

**Calibre Mining Corp.**  
**2009 TECHNICAL REPORT ON THE NEN  
PROPERTY, NICARAGUA**

Municipalities of Siuna, Rosita and Bonanza  
Región Autónoma Atlántico Norte (RAAN), Nicaragua  
14° 00' N Latitude; 84° 30' W Longitude  
UTM 1 550 000N, 770 000E (NAD 27 Zone 16N)

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## 1.0 SUMMARY

The NEN property consists of six mineral and five exploitation concession totalling 710 km<sup>2</sup> of northeastern Nicaragua, approximately 230 kilometres northeast of Managua. Three small towns (Siuna, Rosita and Bonanza) are located within the concession area. Each town has daily flights from Managua and unpaved road connections to Managua near the Pacific coast and to Puerto Cabezas on the Caribbean Sea. The property is hilly to fairly subdued in topography, largely covered by pasture land and subject to a subtropical climate. It is owned 100% by Yamana Nicaragua S.A., a subsidiary of Yamana Gold Inc. ("Yamana"), subject to a 3% net smelter royalty payable to the Nicaraguan government. Calibre Mining Corp. ("Calibre") has agreed to purchase Yamana's Nicaraguan subsidiary and the NEN property for cash, shares and warrants.

On the NEN property, windows of Cretaceous sedimentary and volcanic rocks are exposed beneath Cretaceous to Tertiary, generally andesitic to basaltic, volcanic rocks. These rocks are intruded by a series of Cretaceous to Tertiary intrusive bodies which range in composition from granite to quartz diorite. At Siuna and Rosita, skarn mineralization has formed where these stocks have intruded Cretaceous calcareous sedimentary rocks. The La Luz mine at Siuna produced 17.1 million tonnes of ore grading 4.14 g/tonne Au (2.3 million oz. Au) from a garnet-epidote skarn and the Rosita mine produced 5.4 million tonnes grading 2.57% Cu (305 million lb. Cu) from a garnet skarn. Generally northeast-trending faults produced by Tertiary extensional tectonics host extensive low-sulphidation epithermal Au-Ag veining at the Bonanza mine and in the northeastern part of the NEN property. The Bonanza gold mine, which does not form part of the NEN property, but which is surrounded by NEN concessions, has reportedly produced >2.6 million oz. Au at an average grade of 9.16 g/tonne Au from epithermal veins.

The exploration and mining history of the NEN property dates from the late 19<sup>th</sup> century, when several prospects were discovered and mined on a small scale for gold. The opening of the La Luz (1939), Bonanza (1939) and Rosita (1959) mines led to improved access and further exploration in the area. The 1810 tonne/day La Luz mine was shut down in 1968 after a flood destroyed its hydro-electric plant; the underground workings were allowed to flood. The 1810 tonne/day Rosita open pit mine shut down in 1975, due to low copper prices. Epithermal veins (Riscos de Oro, Blag, La Luna and Española) in the northeastern part of the property were mined on a small scale during the late 1970's, producing about 20,000 ounces of gold. The mines were nationalized in 1979 and privatized again in 1994, with exploration campaigns by Greenstone Resources (1997-98) and Yamana (2006-09) but no further production.

The NEN property has potential to host two major types of mineral deposit: low sulphidation epithermal Au-Ag veins; and Au-Cu skarns and their associated porphyry and vein/replacement mineralization. Prospects with potential for skarn-related mineralization include:

- La Luz/Rosita: Each of these mines had low-grade resources remaining at the time that they shut down. In addition, each has waste dumps and tailings which could be a low-grade resource.
- Cerro Potosí: This hosts near-surface, lower-grade Au-bearing garnet-epidote skarn mineralization in the footwall of the main orebody worked by the La Luz mine. Yamana drill intercepts include 16.2 metres grading 4.18 g/tonne Au.
- Cerro Aeropuerto: Yamana discovered gold-bearing quartz-sphalerite vein/replacement mineralization a kilometre south of Cerro Potosí in 2007-08. Widely-spaced drill holes indicate a north-trending, steeply west-dipping zone which can be traced for 300 metres along strike and >300 metres downdip. Yamana drill intercepts include 24.0 metres grading 5.75 g/tonne Au, but controls, geometry and extent of the higher grade mineralization remain unclear.
- Bambana/Minnesota: Recent artisanal workings at Bambana expose gold-bearing altered granodiorite with local copper carbonates/oxides in an area of little exposure or previous work, suggesting its potential for Cu-Au porphyry mineralization. Less is known of Minnesota, but the extent of artisanal surface workings in the same granodiorite raise the possibility of porphyry mineralization there as well.

The low-sulphidation epithermal veins in the northeastern part of the NEN property are similar in many respects to the epithermal veining of the >2.6 million ounce Bonanza mine district, located 35 kilometres to the west. The area of veining is roughly similar (13 x 14 km for the northeast NEN; 7 x 20 km for Bonanza), both are hosted by Cretaceous to mid-Tertiary Matagalpa and pre-Matagalpa Formation andesitic volcanic rocks, and the majority of veining in both strikes northeasterly and dips steeply, related to Tertiary extension in northeastern Nicaragua. The most apparent difference between the two districts, apart from past gold production, is their topography. The Bonanza district is located within hilly terrain, while the relief around the northeast part of the NEN property is much more subdued, corresponding to the Atlantic coastal plain physiographic province. Most of the Bonanza veins were discovered by the end of the 19<sup>th</sup> century, but it appears quite likely that significant veins in the northeast NEN district remain to be found and evaluated.

A CDN\$2.5 million multi-faceted exploration program is recommended for the NEN property. The first facet will consist of property-wide geological mapping, silt geochemistry, data compilation and prospect mapping/sampling/description, to provide a property-wide framework for future exploration and to understand the potential of different areas and each of the known prospects. The second facet will be to advance the Bambana/Minnesota porphyry prospects and the northeast epithermal vein targets through soil geochemistry, more detailed mapping and hand-trenching. The third facet will be diamond drilling to better understand the geometry and potential of mineralization at Cerro Aeropuerto and the main known epithermal vein targets (Riscos de Oro, La Luna and Blag).

## 2.0 INTRODUCTION

Equity Exploration Consultants Ltd. ("Equity") was contracted by Calibre Mining Corp. ("Calibre") to examine the NEN property in Nicaragua, and to compile all available exploration data, prepare recommendations for future exploration and prepare a technical report on the NEN property in compliance with the requirements of NI 43-101. The technical report will be used by Calibre in connection with their acquisition of the NEN property from Yamana Gold Inc. ("Yamana"). This report is largely based upon private reports and unpublished property data provided to Calibre by Yamana, as supplemented by publicly-available journal articles, maps and publications. A list of references used in the preparation of this report is provided in Appendix A (References). The author personally inspected the NEN property during the period June 17 – 22, 2009, accompanied by David Turner (Yamana's Exploration Manager for Central America), Adrian Newton (Project Geologist with Calibre) and other Yamana technical personnel. The property examination included: examination of surface exposures of the Cerro Potosí, Cerro Aeropuerto, Santa Rita, Bambana, Terciopelo, La Luna, Blag and Riscos de Oro prospects/deposits; examination of diamond drill core from Cerro Potosí (holes CP08-13, CP08-14, CP08-15, CP08-18) and Cerro Aeropuerto (hole CA08-16); re-sampling of Yamana surface chip samples at Cerro Potosí, Cerro Aeropuerto, Bambana and La Luna; sampling of vein dump material at the site of the Riscos de Oro shaft; and discussions with Yamana personnel about technical, social, historical and legal issues.

## 3.0 RELIANCE ON OTHER EXPERTS

The author has relied on Calibre and Yamana for information regarding ownership of tenure and terms of the purchase agreement between Calibre and Yamana for the NEN property (Section 4). The author relied on publications and websites of the Nicaraguan Ministerio de Energía y Minas ("MIM") and on discussions with Yamana personnel for general information on mineral tenure and regulations in Nicaragua (Section 4). The author has relied on David Turner of Yamana for assurances that pre-1994 environmental liabilities on the NEN property have been assumed by the Nicaraguan government. The author has not relied on a report, opinion or statement of an expert for other information concerning environmental, political or other issues.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

The NEN property is located in north-central Nicaragua, in the Siuna, Rosita and Bonanza municipalities of the Región Autónoma del Atlántico Norte (RAAN) (Figure 1). The property is centred at 14° 00' north latitude and 84° 30' west longitude and consists of six mineral (646.2 km<sup>2</sup>) and five exploitation concessions (63.6 km<sup>2</sup>), as summarized in Table 1 (Figure 2).

**Table 1: NEN Property Tenure**

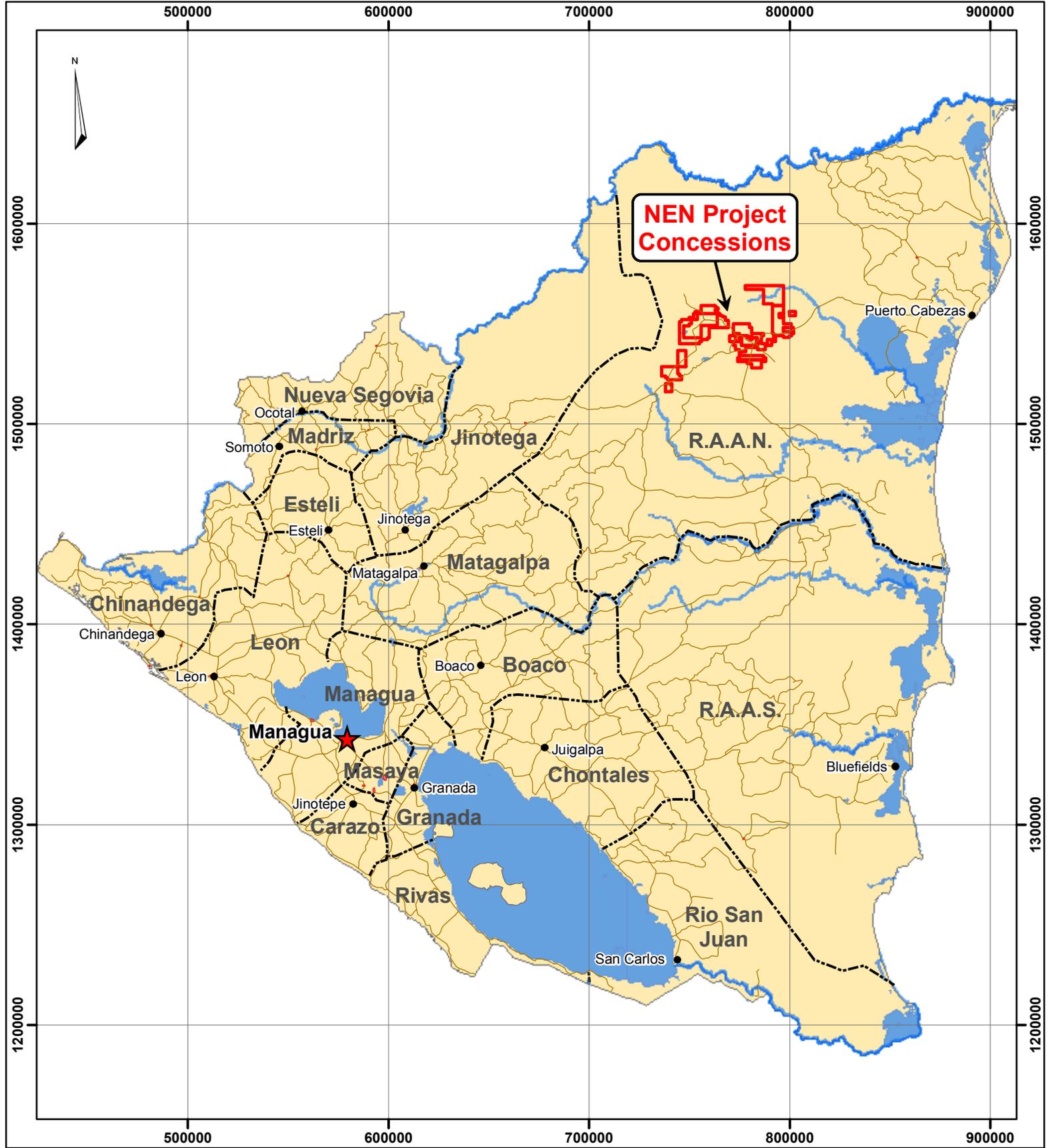
Concession Name	Accord #	Size (Ha)	Type	Expiration Date	US\$/Ha/Yr
Siuna H-1	53-DM-36-2007 <sup>1</sup>	5,200.0	Mineral	July 28, 2027	\$4
Asa H-1	56-DM-39-2007 <sup>1</sup>	3,200.0	Mineral	July 28, 2027	\$4
Nueva America H-1	76-DM-57-2007 <sup>1</sup>	3,200.0	Mineral	July 28, 2027	\$4
Rosita H-2	81-DM-62-2007 <sup>1</sup>	25,484.5	Mineral	July 28, 2027	\$4
Hemco II	54-DM-37-2007 <sup>1</sup>	11,350.0	Mineral	June 16, 2027	\$4
Bonanza H-1	58-DM-41-2007 <sup>1</sup>	16,184.2	Mineral	July 28, 2027	\$4
		64,618.7			
Siuna D	57-DM-40-2007	1,200.0	Exploitation	June 9, 2044	\$8
Rosita D	55-DM-38-2007	3,356.9	Exploitation	June 9, 2044	\$8
Riscos de Oro	59-DM-42-2007	400.0	Exploitation	June 9, 2044	\$8
Blag	65-DM-48-2007	600.0	Exploitation	June 9, 2044	\$8
La Luna	61-DM-44-2007	800.0	Exploitation	June 9, 2044	\$8
		6,356.9			

Note 1. Accord numbers assigned as of December 31, 2008; new numbers will be assigned for concessions which were reduced in size January 1, 2009.

The concessions which comprise the NEN property are held by Yamana Nicaragua S. A., a wholly owned subsidiary of Yamana Gold Inc. ("Yamana"). In May 2009, Calibre Mining Corp. ("Calibre") executed a letter of intent to acquire 100% of Yamana Nicaragua S. A. and its interest in the NEN property. The purchase price is set at C\$7.0 million, consisting of 12 million shares of Calibre and no less than C\$4.0 million in cash. In the event that Calibre spends at least C\$5 million in exploration on the property and completes an approved NI 43-101 report with a resource estimate within five years, Calibre will also be required to make a bonus payment to Yamana of up to C\$3.5 million in cash, to be calculated at C\$5 per gold-equivalent ounce of measured and indicated resources, to a maximum of 700,000 gold-equivalent ounces. Also, Calibre will issue Yamana 5 million Calibre warrants exercisable at C\$0.50/share and 5 million Calibre warrants exercisable at C\$1.00/share within 5 years; these warrants will only be exercisable if Calibre delineates at least 2.5 million gold-equivalent ounces in a NI 43-101-compliant measured and indicated resource (Calibre, 2009b).

In June 2009, Calibre granted an option to B2Gold Corp. ("B2Gold") to earn 51% of the NEN property by completing CDN\$8 million in exploration expenditures by July 1, 2012. Upon earning its interest, B2Gold will be responsible for its pro rata share of bonus payments to Yamana and will have the option to earn a further 14% interest in a defined project area by completing a preliminary feasibility study on it (Calibre, 2009a). The property is not subject to any royalties or back-in rights, other than the 3% net smelter return royalty payable to the Nicaraguan government, as dictated by law.

