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# IAMGOLD CORPORATION AND CALIBRE MINING CORP.

# TECHNICAL REPORT ON THE EASTERN BOROSI PROJECT, NICARAGUA

NI 43-101 Report

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May 11, 2018

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# **1 SUMMARY**

# **EXECUTIVE SUMMARY**

Roscoe Postle Associates Inc. (RPA) was retained by IAMGOLD Corporation (IAMGOLD) and Calibre Mining Corp. (Calibre) to prepare an independent Technical Report on the Eastern Borosi Project (EBP), located in Nicaragua. The purpose of this report is to support the public disclosure of initial Mineral Resource estimates for the Guapinol, Vancouver, Blag, and East Dome veins, and updated Mineral Resource estimates for the Riscos de Oro and La Luna veins. Results were initially disclosed in a press release dated April 3, 2018. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. RPA visited the property from October 27 to 29, 2017.

The EBP, consisting of 176 km<sup>2</sup> within the Borosi Concessions, is subject to an option agreement between Calibre and IAMGOLD dated May 26, 2014. IAMGOLD has completed the First Option having paid \$450,000 and completed expenditures of \$5 million, and has earned 51% interest in the Project. IAMGOLD has exercised the Second Option with the right to earn a further 19% in the Project (by paying \$450,000 and further exploration expenditures of \$5 million). The total potential investment by IAMGOLD to earn a 70% interest in the Project is US\$10.9 million. Open pit and underground mining for gold and silver were conducted intermittently on Riscos de Oro and Blag veins in the 1970s and early 1980s.

Table 1-1 summarizes the EBP Mineral Resources as of March 15, 2018. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) were followed for Mineral Resources. Mineral Resources were all assigned to the Inferred category. RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.



### TABLE 1-1 SUMMARY OF MINERAL RESOURCES – MARCH 15, 2018 IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Category	Method/Vein	Tonnage (000 t)	Grade Au (g/t)	Metal Au (oz)	Grade Ag (g/t)	Metal Ag (oz)	Grade AuEq (g/t)	Metal AuEq (oz)
Inferred	Underground							
	Blag	740	3.01	71,500	117	2,776,000	4.16	99,000
	East Dome	513	2.23	37,000	219	3,611,000	4.38	72,500
	Riscos	1,184	5.73	218,000	106	4,046,500	6.77	258,000
	Guapinol	612	12.74	251,000	12	243,500	12.86	253,000
	Vancouver	170	8.54	46,500	15	82,000	8.69	47,500
	Total Underground	3,219	6.03	624,000	104	10,758,500	7.05	729,500
Inferred	Open Pit							
	La Luna	1,199	1.98	76,500	16	601,000	2.13	82,000
Inferred	Total Underground and Open Pit	4,418	4.93	700,500	80	11,359,500	5.72	812,000

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated at a cut-off grade of 2.0 g/t gold equivalent (AuEq) for resources potentially mined by underground methods and 0.42 g/t AuEq for resources potentially mined by open pit methods.

3. Gold equivalent values were calculated using the formula: AuEq (g/t) = Au (g/t) + Ag (g/t) / (101.8)

4. Mineral Resources are estimated using a long-term gold price of US\$1,500 per ounce of gold, US\$23 per ounce of silver.

5. A minimum mining width of 2.4 m was used for underground and 3 m for open pit.

6. Bulk density is 2.65 t/m<sup>3</sup> for Blag, East Dome, Riscos, and La Luna, and 2.60 t/m<sup>3</sup> for Guapinol and Vancouver.

7. Numbers may not add due to rounding.

# CONCLUSIONS

The EBP is located in the Mining Triangle District in north-central Nicaragua, in the Rosita municipality of the Región Autónoma de la Costa Caribe Norte, approximately 300 km northeast of Managua and 90 km west of the coastal town of Puerto Cabezas.

In RPA's opinion, the sample preparation, analysis, and security procedures at the EBP and the quality assurance/quality control (QA/QC) program as designed and implemented by Calibre is adequate and the assay results are suitable for use in the estimation of Mineral Resources. In RPA's opinion, the drill hole database complies with industry standards and is adequate for Mineral Resource estimation.



RPA prepared initial Mineral Resource estimates for Blag, East Dome, Guapinol, and Vancouver veins, and updated the Mineral Resource estimates for the Riscos de Oro and La Luna veins. The models were interpreted under the assumption that an open pit mining method would potentially be used for La Luna veins, while the rest of the veins would potentially be mined by underground methods. The Mineral Resource includes 3.219 Mt at average grades of 6.03 g/t Au and 104 g/t Ag, containing 624,000 ounces of gold and 10.758 million ounces of silver from the underground, and 1.199 Mt at average grades of 1.98 g/t Au and 16 g/t Ag, containing 76,500 ounces of gold and 601,000 ounces of silver from the open pit. Mineral Resources were assigned to the Inferred category.

