

Report to:



**NI 43-101 Technical Report and Resource Estimation of the  
Cerro Aeropuerto and La Luna Deposits, Borosi Concessions,  
Región Autónoma del Atlántico Norte, Nicaragua**

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# TABLE OF CONTENTS

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<b>1.0</b>	<b>SUMMARY .....</b>	<b>1</b>
1.1	GEOLOGY .....	1
1.1.1	CERRO AEROPUERTO .....	2
1.1.2	LA LUNA .....	2
1.2	CONCLUSION .....	2
1.3	RECOMMENDATIONS .....	3
1.3.1	PHASE 1 CERRO AEROPUERTO EXPANSION .....	3
1.3.2	PHASE 2 CERRO AEROPUERTO DELINEATION .....	3
1.3.3	PHASE 1 LA LUNA EXPANSION .....	4
1.3.4	PHASE 2 LA LUNA DELINEATION .....	4
1.3.5	OTHER RECOMMENDATIONS .....	4
<b>2.0</b>	<b>INTRODUCTION .....</b>	<b>6</b>
<b>3.0</b>	<b>RELIANCE ON OTHER EXPERTS.....</b>	<b>7</b>
<b>4.0</b>	<b>PROPERTY DESCRIPTION AND LOCATION .....</b>	<b>8</b>
<b>5.0</b>	<b>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY.....</b>	<b>13</b>
5.1	SITE TOPOGRAPHY, ELEVATION AND VEGETATION .....	13
5.2	ACCESS.....	13
5.3	CLIMATE .....	13
5.4	INFRASTRUCTURE .....	14
<b>6.0</b>	<b>HISTORY.....</b>	<b>15</b>
6.1	HISTORY OF THE CERRO POTOSI GOLD SKARN DEPOSIT .....	15
<b>7.0</b>	<b>GEOLOGICAL SETTING .....</b>	<b>18</b>
7.1	REGIONAL GEOLOGY.....	18
7.2	PROPERTY GEOLOGY.....	20
7.2.1	CERRO AEROPUERTO .....	20
7.2.2	LA LUNA .....	23
<b>8.0</b>	<b>DEPOSIT TYPE.....</b>	<b>25</b>
8.1	REPLACEMENT/SKARN .....	25
8.2	LOW SULPHIDATION EPITHERMAL .....	25
<b>9.0</b>	<b>MINERALIZATION .....</b>	<b>27</b>
9.1	CERRO AEROPUERTO .....	27
9.2	LA LUNA .....	28
<b>10.0</b>	<b>EXPLORATION.....</b>	<b>31</b>

10.1	CERRO AEROPUERTO .....	31
10.2	LA LUNA .....	31
<b>11.0</b>	<b>DRILLING.....</b>	<b>37</b>
11.1	CERRO AEROPUERTO .....	37
11.1.1	HISTORICAL DIAMOND DRILLING .....	37
11.2	LA LUNA .....	38
11.2.1	HISTORICAL DIAMOND DRILLING .....	38
11.2.2	CALIBRE 2010 DIAMOND DRILLING.....	38
<b>12.0</b>	<b>SAMPLING METHOD AND APPROACH.....</b>	<b>43</b>
12.1	CERRO AEROPUERTO .....	43
12.2	LA LUNA .....	43
<b>13.0</b>	<b>SAMPLE PREPARATION, ANALYSES, AND SECURITY.....</b>	<b>47</b>
13.1	SAMPLE PREPARATION.....	47
13.1.1	CERRO AEROPUERTO .....	47
13.1.2	LA LUNA .....	49
13.2	SAMPLE ANALYSES .....	50
13.2.1	CERRO AEROPUERTO .....	50
13.2.2	LA LUNA .....	50
13.3	QA/QC PROGRAM .....	50
13.3.1	YAMANA QA/QC PROGRAM .....	50
13.3.2	CALIBRE QA/QC PROGRAM .....	59
<b>14.0</b>	<b>DATA VERIFICATION .....</b>	<b>64</b>
14.1	CERRO AEROPUERTO .....	64
14.2	LA LUNA .....	66
<b>15.0</b>	<b>ADJACENT PROPERTIES .....</b>	<b>69</b>
15.1.1	BONANZA MINE .....	69
<b>16.0</b>	<b>MINERAL PROCESSING AND METALLURGICAL TESTING.....</b>	<b>71</b>
<b>17.0</b>	<b>MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES.....</b>	<b>72</b>
17.1	DATABASE.....	72
17.1.1	CERRO AEROPUERTO .....	72
17.1.2	LA LUNA .....	72
17.2	SPECIFIC GRAVITY .....	72
17.2.1	CERRO AEROPUERTO .....	73
17.2.2	LA LUNA .....	73
17.3	EXPLORATORY DATA ANALYSIS .....	73
17.3.1	CERRO AEROPUERTO .....	73
17.3.2	LA LUNA .....	74
17.4	GEOLOGICAL INTERPRETATION.....	76
17.4.1	GOLD EQUIVALENT FORMULA .....	76
17.4.2	CERRO AEROPUERTO .....	76
17.4.3	LA LUNA .....	77
17.5	SPATIAL ANALYSIS .....	79

17.6	RESOURCE BLOCK MODEL .....	80
17.6.1	CERRO AEROPUERTO .....	80
17.6.2	LA LUNA .....	82
17.7	RESOURCE CLASSIFICATION.....	84
17.8	MINERAL RESOURCE TABULATION .....	84
17.9	VALIDATION .....	89
17.9.1	CERRO AEROPUERTO .....	89
17.9.2	LA LUNA .....	90
<b>18.0</b>	<b>OTHER RELEVANT DATA AND INFORMATION .....</b>	<b>95</b>
<b>19.0</b>	<b>INTERPRETATION AND CONCLUSIONS .....</b>	<b>96</b>
<b>20.0</b>	<b>RECOMMENDATIONS .....</b>	<b>98</b>
20.1	PHASE 1 CERRO AEROPUERTO EXPANSION .....	98
20.2	PHASE 2 CERRO AEROPUERTO DELINEATION.....	98
20.3	PHASE 1 LA LUNA EXPANSION .....	99
20.4	PHASE 2 LA LUNA DELINEATION .....	100
20.5	OTHER RECOMMENDATIONS.....	100
<b>21.0</b>	<b>REFERENCES .....</b>	<b>102</b>
<b>22.0</b>	<b>DATE AND SIGNATURE PAGE.....</b>	<b>104</b>
<b>23.0</b>	<b>CERTIFICATE OF QUALIFIED PERSON.....</b>	<b>105</b>

## APPENDICES

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### APPENDIX A SRM CERTIFICATES

## LIST OF TABLES

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Table 4.1	Concession Details.....	8
Table 6.1	Exploration and Production History.....	15
Table 10.1	La Luna Trench Location .....	31
Table 10.2	La Luna Trench Results .....	36
Table 11.1	La Luna Collars .....	39
Table 11.2	La Luna Drill Results .....	41
Table 13.1	Yamana SRM List .....	51
Table 13.2	Calibre SRM .....	59
Table 14.1	Cerro Aeropuerto Data Validation.....	64
Table 14.2	Cerro Aeropuerto Collar Validation .....	65
Table 14.3	Cerro Aeropuerto Check Assays .....	66

Table 14.4	La Luna Collar Validation .....	67
Table 14.5	La Luna Check Assays .....	68
Table 15.1	Bonanza Resource Statement 2005 by RNC Gold.....	69
Table 17.1	Drill Data Set .....	72
Table 17.2	Cerro Aeropuerto Data Set .....	73
Table 17.3	Cerro Aeropuerto Grade Capping.....	74
Table 17.4	Cerro Aeropuerto Composite Statistics.....	74
Table 17.5	La Luna Assay Data Set .....	74
Table 17.6	La Luna Grade Capping.....	75
Table 17.7	La Luna Composite Statistics.....	75
Table 17.8	Cerro Aeropuerto Wireframe Volume .....	77
Table 17.9	La Luna Wireframe Volume .....	78
Table 17.10	Cerro Aeropuerto Parent Model.....	80
Table 17.11	Cerro Aeropuerto Estimation Criteria.....	81
Table 17.12	Cerro Aeropuerto Search Criteria .....	81
Table 17.13	La Luna Parent Model.....	82
Table 17.14	La Luna Estimation Criteria.....	83
Table 17.15	La Luna Search Criteria .....	83
Table 17.16	Cerro Aeropuerto Resource Cut-off .....	85
Table 17.17	La Luna Resource Cut-off .....	85
Table 17.18	Resource Totals .....	88
Table 17.19	Cerro Aeropuerto Global Statistics .....	90
Table 17.20	La Luna Global Statistics .....	94
Table 20.1	Phase 1 Cerro Aeropuerto Expansions .....	98
Table 20.2	Phase 2 Cerro Aeropuerto Delineation .....	99
Table 20.3	Phase 1 La Luna Extension .....	99
Table 20.4	Phase 2 La Luna Delineation .....	100

## LIST OF FIGURES

---

Figure 4.1	Location Map.....	9
Figure 4.2	Borosi Concession Map .....	10
Figure 7.1	Regional Geology .....	19
Figure 7.2	Cerro Aeropuerto Geology .....	22
Figure 7.3	La Luna Geology .....	24
Figure 9.1	DDH-08-10 from 188.2 m to 189.0 m.....	27
Figure 9.2	Cerro Aeropuerto Mineralization .....	28
Figure 9.3	LL10-004 Core .....	29
Figure 9.4	La Luna Mineralization .....	30
Figure 10.1	La Luna Trench Location Map .....	32
Figure 10.2	La Luna Trench Compilation Views .....	33
Figure 10.3	La Luna BTR10-011 .....	34
Figure 10.4	La Luna BTR10-012.....	35
Figure 10.5	La Luna BTR10-012 Reclaimed.....	36
Figure 11.1	Calibre Siuna Core Storage .....	38
Figure 11.2	La Luna Collar .....	40

Figure 11.3	La Luna 2010 Drill Collar Locations .....	42
Figure 12.1	Rosita Logging Facility .....	45
Figure 12.2	Rosita Core Cutting Facility.....	46
Figure 13.1	Cerro Aeropuerto Reject Storage .....	48
Figure 13.2	Calibre Siuna Field Office .....	49
Figure 13.3	G999-2.....	52
Figure 13.4	G902-7.....	54
Figure 13.5	G302-7.....	55
Figure 13.6	G998-10.....	56
Figure 13.7	G304-5.....	57
Figure 13.8	Yamana Blank Chart .....	58
Figure 13.9	Control Chart STD CDN-GS-1E.....	60
Figure 13.10	Control Chart STD CDN-GS-7A.....	60
Figure 13.11	Control Chart STD CDN-GS-P8.....	61
Figure 13.12	Control Chart STD CDN-GCS-19 .....	61
Figure 13.13	Control Chart STD CDN-CGS-20 .....	62
Figure 13.14	Control Chart Scoria.....	62
Figure 15.1	Adjacent Properties .....	70
Figure 17.1	Cerro Aeropuerto Wireframe Oblique View (not to scale) .....	77
Figure 17.2	La Luna North Oblique View (not to scale) .....	78
Figure 17.3	La Luna South Oblique View (not to scale) .....	79
Figure 17.4	La Luna Oblique View (not to scale) .....	79
Figure 17.5	Cerro Aeropuerto Grade Tonnage Curve .....	86
Figure 17.6	La Luna Grade Tonnage Curve .....	86
Figure 17.7	Cerro Aeropuerto Section View .....	89
Figure 17.8	Cerro Aeropuerto Plan View .....	90
Figure 17.9	La Luna Section View.....	91
Figure 17.10	La Luna North Plan View .....	92
Figure 17.11	La Luna South Plan View.....	93

## GLOSSARY

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### UNITS OF MEASURE

Above mean sea level.....	amsl
Acre .....	ac
Ampere .....	A
Annum (year) .....	a
Billion .....	B
Billion tonnes.....	Bt
Billion years ago.....	Ga
British thermal unit .....	BTU
Centimetre .....	cm
Cubic centimetre .....	cm <sup>3</sup>
Cubic feet per minute.....	cfm

Cubic feet per second .....	ft <sup>3</sup> /s
Cubic foot.....	ft <sup>3</sup>
Cubic inch .....	in <sup>3</sup>
Cubic metre.....	m <sup>3</sup>
Cubic yard.....	yd <sup>3</sup>
Coefficients of Variation .....	CVs
Day .....	d
Days per week .....	d/wk
Days per year (annum) .....	d/a
Dead weight tonnes .....	DWT
Decibel adjusted .....	dBa
Decibel.....	dB
Degree .....	°
Degrees Celsius.....	°C
Diameter .....	∅
Dollar (American).....	US\$
Dollar (Canadian).....	Cdn\$
Dry metric ton.....	dmt
Foot.....	ft
Gallon .....	gal
Gallons per minute (US) .....	gpm
Gigajoule.....	GJ
Gigapascal .....	GPa
Gigawatt.....	GW
Gram.....	g
Grams per litre .....	g/L
Grams per tonne .....	g/t
Greater than.....	>
Hectare (10,000 m <sup>2</sup> ).....	ha
Hertz .....	Hz
Horsepower.....	hp
Hour .....	h
Hours per day .....	h/d
Hours per week.....	h/wk
Hours per year .....	h/a
Inch .....	"
Kilo (thousand).....	k
Kilogram.....	kg
Kilograms per cubic metre .....	kg/m <sup>3</sup>
Kilograms per hour.....	kg/h
Kilograms per square metre.....	kg/m <sup>2</sup>
Kilometre.....	km
Kilometres per hour.....	km/h
Kilopascal.....	kPa
Kilotonne.....	kt
Kilovolt .....	kV
Kilovolt-ampere .....	kVA

Kilovolts.....	kV
Kilowatt .....	kW
Kilowatt hour .....	kWh
Kilowatt hours per tonne (metric ton) .....	kWh/t
Kilowatt hours per year .....	kWh/a
Less than .....	<
Litre.....	L
Litres per minute .....	L/m
Megabytes per second.....	Mb/s
Megapascal.....	MPa
Megavolt-ampere .....	MVA
Megawatt .....	MW
Metre.....	m
Metres above sea level .....	masl
Metres Baltic sea level .....	mbsl
Metres per minute .....	m/min
Metres per second .....	m/s
Metric ton (tonne).....	t
Microns .....	µm
Milligram.....	mg
Milligrams per litre.....	mg/L
Millilitre .....	mL
Millimetre.....	mm
Million.....	M
Million bank cubic metres.....	Mbm <sup>3</sup>
Million bank cubic metres per annum.....	Mbm <sup>3</sup> /a
Million tonnes.....	Mt
Minute (plane angle) .....	'
Minute (time).....	min
Month.....	mo
Ounce .....	oz
Pascal .....	Pa
Centipoise .....	mPa·s
Parts per million .....	ppm
Parts per billion .....	ppb
Percent.....	%
Pound(s) .....	lb
Pounds per square inch .....	psi
Revolutions per minute .....	rpm
Second (plane angle).....	"
Second (time).....	s
Specific gravity.....	SG
Square centimetre.....	cm <sup>2</sup>
Square foot .....	ft <sup>2</sup>
Square inch.....	in <sup>2</sup>
Square kilometre.....	km <sup>2</sup>
Square metre .....	m <sup>2</sup>

Thousand tonnes .....	kt
Three Dimensional .....	3D
Three Dimensional Model .....	3DM
Tonne (1,000 kg).....	t
Tonnes per day .....	t/d
Tonnes per hour.....	t/h
Tonnes per year.....	t/a
Tonnes seconds per hour metre cubed .....	ts/hm <sup>3</sup>
Volt.....	V
Week.....	wk
Weight/weight .....	w/w
Wet metric ton.....	wmt
Year (annum).....	a

### ABBREVIATIONS AND ACRONYMS

Calibre Mining Corp. ....	Calibre
Gold .....	Au
Silver.....	Ag
Copper .....	Cu
Zinc.....	Zn
Wardrop, a Tetra Tech Company .....	Wardrop
National Instrument 43-101.....	NI 43-101
Gold Equivalent .....	AuEq
Induced Polarization .....	IP
Quality Assurance/Quality Control .....	QA/QC
Specific Gravity .....	SG
Región Autónoma del Atlántico Norte.....	RAAN
Ministerio de Fomento, Industria y Comercio.....	MIFIC
Yamana Gold Inc. ....	Yamana
B2 Gold Corp. ....	B2 Gold
Secretaria de Recursos Natural .....	SERENA
Hanging Wall Andesite.....	HWA
Rock Quality Designation.....	RQD
Standard Reference Material .....	SRM
ALS Minerals .....	ALS
Reverse Circulation.....	RC
Nearest Neighbour.....	NN
Inverse Distance Squared.....	ID2

## 1.0 SUMMARY

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The Borosi Concessions are located in the “Mining Triangle” of north central Nicaragua in the Siuna and Rosita municipalities of the Región del Atlántico Norte and are currently 100% owned by CXB Nicaragua, S.A., which is a wholly-owned subsidiary of Calibre Mining Corp. (Calibre). The “Mining Triangle” of Nicaragua is estimated to have had historical production totalling more than 5 million oz of gold (Au), 4 million oz of silver (Ag), 158,000 tons of copper (Cu), and 106,000 tons of zinc (Zn) (Arengi, et al, 2003).

The Concessions are centred at 14° 00' north latitude and 84° 30' west longitude and consists of six exploration and five exploitation concessions.

In December 2010, Wardrop, a Tetra Tech Company, (Wardrop) was commissioned by Calibre to complete a resource estimate and technical report on the Cerro Aeropuerto and La Luna concessions based on historic and current diamond drill holes and surface trenches on the property since 2010. This technical report complies with disclosure and reporting requirements set forth in National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects, Companion Policy 43-101CP, and Form 43-101F.

This technical report deals with three of the concessions (two exploitation and one exploration) containing the resource estimates, which are owned 100% by Calibre and not subject to an option agreement between Calibre and B2 Gold.

### 1.1 GEOLOGY

The Borosi Concessions are regionally underlain by the Chortis Block, which consists of phyllites and mica schists. The Chortis Block is unconformably overlain by Mesozoic stratigraphy represented by limestone, mudstone, greywacke and calcareous mudstone, with lesser andesite tuff and flows, of the Early Cretaceous Todos Santos Formation. Cenozoic aged volcanic rocks of calc-alkaline, high-alumina basalts, and basaltic andesites composition, are extensively exposed in the vicinity of the concessions. The Cenozoic volcanics are overlain by regionally extensive Miocene ignimbrites and by mid-Miocene to Pliocene mafic flows.

A series of intrusive bodies extend northeasterly through northeastern Nicaragua, including the concession areas. Age dating of the intrusions suggests ages from Cretaceous to Tertiary. The intrusives consist of fine- to medium-grained diorite, granodiorite, syenite, monzonite and alaskite stocks, plugs and dykes.

### 1.1.1 CERRO AEROPUERTO

The local geology at Cerro Aeropuerto consists of undifferentiated andesite, which unconformably overlays intercalated limestones and calcareous marine sediments. A swarm of feldspar ± biotite porphyry dykes have intruded the sequence, displaying a north-south general strike and dipping approximately 70-75° to the west. The dykes are strongly sericitized and commonly pyritic; the sedimentary rocks are variably skarned with local epidote alteration.

Mineralization is primarily hosted within the dykes, with minor mineralization in the altered sedimentary rocks. Mineralization commonly occurs with coarse brown sphalerite, both in discrete quartz-sulphide veinlets and in patchy sulphide replacement of sericitized porphyry. The zone of gold-bearing mineralization can be traced over 500 m of strike length and >400 m down-dip. This zone of mineralization strikes northerly and dips ~75° to the west, roughly parallel to the inferred trend of the Potosí fault found at Cerro Potosí to the north. The mineralization is currently defined in two parallel zones separated by approximately 15 m.

The resource estimate at Cerro Aeropuerto is supported by nine diamond drillholes and five surface trenches.

### 1.1.2 LA LUNA

The La Luna vein system is hosted in a sequence of andesite tuffs and porphyritic andesites. The system generally trends northerly (350°-010°) and dips steeply to the east or west. The interpreted strike length totals 1,450 m and to a depth of approximately 200 m vertical.

Where exposed, the La Luna system is comprised of a 15 to 20 m-wide argillic zone of alteration cored by approximately 5 to 10 m of moderate to strong silicification. Within the silicified core are numerous centimetre-scale quartz veins, hosting the mineralization. The distribution of individual quartz veins are too erratic to link from drillhole to drillhole, yet the silicified core remains consistently planar.

The presence of a cross-cutting fault is inferred by the 400 m dextral (right lateral) displacement between the north and south zones. As this area occurs in a topographic low, it is unknown if the inferred fault is late cross-cutting or a dilational jog in the system.

The resource estimate at La Luna is supported by twenty diamond drillholes and seven surface trenches.

## 1.2 CONCLUSION

The Borosi Concession comprises a land package in the historical Bonanza, La Luz and Rosita mining camps of north east Nicaragua. Cerro Aeropuerto represents a typical endoskarn deposit, while La Luna displays classic low sulphidation epithermal

characteristics. The geological dataset generated by Calibre, consisting of data derived from diamond drilling and trenching, is deemed to be suitable to support geological interpretation and resource estimation at both Cerro Aeropuerto and La Luna.

The Cerro Aeropuerto mineral resource was developed on two parallel, gold bearing zones at a gold equivalent cut-off grade of 0.6 g/t Au, and contains an Inferred Resource of about 6.1 million tonnes with an average grade of 3.64 g/t Au and 16.16 g/t Ag. The La Luna mineral resource was a single vein system offset by a cross-cutting fault. The Inferred Resource at La Luna totals 2.5 million tonnes with an average grade of 1.56 g/t Au and 14.30 g/t Ag. The combined Inferred Resource total for Cerro Aeropuerto and La Luna is 8.6 million tonnes at average grades of 3.02 g/t Au and 15.5 g/t Ag using a 0.6 g/t gold equivalent (AuEq) cut-off.

### 1.3 RECOMMENDATIONS

It is the author's opinion that additional exploration expenditures are warranted. Two separate exploration programs are proposed. Each can be carried out concurrently and independently of each other, and neither is contingent on the results of the other.

#### 1.3.1 *PHASE 1 CERRO AEROPUERTO EXPANSION*

Phase 1 is designed to expand the current resource at Cerro Aeropuerto by testing the strike extension of the deposit. This will entail a diamond drilling program.

The drilling campaign should be designed to target the potential strike extensions of Cerro Aeropuerto particularly to the north and to a depth of approximately 200 m vertical. Drillhole spacing should continue at approximately 75 to 100 m along section and 50 to 75 m vertically on section in order to support an Inferred Resource.

Some holes should follow up on the buried zone identified in borehole DDH-CA-08-04 as a potential new zone.

The estimated budget for Phase 1 is \$820,000.

#### 1.3.2 *PHASE 2 CERRO AEROPUERTO DELINEATION*

Phase 2 is designed to delineate the resource at Cerro Aeropuerto by infilling of the deposit. This will entail a diamond drilling program.

The drilling campaign should be designed to target the core areas of the Cerro Aeropuerto deposit. Drillhole spacing should be at approximately 30 to 50 m along section and 25 to 50 m vertically on section in order to improve the resource classification.

The estimated budget for Phase 2 is \$1.2 million.

### 1.3.3 PHASE 1 LA LUNA EXPANSION

Phase 1 is designed to expand the current resource at La Luna by testing the strike extension of the deposit. This will entail mapping and Induced Polarization (IP) survey and diamond drilling.

The mapping program should focus to the south of the current resource. The IP survey at 100 m line spacing south along strike of the resource should assist in delineating the mineralized zone and to identify drill targets. The IP survey should also test to potential of the dilational jog that off-set La Luna North from La Luna south.

The drilling campaign should be designed to target the potential strike extensions of La Luna, particularly to the south. Drillhole spacing should continue at approximately 100 to 150 m along section and 75 to 100 m vertically on section in order to support an inferred resource.

Some holes should follow up any IP targets in the potential dilational jog.

The estimated budget for Phase 1 is \$280,000.

### 1.3.4 PHASE 2 LA LUNA DELINEATION

Phase 2 is designed to delineate the resource at La Luna by infilling of the deposit. This will entail a diamond drilling program.

The drilling campaign should be designed to target the core areas of the La Luna deposit, particularly in the south where widths are wider and grades are higher. Drillhole spacing should be at approximately 50 m along section and 50 m vertically on section in order to improve the resource classification.

The estimated budget for Phase 2 is \$470,000.

### 1.3.5 OTHER RECOMMENDATIONS

The following recommendations are to assist in moving the project forward:

- Adjust the insertion location of the quality assurance/quality control (QA/QC) blanks to allow for the control samples to be placed within or immediately after mineralized intervals. This will be a better use of the control samples as it is designed to monitor the prep facility.
- For future drilling programs, collect specific gravity (SG) measurement for the various rock types and alteration styles. Approximately 4-5% of the database should have a SG measurement. This will allow for a more accurate calculation of the tonnage in the subsequent resource estimate.

- Consider conducting a preliminary metallurgical test using drill core or course rejects to determine the global recoveries that maybe expected from the deposit.
- The use of an underground diamond drill on surface may facilitate shallow dipping or horizontal drilling on the hill sides, while minimizing disruption within the community of Siuna.
- A new topographic survey should be conducted in the La Luna area in order to determine the proper elevation. All drill collars and trenches must then be adjusted to the proper elevations.

## 2.0 INTRODUCTION

---

The Borosi Concessions are located in north central Nicaragua in the Siuna and Rosita municipalities of the Región del Atlántico Norte and is currently 100% owned by CXB Nicaragua, S.A., a wholly-owned subsidiary of Calibre.

In December 2010, Wardrop was commissioned by Calibre to complete a resource estimate and technical report on the Cerro Aeropuerto and La Luna concessions, based on historic and current diamond drillholes and surface trenches on the property since 2010.

The object of the technical report is to:

- compile historical work and activities on the property
- generate a resource estimate on the Cerro Aeropuerto deposit
- generate a resource estimate on the La Luna deposit
- complete a technical report on the deposits and properties indicated above, including summarizing all land tenures, exploration history, drilling, and resource estimates
- provide recommendations and budget for additional work on the project.

This report has been compiled in accordance with NI 43-101, Companion Policy 43-101CP, and Form 43-101F1.

All the data files that were reviewed for the report were provided by Calibre in digital format, and access to paper reports and logs was granted when requested. Calibre made its own work available and compiled historical work conducted by previous operators on the Projects.

The primary author of this report is Todd McCracken, P. Geo., who is a Professional Geologist with 19 years of experience in exploration and operations, including several years working in epithermal and replacement gold deposits. Mr. McCracken visited the Project from February 7<sup>th</sup> to 11<sup>th</sup> inclusive.

## 3.0 RELIANCE ON OTHER EXPERTS

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Wardrop has reviewed and analyzed data and reports that have been provided by Calibre, together with publicly available data, and has drawn its own conclusions, augmented by its direct field examination.

Wardrop is relying on reports, opinions and statements from experts who are not qualified persons for information concerning legal, environmental, political or other issues and factors relevant to the technical report.

Information from third party sources are quoted in the report or referenced. Neither Wardrop or the author of this report are qualified to provide extensive comment on legal issues, including status of tenure associated with the Cerro Aeropuerto and La Luna deposits referred to in this report. A description of the property and ownership is provided for general information purpose only. Assessment of these aspects has relied on information provided by Calibre, which has not been independently verified by Wardrop.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

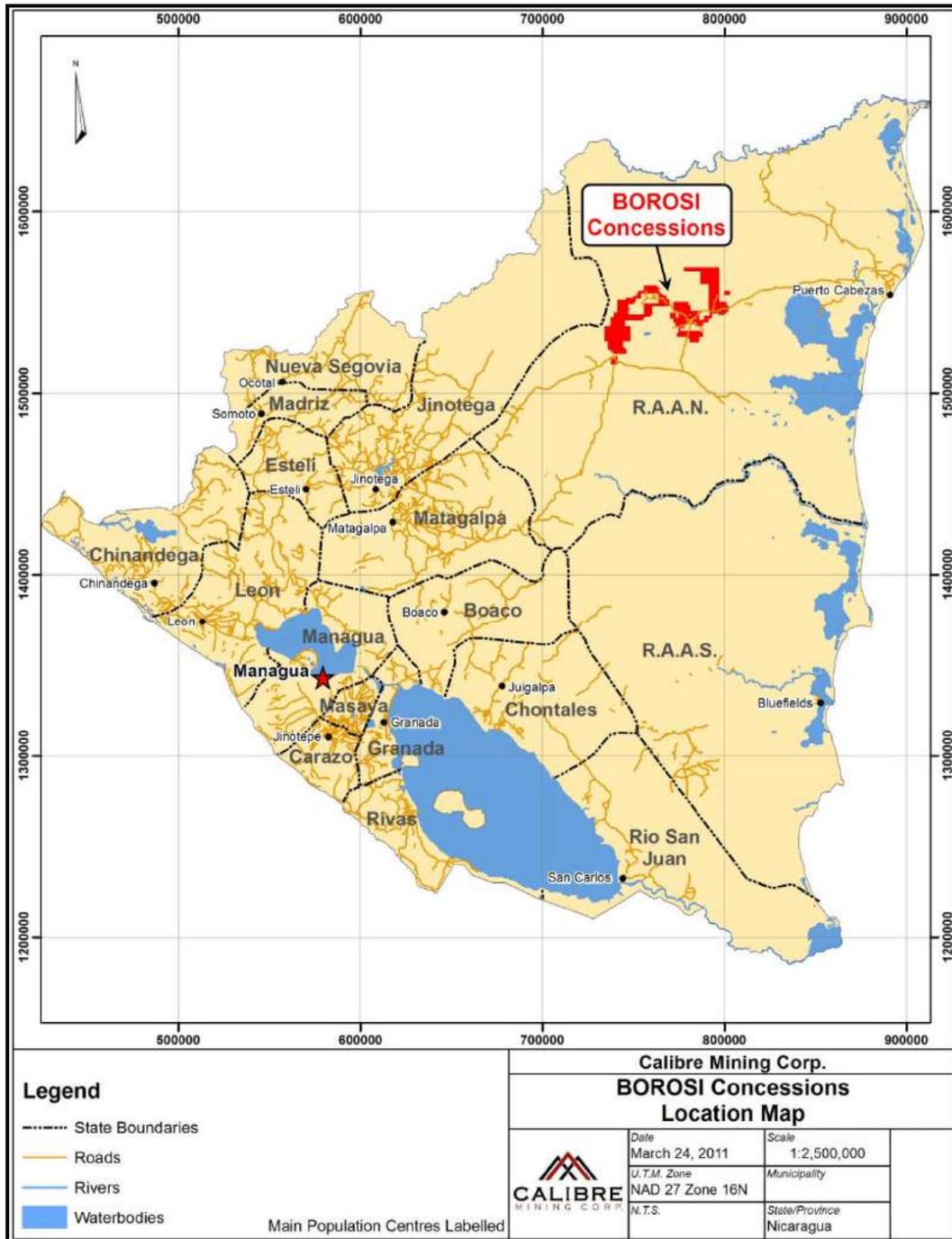
The Borosi Concessions are located in north-central Nicaragua, in the Siuna, Rosita and Bonanza municipalities of the Región Autónoma del Atlántico Norte (RAAN) (Figure 4.1). The Concessions are centred at 14° 00' N latitude and 84° 30' W longitude and consists of six exploration and five exploitation concessions. This technical report deals with three concessions in this Borosi Concession package as summarized in Table 4.1 and displayed in Figure 4.2.

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 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).