In Nicaragua, concessions are demarcated by E-W and N-S lines as defined by UTM coordinates (NAD-27). Annual payments are required for maintenance of exploration and mining concessions. Prior to enactment of Nicaragua's Law 387 of 2001, both exploration and exploitation concessions were granted by the government; after 2001, mineral concessions with rights for both exploration and exploitation were granted. For mineral concessions granted after 2001, the annual payments are US\$0.25/ha in year 1, US\$0.75/ha in year 2, US\$1.50/ha in years 3 and 4, US\$3.00/ha in years 5 and 6, US\$4.00/ha in years 7 and 8, US\$8.00/ha in years 9 and 10 and US\$12.00/ha for every year thereafter. Exploitation concessions, which



- Legend**
- State Boundaries
  - Roads
  - Rivers
  - Waterbodies

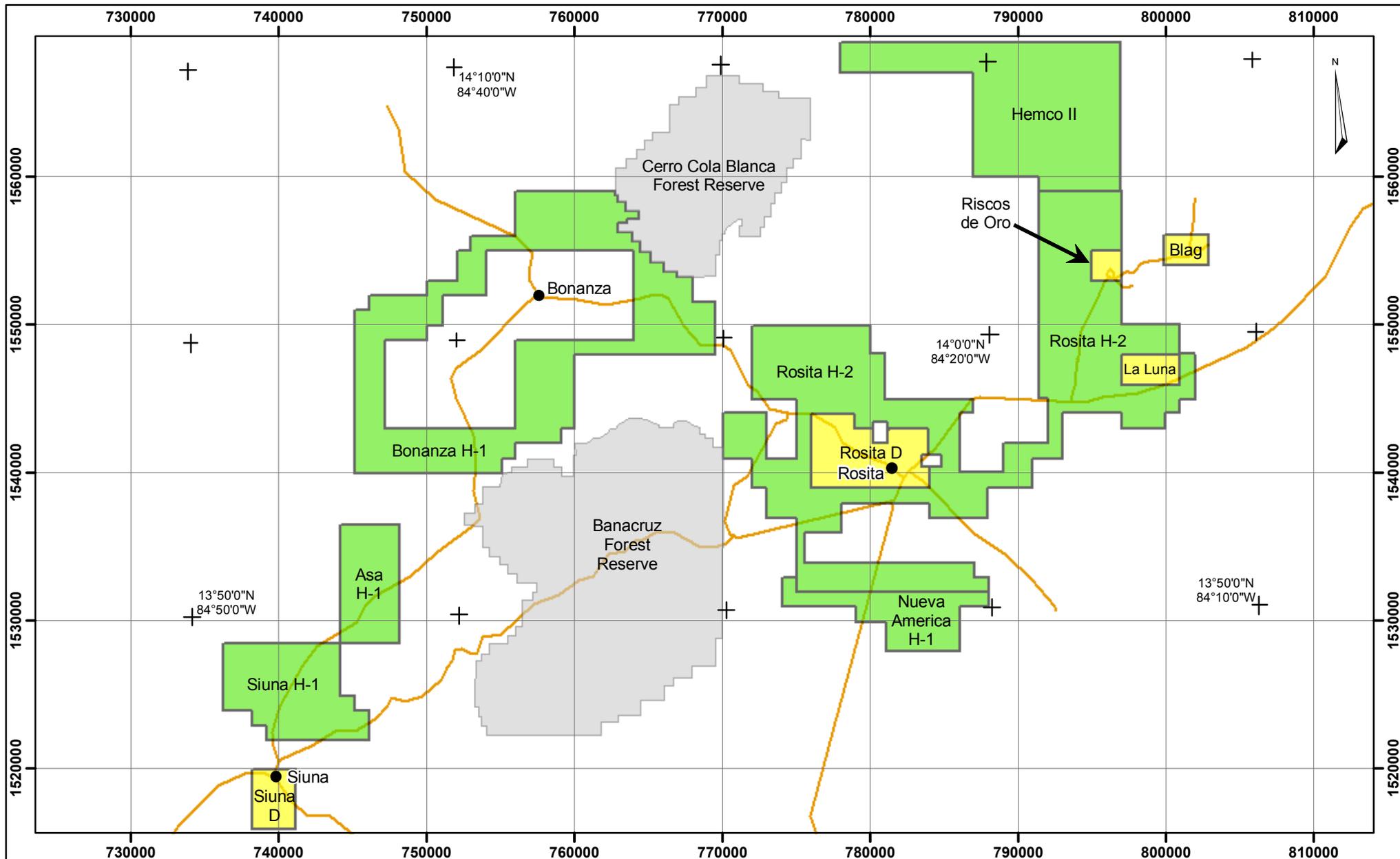
Main Population Centres Labelled

**Calibre Mining Corp.**

**NEN Project Location Map**



Date	June 30, 2009	Scale	1:2,500,000	Figure <b>1</b>
U.T.M. Zone	NAD 27 Zone 16N	Municipality		
N.T.S.		State/Province	Nicaragua	



**Legend**

**NEN Project Concessions**

- Exploitation
- Mineral
- Roads

Main Population Centres Labelled

**Calibre Mining Corp.**

**NEN Project  
Tenure Map**



<i>Date</i> June 30, 2009	<i>Scale</i> 1:350,000	<i>Figure</i>  <b>2</b>
<i>U.T.M. Zone</i> NAD 27 Zone 16N	<i>Municipality</i> Siuna, Rosita, Bonanza	
<i>N.T.S.</i>	<i>State/Province</i> R.A.A.N.	

predate Nicaragua's Law 387 of 2001, require payments of US\$2.00/ha in years 1 and 2, US\$4.00/ha in years 3 and 4 and US\$8.00/ha for every year thereafter. Both exploitation and mineral concessions are granted for a term of 25 years and can be renewed for an additional 25 years. Artisanal miners are permitted to conduct hand-mining on concessions held by others, but artisanal miners not already active by 2001 are limited to a maximum of 1% of the concession area and their activities are regulated by the Ministerio de Fomento, Industria y Comercio ("MIFIC").

Yamana Nicaragua S. A. owns surface rights to several parcels of land within the NEN property, covering the inactive pits and sites of some of the surface infrastructure related to the La Luz (Siuna) and Rosita (Santa Rita and R-13) mines. Since the nationalization of the La Luz and Rosita mines in 1979, the towns of Siuna and Rosita have grown up around the former minesites, and surface rights formerly controlled by the mines have gradually passed into private hands. Surface rights throughout the remainder of the NEN property are privately held, with the exception of a few indigenous communities which hold their land communally. The NEN property borders two Forest Reserves, Cerro Cola Blanca to the north and Banacruz to the south (Figure 2).

There has been significant surface disturbance by past mining activities in several parts of the property. The author has been informed by David Turner of Yamana that the current concession owners are not liable for the effects of mining and exploration prior to the privatization of the concessions in 1994, which liability has been accepted by the government of Nicaragua. However, the author has not seen documentation to that effect. All formal mining on the property occurred prior to the privatization and would dwarf any environmental liabilities produced later. The author has not attempted to determine the extent of environmental liabilities which could be present.

Prior to any type of mineral exploration, an environmental permit is required from the Región Autónoma del Atlántico Norte (RAAN). An exploration plan with proposed field work, time-line and cost estimate must be submitted to the Secretaria de Recursos Natural (SERENA) of the RAAN. An independent environmental impact study and public consultations are required for programs with significant ground disturbance, such as trenching or drilling. The author has been informed that Siuna exploitation concession is currently permitted for approximately 20 additional drill holes and the Hemco II and Bonanza H-1 concessions have active prospecting permits. Permits will be required for other exploration carried out on the property in the future.

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

### **5.1 Accessibility**

The NEN property is located 230 air kilometres northeast of Managua and 100 air kilometres west of the Caribbean port town of Puerto Cabezas (Figure 1). There are two main population centres within the concession, Siuna and Rosita. A third town, Bonanza, lies near the centre of the property, but not within it. Each of these towns has a population of 10,000 – 20,000. Ground access to the area and each of the three towns is provided by unpaved roads from the south, east and west. The southern and western access roads connect Siuna to Matagalpa, Nicaragua's fifth-largest city, a distance of approximately 140 kilometres. Currently, it takes about 7 hours to drive from Managua to Siuna. From Siuna, this road extends eastward through Rosita to Puerto Cabezas on the Caribbean Sea. Another road connects Rosita and Bonanza. Aside from the principal unpaved roads, the area is traversed by a series of dirt tracks and footpaths, some accessible by 4 wheel drive truck, that connect outlying villages and farms.

All three communities have daily scheduled flights to Managua with La Costeña, a commercial airline.

### **5.2 Climate and Physiography**

Northeast Nicaragua is covered by lowland humid tropical forest, much of which has been converted to pasture land on the NEN property. The area undergoes a dry season from December to May and a rainy

season from June to November. The transition between the two seasons varies slightly from year to year and across the property. The rainy season is marked by generally clear mornings and daily cloudbursts in the afternoon. Field work is possible throughout the year, but access is generally easier from November to June. The concession straddles the hilly interior highlands and flat Atlantic coastal plain physiographic provinces. Elevations in the highlands range from 100 to 1000 meters above sea level. The Atlantic plain extends to the Rosita area and is flat to gently undulating and poorly drained with an elevation range of 50 to 100 meters above sea level.

### 5.3 Local Resources and Infrastructure

Siuna and Rosita have municipal water systems serviced by reservoir, although water for industrial use and drilling is limited in the dry season. Siuna has recently been connected to the national electricity grid and power lines are being erected between Siuna and Rosita, but Rosita is still serviced by diesel generator. A hydroelectric facility on the Río Way at El Salto, approximately 25 kilometres northeast of Siuna, provided ample power for the La Luz and Rosita mines and communities before failing in 1968. A Nicaraguan company is reportedly preparing to re-build this dam and power plant, and connect it to the national grid.

Telephone service is provided by landline to Siuna and Rosita through the national telephone company, Enitel. As well, a number of companies currently provide cellular and satellite communication services within the property.

Aside from mining, the principal economic activities in the area are logging, small scale farming, ranching and service industries. The towns were built to support the formerly active mines, and their population would provide a good supply of unskilled and semi-skilled labour, as well as heavy equipment and supplies.

The NEN property includes surface rights over several parcels of land covering the sites of former infrastructure at the La Luz and Rosita mines. However, it is likely that they would not be sufficient for any future mine development and that purchase of additional surface rights would be necessary in that event.

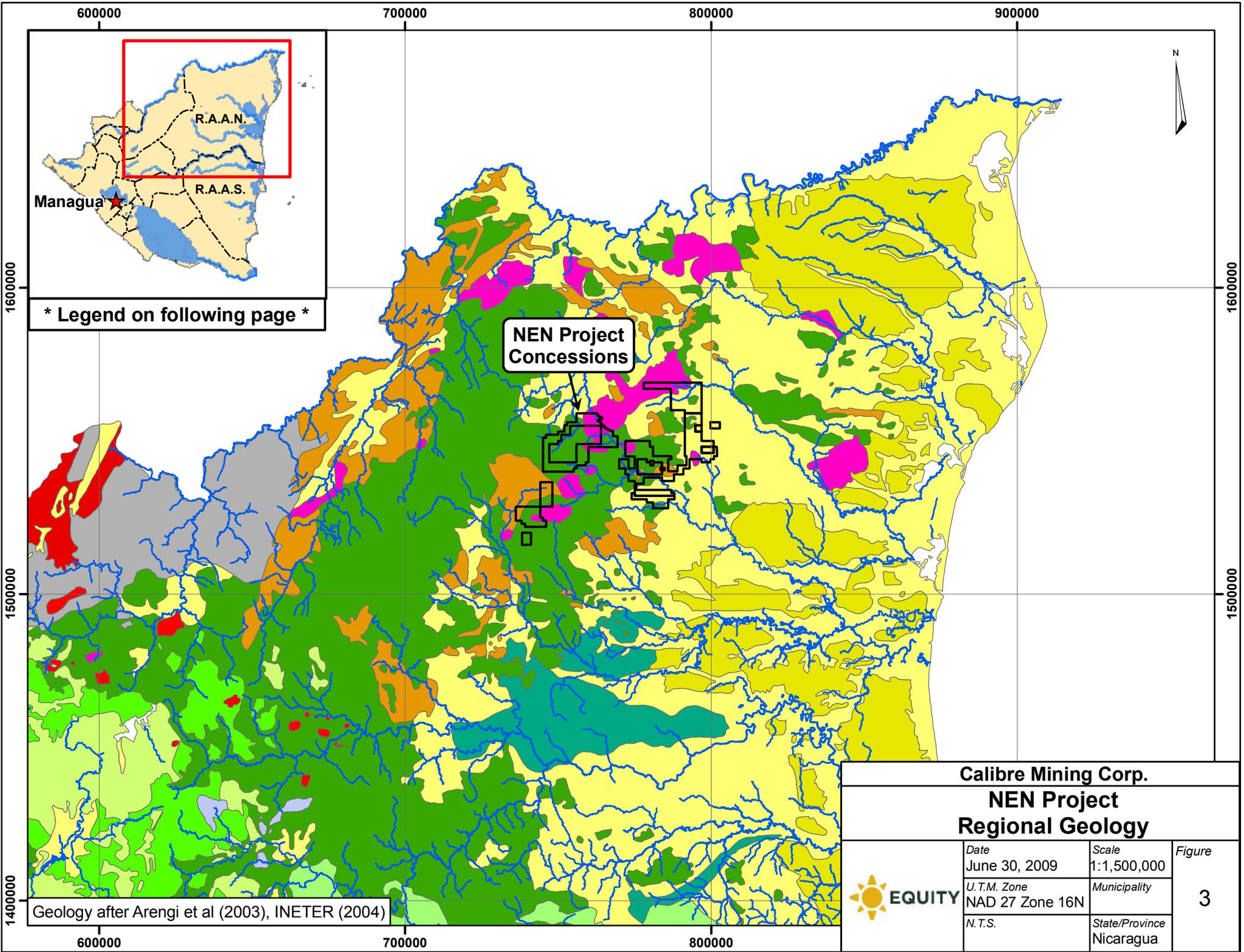
## 6.0 HISTORY

The exploration and mining history of the NEN property is not well-documented and much of the earlier history and production data below has been summarized from Arengi et al (2003) and Hendrickson (1995). In particular, their reports were based upon records of the La Luz mine and reports of more recent exploration, all of which were subsequently destroyed by a catastrophic fire at Yamana's Siuna offices in April 2008. Records for the Rosita mine were destroyed in the early 1980's, when contras destroyed the mine buildings and mill. Little of the paper-based data or maps were digitized prior to the 2008 fire and as a result, much of the pre-Yamana exploration work is evidenced only by vague references in surviving reports and maps.

The NEN property has been subjected to repeated campaigns of mapping, geochemical/geophysical surveys, trenching, drilling and underground development. Results from this work are more fully described below and in descriptions of individual prospects (Section 9).

### 6.1 Siuna Area

The Siuna area has been intermittently explored for gold, silver and copper since the late 19<sup>th</sup> century. In 1896, José Aramburo made several open cuts in a supergene enriched, oxide ore zone in the area of the current flooded La Luz pit. This work continued until 1909 when the property was acquired by La Luz and Los Angeles Mining Company, which operated a 90 tonne/day mill from 1912 to 1929, with production of 475,000 tonnes from an open pit in the oxide ore (Table 2). In 1936, Ventures Ltd. (later Falconbridge) acquired the dormant property and formed La Luz Mines Ltd. Following three years of exploration and development, production commenced in 1939 from an open pit at an initial rate of 275 tonnes/day. The transition to underground mining began in 1943, with mill through-put gradually increasing to 1815 tonnes/day in 1948



\* Legend on following page \*

NEN Project Concessions

Geology after Arengi et al (2003), INETER (2004)

<b>Calibre Mining Corp.</b>			
<b>NEN Project</b>			
<b>Regional Geology</b>			
	Date	Scale	Figure
	June 30, 2009	1:1,500,000	
	U. T.M. Zone	Municipality	3
NAD 27 Zone 16N	Nicaragua		
N.T.S.	State/Province		
		Nicaragua	

# Legend (To Accompany Map from Previous Page)

## SEDIMENTARY ROCKS

Quaternary	<i>Holocene–Pleistocene</i>	[	 ALLUVIUM/COLLUVIUM
			 BRAGMAN'S BLUFF FORMATION 60 m. sand and gravel
Tertiary	<i>Paleocene–Eocene</i>	[	 MACHUCA FORMATION limestones, graywackes
Mesozoic	<i>Jurassic</i>		 TODOS SANTOS (METAPAN SERIES) limestone, schist, conglomerate, black calcareous shale, thin- to thickly bedded tuffs, thin, dark gray andesitic flows, local serpentinites in the Sluna–Rosita–Bonanza area

## VOLCANIC ROCKS

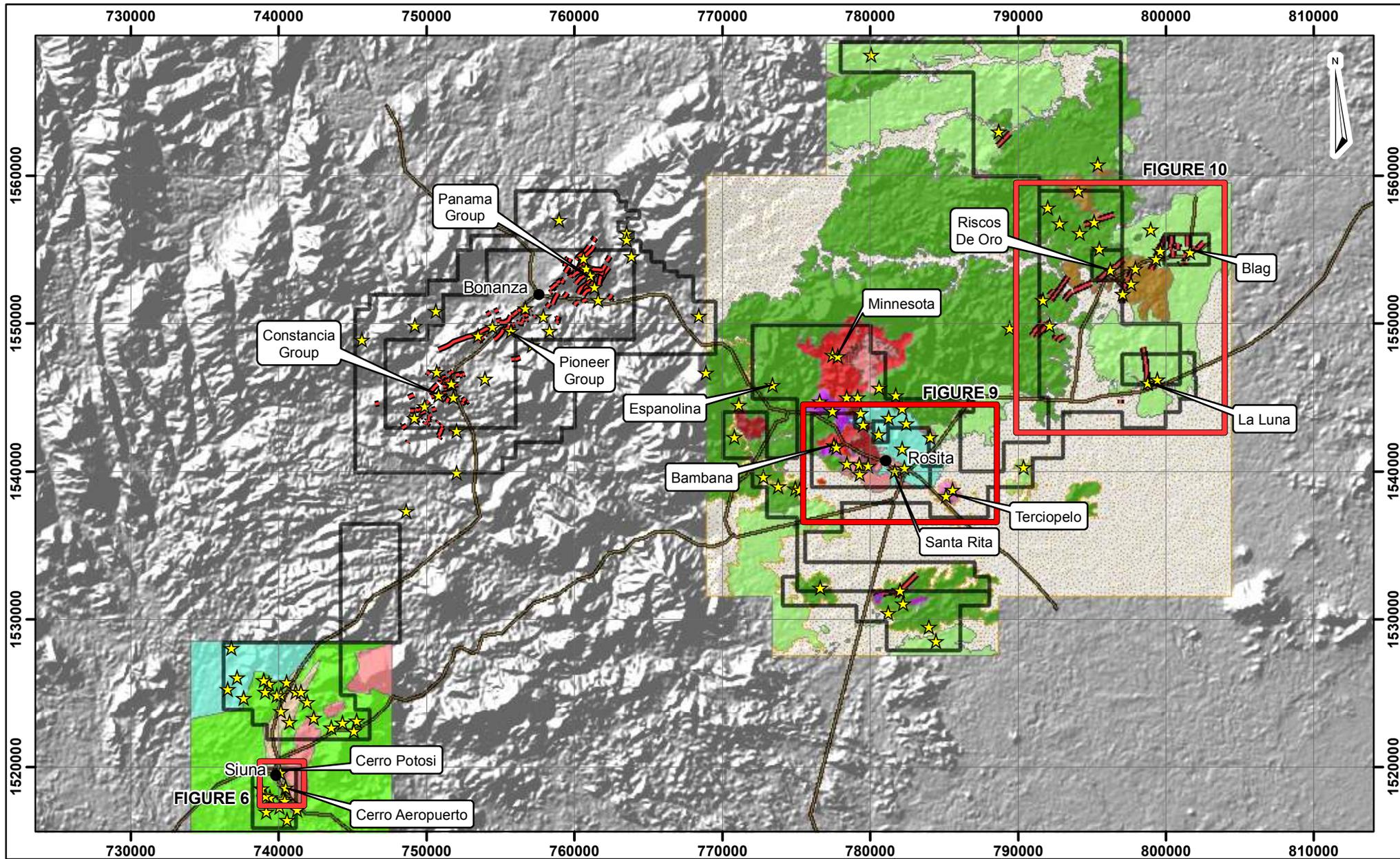
Quaternary	<i>Holocene–Pleistocene</i>	[	 UPPER COYOL GROUP ignimbrites, dacitic tuffs & breccias, basaltic & andesite lava flows
Tertiary	<i>Mid–Miocene Pliocene</i>		 UNDIFFERENTIATED COYOL GROUP (May include Upper and Lower Coyol) basaltic & basaltic andesite lavas, andesitic dacite, ignimbrites, tuffs, tuffaceous breccias, rhyodacites, agglomerates
		 LOWER COYOL GROUP andesite & basaltic–andesite lavas, dacitic andesite, rhyodacite, rhyolite & dacite tuffs and tuffaceous breccias, agglomerate	
	<i>Miocene</i>	 TAMARINDO FORMATION ignimbrites, lavas, tuffs, rhyolite & dacite tuffaceous breccias, basaltic andesite, tuffaceous sandstones, conglomerates	
	<i>Oligocene Mid–Miocene</i>	 MATAGALPA and Pre–MATAGALPA GROUPS rhyodacite & rhyolite tuffs, lavas, andesitic flow breccia, basalt, tuffaceous andesitic dacite, agglomerates, tuffaceous sandstone, clayey sandy breccias, ignimbrites	

## METAMORPHIC ROCKS

Paleozoic	 NUEVA SEGOVIA SCHIST limestone, schist, conglomerate, marble
-----------	---

## INTRUSIVE ROCKS

Tertiary	<i>Miocene</i>	[	 GABBRO
			 DIORITE
			 GRANODIORITE
	<i>Eocene</i>	[	 GABBRO
			 DIORITE
Mesozoic	<i>Paleocene Upper Cretaceous</i>	[	 GRANITE
			 SYENITE
	<i>Cretaceous</i>	 GRANITE/GRANODIORITE	



**Legend**

Alluvium/Colluvium	Granodiorite	NEN Project Concessions
Andesite Dike	Granite	Prospects
Andesite Flow	Limestone	Epithermal Veins
Andesite Flows and Tuffs	Lutite	Roads
Andesite Tuff	Rhyolite Flow	
Basalt Flow	Serpentinite	
Dacite Porphyry	Skarn	
Diorite		

Main Population Centres Labelled

**Calibre Mining Corp.**

**NEN Project  
Property Geology**

	Date June 30, 2009	Scale 1:350,000	Figure <b>4</b>
	U.T.M. Zone NAD 27 Zone 16N	Municipality Siuna, Rosita, Bonanza	
	N.T.S.	State/Province R.A.A.N.	

