodacitic in composition. Where observed in highway cuts on the east side of the concession alteration is strong in the volcanics with massive clots of epidote and minor garnet development common. In outcrops on the western side of the La Bronca area the volcanics are pervasively quartz-sericite altered and leached. Flow foliation with low angle attitudes is commonly observed in outcrops of the volcanic rocks.

Intrusive
Intrusive sequences in the area are multi phase, ranging from mafic porphyritic diorite dikes through felsic quartz feldspar porphyry dikes and stocks. Prior descriptions with a whole rock analysis of granite has defined part of the intrusive sequence (included Melvin Herdrick report, 2000, see Appendix). The best examples of diorite dikes were observed in the backbone of the Bronca northwest trending ridge containing strong endoskarn. Further north northwest of the Bronca ridge (approximately 1 km.), the

southern edge of a quartz feldspar porphyry stock was located. This quartz feldspar porphyry stock contains weak stockwork of pyrite fracture fillings and narrow envelopes of sericitic-argillic alteration.

Intrusives located west of the La Bronca skarn are predominantly granodiorite porphyry. Stockwork quartz veining was observed within granodiorite porphyry with sericitic alteration. Cross cutting the granodiorite stock is one or more 20 meter wide porphyryitic microgranular granodiorite dikes carrying copper mineralization with sericite alteration locally changing to epidote-propylitic alteration. Areas of granodiorite surrounding the dykes also display similar alteration to that within the dikes. Chrysocolla with neotocite are contained within the dike over approximately 200m of strike length and extending to the west beneath pediment cover.

Tertiary and Quaternary alluvium

Tertiary gravel is an important component of the area geology. A Tertiary gravel unit known as the Baucerit Formation is part of a pediment cover new partially dissected by erosion. The removal of this cover makes the La Bronca area essentially a window of exposure through the Tertiary pediment and basin fill gravel deposit. Part of the mineralized area is covered by gravel, and exploration will need to include drilling through shallow gravel. The Baucerit Formation is equivalent to the Gila Formation of Arizona and New Mexico which has a tentative age range of 22 to 12 million years. On the east side of the concession is probably an underlying basin with thicker basin fill gravel, common throughout the region (including Arizona) as part of the Basin and Range province. They appear to have a role in the formation or protection of supergene enriched copper deposits and possibly oxide zinc deposits.

Alteration and Skarn Formation

Skarn alteration encompasses all rock types except the Tertiary and Quaternay gravels (Figure 2). Most intensely skarned are limestones but to a lesser degree quartzites, shales and volcanics. The intrusives display strong endoskarn with diorite dykes most intensely altered.

Garnet, epidote, and possibly diopside are the main hydrothermal alteration minerals in skarn. It is probable that several different intrusive phases produced separate stages of silicate alteration, but this must have occured in a relatively short time sequence because it does not appear that significant lower temperature episodes of alteration intervened between crosscutting garnet stages. Alteration has completely modified much of the original sedimentary rock and completely replaced some beds that were probably relatively pure limestones. Garnet is observed in both the pale green form, grossularite, and lesser brownish garnet, andradite. Only small isolated remnants of less altered sedimentary rock remain.

Structure

Structure is an important control of alteration and mineralization. Because of the gravel cover, structures observed are mainly in old mine workings and road cuts. High angle parallel fractures with NW trends are common on the La Bronca ridge in more strongly skarned and mineralized areas. Highway road cuts expose large faults with sulfidic vein filling with N40E trends and steep southeasterly dips. Late Tertiary post mineral faults were observed in the same roadcuts with north-south strikes and shallow westerly dips.

Strikes and dips of bedded sedimentary rocks are consistent in the La Bronca ridge area, with northwest strikes and 10-15 degrees southwest dips over an area of approximately one square km. The La Verde zone has a similar orientation at surface, however nearby roadcuts indicate complex fault relationships and juxtapose different rock units and orientations of bedding. Some vertical dipping beds are observed.

The porphyritic microgranular granodiorite dikes trend nearly east-west on the La Bronca prospect. On the La Bronca ridge a narrow diorite porphyry dike has a trend of approximately WNW.