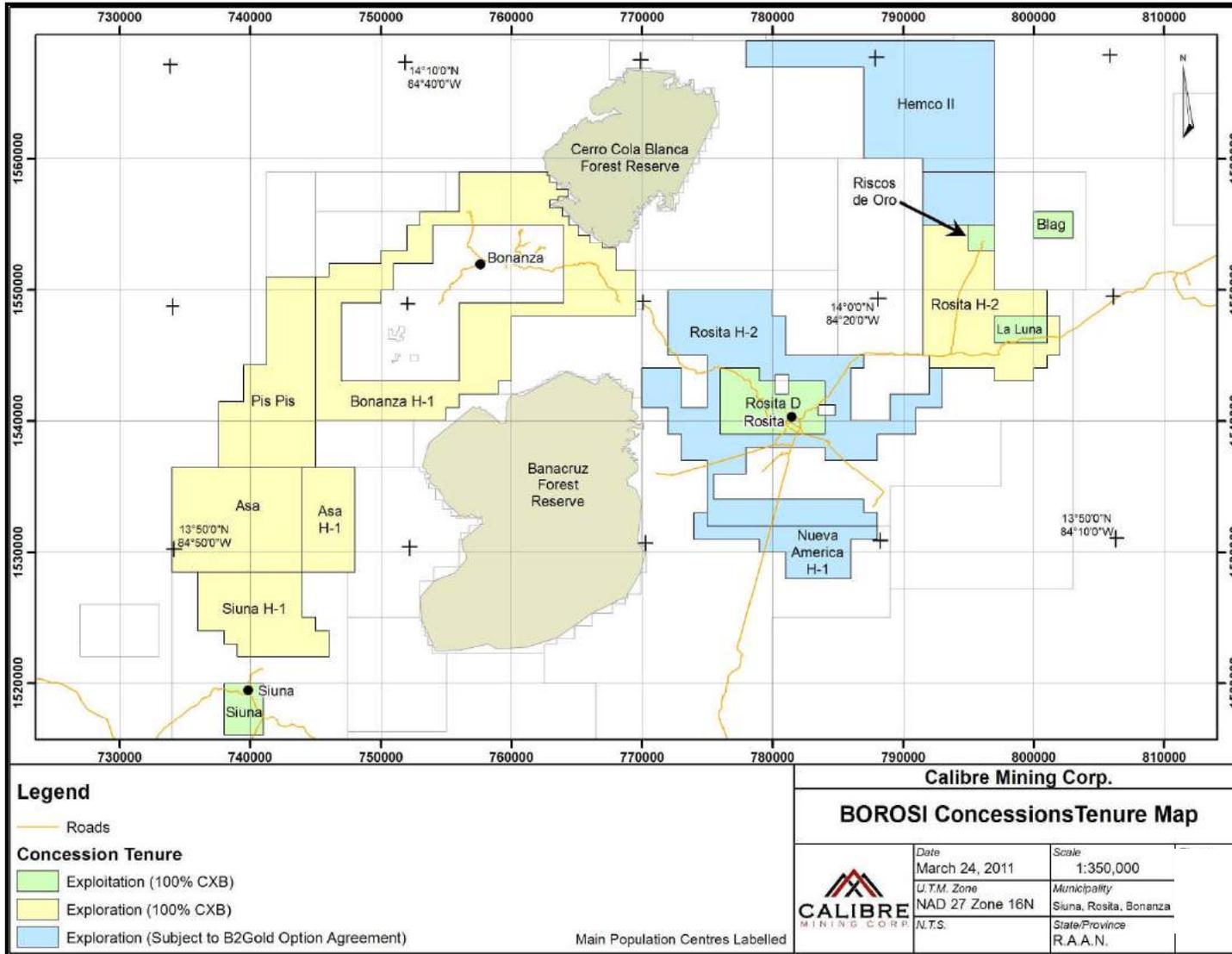
**Table 4.1 Concession Details**

Concession Name	Ministerial Accord #	Size (Ha)	Type	Status	Grant Date	Valid Through	Holding Cost US\$/ha/yr
Siuna	57-DM-40-2007	1,200.00	Exploitation	Granted	10-Jun-94	09-Jun-44	8
La Luna	61-DM-44-2007	800.00	Exploitation	Granted	10-Jun-94	09-Jun-44	8
Rosita H2	81-DM-62-2007	24,484.50	Exploration	Granted	29-Jul-02	28-Jul-27	8

**Figure 4.1 Location Map**



**Figure 4.2 Borosi Concession Map**



The concessions that comprise the Borosi Area are held by CXB Nicaragua, S.A., and Calibre Nicaragua, S.A., wholly owned subsidiaries of Calibre. In May 2009, Calibre purchased the NEN Concessions (later named Borosi) from Yamana Gold Inc. (Yamana) for a price of Cdn\$7.0 million, consisting of 12 million shares of Calibre and Cdn\$4.42 million in cash. Calibre is obligated until July 2014 to make a bonus payment of Cdn\$5 per gold-equivalent ounce to Yamana, capped at Cdn\$3.5 million, for newly reported NI 43-101 compliant Measured or Indicated Resources outlined within the original NEN concession boundaries. The bonus payment, at Calibre's discretion, may be paid in cash or shares of Calibre. Yamana also received 5 million Calibre warrants exercisable at Cdn\$0.50/share and 5 million Calibre warrants exercisable at Cdn\$1.00/share until July 2014; 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. Also included in the Borosi Area, but are not subject to these purchase terms, are the Asa and Pis Pis concessions that were granted to Calibre in 2010. The properties are 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 June 2009, Calibre granted an option to B2Gold Corp. (B2Gold) to earn a 51% interest in the Borosi Area Concessions by completing Cdn\$8 million in exploration expenditures by July 1, 2012. In October 2010, after exploration expenditures of Cdn\$2.9 million, the option agreement with B2Gold was revised to cover 322 km<sup>2</sup> from the original 710 km<sup>2</sup> concession area. B2Gold may earn a 51% interest in the concessions that remain in the option agreement by completing Cdn\$8 million in exploration expenditures by July 2014. B2Gold may elect to carry an individual prospect within the amended concession area through to a Preliminary Economic Assessment for an additional 14% interest in the prospect. Calibre retains a 100% interest in concessions that fall outside the area of this agreement, including the Siuna and La Luna exploitation concessions that host the Cerro Aeropuerto and La Luna deposits.

Calibre owns surface rights to several parcels of land within the Borosi Concessions, 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 mine sites, and surface rights formerly controlled by the mines have gradually passed into private hands. Surface rights throughout the remainder of the Borosi Concessions are privately held, with the exception of a few indigenous communities which hold their land communally. The Borosi Concessions borders two Forest Reserves, Cerro Cola Blanca to the north and Banacruz to the south (Figure 4.2).

There has been significant surface disturbance by past mining activities in several parts of the property. It is believed that Calibre, as the current concession owner, is not liable for the effects of mining and exploration prior to the privatization of the concessions in 1994. This liability has been accepted by the government of

Nicaragua. Calibre is only responsible for any environmental disturbances generated through the exploration activities conducted by Calibre.

Prior to any type of mineral exploration, an environmental permit is required from the 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 and the La Luna exploitation concession are currently permitted to allow for additional drilling and trenching.

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

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### 5.1 SITE TOPOGRAPHY, ELEVATION AND VEGETATION

The concession straddles the hilly interior highlands and flat Atlantic coastal plain physiographic provinces.

Elevations in the highlands range from 100 to 1000 m 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 m above sea level.

### 5.2 ACCESS

The property is located 230 air kilometres northeast of Managua and 100 air kilometres west of the Caribbean port town of Puerto Cabezas. 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 k.

Currently, it takes about seven 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 four wheel drive truck, that connect outlying villages and farms.

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

### 5.3 CLIMATE

Northeast Nicaragua is covered by lowland humid tropical forest, much of which has been converted to pasture land on the 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, with access generally being easier from November to June.

## 5.4 INFRASTRUCTURE

The towns of Siuna and Rosita have municipal water systems serviced by reservoir, although water for industrial use and drilling is limited in the dry season. Diamond drilling programs at La Luna requires water to be trucked to the project as local streams cannot provide the appropriate volumes.

Both Siuna and Rosita have recently been connected to the national electricity grid. Intermittent power failures are common, and generator backups are recommended. A hydroelectric facility on the Río Way at El Salto, approximately 25 km northeast of Siuna, provided ample power for the La Luz and Rosita mines and communities before failing in 1968 due to heavy rain fall.

Telephone service is provided by landline to Siuna and Rosita through the national telephone company, Enitel. A number of companies also currently provide cellular and satellite communication services across 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.

## 6.0 HISTORY

The exploration and mining history are summarized from Arengi (2003) and Hendrickson (1995).

The recorded history of the region is not well documented as numerous records were destroyed initially in the early 1980's during the Nicaraguan Civil war and secondly by a fire at the Yamana office in Siuna in 2008.

### 6.1 HISTORY OF THE CERRO POTOSI GOLD SKARN DEPOSIT

Over the last 100 years, Siuna/La Luz has sustained a variety of exploration and exploitation programs, highlighted by two main periods of production followed by erratic exploration. Historical records indicate that the mine has produced over 2,249,144 oz Au (16.8 Mt at 4.08 g/t Au) and contains historical resources of 633,317 oz Au (7.5 Mt grading 2.64 g/t Au) (note that the historical resources are not NI 43-101 compliant).

Table 6.1 summarizes the exploration and production history of the region.

**Table 6.1 Exploration and Production History**

Year	Company	Activities
1896 -1906	Jose Aramburo	Excavated several open cuts in supergene enriched oxide zone in the now flooded La Luz pit north of Cerro Aeropuerto.
1912 - 1929	La Luz & Los Angeles Mining Company	Operated a 82 tonne per day mill and produced 523,000 tonnes at a grade of 8.57 g/t from open pit at La Luz (Plecash, Harper et al, 1963).
1936	Venture Ltd.	Acquired dormant La Luz mine and formed La Luz Mines Ltd.
1936 - 1939	La Luz Mining Ltd.	Conducted exploration and development at La Luz.
1939 - 1943	La Luz Mining Ltd.	Operated La Luz open pit at rate of 907 t/d.
1943 - 1948	La Luz Mining Ltd.	Transitioned La Luz to underground operation and increased production to 1,815 t/d.

*table continues...*

Year	Company	Activities
1968	La Luz Mining Ltd.	La Luz mine closed due to heavy rain fall damaging the nearby hydroelectric dam, and the mine was allowed to flood. Production from 1939 to 1968 was 15.5 million tonnes at a grade of 4.05 g/t (2.1 million ounces of gold) (Rosario Internal Company Report, 1974).
1973	Rosario Resources	Acquired the La Luz property which included the area surrounding Cerro Aeropuerto and La Luna.
1974 - 1975	Rosario Resources	Conducted diamond drill programs, ground geophysics, trenching and soil surveys, and generated a resource estimate and pre-feasibility study for the Footwall Zone from surface to the 1650' level. Reserve 3.0 Mt at 3.26 g/t gold, Resources 4.5 Mt at 2.23 g/t gold.
1977	Rosario Resources	Mined an estimated 35,000 tonnes from open pit at La Luna
1978	Rosario Resources	La Luz mill refurbished, mine dewatered and open pit restarted
1979	Corporacion Nicaraguense de Minas	Rosario Resources assets were nationalized
1979 - 1995	Corporacion Nicaraguense de Minas	Conducted intermittent mining, trenching, stream sampling, and geophysics. Produced an estimated 765,000 t at 1.85 g/t gold (46,000 ounces of gold).
1990	HEMCO	A joint venture between Bunker Hill and the McGregor family acquire a majority of the concession in the region from Corporacion Nicaraguense de Minas.
1997	Greenstone Resources	Options concession from Hemco, drills 45 holes in the Siuna region, including one at Cerro Aeropuerto.
2001	Greenstone Resources	Files for bankruptcy.
2001	HEMCO	Greenstone options are returned to HEMCO.
2003	RNC Gold Inc.	Acquired 80% of the property from HEMCO
2004	RNC Gold Inc.	Acquired remaining 20% of property from HEMCO
2006	Yamana Gold Inc.	Purchases RNC Gold Inc. and all their assets

*table continues...*

<b>Year</b>	<b>Company</b>	<b>Activities</b>
2007	Yamana Gold Inc.	Three diamond drill holes totaling 1,880 m at Cerro Aeropuerto.
2008	Yamana Gold Inc.	Six diamond drill holes totaling 2,142 m at Cerro Aeropuerto.
2008	Yamana Gold Inc.	Geological sampling in the La Luna area. Fire on site at Siuna destroyed the core shack, paper logs, and historical files for La Luz project
2009	Calibre Mining	Acquires concession from Yamana Gold.
2010	Calibre Mining	Seven trenches at La Luna totaling 174 m and 11 diamond drill holes totaling 2,159 m.

Resources and reserves stated in the table are calculations completed before the implementation of NI 43-101 standards and should not be relied upon and are shown for historical purposes only.

A qualified person has not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves. Calibre is not treating the historical estimates as current mineral resources or mineral reserves.

## 7.0 GEOLOGICAL SETTING

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### 7.1 REGIONAL GEOLOGY

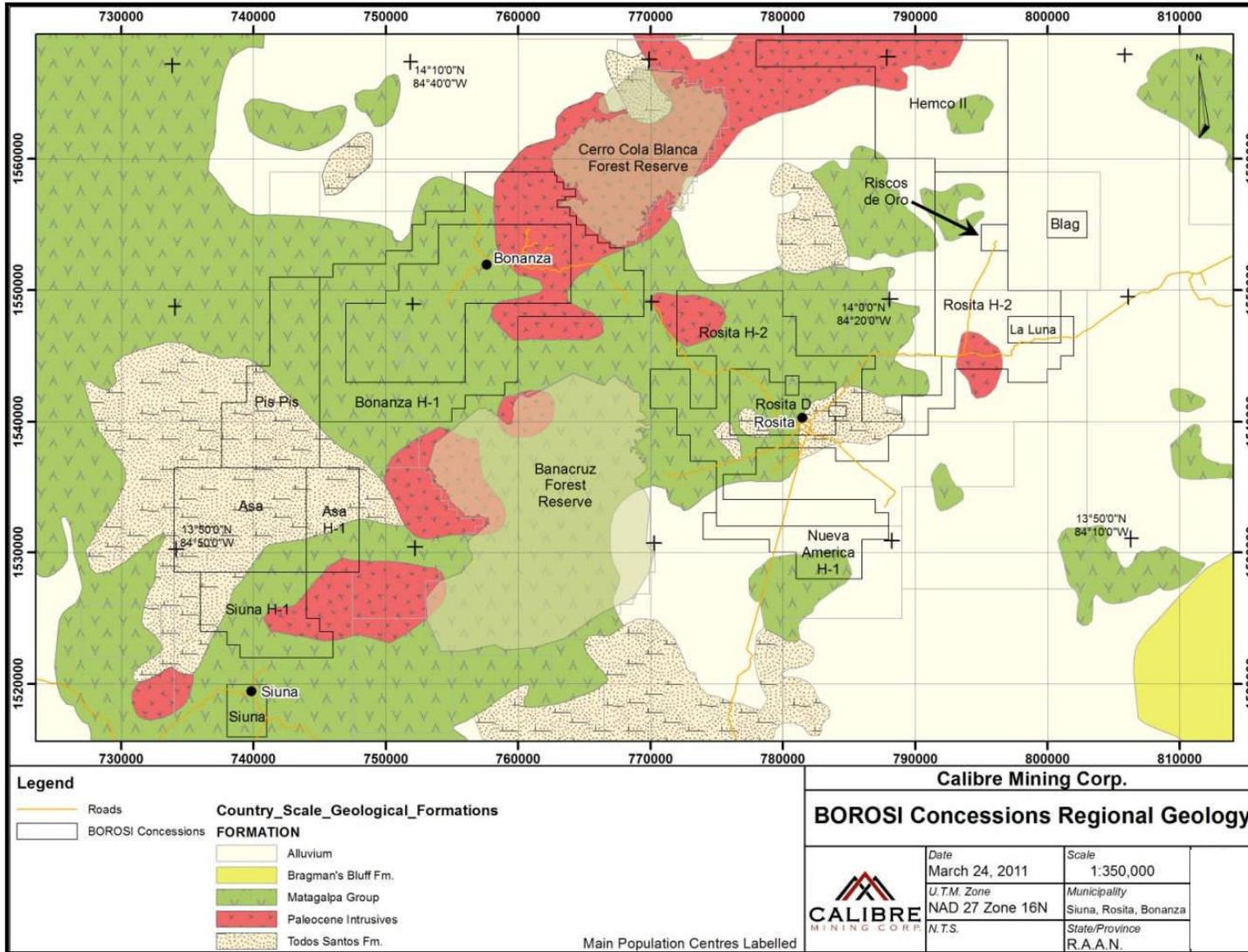
Nicaragua is underlain by the Chortis block of the Caribbean plate. Basement rocks in the Chortis block are dominantly phyllites and mica schists which are unconformably overlain by Mesozoic stratigraphy (Sundblad, 1991). The Mesozoic stratigraphy is represented by limestone, mudstone, greywacke and calcareous mudstone, with lesser andesite tuff and flows, of the Early Cretaceous Todos Santos Formation. Around the projects, the Todos Santos Formation is exposed as a series of northeast trending isolated windows within pre-Tertiary and Tertiary volcanics and intrusives (Arengi, 2003) (Figure 7.1).

Subduction of the Farallon and later the Cocos plates beneath the Caribbean plate along the Middle America Trench, southwest of Nicaragua, resulted in extensive accumulation of Cenozoic volcanic rocks (Donnelly, 1990). The volcanic rocks are dominated by calc-alkaline, high-alumina basalts and basaltic andesites, with locally important ignimbrites of rhyolitic to andesitic composition. 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, and is extensively exposed in the vicinity of the projects. The Matagalpa Formation is overlain by regionally extensive Miocene ignimbrites (Tamarindo Formation) and by mid-Miocene to Pliocene mafic flows of the Coyoil 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, including the project areas. Limited age dating suggests the oldest of these are Cretaceous; however there is field evidence that some of them are Tertiary in age. 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 projects.

**Figure 7.1 Regional Geology**



## 7.2 PROPERTY GEOLOGY

### 7.2.1 CERRO AEROPUERTO

Cerro Aeropuerto is a small hill which lies from 500 to 1200 m south of the southern end of Cerro Potosí, along the inferred southern extension of the Potosí fault.

Locally, the rocks of the Siuna Belt have been divided into four main units by previous workers: the “Mine Series”, “Hanging Wall Andesite”, “K-Dyke” and the “Footwall Complex” as compiled from the La Luz and Cerro Potosi north of Cerro Aeropuerto.

The rocks of the Mine Series are dominated by calcareous sedimentary rocks consisting of interbedded massive limestone, thin bedded impure limestones and mudstones (lutites), limy shale, greywacke, arkose, quartzite and conglomerates together with lesser tuffs and andesite volcanics. The calcareous units are locally altered to an epidote-calcite-silica-garnet assemblage with secondary pyrite, chalcopyrite, sphalerite, magnetite and hematite. This alteration has been interpreted to have originated as a skarn, however, several workers have noted that there is a conspicuous absence of pyroxene and other calc-silicate minerals in the assemblage and the occurrence of pyrite rather than pyrrhotite is unusual. The deposit is considered to be an atypical skarn resulting from hydrothermal alteration associated with skarn development (Arengei, 1998).

The Hanging Wall Andesite (HWA) unit is located at the immediate hanging wall of the main ore body (No. 1) at La Luz. This unit consists of massive to porphyritic andesite with local pyroclastic and tuffaceous textures that is thought to be conformable with the Mine Series stratigraphy. The HWA has been mapped over a strike length of almost 1.6 km with a maximum width of up to 150 m. It has been suggested that the HWA may core either a tight isoclinal syncline in the deposit area, or is perhaps an intrusive unit exploiting a structure that formed during the late Cretaceous suturing of the Siuna and Chortis terranes. In either case, the HWA may have acted as an impermeable boundary which focused mineralizing fluids into the Mine Series sediments.

The K-Dyke is a serpentinite body which occurs proximal to the HWA and appears to be intimately associated with the main No.1 ore body at La Luz. The unit consists of serpentine, talc, chlorite and asbestos and has been traced in underground workings for up to 1,000 m along strike and up to 75 m in width. The unit pinches out both up and down dip and plunges at about 55° to the north. It is believed that the K-dyke also acted as an impermeable boundary which helped to focus mineralizing fluids.

The Footwall Complex represents a continued succession of interbedded calcareous sediments, long thin andesite (diorite) dykes and serpentinite bodies which occur in the footwall to the ore bodies mined at La Luz. These lithological units appear to be similar to those of the Mine Series rocks and appear to have the potential to host

significant mineralization as highlighted by the Cerro Potosi area northeast of the historic open pit.

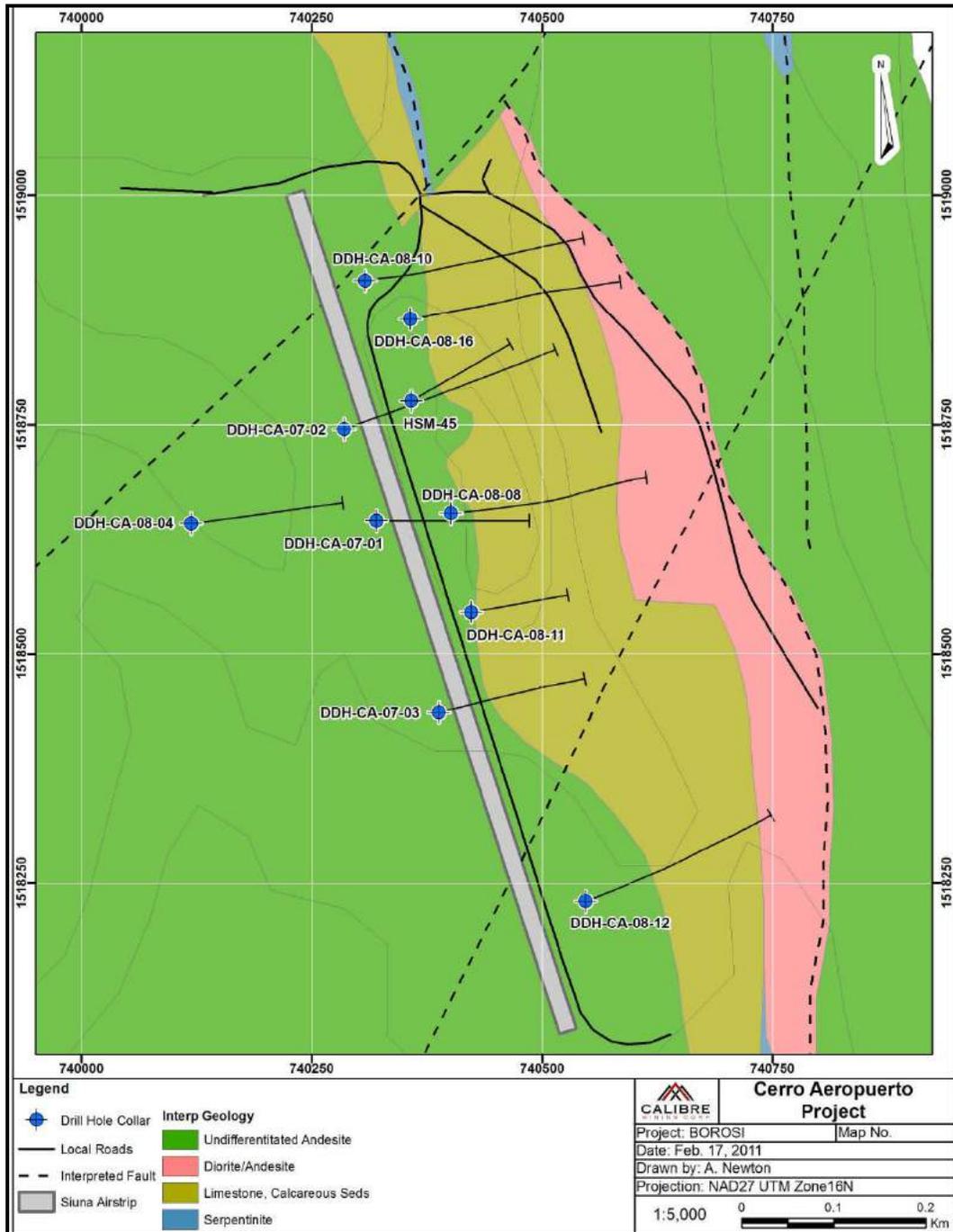
The local geology at Cerro Aeropuerto consists of undifferentiated andesite unconformably overlaying intercalated limestones and calcareous marine sediments of the Mine Series. The volcanics and sedimentary units have a shallow westerly dip of approximately -5 to -10°. A swarm of feldspar ± biotite porphyry dykes locally logged as diorite have intruded the stratigraphy, general northerly strike and dipping approximately -70 to -75° to the west. The dykes are strongly sericitized and commonly pyritic; the sedimentary rocks adjacent to the dykes are variably skarned.

Mineralization is hosted primarily within the dykes with minor amounts in the altered Mine Series sedimentary rocks. Mineralization commonly occurs with coarse brown sphalerite, both in discrete quartz-sulphide veinlets and in patchy sulphide replacement of sericitized porphyry. The zone of gold-bearing mineralization can be traced over 500 m of strike length and >400 m down-dip. This zone of mineralization strikes northerly and dips ~75° to the west, roughly parallel to the inferred trend of the Potosí fault found at Cerro Potosí to the north. The mineralization is currently defined in two parallel zones separated by approximately 15 m.

DDH-CA-08-04 intersected 3.0 m grading 2.10 g/t Au well to the west of the plane of the other intersections, representing the potential of a third mineralized zone which is buried beneath the overlying volcanics. DDH-CA-08-04 was stopped short of the down-dip projection of the main mineralized zones, which would be estimated to occur 400 m below DDH-CA-07-01 (approximately 750 m below surface).

Several late cross-cutting faults with northeast orientation have disrupted the strike extension of the mineralized zone. DDH-CA-08-012 appears to have missed the target stratigraphy as a result of being collared on the south side of one of the inferred cross-cutting faults.

**Figure 7.2 Cerro Aeropuerto Geology**



### 7.2.2 LA LUNA

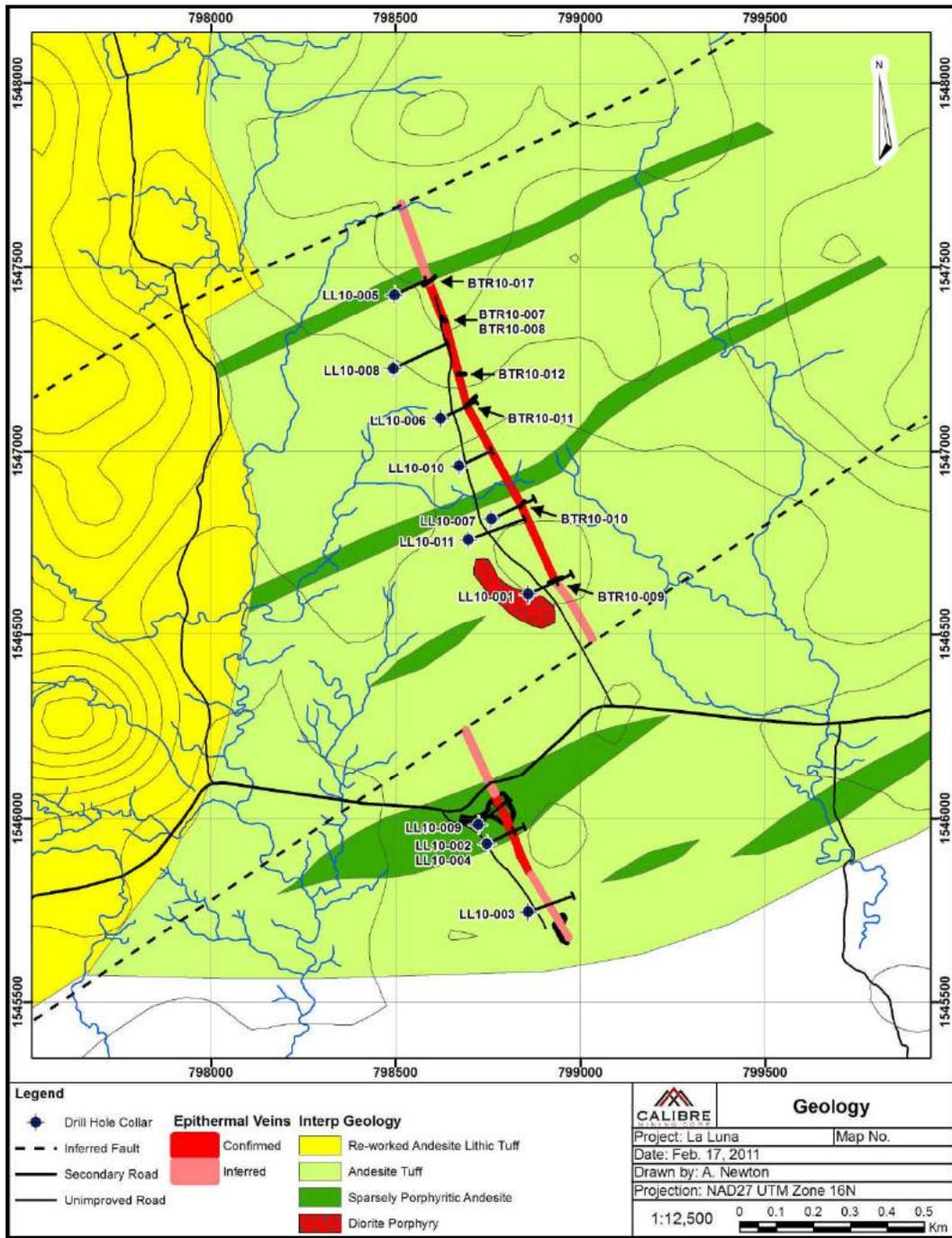
La Luna vein system is hosted in a sequence of andesite tuffs and porphyritic andesites approximately twenty kilometres northeast of the town of Rosita.

The system generally trends 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). The interpreted strike length totals 1,450 m and to a depth of approximately 200 m vertical.

Where exposed in trenches and the historic Rosario's small open pit, La Luna system is comprised of a 15 to 20 m-wide argillic zone of alteration cored by approximately 5 to 10 m of moderate to strong silicification. Within the silicified core are numerous centimetre-scale quartz veins hosting the mineralization. The distribution of the quartz veins are too erratic to link from drillhole to drillhole, yet the silicified core remains consistently planar.

The presence of a cross-cutting fault is inferred by the 400 m dextral (right lateral) displacement between the north and south zones. As this area occurs in a topographic low, it is unknown whether the inferred fault is late cross-cutting or a dilational jog in the system.

**Figure 7.3 La Luna Geology**



## 8.0 DEPOSIT TYPE

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### 8.1 REPLACEMENT/SKARN

Most skarns are formed by the hydrothermal 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. Most skarn deposits are related to plutonism associated with the development of oceanic island arc or back arcs.

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).

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 as in the case at Cerro Aeropuerto.

Endoskarns are found as a variety of irregular lenses and veins to tabular orebodies with lengths up to hundreds of metres.

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.

The amount of endoskarn may exceed exoskarn and mineralogy consists dominantly of potassium feldspar, biotite, magnetite, garnet and pyroxene with lesser epidote, ilvaite and actinolite. Some contain significant amounts of Cu and are transitional to more typical copper skarns (Ray, 1998).

### 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 systems. Emplacement of mineralization is generally restricted to within 1 km of the paleosurface (Panteleyev, 1996). 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. Vein widths vary from a few centimetres to metres or tens of metres.

Gangue mineralogy is dominated by quartz and/or chalcedony, accompanied by lesser and variable amounts of adularia, calcite, pyrite, illite, chlorite and rhodochrosite.

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.

Regional structural control is important in localization of low sulphidation epithermal deposits. Higher grades are commonly found in dilational zones, in faults, at flexures, splays and in cymoid loops.

## 9.0 MINERALIZATION

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### 9.1 CERRO AEROPUERTO

Gold mineralization at Cerro Aeropuerto commonly occurs with coarse brown sphalerite, and patchy pyrite, chalcopyrite (+/- galena) in both discrete quartz-sulphide veinlets and as patchy sulphide replacement of the sericitized porphyry dyke. This is a different style of mineralization that than what is encountered at Cerro Potosi skarn deposit, located approximately 500 m along strike to the north.