(Table 2). The mine closed in 1968 after high water permanently damaged the hydroelectric plant which supplied the La Luz and Rosita mines, and the underground workings at La Luz were allowed to flood. Following mine closure, La Luz carried out air and ground geophysical surveys, trenching and diamond drilling. The latter was carried out mainly in the area northeast of the open pit (Cerro Potosí).

**Table 2: La Luz (Siuna) Mine Production<sup>1</sup>**

Company	Years	Tonnage (tonnes)	Au <sup>2</sup> (g/tonne)	Au (oz) <sup>3</sup>
La Luz and Los Angeles	1912-1929	475,000	7.78	131,000
La Luz	1939-1968	15,852,000	3.73	2,097,000
CONDEMINA	1979-1983	765,000	1.68	46,000
Total	1912-1983	17,092,000	4.14	2,273,000

Note 1: Production data from Arengi et al (2003)

Note 2: Recovered grade

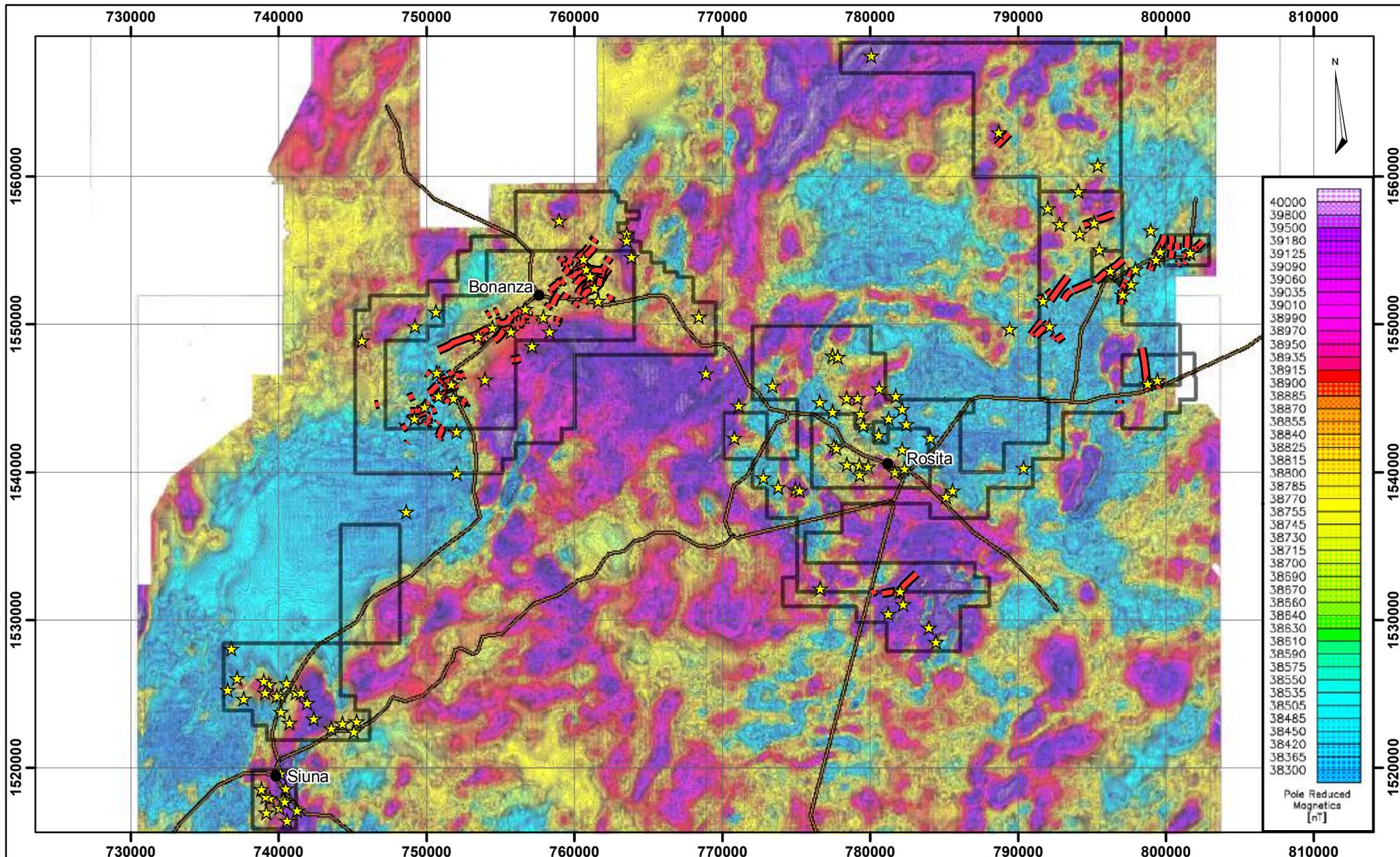
Note 3: In addition, Arengi et al (2003) reports production of 672,000 oz Ag and 2.0 million pounds Cu as a by-product from an unknown tonnage of ore.

In 1973 Rosario Resources acquired the La Luz property and carried out a resource estimate and pre-feasibility study in 1974 as part of a comprehensive exploration program comprising diamond drilling, ground geophysical surveys, trenching and soil geochemical surveys. Rosario decided to proceed with production in 1978, the mill was refurbished and dewatering of the mine and open pit was started. In 1979 the mine was nationalized and Rosario's interest was dissolved. During the period from 1979 to 1995 the Corporación Nicaraguense de Minas (CONDEMINA) and its successor INMINE, carried out intermittent mining (Table 2), trenching, stream sediment sampling, ground magnetics and assaying of churn drill hole samples for blasting in the Cerro Potosi area adjacent to the open pit. A process of privatization of mines in Nicaragua was begun in 1990 and after four years of negotiations the exploitation concessions which form the nucleus of the current NEN property (including the La Luz and Rosita mines) and the Bonanza mine were acquired by Hemco de Nicaragua, S. A. ("Hemco"), a joint venture between Bunker Hunt and the McGregor family of Nicaragua. Greenstone Resources Inc. subsequently optioned the concessions from Hemco and drilled 45 reverse circulation drill holes in the Siuna area in 1997, largely concentrated in the Cerro Potosí area northeast of the La Luz pit. In addition, Greenstone commissioned an airborne magnetic/radiometric survey over the bulk of the current NEN property (Figure 5).

Following the bankruptcy of Greenstone, the concession reverted back to Hemco. In 2003, RNC Gold Inc. acquired 80% of the NEN property from Hemco (Arengi, 2003; RNC, 2003) and the remaining 20% the following year (RNC, 2004). Yamana Gold Inc. purchased RNC Gold Inc. in 2006, acquiring RNC's Nicaraguan assets (Yamana, 2006). Yamana drilled 18 core holes in 2007 and 2008, mainly at Cerro Aeropuerto (9 holes) and Cerro Potosí (5 holes).

## 6.2 Rosita Area

Formal mining in the Rosita area began in 1906 with the Eden Mining Company (Arengi, 2003). Low grade oxide gold ore was mined from surface and underground at the former Santa Rita Hill (now the Santa Rita Pit) until poor economics forced closure in 1912. A total of approximately 360,000 tonnes of ore was mined. The Tonapah Nicaragua Company began exploration in the region in 1916 by sampling underground workings at Santa Rita and churn drilling. A total of 96 drill holes were completed, delineating copper carbonate and copper sulphide bodies of limited dimensions. In 1951, La Luz Mines conducted a drill program to test the lower extension of the copper sulphide bodies delineated by Tonapah. Due to favourable results, La Luz Mines acquired the property in 1954 and began mine construction. A 540 tonne per day roast-leach-precipitation-flotation plant was commissioned in 1959, expanded to 730 tonnes per day in 1964 and to 1810 tonnes per day in 1970 (Table 3). Rosario Resources acquired the mine in 1974 and started mining the R-13 Zone 700 meters northeast of the Santa Rita Pit, but closed down the operation one year later due to high costs and low copper prices.



**Legend**

- ★ Prospects
- Concession Boundaries
- ▬ Epithermal Veins
- ▬ Roads

Main Population Centres Labelled

<b>Calibre Mining Corp.</b>			
<b>NEN Project</b>			
<b>Airborne Total Magnetics (RTP)</b>			
	<i>Date</i>	<i>Scale</i>	<i>Figure</i>
	June 30, 2009	1:350,000	
	<i>U.T.M. Zone</i>	<i>Municipality</i>	
NAD 27 Zone 16N	Siuna, Rosita, Bonanza		<b>5</b>
<i>N.T.S.</i>	<i>State/Province</i>		
	R.A.A.N.		

**Table 3: Rosita Mine Production<sup>1</sup>**

Ore Type	Year	Tonnes Milled	Cu Grade	Au Grade g/t	Ag Grade g/t
Oxide Ore	1958--59	34,234	4.75%	0.27	10.24
	1959--60	95,715	6.40%	0.49	30.11
	1960--61	102,317	7.15%	0.46	29.32
	1961--62	231,498	4.87%	0.32	30.20
	1962--63	243,799	4.58%	0.28	28.10
	1963--64	201,433	5.42%	1.48	25.13
Secondary Ore	1964--65	258,315	4.40%	1.92	19.61
	1965--66	282,477	3.83%	2.19	16.85
	1966--67	302,822	3.70%	1.80	13.86
	1967--68	254,064	2.94%	1.50	11.55
Primary Ore	1968--69	267,430	1.98%	1.51	8.71
	1969--70	394,837	1.04%	0.51	5.12
	1970--71	781,602	0.63%	0.61	3.71
	1971--72	582,001	0.48%	0.64	18.98
	1972--73	535,702	0.36%	0.53	12.77
Total	1958--73	4,568,247	3.50%	0.95	14.72
Total	1906--75	5,374,688	2.57% <sup>2</sup>	0.03 <sup>3</sup>	15.22 <sup>2</sup>

Note 1: All data from Arengi et al (2003). It appears that annual figures quoted are for head grades, but this is not certain.

Note 2: Recovered grade (total production of 305 million lb Cu and 2,629,720 oz Ag)

Note 3: Recovered grade (total production of 177,737 oz Au), but no gold was recovered during the La Luz Mines operation from 1958-73.

The Rosita mine (including the Santa Rita and R-13 pits and surrounding concessions) was nationalized jointly with the La Luz mine in 1979 and has followed the same ownership pattern since then. Greenstone Resources carried out trenching, mapping, soil sampling, IP, ground magnetics and reverse circulation drilling in 1997-98. This work was completed principally in four areas: the Rosita mine area, Tigre Negro, Terciopelo and Minnesota, along with Bambanita, which is now located on a small concession owned by others within the NEN property. In 2008, Yamana carried out further mapping and prospecting throughout the Rosita area, but no drilling.

### 6.3 Northeast Epithermal Veins

Several epithermal prospects in the northeastern portion of the NEN property have been explored by trenching and underground development and have limited historical gold and silver production. Historical production data from each of the deposits (Table 4) and the following historical information are largely taken from Hendrickson (1995), as original records are not available. As with the other parts of the NEN property, each of the epithermal veins had a distinct ownership history until nationalization in 1979. From then until the present, these veins shared the same ownership history as the La Luz and Rosita mines and the remainder of the current NEN property.

**Table 4: Production from Epithermal Veins<sup>1</sup>**

Mine	Years	Tonnage (tonnes)	Au <sup>2</sup> (g/tonne)	Ag <sup>2</sup> (g/tonne)	Au (oz) <sup>2</sup>
Riscos de Oro	1972-1979 <sup>3</sup>	92,500	3.2	206	9,388
Blag	1975-1978	31,000	1.3	93	1,262
La Luna	1977 <sup>4</sup>	~32,000	5.1	19	~5,000
Españolina	1980-81	21,900	5.1	??	3,625
Total		~177,400			~19,275

Note 1: Production data from Hendrickson (1995)

Note 2: Recovered grade

Note 3: Does not include production after nationalization, from 1979-1981

Note 4: Estimated

### 6.3.1 Riscos de Oro

In 1917, the Tonapah Mining Company carried out the first reported work at Riscos de Oro, located 20 kilometres northeast of Rosita, but concentrated their efforts at Guapinol, a few kilometres to the southeast. In the 1940's, La Luz Mines carried out exploration at Riscos de Oro, including driving underground drifts and cross-cuts, but left it for the time because of poor access. In 1969, La Luz Mines built a road to Riscos de Oro to facilitate development of a small open pit mine, which began production in 1972. Rosario Resources took over the open pit operation in 1973 and commenced underground mining in 1975. Subsequent to nationalization in 1979, INMINE operated the mine until it shut down in 1981.

Yamana excavated trenches at approximately 200 metre intervals along the vein in 2008, showing that it extends for 2,000 metres from one side of the concession to the other on surface. A line of soil samples perpendicular to the vein across the concession did not yield gold values indicative of further parallel veining.

### 6.3.2 Blag

A regional geochemical program by La Luz Mines following their 1969 construction of the Riscos de Oro road led to the trenching of gold-bearing mineralization at Blag in 1971. Following acquisition of La Luz Mines in 1973, Rosario built a road from Riscos de Oro to Blag and identified two veins through trenching and drilling. Rosario started mining from two pits at Blag in 1975, but quickly abandoned them. Underground development began in 1977, but bad ground hampered mining efforts and the property was abandoned in 1978.

In 2008, Yamana sampled 7 soil lines at 400 metre spacings, oriented perpendicular to the Blag vein, covering the entire concession. Elevated soil values led to the discovery of four more quartz veins on the concession.

### 6.3.3 La Luna

The early discovery and exploration history of La Luna is unrecorded, but Hendrickson (1995) reports that Rosario Resources mined the La Luna vein from an open pit between February and October, 1977. Yamana did limited sampling in 2008, reporting a 46 g/tonne Au rock sample approximately 300 metres west of the La Luna vein.

### 6.3.4 Española

The discovery and exploration history of Española is unrecorded, but Hendrickson (1995) reports that INMINE produced 3,625 ounces of gold between 1980 and 1981.

## 6.4 Historical Resource Estimates

A number of historical mineral resource estimates have been made for different prospects on the NEN property, at different times and by different operators (Table 5). Much of the information, such as maps, sections, assay certificates, quality control data, etc., which formed the basis of these resource estimates, has been destroyed by the 2008 Siuna fire or was lost previously. In fact, most of the quoted historical resources are simply references to estimates by previous workers. The methods and parameters of estimation are not generally recorded. It is not clear which (if any) of the current NI 43-101 resource categories each of these historical estimates would correspond to. None of these estimates has any current validity and none should be relied upon for any purpose. They are included here only for historical completeness and to give a sense of what previous operators considered the resources of the various zones and prospects.

**Table 5: Historical Resource Estimates**

Prospect	Date	Tonnage (tonnes)	Au (g/tonne)	Other Metals	Reference
La Luz:					
...U/G and Open Pit	1979 <sup>1,2</sup>	9,253,300	2.50		(Hendrickson, 1995)
...Cerro Potosí	1997 <sup>3</sup>	721,500	1.54		(Arengi, 1997)
...Tailings	1991	281,200	1.75		(Arengi, 2002)
...Tailings	1990	326,600	1.30		(Arengi, 2002)
...Dumps	1976	68,900	2.43		(Arengi, 2002)
...Dumps	1961	31,800	2.57		(Arengi, 2002)
Rosita:					
...West R-13	1974 <sup>1,4</sup>	440,900		1.37% Cu	(Arengi, 2002)
...Upper R-13	1974 <sup>1,4</sup>	400,000		0.88% Cu	(Arengi, 2002)
...Lower R-13	1974 <sup>1,4</sup>	352,900			(Arengi, 2002)
...Below Santa Rita Pit	1974 <sup>1,4</sup>	1,179,300			(Arengi, 2002)
...R-13	1998 <sup>3</sup>	6,069,100	0.47	1.55% Cu	(Arengi, 2002)
...Dumps	1998 <sup>3</sup>	6,475,500	0.61	0.50% Cu	(Arengi, 2002)
Tigre Negro:					(Arengi, 2002)
...NW structure	1998 <sup>3</sup>	1,465,100	1.71	0.90% Cu	(Arengi, 2002)
...Skarn pendant	1998 <sup>3</sup>	503,500	1.06		(Arengi, 2002)
Riscos de Oro	1982	120,300	4.42	39 g/tonne Ag	(Hendrickson, 1995)
Blag	1982	59,600	3.05	265 g/tonne Ag	(Hendrickson, 1995)
Españolina	?	4,500	6.34		(Hendrickson, 1995)

Note 1: Calculated by Rosario

Note 2: Approximately 25% open-pittable; mining continued at Siuna until 1983, so some of these resources may have been mined.