5.0 Mineralization

Mineralization in Skarns

Mineralization consists mostly of oxide mineral species derived from primary sulfide mineral. Observed were zinc oxides of smithsonite and hemimorphite, cerussite as the lead carbonate, the copper oxides chrysocolla, malachite, azurite, pitch limonite, and neotocite which is an amorphous manganese copper oxide. The lead oxide cerussite was observed surrounding minor galena in several core pieces. Pyrite was occasionally observed within skarn in some broken pieces of core. Pyrite is usually oxidized to goethite with lesser hematite and jarosite.

Strongly mineralized outcrops were observed and confirmed by sampling to have a porous/vuggy, coarse grained garnet texture with an orange colored limonite. These outcrops usually contain concentrations of combined lead-zinc greater than 2%. Manganese is also often present in these rocks. These beds were probably initially limestone, now completely replaced by garnet plus sulfide minerals in skarn. This same character of mineralization was also observed in drill core and yielded high grade intervals. Usually old mine workings are developed on this rock type. In the vicinity of drillhole BR-1 (which has 2.44 meters averaging approximately 15% lead, 15% zinc, 700 gpt silver), is outcroping in the adit portal a “zebra textured” rock of banded white smithsonite and limonite enclosed by porous, limonitic garnet skarn.

Silver concentrations greater than 200 gpt were observed in fire asssays of rocks and drill core, but other than galena, no other recognizable silver mineral was noted. Silver is probably present as cerargyrite and in some manganese oxides. The silver chloride mineral, cerargyrite, is generally very difficult to distinguish in oxidized rocks

Porphyry Mineralization

Porphyry mineralization is observed as limonitic quartz and fracture filled stockworked areas. The extent of the stockworked mineralized area is over a broad area within felsic porphyritic igneous rocks. The combination of sericitic alteration with leaching of sulfides produces a reddish to brown colored limonitic outcrop. These areas were not drill tested nor the focus of this program because they are usually lower grade targets.

Porphyry mineralization hosted in quartz veins and fracture fillings is typical of porphyry copper deposits. The limonite minerals observed in outcrops are a mix of mainly jarosite and hematite. The high ratio of jarosite to goethite (in minor quantities) indicates a supergene leaching environment caused by oxidation of all sulfide minerals present (pyrite, chalcopyrite, molybdenite). Supergene alunite is often present in leached capping mineralization due to acids generated by dissolution of sulfides and clay minerals and was tentatively identified in the porphyry mineralized stock that outcrops on the south side of the road.

All rock chip samples were sent to Actlabs/Skyline in Tuscon Arizona for analyses. The samples were in the authors control and were delivered across the border to the laboratory receiving facility in Tucson. Samples were prepared there and pulps were sent for ICP analyses to the lab in Ancaster, Ontario.

Rock Chip Sampling

114 rock chip samples were collected over an area of approximately 2 square km on the old La Bronca claim. Within this area are numerous old mine pits, perhaps as many as 100 in total, of uncertain age or origin. This previous pitting and mine development was probably for silver.

The project area is densely vegetated hence north-south lines were cut approximately 100m apart to allow access to outcrops for mapping and sampling. Samples were collected at approximately regular 50m intervals in order to give a general indication of the scope and nature of mineralization (Figure 3, Table 1). Samples typically represent composite chips or panel samples over an area of several square meters. Some samples were obtained by removing surface soil and collecting rock chips from the subsurface.

The results demonstrate widespread and high grade Pb-Zn-Ag mineralization within skarn distributed over approximately 1 square kilometer on the La Bronca prospect area. Rock chip samples on the La Bronca prospect returned numerous anomalous metal concentrations. An anomalous zone with Zn concentrations greater than 0.5% occurs along a southeast-northwest trending belt of skarn over approximately 1 km length and 300m width between 8200E, 5700N and 9100E, 5000N. There are also “outliers” of skarn mineralization to the north and south of this belt.

Out of 114 rock chip samples collected, 5 samples contain greater than 100 gpt Ag, 15 greater than 25 gpt Ag, maximum of 237 gpt silver, 12 samples contain greater than 1% Zn, 52 greater than 0.1% Zn, maximum of 9.52% zinc, 6 samples contain greater than 500 ppm W, with a maximum of 0.205% tungsten, 9 samples contain greater than 1% Pb, 34 greater than 0.1% with a maximum of 6.01 % lead, 5 samples contain greater than 0.5% Cu with a maximum of 0.71 % copper (Figure 2).