This Mineral Resource estimate was completed using Geovia GEMS 6.7 software. Four 3D geological models were built and used to constrain and populate resource block models. The block grade estimate was based on the inverse distance squared (ID<sup>2</sup>) interpolation method. The Mineral Resource is reported at a cut-off grade of 2.0 g/t AuEq for the underground and at a cut-off grade of 0.42 g/t AuEq for the open pit using price assumptions of US\$1,500 per ounce of gold and US\$23 per ounce of silver. High grade gold assays were capped at values ranging from 8 g/t to 40 g/t and high grade silver assays were capped at values ranging from 40 g/t to 800 g/t depending on domain. The Mineral Resource estimate was constrained by a preliminary pit optimization shell for the open pit and by mineralized wireframes for the underground component.

The current Mineral Resource estimate reflects a number of changes from the previous Mineral Resource estimates, including exclusion of historic drilling from the database, higher resource wireframe cut-off values, and new drilling.

# RECOMMENDATIONS

It is RPA's opinion that additional exploration expenditures are warranted. Two separate exploration programs are proposed. Phase 2 is dependent on the results of Phase 1 and should be completed or adjusted upon the completion of Phase 1.

### PHASE 1 – EASTERN BOROSI PROJECT RESOURCE EXPANSION

Phase 1 is designed primarily to expand the current resource at the Project by testing the strike and dip extension of the deposit as well as other geochemical and geophysics targets. This will entail diamond drilling with additional work on metallurgical testing, rock mechanics, and surveying. The drilling campaign should be designed to target the potential strike extensions



of the Project. Drill hole spacing should continue at approximately 50 m along section and 50 m to 75 m vertically on section in order to support an Inferred Mineral Resource. Table 1-2 summarizes the exploration program proposed.

# TABLE 1-2 EASTERN BOROSI PROJECT PHASE 1 EXPLORATION IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Item	Note	Amount (US\$)
Diamond Drilling	9,200 m @ \$150/m	1,380,000
Assays	3,000 samples @ \$40/sample	120,000
Salaries / Technical Support	-	220,000
Metallurgical Testing	-	30,000
Surveying	-	40,000
Additional Technical Studies	-	55,000
Resource Update	-	60,000
Consumable Supplies and Camp Costs	-	95,000
Total		2,000,000

Note: Drilling includes all drilling related charges.

### PHASE 2 – EASTERN BOROSI PROJECT RESOURCE EXPANSION AND ADVANCEMENT

Phase 2 includes both infill drilling, additional metallurgical testing, an environmental baseline study, and a Preliminary Economic Assessment (PEA). The drilling campaign should target the core areas of the Eastern Borosi deposits, particularly in the areas of thicker and higher grade mineralization. Table 1-3 summarizes the proposed Phase 2 program.

# TABLE 1-3 EASTERN BOROSI PROJECT PHASE 2 EXPLORATION IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Item	Note	Amount (US\$)
Diamond Drilling	11,000 m @ \$150/m	1,650,000
Assays	3,500 samples @ \$40/sample	140,000
Salaries	-	280,000
Metallurgical Testing	-	60,000
Additional Technical Studies	-	65,000
Environmental Studies	-	65,000
Consumable Supplies and Camp Costs	-	95,000
Preliminary Economic Assessment	-	145,000
Total		2,500,000

Note: Drilling includes all drilling related charges.



# **TECHNICAL SUMMARY**

### PROPERTY DESCRIPTION AND LOCATION

The EBP is located in the Mining Triangle District in north-central Nicaragua, in the Rosita municipality of the Región Autónoma de la Costa Caribe Norte, approximately 300 km northeast of Managua and 90 km west of the coastal town of Puerto Cabezas. The Mining Triangle District is defined by the mining towns of Bonanza, Rosita, and Siuna which collectively are referred to as BoRoSi or Borosi.

### LAND TENURE

The EBP is centred at UTM coordinates 795000E and 1550000N (Zone 16P, NAD27) and consists of five mineral concessions and a portion of a sixth. Mineral titles are held by CXB Nicaragua S.A., wholly owned subsidiary of Calibre.