Note 3: Calculated by Greenstone

Note 4: Mining at Rosita continued until 1975, so some of these resources may have been mined.

## 7.0 GEOLOGICAL SETTING

### 7.1 Regional Geology

Nicaragua, Honduras, El Salvador and southern Guatemala are underlain by the Chortis block of the Caribbean plate (Figure 3). Basement rocks in the Chortis block are dominantly phyllites and mica schists which are unconformably overlain by Mesozoic stratigraphy (Sundblad, 1991). In the vicinity of the NEN property, the Mesozoic stratigraphy is represented by limestone, mudstone, greywacke and calcareous

mudstone, with lesser andesite tuff and flows, of the Early Cretaceous Todos Santos Formation. To the northwest of the concessions they form a nearly continuous trend within the northeast-trending Iyas-Bocay Graben structure. Around the property, the Todos Santos Formation is exposed as a series of northeast-trending isolated windows within pre-Tertiary and Tertiary volcanics and intrusives (Arengi, 2003) (INETER, 2004).

Subduction of the Farallon and later the Cocos plates beneath the Caribbean plate along the Middle America Trench, southwest of Nicaragua, resulted in the extensive accumulation of Cenozoic volcanic rocks (Donnelly, 1990). These rocks are dominated by calc-alkaline, high alumina basalts and basaltic andesites, with locally important ignimbrites of rhyolitic to andesitic composition. They have been divided into several stratigraphic units, without complete agreement on their validity (Sundblad, 1991). The Matagalpa Formation is a widespread but poorly defined Oligocene to mid-Miocene volcanogenic formation composed of rhyodacite and rhyolite flows and tuffs, andesitic flows and tuffs, basalt and lesser epiclastic material, with a maximum thickness of 300 metres in western Honduras, and extensively exposed in the vicinity of the NEN property. The Matagalpa Formation is overlain by regionally extensive Miocene ignimbrites (Tamarindo Formation) and by mid-Miocene to Pliocene mafic flows of the Coyol Group; these are exposed mainly in a northwest-trending band east of Lake Nicaragua. Pliocene and younger volcanism has shifted southwest toward the Pacific coastline, where several volcanoes are currently active.

A series of intrusive bodies extend northeasterly through northeastern Nicaragua, passing through the NEN property. Limited age dating suggests the oldest of these are Cretaceous, however there is field evidence that some of them are Tertiary in age. The relation between age and composition of the intrusives has not been clearly defined. The intrusives consist of fine- to medium-grained diorite, granodiorite, syenite, monzonite and alaskite stocks, plugs and dykes. Most of these intrusives occur along a northeast trend similar to the distribution of the sedimentary rocks (Arengi, 2003).

Northeastern Nicaragua has been subjected to a variety of compressional and extensional events. One of the earliest structural elements is folding about north-trending axes in the Cretaceous sediments. Tertiary-age extensional tectonics produced numerous northeast-trending faults, veins and magnetic/topographic lineaments on the NEN property.

## 7.2 Property Geology

Little property-wide mapping has been done on the NEN concessions, with detailed mapping confined to the formerly-producing mines and major prospects. Most of the property is underlain by volcanic rocks consisting of fine-grained and porphyritic andesite flows, fine-grained andesite tuff, andesite agglomerate and fine grained basalt flows assigned to the Matagalpa and pre-Matagalpa Formation volcanics. These rocks are widely distributed throughout northeast Nicaragua and likely represent a nearly continuous period of volcanic activity from the Late Cretaceous to mid-Tertiary period. There is no good evidence for submarine deposition and all of these rocks are interpreted to have been deposited in non-marine conditions (Arengi, 2003).

At least two windows of Cretaceous sedimentary rocks, assigned to the Todos Santos Group, are exposed unconformably beneath the Cretaceous to mid-Tertiary volcanic rocks in the Siuna and Rosita areas. The sedimentary package consists of an interbedded sequence of limestone, mudstone, greywacke and calcareous mudstone. They are locally interbedded with andesite tuffs and flows and transected by andesite sills and dykes, also thought to be of Cretaceous age (Arengi, 2003).

Undated intrusives, generally of granodioritic to dioritic composition, intrude both the Todos Santos sedimentary rocks and the later volcanic package. Where the plutonic rocks intrude calcareous sedimentary rocks, extensive skarn zones have been developed, hosting the La Luz and Rosita deposits and several magnetite deposits west of Rosita.

Cretaceous folding created a north-trending syncline-anticline couplet in sedimentary rocks in the Siuna area; although not well documented, this style of folding is probably present in the other Cretaceous windows. North-trending (reverse?) faults, such as the Potosí Fault which bounds the La Luz deposit to the east, may be related to the Cretaceous folding. Northeast-trending faults predominate on the NEN property, affecting both the Cretaceous and overlying Cretaceous to mid-Tertiary volcanic rocks. These are normal

faults related to Tertiary extension, and host most of the epithermal vein mineralization on the property and at the neighbouring Bonanza mine.

## 8.0 DEPOSIT TYPES

The NEN property hosts two main styles of mineralization. The first consists of Au±Cu±Fe skarns associated with Cretaceous to mid-Tertiary plutonism, which are part of a spectrum of related deposit types, including Cu-Au porphyries and polymetallic vein/replacement bodies. The second main style of mineralization is Au-Ag low-sulphidation epithermal veining within the Tertiary volcanic rocks.

### 8.1 Skarns and Related Deposit Types

Most skarns are formed by the metasomatic replacement of calcareous sedimentary rocks by magmatic-derived hydrothermal fluids. They can form in a variety of rock types and tectonic settings, both within the sedimentary rocks and their associated intrusive rocks. The processes that lead to formation of skarn deposits include: (1) isochemical contact metamorphism during pluton emplacement; (2) prograde metasomatic skarn formation as the pluton cools and as the hydrothermal fluid develops, and; (3) retrograde alteration of earlier-formed mineral assemblages (Hammarstrom, 1995). Prograde skarn is dominated by anhydrous garnet and pyroxene, but commonly includes vesuvianite or pyroxenoids such as wollastonite, bustamite and rhodonite. Retrograde assemblages are generally lower temperature and hydrous, typically including epidote, amphibole and/or chlorite. Economically important metal-bearing minerals are commonly deposited with retrograde skarn but may also form with prograde skarn. Skarn deposits are typically zoned mineralogically with respect to pluton contacts, original lithology of host rocks, and/or fluid pathways. Later petrogenetic stages may partly or completely obliterate earlier stages of skarn development. As a rule, retrograde alteration is more intense and more pervasive in shallower skarn systems. Most economic skarn ore is present as exoskarn, which forms in carbonate rock intruded by a mineralizing intrusion. Endoskarn, which is variably developed on the intrusion side of intrusion-wallrock contacts, can be important when fluid flow was directed into the intrusion or channelled along the intrusion-wall rock contact.

Skarn deposits have been subdivided into seven major classes (Fe, Au, Cu, Zn, W, Mo and Sn). Each class of skarn deposit has a characteristic, though not necessarily unique, size, grade, tectonic setting, granitoid association, and mineralogy. Copper skarns are associated with I-type, magnetite-series, calc-alkaline, porphyritic plutons, many of which have cogenetic volcanic rocks and porphyry-style mineralization. Copper skarn mineralogy is dominated by andraditic garnet; in some shallow, porphyry Cu-related skarn systems, extensive retrograde alteration almost completely obliterates the prograde garnet and pyroxene. Calcic iron skarns are associated with Fe-rich plutons intruded into limestone and volcanic wall rocks in an oceanic arc setting. The amount of endoskarn may exceed exoskarn and mineralogy consists dominantly of magnetite, garnet and pyroxene with lesser epidote, ilvaite and actinolite. Some contain significant amounts of Cu and are transitional to more typical copper skarns (Meinert, 2005). The Santa Rita and R-13 are typical Cu skarns; mineralogy at La Luz is typical of Cu skarns but with above-average gold content.

Skarn deposits are commonly associated with other types of magmatic-hydrothermal deposits. In many districts, copper skarns are located between calc-alkaline porphyry deposits in the center of the mining district and peripheral polymetallic vein/replacement and distal disseminated gold deposits.

Calc-alkaline porphyry deposits are typically associated with zoned and/or multi-phase granodiorite to quartz monzonite intrusions into volcanic or sedimentary rocks. They are marked by complex alteration zones that are usually centred about the intrusive complex. The alteration systems are typically comprised of a potassic core enveloped by an overlapping peripheral zone of propylitic alteration. These alteration assemblages can be overprinted by zones of phyllic and/or argillic alteration that are either zonal in distribution (between the potassic and propylitic zones) or structurally-controlled. Copper, gold and molybdenum mineralization is more abundant in the potassic core while pyrite is more prevalent in the propylitic and phyllic zones. Breccia pipes are common, both mineralized and unmineralized. Hypogene economic sulphide mineralization comprises chalcopyrite, bornite and molybdenite, which are hosted in

quartz veinlet stockworks, veins, breccias, disseminations and replacements. The abundance of pyrite in these systems can result in the formation of strongly acidic groundwaters that, under appropriate climactic conditions, generate argillically-altered leached caps and supergene sulphide copper mineralization. Secondary oxide/carbonate copper mineralization can form where weathering is extensive but groundwater is less acidic.

## 8.2 Low-Sulphidation Epithermal

Low-sulphidation epithermal deposits are precious metal-bearing quartz veins, stockworks and breccias which formed from boiling of volcanic-related hydrothermal to geothermal systems. Emplacement of mineralization takes place at depths ranging from near-surface hot-spring environments to ~1 km, from near-neutral pH chloride waters with metal deposition through boiling and fluid mixing. Gangue mineralogy is dominated by quartz and/or chalcedony, accompanied by lesser and variable amounts of adularia, calcite, pyrite, illite, chlorite and rhodochrosite. This gangue mineral assemblage can host a spectrum of Au- to Ag-rich ores, as well as the Au-Ag±Te ores associated with alkaline rocks and the Ag-Pb-Zn ores of northern Mexico.

Vein mineralogy is characterized by gold, silver, electrum and argentite with variable amounts of pyrite, sphalerite, chalcopyrite, galena, tellurides, rare tetrahedrite and sulphosalt minerals. Crustiform banded quartz veining is common, typically with interbanded layers of sulphide minerals, adularia and/or illite. At relatively shallow depths, the bands are colloform in texture and millimetre-scale, whereas at greater depths, the quartz becomes more coarsely crystalline. Lattice textures, composed of platy calcite and its quartz pseudomorphs, indicate boiling. Breccias in veins and subvertical pipes commonly show evidence of multiple episodes of formation. Quartz, adularia, illite and pyrite alteration commonly surround ores; envelope width depends on host rock permeability (Simmons, 2005). Propylitic alteration dominates at depth and peripherally.

Regional structural control is important in localization of low-sulphidation epithermal deposits. Brittle extensional structures (normal faults, fault splays, ladder veins, cymoid loops, etc.) are common. Veins typically have strike lengths in the range of 100's to 1000's of metres; productive vertical extent is seldom more than a few hundred metres and closely related to elevation of paleo-boiling. Vein widths vary from a few centimetres to metres or tens of metres. High-grade ores are commonly found in dilational zones in faults at flexures, splays and in cymoid loops.

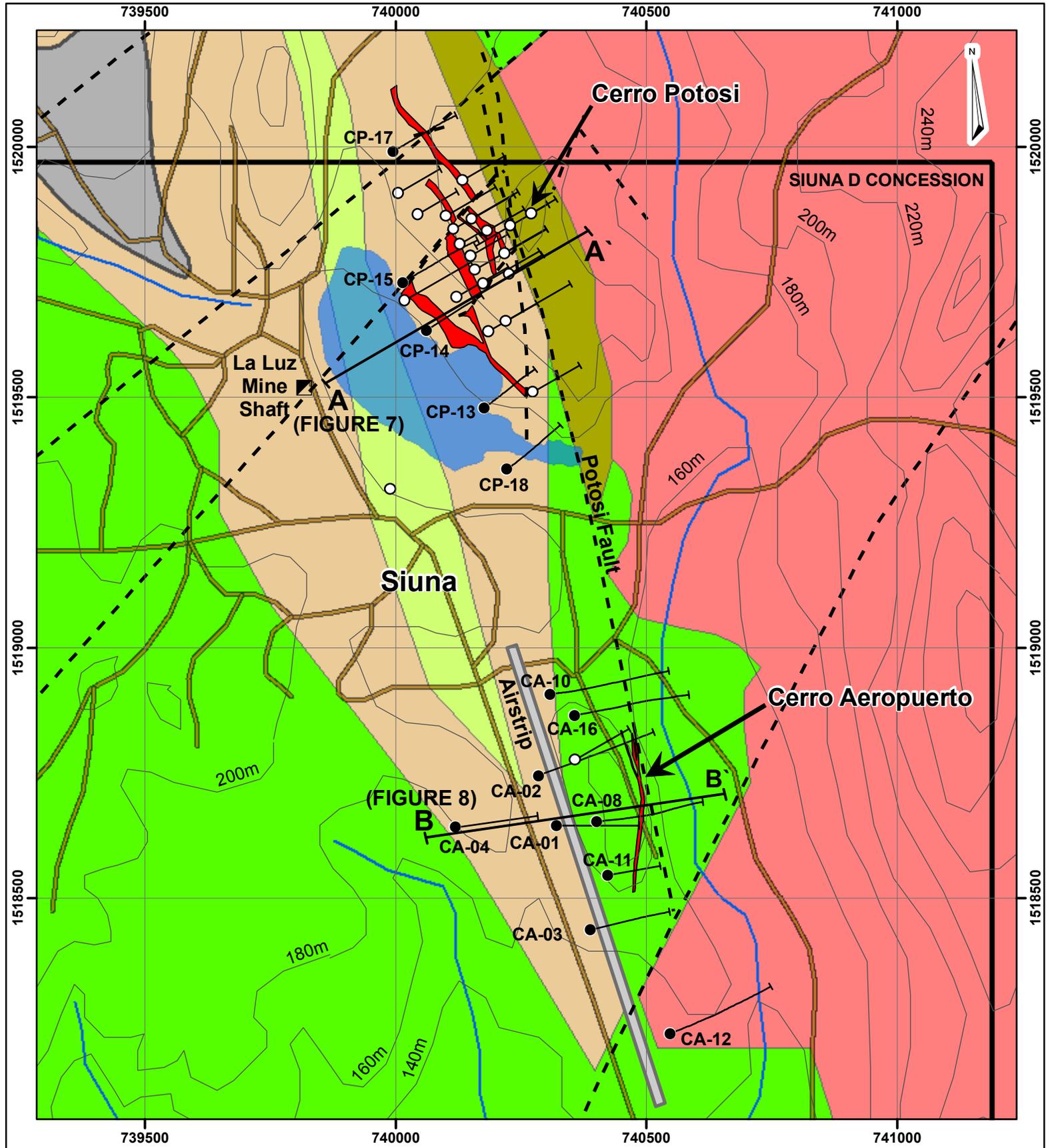
## 9.0 MINERALIZATION

The NEN property hosts several significant prospects and deposits, some of which have been extensively mined, and a multitude of other showings about which little or nothing is known. The most significant prospects and deposits are discussed below.

### 9.1 La Luz Mine

In the Siuna area, the Todos Santos interbedded sedimentary-volcanic sequence forms a 12 km long, 1-2 km wide northerly-trending belt, forming a series of syncline-anticline couplets tightly folded around north-northwest trending fold axes (Figure 6). Locally the sequence is offset by several sets of faults.

Mineralization at the La Luz mine is hosted by a sediment-dominant sequence of the Todos Santos Group, comprising interbedded massive limestone, thin bedded impure limestone, limy mudstone, greywacke, breccia, arkose, quartzite and conglomerate together with lesser tuffs and andesite volcanics, which are referred to as the Mine Series. These units have been altered to a prograde garnet-silica skarn assemblage, locally overprinted by a retrograde epidote±chlorite skarn. Within areas of epidote-rich skarn, smaller zones with disseminated pyrite, chalcopyrite, sphalerite and hematite host the gold-bearing orebodies previously mined at La Luz (Plecash, 1963).



Legend	
<b>Drillholes</b>	<span style="color: red;">■</span> Surface Expression of Mineralization
○ Greenstone (1997)	<b>Geology</b>
● Yamana (2007-2008)	■ Andesite Dike
- - - Faults	■ Andesite Flows and Tuffs
— Creeks and Rivers	■ Diorite
— Roads	■ Calcareous Sediments and Skarn
▭ Concession Boundary	■ Serpentinite
■ Potosi Lagoon (La Luz Pit)	■ Tailings

Calibre Mining Corp.			
NEN Project			
Siuna District Compilation			
	Date	Scale	Figure
	June 30, 2009	1:10,000	
	U.T.M. Zone	Municipality	
NAD 27 Zone 16N	Siuna	State/Province	
N.T.S.	Nicaragua		

The most important of the interbedded volcanic units at La Luz is the Hanging Wall Andesite, a massive to porphyritic andesite with local pyroclastic and tuffaceous textures, which is conformable with the Mine Series sediments and cores a tight syncline. It has been traced in mine workings over at least 1100 metres strike length and 230 metres width (Arengi, 2003).