By comparison the results from scout drilling were much higher in copper, silver, lead and silver analyses. This is in part due to surface leaching and the difficulty in obtaining representative samples from skarn outcrops.

A minimum thickness of mineralized skarn can be estimated from the surface exposures on the hillside between 8800E, 5300N and 8900E, 5500N. Within this area are a minimum of 3 parallel or sub parallel former limestone beds that have been completely replaced by garnet plus other silicates. A sample containing visible galena was collected at 518739E, 3285481N from one of the structurally lower “manto” horizons. The thickness of the skarned beds in the La Bronca zone is at least 50m with topography presenting numerous scattered exposures of this zone as described above. The possibility of bulk mineable mineralization is enhanced by the topography with possible down dip extent potentially greater than surface exposures.

Scout Drilling

Drilling was conducted using a hand portable, 2-cycle gasoline powered drill manufactured in Canada known in the mineral exploration industry as a "Winkie" drill. Core size produced is IEX, 1 3/8 inches in diameter, using lightweight aluminium drill rods. Generally drill holes were targeted adjacent to visible outcropping mineralization to test subsurface continuity and grade (Figures 3, 4). It is difficult to obtain representative samples of mineralization grades in skarn outcrops due to rock hardness and partial cover.

All core samples were cut along core axis in half by diamond rock saw, and halved split into sample bags after descriptive logging and shipped to Acme Analytical Laboratories (Guadalajara, Jalisco preparation facilities). Pulps were in possession of Acme and sent to Vancouver for analysis. One half of the split sample is retained in Hermosillo in wood core boxes for project archive and future review.

In general drill results show higher concentrations of lead, zinc and silver than are immediately apparent in visual examination of core (see Drill Logs). A few intervals contain visible galena but not sufficent to account for high lead and zinc concentrations. Only traces of sphalerite was observed in drill core. Copper was revealed from assays as a significant part of some areas. Metals are mostly carried in oxide minerals which are not immediately obvious to the naked eye.

One hole cut siginifcant copper mineralization which is evident in the .core as chrysocolla with limonite (goethite). This is referred to as the "chocolate zone" gossan in the northwest part of the La Bronca area because of the distinct brown color of friable gossan.

Verde Zone

The Verde Zone is a skarn replacement band approximately 400m long and 50m wide of coarse garnet skarn and scattered marble pods immediately adjacent to and north of the highway. Surface mineralization observed was the guide for placement of the following drill holes.

Hole RA-1 3284476N, 516160E, 030, -60 degrees. 4.88m

Hole RA-1 was spotted within coarse, porous garnet skarn with visible zinc oxide veinlets adjacent to a small old mine pit. The first 0.9 meter interval from the surface cut 10.88% Zn, 1.03% Pb, 131 gpt Ag, 0.12 gpt Au. The entire hole is mineralized, averaging 6.05% Zn, 0.29% Pb, 57.2 gpt Ag over 4.88m. The hole bottomed in 7.56 % Zn, 14 gpt Ag. Mineralization is dominantly white oxides of Zn and Pb with no sulfides observed. The drill core cut skarn at a high angle and these intercepts are believed to be close to true widths.

Hole RA-2 3284559N, 516054E, Azimuth 230, -55 degrees. 8.24m

Hole RA-2 was spotted within massive garnet skarn. This hole returned low grade anomalous Zn concentrations between 0.05% and 0.45%.

Hole RA-2A 3284571N, 516060E, -90 degrees. 9.61m
Hole RA-2A was spotted in massive garnet skarn. The upper 1.38m returned 4.87% Zn, 5 gpt Ag. The hole appeared to cut several minor fault zones between skarn and argillaceous sediments.

La Bronca Zone
Scout drilling on the La Bronca zone returned significant lead, zinc, silver and copper concentrations in skarn. Drilling focussed on outcrops which represent the structurally highest manto zone. There are at least two other similar manto-skarn zones in the mass of skarned ridge which are underneath the drill holes and were not penetrated.