**Figure 9.1 DDH-08-10 from 188.2 m to 189.0 m**



**Figure 9.2 Cerro Aeropuerto Mineralization**



## 9.2 LA LUNA

Where exposed at the end of Rosario's small open pit, La Luna consists of a >12.6 m wide zone of argillic alteration with 1-170 cm quartz veins. Veins generally trend northerly ( $350^{\circ}$ - $010^{\circ}$ ) and dip steeply to the east or west, but a few quartz veinlets are present at other orientations (e.g.  $260^{\circ}/70^{\circ}$ N).

Pyrite with minor amounts of sphalerite and galena are associated with the quartz veining. The presence of sulphides along with strong silicification and moderate argillic alteration is a strong indicator for the presence of elevated gold content.

Figures 9.3 and 9.4 are examples of the core recovered at La Luna and the system of mineralization.

**Figure 9.3 LL10-004 Core**



**Figure 9.4 La Luna Mineralization**



## 10.0 EXPLORATION

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### 10.1 CERRO AEROPUERTO

Calibre has not conducted any exploration activities on the Cerro Aeropuerto project.

### 10.2 LA LUNA

Calibre conducted a trenching program on the La Luna project during the months of January and February 2010. A total of seven trenches totalling 174 m were excavated on La Luna north. Table 10.1 summarizes the general details of the trenching program.

**Table 10.1 La Luna Trench Location**

Trench ID	Easting	Northing	Elevation	Length	Azimuth	Dip
BTR10-007	798628	1547354	146	8.6	50	0
BTR10-008	798626	1547360	144	4.7	328	2
BTR10-009	798951.7	1546655	126	39.8	251	15
BTR10-010	798849	1546862	111	19.8	220	-17
BTR10-011	798689	1547120	132	40.5	48	9
BTR10-012	798668	1547209	142	20.3	92	10
BTR10-017	798575	1547451	144	40	55	10

The trenches were hand dug to an average depth of one meter and a width of two meters. Chip samples were taken by chiselling a channel on the north trench wall approximately 10 to 20 cm from the floor. In the case of a sawn channel, the channel was cut on the trench floor perpendicular to the main structure or mineralized trend.

The minimum sampling interval was 0.5 m and the maximum was 1.5 m. Samples were tied to the veins, structures and mineralization. A similar QA/QC program as applied in the diamond drill program (Section 13.3.2) was used during the trenching program.

Figure 10.1 displays the location of the trenches on the La Luna project. Figure 10.2 is a compilation view of several of the trenches completed during the program. Figures 10.3 and Figure 10.4 are photos of trenches BTR10-011 and BTR10-012 respectively before reclamation.

The author was not present during the trenching program, yet was able to observe the location of each trench after reclamation because the ground vegetation had not yet grown back (Figure 10.5).

**Figure 10.1 La Luna Trench Location Map**

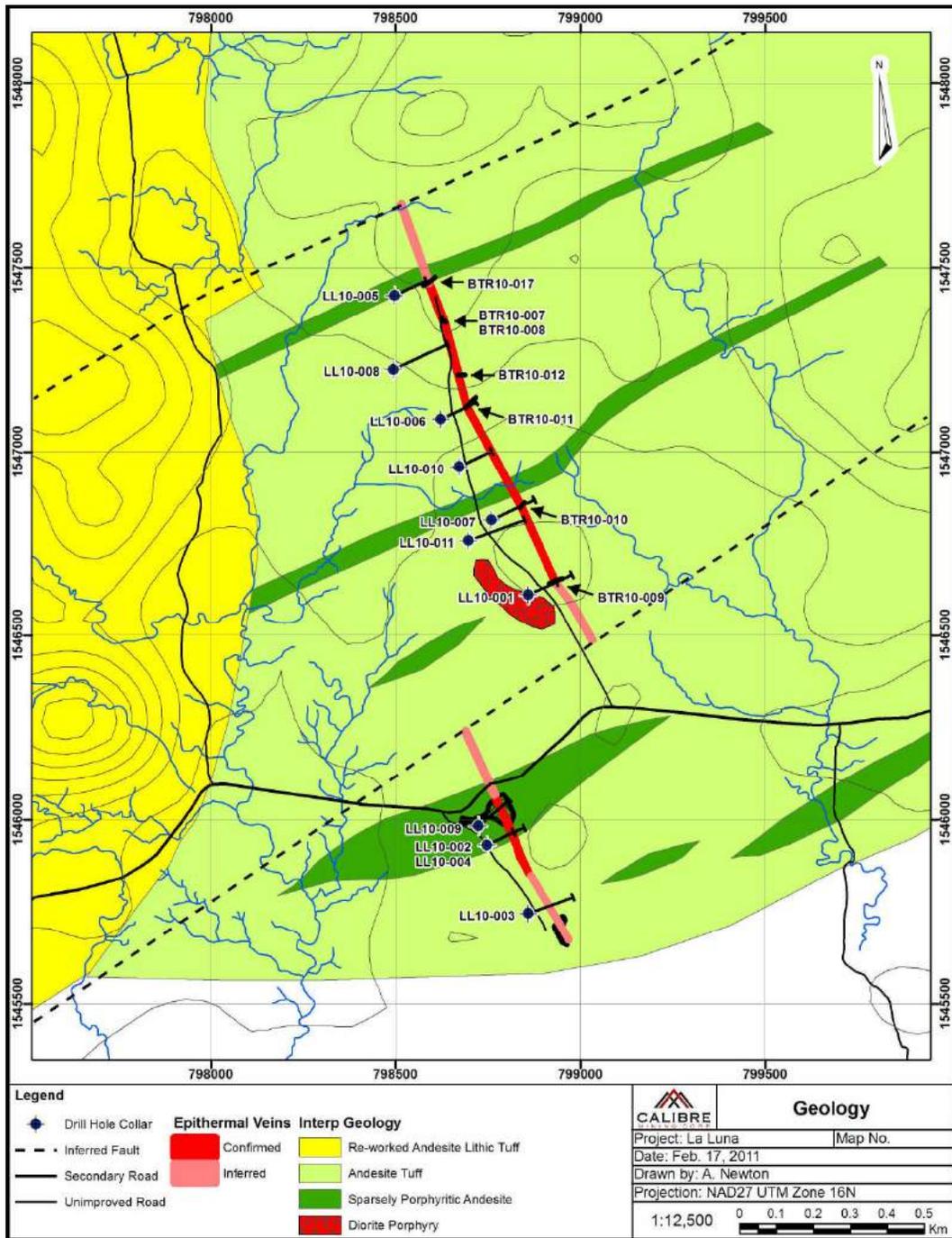
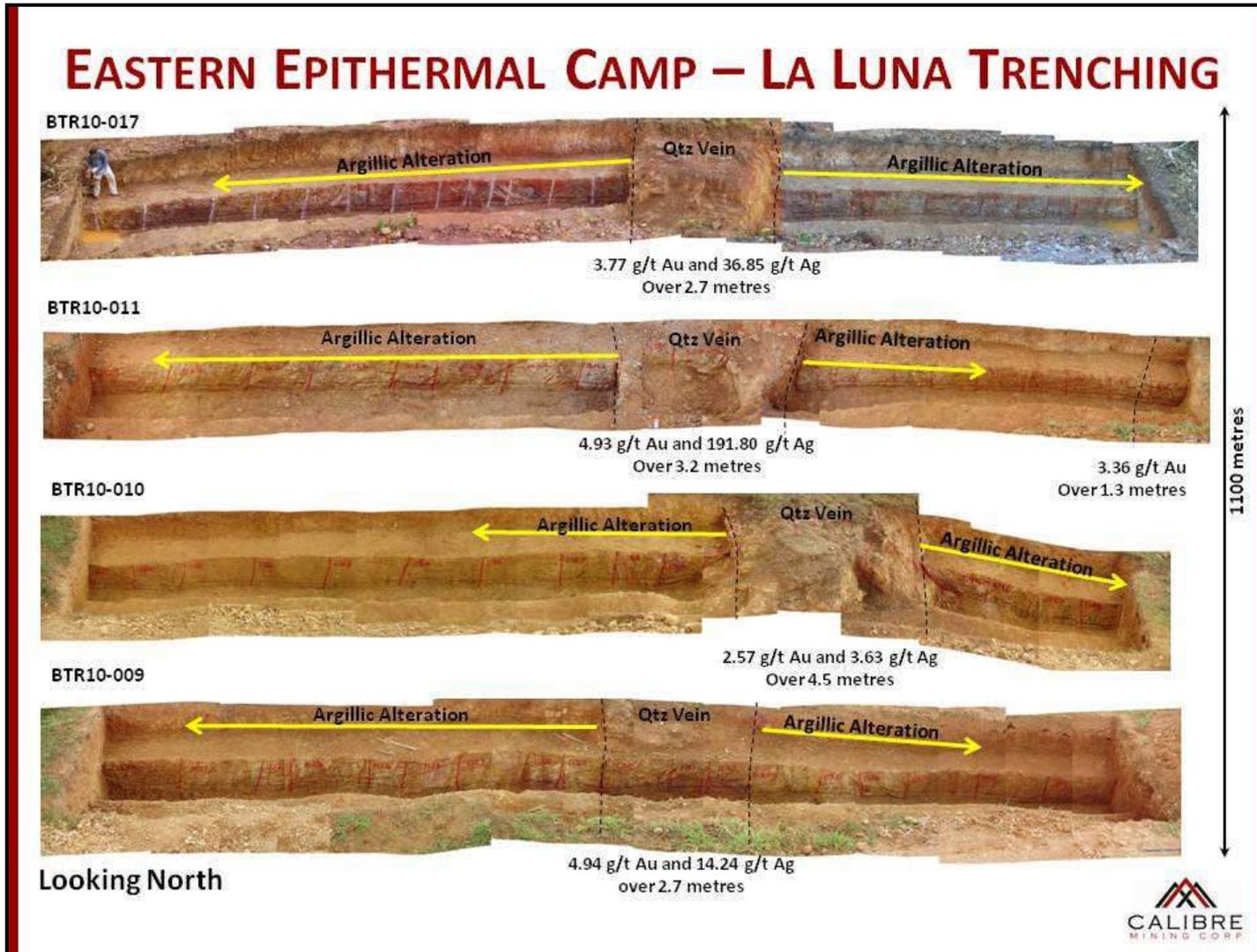


Figure 10.2 La Luna Trenching Compilation Views



**Figure 10.3 La Luna BTR10-011**



**Figure 10.4 La Luna BTR10-012**



**Figure 10.5 La Luna BTR10-012 Reclaimed**



The results of the trenching program are summarized in Table 10.2.

**Table 10.2 La Luna Trench Results**

BHID	From (m)	To (m)	Length (m)	Gold (g/t)	Silver (g/t)
BTR10-007	2.8	3.8	1.0	0.99	0.80
BTR10-008	no significant results				
BTR10-009	19.7	23.9	4.2	3.22	10.08
Includes	19.7	22.4	2.7	4.94	14.24
BTR10-010	11.5	16.0	4.5	2.57	3.63
BTR10-011	10.0	21.7	11.7	1.98	38.60
Includes	18.5	21.7	3.2	4.93	191.80
BTR10-012	8.7	14.0	5.3	2.10	58.97
BTR10-017	23.8	26.5	2.7	3.77	36.85

## 11.0 DRILLING

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### 11.1 CERRO AEROPUERTO

#### 11.1.1 *HISTORICAL DIAMOND DRILLING*

Diamond drilling has been carried out by several previous operators, but no core remains from before the April 2008 fire at the Siuna offices.

Yamana's surviving drill core is stored in Siuna (Figure 11.1). Digital data for the nine holes drilled at Cerro Aeropuerto were captured prior to the fire.

From the logs, the following information was extracted:

- drilling was completed by R&R
- drilling runs were 3 m
- downhole survey was completed using a Tropari borehole surveying instrument (Tropari) at approximately 50 m intervals
- RQD measurements were collected.

**Figure 11.1 Calibre Siuna Core Storage**



## 11.2 LA LUNA

### 11.2.1 HISTORICAL DIAMOND DRILLING

The drill information completed by Rosario in 1974 to 1975 was compiled by Calibre and entered into the Drillhole database. The records are not complete as much of the information was not available, such as drilling company, downhole surveys.

A total of ten drillholes are completed on the southern portion of the La Luna deposit.

### 11.2.2 CALIBRE 2010 DIAMOND DRILLING

The drilling conducted by Calibre during the 2010 drilling campaign was designed to delineate the La Luna zone along strike to the north and test the zone at depth beneath the trenches completed in 2010.

Drilling was completed by Rodio Swissboring Guatemala, S.A. A total of eleven new holes were drilled by Calibre between April and July 2010 (Table 11.1). All holes were drilled HQ and all drill runs were 3.04 m in length.

**Table 11.1 La Luna Collars**

Borehole ID	Easting	Northing	Elevation	Depth	Azimuth	Dip
LL10-001	798860	1546610	132	200.45	65	-48
LL10-002	798747	1545931	129	125.10	65	-52
LL10-003	798860	1545745	128	200.20	70	-53
LL10-004	798747	1545931	129	258.80	65	-65
LL10-005	798497	1547425	135	164.10	65	-53
LL10-006	798622	1547089	131	164.10	65	-48
LL10-007	798760	1546815	131	200.90	65	-48
LL10-008	798494	1547223	122	253.00	65	-48
LL10-009	798724	1545982	128	154.70	50	-46
LL10-010	798672	1546960	131	178.90	65	-50
LL10-011	798698	1546759	132	259.05	70	-50

Surveying diamond drillhole collars at La Luna was completed using a Magellan Mobile Mapper 6 handheld GPS unit. Azimuths were determined using a compass.

Downhole Surveys readings were collected at approximately 50 m intervals using a Tropari and later in the program a Reflex E-Z shot.

Core was logged by qualified geologists familiar with the project. Logging was conducted on laptop utilizing the Logchief software from Maxwell Systems. Logging took place at Calibre’s Rosita facility.

The drill logs recorded major lithological units, alteration, structure, mineralization, veining, textures and minor lithological units as well as the sample intervals.

The collars for all the drillholes were capped with plastic casing and cement with the borehole number scribed into the cement to allow for easy location and identification (Figure 11.2).

Figure 11.2 La Luna Collar



Drilling along the north zone of La Luna, established a continuity of the veins system between the trenches and the boreholes over a strike length of approximately 900 m.

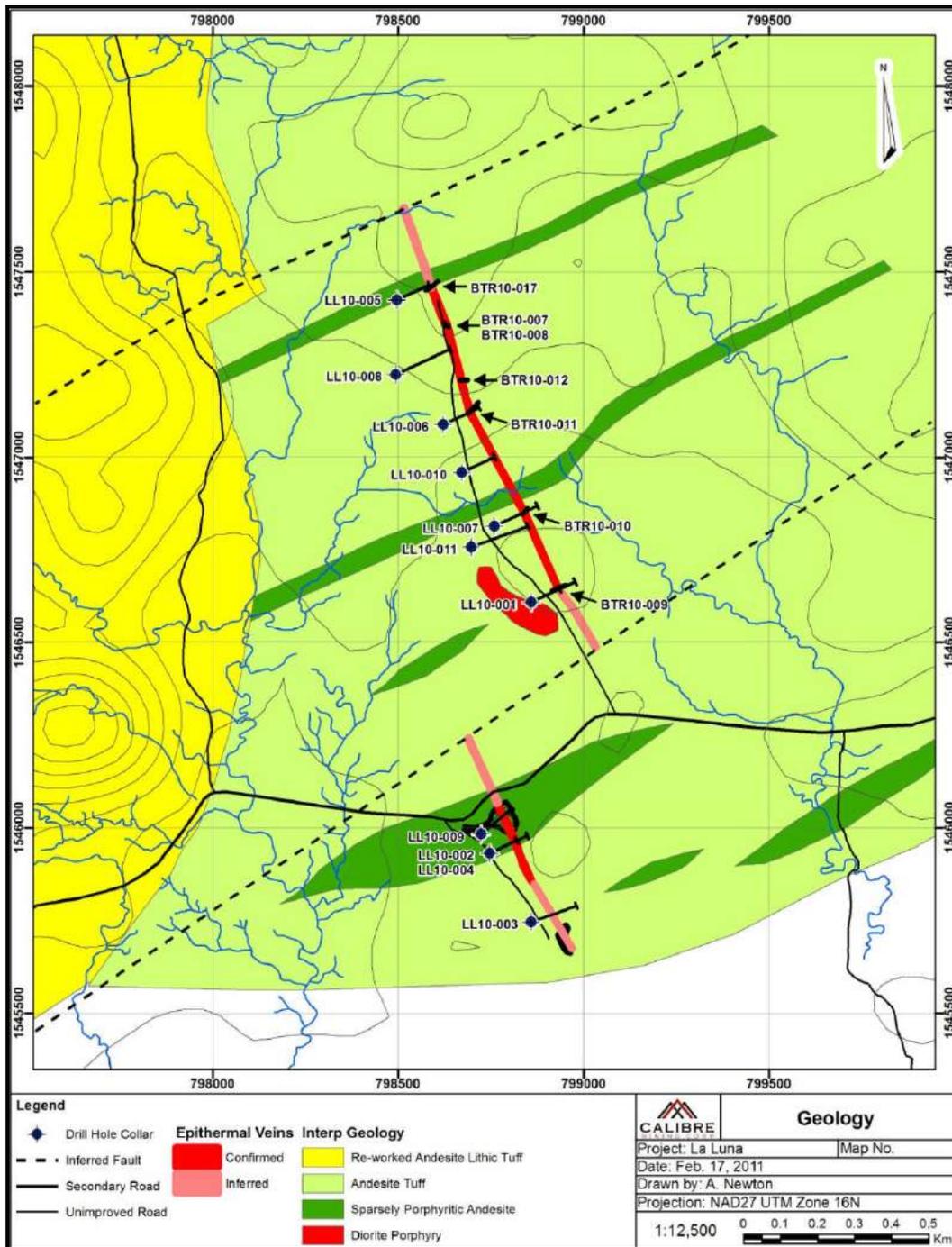
Drilling in the south zone confirmed the presences of the gold bearing system drilled by Rosario in the mid- 1970's. The hole furthest to the south (LL10-003) did not intersect the vein system or associated alteration, indicating the presence of cross-faulting.

Table 11.2 highlights some of the significant intersections encountered in the 2010 drilling campaign. Figure 11.3 shows the location of the drill collars completed during the 2010 diamond drill program.

**Table 11.2 La Luna Drill Results**

BHID	From (m)	To (m)	Length (m)	Gold (g/t)	Silver (g/t)	Zone
LL10-001	115.70	123.45	7.75	1.43	7.51	North
LL10-002	90.00	99.00	9.00	4.63	39.75	South
LL10-003	no significant results					South
LL10-004	110.72	117.00	6.28	1.63	13.61	South
LL10-005	114.80	116.80	2.00	0.15	3.95	North
LL10-006	127.00	131.00	4.00	2.77	19.38	North
LL10-007	18.95	20.70	1.75	2.99	30.66	North
LL10-008	232.00	234.40	2.40	0.08	3.29	North
LL10-009	117.62	128.50	10.88	0.76	9.43	South
LL10-010	141.00	152.90	11.90	0.71	7.14	North
LL10-011	248.00	249.55	1.55	2.98	2.67	North

**Figure 11.3 La Luna 2010 Drill Collar Locations**



## 12.0 SAMPLING METHOD AND APPROACH

---

### 12.1 CERRO AEROPUERTO

There is no direct documentation on the sampling method and approach conducted by Yamana for review by the author. The following procedure was extracted from various reports.

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.

### 12.2 LA LUNA

The following description of the sampling methodology was provided by Adrian Newton, the Senior Project Geologist for the Project and is also available in a formal document. Drilling was not underway when Wardrop conducted the site visit. Field observations made during the site visit conclude that the logging and sampling methodology describe by Mr. Newton are to industry standards, and are acceptable to support a resource estimate.

- Core was collected at the drill site by Calibre personnel on a regular basis and delivered to the core facility in Rosita.
- The boxes placed on the core logging table in order.
- The core was cleaned to remove any drill grease or additives.
- Visually inspect the interval blocks to ensure there were no discrepancies.
- Geological Technician collects the recovery lengths of each interval, rock quality designation (RQD) and takes magnetic susceptibility readings every metre.
- Core is marked at 1 m intervals.
- Core box is labelled with the from – to with a felt marker and an aluminum tag is stapled to the front of the box with Borehole number, box number, and from – to interval.
- Logging is completed by the geologist directly into a laptop computer using Maxwell System's Logchief, which is transferred daily to the office server.
- Logs are imported into Maxwell System's' Datashed by the database manager.

- Sample lengths are variable, 20 cm minimum sample length, 2 m maximum sample length.
- The samples do not cross lithological boundaries.
- Three core boxes at a time are transferred to the photo station in numerical order and photographed using digital cameras.
- Sample intervals are transferred to a sample booklet with pre-printed sample numbers.
- Top-mounted core saw with a fresh water source was used to cut the core.
- The technician verifies the sample number from the drill log with the sample number from pre-printed sample books.
- The technician cuts the core and places one half in a plastic sample bag and returns the other half to the core box.
- One sample tag is placed in the sample bag; one sample tag is placed into the core box at the beginning of the sample interval.
- Sample bags with sample and sample tag are sealed with zip ties.
- QA/QC samples are inserted into the sample stream (see Section 13.0 Sample Preparation, Analyses and Security for details).
- Samples are placed in rice bags and stored in the core logging facility until shipment.

Figures 12.1 and 12.2 display the core logging facility and the core cutting facility at Rosita used for the La Luna project.

**Figure 12.1 Rosita Logging Facility**



**Figure 12.2 Rosita Core Cutting Facility**



## 13.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

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### 13.1 SAMPLE PREPARATION

#### 13.1.1 CERRO AEROPUERTO

There is no direct documentation of the preparation methodology used by Yamana for the samples collected at Cerro Aeropuerto.

All drill, rock-chip samples collected during the 2007-2008 Yamana exploration program were sent to CAS de Honduras, S. de R.L. in Tegucigalpa for preparation. 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.

All bulk rejects and pulps from the drilling program were originally storage at the CAS lab. The coarse rejects are now stored in Calibre's Siuna field office. The Siuna field office has security monitoring the facility 24 hours per day.

**Figure 13.1 Cerro Aeropuerto Reject Storage**



**Figure 13.2 Calibre Siuna Field Office**



### 13.1.2 LA LUNA

Sample shipments were prepared and sent to Managua once a week. All samples bags were placed in numerical sequence and put into rice bags. Each rice bag held approximately 25 kg of weight. Each rice bag was labelled with the sample number range, customs broker and laboratory name and address.

The lab submittal form was completed by the logging geologist and authorized by the Project Manager or the person designated for this purpose. The submittal form was put into a plastic bag and placed in the first rice bag. Each rice bag was secure with two plastic ties and a uniquely numbered non re-sealable security strap. The security tag number was recorded on a sample shipment tracking log. The lab was instructed to notify Calibre of any missing or damaged bags, or any missing security seal.

While on site the samples were kept in a secure warehouse, only accessible to Calibre personnel.

The rice bags were delivered to Calibre's Managua office in a company truck, where they were then picked up by FedEx personnel and shipped to ALS Minerals in Vancouver.

ALS is accredited to international quality standards through the International Organization for Standardization /International Electrotechnical Commission (ISO/IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P-1579 (Mineral Analysis).

All samples are processed using both Jaw Crushers and Ring Mill Pulverizes. Samples received by the lab are processed using the following sample preparation packages:

- dry, crush (<5 kg) 70% -8 mesh (2 mm)
- split (500 g)
- pulverize (to 85% -75 µm).

## 13.2 SAMPLE ANALYSES

### 13.2.1 CERRO AEROPUERTO

The gold assay methodology used a standard Fire Assay with AA finish technique on a 30 g aliquot taken from the 500 g pulp. Samples that returned assays greater than 1 g/t Au re-run used a standard Fire Assay with Gravimetric finish technique on a 30 g aliquot collected from the original 500 g pulp.

A pulp split was also sent by CAS to ACME Analytical Laboratories Ltd, an ISO-9001 certified laboratory in Vancouver for 32-element ICP analysis.

### 13.2.2 LA LUNA

The gold assay methodology used a standard Fire Assay with AA finish technique on a 30 g aliquot taken from the 500 g pulp. Samples that returned assays greater than 10 g/t Au re-run used a standard Fire Assay with Gravimetric finish technique on a 30 g aliquot collected from the original 500 g pulp.

In addition to the gold analysis, a 36 multi-element ICP analysis was run by ALS on the same 500 g pulp.

The ALS analytical code used was Au-AA25 and ME-ICP41.

## 13.3 QA/QC PROGRAM

### 13.3.1 YAMANA QA/QC PROGRAM

#### *Yamana SRM*

A number of Standard Reference Material (SRM) was acquired by Yamana from Geostats Pty Ltd (Australia) and CDN Resource Laboratories Ltd (Canada).

During the 2007-2008 exploration drilling program, a SRM was inserted in the sample stream after every 15<sup>th</sup> sample. Table 13.1 lists the SRM used during the program.

**Table 13.1 Yamana SRM List**

Supplier	Lab Name	Project Code	Expected Value Au (ppm)	1 Std. Dev	2 Std. Dev.	Comments
Geostats	G302-7	STD-3	2.14	0.09	0.18	50 g FA-AA finish
Geostats	G304-7	STD-5	6.83	0.25	0.50	50 g FA-AA finish
Geostats	G902-7	STD-2	1.41	0.10	0.20	50 g FA-AA finish
Geostats	G998-10	STD-4	3.05	0.15	0.30	50 g FA-AA finish
Geostats	G999-2	STD-1	0.63	0.06	0.12	50 g FA-AA finish
CDN Labs	GS-5D	STD-6	5.06	0.13	0.25	30 g FA-ICP finish
CDN Labs	GS-2C	STD-7	2.06	0.08	0.15	30 g FA-ICP finish
CDN Labs	GS-3D	STD-8	3.41	0.13	0.25	30 g FA-ICP finish
CDN Labs	CGS-18	STD-9	0.30	0.02	0.04	30 g FA-ICP finish

Yamana used the following procedure to review the results of the SRM analysis. The percent tolerance values are calculated using the permissible Max and Min values which are derived by adding (Max) and subtracting (Min) 2 standard deviations from the given Au value for each standard, i.e. for Geostats standard G302-7 the % Tolerance is calculated as such:  $(2.32 - 2.14) / 2.32 = +/-7.8\%$ .

Wardrop has plotted the Yamana SRM data on industry standard control plots (Figures 13.3 to 13.11) and summarize the interpretation below.

The low grade SRM G999-2 has an accepted value of 0.63 g/t with a between lab's 95<sup>th</sup> confidence of 0.12 g/t. The mean grade of the QA/QC samples submitted was 0.591 g/t, just slightly lower than the accepted value but within the confidence level set for between labs. There were three failures within the QA/QC sample suite submitted of which two were in a row (Figure 13.3).

Figure 13.3 G999-2



The average grade SRM G902-7 has an accepted value of 1.41 g/t with a between lab's 95<sup>th</sup> confidence of 0.20 g/t. The mean grade of the QA/QC samples submitted was 1.332 g/t, slightly lower than the accepted value but within the confidence level set for between labs. There were no failures within the QA/QC sample suite submitted (Figure 13.4).

The average grade SRM G302-7 has an accepted value of 2.14 g/t with a between lab's 95<sup>th</sup> confidence of 0.18 g/t. The mean grade of the QA/QC samples submitted was 2.116 g/t, slightly lower than the accepted value but within the confidence level set for between labs. There were four failures within the QA/QC sample suite submitted for which two were in a row (Figure 13.5).

The average grade SRM G998-10 has an accepted value of 3.05 g/t with a between lab's 95<sup>th</sup> confidence of 0.30 g/t. The mean grade of the QA/QC samples submitted was 3.06 g/t, slightly higher than the accepted value but within the confidence level set for between labs. There were four failures within the QA/QC sample suite submitted all in a row, yet the results started to go out of spec approximately six samples prior to the failures (Figure 13.6).

The high grade SRM G304-5 has an accepted value of 6.83 g/t with a between lab's 95<sup>th</sup> confidence of 0.50 g/t. The mean grade of the QA/QC samples submitted was 6.916 g/t, slightly higher than the accepted value but within the confidence level set for between labs. There was one failure within the QA/QC sample suite submitted (Figure 13.7).

The remaining four SRM submitted during the drilling programs did not have enough data points to generate valid control limits (less than 15 samples) and thus were not plotted.

To date, Calibre has not followed up on the samples deemed out of tolerance.