The mineral titles which comprise the Project does not have any net smelter return (NSR) royalties to third parties. The Project is subject to a 3% NSR royalty payable to the Nicaraguan government, as dictated by law.

Prior to any type of mineral exploration, an environmental permit is required from the Región Autónoma de la Costa Caribe Norte. The mineral titles comprising the EBP are currently permitted to allow for additional drilling and trenching.

### EXISTING INFRASTRUCTURE

The town of Rosita, 40 km west of the EBP, and the other small communities located within the EBP area are connected to the national electrical grid provided by La Empresa Nicaraguense de Electricidad (ENEL). Telephone and mobile phone services are provided by global communication companies Claro and Movistar with cell phone coverage increasing every year. Approximately 80% of the EBP area now has cellular coverage due to the addition of several new communication towers in recent years.

### HISTORY

The exploration history of the EBP and its concessions is similar to that of nearby Rosita, Siuna, and Bonanza which together form the three points of Nicaragua's Mining Triangle. All three cities were built around historic mines which operated under the same progression of ownership from La Luz Mining Ltd. to Rosario Resources Corp./Neptune Gold Mining for much



of the twentieth century. Operation and exploration continued up to the time of the Nicaraguan revolution and subsequent nationalization from 1978 to 1990.

After re-privatization in the early 1990s, the EBP group of concessions again followed a linear progression of ownership shared with other properties in Siuna and Rosita until the land package was acquired by Calibre from Yamana Gold Inc. (Yamana) in 2009.

### GEOLOGY AND MINERALIZATION

The surficial geology of the EBP has been affected by weathering resulting in saprolite thicknesses ranging from less than one metre to greater than 30 m, usually averaging 10 m to 15 m. The low lying nature of the topography on the Project has also resulted in the deposition of locally widespread alluvial material when the drainages overflow during the wet season.

The host rocks along the mineralized trends consist of interbedded and alternating ash rich crystal lithic andesite tuff and sparsely to coarsely porphyritic andesite flows. The abundance of tuff increases to the northeast towards the Blag and La Sorpresa veins. The reworked coarse tuff unit present at La Sorpresa is especially thick extending to a vertical depth of approximately 125 m. The tuff units are characterized by two centimetre to five centimetre, reworked, sub-rounded to rounded andesite fragments in a fine-grained crystal and ash matrix. Lithologic units mapped in the target area include: aphanitic to porphyritic andesite flows; coarsely porphyritic/amygdaloidal andesite; mixed andesitic ash and lithic tuffs; minor dacite tuff; and minor diorite.

The EBP is considered to be a low sulphidation epithermal deposit, characterized by precious metal-bearing quartz veins, stockworks, and breccias formed from boiling of volcanic-related hydrothermal systems. There are three styles of mineralization present at the Project, of which multi-phase quartz vein breccias, containing a mix of early phase massive quartz fragments, colloform vein fragments, silicified host rocks, and milled rock flour, is the most prevalent. Gold occurs primarily as electrum, and silver occurs primarily within silver-copper sulphide minerals.

### **EXPLORATION STATUS**

Exploration on the EBP began in 2009 immediately after the purchase of the property from Yamana. Work has been conducted systematically following a progression of geologic mapping, rock sampling, soil sampling, trenching, and diamond drilling. Recent work can be divided into three separate periods: the early stage Calibre-B2Gold Corp. option from 2009 to



2010, the Calibre 100% owned period from 2010 to 2013, and the current stage Calibre-IAMGOLD option from 2014 to present. Since 2009, a total of 766 rock samples and 6,044 soil samples have been collected for geological mapping. Additionally, a total of 74 trenches totalling 1,896.76 m and 202 drill holes totalling 40,112.26 m have been completed.

#### MINERAL RESOURCES

RPA prepared initial Mineral Resource estimates for Blag, East Dome, Guapinol, and Vancouver veins, and updated the Mineral Resource estimates for the Riscos de Oro and La Luna veins. The models were interpreted under the assumption that an open pit mining method would potentially be used for La Luna veins, while the rest of the veins would potentially be mined by underground methods. Mineral Resources were assigned to the Inferred category and are summarized in Table 1-1.

RPA was provided with a database for the four deposits containing 170 drill holes, with a total length of 35,970.22 m, and 10,556 samples, with a total sampled length of 14,482.69 m. This Mineral Resource estimate was completed using Geovia GEMS 6.7 software. The block grade estimates are based on a total core sample length of 415.19 m from 77 drill holes. In addition, La Luna was sampled by seven trenches with a total length of 173.7 m. A total of 165 samples were collected, of which 27, totalling 23.1 m, from four trenches were used for the resource estimate.