Hole BR-1 3285744N, 518434E, Azimuth 030, -70 degrees. 13.73m.
The hole was designed to cut coarse, porous garnet skarn with visible zinc oxide veinlets down dip from an old mine pit. The hole cut a high grade Zn-Pb-Ag manto zone between 3.81m and 8.86m depth. This 5.05 meters of mineralization cut an average of 8.5% Zn, 9.22% Pb, 461 gpt Ag, including a 1.22m interval of 11.5% Zn, 26.24% Pb, 1235 gpt Ag between 6.42m and 7.64m depth. Mineralization is dominantly Pb and Zn oxides with a short interval (approximately 20cm) of galena visible. This mineralization is believed to be hosted by what was a single bed of limestone that was entirely replaced by garnet, silica and sulfides (now largely converted to oxides). The interval is thought to be close to true width. The hole bottomed in 0.32 % Zn, 2 gpt Ag.

Hole BR-2 3285775N, 518452E, Azimuth 090, -70 degrees. 4.12m
Hole BR-2 cut intercalated skarn and limestones. Recovery was generally poor, less than 50%. The hole did not reach the intended target interval and was abandoned due to difficult drilling conditions. No significant mineralization was intersected.

Hole BR-3 3285660N, 518353E, Azimuth 120, -70 degrees. 14.18m
The hole was designed to cut skarn with visible oxides near a cluster of old mine pits. The entire hole is mineralized with typical low grade material from 0.21% Zn, 3.54% Pb between 1.98m and 4.12m depth, 0.42% Zn, 0.14% Pb between 5.95m and 6.86m depth in garnet- bearing skarn with minor galena visible and iron oxides. Between 9.3 and 11.59 m depth the hole cut a zone of hydrothermal breccia composed of clasts of silica and carbonate in a matrix of the same. This interval contains 2.39m of 10.93% Zn, 17.93 %Pb, 780 gpt Ag. This hole bottomed in 2.59 m of 6.15% Zn at 14.18m depth. It is believed that these intervals are close to true widths

Hole BR-4 3285804N, 518534E, Azimuth 200, -70 degrees. 4.88m
BR-4 was intended to cut the friable "chocolate zone" gossan.
Hole Br-4 cut mostly fine clay and sand material with a few fragments of skarn. Recovery was poor, perhaps 50%. Despite the poor recovery the entire hole is mineralized containing 0.3-0.48% Zn and 11-26 gpt silver.

Hole BR-5 3285803N, 518586N, Azimuth 225, -70 degrees. 6.1 meters
Hole BR-5 was designed to test a zone of visible copper oxide mineralization (the "chocolate zone") within a strongly gossanous outcrop. The entire hole is mineralized, cutting skarn and intercalated carbonate beds with some fine grained clastic sediments

as well. Recovery in this hole was poor, less than 50%. The top 3.66m averaged 1.3% Cu and 1.57% Zn and 73 gpt Ag. The lower 2.44m contains 0.17% Cu, 0.53% Zn and 30 gpt Ag. It is believed that these intervals are close to true widths

Hole BR-6 3285431N, 518541N, Azimuth 120, -70 degrees, 12.2m
Hole BR-6 was designed to cut garnet skarn contain Pb-Zn oxide adjacent to several old mine pits. The top 1.53m cut 11.58% Zn, 0.7% Pb, 65 gpt Ag. The entire remainder of the hole is mineralized with the bottom 2.59m between 9.61 and 12.2m containing 1.32%Zn, 0.46%Pb, 49 gpt Ag.

Hole BR-7 was not drilled due to collar cement setup delays and is now drill ready.

Hole BR-8 3285406N, 518564E, Azimuth 150, -57 degrees, 9.61m
Hole BR-8 cut massive fine-grained garnet skarn adjacent to and below old mine pits. The hole had poor recovery, 22-40%, but was mineralized from top to bottom with between 1.15% and 2.07% Zn, 20-28 gpt Ag. This hole is probably an example of typical low grade disseminated Zn within the massive skarn beds adjacent to high-grade "manto" deposits.

Significant Drill Intercepts

hole	UTM	Az/dip	Depth m	Interval m	Ag gpt	Cu %	Pb %	Zn %	Comments
RA-1	4476N 6160E	030/-60	0-4.88	4.88	57		0.29	6.05	Entire hole mineralized
includes			0-0.9	0.9	131	0.058	1.03	10.9	
and			4.0-4.88	0.88	14		0.03	7.56	
BR-1	5744N 8434E	200/-70	2.76-7.81	5.05	461		9.22	8.5	
includes			6.42-6.64	1.22	1235	0.11	26.24	11.5	
and			6.64-7.86	1.22	162		3.08	17.9	
BR-3	5660N 8353E	120/-70	9.3-11.59	2.29	780		17.9	10.9	
			11.59-14.18	2.59	7		0.2	6.15	Hole bottom in mineral
BR-5	5803N 8586E	135/-70	0-3.66	3.66	73	1.3		1.57	
BR-6	5431N 8541E	120/-70	0-1.53	1.53	65	0.18	0.76	11.58	
			9.61-12.2	2.59	49		0.46	1.32	Hole bottom in mineral
BR-8	5406N 8564E	150/-57	0-9.61	9.61	24			1.6	Entire hole mineralized