Figure 13.4 G902-7

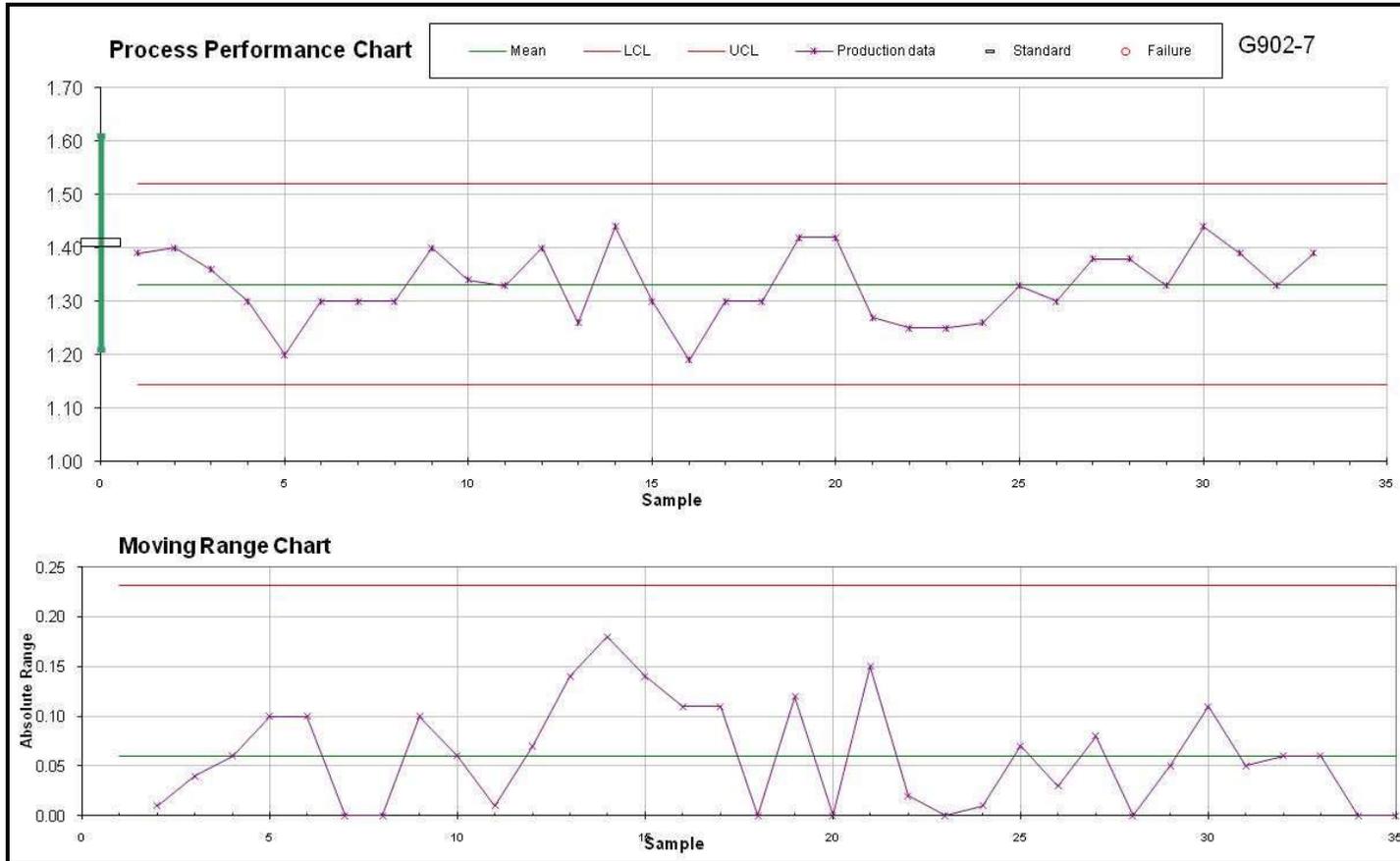
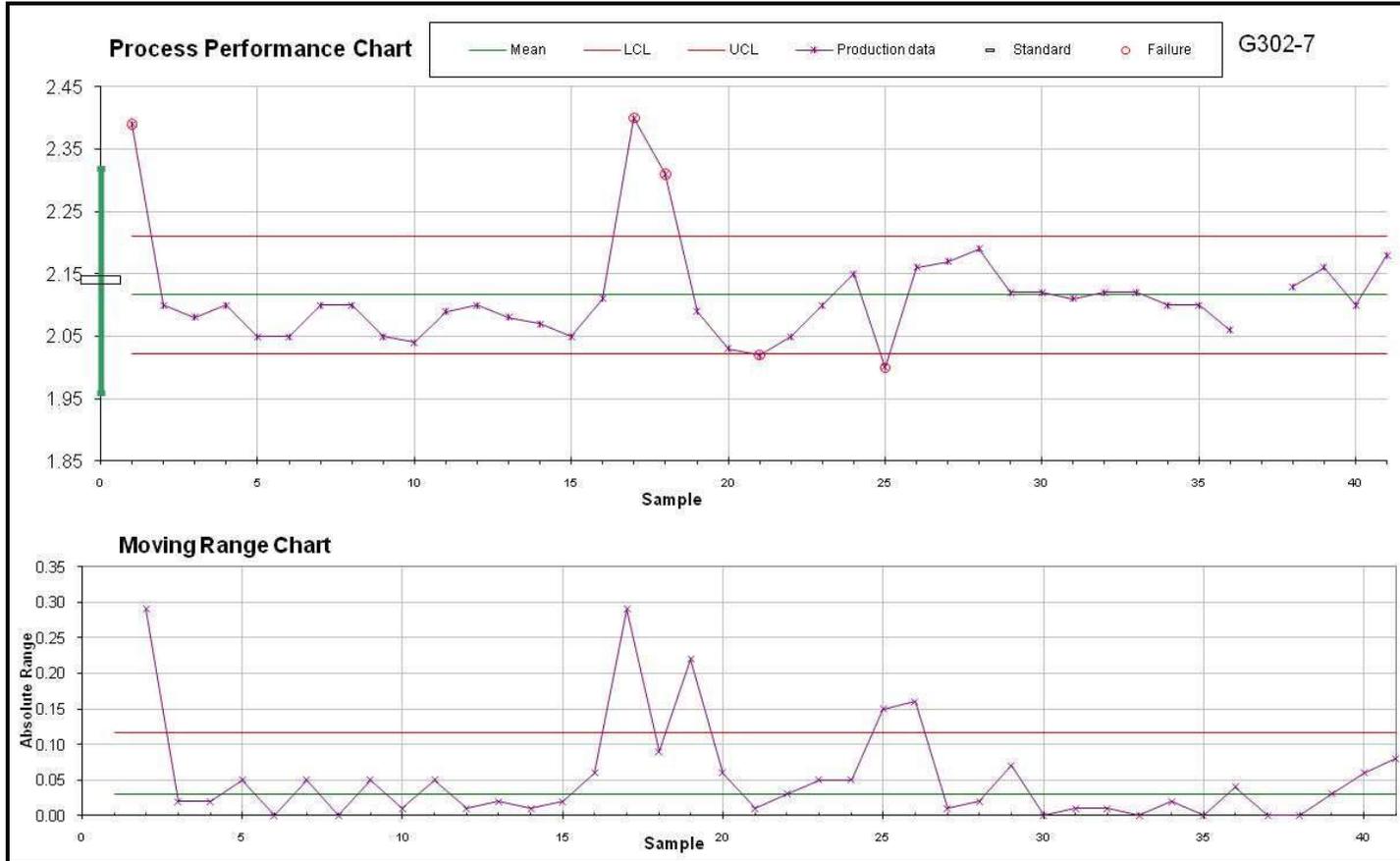


Figure 13.5 G302-7



**Figure 13.6 G998-10**

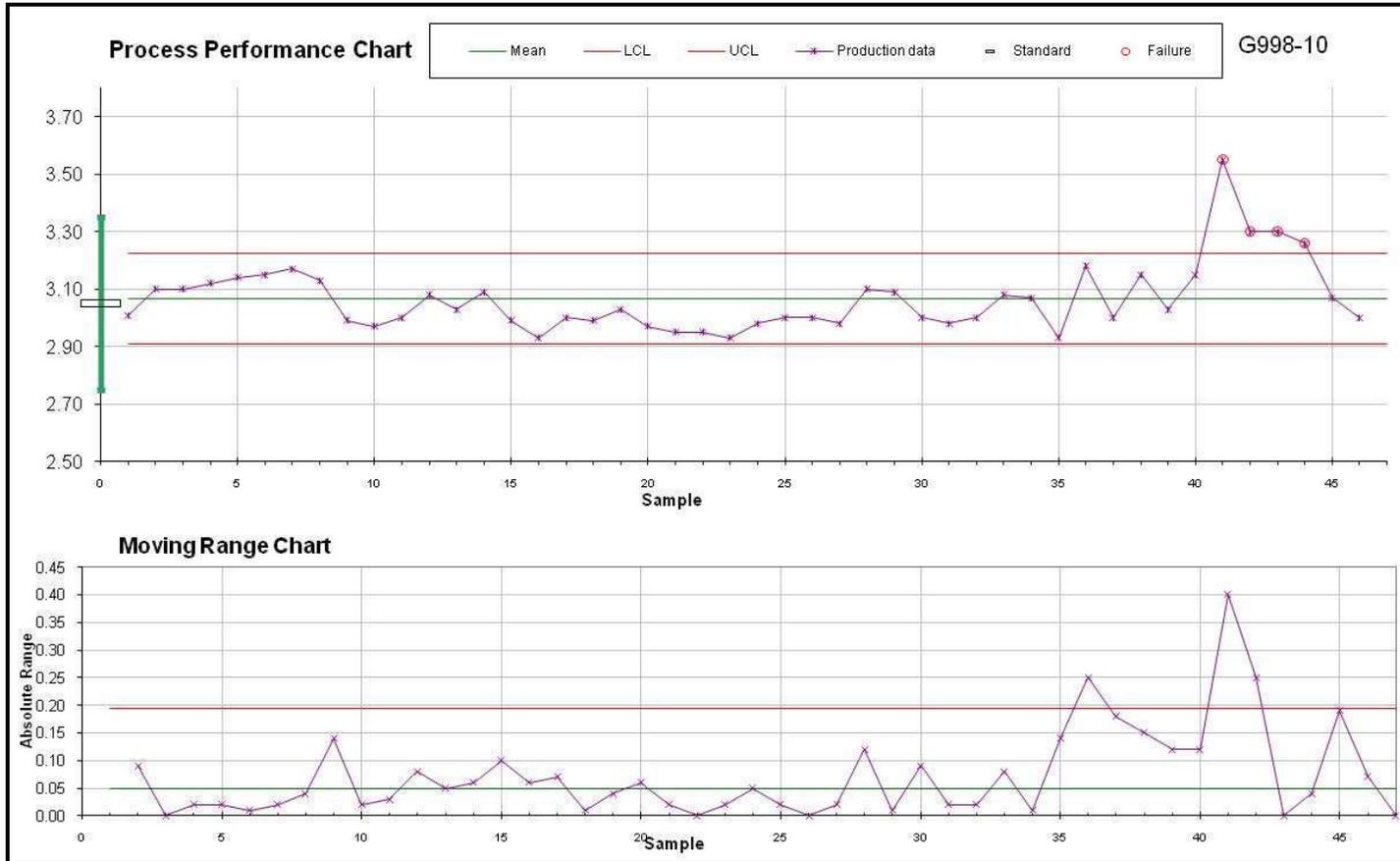
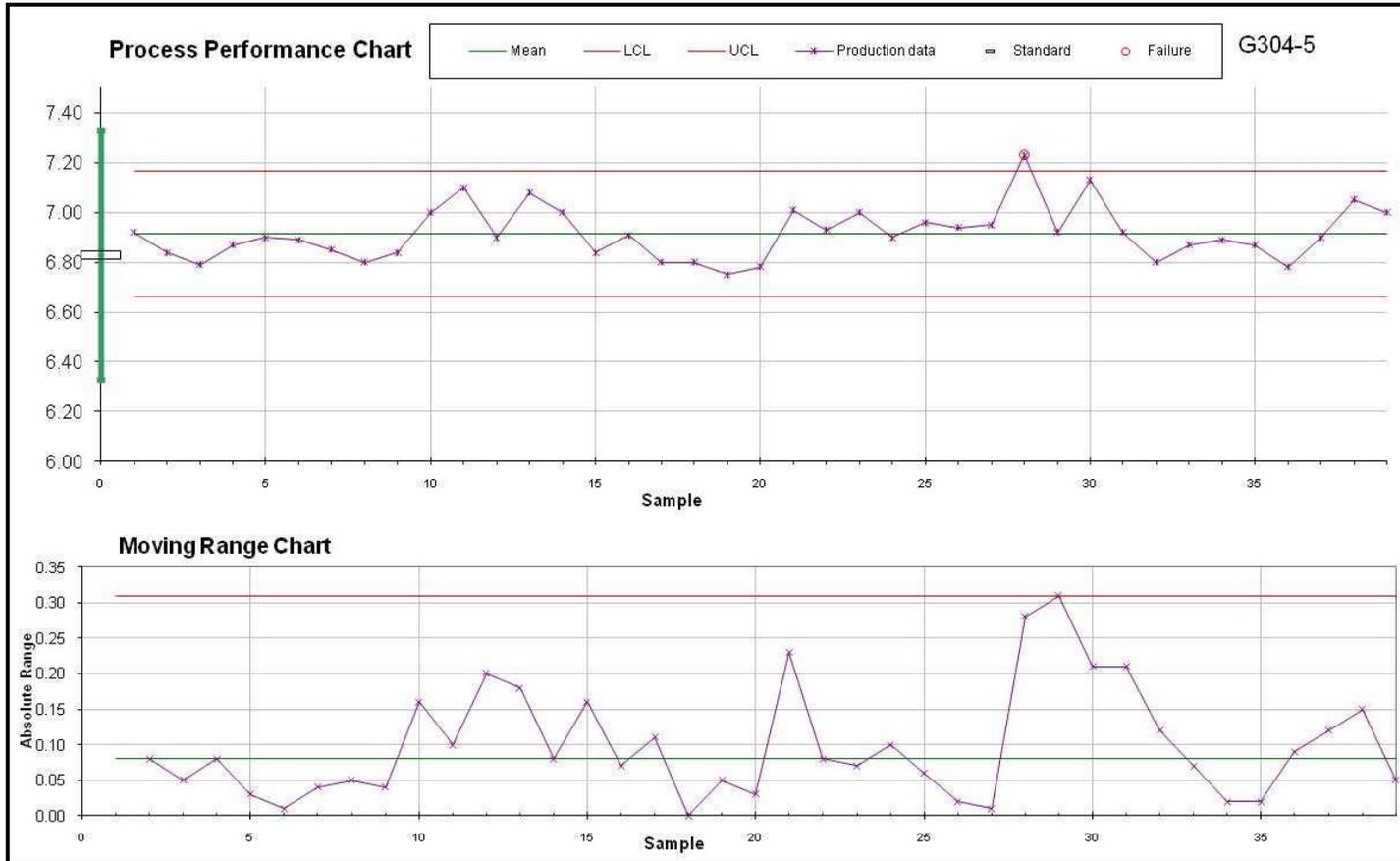


Figure 13.7 G304-5

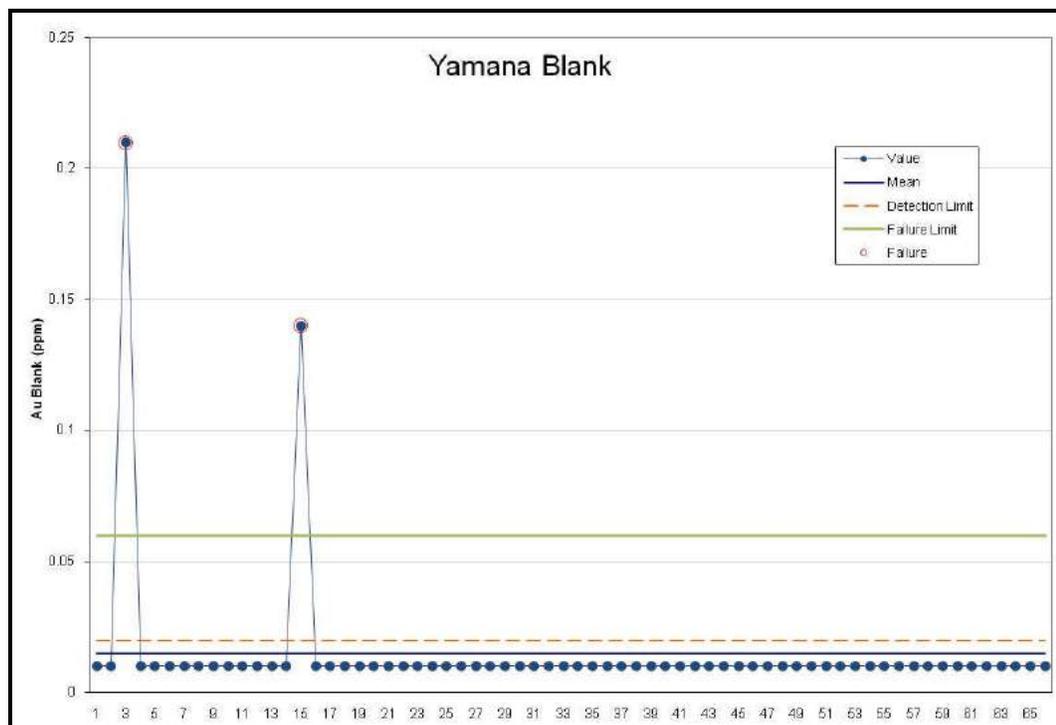


*Yamana Blanks*

Blanks (sterile samples) were inserted based on geologic interpretation of mineralized samples during core logging. Blank samples were routinely inserted directly following a visually mineralized interval 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 (Yamana Gold Inc.) prep lab and were composed of material from the Valle de Angeles Formation (red beds) which is known to not to carry gold mineralization at this locality.

Figure 13.8 is a plot of the Yamana blank data submitted during the 2007-2008 drilling campaign. The detection limit used was 0.02 ppm and a failure was considered as three times the detection limit (0.06 ppm).

**Figure 13.8 Yamana Blank Chart**



Duplicate samples were not collected and sent for assay during the 2007-2008 drilling campaign.

In the author's option, the sample preparation and security are adequate during the 2007- 2008 Yamana drilling program. The QA/QC program conducted by Yamana during the drilling program was done appropriately, yet the failures should have been addressed at the time the program was conducted.

### 13.3.2 CALIBRE QA/QC PROGRAM

Calibre has a well documented QA/QC program in place managed by the Supervisor of Quality Control.

QA/QC samples, including Pulp duplicates, crush duplicates, SRM, and blanks were inserted in a predetermined sequence every 30<sup>th</sup> sample. This ensures that there is at least one of each QA/QC sample typed submitted in the assay batch.

- Pulp Duplicate – every 30<sup>th</sup> sample starting at the 10<sup>th</sup> sample.
- SRM – every 30<sup>th</sup> sample starting at the 15<sup>th</sup> sample.
- Crush Duplicate – every 30<sup>th</sup> sample starting at the 20<sup>th</sup> sample.
- Blank – every 30<sup>th</sup> sample starting at the 25<sup>th</sup> sample.

The SRMs were purchased from CDN Labs of Vancouver. The Blanks consisted of small pieces of volcanic scoria, collected from Masaya volcano, near Managua. Table 13.2 summarizes the SRMs used during the 2010 drilling campaign.

**Table 13.2 Calibre SRM**

Supplier	Lab Name	Expected Value Au (ppm)	1 Std. Dev	Comments
CDN Labs	GS-1E	1.16	0.06	30 g FA-AA finish
CDN Labs	GS-7A	7.20	0.60	30 g FA-gravimetric finish
CDN Labs	GS-P8	0.78	0.06	30 g FA-gravimetric finish
CDN Labs	CGS-19	0.74	0.07	30 g FA-AA finish
CDN Labs	CGS-20	7.75	0.47	30 g FA-AA finish

All data is reported in CSV files which are directly imported into Datashed. The results for quality control were reviewed as soon as a certificate is received.

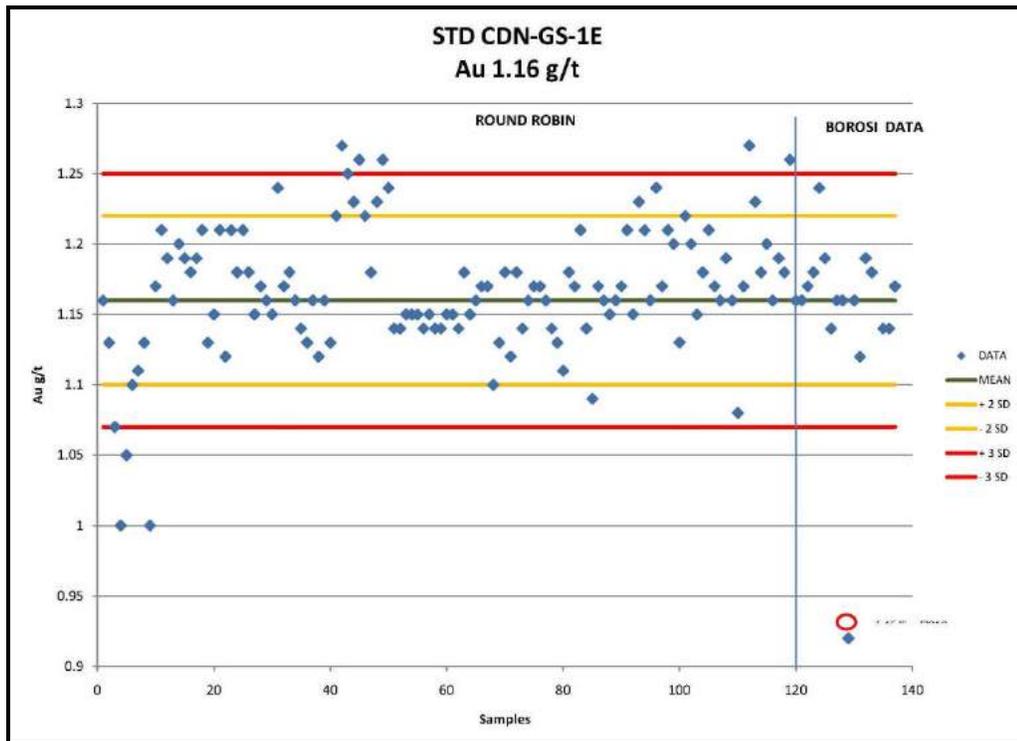
The following criteria were used to determine pass or fail of an assay batch.

1. SRM with gold values  $\pm 3$  standard deviations was considered a failure and the whole batch re-assayed.
2. Two adjacent SRM for Au are  $\pm 2$  standard deviation on the same side of the mean was considered a failure and an indication of bias.
3. Blanks more than three times the detection limit considered a failure.

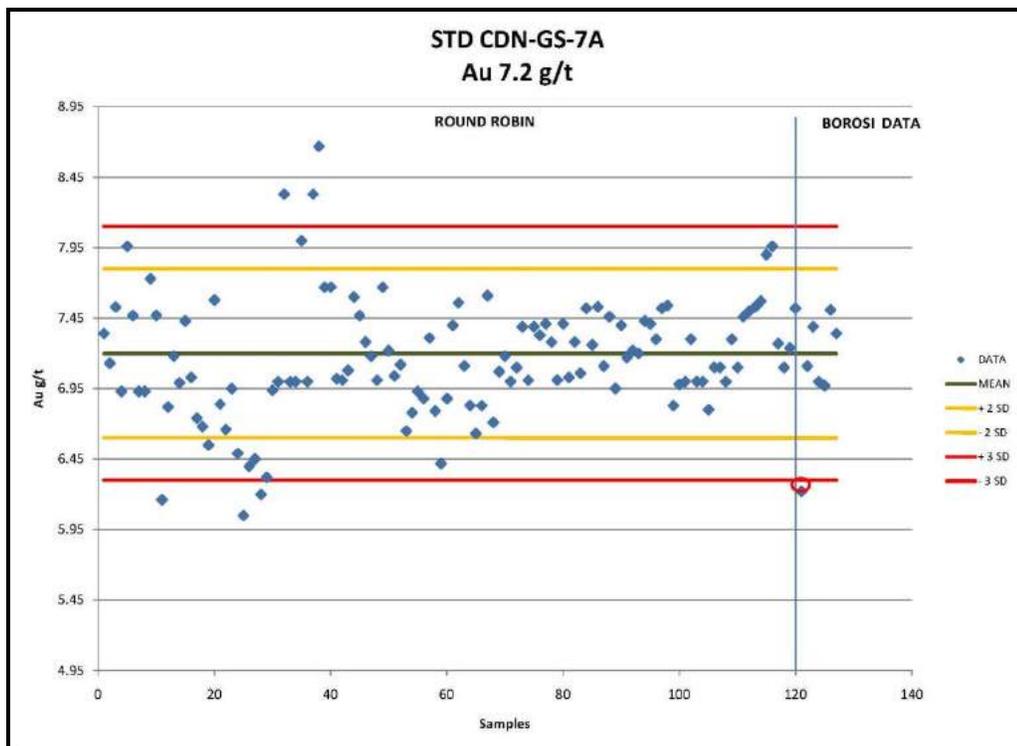
All the failures are logged in a table for failures, as well as the action taken to solve the issues.

Calibre plotted the results on control charts (Figure 13.9 to 13.14)

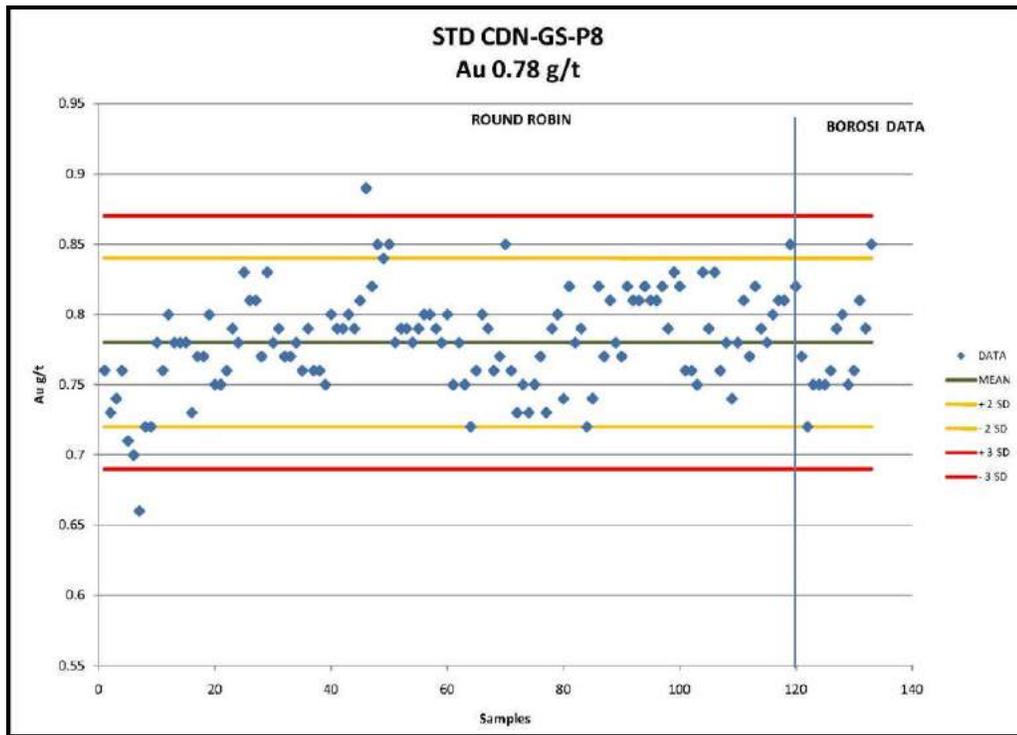
**Figure 13.9 Control Chart STD CDN-GS-1E**



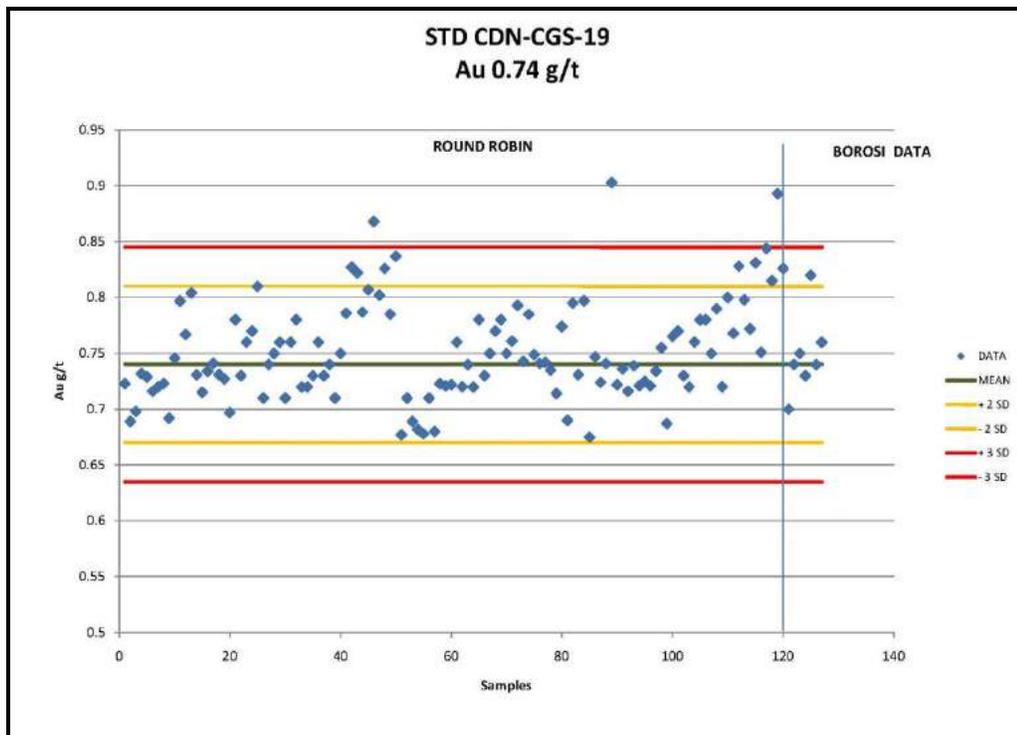
**Figure 13.10 Control Chart STD CDN-GS-7A**



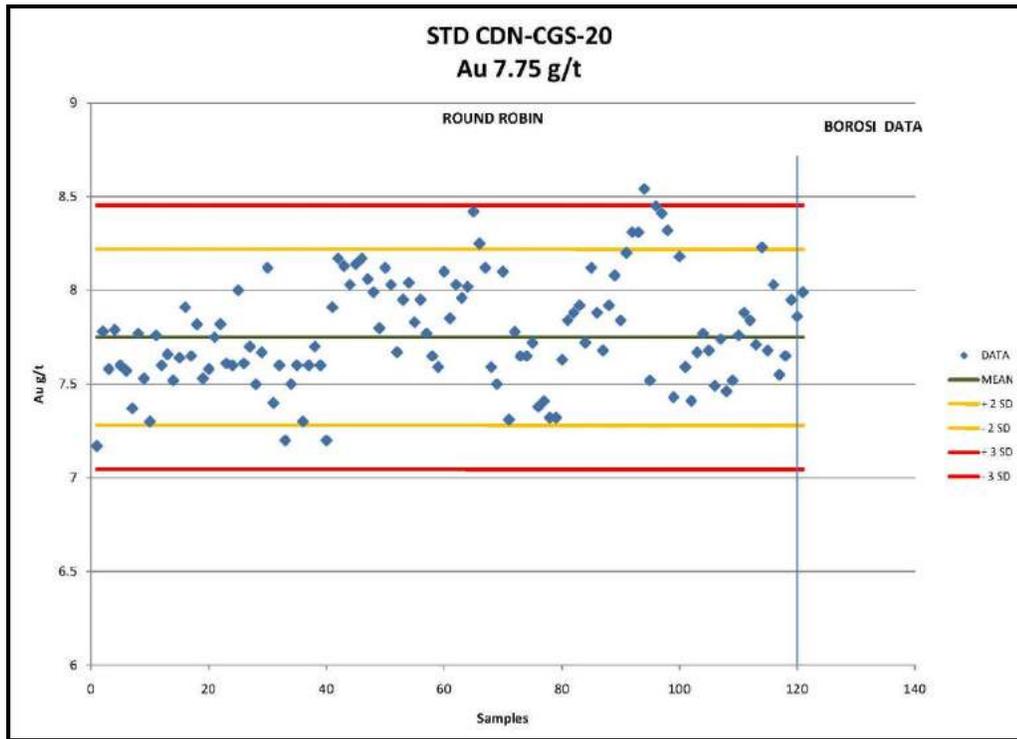
**Figure 13.11 Control Chart STD CDN-GS-P8**



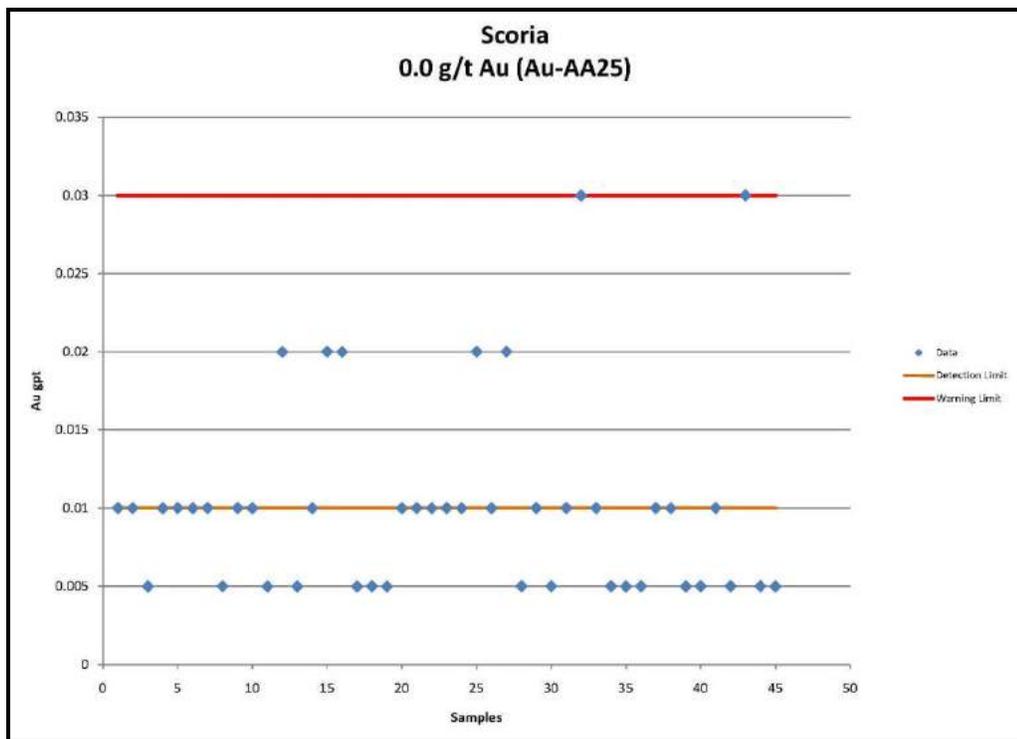
**Figure 13.12 Control Chart STD CDN-GCS-19**



**Figure 13.13 Control Chart STD CDN-CGS-20**



**Figure 13.14 Control Chart Scoria**



In the author's option, the sample preparation and security are acceptable during the 2010 Calibre drilling program. The QA/QC program conducted by Calibre during the drilling program was done appropriately, and meeting industry standard.