Four 3D geological models were built and used to constrain and populate resource block models. The block grade estimate was based on the ID<sup>2</sup> interpolation method. The Mineral Resource is reported at a cut-off grade of 2.0 g/t AuEq for the underground and at a cut-off grade of 0.42 g/t AuEq for the open pit using a gold price assumption of US\$1,500 per ounce and a silver price of US\$23 per ounce. High grade gold assays were capped at values ranging from 8 g/t to 40 g/t and high grade silver assays were capped at values ranging from 40 g/t to 800 g/t depending on domain.



# **2 INTRODUCTION**

Roscoe Postle Associates Inc. (RPA) was retained by IAMGOLD Corporation (IAMGOLD) and Calibre Mining Corp. (Calibre) to prepare an independent Technical Report on the Eastern Borosi Project (EBP or the Project), located in Nicaragua. The purpose of this Technical Report is to support the public disclosure of initial Mineral Resource estimates for the Guapinol, Vancouver, Blag, and East Dome veins, and updated Mineral Resource estimates for the Riscos de Oro and La Luna veins. Results were initially disclosed in a press release dated April 3, 2018. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects.

The EBP, consisting of 176 km<sup>2</sup> within the Borosi Concessions, is subject to an option agreement between Calibre and IAMGOLD dated May 26, 2014. IAMGOLD has earned 51% interest in the Project and has exercised the Second Option with the right to earn a further 19% in the Project. Open pit and underground mining for gold and silver were conducted intermittently on the Riscos de Oro and Blag veins in the 1970s and early 1980s.

# SOURCES OF INFORMATION

A site visit was carried out by Tudorel Ciuculescu, M.Sc., P.Geo., Senior Geologist with RPA, from October 27 to 29, 2017. During the site visit, discussions were held with the following personnel from Calibre:

- Greg Smith, CEO, President, and Director,
- Marc Cianci, Country Manager and Senior Project Geologist,
- Marisa Espinosa, Database and QA/QC Manager, and
- Angelica Calderon, Coordinator for Health, Security, Environment, and Community Relations.

Mr. Ciuculescu is responsible for the preparation of all sections of this report and is the Independent Qualified Person (QP) for this Technical Report.

The documentation reviewed, and other sources of information, is listed at the end of this report in Section 27 References.



### LIST OF ABBREVIATIONS

Units of measurement used in this report conform to the metric system. All currency in this report is US dollars (US\$) unless otherwise noted.

а	annum	kWh	kilowatt-hour
A	ampere	L	litre
bbl	barrels	lb	pound
btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C\$	Canadian dollars	M	mega (million); molar
cal	calorie	m <sup>2</sup>	square metre
cfm	cubic feet per minute	m <sup>3</sup>	cubic metre
cm	centimetre	μ	micron
cm <sup>2</sup>	square centimetre	MASL	metres above sea level
d	day	μg	microgram
dia	diameter	m <sup>3</sup> /h	cubic metres per hour
dmt	dry metric tonne	mi	mile
dwt	dead-weight ton	min	minute
°F	degree Fahrenheit	μm	micrometre
ft	foot	mm	millimetre
ft <sup>2</sup>	square foot	mph	miles per hour
ft <sup>3</sup>	cubic foot	MVA	megavolt-amperes
ft/s	foot per second	MW	megawatt
g	gram	MWh	megawatt-hour
Ğ	giga (billion)	oz	Troy ounce (31.1035g)
Gal	Imperial gallon	oz/st, opt	ounce per short ton
g/L	gram per litre	ppb	part per billion
Ğpm	Imperial gallons per minute	ppm	part per million
g/t	gram per tonne	psia	pound per square inch absolute
gr/ft <sup>3</sup>	grain per cubic foot	psig	pound per square inch gauge
gr/m <sup>3</sup>	grain per cubic metre	RL	relative elevation
ha	hectare	S	second
hp	horsepower	st	short ton
hr	hour	stpa	short ton per year
Hz	hertz	stpd	short ton per day
in.	inch	t	metric tonne
in <sup>2</sup>	square inch	tpa	metric tonne per year
J	joule	tpd	metric tonne per day
k	kilo (thousand)	US\$	United States dollar
kcal	kilocalorie	USg	United States gallon
kg	kilogram	USgpm	US gallon per minute
km	kilometre	V	volt
km²	square kilometre	W	watt
km/h	kilometre per hour	wmt	wet metric tonne
kPa	kilopascal	wt%	weight percent
kVA	kilovolt-amperes	yd <sup>3</sup>	cubic yard
kW	kilowatt	yr	year



# **3 RELIANCE ON OTHER EXPERTS**

This report has been prepared by RPA for IAMGOLD and Calibre. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by IAMGOLD and Calibre and other third party sources.