This "scout drilling" program demonstrates the presence of widespread disseminated relatively low grade Zn mineralization (plus lead and silver) between 0.3 and 2% Zn, plus high grade manto zones containing greater than 10% Zn, 10% Pb, 500 gpt Ag over significant intervals distributed over a large area. A zone of copper-zinc-silver mineralization containing up to 1.36% Cu, 1.57% Zn, 73 gpt Ag was also drilled. Geological mapping shows that the same skarns continue for approximately 1 km length, 300m meters width and a minimum thickness of 50m. It is possible (in fact likely) that this skarn continues underneath the pediment cover to the northeast.

Ground based geophysical surveys will be used to expand and define mineralization, followed by drilling.

6.0 Exploration Targets

Three types of targets exist within the RA concession area and much work remains to fully explore them. Two are zinc related and one is copper-molybdenum, as follows:

- **a.** Porphyry copper-molybdenum. Two quartz vein stockwork zones and capping in intrusive have been identified. Limonite mineralogy and geochemistry are permissive of large scale porphyry copper-molybdenum type mineralization.
- **b.** Bulk tonnage mineable "porphyry" zinc zone. Zinc-bearing skarns occur over a broad area. The La Bronca zinc oxide minerals are considered to be leachable and mineable by bulk tonnage methods, with additional high-grade "manto" zones within.
- **c.** Manto style zinc-silver zones. High grade replacement in stratabound zones, located in La Bronca, Verde, Picacho, and El Pavo.

The best examples of similar deposits for target models of "manto" deposits are the Cerro el Oro located nearby about 30 km southeast of RA in the same sedimentary sequence which contains 3 million tonnes of 10% zinc, plus numerous mines operating throughout Mexico and the world, mostly polymetallic Pb-Zn-Ag-Cu. Bulk tonnage mineable Zn-Cu deposits include the Las Terrazas deposit in Chihuahua controlled by Constellation Copper, and the large Antamina deposit in Peru. All are characterized by skarn hosted mineralization with base metals and lesser silver plus or minus gold.

Currently the author knows of no producing heap leach zinc mines, however zinc is a more soluble base metal than copper, which is heap leached. Heap leaching is being tested as the production method for the Las Terrazas oxide zinc deposit in Chihuahua, Mexico. The author is aware of additional testing for oxide zinc heap leach production in Mexico and Guatemala. Zinc is currently produced by the hydrometallurgical process of pulp leaching in a mill from the Skorpion deposit in Namibia (Anglo American).

In future exploration activities, it will be important to determine the zinc solubility and metallurgical parameters which determine the subsequent economics. In oxide copper deposits this detailed information is important for each drill hole in mapping ore types within a deposit. Most critical after tentatively outlining a deposit is ascertaining the percent recovery by sulfuric acid leaching of both run of mine rock and crushed rock. Related tests should determine sulfuric acid consumption which is an important economic parameter. Drilling should determine size and grade of mineralization over a large area of favorable skarn. SX-EW produces a high purity cathode that is directly salable on the metal market at a 5 cent premium over spot prices as SHG zinc cathode. Zinc produced from sulfides requires smelting which incurs costs and penalties.

7.0 Conclusions and Recommendations

I conclude that the RA concession, especially the La Bronca area, has a high probability of economic zinc mineralization. Additional skarn zones including the El Pavo and La Verde zones have economic potential as well. The porphyry copper-moly targets should also be explored by drilling.

Currently no reserves nor resources have been established, but strong and widespread zinc-silver and copper-molybdenum areas have been outlined. I recommend additional detailed mapping and sampling with trenching in areas of higher grade zinc (surface sample zones having more than 1 percent zinc) and along and between completed sample lines Additional trench sampling should be completed in spot zones where 0.5 percent zinc is found in surface sampling. An Induced Polarization and magnetic ground geophysical survey should be considered to search beneath pediment gravel cover and to define the entire sulfide system width and depth. A bulldozer tractor should be employed for road rehabilitation and trenching.