It recommended, adjusting the insertion location of the blanks from the systematic placement to placing the blank immediately after a mineralized interval.

Copies of the SRM certificates are located in Appendix A.

## 14.0 DATA VERIFICATION

### 14.1 CERRO AEROPUERTO

Wardrop carried out an internal validation of the diamond drillhole and trench data files against the original drillhole logs, trench maps and assay certificates. The validation of the data files was completed on nine of the ten drillholes in the total database or 90% of the dataset and all five trenches or 100% of the database. Data verification was completed on collar co-ordinates, end-of-hole depth, down-the-hole survey measurements, From and To intervals, measurements of assay sampling intervals, and gold and silver grades. Minor discrepancies in the data set were corrected with no major errors encountered in the collar, survey or lithology files.

The assay file contained twenty two entries that were corrected, primarily due to minor discrepancy in the assay values in the database. This represents less than 0.01% errors within the entire assay dataset. All assays entered as zeros (0) were converted to half the detection limit and were not considered to be errors in the data.

**Table 14.1 Cerro Aeropuerto Data Validation**

Category	Borehole	Comments
Collar	CA-07-02	Log missing EIV, used database value
	CA-08-08	Log has different X,Y,Z values, used database values
	CA-08-16	Log has different X,Y,Z values, used database values
Survey	CA-07-01	No survey data, used top and bottom of hole
	CA-07-02	Changed dip to include (-)
	CA-07-03	Changed dip to include (-)
	CA-08-04	Changed dip to include (-)
	CA-08-11	No survey data, used top and bottom of hole
	CA-08-12	Changed dip to include (-)
	CA-08-16	Changed dip to include (-)
	HSA-45	No survey data, used top and bottom of hole
Assays	CA-07-02	Sample 473251 Used averaged Au FA30+Grav value
		Sample 473252 Used averaged Au FA30+Grav value
		Sample 473268 Used averaged Au FA30+Grav value
		Sample 473269 Used averaged Au FA30+Grav value
		Assay cert values in database do not match assay cert for 47320, 47319, 47318, 47316 changed to match assay cert
	CA-07-03	Sample 47003324 used Ag FA30+Grav value
		Sample 47003325 used Ag FA30+Grav value
		Sample 47003337 used Ag FA30+Grav value
		Sample 47003339 used assay certificate value Cu and Zn

Category	Borehole	Comments
		Sample 47003340 used assay certificate value Cu and Zn
	CA-08-04	Sample 4804414 used lower Au FA30+Grav value
	CA-08-10	Sample 4810017 changed (>) to make a number
		Sample 4810055 used averaged Au FA30+Grav value
		Assay cert values missing on all samples for Ag, Cu, Zn, Database values used instead of assay certs
	CA-08-16	Sample 4816106 used averaged Au FA30+Grav value
		Sample 4816147 used averaged Au FA30+Grav value
		Sample 4816171 used averaged Au FA30+Grav value
		Sample 4816130 changed (>) to make a number
		Sample 4816136 changed (>) to make a number
		Sample 4816139 changed (>) to make a number
		Sample 4816171 changed (>) to make a number
		Missing Ag, Cu, Zn assays from Sample 4816110-4816393, Database values used instead of assay certs

The drillhole data was imported into the Datamine program, which has a routine that checks for duplicate intervals, overlapping intervals and intervals beyond the end of hole. The errors identified in the routine were checked against the original logs and corrected.

Wardrop confirmed the locations of five surface drillhole collars during the site visit. Wardrop collected the collar locations using a Garmin GPSMAP 60Cx handheld GPS unit. Table 14.2 displays the results of the collar validation. The accepted error for the 60Cx GPS unit is typically  $\pm 5$  m range. Although all the holes show a delta difference of more than 5 m, it is primarily due to differences in elevations. There is typically a great margin of error when dealing with elevations using a handheld GPS. It is recommended that Calibre check the co-ordinates of the borehole collars using a differential GPS during the next drilling campaign to confirm elevations.

**Table 14.2 Cerro Aeropuerto Collar Validation**

BHID	Calibre Co-ordinate			Wardrop Check Co-ordinate			Delta Distance
	X	Y	Z	X	Y	Z	
DDH-07-02	740285	1518745	176	740294	1518737	193	20.83
DDH-07-04	740119	1518642	191	740126	1518638	211	21.56
DDH-08-08	740401	1518653	180	740403	1518654	196	16.15
DDH-08-10	740308	1518907	180	740307	1518909	188	8.29
DDH-08-11	740423	1518546	194	740420	1518547	190	5.10

Six independent samples of mineralized split drill core ( $\frac{1}{4}$  core) were collected for check assaying representing different mineralization grade ranges. The samples

were bagged, sealed on site and delivered to ALS Minerals (ALS) in Sudbury, ON. The samples were prepared in Sudbury and the pulps were shipped by ALS to Vancouver, British Columbia for analysis.

ALS is accredited to international quality standards through the International Organization for Standardization /International Electrotechnical Commission (ISO/IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P-1579 (Mineral Analysis).

The six samples were analyzed for gold using analysis package Au-AA25 which is a fire assay with an AA finish (Table 14.3).

Of the samples collected, two samples had results with greater than 50% absolute difference when comparing the gold values. The check samples confirm the presence of gold and silver in the system. As would be expected in a gold bearing system, the grades display an erratic nature even at a short range of a distribution of quartered core.

**Table 14.3 Cerro Aeropuerto Check Assays**

	BHID	From	To	Yamana			Wardrop			Abs % Diff Au	Abs % Diff Ag
				Sample #	Au g/t	Ag g/t	Sample #	Au g/t	Ag g/t		
Cerro Aeropuerto	DDH 08-10	188.2	189.0	4810059	1.4	2.9	40315	0.58	3.00	141%	3%
Cerro Aeropuerto	DDH 08-16	109.0	109.9	4816100	0.87	1.07	40316	1.45	11.00	40%	90%
Cerro Aeropuerto	DDH 08-16	137.0	138.0	4816130	1.10	6.30	40317	2.80	6.00	61%	5%
Cerro Aeropuerto	DDH 08-16	111.0	112.0	4816102	6.00	15.00	40318	7.85	11.00	24%	36%
Cerro Aeropuerto	DDH 08-11	65.0	65.8	4811058	0.30	2.00	40319	0.46	3.00	35%	33%
Cerro Aeropuerto	DDH 08-16	146.0	147.4	4816139	1.46	9.60	40320	1.33	11.00	10%	13%

The Cerro Aeropuerto data set is deemed to be valid and is acceptable for the use in a resource estimate.

## 14.2 LA LUNA

Wardrop carried out an internal validation of the diamond drillhole and trench data files against the original drillhole logs, trench maps and assay certificates. The validation of the data files was completed on 20 of the 117 drillholes in the total database or 17% of the dataset. Data verification was completed on collar co-ordinates, end-of-hole depth, down-the-hole survey measurements, From and To

intervals, measurements of assay sampling intervals, gold and silver grades. No errors were identified in the collar, survey, lithology or assay files.

All assays entered as zeros (0) were converted to half the detection limit and were not considered to be errors in the data.

The drillhole data was imported into the Datamine program, which has a routine that checks for duplicate intervals, overlapping intervals and intervals beyond the end of hole. The errors identified in the routine were checked against the original logs and corrected.

Wardrop confirmed the locations of six surface drillhole collars and three trenches during the site visit. Wardrop collected the collar locations using a Garmin GPSMAP 60Cx handheld GPS unit. Table 14.5 displays the results of the collar validation. The accepted error for the 60Cx GPS unit is typically  $\pm 5$  m range. It is recommended that Calibre check the co-ordinates of the boreholes using a differential GPS during the next drilling campaign to confirm the locations as all the boreholes show a delta difference of more than 5 m, in the delta XY direction.

The GPS locations of the three trenches are within the general location provided in the database. The trenches have been reclaimed, and as such the specific co-ordinates could not be matched.

The elevations collected by Wardrop are constantly 60-70 m lower than the elevation provided in the database and the drill logs. The elevations collected by Wardrop match the digital topographic files provided by Calibre. The difference in elevations is likely the result of different projection datum. It is recommended that Calibre confirm the elevation in the region with a new survey (surveyor or Lindar/Radar) and then adjust all the collars and trenches to the correct elevations.

**Table 14.4 La Luna Collar Validation**

BHID	Calibre Co-ordinate			Wardrop Check Co-ordinate			Delta Distance
	X	Y	Z	X	Y	Z	
BTR10-009	798951.7	1546655	126	798933	1546637	71	
BTR10-011	798689	1547120	132	798698	1547123	84	
BTR10-017	798575	1547451	144	798591	1547458	93	
LL10-001	798860	1546610	132	798848	1546597	62	22.5
LL10-004	798747	1545931	129	798742	1545921	68	11.2
LL10-007	798760	1546815	131	798756	1546810	62	6.4
LL10-009	798724	1545982	128	798718	1545976	61	8.4
LL10-010	798672	1546960	131	798671	1546954	64	6.1
LL10-011	798698	1546759	132	798691	1546746	65	14.8

Four independent samples of mineralized split drill core (¼ core) were collected for check assaying representing different mineralization grade ranges. The samples were bagged, sealed on site and delivered to ALS in Sudbury, ON. The samples were prepared in Sudbury and the pulps were shipped by ALS to Vancouver, British Columbia for analysis.

ALS is accredited to international quality standards through the International Organization for Standardization /International Electrotechnical Commission (ISO/IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P-1579 (Mineral Analysis).

The four samples were analyzed for gold using analysis package Au-AA25 which is a fire assay with an AA finish (Table 14.5).

Of the samples collected, only one sample had a result with greater than 50% absolute difference when comparing the gold values. The check samples confirm the presence of gold and silver in the system. As would be expected in a gold bearing system, the grades display an erratic nature even at a short range of a distribution of quartered core.

**Table 14.5 La Luna Check Assays**

	BHID	From	To	Calibre			Wardrop			Abs % Diff Au	Abs % Diff Ag
				Sample #	Au g/t	Ag g/t	Sample #	Au g/t	Ag g/t		
La Luna	LL10-004	117.0	119.0	B10C0898	0.42	1.80	40321	0.33	1.00	27%	80%
La Luna	LL10-006	129.0	130.0	B10C1173	5.25	39.30	40322	7.53	36.00	30%	9%
La Luna	LL10-007	113.7	114.7	B10C1270	2.65	3.50	40323	0.35	3.00	657%	17%
La Luna	LL10-007	114.7	115.7	B10C1271	0.51	5.10	40324	0.39	5.00	31%	2%

The La Luna data set is deemed to be valid and is acceptable for the use in a resource estimate.

## 15.0 ADJACENT PROPERTIES

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There are currently no active exploration concessions adjacent to the Calibre property.

### 15.1.1 BONANZA MINE

The Bonanza mine is located on an exploitation concession entirely surrounded by Calibre concessions (Figures 15.1). The mine is presently owned and operated by a private arms-length company.

The mine has produced an estimated 2.6 million ounces of gold from low sulphidation epithermal veins from 1939 to 2002 from both open pits and underground operations (Arenji, et. al, 2003).

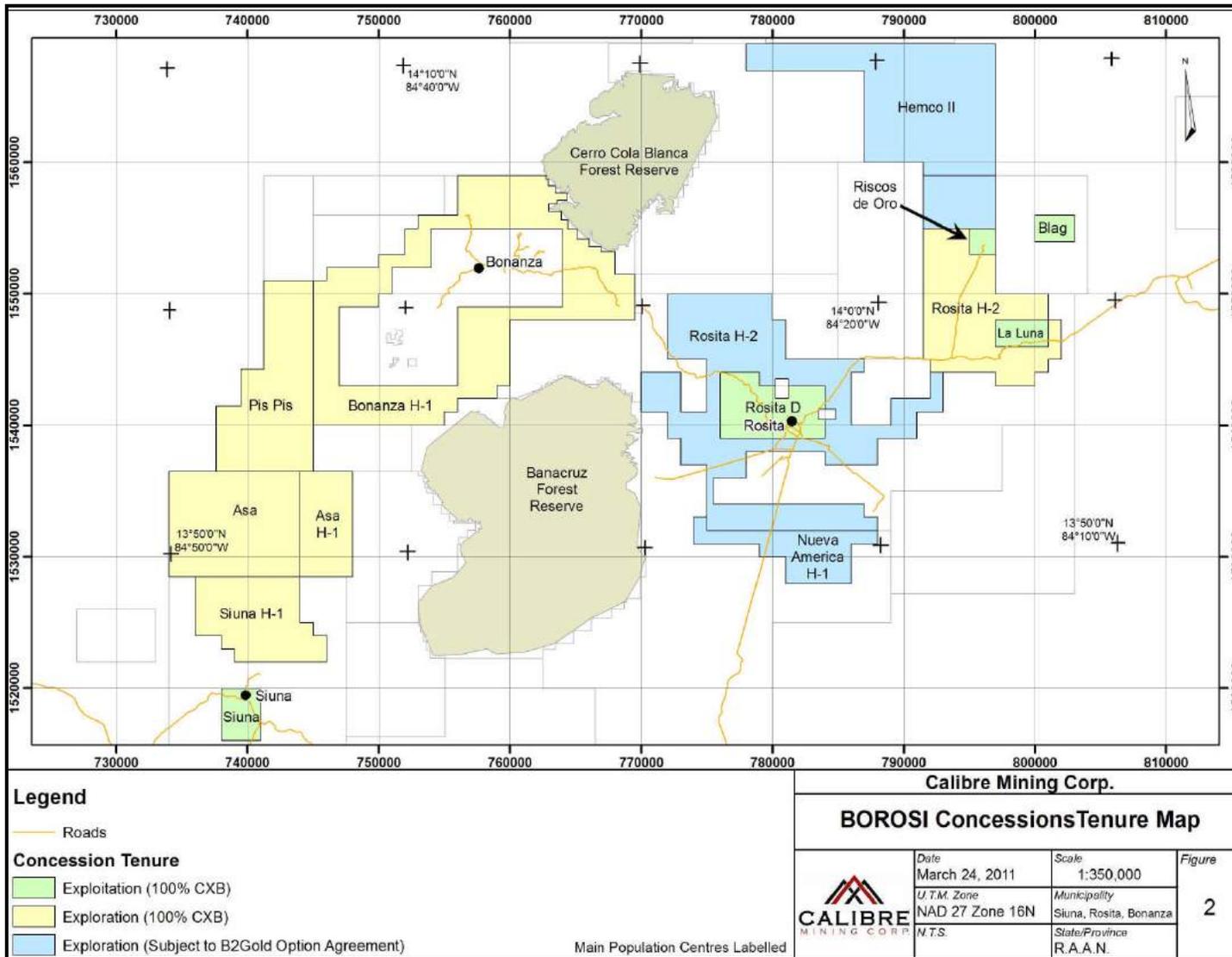
The last publicly stated resource for Bonanza was by RNC Gold Inc in 2005. Table 15.1 is a summary of the resources stated by RNC Gold.

**Table 15.1 Bonanza Resource Statement 2005 by RNC Gold**

Deposit	Category	Tonnes	Gold (g/t)
Bonanza	Measured	677,174	4.39
	Indicated	1,147,188	5.62
	M+I	1,824,362	5.16
	Inferred	1,134,649	6.63

Historical estimate within the table above is considered relevant but not reliable. The author has not validated the above information on the Bonanza Mine and deems the results to be historic in nature. Calibre is to treat the estimate as a historical estimate that should not be relied upon.

**Figure 15.1 Adjacent Properties**



## 16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

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Calibre has not conducted any metallurgical testing on material from Cerro Aeropuerto or La Luna.

Recoveries and metallurgical results from the historical mining operations at La Luz, located immediately north of Cerro Aeropuerto were reviewed from a paper by Plecash et al, (1963).

The mill operation at La Luz consisted of the typical Merrill Crowe (CIL) plant. The flowsheet for the mill operation was as follows:

1. Washing: -5" hoisted ore is passed through a wash plant to remove slimes and fines.
2. Crushing: material passed through two Symons cone crushers to end up at -1/4".
3. Grinding: consists of three 8' x 8' ball mills with material discharged between +65 mesh to -200 mesh.
4. Flotation: consists of three, 6 bank Denver floatation units.
5. Re grind: a single 8' x 3' ball mill with a discharge of 75% passing -352 mesh.
6. Cyanidation: four 21' x 20' Dorr agitators, with center-column air lift and four 38' x 12' thickeners.
7. Precipitation: Merrill Crowe.
8. Smelting/Slag Recovery: bullion furnace.

The overall gold recovery reported in 1962 averaged 90.3%. The recoveries at La Luz may not represent the recoveries Cerro Aeropuerto.

Metallurgical results of the mining at La Luna by Rosario Resources in 1977 were not available. An estimated 5,000 oz were recovered from approximately 32,000 t mined (Hendrickson, 1995).

## 17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

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### 17.1 DATABASE

Calibre maintains all drillhole data in a Maxwell Geoservices Datashed database. The headers, survey, lithology, assays tables were exported to CSV format then transferred to Wardrop. The CSV files were created on January, 2011 and separate files were created for Cerro Aeropuerto and La Luna.

All resource estimations were conducted using Datamine Studio 3 version 3.19.3638.0.

#### 17.1.1 CERRO AEROPUERTO

A total of ten drillholes and five surface trenches were present on the Cerro Aeropuerto project. Nine of the drillholes were drilled by Yamana three in 2007 and six in 2008. One reverse circulation (RC) hole was completed by Greenstone Resources in 1997.

#### 17.1.2 LA LUNA

A total of 117 holes and seven surface trenches are present at La Luna. However, only twenty one drillholes and seven trenches within the areas of interest and with exploration potential were included in the resource estimate. The remaining ninety six holes were completed with a percussion drill in 1976-1977 by Rosario Resources.

Table 17.1 summarizes the number of drillholes used in the resources estimate for each deposit.

**Table 17.1 Drill Data Set**

	Cerro Aeropuerto		La Luna	
	Hole in Project Area	Holes Used in Resource	Hole in Project Area	Holes Used in Resource
# of Drill Holes	10	9	117	20
# of Trenches	5	5	7	7

### 17.2 SPECIFIC GRAVITY

There is currently no specific gravity data available on the project.

### 17.2.1 CERRO AEROPUERTO

Wardrop used a SG factor of 2.7 for the Cerro Aeropuerto mineral resource estimate. This is comparable to other gold skarn deposits.

Wardrop would recommend that Calibre collect SG measurements from various rock types in order to build up the data set. At a minimum, 2% of the data set should have a SG measurement, with minimum number of SG samples being twenty.

### 17.2.2 LA LUNA

Wardrop used a SG factor of 2.65 for the La Luna mineral resource estimate. This is comparable to other epithermal deposits.

Wardrop would recommend that Calibre collect SG measurements from various rock types in order to build up the data set. A minimum of 2% of the data set should have a SG measurement. This would mean that the La Luna data set should have at least thirty five SG measurements.

## 17.3 EXPLORATORY DATA ANALYSIS

### 17.3.1 CERRO AEROPUERTO

#### Assays

The portion of the deposit included in the Mineral Resource was sampled by a total of 146 assays (Table 17.2). Complete assay information was provided for gold and silver plus 51 other elements.

**Table 17.2 Cerro Aeropuerto Data Set**

Zone	Field	N samples	Min	Max	Mean	Stand dev
	LENGTH	149	0.100	2.00	1.03	0.40
	Au	146	0.010	40.03	3.43	7.07
	Ag	146	0.150	1926.10	30.07	170.50

#### Grade Capping

Raw assay data was examined to assess the amount of metal that is at risk from high-grade assays. The Datamine© Decile function was used to determine if grade capping was required for gold or silver in the deposit. Wardrop elected to apply a top cut to the grades that exceeded 40% metal content in the ninetieth (90<sup>th</sup>) decile. Based on the analysis, capping was set at 22.83 g/t for gold and 123.50 g/t for silver. A total of five gold assays or 45 of the data set were capped. Tables 17.3 shows a summary of the top cuts that were applied to the Cerro Aeropuerto dataset.

**Table 17.3 Cerro Aeropuerto Grade Capping**

Element	# Sample	Minimum Grade (g/t)	# Samples Capped	Grade Range Capped (g/t)	Capping Value (g/t)	% Capped
Au	121	0.1	5	22.83 - 40.03	22.83	4.1%
Ag	103	2	1	1926.1	123.50	1.0%

### Composites

Gold and silver assay data were composited into 1 m downhole intervals honouring the interpreted geological solids. A 1 m composite length was selected as a majority of the assays are in the 1 m range for length, and it corresponds to approximately a half to a third the cell size to be used in the modelling process. The backstitching process was used in the compositing routine to ensure all captured sample material was included. The backstitching routine adjusts the composite lengths for each individual drillhole in order to compensate for the last sample interval. The result is individual boreholes have composites that vary in length from 0.96 to 1.07 m, with a mean composite length of 0.99 m. Table 17.4 summarizes the statistics of the boreholes after capping and compositing.

**Table 17.4 Cerro Aeropuerto Composite Statistics**

Zone	Field	N samples	Min	Max	Mean	Stand dev
	LENGTH	186	0.96	1.05	0.99	0.02
	Au	186	0.01	40.03	3.07	6.07
	Ag	186	0.16	1926.10	27.49	142.70
	Au Cap	186	0.01	29.80	2.84	5.17
	Ag Cap	186	0.16	123.50	15.86	24.42

## 17.3.2 LA LUNA

### Assays

The portion of the deposit included in the Mineral Resource was sampled by a total of 1729 assays (Table 17.5). Complete assay information was provided for gold and silver plus partial assays for 34 other elements.

**Table 17.5 La Luna Assay Data Set**

Zone	Field	N samples	Min	Max	Mean	Stand dev
	LENGTH	1788	0.010	36.46	1.80	2.90
	Au	1729	0.005	115.27	0.27	1.71
	Ag	1729	0.030	353.00	2.62	14.41

### Grade Capping

Raw assay data was examined to assess the amount of metal that is at risk from high-grade assays. The Datamine® Decile function was used to determine if grade capping was required for gold or silver in the deposit. Wardrop elected to apply a top cut to the grades that exceeded 40% metal content in the ninetieth (90<sup>th</sup>) decile. Based on the analysis, different capping was required for La Luna North compared to La Luna South. In total, one gold assay and fifteen silver samples were capped. Table 17.6 shows a summary of the top cuts that were applied to the La Luna dataset.

**Table 17.6 La Luna Grade Capping**

Element	# Sample	Minimum Grade (g/t)	# Samples Capped	Grade Range Capped (g/t)	Capping Value (g/t)	% Capped
<b>La Luna North</b>						
Au	140	0.1	0	0	0.00	0.0%
Ag	98	2	13	42.5 - 353	42.50	13.3%
<b>La Luna South</b>						
Au	78	0.1	1	41.14	17.76	1.3%
Ag	88	2	2	213.6 - 215.59	134.06	2.3%

### Composites

Gold and silver assay data were composited into 1 m downhole intervals honouring the interpreted geological solids. A 1 m composite length was selected as a majority of the assays are in the 1 m range for length, and it corresponds to approximately a half to a third the cell size to be used in the modelling process. The backstitching process was used in the compositing routine to ensure all captured sample material was included. The backstitching routine adjusts the composite lengths for each individual drillhole in order to compensate for the last sample interval. Composites were complete separately for the north zone and south zone. Table 17.7 summarizes the statistics of the boreholes after capping and compositing.

**Table 17.7 La Luna Composite Statistics**

Zone	Field	N samples	Min	Max	Mean	Stand dev
<b>La Luna North</b>						
	LENGTH	137	0.94	1.20	1.00	0.03
	Au	137	0.01	6.17	0.83	1.23
	Ag	137	0.10	145.94	7.14	18.26
	Au Cap	137	0.01	6.74	0.83	1.23
	Ag Cap	137	0.10	42.50	5.14	7.86

*table continues...*

Zone	Field	N samples	Min	Max	Mean	Stand dev
<b>La Luna South</b>						
	LENGTH	100	0.76	1.05	0.99	0.04
	Au	100	0.03	41.14	2.94	5.49
	Ag	100	0.03	117.01	26.36	31.07
	Au Cap	100	0.03	17.06	2.58	3.78
	Ag Cap	100	0.03	117.01	25.40	29.32

## 17.4 GEOLOGICAL INTERPRETATION

### 17.4.1 GOLD EQUIVALENT FORMULA

A gold equivalent value was assigned to all sample intervals to assist with the geological interpretation of the mineralized zones at both Cerro Aeropuerto and La Luna. The gold equivalent value is based on a long range pricing index updated quarterly. At the time the resource models were completed the following commodity prices were used:

- Gold = \$US1058 per troy ounce
- Silver - \$US16.57 per troy ounce

The equation for the gold equivalent value is as follows;

$$\text{AuEq} = ([\text{Au grade} \times \text{Au price} \times 0.029167] + [\text{Ag grade} \times \text{Ag price} \times 0.029167]) / (\text{Au price} \times 0.029167)$$

### 17.4.2 CERRO AEROPUERTO

Three-dimensional wireframe models of mineralization was developed for the deposit based on an AuEq cut off of greater than 0.2 g/t and a minimum 2 m horizontal width.

Topographic digital terrain model was generated using digital topographic data provided by Calibre.

Sectional interpretations were digitized in Datamine Studio version 3.19.3638.0 software, and these interpretations were linked with tag strings and triangulated to build three dimensional solids. Table 17.8 summarizes the solids and associated volumes. The solids were validated in Datamine and no errors were found.

The zones of mineralization interpreted for each area were generally contiguous; however, due to the nature of the mineralization there are portions of the wireframe that have grades less than 0.2 g/t AuEq, yet are still within the mineralizing trend.

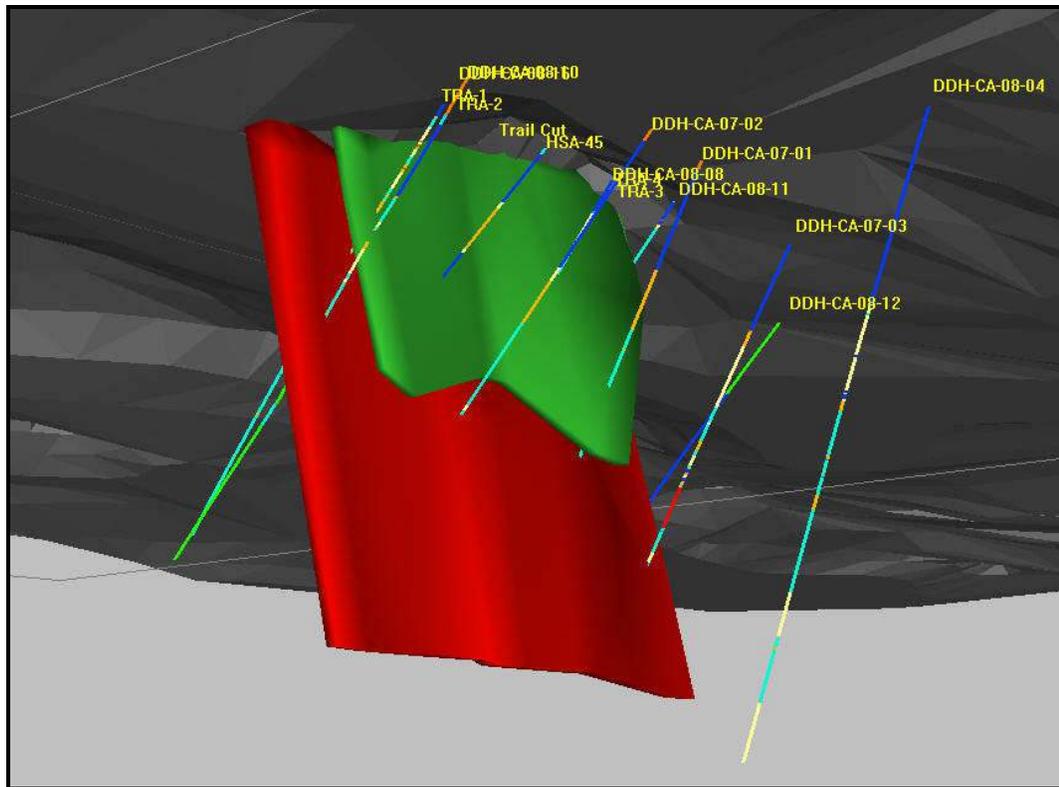
A projected cross-cutting fault to the south was used as a hard boundary to trim the southern boundary of the mineralized zone.

The non-assayed intervals were assigned void (-) value. The author believes that non-assayed material should not be assigned a zero value, as this does not reflect the true value of the material.

**Table 17.8 Cerro Aeropuerto Wireframe Volume**

Zone	Wireframe Dimensions						Volume (m <sup>3</sup> )
	Minimum X	Maximum X	Minimum Y	Maximum Y	Minimum Z	Maximum Z	
Cerro Aeropuerto	740371	740575	1518422	1518976	-200	225	2,182,050

**Figure 17.1 Cerro Aeropuerto Wireframe Oblique View (not to scale)**



### 17.4.3 LA LUNA

Three-dimensional wireframe models of mineralization was developed for the deposit based on an AuEq cut off of greater than 0.2 g/t and a minimum 2 m horizontal width.

Topographic digital terrain model was generated using digital topographic data provided by Calibre.

Sectional interpretations were digitized in Datamine Studio version 3.19.3638.0 software, and these interpretations were linked with tag strings and triangulated to build three dimensional solids. Table 17.9 summarizes the solids and associated volumes. The solids were validated in Datamine and no errors were found.

The zones of mineralization interpreted for each area were generally contiguous; however, due to the nature of the mineralization there are portions of the wireframe that have grades less than 0.2 g/t AuEq, yet are still within the mineralizing trend.

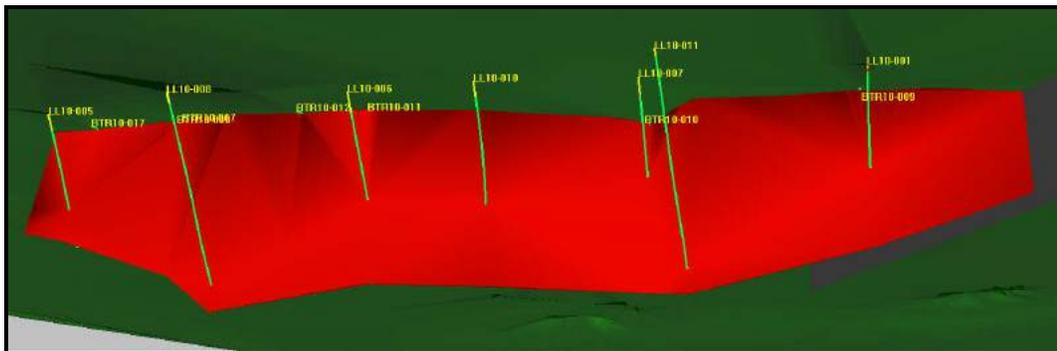
A projected cross-cutting fault was used as a hard boundary to off –set the north zone off the south zone. There is no physical evidence of this fault, which may actually be a dilation zone.

The non-assayed intervals were assigned void (-) value. The author believes that non-assayed material should not be assigned a zero value, as this does not reflect the true value of the material.

**Table 17.9 La Luna Wireframe Volume**

Zone	Wireframe Dimensions						Volume (m <sup>3</sup> )
	Minimum X	Maximum X	Minimum Y	Maximum Y	Minimum Z	Maximum Z	
La Luna North	798528	799024	1546505	1547514	-84	149	1,115,072
La Luna South	798740	798829	1545850	1546208	-38	140	334,331

**Figure 17.2 La Luna North Oblique View (not to scale)**





## 17.6 RESOURCE BLOCK MODEL

### 17.6.1 CERRO AEROPUERTO

A single block model was established in Datamine for the two parallel lenses using one parent model as the origin. The model was not rotated.

Drillhole spacing varies with the majority of the drilling spaced at approximately 100 m. A block size of 4 m x 10 m x 10 m in the X/Y/Z directions was selected in order to accommodate the nature of the mineralization.

Sub-celling of the block model on a 1 x 1 x 1 allows the parent block to be split once in each direction to more accurately fill the volume of the wireframes, thus more accurately estimate the tonnes in the resource.