For the purpose of this report, RPA has relied on ownership information provided by IAMGOLD and Calibre. RPA has not researched property title or mineral rights for the EBP and expresses no opinion as to the ownership status of the property.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.



# **4 PROPERTY DESCRIPTION AND LOCATION**

The EBP is located in the Mining Triangle District in north-central Nicaragua, in the Rosita municipality of the Región Autónoma de la Costa Caribe Norte, approximately 300 km northeast of Managua and 90 km west of the coastal town of Puerto Cabezas (Figure 4-1). The Mining Triangle District is defined by the mining towns of Bonanza, Rosita, and Siuna which collectively are referred to as BoRoSi or Borosi.

The EBP, consisting of 176 km<sup>2</sup> within the Borosi Concessions, is subject to an option agreement between Calibre and IAMGOLD dated May 26, 2014. IAMGOLD has completed the First Option having paid \$450,000 and completed expenditures of \$5 million, and has earned 51% interest in the Project. IAMGOLD has exercised the Second Option with the right to earn a further 19% in the Project (by paying \$450,000 and further exploration expenditures of \$5 million) having paid the first installment of \$150,000 and completed a 2017 drilling program. The total potential investment by IAMGOLD to earn a 70% interest in the Project is US\$10.9 million.

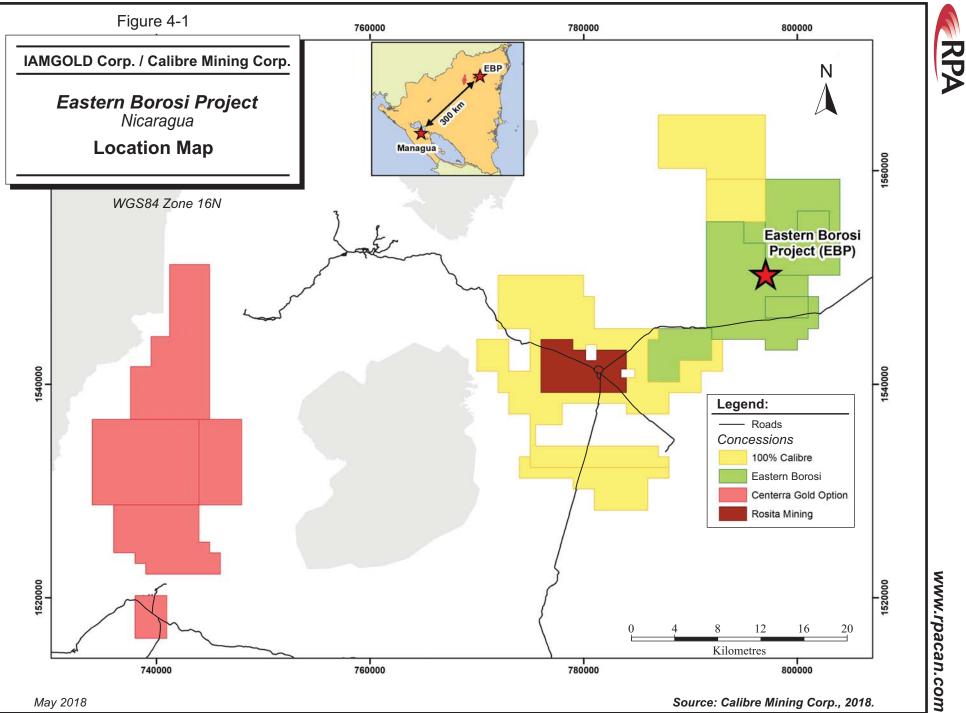
# MINERAL TITLES

The EBP is centred at UTM coordinates 795000E and 1550000N (Zone 16P, NAD27) and consists of five mineral concessions and a portion of a sixth. Mineral titles are held by CXB Nicaragua S.A., wholly owned subsidiary of Calibre. The mineral titles are detailed in Table 4-1 and shown in Figure 4-2.