Exploration conducted in this program outlines an area of mineralized skarn covering approximately one square kilometer on the old La Bronca prospect. Within this area a minimum of 10 holes should be drilled. There are several other skarn areas that present obvious drill targets. In addition a minimum of 4 holes should be drilled on the porphyry copper-molybdenum bodies exposed to the south of the highway and west of the La Bronca skarns.

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Certificate of Qualifications

1. I am a consulting geologist residing at 318 Huepac, Colonia Lomas Madrid, Hermosillo, Sonora, Mexico.

2. I am a Professional Geologist registered in the State of Washington, (United States of America), professional registry number 1801.

3. My academic qualifications are:

   Bachelor of Science, Washington State University, Pullman Washington

   Master of Science, University of Idaho, Moscow, Idaho

4. I have been engaged in geological work since graduation in 1966.

5. Permission is granted to use this report in a prospectus or other financial offering.

6. I personally conducted exploration on the Ramaje Ardiente Project in numerous days of investigation in 2005 and 2006 in connection with this report.

7. I have not received, directly or indirectly, nor do I expect to receive any interest direct or indirect, in the properties owned by Colibri Resource Corporation or affiliate thereof, nor do I beneficially own, directly or indirectly and securities in Colibri Resource Corporation or any affiliate thereof.

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Appendix

Mel Herdrick, Ramaje Ardiente Report, Phelps Dodge Corporation, 2000

RAMAJE ARDIENTE CONCESSION, CARBO, SONORA

The Ramaje Ardiente Concession is located about 12 kilometers east of Carbo on the main road connecting Carbo, Sonora to Rayon. Carbo is located northeast of Hermosillo about 100 km. The concession's size is 12 km north-south by 6 kilometers east-west with about 5 small internal concessions localized on copper and zinc skarn related mineralization. Numerous other side roads with locked gates offer access to most of the concession south of the road.

Land Concessions:

The Ramaje Ardiente concession was presented to Phelps Dodge by Jim Irwin representing Minera Sahauro, the corporation being the legal owner of the concession. Internal concessions are La Bronca, La Bronca II, Picacho (probably 2 concessions), El Pavo, El Pavo II, El Dorado, El Dorado I, and El Dorado II. Javier Munguia visited the prospect in mid-2000 inspecting a zinc bearing skarn zone by taking nine samples.

Work Completed

Prior work on record consists of two diamond drill holes by United Verde that were completed in 1929. The drill holes were within the skarn zone on the south side of a granitic stock where several higher grade copper veins were mapped in a project by the name of Independencia. The core drill holes intercepted scattered copper mineralization ranging up to 0.5% copper, but most areas of the holes were generally low grade. None were assayed for zinc. A crude form of induced polarization was used to try to locate the targeted vein zones.

In this investigation 50 rock chip samples were taken, and an additional 70 sample analyses were supported for samples that were taken by Jim Irwin. This sampling program led to defining an altered and quartz stockwork veined porphyritic quartz monzonitic stock in two hills south of the Carbo to Rayon road.

The topographic map with coverage of the area is the Carbo Quadrangle, sheet number H12 D21. This is at a scale of 1:50,000 with aeromagnetic coverage available for the same quadrangle.

Geology and Mineralization

Review of this area east of Carbo, Sonora reveals a large zone of contact hornfels and skarn localized within Paleozoic calcareous sedimentary rocks. An adjacent intrusive was located on a ridge and northwesterly extending beneath pediment gravels. The intrusive is granite in composition with a 500 by 600-meter zone of stockwork quartz veining and limonitic leached cap. The strongly altered and stockwork veined intrusive may extend northwesterly beneath the pediment cover. Additional small zones of higher grade skarns exist within carbonated bearing rocks. Skarns consist of garnet developed zones usually near the axis of anticlines where there is high zinc content, or in areas closer to the intrusive zinc with copper in these mineralized zones. All mineralization is oxidized with moderate quantities of limonite.

The strongly quartz-sericite altered and stockwork veined intrusive has the character of porphyry copper style of mineralization. The granite is however evolved to a more felsic granitic stock than most porphyry copper granitic related intrusives.