The principal orebody (No. 1) mined at La Luz lies in the immediate footwall of the Hanging Wall Andesite on the east limb of the syncline, which dips to the southwest at about 65° (Figure 7). Plecash et al (1963) suggest that the Hanging Wall Andesite acted as an impermeable boundary which focused the mineralizing fluids within the subjacent Mine Series calcareous sediments. Other impermeable dykes and sills, in particular the K Dyke serpentinite, also controlled fluid flow and the distribution of gold-bearing orebodies.

The La Luz mine was developed initially from an open pit and then underground from seven levels to a depth of 440 metres (1450'), with reported production of 2.3 million ounces of gold. With depth, as the andesite/skarn contact flattens out towards the trough of the syncline, gold grades drop off and the base of the No. 1 orebody rakes toward the northwest, parallel to the fold axis. The highest gold grades in the No. 1 orebody were immediately adjacent to the Hanging Wall Andesite contact; they generally decreased with distance from it and the footwall of the No. 1 orebody was an assay cut-off (Plecash, 1963). The geometry of the No. 2 orebody is more complicated; it lies in the footwall of the No. 1 orebody, controlled by lithologies of the calcareous sediments and by orientations of the K dyke and other impermeable bodies. The two orebodies were connected by an envelope of lower-grade skarn mineralization.

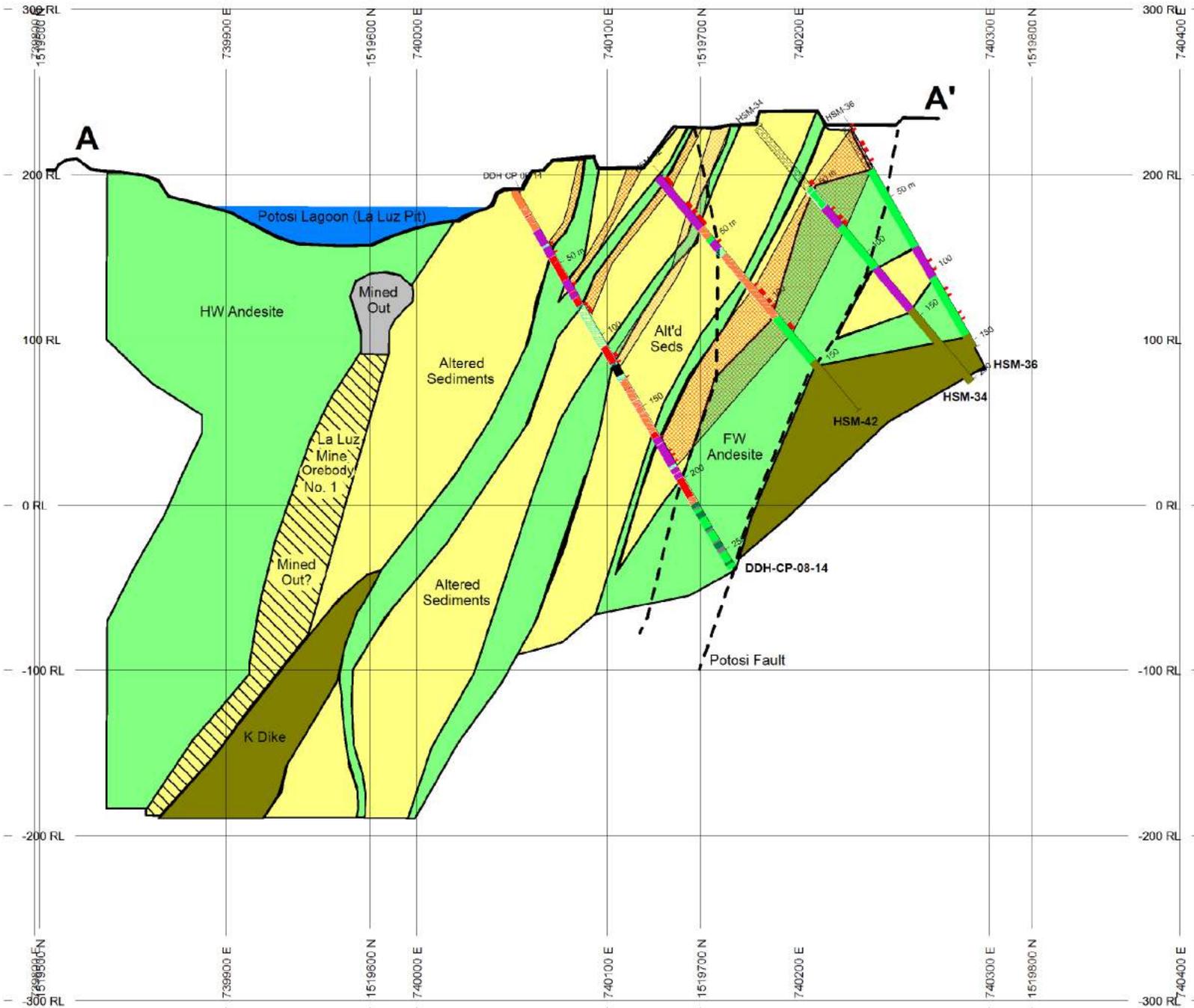
The loss of the mine's detailed level plans and sections, which were lost in the 2008 Siuna fire, will make it more difficult to develop targets at La Luz which could host mineralization of underground-mineable grade.

## 9.2 Cerro Potosí

Cerro Potosí is the small hill immediately northeast of the water-filled La Luz pit (Figure 6). It covers the Mine Series sedimentary/volcanic package in the footwall of the previously exploited No. 1 orebody of the La Luz mine (Figure 7). The style of mineralization is identical to that of the La Luz mine, with prograde garnet-skarn-diopside(?) skarn developed extensively within the Mine Series calcareous sediments and more localized epidote-rich retrograde skarn locally accompanied by sulphides. The author noted several occurrences of visible gold in drill core from Cerro Potosí. It was noted mainly in retrograde epidote- or chlorite-rich skarn, but also in prograde garnet skarn and in a late cross-cutting anhydrite veinlet. Several mineralized northwest-trending gold-bearing zones have been recognized proximal to hornblende-feldspar porphyry dykes at Cerro Potosí. The sediments consist of a package of well-laminated mudstone, calcareous mudstone, marble and lesser arenite which show varying degrees of folding and disruption. Depending on the attitude of the sediments, the dykes vary from slightly to highly discordant. The northwest trending andesite dykes are transected by north to northeast trending faults with left lateral displacement.

The north-trending Potosí fault generally marks the eastern edge of the system of gold-bearing skarn zones at Cerro Potosí. Skarn alteration is locally present but much weaker to the east of the fault, and only scattered elevated gold values have been reported. It has been suggested that the Potosí fault is a control on Cerro Potosí and La Luz mineralization, but it appears generally unaltered and its most recent movement post-dates mineralization.

Drilling by Greenstone in 1997 and Yamana in 2008 indicated widespread gold mineralization in the Cerro Potosí area. Arengi et al (2003) defined three parallel northwest trending gold-bearing zones (Figure 6), lying within or proximal to northwest trending andesite dykes west of the Potosí fault. Two of his zones are about 3 to 4.5 meters wide (true width) and he correlated them over a strike length of about 275 to 305 meters and to a vertical depth of 105 to 120 meters. His easternmost zone pinches out to the north and both zones are open to the south. He described a third mineralized zone along a bench cut below the 660 bench (the highest bench at Cerro Potosí). This zone has a true width of 9 to 12 meters and has been projected along a strike length of 215 meters. A closer examination of the drill and surface data will be necessary in the Cerro Potosí area to determine the existence and continuity of these zones.



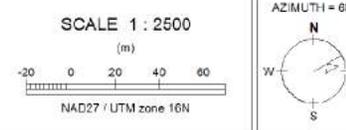
**HOLES PLOTTED**

TOTAL 4  
 DDH-CP-08-14 HSM-34 HSM-36  
 HSM-42

Mineralized Zone			
NUMBER BANDS	L/R	PATTERN	RANGE
Au <sub>opm</sub>	R	[Red Pattern]	0.5 to 65
ROCK CODES	PAT	LABEL	DESCRIPTION
Calibre_Lth	[Green Pattern]	AND	andesite
	[Green Pattern]	AND DIKE	andesite dike
	[Dark Green Pattern]	BAS	basalt
	[Red Pattern]	DIO	diorite
	[Black Pattern]	FLT	fault
	[Black Pattern]	LOGT	lost core
	[Light Blue Pattern]	LST	limestone
	[Orange Pattern]	LUT	lutite
	[Dotted Pattern]	MINE WASTE	mine waste
	[Blue Pattern]	QCV	quartz-carbonate vein
	[Orange Pattern]	SED	undiff sedimentary rocks
	[Orange Pattern]	SIS	interbedded sedimentary rocks
	[Purple Pattern]	SKRN	skarn
	[Brown Pattern]	SERP	serpentinite

**SECTION SPECS:**

REF. PT. E, N	740097 m	1519670 m
EXTENTS	723.5 m	621.3 m
SECTION TOP, BOT	312.1 m	-300.1 m
TOLERANCE +/-	25 m	



**Calibre Mining Corp.**  
**Cerro Potosi**  
**Section A-A'**  
**Looking 330°**

Date	June 30, 2009	Scale	1:2,500	Figure	7
UTM Zone	NAD 27 Zone 16N	Municipality	Siuna		
N.T.S.		State/Province	Nicaragua		
EQUITY					

### Plate 1: Cerro Potosí Core Textures

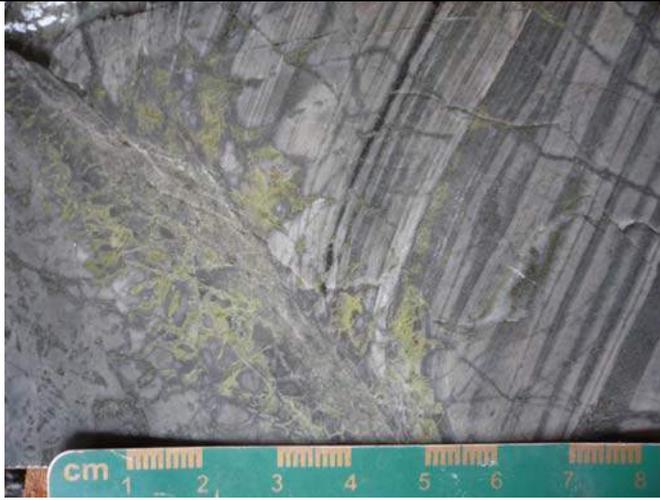


Photo 1: DDH CP08-13 (119.7m; 0.03 g/t Au). Prograde green garnet and 10% pyrite replaces darker siltstone bands; lighter bands are limestone with sparse garnet. Retrograde epidote in selected bands and extending away from fractures.

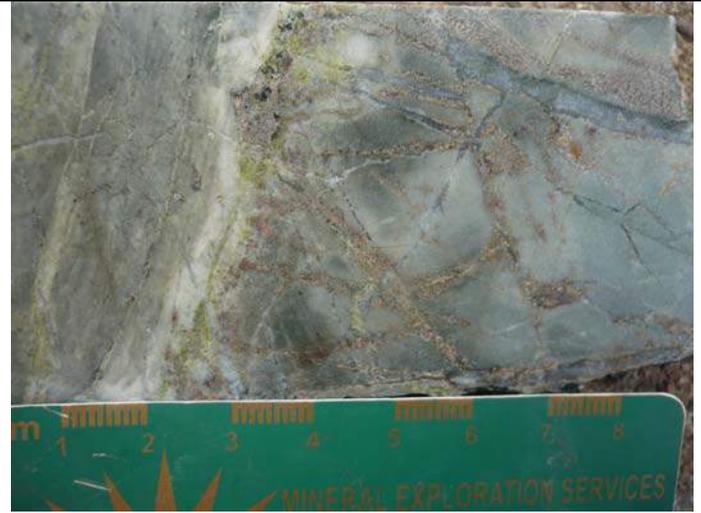


Photo 2: CP08-14 (188.2m; 1.60 g/t Au). Red-brown garnet on fractures cutting diopside(?) skarn. <1% PY, minor epidote.



Photo 3: CP08-13 (86.9m; 10.34 g/t Au, 1.0 g/t Ag, 397 ppm Cu, 37 ppm Zn). Prograde garnet-diopside(?) skarn with irregular chloritization, PY-CP patches, visible gold.



Photo 4: CP08-15 (51.3m; 3.40 g/t Au, 2.0 g/t Ag, 325 ppm Cu, 81 ppm Zn). Gold flake in centre of late anhydrite veinlet cutting pink garnet-diopside(?) skarn with 5% pyrite. Patchy chalcopyrite.

Yamana drilled five core holes below the Greenstone reverse circulation holes at Cerro Potosí, along a strike length of 650 metres. Table 6 lists the composites from the Yamana drilling (>0.5 g/t Au over a minimum of 3 metres core length).

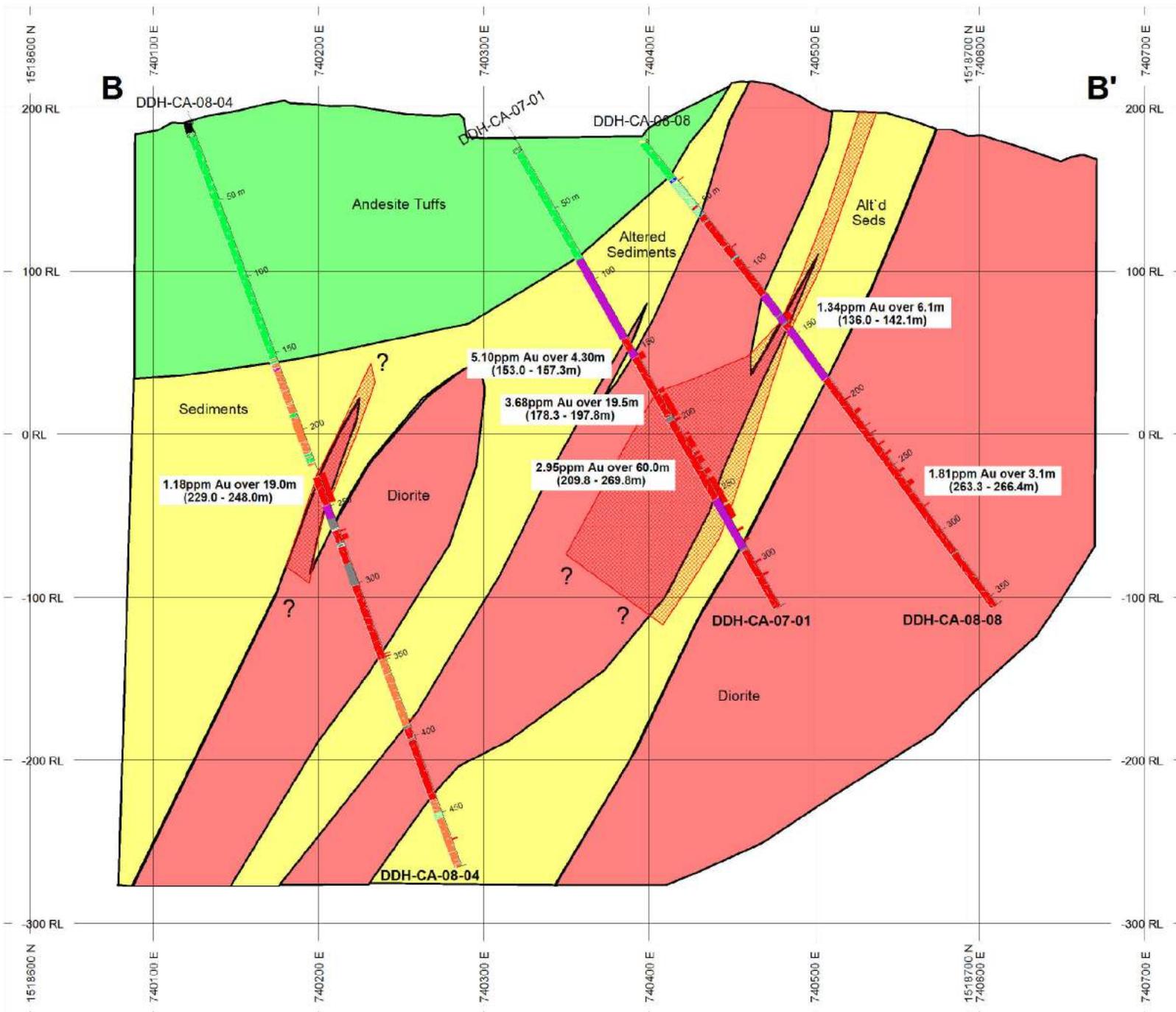
**Table 6: Cerro Potosí >0.5 g/t Au Drill Composites (Yamana)**

Hole	From (m)	To (m)	Length (m)	Au (g/tonne)
CP-08-13	30.00	34.00	4.00	0.93
CP-08-13	56.00	88.00	32.00	2.50
CP-08-14	81.00	85.30	4.30	1.52
CP-08-14	113.00	120.00	7.00	1.32
CP-08-15	39.30	55.50	16.20	4.18
CP-08-15	62.00	68.50	6.50	2.46
CP-08-18	27.00	30.00	3.00	0.72
CP-08-18	39.00	54.00	15.00	1.78
CP-08-18	70.45	76.30	5.85	0.95

### 9.3 Cerro Aeropuerto

Cerro Aeropuerto is a small hill which lies from 500 to 1200 metres south of the southern end of Cerro Potosí, along the inferred southern extension of the Potosí fault (Figure 6). A pit and a 30-metre adit into a gold-bearing silicified zone led to initial exploration by La Luz in 1948 and Rosario in 1974 (Lehman, 1982). It was subsequently advanced through trenching by INMINE and drilling by Greenstone in 1997 and Yamana in 2007-08.

The local geology is similar to that of La Luz and Cerro Potosí, with the Hanging Wall Andesite coring the southern extension of the same syncline as at La Luz (Figure 8). Mineralization is hosted within altered Mine Series sedimentary rocks and feldspar±biotite porphyry dykes (logged as diorite by Yamana geologists and in Figure 8). The dykes are strongly sericitized and commonly pyritic; the sedimentary rocks are variably skarned with local epidote alteration. Gold mineralization commonly occurs with coarse brown sphalerite, both in discrete quartz-sulphide veinlets and in patchy sulphide replacement of sericitized porphyry. The author noted flakes of visible gold in two places in the sericitized porphyry, both with and without sphalerite.