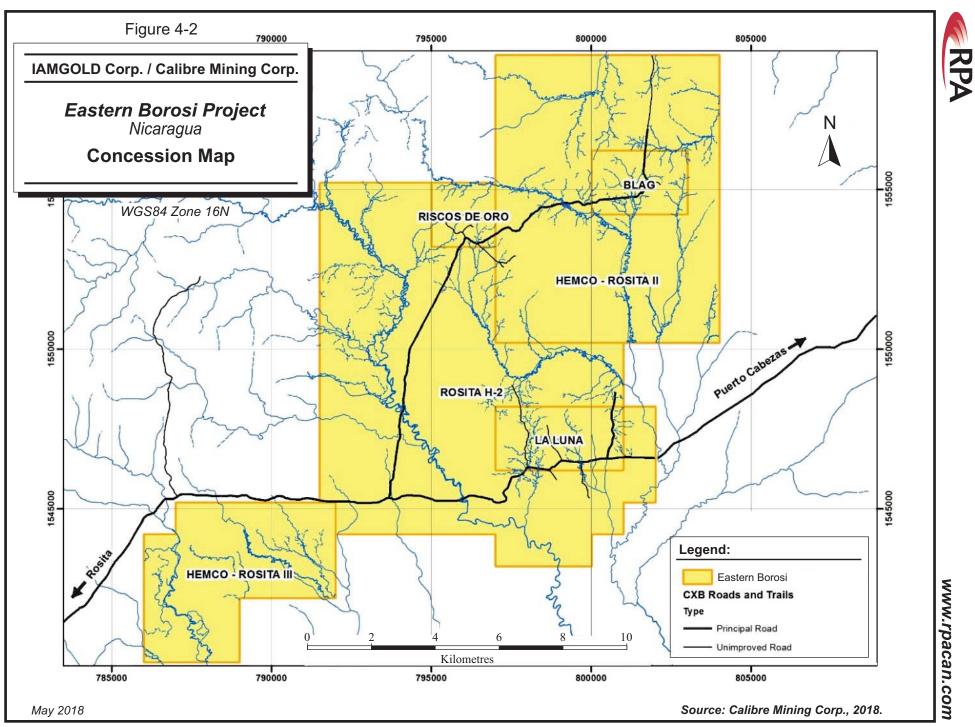
Mineral Title	Ownership	Authorized	Due Date	Ministry Accord	Hectares
Rosita H-2	CXB Nicaragua S.A.	2002-07-29	2027-07-28-	38-DM-161-2009	7,800.94*
La Luna	CXB Nicaragua S.A.	1994-06-10	2044-06-09-	61-DM-44-2007	800.00
Riscos de Oro	CXB Nicaragua S.A.	1994-06-10	2044-06-09-	59-DM-42-2007	400.00
Blag	CXB Nicaragua S.A.	1994-06-10	2044-06-09-	64-DM-128-2008	600.00
HEMCO-Rosita II	CXB Nicaragua S.A.	2011-09-02	2036-09-02	064-DM-366-2012	5,700.00
HEMCO-Rosita III	CXB Nicaragua S.A.	2010-08-30	2035-08-30-	066-DM-368-2012	2,300.00

### TABLE 4-1 MINERAL TITLE IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Note. \* portion of mineral title as defined by UTM Coordinates



4-2



4-3



Mineral titles included in the option agreement between Calibre and IAMGOLD are defined by the following UTM coordinates.

Vertex	Easting	Northing	
Rosita H-2			
0	795007	1555203	
1	795007	1553203	
2	797007	1553203	
3	797007	1550203	
4	801007	1550203	
5	801007	1548203	La Luna
6	797007	1548203	Internal
7	797007	1546203	Internal
8	801007	1546203	Internal
9	801007	1548203	Internal
10	802007	1548203	
11	802007	1545203	
12	801007	1545203	
13	801007	1544203	
14	800007	1544203	
15	800007	1543203	
16	797007	1543203	
17	797007	1544203	
18	793007	1544203	
19	792007	1544203	
20	792007	1545203	
21	791507	1545203	
22	791507	1555203	
Riscos de (	Dro		
0	795007	1555203	
1	797007	1555203	
2	797007	1553203	
3	795007	1553203	
El Blag	002007	1551000	
0 1	803007	1554203	
	800007 800007	1554203	
2 3	800007 803007	1556203 1556203	
3	803007	1556203	

# TABLE 4-2CONCESSION COORDINATES - UTM ZONE 16PIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project



Vertex	Easting	Northing	
La Luna			
0	797007	1548203	
1	801007	1548203	
2	801007	1546203	
3	797007	1546203	
Hemco-Ros	ita II		
0	797007	1550203	
1	797007	1559203	
2	804007	1559203	
3	804007	1550203	Blag
0	800007	1556203	Internal
1	800007	1554203	Internal
2	803007	1554203	Internal
3	803007	1556203	Internal
Hemco-Rosita III			
0	786007	1540203	
1	786007	1544203	
2	787007	1544203	
3	787007	1545203	
4	792007	1545203	
5	792007	1542203	
6	789007	1542203	
7	789007	1540203	

In Nicaragua, concessions are demarcated by east-west and north-south lines as defined by Universal Transverse Mercator (UTM) coordinates, Zone 16P, North American Datum of 1927 (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 (Riscos de Oro, Blag, and La Luna), 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). At the time of RPA's site visit, artisanal miners were active on the property at La Luna.