Table 17.10 summarizes details of the parent block model.

**Table 17.10 Cerro Aeropuerto Parent Model**

Zone	Origin			Cell Size			Number of Cells		
	X Origin	Y Origin	Z Origin	XINC	YINC	ZINC	NX	NY	NZ
Cerro Aeropuerto	740300	1518400	-250	4	10	10	80	60	50

The interpolation of the model was completed using the estimation methods: nearest neighbour (NN) and inverse distance squared (ID2). The estimations were designed for three passes. In each pass a minimum and maximum number of samples were required as well as a maximum number of samples from a borehole in order to satisfy the estimation criteria. Table 17.11 and 17.12 summarizes the interpolation criteria and search criteria for the Cerro Aeropuerto resource model.

**Table 17.11 Cerro Aeropuerto Estimation Criteria**

Zone	Edesc	EREFNUM	VALUE_IN	VALUE_OU	NUMSAM_F	SVOL_F	MINDIS	SREFNUM	IMETHOD	POWER
Cerro	Estima Param 1	1	AUCAP	AUCAPNN				1	1	
	Estima Param 2	2	AGCAP	AGCAPNN				1	1	
	Estima Param 3	3	AUCAP	AUCAPID	num_sam	svol	DIST_SAM	1	2	2
	Estima Param 4	4	AGCAP	AGCAPID				1	2	2

**Table 17.12 Cerro Aeropuerto Search Criteria**

SREFNUM	SMETHOD	SDIST1	SDIST2	SDIST3	SANGLE1	SAXIS1	SANGLE2	SAXIS2	SANGLE3	SAXIS3
1	2	5	40	40	-20	3	0	1	-10	2
SVOLFAC1	MINNUM1	MAXNUM1	SVOLFAC2	MINNUM2	MAXNUM2	SVOLFAC3	MINNUM3	MAXNUM3		
1	3	15	3	2	15	10	2	10		
OCTMETH	MINOCT	MINPEROC	MAXPEROC	MAXKEY						
0	2	1	8	4						

## 17.6.2 LA LUNA

A single block model was established in Datamine for the North and South Zones using one parent model as the origin. The model was not rotated.

Drillhole spacing varies with the majority of the drilling spaced at approximately 100 to 150 m in the north and 40 to 800 m in the south. A block size of 4 m x 10 m x 10 m in the X/Y/Z directions was selected in order to accommodate the nature of the mineralization.

Sub-celling of the block model on a 1 x 1 x 1 allows the parent block to be split once in each direction to more accurately fill the volume of the wireframes, thus more accurately estimate the tonnes in the resource.

Table 17.13 summarizes details of the parent block model.

**Table 17.13 La Luna Parent Model**

Zone	Origin			Cell Size			Number of Cells		
	X Origin	Y Origin	Z Origin	XINC	YINC	ZINC	NX	NY	NZ
La Luna	798400	1545700	-100	4	10	10	175	190	26

The interpolation of the model was completed using the estimation methods: nearest neighbour (NN) and inverse distance squared (ID2). The estimations were designed for three passes. In each pass a minimum and maximum number of samples were required as well as a maximum number of samples from a borehole in order to satisfy the estimation criteria. Table 17.14 and 17.15 summarizes the interpolation criteria and search criteria for the La Luna resource model.

**Table 17.14 La Luna Estimation Criteria**

Zone	Edesc	EREFNUM	VALUE_IN	VALUE_OU	NUMSAM_F	SVOL_F	MINDIS	SREFNUM	IMETHOD	POWER
North	Estima Param 1	1	AUCAP	AUCAPNN				1	1	
	Estima Param 2	2	AGCAP	AGCAPNN				1	1	
	Estima Param 3	3	AUCAP	AUCAPID	num_sam	svol	DIST_SAM	1	2	2
	Estima Param 4	4	AGCAP	AGCAPID				1	2	2
South	Estima Param 1	1	AUCAP	AUCAPNN				1	1	
	Estima Param 2	2	AGCAP	AGCAPNN				1	1	
	Estima Param 3	3	AUCAP	AUCAPID	num_sam	svol	DIST_SAM	1	2	2
	Estima Param 4	4	AGCAP	AGCAPID				1	2	2

**Table 17.15 La Luna Search Criteria**

	SREFNUM	SMETHOD	SDIST1	SDIST2	SDIST3	SANGLE1	SAXIS1	SANGLE2	SAXIS2	SANGLE3	SAXIS3
North	1	2	5	50	50	-26	3	0	1	-5	2
	SVOLFAC1	MINNUM1	MAXNUM1	SVOLFAC2	MINNUM2	MAXNUM2	SVOLFAC3	MINNUM3	MAXNUM3		
	1	3	15	2	3	20	6	3	4		
	OCTMETH	MINOCT	MINPEROC	MAXPEROC	MAXKEY						
	0	2	1	8	3						
South	SREFNUM	SMETHOD	SDIST1	SDIST2	SDIST3	SANGLE1	SAXIS1	SANGLE2	SAXIS2	SANGLE3	SAXIS3
	1	2	5	50	50	-10	3	0	1	-10	2
	SVOLFAC1	MINNUM1	MAXNUM1	SVOLFAC2	MINNUM2	MAXNUM2	SVOLFAC3	MINNUM3	MAXNUM3		
	1	2	20	3	3	20	10	3	15		
	OCTMETH	MINOCT	MINPEROC	MAXPEROC	MAXKEY						
0	2	1	8	2							

## 17.7 RESOURCE CLASSIFICATION

Several factors are considered in the definition of a resource classification:

- NI 43-101 requirements
- Canadian Institute of Mining, Metallurgy and Petroleum guidelines
- authors experience with Skarn and Epithermal gold deposits
- spatial continuity of the assays within the drillholes.

No environmental, permitting, legal, title, taxation, socio-economic, marketing or other relevant issues are known to the authors that may affect the estimate of mineral resources. Mineral reserves can only be estimated on the basis of an economic evaluation that is used in a Preliminary Feasibility Study or a Feasibility Study of a mineral project; thus, no reserves have been estimated. As per NI 43-101, mineral resources, which are not mineral reserves, do not have to demonstrate economic viability.

## 17.8 MINERAL RESOURCE TABULATION

The resource reported as of February 2011 has been tabulated in terms of a gold equivalent cut off grade (AuEq). An AuEq value was assigned to reach block based on the estimated Au and Ag for the block.

The Mineral Resources for Cerro Aeropuerto and La Luna are tabulated in Tables 17.16 and Table 17.17 for the Inferred resources respectively. The resources are tabulated using various AuEq cut off grades up to an upper boundary of greater than 1.0 g/t AuEq. Figure 17.5 and 17.6 are the grade tonnage curves for Cerro Aeropuerto and La Luna respectively. Tonnages and contained metal have been rounded to reflect the level of confidence in the estimation.

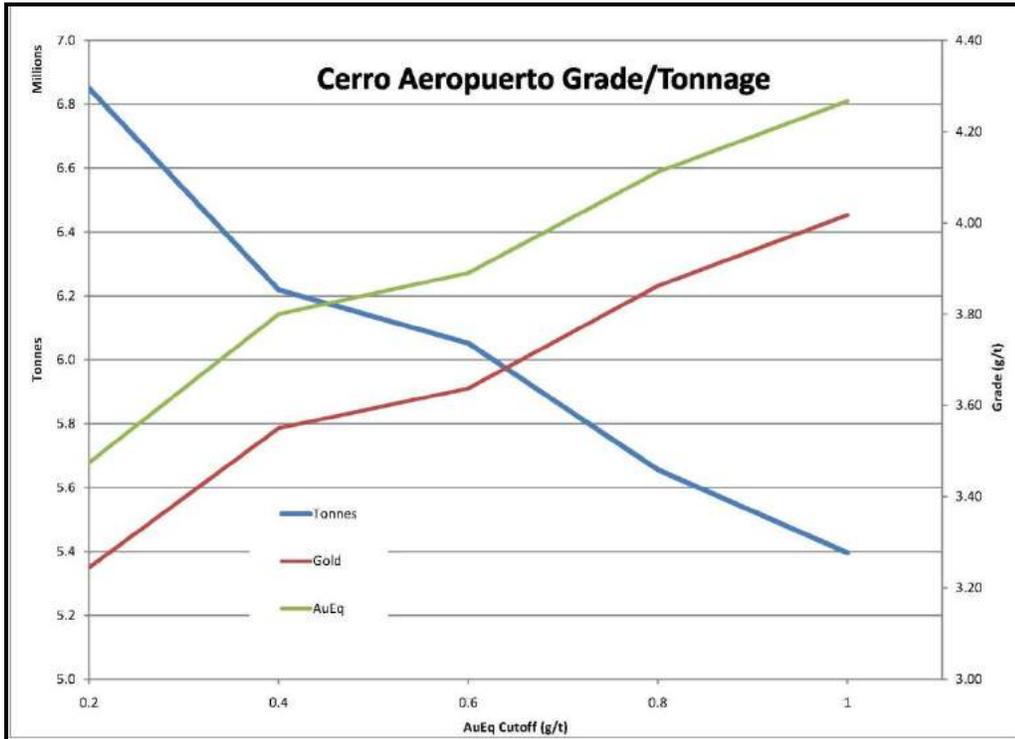
**Table 17.16 Cerro Aeropuerto Resource Cut-off**

Category	Cut off Grade AuEq (g/t)	Tonnes and Grades				Total Contained Metal				
		Tonnes	Gold (g/t)	Silver (g/t)	AuEq (g/t)	Gold (g)	Silver (g)	Gold (oz)	Silver (oz)	AuEq (oz)
Inferred	0.2	6,850,000	3.24	14.69	3.47	22,228,000	100,599,000	714,640	3,234,350	765,290
Inferred	0.4	6,219,000	3.55	15.95	3.80	22,078,000	99,203,000	709,820	3,189,470	759,780
Inferred	0.6	6,052,000	3.64	16.16	3.89	22,013,000	97,805,000	707,750	3,144,500	757,000
Inferred	0.8	5,656,000	3.86	15.95	4.11	21,845,000	90,205,000	702,330	2,900,150	747,750
Inferred	1.0	5,396,000	4.02	15.93	4.27	21,676,000	85,980,000	696,910	2,764,320	740,210

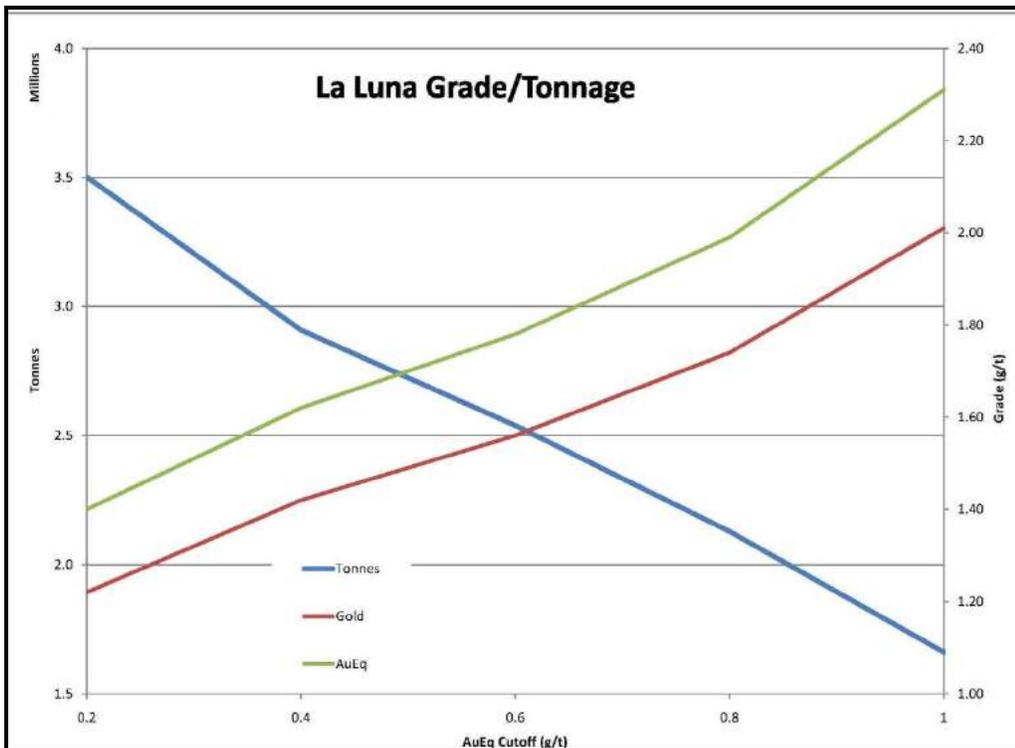
**Table 17.17 La Luna Resource Cut-off**

Category	Cut-off Grade AuEq (g/t)	Tonnes and Grades				Total Contained Metal				
		Tonnes	Gold (g/t)	Silver (g/t)	AuEq (g/t)	Gold (g)	Silver (g)	Gold (oz)	Silver (oz)	AuEq (oz)
Inferred	0.2	3,502,000	1.22	11.15	1.40	4,279,000	39,044,000	137,570	1,255,280	157,230
Inferred	0.4	2,909,000	1.42	12.79	1.62	4,129,000	37,206,000	132,750	1,196,190	151,480
Inferred	0.6	2,539,000	1.56	14.01	1.78	3,972,000	35,569,000	127,700	1,143,570	145,610
Inferred	0.8	2,129,000	1.74	15.82	1.99	3,713,000	33,685,000	119,360	1,083,010	136,320
Inferred	1.0	1,661,000	2.01	19.09	2.31	3,343,000	31,708,000	107,500	1,019,440	123,470

**Figure 17.5 Cerro Aeropuerto Grade Tonnage Curve**



**Figure 17.6 La Luna Grade Tonnage Curve**



Based on the results of similar gold operation located in Nicaragua, a 0.6 g/t AuEq cut off was used to tabulate the total for the two deposits. This based on the following parameters:

- selective mining underground operation
- operating cost of \$20/tonnes
- gold price of \$US1058/troy oz
- US\$ to Cdn\$ conversion of 1.02
- gold recovery of 94%.

Table 17.18 summaries the resource estimate at the 0.6 g/t AuEq cut off for Cerro Aeropuerto and La Luna.

**Table 17.18 Resource Totals**

Deposit	Category	Tonnes and Grades				Total Contained Metal				
		Tonnes	Gold (g/t)	Silver (g/t)	AuEq (g/t)	Gold (g)	Silver (g)	Gold (oz)	Silver (oz)	AuEq (oz)
Cerro Aeropuerto	Inferred	6,052,000	3.64	16.16	3.89	22,013,000	97,805,000	707,750	3,144,500	757,000
La Luna	Inferred	2,539,000	1.56	14.01	1.78	3,972,000	35,569,000	127,700	1,143,570	145,610
<b>Total</b>		<b>8,591,000</b>	<b>3.02</b>	<b>15.5</b>		<b>25,985,000</b>	<b>133,374,000</b>	<b>835,450</b>	<b>4,288,070</b>	<b>902,610</b>

## 17.9 VALIDATION

### 17.9.1 CERRO AEROPUERTO

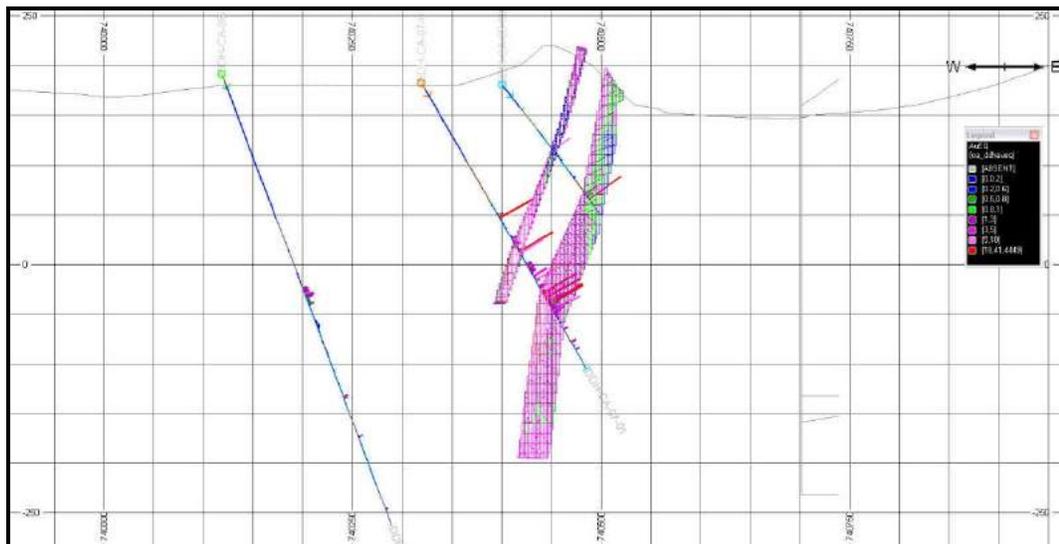
The Cerro Aeropuerto Deposit model was validated by two methods:

1. Visual comparison of colour-coded block model grades with composite grades on section and plan.
2. Comparison of the global mean block grades for inverse distance squared, nearest neighbour and composites.

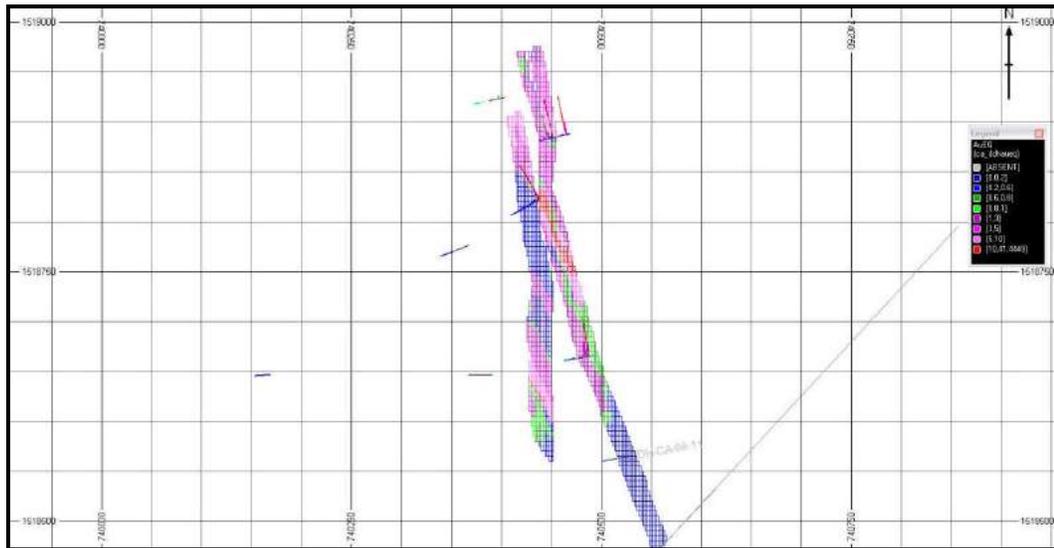
#### *Visual Comparison*

The visual comparisons of block model grades with composite grades for the deposit show a reasonable correlation between the values. No significant discrepancies were apparent from the sections and plans reviewed, yet grade smoothing is apparent (Figures 17.7 and 17.8).

**Figure 17.7 Cerro Aeropuerto Section View**



**Figure 17.8 Cerro Aeropuerto Plan View**



*Global Comparison*

The global block model statistics for the Inverse Distance were compared to the global nearest neighbour model values as well as the composite capped drillhole data and raw composite drillhole data. Table 17.19 shows this comparison of the global estimates for the two estimation method calculations. In general, there is agreement between the models. Larger discrepancies are reflected as a result of lower drill density in some portions of the model. There is a degree of smoothing apparent when compared to the diamond drill statistics. Comparisons were made using all blocks at a 0 g/t AuEq cut off.

**Table 17.19 Cerro Aeropuerto Global Statistics**

	DDH Raw Composites		DDH Capped Composites		Nearest Neighbour		Inverse Distance	
	Gold	Silver	Gold	Silver	Gold	Silver	Gold	Silver
Minimum	0.01	0.16	0.01	0.16	0.01	0.16	0.01	0.25
Maximum	40.03	1926.10	29.80	123.50	29.80	123.50	25.04	95.13
Mean	3.07	142.70	2.84	15.86	2.58	10.77	2.88	13.85

**17.9.2 LA LUNA**

The La Luna Deposit model was validated by two methods:

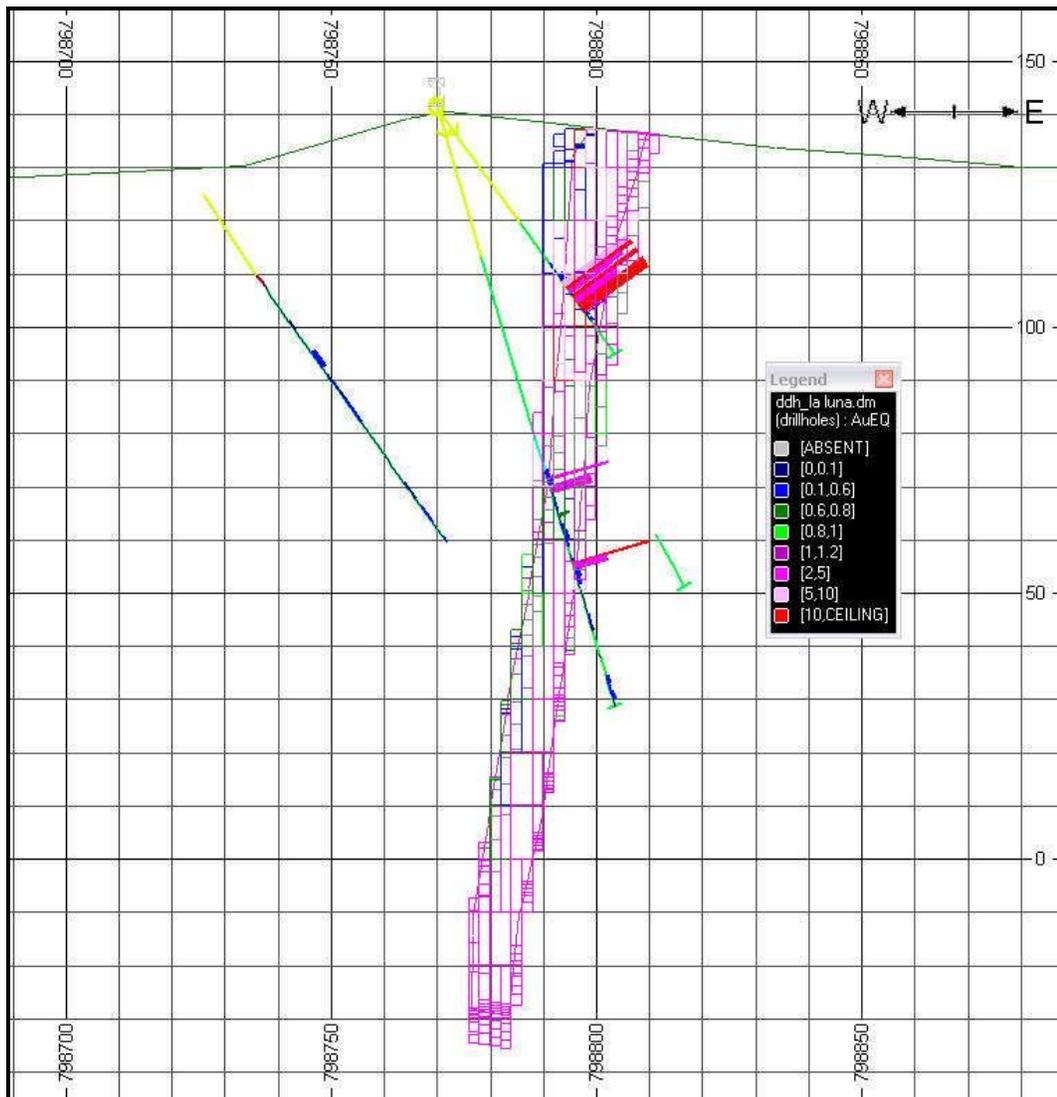
1. Visual comparison of colour-coded block model grades with composite grades on section and plan.

2. Comparison of the global mean block grades for inverse distance squared, nearest neighbour and composites.

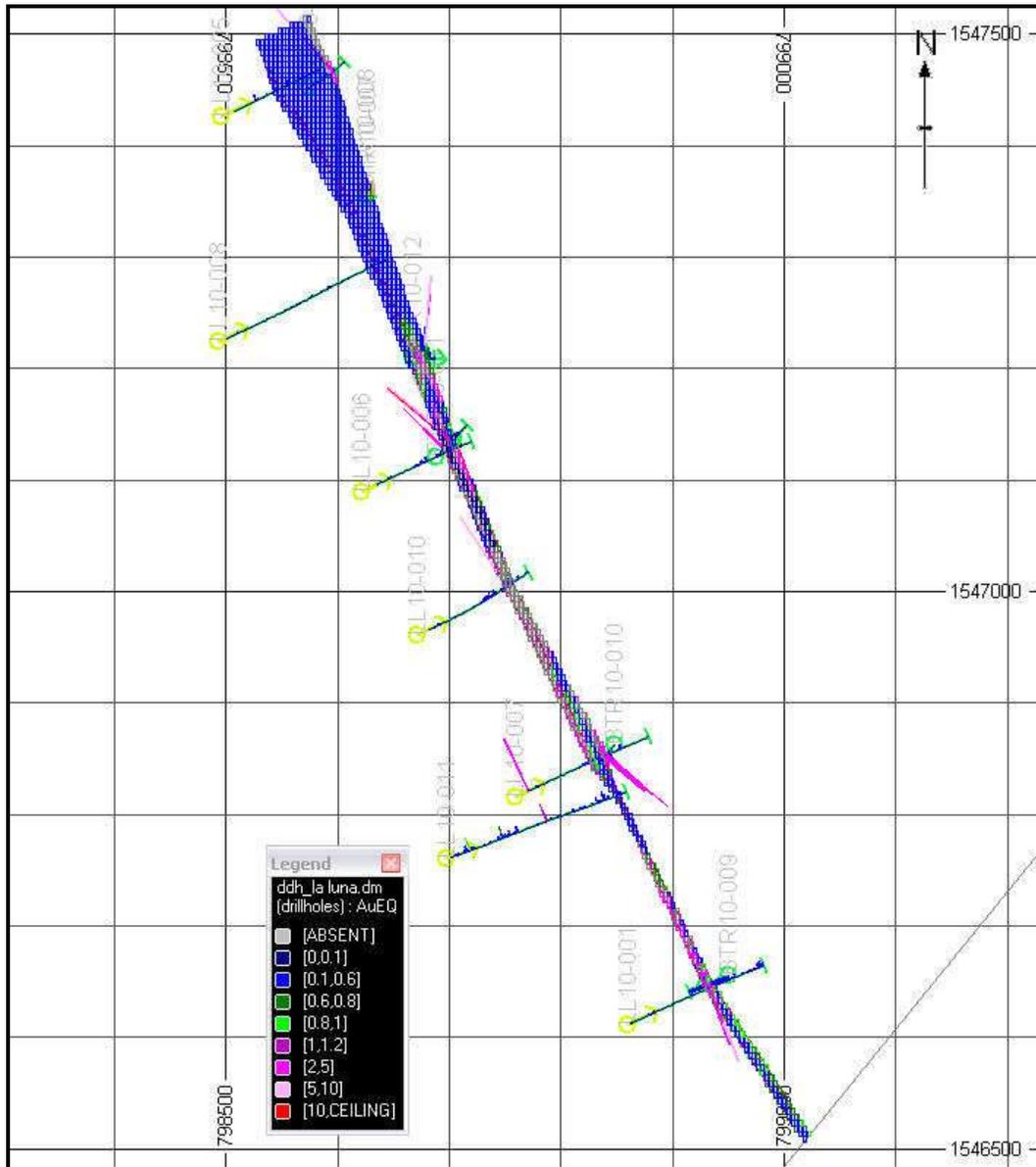
*Visual Comparison*

The visual comparisons of block model grades with composite grades for the deposit show a reasonable correlation between the values. No significant discrepancies were apparent from the sections and plans reviewed, yet grade smoothing is apparent (Figures 17.9 and 17.10).

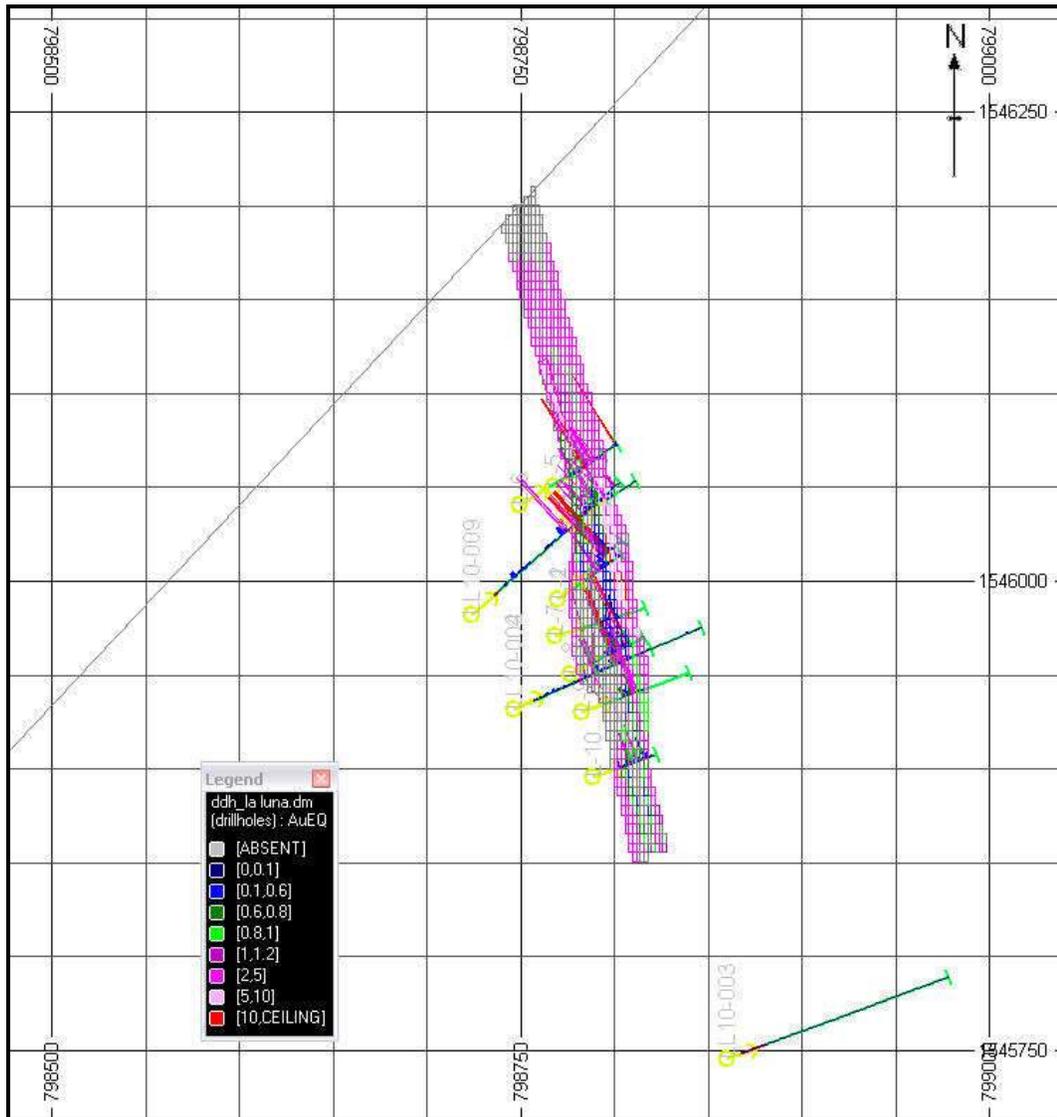
**Figure 17.9 La Luna Section View**



**Figure 17.10 La Luna North Plan View**



**Figure 17.11 La Luna South Plan View**



*Global Comparison*

The global block model statistics for the Inverse Distance interpolation were compared to the global nearest neighbour interpolation as well as the composite capped drillhole data. Table 17.20 shows this comparison of the global estimates for the two estimation method calculations. In general, there is agreement between the models. Larger discrepancies are reflected as a result of lower drill density in some portions of the model. There is a degree of apparent smoothing when compared to the diamond drill statistics. Comparisons were made using all blocks at a 0 g/t AuEq cut-off.