**HOLES PLOTTED**

TOTAL 3

DDH-CA-07-01 DDH-CA-08-04 DDH-CA-08-08

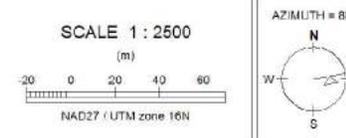
Mineralized Zone

NUMBER BANDS	L/R	PATTERN	RANGE
Au_ppm_	R		0.5 to 85

ROCK CODES	PAT	LABEL	DESCRIPTION
Calibre_Lith		AND	andesite
		AND_TUFF	andesite tuff
		BAS DIKE	basalt dike
		CBX	carbonate breccia
		CCV	calcium carbonate vein
		COLV	colluvium
		DIKE	dike
		DIO	diorite
		DIO DIKE	diorite dike
		FLT	fault
		GWK	graywacke
		LOST	lost core
		LST	limestone
		LUT	lutite
		MINE WASTE	mine waste
		SED	undiff sedimentary rocks
		SIS	interbedded sedimentary rocks
		SS	sandstone
		SKRN	skarn

**SECTION SPECS:**

REF. PT. E, N	740386 m	1518860 m
EXTENTS	723.5 m	621.3 m
SECTION TOP, BOT	262.1 m	-359.1 m
TOLERANCE +/-	50 m	



**Calibre Mining Corp.**  
**Cerro Aeropuerto**  
**Section B-B'**  
**Looking 350°**

	Date	June 30, 2009	Scale	1:2,500	Figure	8
	U.T.M. Zone	NAD 27 Zone 16N	Municipality	Siuna		
	N.T.S.		State/Province	Nicaragua		

## Plate 2: Cerro Aeropuerto Core Textures

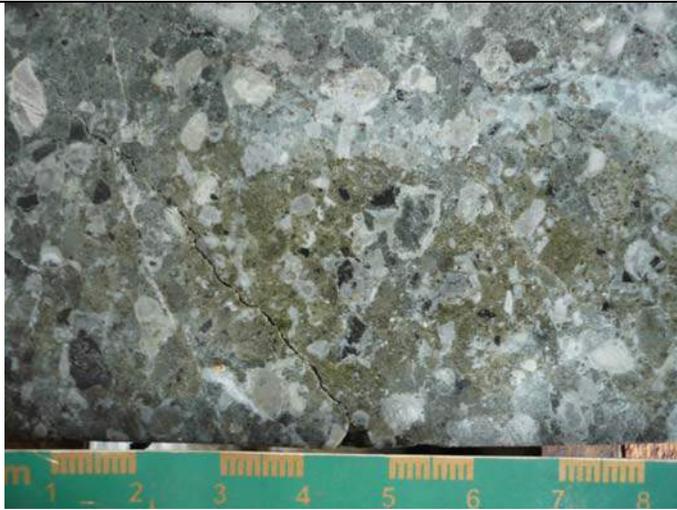


Photo 5: CA08-16 (92.6m; 0.01 g/t Au).  
Conglomerate with fine-grained epidote in matrix.



Photo 6: CA08-16 (115.0m; 10.93 g/t Au, 1.0 g/t Ag, 46 ppm Cu, 1073 ppm Zn). 5mm quartz-sphalerite-pyrite-gold veinlet cutting strongly sericitized feldspar(-biotite?) porphyry. Epidote along fractures.



Photo 7: CA08-16 (143.7m; 5.92 g/t Au, 44.8 g/t Ag, 1808 ppm Cu, >10,000 ppm Zn). Patchy sphalerite-chalcopyrite-galena replacement of strongly sericitized (and weakly Kspar altered?) feldspar porphyry.



Photo 8: CA08-16 (164.9m; 0.33 g/t Au, 2.8 g/t Ag, 18 ppm Cu, 1698 ppm Zn). Clot of coarse sphalerite associated with silicification in epidote altered calcareous sediment. Note grey anhydrite veinlet.

Only ten holes have been drilled at Cerro Aeropuerto, generally on sections spaced 100 metres apart and with holes about 100 metres apart vertically. Despite the coarse drill grid, a zone of gold-bearing mineralization can be traced over 300 metres of strike length and >300 metres downdip. This apparent zone of mineralization strikes northerly and dips ~75° to the west, roughly parallel to the apparent trend of the Potosí fault to the north at Cerro Potosí. The location of the Potosí fault in the Cerro Aeropuerto area is still conjectural.

Further drilling will help considerably with the interpretation of the morphology and significance of the Cerro Aeropuerto mineralization. For instance, the diorite (feldspar-biotite porphyry) bodies on Figure 8 are shown as tabular discordant dykes, but they may actually be sills wrapping around the syncline. Again, hole CA08-04 intersected 3.0 metres grading 2.10 g/tonne Au well to the west of the plane of the other intersections, representing either the first indication of a second tabular mineralized zone or a continuation of the same zone as the others, wrapped around the syncline in a similar geometry to the skarn mineralization at La Luz. Just as the morphology of the mineralized body is poorly constrained, the controls on mineralization are not known. Hole CA07-01 intersected 24.0 metres grading 5.75 g/tonne Au, but the holes above (CA08-08) and beside it (CA07-02 and CA08-11) returned only narrow intersections, if any. Table 7 lists composites for the Yamana drilling at Cerro Aeropuerto (>2.0 metres grading >2.0 g/tonne Au).

**Table 7: Cerro Aeropuerto >2.0 g/t Au Drill Composites (Yamana)**

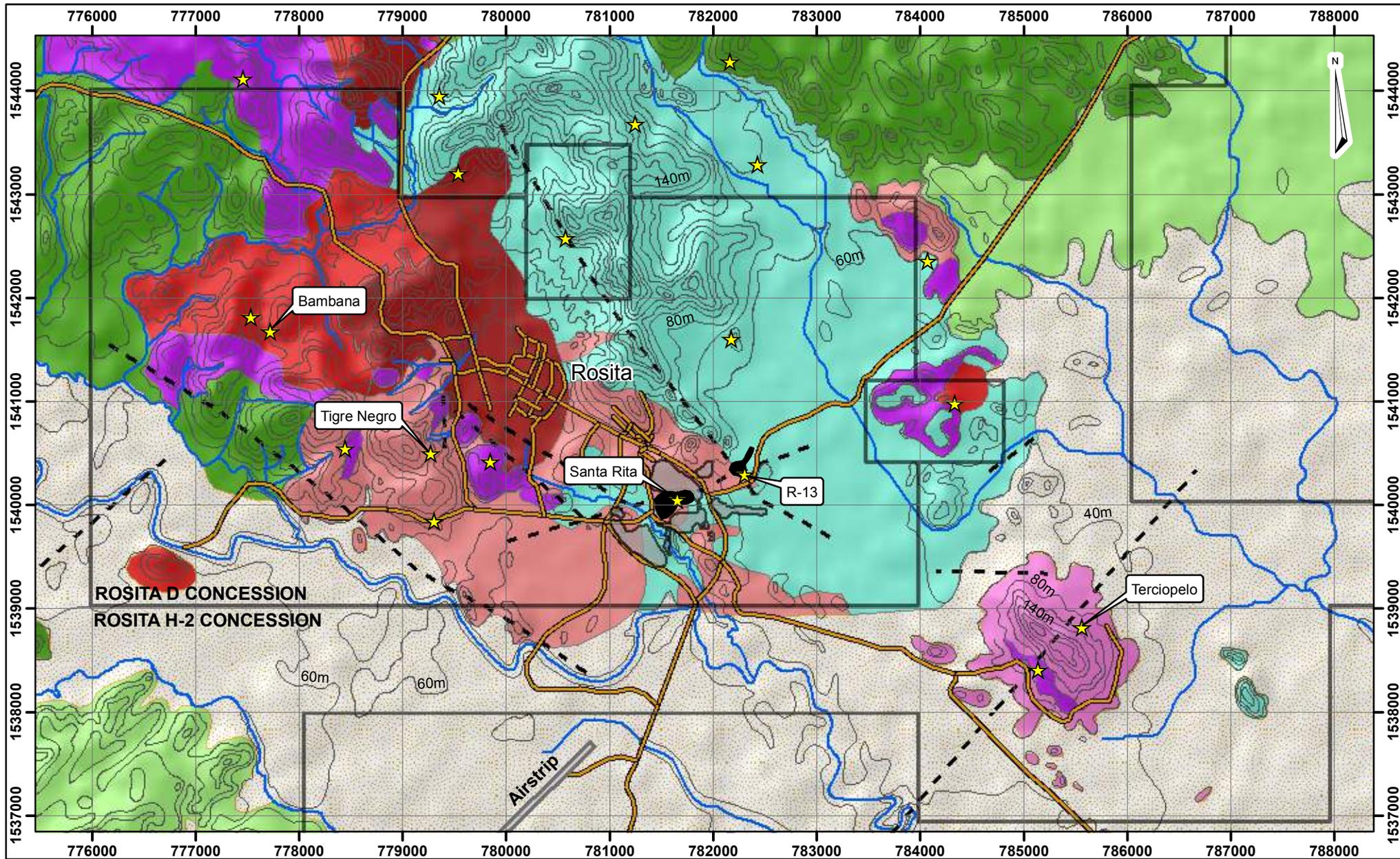
Hole	From (m)	To (m)	Length (m)	Au (g/tonne)
CA07-01	194.80	197.80	3.00	19.72
CA07-01	242.80	266.80	24.00	5.75
CA07-02	242.00	244.00	2.00	25.08
CA07-02	257.50	259.70	2.20	16.94
CA07-03	303.00	306.00	3.00	4.16
CA07-03	316.00	318.00	2.00	7.34
CA08-04	237.00	240.00	3.00	2.10
CA08-08	263.80	266.40	2.60	2.01
CA08-16	9.00	13.95	4.95	2.50
CA08-16	111.00	116.00	5.00	7.23
CA08-16	174.70	177.20	2.50	6.56

#### 9.4 Rosita

Another window of Cretaceous calcareous and siliceous sediments and minor andesite volcanic flows and tuffs of the Todos Santos Formation is exposed in the Rosita area (Figure 9). These rocks are unconformably overlain by Tertiary Matagalpa Formation volcanics composed chiefly of andesitic flows and tuffs. All of these units have been intruded by a series of intermediate to felsic, stocks, plugs and dykes, which extend northwesterly and are associated with the Rosita (Santa Rita and R-13), Tigre Negro and Bambana deposits/prospects and several magnetite skarns (Figure 9).

Prior to mining, the Santa Rita deposit consisted of a plug of alaskite (leucogranite) that intruded the sedimentary and overlying volcanic rocks giving rise to garnet-epidote skarn, marble, and hornfels. A northeast-trending fault (the "Rosita Fault"), which contains extensive brecciation and hydrothermal alteration, cut through the alaskite and intruded sediments. Epidote-silica endoskarn developed within the alaskite constituted most of the early Santa Rita ore. Alteration decreased laterally into the wallrock away from the fault; to depth, the altered rock grades into weakly altered/mineralized alaskite. The hill over the Santa Rita orebody was extensively weathered, with both supergene oxide copper and supergene sulphide copper orebodies (Plecash, 1963).

Copper mineralization also occurs in garnet-bearing skarn developed within the intruded sediments. The favorable skarn horizon in the Santa Rita area is 150 meters thick, strikes east-northeast and dips 50° southeast. Copper mineralization within this zone consists of an elongate sulphide horizon which strikes northeast along the Rosita Fault and dips to the southeast. The horizon is 25 meters thick, 40 metres wide and 175 meters long and divided into three ore zones on the basis of skarn mineralogy within the pit. In the west zone massive sulfides occur as lenses, pods and stringers within fractured and brecciated red-garnet skarn. Ore and sulphide mineralogy is characterized by chalcopyrite>pyrite>pyrrhotite. Gold values are associated with a NNW fault. The central zone is a brecciated quartz-garnet skarn with finely disseminated pyrite and chalcopyrite. Here the garnet is red to red-brown. The east ore zone is yellow-garnet skarn and



**Legend**

- |                            |                      |                |
|----------------------------|----------------------|----------------|
| ★ Prospects                | <b>Geology</b>       | □ Diorite      |
| ■ Open Pits                | □ Alluvium/Colluvium | □ Granodiorite |
| ■ Tailings and Waste Dumps | ■ Andesite Flow      | ■ Granite      |
| □ Concession Boundaries    | ■ Andesite Tuff      | ■ Limestone    |
| - - - Faults               | ■ Dacite Porphyry    | ■ Skarn        |
| — Roads                    |                      |                |

Main Population Centres Labelled

<b>Calibre Mining Corp.</b>			
<b>NEN Project</b>			
<b>Rosita District Compilation</b>			
	<i>Date</i> June 30, 2009	<i>Scale</i> 1:50,000	<i>Figure</i>  <b>9</b>
	<i>U.T.M. Zone</i> NAD 27 Zone 16N	<i>Municipality</i> Rosita	
	<i>N.T.S.</i>	<i>State/Province</i> R.A.A.N.	

mineralization occurs as disseminated or massive chalcopyrite or quartz-chalcopyrite-pyrite lenses and veins. The former is commonly associated with chlorite, magnetite, pyrrhotite and pyrite (Arengi, 2003).

R-13 lies a few hundred metres northeast of Santa Rita along the Rosita Fault, with limited mining by Rosario in the early 70's. Currently, the pit consists of a small lagoon approximately 150m x 150m wide and 100m deep. R-13 is localized by the Rosita Fault within highly fractured quartz diorite which has been strongly propylitized and moderately silicified. Both types of alteration are localized in fractures that reportedly contain high concentrations of Cu, Ag and Au.

Arengi et al (2003) report drill intercepts encountered in three drill holes ranging from 5 to 50 meters in width and containing copper concentrations as high as 18% with 208 g/t silver; the author has not seen the data upon which this is based.

### **9.5 Tigre Negro**

Tigre Negro is located about two kilometres west of the Santa Rita pit (Figure 9), where a broad, northwesterly-trending zone of garnet skarns is associated with granite, diorite and monzonite intrusives. Lehman (1982) considered it a porphyry copper/skarn target for its widespread alteration and mineralization in andesites, calcareous sediments and intrusives. Greenstone explored it for its gold potential, identifying gold mineralization of two types: (1) discontinuous quartz stockworks and associated gold-bearing magnetite-pyrite replacements in garnet skarn roof pendants, and; (2) flat-lying quartz veins associated with a northwest-trending shear zone. Greenstone reported a reverse circulation hole (HRTN-46) intersecting 90 metres of 2.8 g/tonne Au from Tigre Negro. They followed it up with 11 more holes in its vicinity which did not reproduce the results from the original hole, nor give any indications of continuity of mineralization of the same width (Arengi, 2003). The implications are that there may have been downhole contamination in the initial reverse circulation hole, exaggerating the width of the gold-bearing interval.

### **9.6 Bambana**

Artisanal miners have dug pits in two areas about 210 metres apart, in a rolling area without outcrops located about three kilometres northwest of Rosita (Figure 9). Both pits expose strongly argillized (from sericite?) equigranular granodiorite cut by sparse quartz veinlets. A chip sample from one pit by the author returned 0.22 g/tonne Au across 1.5 metres. A chip sample from the other pit, in which abundant malachite and traces of azurite are present, returned 1.64 g/tonne Au, 1645 g/tonne Ag, 29.9% Cu, 227 ppm Mo, 7010 ppm Pb and 3.2% Zn across 0.90 metres. The nature of this mineralization is not clear, but the possible presence of porphyry mineralization is indicated by: extent of gold mineralization in pits, lack of any obvious vein or structural control, strongly altered intrusive with quartz veinlets, copper oxide mineralization in one pit and elevated molybdenum values. Given the nature and extent of skarn mineralization in the Rosita area, porphyry mineralization would not be unexpected. No exploration has been done in the Bambana area beyond sampling of the artisanal miner pits.

### **9.7 Minnesota**

The Minnesota prospect, located seven kilometres northwest of Rosita (Figure 4), appears similar to Bambana in several respects. Yamana geologists have mapped it as underlain by the same granodiorite as Bambana. Interestingly, there is a pronounced circular topographic high, nine kilometres in diameter, centred on Minnesota and the granodiorite stock. Guiriseros (artisanal miners) have worked numerous small pits for gold over an area of several hundred metres in the Minnesota area. Arengi et al (2003) reports Greenstone reverse circulation drill results of 5.88 g/tonne Au over 9.0 metres and 8.12 g/tonne Au over 1.5 metres from the weathered and limonitic intrusive, but gives no indication of lithologies, alteration or whether Greenstone drilling reached hypogene material. Records of the Greenstone exploration are now lost. Other than sampling the artisanal pits, Yamana has done no exploration in the Minnesota area and very little is documented about it.

## 9.8 Terciopelo

Terciopelo is located on a small hill five kilometres southeast of Rosita (Figure 9), which has been the scene of artisanal gold mining since the 1920's. There are two gold-bearing occurrences at Terciopelo, one on the northeast flank and one on the southwest flank. Artisanal miners ("guiriseros") have worked a number of sizeable pits on the northeast flank, over an area about 200 metres in diameter. The pits expose a breccia or conglomerate composed of rounded to subrounded fragments of quartz±biotite phyrlic dacite porphyry up to several tens of centimetres in diameter, supported by a white to red to black clay-rich matrix. The guiriseros discard the fragments and sluice the matrix to recover free gold. Rosario apparently reported 18.3 metres grading 1.85 g/tonne Au and 2.7 g/tonne Ag from a crosscut within the breccia (Hendrickson, 1995). Greenstone reportedly drilled some reverse circulation holes in the vicinity of Terciopelo, but that information has been lost.

Two theories have been proposed to explain the origin of the gold-bearing breccia or conglomerate, either of which is consistent with the textures observed in the pits: (a) lithified colluvium; and (b) breccia pipe. If it were lithified colluvium, there would be two questions to answer: what is the source of the gold? and why is similar lithified colluvium not exposed elsewhere in the Rosita area? If it were a breccia pipe, the gold-bearing and variably limonitic matrix would be consistent with weathering of a variably sulphide-rich breccia matrix and similar breccia pipes are common within porphyry/skarn environments.