# **ROYALTIES AND RELATED INFORMATION**

The mineral titles which comprise the Project do not have any net smelter return (NSR) royalties to third parties.

The Project is subject to a 3% NSR royalty payable to the Nicaraguan government, as dictated by law.

# ENVIRONMENTAL LIABILITIES

There has been limited surface disturbance by past mining activities in parts of the Project. 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 and this has been confirmed in writing by the Nicaraguan Authorities. Calibre is responsible only for environmental disturbances generated through the exploration activities conducted by Calibre and has an on-going program of recuperation of recently active drilling sites.

# PERMITS

Prior to any type of mineral exploration, an environmental permit is required from the Región Autónoma de la Costa Caribe Norte. An exploration plan with proposed field work, time-line and cost estimate must be submitted to the Secretaria de Recursos Natural (SERENA) of the Región Autónoma de la Costa Caribe Norte. An independent environmental impact study and public consultations are required for programs with significant ground disturbance, such as trenching or drilling. The mineral titles comprising the EBP are currently permitted to allow for additional drilling and trenching (Table 4-3).



# TABLE 4-3PRIMAVERA PERMITSIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Mineral Title	Environmental Permit	Date Authorized by SERENA	Expiration Date
Rosita H-2	Exploración -Borosi Este	2017-10-02	2020-10-02
La Luna	Exploración -Borosi Este	2017-10-02	2020-10-02
Riscos de Oro	Exploración -Borosi Este	2017-10-02	2020-10-02
Blag	Exploración -Borosi Este	2017-10-02	2020-10-02
HEMCO-Rosita II	Exploración Rosita II	2015-08-27	2018-08-27
HEMCO-Rosita III	Prospección	2017-03-07	2018-03-07

Note: Permits allow for a full range of work as outlined in the BOROSI ESTE environmental impact study submitted by Calibre to SERENA and includes collection of rock and soil samples, manual trenching, geophysical work, and drilling.

RPA is not aware of any environmental liabilities on the property. Calibre has all required permits to conduct the proposed work on the property. RPA is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.



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

## ACCESSIBILITY

The EBP is located approximately 300 km northeast of the capital city of Managua and 90 km west of the Caribbean port town of Puerto Cabezas. The largest population centre near the project is the town of Rosita with approximately 23,000 residents, located 25 km to the southwest of the concession area. Smaller communities located within the project boundaries include Riscos de Oro, Pueblo Santos, and Blag.

The town of Rosita can be accessed by vehicle over a mix of paved and unpaved roads from Managua. The current drive time from Managua to Rosita is approximately nine-hours. A 4x4 vehicle is recommended. Alternatively, Rosita can be accessed using a mix of air and land routes utilizing twice daily flights from Managua to the town of Bonanza. After arrival in Bonanza, travellers continue by land to Rosita, which is approximately one-hour drive time to the south.

Access to the EBP area is accomplished over unpaved roads by 4x4 vehicle from the town of Rosita. Travel times vary throughout the year based on road conditions but average one-hour of drive time. Once at site, the local prospects are accessed using a combination of 4x4 vehicle and a network of horse and foot trails. Prospects are accessible year-round.

### CLIMATE

The northeast region of Nicaragua has two distinct seasons. A dry season running from December through May and a rainy season from June through November. The transition between the two seasons varies by two to four weeks from year to year. The rainy season is marked by clear mornings and powerful cloudbursts in the afternoon. An average of 300 mm of rain per month is reported for the rainy season with the wettest months being September and October. Fieldwork is possible throughout the year, with more favourable access from November through June.



# LOCAL RESOURCES AND INFRASTRUCTURE

The town of Rosita, 40 km west of the EBP, is serviced by a municipal water system sourced from a local reservoir; however, frequent water shortages are experienced due to an aging transport system and insufficient maintenance. It is common for individual houses or compounds to utilize private wells installed by the property owners for sourcing water. Well water needs to undergo treatment before being considered a potable source. Drill water for the EBP area is easily sourced from the local creeks year-round. The average distance to water from the drill platforms is less than 300 m.