**Table 17.20 La Luna Global Statistics**

	DDH Raw Composites		DDH Capped Composites		Nearest Neighbour		Inverse Distance	
	Gold	Silver	Gold	Silver	Gold	Silver	Gold	Silver
Minimum	0.01	0.03	0.01	0.03	0.01	0.03	0.03	0.13
Maximum	41.14	145.94	17.06	117.01	17.76	117.01	15.46	102.91
Mean	1.72	15.25	1.56	13.69	1.09	8.74	1.10	9.94

## 18.0 OTHER RELEVANT DATA AND INFORMATION

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No other relevant information.

## 19.0 INTERPRETATION AND CONCLUSIONS

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Based on the review of the available information and observations made during the site visit, the author concludes the following, in no particular order of perceived importance:

- The Borosi Concessions are currently held 100% by Calibre, through a wholly owned subsidiary.
- The Siuna and La Luna Concession, which this report addresses is not subject to the option agreement between B2 Gold and Calibre.
- Cerro Aeropuerto is analogous to a skarn/replacement deposit typical for the region.
- La Luna is analogous to a low sulphidation epithermal deposit typical for the region.
- Mineralization at Cerro Aeropuerto is currently defined in two parallel zones with a strike length of approximately 500 m and a vertical extent of 400 m.
- Mineralization at La Luna is currently defined as a single zone offset approximately 400 m by a cross-cutting fault. The total strike length is approximately 1,450 m and a vertical extent of 200 m.
- Drilling and sampling procedures, sample preparation and assay protocols are generally conducted in agreement with best practices.
- Verification of the drillhole collars, surveys, assays, core and drillhole logs indicates the Calibre data is reliable.
- Some twinning of historical drillholes at Cerro Aeropuerto will be required to confirm older assay data. Existing validation is incomplete, due to loss of historic data.
- Based on the QA/QC program, the data is sufficiently reliable to support the resource estimate generated for both Cerro Aeropuerto and La Luna.
- The mineral models have been constructed in conformance to industry standard practices.
- The geological understanding is sufficient to support the resource estimation.
- At a gold cut-off grade of 0.6 g/t AuEq, Cerro Aeropuerto and La Luna contain a combined Inferred Resource totalling 8.6 million tonnes with an average grade 3.02 g/t Au and 15.5 g/t Ag.
- The specific gravity values used to determine the tonnages at Cerro Aeropuerto and La Luna were derived from SG values typical to skarn/replacement and low sulphidation epithermal deposits.

- The Cerro Aeropuerto deposit remains open to the north and at depth in addition to the potential for hidden mineralized dykes as encountered in DDH-CA-08-04.
- The La Luna Deposit remains open at depth and has the potential to host mineralization in a dilational zone between the off-set of La Luna North and La Luna South as well as to the south.

## 20.0 RECOMMENDATIONS

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It is the author's opinion that additional exploration expenditures are warranted. Two separate exploration programs are proposed. Each can be carried out concurrently and independently of each other, and neither is contingent on the results of the other.

### 20.1 PHASE 1 CERRO AEROPUERTO EXPANSION

Phase 1 is designed to expand the current resource at Cerro Aeropuerto by testing the strike extension of the deposit. This will entail a diamond drilling program.

The drilling campaign should be designed to target the potential strike extensions of Cerro Aeropuerto particularly to the north and to a depth of approximately 200 m vertical. Drillhole spacing should continue at approximately 75 to 100 m along section and 50 to 75 m vertically on section in order to support an Inferred Resource.

Some holes should follow up on the buried zone identified in DDH-CA-08-04 as a potential new zone.

Table 20.1 summarizes the exploration program proposed.

**Table 20.1 Phase 1 Cerro Aeropuerto Expansions**

Project	Activity	Rate	Units	Cost
Cerro Aeropuerto	DD Drilling (27 holes)	\$120/m	6,000	\$720,000
	Salaries	\$8000/month	4	\$32,000
	Fuel	\$1500/month	3	\$4,500
	Admin - Camp	\$2500/month	4	\$10,000
Indirect Costs	Consumable			\$55,000
<b>Total</b>				<b>\$821,500</b>

**Note:** includes all drilling related charges, sample analysis, road building.

### 20.2 PHASE 2 CERRO AEROPUERTO DELINEATION

Phase 2 is designed to delineate the resource at Cerro Aeropuerto by infilling of the deposit. This will entail a diamond drilling program.

The drilling campaign should be designed to target the core areas of the Cerro Aeropuerto deposit. Drillhole spacing should be at approximately 30 to 50 m along section and 25 to 50 m vertically on section in order to improve the resource classification.

Table 20.2 summarizes the exploration program proposed.

**Table 20.2 Phase 2 Cerro Aeropuerto Delineation**

Project	Activity	Rate	Units	Cost
Cerro Aeropuerto	DD Drilling (45 holes)	\$120/m	9,000	\$1,080,000
	Salaries	\$8000/month	6	\$48,000
	Fuel	\$1500/month	5	\$7,500
	Admin - Camp	\$2500/month	6	\$15,000
Indirect Costs	Consumable			\$55,000
<b>Total</b>				<b>\$1,205,500</b>

**Note:** includes all drilling related charges, sample analysis, road building.

## 20.3 PHASE 1 LA LUNA EXPANSION

Phase 1 is designed to expand the current resource at La Luna by testing the strike extension of the deposit. This will entail a mapping, and IP survey and diamond drilling.

The mapping program should focus to the south of the current resource. The IP survey at 100 m line spacing south along strike of the resource should assist in delineating the mineralized zone and to identify drill targets. The IP survey should also test to potential of the dilational jog that off-set La Luna North from La Luna south.

The drilling campaign should be designed to target the potential strike extensions of La Luna, particularly to the south. Drillhole spacing should continue at approximately 100 to 150 m along section and 75 to 100 m vertically on section in order to support an inferred resource.

Some holes should follow up any IP targets in the potential dilational jog.

Table 20.3 summarizes the exploration program proposed.

**Table 20.3 Phase 1 La Luna Extension**

Project	Activity	Rate	Units	Cost
	Mapping	\$800/day	30	\$24,000
	Induced Polarization Survey	\$1200/km	22	\$26,400
La Luna	DD Drilling (10 holes)	\$120/m	1,500	\$180,000
	Salaries	\$8000/month	3	\$24,000
	Fuel	\$1500/month	3	\$4,500
	Admin - Camp	\$2500/month	3	\$7,500
Indirect Costs	Consumable			\$15,000
<b>Total</b>				<b>\$281,400</b>

**Note:** includes all drilling related charges, sample analysis, road building.

## 20.4 PHASE 2 LA LUNA DELINEATION

Phase 2 is designed to delineate the resource at La Luna by infilling of the deposit. This will entail a diamond drilling program.

The drilling campaign should be designed to target the core areas of the La Luna deposit, particularly in the south where widths are wider and grades are higher. Drillhole spacing should be at approximately 50 m along section and 50 m vertically on section in order to improve the resource classification.

Table 20.4 summarizes the exploration program proposed.

**Table 20.4 Phase 2 La Luna Delineation**

Project	Activity	Rate	Units	Cost
La Luna	Trenching	\$75/m	300	\$22,500
	DD Drilling (20 holes)	\$120/m	3,000	\$360,000
Indirect Costs	Salaries	\$8000/month	5	\$40,000
	Fuel	\$1500/month	5	\$7,500
	Admin - Camp	\$2500/month	5	\$12,500
	Consumable			\$25,000
<b>Total</b>				<b>\$467,500</b>

**Note:** includes all drilling related charges, sample analysis, road building.

## 20.5 OTHER RECOMMENDATIONS

The following recommendations are to assist in moving the project forward;

- Adjust the insertion location of the QA/QC blanks to allow for the control samples to be placed within or immediately after mineralized intervals. This will be a better use of the control samples as it is designed to monitor the prep facility.
- For future drilling programs, collect SG measurement for the various rock types and alteration styles. Approximately 4-5% of the database should have a SG measurement. This will allow for a more accurate calculation of the tonnage in the subsequent resource estimate.
- Consider conducting a preliminary metallurgical test using drill core or course rejects, to determine the global recoveries that maybe expected from the deposit.
- The use of an underground diamond drill on surface may facilitate shallow dipping or horizontal drilling on the hill sides, while minimising disruption within the community of Siuna.

- A new topographic survey should be conducted in the La Luna area in order to determine the proper elevation, then all drill collars and trenches must be adjusted to the proper elevations

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## 22.0 DATE AND SIGNATURE PAGE

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The effective date of this Technical Report, titled “NI 43-101 Technical Report and Resource Estimation on the Cerro Aeropuerto and La Luna Deposits”, is April 11<sup>th</sup>, 2011.

Signed,

*“Original document signed by  
Todd McCracken, P.Geol.”*

---

Todd McCracken, P.Geol.  
Wardrop, a Tetra Tech Company

## 23.0 CERTIFICATE OF QUALIFIED PERSON

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I, Todd McCracken, P. Geo., of Sudbury, Ontario, do hereby certify:

- I am a Principal Geologist with Wardrop Engineering with a business address at 101-957 Cambrian Heights, Sudbury, Ontario, P3C 5M6.
- This certificate applies to the technical report entitled NI 43-101 Technical Report and Resource Estimation on the Cerro Aeropuerto and La Luna Deposits, dated April 11, 2011 (the "Technical Report").
- I am a graduate of the University of Waterloo, (B.Sc. Honours, 1992).
- I am a member in good standing of the Association of Professional Engineers and Geoscientists of Ontario, License #0631.
- My relevant experience is 18 years of experience in exploration and operations, including several years working in gold deposits.
- I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
- My most recent personal inspection of the Property was on February 7, 2011 for 5 days.
- I am responsible for Sections 1-21 of the Technical Report.
- I am independent of Calibre Mining Corp. as defined by Section 1.4 of the Instrument.
- I have no prior involvement with the Property that is the subject of the Technical Report.
- I have read the Instrument and the technical report has been prepared in compliance with the Instrument.
- As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Signed and dated this 11<sup>th</sup> day of April, 2011 at Sudbury, Ontario.

*"Original document signed and sealed by Todd McCracken, P. Geo."*

---

Todd McCracken, P. Geo.  
Principal Geologist

# APPENDIX A

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SRM CERTIFICATES

# CDN Resource Laboratories Ltd.

Unit 2 - 20148, 102nd Avenue, Langley, B.C., Canada, V1M 4B4, Ph: 604-882-8422 Fax: 604-882-8466  
(www.cdnlabs.com)

## ORE REFERENCE STANDARD: CDN-CGS-18

Recommended values and the "Between Lab" Two Standard Deviations

*Copper concentration:*  $0.319 \pm 0.015 \%$

*Gold concentration*  $0.297 \pm 0.040 \text{ g/t}$  (provisional only, RSD = 6.86%)

### **\*\* Note:**

**Standards with an RSD of near or less than 5 % are certified, RSD's of between 5 % and 15 % are Provisional, and RSD's over 15 % are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.**

**PREPARED BY:** CDN Resource Laboratories Ltd.

**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia

**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.

**DATE OF CERTIFICATION:** February 15, 2008

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 13 laboratories for round robin assaying.

### **ORIGIN OF REFERENCE MATERIAL:**

This standard is made from a combination of granitic material, Au / Cu ores and an Au / Cu concentrate.

### **Approximate chemical composition is as follows:**

	Percent			Percent
SiO <sub>2</sub>	59.2		MgO	2.0
Al <sub>2</sub> O <sub>3</sub>	16.5		K <sub>2</sub> O	2.2
Fe <sub>2</sub> O <sub>3</sub>	7.3		TiO <sub>2</sub>	0.7
CaO	2.4		LOI	3.7
Na <sub>2</sub> O	3.8		S	0.8

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

## STANDARD REFERENCE MATERIAL CDN-CGS-18

### Results from round-robin assaying:

**Assay Procedures:**    **Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).  
                                   **Cu:** 4-acid digestion, AA or ICP finish.

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13
	Au (g/t)												
CGS-18-1	0.305	0.272	0.286	0.29	0.289	0.279	0.27	0.294	0.331	0.294	0.308	0.322	0.294
CGS-18-2	0.310	0.275	0.288	0.29	0.279	0.282	0.28	0.296	0.307	0.305	0.294	0.310	0.273
CGS-18-3	0.274	0.279	0.296	0.33	0.375	0.272	0.31	0.300	0.287	0.293	0.312	0.317	0.266
CGS-18-4	0.303	0.266	0.340	0.32	0.343	0.288	0.32	0.297	0.335	0.266	0.32	0.315	0.276
CGS-18-5	0.279	0.303	0.280	0.34	0.294	0.280	0.30	0.300	0.347	0.293	0.296	0.294	0.273
CGS-18-6	0.300	0.263	0.291	0.30	0.350	0.287	0.32	0.296	0.276	0.338	0.269	0.304	0.285
CGS-18-7	0.319	0.306	0.355	0.30	0.272	0.311	0.26	0.297	0.386	0.280	0.273	0.284	0.293
CGS-18-8	0.310	0.319	0.334	0.33	0.294	0.283	0.33	0.300	0.286	0.276	0.293	0.325	0.274
CGS-18-9	0.285	0.258	0.314	0.34	0.319	0.289	0.29	0.296	0.277	0.312	0.279	0.290	0.280
CGS-18-10	0.307	0.328	0.305	0.29	0.294	0.309	0.39	0.300	0.347	0.300	0.293	0.298	0.278
Mean	0.299	0.287	0.309	0.313	0.311	0.288	0.307	0.298	0.318	0.296	0.294	0.306	0.279
Std. Dev.	0.015	0.025	0.026	0.021	0.034	0.013	0.037	0.002	0.037	0.020	0.017	0.014	0.009
%RSD	4.96	8.70	8.39	6.74	11.04	4.38	12.10	0.75	11.64	6.85	5.67	4.61	3.23
	Cu (%)												
CGS-18-1	0.316	0.326	0.303	0.317	0.317	0.327	0.330	0.310	0.334	0.324	0.333	0.312	0.322
CGS-18-2	0.324	0.326	0.303	0.315	0.316	0.324	0.327	0.310	0.340	0.325	0.309	0.310	0.305
CGS-18-3	0.319	0.323	0.305	0.316	0.317	0.318	0.324	0.320	0.329	0.329	0.318	0.316	0.313
CGS-18-4	0.315	0.330	0.303	0.316	0.319	0.323	0.332	0.320	0.332	0.322	0.316	0.317	0.293
CGS-18-5	0.314	0.325	0.311	0.313	0.319	0.323	0.328	0.320	0.335	0.322	0.317	0.316	0.313
CGS-18-6	0.315	0.321	0.311	0.322	0.318	0.325	0.327	0.310	0.343	0.324	0.323	0.313	0.302
CGS-18-7	0.318	0.325	0.308	0.315	0.317	0.325	0.329	0.320	0.334	0.323	0.318	0.314	0.312
CGS-18-8	0.317	0.321	0.304	0.314	0.322	0.322	0.331	0.320	0.333	0.320	0.322	0.314	0.307
CGS-18-9	0.320	0.328	0.308	0.317	0.324	0.323	0.319	0.310	0.339	0.329	0.315	0.315	0.303
CGS-18-10	0.315	0.324	0.312	0.318	0.319	0.322	0.324	0.320	0.335	0.324	0.317	0.315	0.311
Mean	0.317	0.325	0.307	0.316	0.319	0.323	0.327	0.316	0.335	0.324	0.319	0.314	0.308
Std. Dev.	0.003	0.003	0.004	0.002	0.002	0.002	0.004	0.005	0.004	0.003	0.006	0.002	0.008
%RSD	0.96	0.88	1.19	0.78	0.78	0.74	1.19	1.63	1.23	0.89	1.97	0.67	2.58

**STANDARD REFERENCE MATERIAL CDN-CGS-18**

**Participating Laboratories:**

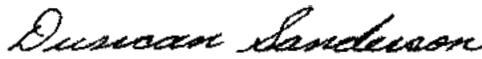
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver  
Actlabs, Ontario, Canada  
Alaska Assay Laboratory, USA  
Assayers Canada Ltd., Vancouver  
ALS Chemex Laboratories, North Vancouver  
Alex Stewart Assayers, Argentina  
Genalysis Laboratory Services Pty. Ltd., Australia  
Labtium Laboratory, Finland  
OMAC Laboratories Ltd., Ireland  
Skyline Assayers & Laboratories, Tucson, USA  
Teck Cominco - Global Discovery Laboratory, Vancouver  
TSL Laboratories, Saskatoon  
Ultra Trace Analytical Laboratories, Australia

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. or Barry Smee accept no liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist



Dr. Barry Smee, Ph.D., P. Geo.

# CDN Resource Laboratories Ltd.

Unit 2 - 20148, 102nd Avenue, Langley, B.C., Canada, V1M 4B4, Ph: 604-882-8422 Fax: 604-882-8466  
(www.cdnlabs.com)

## ORE REFERENCE STANDARD: CDN-CGS-19

Recommended values and the "Between Lab" Two Standard Deviations

*Copper concentration:* 0.132 ± 0.010 %

*Gold concentration:* 0.74 ± 0.07 g/t

**PREPARED BY:** CDN Resource Laboratories Ltd.

**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia

**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.

**DATE OF CERTIFICATION:** June 15, 2008

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 13 laboratories for round robin assaying.

### **ORIGIN OF REFERENCE MATERIAL:**

This standard is made from a combination of granitic material and Au / Cu ores.

### **Approximate chemical composition is as follows:**

	Percent			Percent
SiO <sub>2</sub>	61.0		MgO	3.0
Al <sub>2</sub> O <sub>3</sub>	13.4		K <sub>2</sub> O	1.8
Fe <sub>2</sub> O <sub>3</sub>	8.7		TiO <sub>2</sub>	0.7
CaO	3.8		LOI	3.0
Na <sub>2</sub> O	2.5		S	1.1

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

## **STANDARD REFERENCE MATERIAL CDN-CGS-19**

### **Results from round-robin assaying:**

**Assay Procedures:**    **Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).  
                                   **Cu:** 4-acid digestion, AA or ICP finish.

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au (g/t)											
CGS-19-1	0.723	0.797	0.78	0.76	0.786	0.677	0.76	0.761	0.690	0.736	0.77	0.768
CGS-19-2	0.689	0.767	0.73	0.78	0.827	0.710	0.72	0.793	0.795	0.716	0.73	0.828
CGS-19-3	0.698	0.804	0.76	0.72	0.822	0.689	0.74	0.743	0.731	0.739	0.72	0.798
CGS-19-4	0.732	0.731	0.77	0.72	0.787	0.682	0.72	0.785	0.797	0.721	0.76	0.772
CGS-19-5	0.729	0.715	0.81	0.73	0.807	0.678	0.78	0.749	0.675	0.725	0.78	0.831
CGS-19-6	0.716	0.734	0.71	0.76	0.868	0.710	0.73	0.741	0.747	0.721	0.78	0.751
CGS-19-7	0.720	0.741	0.74	0.73	0.802	0.680	0.75	0.742	0.724	0.734	0.75	0.844
CGS-19-8	0.723	0.731	0.75	0.74	0.826	0.723	0.77	0.735	0.741	0.755	0.79	0.815
CGS-19-9	0.692	0.727	0.76	0.71	0.785	0.721	0.78	0.714	0.903	0.687	0.72	0.893
CGS-19-10	0.746	0.697	0.71	0.75	0.837	0.722	0.75	0.774	0.722	0.765	0.80	0.826
Mean	0.717	0.744	0.752	0.740	0.815	0.699	0.750	0.754	0.752	0.730	0.760	0.813
Std. Dev.	0.018	0.035	0.031	0.022	0.027	0.020	0.023	0.024	0.065	0.022	0.029	0.042
%RSD	2.57	4.64	4.15	2.99	3.26	2.82	3.01	3.23	8.70	2.96	3.82	5.17
	Cu (%)											
CGS-19-1	0.125	0.137	0.132	0.125	0.137	0.130	0.119	0.139	0.136	0.134	0.13	0.126
CGS-19-2	0.128	0.137	0.132	0.124	0.137	0.130	0.128	0.135	0.136	0.135	0.14	0.125
CGS-19-3	0.126	0.137	0.132	0.126	0.137	0.133	0.128	0.139	0.135	0.132	0.13	0.124
CGS-19-4	0.125	0.139	0.129	0.125	0.137	0.132	0.129	0.141	0.133	0.134	0.13	0.123
CGS-19-5	0.128	0.138	0.131	0.125	0.136	0.134	0.128	0.137	0.136	0.133	0.13	0.122
CGS-19-6	0.129	0.138	0.132	0.127	0.135	0.131	0.129	0.136	0.134	0.134	0.13	0.121
CGS-19-7	0.124	0.140	0.136	0.126	0.136	0.130	0.128	0.137	0.135	0.136	0.13	0.123
CGS-19-8	0.128	0.138	0.132	0.125	0.137	0.132	0.129	0.139	0.136	0.132	0.14	0.122
CGS-19-9	0.127	0.141	0.134	0.125	0.135	0.131	0.127	0.135	0.135	0.131	0.13	0.123
CGS-19-10	0.128	0.137	0.135	0.126	0.136	0.132	0.130	0.137	0.135	0.132	0.14	0.120
Mean	0.127	0.138	0.133	0.125	0.136	0.132	0.128	0.138	0.135	0.133	0.133	0.123
Std. Dev.	0.002	0.001	0.002	0.001	0.001	0.001	0.003	0.002	0.001	0.002	0.005	0.002
%RSD	1.33	1.01	1.52	0.64	0.60	1.03	2.43	1.42	0.74	1.18	3.63	1.46

**Note: Au data from Lab. 12 was removed for failing the "t" test.**

**STANDARD REFERENCE MATERIAL CDN-CGS-19**

**Participating Laboratories:**

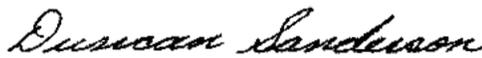
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver  
Actlabs, Ontario, Canada  
Assayers Canada Ltd., Vancouver  
ALS Chemex Laboratories, North Vancouver  
Alex Stewart Assayers, Argentina  
Genalysis Laboratory Services Pty. Ltd., Australia  
International Plasma Laboratories, Canada  
Labtium Laboratory, Finland  
OMAC Laboratories Ltd., Ireland  
Skyline Assayers & Laboratories, Tucson, USA  
TSL Laboratories, Saskatoon, Canada  
Ultra Trace Analytical Laboratories, Australia

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. or Barry Smee accept no liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist



Dr. Barry Smee, Ph.D., P. Geo.

# CDN Resource Laboratories Ltd.

Unit 2 - 20148, 102nd Avenue, Langley, B.C., Canada, V1M 4B4, Ph: 604-882-8422 Fax: 604-882-8466  
(www.cdnlabs.com)

## ORE REFERENCE STANDARD: CDN-CGS-20

Recommended values and the "Between Lab" Two Standard Deviations

*Copper concentration:* 3.36 ± 0.17 %

*Gold concentration:* 7.75 ± 0.47 g/t

**PREPARED BY:** CDN Resource Laboratories Ltd.

**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia

**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.

**DATE OF CERTIFICATION:** September 05, 2008

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 12 laboratories for round robin assaying.

### **ORIGIN OF REFERENCE MATERIAL:**

This standard is made from a combination of granitic material and an Au / Cu concentrate.

### **Approximate chemical composition is as follows:**

	Percent		Percent
SiO <sub>2</sub>	52.2	MgO	2.7
Al <sub>2</sub> O <sub>3</sub>	13.0	K <sub>2</sub> O	1.8
Fe <sub>2</sub> O <sub>3</sub>	12.2	TiO <sub>2</sub>	0.7
CaO	6.1	LOI	4.7
Na <sub>2</sub> O	2.5	S	5.9

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

## **STANDARD REFERENCE MATERIAL CDN-CGS-20**

### **Results from round-robin assaying:**

**Assay Procedures:**   **Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).

**Cu:** 4-acid digestion, AA or ICP finish.

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au (g/t)											
	7.17	7.76	7.75	7.40	7.91	8.03	7.85	7.31	7.84	8.20	7.59	7.88
	7.78	7.60	7.82	7.60	8.17	7.67	8.03	7.78	7.88	8.31	7.41	7.84
	7.58	7.66	7.61	7.20	8.13	7.95	7.96	7.65	7.92	8.31	7.67	7.71
	7.79	7.52	7.60	7.50	8.03	8.04	8.02	7.65	7.72	8.54	7.77	8.23
	7.60	7.64	8.00	7.60	8.14	7.83	8.42	7.72	8.12	7.52	7.68	7.68
	7.57	7.91	7.61	7.30	8.17	7.95	8.25	7.38	7.88	8.45	7.49	8.03
	7.37	7.65	7.70	7.60	8.06	7.77	8.12	7.41	7.68	8.41	7.74	7.55
	7.77	7.82	7.50	7.70	7.99	7.65	7.59	7.32	7.92	8.32	7.46	7.65
	7.53	7.53	7.67	7.60	7.80	7.59	7.50	7.32	8.08	7.43	7.52	7.95
	7.30	7.58	8.12	7.20	8.12	8.10	8.10	7.63	7.84	8.18	7.76	7.86
Mean	7.55	7.67	7.74	7.47	8.05	7.86	7.98	7.52	7.89	8.17	7.61	7.84
Std. Dev.	0.211	0.127	0.193	0.183	0.122	0.182	0.280	0.184	0.137	0.381	0.133	0.201
%RSD	2.80	1.65	2.50	2.45	1.52	2.31	3.50	2.45	1.74	4.66	1.75	2.57
	Cu (%)											
	3.36	3.38	3.54	3.28	3.40	3.83	3.40	3.28	3.35	3.22	3.32	3.54
	3.36	3.42	3.42	3.31	3.50	3.63	3.30	3.36	3.35	3.20	3.49	3.58
	3.34	3.45	3.33	3.29	3.44	3.86	3.47	3.31	3.38	3.24	3.31	3.56
	3.37	3.51	3.38	3.28	3.42	3.82	3.36	3.32	3.36	3.21	3.33	3.67
	3.34	3.42	3.36	3.27	3.44	3.45	3.28	3.29	3.34	3.25	3.30	3.60
	3.36	3.34	3.40	3.28	3.41	3.85	3.30	3.38	3.32	3.25	3.42	3.57
	3.37	3.43	3.38	3.28	3.50	3.61	3.27	3.44	3.36	3.26	3.29	3.56
	3.34	3.48	3.33	3.27	3.49	3.84	3.33	3.33	3.38	3.27	3.34	3.59
	3.37	3.43	3.35	3.27	3.45	3.69	3.29	3.50	3.34	3.22	3.25	3.53
	3.33	3.43	3.36	3.29	3.40	3.57	3.25	3.37	3.37	3.24	3.32	3.57
Mean	3.35	3.43	3.38	3.28	3.45	3.71	3.32	3.36	3.36	3.24	3.34	3.58
Std. Dev.	0.015	0.047	0.063	0.013	0.040	0.145	0.067	0.069	0.018	0.023	0.069	0.039
%RSD	0.45	1.38	1.86	0.40	1.15	3.89	2.02	2.05	0.54	0.70	2.07	1.09

**Note:** Au data from Lab. 10 was removed for failing the “t” test.

Cu data from Lab. 6 was removed for failing the “t” test.

**STANDARD REFERENCE MATERIAL CDN-CGS-20**

**Participating Laboratories:**

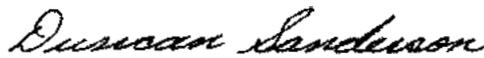
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver  
Actlabs, Ontario, Canada  
Assayers Canada Ltd., Vancouver  
ALS Chemex Laboratories, North Vancouver  
Alex Stewart Assayers, Argentina  
Genalysis Laboratory Services Pty. Ltd., Australia  
International Plasma Laboratories, Canada  
Labtium Laboratory, Finland  
OMAC Laboratories Ltd., Ireland  
Skyline Assayers & Laboratories, Tucson, USA  
TSL Laboratories, Saskatoon, Canada  
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Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist



Dr. Barry Smee, Ph.D., P. Geo.

# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

**Certified Gold Reference Material Product Code**

## G302-7

### Certified Control Values

<b>50 gram Fire Assay</b>	
Gold Grade	2.14 ppm
Standard Deviation	0.09 ppm
Confidence Interval	+/- 0.014 ppm
<b>Aqua Regia Digest</b>	
Gold Grade	2.14 ppm
Standard Deviation	0.13 ppm
Confidence Interval	+/- 0.027 ppm



### CRM Details

<b>Control Statistic Details</b>	<b>Neutron Activation Analysis Results (ppm)</b>		<b>Major Elements Fusion / XRF (%)</b>	
	Control statistics were produced from results accumulated in the : <u>April-2004</u> Geostats Pty Ltd Laboratory Round Robin Program. <u>164</u> laboratories tested this material using 50 gram Fire Assay. <u>96</u> laboratories tested it using an Aqua Regia Technique.	Antimony	4.595	Fe
<b>Source Material</b> Prior to homogenisation and testing, this material was sourced from Oxide Ore Siliceous	Arsenic	1.4	SiO2	nr
<b>Colour Designation</b> Pale reddish brown	Barium	<100	Al2O3	nr
<b>Usage</b> This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.	Bromine	<1	TiO2	nr
<b>Preparation and Packaging</b> All standards are dried in an oven for a minimum of 12 hours at 110C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an Air Classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.  Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.	Cadmium	nr	MnO	nr
<b>Assay Testwork</b> All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by a minimum of 50 reputable laboratories selected from across the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.	Cerium	4.195	CaO	nr
	Caesium	29.05	P	nr
	Chromium	13.1	S	nr
	Cobalt	<1	MgO	nr
	Europium	<0.5	K2O	nr
	Gold ppb	2185	Na2O	nr
	Hafnium	10.6	LOI1000	nr
	Iridium ppb	<20		
	Iron %	2.17		
	Lanthanum	2.335		
	Lutetium	<0.2		
	Molybdenum	<5		
	Nickel	nr		
	Rubidium	888		
	Samarium	0.335		
	Scandium	0.72		
	Selenium	<5		
	Sodium %	1.27		
	Tantalum	<1		
	Tellurium	<5		
	Terbium	nr		
	Thorium	0.8		
	Tin	nr		
	Tungsten	<2		
	Uranium	<2		
	Ytterbium	<0.5		
	Zinc	<100		
	Zirconium	<500		
	Calcium%	<1		
	Potassium %	4.25		
	Silver	<5		
	Mercury	nr		
	Neodymium	nr		
	Strontium	nr		

10A Marsh Close, O'Connor, Western Australia 6163  
Phone : +61 8 9314 2566, Fax : +61 8 9314 3699  
e-mail : [pjh@geostats.com.au](mailto:pjh@geostats.com.au), [srr@geostats.com.au](mailto:srr@geostats.com.au)  
Website <http://www.geostats.com.au>

G302-7

Geostats Pty Ltd, Certified Gold Reference Material, Product Code :

# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

**Certified Gold Reference Material Product Code**

## G304-7

### Certified Control Values

<b>50 gram Fire Assay</b>	
Gold Grade	6.83 ppm
Standard Deviation	0.25 ppm
Confidence Interval	+/- 0.054 ppm

<b>Aqua Regia Digest</b>	
Gold Grade	6.73 ppm
Standard Deviation	0.33 ppm
Confidence Interval	+/- 0.099 ppm



### CRM Details

<b>Control Statistic Details</b>	<b>Neutron Activation Analysis Results (ppm)</b>		<b>Major Elements Fusion / XRF (%)</b>	
	Control statistics were produced from results accumulated in the : <u>Apr-2004</u> Geostats Pty Ltd Laboratory Round Robin Program. <u>90</u> laboratories tested this material using 50 gram Fire Assay. <u>46</u> laboratories tested it using an Aqua Regia Technique.	Antimony	14.8	Fe
<b>Source Material</b> Prior to homogenisation and testing, this material was sourced from Composite Gold Ores, Low Sulphide	Arsenic	653	SiO2	nr
<b>Colour Designation</b> Light brownish gray	Barium	277	Al2O3	nr
<b>Usage</b> This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.	Bromine	<1	TiO2	nr
<b>Preparation and Packaging</b> All standards are dried in an oven for a minimum of 12 hours at 110C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an Air Classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.  Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.	Cadmium	nr	MnO	nr
<b>Assay Testwork</b> All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by a minimum of 50 reputable laboratories selected from across the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.	Cerium	29.5	CaO	nr
	Caesium	55.4	P	nr
	Chromium	238	S	nr
	Cobalt	122	MgO	nr
	Europium	0.63	K2O	nr
	Gold ppb	6560	Na2O	nr
	Hafnium	7.85	LOI1000	nr
	Iridium ppb	<20		
	Iron %	8.59		
	Lanthanum	14.6		
	Lutetium	<0.2		
	Molybdenum	13.1		
	Nickel	nr		
	Rubidium	1350		
	Samarium	2.27		
	Scandium	9.45		
	Selenium	<5		
	Sodium %	1.37		
	Tantalum	28.4		
	Tellurium	<5		
	Terbium	nr		
	Thorium	3.42		
	Tin	nr		
	Tungsten	34.5		
	Uranium	<2		
	Ytterbium	1.3		
	Zinc	522		
	Zirconium	<500		
	Calcium%	1.75		
	Potassium %	3.78		
	Silver	12.2		
	Mercury	nr		
	Neodymium	nr		
	Strontium	nr		

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Website http://www.geostats.com.au

G304-7

Geostats Pty Ltd, Certified Gold Reference Material, Product Code :

# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

## Certified Gold Reference Material Product Code

# G902-7

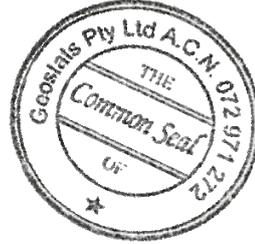
### Certified Control Values

**50 gram Fire Assay**

Gold Grade	1.41 ppm
Standard Deviation	0.10 ppm
Confidence Interval	+/- 0.023 ppm

**Aqua Regia Digest**

Gold Grade	1.37 ppm
Standard Deviation	0.16 ppm
Confidence Interval	+/- 0.045 ppm



### CRM Details

<b>Control Statistic Details</b>	<b>Neutron Activation Analysis Results (ppm)</b>		<b>Major Elements Fusion / XRF (%)</b>	
	Control statistics were produced from results accumulated in the : <u>October-2002</u> Geostats Pty Ltd Laboratory Round Robin Program. <u>84</u> laboratories tested this material using 50 gram Fire Assay. <u>54</u> laboratories tested it using an Aqua Regia Technique.	Antimony	17.8	Fe
<b>Source Material</b> Prior to homogenisation and testing, this material was sourced from Oxide Material ex Eastern Goldfields	Arsenic	976	SiO2	nr
<b>Colour Designation</b> Moderate brown	Barium	270	Al2O3	nr
<b>Usage</b> This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.	Bromine	1.23	TiO2	nr
<b>Preparation and Packaging</b> All standards are dried in an oven for a minimum of 12 hours at 110C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an Air Classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.  Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.	Cadmium	nr	MnO	nr
<b>Assay Testwork</b> All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by a minimum of 50 reputable laboratories selected from across the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.	Cerium	36.3	CaO	nr
	Caesium	3.34	P	nr
	Chromium	788	S	nr
	Cobalt	49.9	MgO	nr
	Europium	1.06	K2O	nr
	Gold ppb	1440	Na2O	nr
	Hafnium	3.78	LOI1000	nr
	Iridium ppb	<20		
	Iron %	23.7		
	Lanthanum	20.4		
	Lutetium	<0.2		
	Molybdenum	21		
	Nickel	nr		
	Rubidium	50.3		
	Samarium	3.31		
	Scandium	16.6		
	Selenium	<5		
	Sodium %	1.01		
	Tantalum	<1		
	Tellurium	<5		
	Terbium	nr		
	Thorium	6.47		
	Tin	nr		
	Tungsten	40.2		
	Uranium	<2		
	Ytterbium	1.3		
	Zinc	<100		
	Zirconium	<500		
	Calcium%	1.03		
	Potassium %	0.81		
	Silver	<5		
	Mercury	nr		
	Neodymium	nr		
	Strontium	nr		

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Website <http://www.geostats.com.au>

G902-7

Geostats Pty Ltd, Certified Gold Reference Material, Product Code :

# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

**Certified Gold Reference Material Product Code**

## G998-10

### Certified Control Values

**50 gram Fire Assay**

Gold Grade	3.05 ppm
Standard Deviation	0.15 ppm
Confidence Interval	+/- 0.03 ppm

**Aqua Regia Digest**

Gold Grade	2.97 ppm
Standard Deviation	0.24 ppm
Confidence Interval	+/- 0.059 ppm



### CRM Details

<b>Control Statistic Details</b>	<b>Neutron Activation Analysis Results (ppm)</b>		<b>Major Elements Fusion / XRF (%)</b>	
	<p>Control statistics were produced from results accumulated in the :</p> <p><u>October-1998</u> Geostats Pty Ltd Laboratory Round Robin Program. <u>98</u> laboratories tested this material using 50 gram Fire Assay. <u>67</u> laboratories tested it using an Aqua Regia Technique.</p> <p><b>Source Material</b> Prior to homogenisation and testing, this material was sourced from Sulphide ore with minor Copper ex Pilbara region.</p> <p><b>Colour Designation</b> Light brown</p> <p><b>Usage</b> This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.</p> <p><b>Preparation and Packaging</b> All standards are dried in an oven for a minimum of 12 hours at 110C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an Air Classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.</p> <p>Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.</p> <p><b>Assay Testwork</b> All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by a minimum of 50 reputable laboratories selected from across the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.</p>	<p>Antimony 9.24</p> <p>Arsenic 246</p> <p>Barium 1330</p> <p>Bromine &lt;1</p> <p>Cadmium nr</p> <p>Cerium 54.4</p> <p>Caesium 2.7</p> <p>Chromium 232</p> <p>Cobalt 48.1</p> <p>Europium 0.9</p> <p>Gold ppb 3050</p> <p>Hafnium 3.21</p> <p>Iridium ppb &lt;20</p> <p>Iron % 4.57</p> <p>Lanthanum 25.6</p> <p>Lutetium 0.26</p> <p>Molybdenum &lt;5</p> <p>Nickel nr</p> <p>Rubidium 69.4</p> <p>Samarium 4.77</p> <p>Scandium 12.1</p> <p>Selenium &lt;5</p> <p>Sodium % 0.073</p> <p>Tantalum &lt;1</p> <p>Tellurium &lt;5</p> <p>Terbium nr</p> <p>Thorium 9.34</p> <p>Tin nr</p> <p>Tungsten 4.05</p> <p>Uranium 5.12</p> <p>Ytterbium 1.75</p> <p>Zinc &lt;100</p> <p>Zirconium &lt;500</p> <p>Calcium% &lt;1</p> <p>Potassium % 1.23</p> <p>Silver &lt;5</p> <p>Mercury nr</p> <p>Neodymium nr</p> <p>Strontium nr</p>	<p>Fe nr</p> <p>SiO2 nr</p> <p>Al2O3 nr</p> <p>TiO2 nr</p> <p>MnO nr</p> <p>CaO nr</p> <p>P nr</p> <p>S nr</p> <p>MgO nr</p> <p>K2O nr</p> <p>Na2O nr</p> <p>LOI1000 nr</p>	

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Website http://www.geostats.com.au

G998-10

Geostats Pty Ltd, Certified Gold Reference Material, Product Code :

# GEOSTATS PTY LTD

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Reference Material Manufacture and Sales

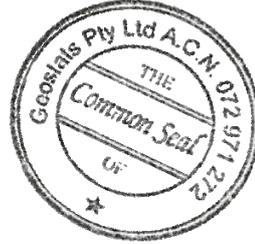
## Certified Gold Reference Material Product Code

# G999-2

### Certified Control Values

<b>50 gram Fire Assay</b>	
Gold Grade	0.63 ppm
Standard Deviation	0.06 ppm
Confidence Interval	+/- 0.012 ppm

<b>Aqua Regia Digest</b>	
Gold Grade	0.62 ppm
Standard Deviation	0.07 ppm
Confidence Interval	+/- 0.019 ppm



### CRM Details

#### Control Statistic Details

Control statistics were produced from results accumulated in the :

<u>October-1999</u>	Geostats Pty Ltd Laboratory Round Robin Program.
<u>93</u>	laboratories tested this material using 50 gram Fire Assay.
<u>57</u>	laboratories tested it using an Aqua Regia Technique.

#### Source Material

Prior to homogenisation and testing, this material was sourced from Oxide Gold Ore ex N.E. Goldfields

#### Colour Designation

Grayish Orange

#### Usage

This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.

#### Preparation and Packaging

All standards are dried in an oven for a minimum of 12 hours at 110C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an Air Classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

#### Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by a minimum of 50 reputable laboratories selected from across the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Neutron Activation Analysis Results (ppm)		Major Elements Fusion / XRF (%)	
Antimony	19.5	Fe	nr
Arsenic	657	SiO2	nr
Barium	384	Al2O3	nr
Bromine	1.86	TiO2	nr
Cadmium	nr	MnO	nr
Cerium	78.8	CaO	nr
Caesium	1.66	P	nr
Chromium	1100	S	nr
Cobalt	151	MgO	nr
Europium	0.89	K2O	nr
Gold ppb	545	Na2O	nr
Hafnium	3.29	LOI1000	nr
Iridium ppb	<20		
Iron %	5.38		
Lanthanum	31.2		
Lutetium	<0.2		
Molybdenum	<5		
Nickel	nr		
Rubidium	55.9		
Samarium	4.08		
Scandium	21.8		
Selenium	<5		
Sodium %	1.24		
Tantalum	1.96		
Tellurium	<5		
Terbium	nr		
Thorium	11		
Tin	nr		
Tungsten	20.7		
Uranium	<2		
Ytterbium	1.2		
Zinc	117		
Zirconium	<500		
Calcium%	1.28		
Potassium %	1.21		
Silver	<5		
Mercury	nr		
Neodymium	nr		
Strontium	nr		

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Website <http://www.geostats.com.au>

G999-2

Geostats Pty Ltd, Certified Gold Reference Material, Product Code :

# CDN Resource Laboratories Ltd.

#2, 20148 - 102nd Avenue, Langley, B.C., Canada, V1M 4B4, Ph: 604-882-8422 Fax: 604-882-8466 (www.cdnlabs.com)

## GOLD ORE REFERENCE STANDARD: CDN-GS-1E

Recommended value and the "Between Laboratory" two standard deviations

*Gold concentration: 1.16 ± 0.06 g/t*

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** April 18, 2009

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-1E was prepared using ore supplied by Canadian Gold Hunter Corporation from its Caballo Blanco (North Zone) property in Mexico. It is a high sulphidation gold system with extensive silica flooding and brecciation. The breccia can be filled with iron oxides, but is usually devoid of clay.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 12 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au g/t											
GS-1E-1	1.16	1.21	1.21	1.24	1.22	1.14	1.15	1.12	1.18	1.21	1.22	1.17
GS-1E-2	1.13	1.19	1.12	1.17	1.27	1.14	1.14	1.18	1.17	1.15	1.20	1.27
GS-1E-3	1.07	1.16	1.21	1.18	1.25	1.15	1.18	1.14	1.21	1.23	1.15	1.23
GS-1E-4	1.00	1.20	1.18	1.16	1.23	1.15	1.15	1.16	1.14	1.21	1.18	1.18
GS-1E-5	1.05	1.19	1.21	1.14	1.26	1.15	1.16	1.17	1.09	1.16	1.21	1.20
GS-1E-6	1.10	1.18	1.18	1.13	1.22	1.14	1.17	1.17	1.17	1.24	1.17	1.16
GS-1E-7	1.11	1.19	1.15	1.16	1.18	1.15	1.17	1.16	1.16	1.17	1.16	1.19
GS-1E-8	1.13	1.21	1.17	1.12	1.23	1.14	1.10	1.14	1.15	1.21	1.19	1.18
GS-1E-9	1.00	1.13	1.16	1.16	1.26	1.14	1.13	1.13	1.16	1.20	1.16	1.26
GS-1E-10	1.17	1.15	1.15	1.13	1.24	1.15	1.18	1.11	1.17	1.13	1.08	1.16
Mean	1.09	1.18	1.17	1.16	1.24	1.15	1.15	1.15	1.16	1.19	1.17	1.20
Std. Dev.	0.061	0.027	0.030	0.034	0.026	0.005	0.025	0.024	0.031	0.036	0.040	0.040
%RSD	5.56	2.29	2.58	2.97	2.13	0.46	2.17	2.05	2.66	3.05	3.38	3.33

**Assay Procedure:** all assays were fire assay, AA or ICP finish on 30g samples

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent
SiO <sub>2</sub>	80.0	Na <sub>2</sub> O	0.7
Al <sub>2</sub> O <sub>3</sub>	2.5	MgO	<0.1
Fe <sub>2</sub> O <sub>3</sub>	10.0	K <sub>2</sub> O	0.7
CaO	1.3	TiO <sub>2</sub>	2.2
MnO	<0.1	LOI	1.0
S	0.2	C	<0.1

## GOLD ORE REFERENCE STANDARD: CDN-GS-1E

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Participating Laboratories:

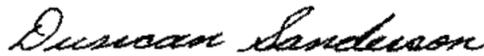
(not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, Canada  
Activation Laboratories, Ancaster, Ontario, Canada  
Activation Laboratories, Thunder Bay, Ontario, Canada  
ALS Chemex, North Vancouver, Canada  
Assayers Canada Ltd., Vancouver, Canada  
Alex Stewart (Assayers) Argentina Ltd.  
Genalysis Lab.Services, Australia  
International Plasma Labs, Richmond, B.C., Canada  
Labtium Inc., Finland  
Omac Laboratory, Ireland  
TSL Laboratories Ltd., Saskatoon, Canada  
Ultra Trace Pty. Ltd., Australia

### Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist



Dr. Barry Smee, Ph.D., P. Geo.

# CDN Resource Laboratories Ltd.

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## GOLD ORE REFERENCE STANDARD: CDN-GS-2C

Recommended value and the "Between Laboratory" two standard deviations

**Gold concentration: 2.06 ± 0.15 g/t**

**PREPARED BY:** CDN Resource Laboratories Ltd.

**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia

**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.

**DATE OF CERTIFICATION:** November 1, 2007

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-2C was prepared using 780 kg of a blank granitic ore and 15 kg of a high grade gold ore.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 12 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au g/t											
GS-2C-1	2.12	1.95	2.10	2.08	2.07	1.81	2.16	2.19	2.16	2.12	1.85	1.93
GS-2C-2	1.98	2.27	2.06	1.99	2.23	1.85	2.18	2.06	2.04	2.13	1.96	1.92
GS-2C-3	2.02	2.10	2.15	2.01	2.03	1.94	2.00	1.82	2.18	2.07	1.82	2.02
GS-2C-4	2.12	2.08	2.18	2.02	2.04	2.18	2.04	2.07	1.99	2.09	1.99	1.94
GS-2C-5	2.04	2.09	2.00	2.09	1.98	2.09	2.06	2.08	2.13	2.07	1.82	1.93
GS-2C-6	1.96	2.18	2.02	2.11	1.97	2.05	2.01	2.05	2.04	1.97	1.82	2.04
GS-2C-7	2.02	2.02	1.98	2.12	1.99	1.93	2.20	2.02	2.09	2.03	2.02	2.00
GS-2C-8	2.05	2.11	2.14	2.11	2.12	2.02	1.99	2.00	2.09	2.03	1.78	1.95
GS-2C-9	2.07	2.45	2.19	2.01	2.18	2.02	2.06	2.15	2.25	2.14	1.89	1.96
GS-2C-10	2.05	1.95	2.06	2.00	2.11	1.99	2.09	2.20	2.10	1.95	1.89	2.10
Mean	2.04	2.12	2.09	2.05	2.07	1.99	2.08	2.06	2.11	2.06	1.88	1.98
Std. Dev.	0.052	0.151	0.076	0.052	0.087	0.111	0.077	0.109	0.077	0.065	0.081	0.059
%RSD	2.56	7.13	3.64	2.55	4.22	5.57	3.68	5.30	3.63	3.15	4.32	2.99

*Note: results from Lab. 11 were excluded for failing the "t" test.*

*Assay Procedure: all assays were fire assay, ICP finish on 30g samples*

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent
SiO <sub>2</sub>	63.4	Na <sub>2</sub> O	3.1
Al <sub>2</sub> O <sub>3</sub>	15.5	MgO	1.8
Fe <sub>2</sub> O <sub>3</sub>	6.7	K <sub>2</sub> O	1.9
CaO	2.2	TiO <sub>2</sub>	0.6
MnO	0.1	LOI	2.6
S	0.1		

## GOLD ORE REFERENCE STANDARD: CDN-GS-2C

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Participating Laboratories:

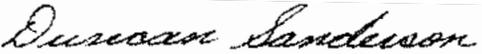
(not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, Canada  
Activation Laboratories, Ontario, Canada  
ALS Chemex, North Vancouver, Canada  
Assayers Canada Ltd., Vancouver, Canada  
Alex Stewart (Assayers) Argentina) Ltd.  
Genalysis Lab.Services, Australia  
Labtium Inc., Finland  
Omac Laboratory, Ireland  
Skyline Assayers & Laboratories Ltd, Arizona, USA  
Teck Cominco, Global Discovery Laboratory, Vancouver, Canada  
TSL Laboratories Ltd., Saskatoon, Canada  
Ultra Trace Pty. Ltd., Australia

### Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by

  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
Dr. Barry Smee, Ph.D., P. Geo.

# CDN Resource Laboratories Ltd.

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## GOLD ORE REFERENCE STANDARD: CDN-GS-3D

Recommended value and the "Between Laboratory" two standard deviations

*Gold concentration: 3.41 ± 0.25 g/t*

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** March 15, 2008

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-3D was prepared using 605 kg of a blank granitic ore and 8 kg of a high grade gold ore.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 12 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au g/t											
GS3D-1	3.35	3.62	3.46	3.44	3.58	3.44	3.20	3.56	3.43	3.61	3.24	3.56
GS3D-2	3.31	3.49	3.38	3.38	3.31	3.48	3.22	3.59	3.67	3.51	3.30	3.43
GS3D-3	3.28	3.43	3.41	3.27	3.49	3.45	3.22	3.26	3.42	3.69	3.38	3.42
GS3D-4	3.26	3.49	3.20	3.32	3.62	3.45	3.26	3.56	3.50	3.70	3.37	3.42
GS3D-5	3.44	3.40	3.31	3.05	3.61	3.49	3.32	3.39	3.54	3.58	3.28	3.83
GS3D-6	3.35	3.53	3.38	3.27	3.45	3.30	3.34	3.38	3.45	3.54	3.42	3.15
GS3D-7	3.31	3.56	3.31	3.37	3.35	3.49	3.22	3.33	3.46	3.67	3.31	3.36
GS3D-8	3.38	3.45	3.26	3.36	3.66	3.20	3.22	3.45	3.46	3.58	3.45	3.63
GS3D-9	3.37	3.51	3.29	3.31	3.54	3.41	3.32	3.50	3.61	3.70	3.44	3.35
GS3D-10	3.48	3.37	3.33	3.26	3.47	3.49	3.20	3.36	3.47	3.65	3.44	3.36
Mean	3.35	3.49	3.33	3.30	3.51	3.42	3.25	3.44	3.50	3.62	3.36	3.45
Std. Dev.	0.069	0.075	0.076	0.106	0.117	0.096	0.053	0.112	0.082	0.069	0.076	0.185
%RSD	2.05	2.17	2.29	3.20	3.33	2.81	1.64	3.24	2.34	1.90	2.26	5.37

*Assay Procedure: all assays were fire assay, ICP finish on 30g samples*

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent
SiO <sub>2</sub>	65.7	Na <sub>2</sub> O	2.5
Al <sub>2</sub> O <sub>3</sub>	12.5	MgO	2.1
Fe <sub>2</sub> O <sub>3</sub>	6.2	K <sub>2</sub> O	1.6
CaO	3.6	TiO <sub>2</sub>	0.6
MnO	0.1	LOI	3.2
S	1.7	C	0.6

## GOLD ORE REFERENCE STANDARD: CDN-GS-3D

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Participating Laboratories:

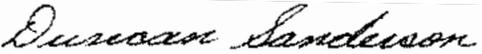
(not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, Canada  
Activation Laboratories, Ontario, Canada  
ALS Chemex, North Vancouver, Canada  
Assayers Canada Ltd., Vancouver, Canada  
Alex Stewart (Assayers) Argentina) Ltd.  
Genalysis Lab.Services, Australia  
Labtium Inc., Finland  
Omac Laboratory, Ireland  
Skyline Assayers & Laboratories Ltd, Arizona, USA  
Teck Cominco, Global Discovery Laboratory, Vancouver, Canada  
TSL Laboratories Ltd., Saskatoon, Canada  
Ultra Trace Pty. Ltd., Australia

### Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by

  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
Dr. Barry Smee, Ph.D., P. Geo.

# CDN Resource Laboratories Ltd.

10945-B River Road, Delta, B.C., Canada, V4C 2R8, 604-540-2233, Fax: 604-540-2237 (www.cdnlabs.com)

## GOLD ORE REFERENCE STANDARD: CDN-GS-5D

Recommended value and the "Between Laboratory" two standard deviations

**Gold concentration: 5.06 ± 0.25 g/t**

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** November 1, 2007

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-5D was prepared using 780 kg of a blank granitic ore and 15 kg of a high grade gold ore.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 13 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13
	Au g/t												
GS5D-1	4.87	5.08	5.28	5.12	4.90	5.10	5.21	5.07	5.22	4.92	5.09	5.07	5.07
GS5D-2	4.97	4.95	5.20	5.11	4.70	5.09	5.26	4.93	5.29	5.01	5.12	4.91	5.25
GS5D-3	5.00	5.13	5.23	5.19	4.89	5.10	5.12	4.89	5.26	4.84	5.00	4.99	5.22
GS5D-4	4.91	5.03	5.10	5.08	4.76	5.08	5.12	5.03	5.32	4.89	5.09	4.85	5.05
GS5D-5	5.20	4.91	5.14	5.21	4.81	5.03	5.05	5.08	5.25	4.90	4.92	4.80	5.21
GS5D-6	5.21	5.09	5.36	5.11	4.77	5.06	5.20	4.77	5.25	4.90	4.99	5.07	5.08
GS5D-7	4.90	4.95	5.12	5.21	5.09	5.07	5.15	5.19	5.17	4.83	5.04	5.05	5.24
GS5D-8	5.18	4.91	5.19	5.10	4.96	5.10	5.04	4.88	5.21	4.95	5.12	5.07	5.12
GS5D-9	5.00	5.15	5.38	5.11	4.92	5.08	5.14	4.95	5.25	4.90	5.02	5.06	5.03
GS5D-10	5.04	4.93	5.20	5.11	4.87	5.11	5.14	4.92	5.21	4.87	5.01	5.19	5.10
Mean	5.03	5.01	5.22	5.13	4.87	5.08	5.14	4.97	5.24	4.90	5.04	5.00	5.14
Std. Dev.	0.127	0.094	0.095	0.048	0.113	0.024	0.068	0.122	0.045	0.052	0.065	0.119	0.084
% RSD	2.53	1.87	1.82	0.94	2.32	0.47	1.33	2.45	0.86	1.06	1.28	2.37	1.64

*Assay Procedure: all assays were fire assay, ICP finish on 30g samples*

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent
SiO <sub>2</sub>	70.0	Na <sub>2</sub> O	1.8
Al <sub>2</sub> O <sub>3</sub>	10.0	MgO	2.1
Fe <sub>2</sub> O <sub>3</sub>	5.4	K <sub>2</sub> O	1.3
CaO	4.0	TiO <sub>2</sub>	0.5
MnO	0.1	LOI	3.5
S	0.9		

## GOLD ORE REFERENCE STANDARD: CDN-GS-5D

### Statistical Procedures:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Participating Laboratories:

(not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, Canada  
Alaska Assay Laboratory, Fairbanks, Alaska, USA  
ALS Chemex, North Vancouver, Canada  
Assayers Canada Ltd., Vancouver, Canada  
Alex Stewart (Assayers) Argentina Ltd.  
Eco Tech Laboratory Ltd., B.C., Canada  
Genalysis Lab.Services, Australia  
Labtium Inc., Finland  
Omac Laboratory, Ireland  
Skyline Assayers & Laboratories Ltd, Arizona, USA  
Teck Cominco, Global Discovery Laboratory, Vancouver, Canada  
TSL Laboratories Ltd., Saskatoon, Canada  
Ultra Trace Pty. Ltd., Australia

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Certified by

  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
Dr. Barry Smee, Ph.D., P. Geo.

# CDN Resource Laboratories Ltd.

#2, 20148 - 102nd Avenue, Langley, B.C., Canada, V1M 4B4, Ph: 604-882-8422 Fax: 604-882-8466  
(www.cdnlabs.com)

## GOLD ORE REFERENCE STANDARD: CDN-GS-7A

Recommended value and the "Between Laboratory" two standard deviations

*Gold concentration: 7.20 ± 0.60 g/t*

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** September 15, 2008

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-7A was prepared using ore supplied by Comaplex Minerals Corporation. The ore is from the 1100 lode of the Tiriganiaq Gold Deposit north of Rankin Inlet in Nunavut. It is a banded magnetite iron formation zone with gold in quartz shears with accessory pyrrhotite, pyrite, and arsenopyrite. The gold is free milling although there may be a small refractory component.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 12 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au (g/t)											
GS-7A-01	7.34	6.16	6.84	7.00	7.02	7.04	7.40	7.00	7.03	7.17	7.0	7.46
GS-7A-02	7.13	6.82	6.66	8.33	7.01	7.12	7.56	7.10	7.28	7.22	7.3	7.50
GS-7A-03	7.53	7.18	6.95	7.00	7.08	6.65	7.11	7.39	7.06	7.20	7.0	7.53
GS-7A-04	6.93	6.99	6.49	7.00	7.60	6.78	6.83	7.01	7.52	7.43	7.0	7.57
GS-7A-05	7.96	7.43	6.05	8.00	7.47	6.93	6.63	7.39	7.26	7.41	6.8	7.90
GS-7A-06	7.47	7.03	6.40	7.00	7.28	6.88	6.83	7.33	7.53	7.30	7.1	7.96
GS-7A-07	6.93	6.74	6.45	8.33	7.18	7.31	7.61	7.41	7.11	7.52	7.1	7.27
GS-7A-08	6.93	6.68	6.20	8.67	7.01	6.79	6.71	7.28	7.46	7.54	7.0	7.10
GS-7A-09	7.73	6.55	6.32	7.67	7.67	6.42	7.07	7.01	6.95	6.83	7.3	7.24
GS-7A-10	7.47	7.58	6.94	7.67	7.22	6.88	7.18	7.41	7.40	6.98	7.1	7.52
Mean	7.34	6.92	6.53	7.67	7.25	6.88	7.09	7.23	7.26	7.26	7.07	7.51
Std. Dev.	0.358	0.421	0.310	0.648	0.248	0.248	0.348	0.181	0.214	0.230	0.149	0.271
%RSD	4.88	6.09	4.75	8.45	3.41	3.60	4.90	2.50	2.94	3.17	2.11	3.61

**Assay Procedure:** all assays were fire assay, gravimetric finish on 30g samples except for labs 4, 6 and 7 which used ICP finish.

**Note:** Data from Lab 3 was removed for failing the "t" test.

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent
SiO <sub>2</sub>	55.5	Na <sub>2</sub> O	1.4
Al <sub>2</sub> O <sub>3</sub>	9.0	MgO	1.6
Fe <sub>2</sub> O <sub>3</sub>	21.5	K <sub>2</sub> O	2.1
CaO	3.2	TiO <sub>2</sub>	0.3
MnO	1.6	LOI	4.9
S	1.7	C	1.2
		As	7600 ppm

## GOLD ORE REFERENCE STANDARD: CDN-GS-7A

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Participating Laboratories:

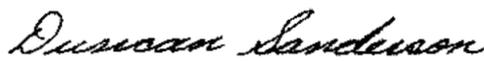
(not in same order as table of assays)

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Labtium Inc., Finland  
Omac Laboratory, Ireland  
Skyline Assayers & Laboratories Ltd, Arizona, USA  
International Plasma Laboratories, Canada  
TSL Laboratories Ltd., Saskatoon, Canada  
Ultra Trace Pty. Ltd., Australia

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Certified by



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Geochemist



Dr. Barry Smee, Ph.D., P. Geo.

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## GOLD ORE REFERENCE STANDARD: CDN-GS-P8

Recommended value and the "Between Laboratory" two standard deviations

*Gold concentration: 0.78 ± 0.06 g/t*

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** April 18, 2009

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-P8 was prepared using ore supplied by Canadian Gold Hunter Corporation from its Caballo Blanco (North Zone) property in Mexico. It is a high sulphidation gold system with extensive silica flooding and brecciation. The breccia can be filled with iron oxides, but is usually devoid of clay.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to 12 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au g/t											
GS-P8-1	0.76	0.76	0.75	0.79	0.79	0.78	0.75	0.76	0.82	0.82	0.76	0.81
GS-P8-2	0.73	0.80	0.76	0.77	0.79	0.79	0.78	0.73	0.78	0.81	0.76	0.77
GS-P8-3	0.74	0.78	0.79	0.77	0.80	0.79	0.75	0.75	0.79	0.81	0.75	0.82
GS-P8-4	0.76	0.78	0.78	0.78	0.79	0.78	0.72	0.73	0.72	0.82	0.83	0.79
GS-P8-5	0.71	0.78	0.83	0.76	0.81	0.79	0.76	0.75	0.74	0.81	0.79	0.78
GS-P8-6	0.70	0.73	0.81	0.79	0.89	0.80	0.80	0.77	0.82	0.81	0.83	0.80
GS-P8-7	0.66	0.77	0.81	0.76	0.82	0.80	0.79	0.73	0.77	0.82	0.76	0.81
GS-P8-8	0.72	0.77	0.77	0.76	0.85	0.79	0.76	0.79	0.81	0.79	0.78	0.81
GS-P8-9	0.72	0.80	0.83	0.75	0.84	0.78	0.77	0.80	0.78	0.83	0.74	0.85
GS-P8-10	0.78	0.75	0.78	0.80	0.85	0.80	0.85	0.74	0.77	0.82	0.78	0.82
Mean	0.73	0.77	0.79	0.77	0.82	0.79	0.77	0.75	0.78	0.81	0.78	0.80
Std. Dev.	0.035	0.021	0.028	0.016	0.034	0.008	0.035	0.027	0.032	0.011	0.031	0.022
%RSD	4.75	2.69	3.55	2.12	4.14	1.03	4.56	3.53	4.15	1.38	4.02	2.79

**Assay Procedure:** all assays were fire assay, gravimetric finish on 30g samples

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent
SiO <sub>2</sub>	75.6	Na <sub>2</sub> O	0.5
Al <sub>2</sub> O <sub>3</sub>	2.3	MgO	<0.1
Fe <sub>2</sub> O <sub>3</sub>	15.6	K <sub>2</sub> O	0.8
CaO	1.2	TiO <sub>2</sub>	1.7
MnO	<0.1	LOI	1.0
S	0.1	C	<0.1

## GOLD ORE REFERENCE STANDARD: CDN-GS-P8

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Participating Laboratories:

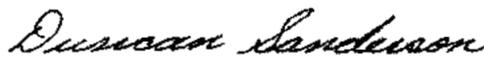
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Omac Laboratory, Ireland  
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Geochemist



Dr. Barry Smee, Ph.D., P. Geo.