The area initially visited near the main road is a garnet skarn zone following north-westerly trending limestone and calcareous shales with strong skarnification localized near the axis of a tight fold having a near horizontal axis. A similar setting appears to be the case in the La Bronca prospected skarn area further northeast. Near this fold axis garnet skarn has developed with probably disseminated sphalerite and possibly lesser pyrite. The mineralization is completely oxidized to unknown depths. Zinc assays from one percent to more than 15% have been taken from this zone. Very little prospecting has been done in this skarn zone, probably because there is only zinc present. Silver, lead, and copper are generally low in this skarn zone that has surface dimensions of about 20 meters by 400 meters. A second zone of similar dimensions in the Picacho area has both zinc and copper, with zinc somewhat more dominant. Further south in the contact zone with the intrusive copper and zinc are approximately equal quantities in dolomite where alteration can consist of magnetite and serpentine or zones with garnet.

Review of analyses shows that base metal zoning has a distinctive pattern of copper increasing toward the periphery of the altered intrusive within host rocks consisting of skarned limestone and calcareous shale as well as in fractured quartzite. Manganese is common in most areas of skarn type mineralization. Close to the intrusive contact a hydrous skarn type of alteration consisting mainly of serpentine replacement of limestone with minor magnetite and generally high copper and zinc values.

Samples of the granitic intrusive analyzed by the 35 element total digestion process (Bondar-Klegg) produce good data within which the major element analyses are as useful as whole rock analyses. The intrusive is considered to be Eocene age around 55 to 60 ma. Following is a listing of only igneous rock analyses (two porphyritic granite phases) and analytical results for specific major metals by ICP analysis to show alteration effects:

Sample no.	Percent K	Percent Na	Percent Fe	Percent Ti	Percent Al	Percent Mg	Percent S
114321	2.32	2.26	0.46	0.06	5.62	.07	-.002
114323	2.29	0.39	2.62	0.10	6.10	.13	.022
114324	2.33	0.26	2.42	0.12	5.09	.13	.037
114325	2.11	0.18	2.29	0.15	4.61	.16	.044
114352	0.92	0.03	3.95	0.15	3.11	.09	.028
114364	3.88	2.18	0.36	0.04	7.54	.15	.010
114369	3.16	0.11	1.78	0.06	4.33	.21	.070
114370	3.05	0.11	1.79	0.05	4.68	.14	.019
114371	3.05	1.39	1.55	0.04	3.39	.05	.008
114372	3.00	0.14	2.31	0.09	5.29	.21	.029

Two samples, 114321 and 114 364, were taken from the least altered porphyritic quartz monzonite or granite part of the stock. They show, compared with the other more strongly sericitic altered intrusive, that sodium and calcium (not listed) are significantly leached by hydrothermal alteration. Aluminum is somewhat depleted by alteration processes as well. Among the other major elements total iron is much increased from about 0.4 to about 2 percent, as limonite after sulfides. Silica, which is not reported, is the main element increased replacing sodium and as quartz veinlets. Potassium metasomatism is probably not a significant part of the alteration process in these samples. One whole rock analysis of sample 114364 was made with the following results by x-ray flourescence (ICP values are listed for comparison):

	XRF		ICP	
SiO2	75.42%	Si	na	
Al203	12.59	Al	7.54%	
Fe2O3	0.64	Fe	0.36	
CaO	0.51	Ca	0.31	
K2O	4.97	K	3.88	
NaO	3.22	Na	2.18	
MgO	0.29	Mg	0.15	
P2O5	0.06	P	na	
TiO2	0.10	Ti	0.04	
MnO	0.03	Mn	0.02	
LOI	1.13			na
LOI C	1.13		na	
Cr2O3	-.01	Cr	0.003	
Total Pct.	98.97			

This whole rock analysis shows the stock to be granite in composition (ICP analysis is listed for comparison). The low quantity of sodium remaining in the more strongly altered granitic rock (samples 114323, 24, 25, 69, 70, 71, and 72) indicates that there is a good chance for supergene leaching and enrichment to proceed within the stockwork quartz veined area.