Arengi et al (2003) describes the geology of Terciopelo as a shallow-dipping sequence of basaltic andesite flows overlain by dacite porphyry. These have been intruded by holocrystalline quartz diorite, with a thick hornfels zone developed between the quartz diorite and basaltic andesite. On the southwest flank of the hill, Rosario discovered a gold/base metal skarn system associated with a strong magnetic anomaly. "INMINE mined some of the mineralized rock at south Terciopelo and milled it at Rosita, but the grades were low and gold recovery was poor so the effort was abandoned" (Hendrickson, 1995).

## 9.9 Riscos de Oro

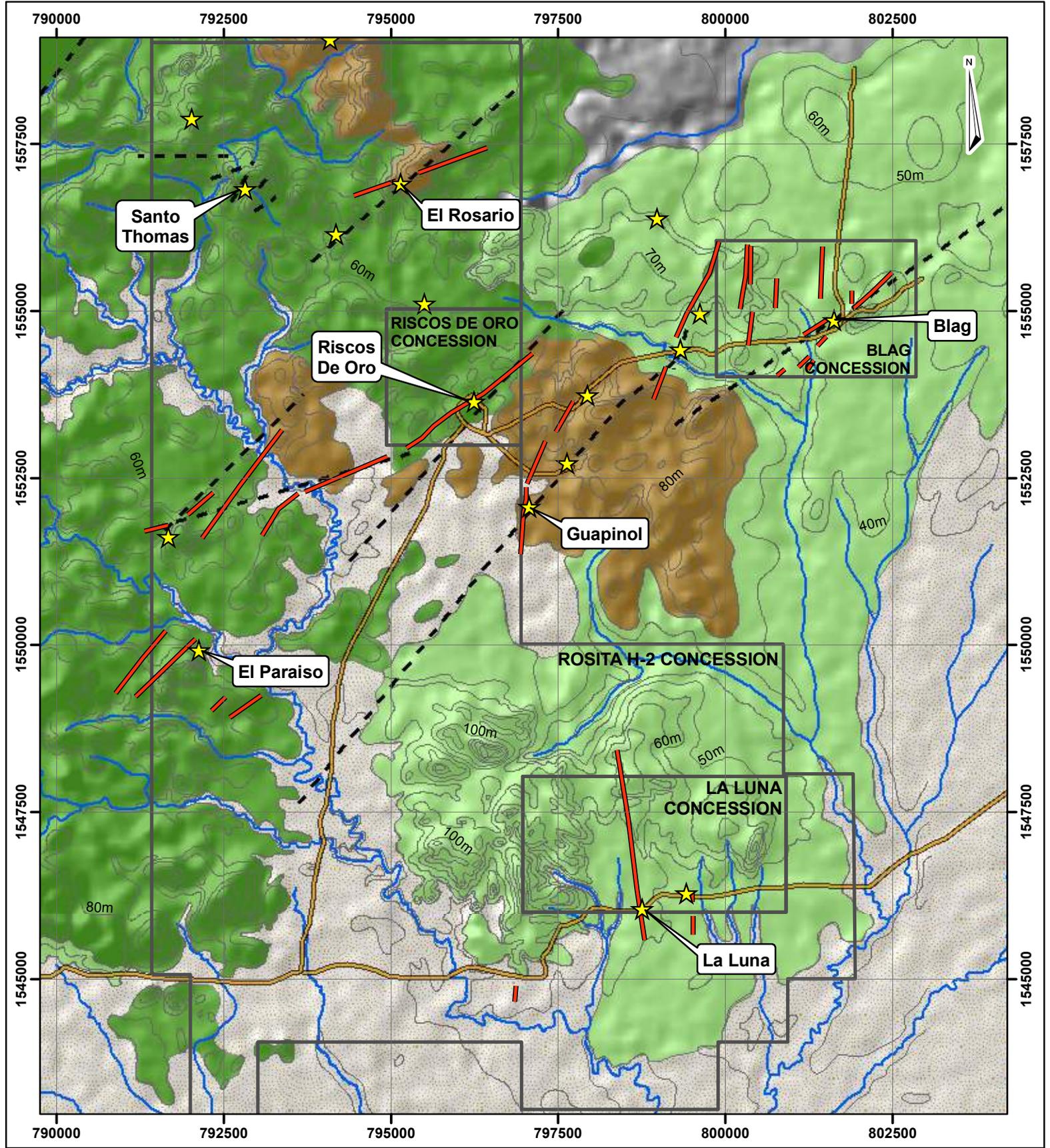
Riscos de Oro is located approximately 20 kilometres northeast of Rosita (Figures 4, 10). Mineralization occurs in a single epithermal quartz vein that ranges from 7 to 11 metres thick in underground workings, strikes 053° and dips 60° to the northwest, hosted in Matagalpa or pre-Matagalpa Formation andesite flows (Hendrickson, 1995). Surface trenching by Yamana showed the vein to extend at least 2,000 metres across the Riscos de Oro concession, although narrowing to ~1.0 metres at the southwest end. The vein has a low sulphide content that is typically 3% but may range up to 10%; sulphide banding was noted on dump float at the site of the former shaft. Gold is strongly associated with total sulphide content in the vein; the sulphide suite includes pyrite, chalcopyrite, sphalerite, galena and argentite (Hendrickson, 1995). The author took a sample from selected pieces of quartz vein material scattered around the former shaft site; it assayed 7.95 g/tonne Au with 837 g/tonne Ag, 7050 ppm Cu, 3000 ppm Pb and 4590 ppm Zn but only 72 ppm As and 15 ppb Sb.

Yamana collected a single line of soil samples for 2.8 kilometres perpendicular to the strike of the Riscos de Oro vein. Gold results were uniformly low away from the Riscos de Oro vein, diminishing the likelihood of other significant veining in the immediate area.

## 9.10 Blag

Two main quartz veins have been described at Blag, six kilometres east of Riscos de Oro (Figure 10), hosted within andesitic tuffs. One is well-exposed by a tractor cut where it has been taken for use as road material. At that point, it consists of a ~5 metre wide zone composed of 1-50 cm quartz veins in sheared andesite, trending 040°/80°SW. Underground workings are currently inaccessible, but Hendrickson (1995) describes Blag as follows:

"Two gold quartz veins occur at La Blag; a southern vein known as Blag No. 1 and a northern vein known as Blag No. 2. Mining was only carried out on the Blag No. 1 vein which is at least 200 m long, strikes northerly, dips easterly, from 65° to 70°, and has an average thickness of 2 metres. At Blag No.



**Legend**

- ★ Prospects
  - Concession Boundaries
  - Epithermal Veins
  - - Faults
  - Creeks and Rivers
  - Roads
- 
- Geology**
- Alluvium/Colluvium
  - Andesite Flow
  - Andesite Tuff
  - Basalt Flow

**Calibre Mining Corp.**

**NEN Project  
NE Epithermal District Compilation**



Date June 30, 2009	Scale 1:75,000	Figure  <b>10</b>
U.T.M. Zone NAD 27 Zone 16N	Municipality Rosita	
N.T.S.	State/Province Nicaragua	

2, drilling indicates that gold mineralization occurs in several discontinuous very narrow veins. These veins strike roughly N20°E and dip 40° to the northwest. The strike length of Blag No. 2 is less than that of Blag No. 1. Gold and silver mineralization in the La Blag veins typically occurs at a ratio of 1:80, and base metal assays in the percent range occur locally. Sulphides identified at La Blag include pyrite, sphalerite, galena, chalcopyrite, arsenopyrite and argentite. Native silver, presumed to be an oxidation product of the argentite, also occurs locally.”

Yamana collected soil samples along seven NW-trending lines, spaced 400 metres apart. These yielded several samples with elevated gold values and subsequent prospecting led to the recognition of four north-trending veins within a kilometre to the northwest of the Blag workings.

### **9.11 La Luna**

La Luna vein is a north-trending vein system located eight kilometres south of Riscos de Oro (Figure 10). Where exposed at the end of Rosario’s small open pit, La Luna consists of a >12.6 metre wide zone of argillization (after sericite?) with 1-170 centimetre quartz veins. Veins generally trend northerly (350°-010°) and dip steeply to the east or west, but a few quartz veinlets are present at other orientations (e.g. 260°/70°N). Yamana reported chip samples across this face averaging 3.50 g/tonne Au and 18 g/tonne Ag over 12.6 metres. The author repeated one of Yamana’s chip samples, yielding 1.6 metres grading 3.73 g/tonne Au and 6.8 g/tonne Ag.

Yamana did limited prospecting in the vicinity of La Luna, finding the inferred strike extension of the main vein approximately 1.5 kilometres north. They also reported an isolated sample from silicified outcrop, located a few hundred metres west of the La Luna pit, with 46.07 g/tonne Au. This has apparently not been investigated further.

### **9.12 Santo Tomás**

The Santo Tomás area, located about five kilometres northwest of Riscos de Oro (Figure 10) is reported by Yamana to be underlain by argillized and silicified andesite flows over an area of 4 km<sup>2</sup>, with large blocks of vein quartz. Guiriseros (artisanal miners) are actively working in the Santo Tomás area for gold. Initial sampling by Yamana returned up to 6.12 g/tonne Au from quartz veins and silicified zones (Turner, 2008).

## **10.0 EXPLORATION**

Calibre has not carried out any exploration work on the NEN property. Relevant exploration carried out by others, to the extent known, has been described above in Sections 6 (History) and 9 (Mineralization).

## **11.0 DIAMOND DRILLING**

Calibre has not carried out any drilling on the NEN property. Diamond drilling has been carried out by several previous operators, but no core remains from prior to the April 2008 fire at the Siuna offices. Little data remains from the diamond drilling programs prior to Yamana. Yamana’s surviving drill core, starting with hole CA08-11, is stored in Siuna. Greenstone drilled extensively at several prospects in the Siuna and Rosita areas in 1997 and 1998, using reverse circulation techniques. Digital data for the 45 holes drilled in the Siuna area was captured prior to the fire, but all data has been lost from drilling in the Rosita area and no chips remain from either area.

Results of drilling are discussed in Sections 6 (History) and 9 (Mineralization). Composites for the Yamana drilling are summarized in Sections 9.2 and 9.3 (Mineralization).

## 12.0 SAMPLING METHOD AND APPROACH

Yamana's drill core was sawn, with one half sent for analysis and one half retained on site for reference. Sample widths were a maximum of 3.0 m and a minimum of 0.15 m, selected on the basis of lithological, alteration or mineralization boundaries. Two core samples were longer than 3.0 metres (4.95 and 5.0 metres) in zones of poor recovery at the tops of holes. Recovery was excellent throughout the Yamana drilling, although some of the mineralized sections of the Cerro Aeropuerto core examined by the author were in fault zones with slightly lower recovery.

## 13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Calibre has not conducted any exploration or drilling on the NEN property. The author collected nine rock samples in the course of his property examination. These were kept in his possession until delivery to ALS Chemex Labs, an ISO 9001:2000 accredited laboratory, in North Vancouver, B. C. They were analyzed by ALS Chemex for Au (fire assay with gravimetric finish) and 35 elements by ICP. No officers or directors of Calibre were involved in the collection, preparation or analysis of these samples. The author is satisfied that security, sample preparation and analytical procedures were adequate for these samples.

All drill, rock-chip and soil samples collected during the 2007-2008 Yamana exploration program were sent to CAS de Honduras, S. de R.L. in Tegucigalpa for preparation and Au and Ag analyses (30 g fire assay with atomic absorption finish). CAS de Honduras is not a certified laboratory, but an inspection by Yamana personnel in 2006 concluded that its premises, protocol and internal QA/QC program were satisfactory. A pulp split was sent by CAS to ACME Analytical Laboratories Ltd of Vancouver, an ISO-9001 certified laboratory, for 32-element ICP analysis. All bulk rejects and pulps from the drilling program are in storage at the CAS lab and all pulps used in the ACME ICP analysis are in storage in Vancouver.

During the 2007-2008 Siuna exploration drilling program, standards were inserted in the sample sequence submitted to CAS after every 15<sup>th</sup> sample. The certified reference materials used in the program were obtained from Geostats Pty Ltd (Australia) and CDN Resource Laboratories Ltd (Canada). The sample details are listed in the following table:

**Standards Data for Siuna 2007 - 2008 Drilling Program**

Supplier	Lab Code	Au (ppm)	1 Std. Dev.	2 Std. Dev.	Project Code	Max	Min	Tolerance
Geostats	G302-7	2.14	0.09	0.18	STD-3	2.32	1.96	7.8%
Geostats	G304-7	6.83	0.25	0.50	STD-5	7.33	6.33	6.8%
Geostats	G902-7	1.41	0.10	0.20	STD-2	1.61	1.21	12.4%
Geostats	G998-10	3.05	0.15	0.30	STD-4	3.35	2.75	9.0%
Geostats	G999-2	0.63	0.06	0.12	STD-1	0.75	0.51	16.0%
CDN Labs	CDN-GS-5D	5.06	0.13	0.25	STD-6	5.31	4.81	4.7%
CDN Labs	CDN-GS-2C	2.06	0.08	0.15	STD-7	2.21	1.91	6.8%
CDN Labs	CDN-GS-3D	3.41	0.13	0.25	STD-8	3.66	3.16	6.8%
CDN Labs	CDN-CGS-18	0.30	0.02	0.04	STD-9	0.34	0.26	11.9%

Variations up to 2 standard deviations were considered acceptable. Percent tolerance values were calculated from the ratio of the accepted grade + 2 standard deviations, divided by the accepted grade. A total of 243 standards were inserted into the samples submitted for Au fire assay to CAS Honduras, with all but 16 within tolerance limits. To date, Yamana has not followed up on the samples deemed out of tolerance. No standards were submitted to Acme with the CAS pulp splits and no comparison was done by Yamana between the Au assays received from CAS and ACME because of the differences in analytical procedures (fire assay vs. ICP).

Blank (sterile) samples were inserted in the sample stream to CAS Honduras, based on geologic interpretation of mineralized samples during core logging. A blank sample would be inserted directly following a visually mineralized sample and were not inserted at fixed intervals. On average a blank sample was inserted after every 75<sup>th</sup> sample. The blank samples were prepared at the San Andres mine (Honduras) prep lab from material from a locality of the Valle de Angeles Formation (red beds) which is known to not carry gold. A total of 62 blanks were submitted to CAS Honduras, uniformly returning 0.01 g/tonne Au; contamination at the lab is not a problem.

No duplicate samples were collected from core during the 2007-2008 drilling campaign.

It is the opinion of the author that sample preparation and security were adequate during the 2007-2008 Yamana drilling program, but that further QA/QC work will be necessary before analyses from that program can be relied upon. In addition, the gold content may have been understated due to the presence of coarse gold at Cerro Potosí and Cerro Aeropuerto. Metallics (screen) assaying should be done in future on all Cerro Potosí and Cerro Aeropuerto drill samples exceeding 0.5 g/t Au.

#### 14.0 DATA VERIFICATION

The author examined drill core from the 2008 Yamana drilling. The author collected no further samples from the core, but noted visible gold in core from both Cerro Potosí (9 occurrences) and Cerro Aeropuerto (2 occurrences). The visible gold was located within samples with elevated gold values (1.29-32.1 g/tonne Au). Other samples with similarly elevated gold values were in similarly altered and mineralized rock, although no gold was visible.

The presence of visible gold and its correlation to mineralized assay intervals are sufficient to have confidence in the validity of the reported Yamana gold assays from core.

The author collected nine samples from the NEN property in an effort to corroborate Yamana's surface sampling and grades of reported mineralization. The results of these samples are summarized in Table 8.

**Table 8: Author's Surface Sampling**

Sample Number	Prospect	Type	Length (m)	Au (g/tonne)	Yamana
G0813203	Aeropuerto	Chip	1.8	0.8	
G0813204	Aeropuerto	Chip	1.4	1.24	
G0813205	Aeropuerto	Chip	1.7	1.33	
G0813206	Aeropuerto	Chip	<u>1.8</u>	<u>0.62</u>	
	Total		6.7	0.98	12.5m @ 2.01 g/tonne Au
G0813207	Potosi	Grab	5.2	0.83	5.2m @ 2.11 g/tonne Au
G0813208	Bambana	Chip	1.5	0.22	Not sampled
G0813209	Bambana	Chip	0.9	1.64	#20145 – 5.22 g/tonne Au
G0813210	La Luna	Chip	1.6	3.73	#50117 – 13.02 g/tonne Au
G0813211	Riscos	Dump	N/A	7.95	Not sampled

Samples G0813203-206 were taken from a portion of a road cut on Cerro Aeropuerto previously sampled by Yamana. No sample markings were left and the location of the author's samples relative to Yamana's was uncertain. The Yamana samples were influenced by a 1.4 metre sample at 9.10 g/tonne Au, which I believed would be captured within the four chip samples. Either it wasn't captured, or it was overstated. The author's four continuous chip samples are in a similar range to the remainder of Yamana's samples from this road cut, which reported 0.47-2.83 g/tonne Au.

Sample G0813207 was a representative grab sample, since the hard skarn in this area could not be readily chipped, so it is not directly comparable to Yamana's reported value.

Samples G0813209 and G0813210 are directly comparable to chip samples reported by Yamana, with paint markings remaining from the Yamana sampling. In both cases, the author's samples contain significant gold, but much less than reported by Yamana. In each case, there may be extenuating circumstances responsible for the higher gold grades reported by Yamana. For sample G0813209, there appears to be extreme variability at that site. Evidence for this comes from a second chip sample reported by

Yamana 1.1 metres above their sample 20145 from the Bambana pit, which returned only 0.79 g/tonne Au across 1.5 metres. For sample 50117 from La Luna, a 1 cm quartz veinlet parallels a portion of the chip sample as a dip slope along the outcrop face; it could have formed a significant part of the Yamana sample and influenced its high grade.

Samples G0813208 and G0813211 were not taken from the same locations as any of Yamana's surface sampling.

The discrepancies between higher gold values reported by Yamana and lower ones in the author's surface check sampling are disconcerting. They may be due to variations in gold distribution or in poor sampling practice. Regardless of the source of this discrepancy, however, Yamana's surface sampling is adequate to indicate the presence of gold and areas where further work should be done. However, a more rigorous surface sampling protocol should be established in future.

Limited checks of the database were made by the author, without discovering any errors.

The author believes that Yamana's drill and surface data can be relied upon with the limitations noted above. At this point, insufficient documentation exists to rely upon earlier data.

## 15.0 ADJACENT PROPERTIES

The Bonanza mine is located on an exploitation concession entirely surrounded by the Bonanza H-1 concession of the NEN property (Figures 2, 4). A series of generally northeast-trending low-sulphidation epithermal veins have been mined continuously since 1939 at Bonanza, from both open pits and underground. Arengi et al (2003) report mine production for Bonanza from 1939 to July 2002 as 2.6 million ounces of gold at an average grade of 9.15 g/tonne Au. The majority of this came from the Panama Group of veins (2.0 million oz.), with another 585,000 ounces produced from the Pioneer and Constancia groups of veins. Together, the three groups define a 20 kilometre northeast-trending mineralized corridor of epithermal veining. The veins generally strike northeast and dip steeply northwest, with strike lengths up to 3,000 metres and widths from 0.3 to >24 metres. Less common northwest-striking veins are vertical to steeply southwest dipping; these are generally narrower with shorter strike lengths (Arengi, 2003).

The author has been unable to verify the above information on the Bonanza mine and it is not necessarily indicative of mineralization on the NEN property.

## 16.0 INTERPRETATION AND CONCLUSIONS

The NEN property exhibits excellent potential for mineralization of two major styles: low-sulphidation epithermal veins and Au-Cu porphyry/skarn deposits. Two major mines, La Luz and Rosita, operated in the mid-1900's on the NEN property, producing a reported 2.3 million ounces of gold and 305 million pounds of copper from skarn deposits. A third mine, Bonanza, which is located on a concession surrounded by the NEN property, has produced >2.6 million ounces of gold from low-sulphidation epithermal veins since 1939.

The prospects on the NEN property with the most potential for discovery of Au±Cu skarn, Cu-Au porphyry and related deposits are:

**La Luz:** The La Luz mine produced 2.3 million ounces of gold at an average recovered grade of 4.14 g/tonne Au from a large epidote-garnet skarn deposit. It was closed abruptly following the failure of its hydro-electric dam in 1968. Prior to the failure, the mine had calculated underground-mineable reserves (Table 5) for their continued operation. However, the underground workings have flooded and there are reports that the shaft's alignment may have shifted, so any further work on the underground potential of the La Luz mine should be predicated on construction of new infrastructure. Using Hendrickson's (1995) resource estimate as the potential underground target (8.4 million tonnes @ 2.32 g/tonne Au), and the apparently declining grades with depth, this will be a low priority.

**Cerro Potosí:** Cerro Potosí covers the footwall part of the skarn deposit mined at La Luz. Grades decrease in the footwall, but there are several relatively narrow gold-bearing skarn bands of moderate grade exposed at surface at Cerro Potosí which could be amenable to open pit mining.

**Cerro Aeropuerto:** Widely-spaced drilling by Yamana in 2007 and 2008 gave indications of a gold-bearing vein/replacement body with 300 metres strike length and >300 metres down-dip extent. Yamana's best drill intersection averaged 5.75 g/tonne Au along 24.0 metres of core, but controls on mineralization and geology are poorly understood. Even though Cerro Aeropuerto is less than a kilometre south of La Luz and Cerro Potosí, its style of mineralization is quite distinct. Garnet-epidote skarn is locally present but does not appear important in localizing gold mineralization. Instead, gold is associated with quartz-sphalerite veinlets and replacements (absent from Cerro Potosí) and strongly sericitized (also absent from Cerro Potosí) feldspar-biotite porphyry. The Cerro Aeropuerto mineralization may have formed along an escape structure for hydrothermal fluids related to the La Luz/Cerro Potosí skarn deposition. More drilling will be required to define the geometry of the mineralized zone, and controls, extent and orientation of higher-grade mineralization and the potential for other zones.

**Rosita:** Historical records of Rosita were lost when the mine buildings were destroyed in the early 1980's. Little effort has been expended since then in determining whether significant resources remain in the historical mining areas.

**Bambana/Minnesota:** Very little work has been done on either of these prospects. Bambana was first reported in 2008, as a follow-up of pits dug by artisanal miners. Its regional setting, in the midst of Cu-Au skarn deposits, its granodioritic host, its argillic (sericitic?) alteration with quartz veinlets and the presence of widespread gold, local copper oxides and elevated molybdenum values are all indications that Bambana may form part of a previously-unrecognized Cu-Au porphyry system. It is located in an area of rolling pastures, practically devoid of outcrop, but very amenable to testing with soil geochemistry, induced polarization surveys and trenching. As a porphyry target, additional potential would be present for surface leaching and deposition of supergene copper sulphides or copper oxides/carbonates. Less is known of Minnesota and it should also be evaluated for its porphyry potential.

**Terciopelo:** This appears to be a gold-bearing breccia pipe, about which little information from previous exploration has survived. It deserves evaluation for whether it could also form part of a significant porphyry system.

A number of low-sulphidation epithermal veins have been recognized and developed to differing extents in the northeastern part of the NEN property, over an area of 13 x 14 kilometres. Most of these veins strike northeasterly and dip steeply. This area, which includes the **Riscos de Oro, Blag, La Luna** and **Santo Tomás** prospects, is similar in size to the Bonanza district, located 35 kilometres to the west, which has produced >2.6 million ounces of gold from low-sulphidation epithermal veins. In both districts, the vein orientation is predominantly northeast-striking and steeply-dipping. In both, veins are hosted by Cretaceous to mid-Tertiary andesitic volcanic rocks. The major difference between the two districts appears to be their topography and the resulting level of exploration and development. At Bonanza, topography is quite hilly, allowing for the prospecting and discovery of all major vein systems by the end of the 19<sup>th</sup> century. The northeastern part of the NEN property falls within the Atlantic coastal plain physiographic province, where relief is more subdued and outcrop more limited. It would be reasonable to expect undiscovered veins in lowland areas of the northeastern part of the NEN property.

Considerable exploration has been carried out on the NEN property in the past century. Much of this work was poorly documented and much of the existing documentation was lost in a fire at the Siuna offices in 2008. No property-wide geological mapping and geochemical sampling has been preserved. Most of the recent work has focused on previously-known prospects or new discoveries made in the search for gold by artisanal miners. Digital compilation of whatever surviving data remains has been minimal. There are a number of poorly-documented mineral occurrences throughout the property, whose potential is unknown. Digital compilation of existing information, property-wide geological mapping and geochemical sampling and systematic evaluation, description and prioritization of known prospects are essential on the property.

Given the considerable past production from the NEN property, the early stage of evaluation of some intriguing prospects (in particular Cerro Aeropuerto, Bambana and the low-sulphidation epithermal prospects) and the strong similarities between the epithermal targets and the >2.6 million ounce Bonanza district, further exploration is fully warranted on the NEN property.

## 17.0 RECOMMENDATIONS

### 17.1 Program

A comprehensive program is recommended for the NEN property, consisting of data compilation, property-wide mapping and geochemical sampling and drilling on the Cerro Aeropuerto, Riscos de Oro, Blag and La Luna prospects. All existing exploration data should be compiled into a digital database. Efforts should be continued to re-discover reports, maps and data lost in the April 2008 fire at Siuna. Property-wide geological mapping should be undertaken, jointly with property-wide silt sampling. Detailed sampling and mapping should be done at all prospects, with preparation of good descriptions and maps and an assessment of their potential.

Reconnaissance soil sampling should be done on lines spaced 200 metres apart across the Bambana area. If initial evaluations of the Minnesota prospect show it to be warranted, the soil grid should be extended north with lines spaced 200 and 400 metres apart through the Minnesota area. Hand trenching should be done to follow up Au, Cu or Mo soil geochemical anomalies and an induced polarization (IP) survey may be warranted over a portion of the soil grid.

Reconnaissance soil sampling should be done on NW directed lines spaced 400 metres apart, throughout the northeast portion of the NEN property, from La Luna to Santo Tomás and from Blag to El Paraíso. In areas of little relief, or where it does not appear that residual soils are present, deep-penetrating soil geochemical technique(s), such as pH, partial leach, etc., should be employed. More detailed prospecting and hand-trenching should follow up on geochemical anomalies.

A total of 6,000 metres of diamond drilling is recommended on the following prospects: Cerro Aeropuerto (1,500 metres), Riscos de Oro (1,500 metres), Blag (1,500 metres) and La Luna (1,500 metres). At Cerro Aeropuerto, the drilling should be used on 50-metre stepouts around hole CA08-07 and on a scissor hole directed west at CA08-07. These holes will help determine the extent and orientation of the high-grade mineralization, the orientation of the feldspar-biotite porphyry bodies and the controls/plunge of the high-grade mineralization. At the epithermal prospects, the drilling should be directed at better understanding the width and grade of mineralization, its controls, the plunge of ore-shoots and their vertical extent.

### 17.2 Budget (All figures are in Canadian dollars)

#### Property Work (mapping, sampling)

Personnel	\$ 612,320
Analyses	415,500
Support	127,800

#### Drilling (all-in)

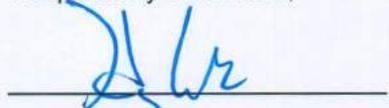
6000m @ \$200/m	1,200,000
	<u>\$ 2,355,620</u>

Contingency (10%)	<u>235,562</u>
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<b>Total</b>	<b>\$ 2,591,182</b>
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The proposed program will cost approximately CDN\$2.6 million to implement.

Respectfully submitted,



Henry J. Awmack, P.Eng.  
EQUITY EXPLORATION CONSULTANTS LTD.  
Vancouver, British Columbia  
September 30, 2009



**Appendix A: References**

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**Appendix B: Analytical Certificate**



# ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY

ALS Canada Ltd.

212 Brooksbank Avenue

North Vancouver BC V7J 2C1

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: EQUITY EXPLORATION CONSULTANTS LTD.

700 - 700 PENDER STREET

VANCOUVER BC V6C 1G8

Page: 1

Finalized Date: 29-JUN-2009

This copy reported on 30-JUN-2009

Account: EIACXB

## CERTIFICATE VA09063052

Project: CXB09-01 (NEN)

P.O. No.:

This report is for 9 Rock samples submitted to our lab in Vancouver, BC, Canada on 23-JUN-2009.

The following have access to data associated with this certificate:

HENRY AWMACK

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Zn-OG46	Ore Grade Zn - Aqua Regia	VARIABLE
Ag-GRA21	Ag 30g FA-GRAV finish	WST-SIM
Cu-OG46	Ore Grade Cu - Aqua Regia	VARIABLE
Au-GRA22	Au 50 g FA-GRAV finish	WST-SIM
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES
Ag-OG46	Ore Grade Ag - Aqua Regia	VARIABLE
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES

To: EQUITY EXPLORATION CONSULTANTS LTD.

ATTN: HENRY AWMACK

700 - 700 PENDER STREET

VANCOUVER BC V6C 1G8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A  
Total # Pages: 2 (A - C)  
Finalized Date: 29-JUN-2009  
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Project: CXB09-01 (NEN)

<b>CERTIFICATE OF ANALYSIS</b>	<b>VA09063052</b>
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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au-GRA22 Au ppm	Au-GRA22 Au Check ppm	ME-ICP41 Ag ppm	ME-ICP41 Al %	ME-ICP41 As ppm	ME-ICP41 B ppm	ME-ICP41 Ba ppm	ME-ICP41 Be ppm	ME-ICP41 Bi ppm	ME-ICP41 Ca %	ME-ICP41 Cd ppm	ME-ICP41 Co ppm	ME-ICP41 Cr ppm	ME-ICP41 Cu ppm
		0.02	0.05	0.05	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1
G0813203		2.26	0.80		2.2	2.99	1870	<10	180	1.4	7	0.02	2.5	52	120	480
G0813204		2.18	1.24		3.1	2.82	1960	<10	210	1.2	9	0.02	4.3	61	177	613
G0813205		2.68	1.33		13.0	1.42	2830	<10	800	0.7	12	0.03	6.3	226	188	1010
G0813206		2.24	0.62		8.8	0.50	2070	<10	390	<0.5	9	0.02	3.1	25	134	383
G0813207		0.84	0.83		0.6	1.26	103	<10	50	<0.5	2	6.95	25.9	63	25	89
G0813208		3.08	0.22		4.4	0.99	42	<10	30	<0.5	15	0.03	<0.5	1	4	168
G0813209		1.32	1.39	1.89	>100	1.26	18	<10	30	<0.5	1465	0.05	18.3	34	<1	>10000
G0813210		2.54	3.73		6.8	0.46	805	<10	2270	<0.5	7	0.01	<0.5	<1	9	1150
G0813211		1.12	7.95		>100	0.40	72	10	30	<0.5	55	6.74	14.2	3	8	7050



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Page: 2 - B  
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Account: EIACXB

Project: CXB09-01 (NEN)

<b>CERTIFICATE OF ANALYSIS</b>	<b>VA09063052</b>
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Sample Description	Method Analyte Units LOR	ME-ICP41 Fe %	ME-ICP41 Ga ppm	ME-ICP41 Hg ppm	ME-ICP41 K %	ME-ICP41 La ppm	ME-ICP41 Mg %	ME-ICP41 Mn ppm	ME-ICP41 Mo ppm	ME-ICP41 Na %	ME-ICP41 Ni ppm	ME-ICP41 P ppm	ME-ICP41 Pb ppm	ME-ICP41 S %	ME-ICP41 Sb ppm	ME-ICP41 Sc ppm
		0.01	10	1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1
G0813203		8.40	10	<1	0.09	10	0.23	1670	3	0.01	216	600	43	0.05	9	18
G0813204		9.99	10	<1	0.05	10	0.60	1720	3	0.01	371	700	70	0.02	13	21
G0813205		9.05	10	<1	0.02	10	0.08	7300	10	0.01	830	360	107	0.11	21	13
G0813206		4.91	<10	<1	0.01	<10	0.03	920	6	<0.01	420	210	41	0.40	19	5
G0813207		2.93	<10	<1	0.06	<10	0.98	1950	5	0.01	36	530	6	0.70	3	5
G0813208		1.45	<10	<1	0.09	10	0.01	55	10	0.01	5	50	218	0.04	<2	1
G0813209		6.09	<10	1	0.03	10	0.03	684	227	<0.01	1	110	7010	0.08	58	6
G0813210		5.10	<10	<1	0.11	<10	0.01	11	107	0.01	<1	420	118	0.09	12	4
G0813211		1.35	<10	<1	0.06	<10	0.14	444	11	0.01	1	70	3000	0.73	15	1



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700 - 700 PENDER STREET  
VANCOUVER BC V6C 1G8

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Finalized Date: 29-JUN-2009  
Account: EIACXB

Project: CXB09-01 (NEN)

<b>CERTIFICATE OF ANALYSIS VA09063052</b>
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Sample Description	Method	ME-ICP41	Ag-OG46	Zn-OG46	Ag-GRA21	Cu-OG46							
	Analyte	Sr	Th	Ti	Tl	U	V	W	Zn	Ag	Zn	Ag	Cu
Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%
LOR	1	20	0.01	10	10	1	10	2	1	0.001	5	0.001	
G0813203		9	<20	0.01	<10	<10	155	<10	974				
G0813204		4	<20	<0.01	<10	<10	190	<10	1680				
G0813205		13	<20	0.01	<10	<10	151	<10	2660				
G0813206		9	<20	<0.01	<10	<10	44	<10	768				
G0813207		164	<20	0.12	<10	<10	39	10	7660				
G0813208		5	<20	0.01	<10	<10	6	<10	85				
G0813209		6	20	0.01	<10	<10	8	30	>10000	>1500	3.20	1645	29.9
G0813210		14	<20	<0.01	<10	<10	71	<10	129				
G0813211		53	<20	<0.01	<10	<10	23	<10	4590	837			

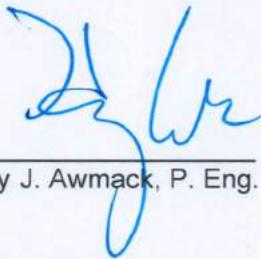
**Appendix C: Engineer's Certificate**

## ENGINEER'S CERTIFICATE

I, Henry Awmack, P.Eng., do hereby certify:

- THAT I am a Professional Engineer with offices at 700-700 West Pender Street and residing at 1735 Larch Street, Vancouver, British Columbia, Canada.
- THAT I am an author of the Technical Report entitled "2009 Technical Report on the NEN Property, Nicaragua", dated June 30, 2009 and revised September 30, 2009, relating to the NEN property (the "Technical Report"). I have examined the property in the field (June 17-22, 2009).
- THAT I am a member in good standing (#15,709) of the Association of Professional Engineers and Geoscientists of British Columbia.
- THAT I graduated from the University of British Columbia with a Bachelor of Applied Science (Honours) degree in geological engineering (Mineral Exploration Option) in 1982, and I have practiced my profession continuously since 1982.
- THAT since 1982, I have been involved in mineral exploration for gold, silver, copper, lead, zinc, cobalt, nickel and tin in Canada, Costa Rica, Panama, Chile, Argentina, Brazil, Peru, Ecuador, Venezuela, Nicaragua, Bolivia, Mexico, Indonesia, China, Sénégal and Egypt.
- THAT I am a Consulting Geological Engineer and principal of Equity Exploration Consultants Ltd., a geological consulting and contracting firm, and have been so since February 1987.
- THAT I have read the definition of "independence" set out in Part 1.4 of National Instrument 43-101 ("NI 43-101") and certify that I am independent of Calibre Mining Corp.
- THAT I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- THAT as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- THAT I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form. I am responsible for the entire content of this report.
- THAT I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated at Vancouver, British Columbia, this 30<sup>th</sup> day of September, 2009.



Henry J. Awmack, P. Eng.