This leached capping area which is located about 1 km south of the main road contains limonite consisting of a mix of jarosite, hematite, and goethite. Limonite is found in thick to thin coatings on fractures and in a disseminated form fringing and within cavities. The overall estimated limonite ratio based on traversing the zone is jarosite to goethite at about 90% to 10%. The general hematite content ranges up to 40 percent of the total limonite. The capping is suggests a former sulfide content of about three to five percent pyrite plus or minus other sulfide minerals.

The principle questions raised are: What was the original copper content of the stockwork zone?, and Was sufficient material leached to collect an enriched deposit? Copper values in samples 114321 and 114364 are 24 and 84 ppm (Mo of 9 and 16 ppm) are from the least altered and leached part of the stock. However, within the more mineralized and leached stockwork zone, the copper ranges from 5 to 48 ppm. Most samples of the leached cap taken by Jim Irwin are also depleted in copper but a few have values ranging as high as 294 (SARA 113) and 410 ppm in leached capping. Relief limonite in vugs, which were formerly occupied by sulfides, is suggestive that a portion of the sulfide was chalcopyrite, possibly up to 10 percent of the total sulfide.

This could have had an original primary copper content of about 0.15 %, which with leaching and enrichment could generate a chalcocite zone of interest. The quantity of hematite is suggestive of the former presence of chalcocite in the leached zone, permitting the copper grade to be doubled or tripled over the primary grade by re-leaching and deposition. However, if the primary grade was only .04 percent the resulting copper content in the enriched zone may only be .1 to .15 % over 50 meters, and not of interest.

Molybdenum is generally strongly anomalous is this stockwork area ranging from 25 ppm to more than 600 ppm. Molybdenum represents an unleachable constituent and correlates with the zone of most intense alteration and mineralization. This zone of molybdenum and copper probably continues northwestward beneath the "nipple hills", an area of outcropping quartzite surrounded by pediment cover where sample 114367 contained 165 ppm Cu and 117 ppm Mo with elevated zinc and lead. Further north the fine-grained granite in samples 114323, 24, and 25 is quartz sericite altered but probably with less former sulfide content than the area of stockwork quartz veining.

The northern area of altered intrusive has limonite with a jarosite to goethite ratio ranging from 50 to 30 % jarosite to 50 to 70 % goethite. These limonite ratios suggest about 2 percent sulfide and weaker leaching of copper. Copper content of these samples (114323-325) is about 40 to 80 ppm generally having the same range as the un-leached samples (114321 and 114364) of the stock, suggesting no significant leaching in the northern area sampled. However this northern area could be lateral from a leached cap beneath pediment cover to the west.

A negative aspect of the exposed leached cap is seen to be the type of quartz veinlets; a fracture filling type with numerous cocks-comb quartz crystals projecting toward the center of the veins. These veins generally have a coarse sericite to muscovite selvage that has a width of up to 5 x the width of the veins. Alunite was not observed in the course of the leach capping inspection, but is usually a common constituent in leached capping.

The compiled quadrangle data (Magma-Chem) lists the district as having alkali-calcic pluton related mineralization which is usually a higher risk district for porphyry copper deposits. However, the Opedepe district's El Creston Mo-Cu deposit is located nearby, at about 15 to 20 km northeast of the Remaje Ardiente leached capping area. El Creston is reported to have a chalcocite zone of about 50 million tons of 0.3% copper with 130 million tons of more than 0.1% Mo. The igneous complexity with multi-phase intrusive sequence, and possibly two sequences of intrusives in the concession area makes determining the difference between calc-alkaline and alkali-calcic intrusives difficult without detailed whole rock sampling.

I recommend more mapping of the capping area to determine it's overall size and character and add to conclusions regarding the potential for it's continuation northwest beneath the pediment gravel cover. The copper depleted nature of the capping observed is necessary in early parts of leaching cycles to provide a chance for enrichment. This depletion of copper in the capping indicates a generally "young leaching cycle" where chalcocite is less than half of the total sulfides, and therefore is unlikely to form oxides like chrysocolla, but more likely to continue to form chalcocite with continued erosion.

The leached cap must have sufficient size potential for Phelps Dodge to pursue a target with large tonnage potential. If another km of strike length is potentially present beneath cover, size potential is important.

I think if further investigation shows there are no fatal flaws in the hypothesis of a chalcocite zone with sufficient tonnage, several drill holes could quickly test that possibility. Induced polarization geophysical surveys could help outline the extent of the sulfide zone beneath cover and help to define some zoning within the sulfide zone.

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Feb. 2000