Rosita and the other small communities located within the EBP area are connected to the national electrical grid provided by La Empresa Nicaraguense de Electricidad (ENEL). Intermittent power failures are common in the region, and having access to a backup generator is strongly recommended.

Telephone and mobile phone services are provided by global communication companies Claro and Movistar with cell phone coverage increasing every year. Approximately 80% of the EBP area now has cellular coverage due to the addition of several new communication towers in recent years. For remote projects, a satellite phone is used for emergency and check-in purposes.

Apart from mining, the principal economic activities in the region are logging, ranching, commercial agriculture, artisanal mining, and service industries. Originally the town of Rosita was built to support the historic Santa Rita mine. The town is industrialized, and the population would provide a good source of unskilled and semi-skilled labour familiar with the mining industry.

### PHYSIOGRAPHY

The EBP lies within Nicaragua's Atlantic coastal plain and is characterized by flat to hummocky terrain with elevations ranging from 50 MASL to 125 MASL. Cattle ranches and subsistence type farms are common to the area separated by heavy second-growth jungle and swamps. A network of small creeks drains the EBP area providing year-round water for local communities and for exploration activities. Water volumes fluctuate dramatically based on seasonal conditions. Water from the small creeks eventually feeds into the larger Okonwas, Kuliwas, and Kuliwas Sirpi rivers to the south.



# 6 HISTORY

# EXPLORATION HISTORY OF THE EASTERN BOROSI PROJECT AREA

The exploration history of the EBP and its concessions is similar to that of nearby Rosita, Siuna, and Bonanza which together form the three points of Nicaragua's Mining Triangle. All three cities were built around historic mines which operated under the same progression of ownership from La Luz Mining Ltd. to Rosario Resources Corp. (Rosario Resources)/Neptune Gold Mining for much of the twentieth century. Operation and exploration continued up to the time of the Nicaraguan revolution and subsequent nationalization from 1978 to 1990.

After re-privatization in the early 1990s, the EBP group of concessions again followed a linear progression of ownership shared with other properties in Siuna and Rosita until the land package was acquired by Calibre from Yamana Gold Inc. (Yamana) in 2009. Details on the progression can be found in the exploration summary table.

The specific nature of exploration on the EBP concessions prior to 2009 is not well documented as numerous records were destroyed in the early 1980s during the Nicaraguan revolutionary period, and secondly by a fire at the Yamana main office in Siuna in 2008. The exploration history is summarized in Table 6-1.



# TABLE 6-1EXPLORATION AND MINING HISTORY OF THE EASTERN BOROSIPROJECT

Year	Company	Activities
1917	Tonopah Mining Company	Initial investigation and sampling of Guapinol prospect (1.5 km southeast of Riscos de Oro).
1946	La Luz Mining Ltd.	Several exploration drifts driven into Riscos de Oro hill. No further work due to inaccessibility of the area.
1969-1971	La Luz Mining Ltd.	Construction of ballasted road from Rosita to Riscos de Oro area opens area up to first systematic exploration. Regional magnetic and soil surveys completed. Churn drilling and diamond drilling prove sufficient tonnage to warrant open pit mining; underground resources not confirmed.
1972	La Luz Mining Ltd.	Riscos de Oro starts open pit production in April and produces more than 50,000 tons of ore averaging 0.09 oz/ton Au and 3 oz/ton to 5 oz/ton Ag before sale to Rosario Resources.
1973	Rosario Resources	Acquires the properties of La Luz Mining Ltd., continues work with the open pit operation. Construction of road between Riscos de Oro and Blag. Tractor trenching starts at Blag #1 and Blag #2 targets. Diamond drilling starts at Blag with 27 holes for 801.00 m.
1973-1974	Rosario Resources	Diamond and churn drilling programs to test the underground and along strike potential of the Riscos de Oro and Blag #1 and #2 veins. 71 holes totalling 4,020.26 m at Riscos de Oro. 20 holes completed at Blag in 1974 totalling 1,978.33 m. 14 diamond and churn holes totalling 953.63 m completed at La Luna.
1975	Rosario Resources	Preparation for underground mining at Riscos de Oro begins with sinking of a single vertical shaft to 450 ft depth. Production drifts developed at the 150 ft and 300 ft levels. Open pit production starts at Blag in March. Blag single vertical shaft started and eventually sunk to 325 ft. 16 holes completed at Guapinol totalling 1,243.21 m. Tractor cuts and a small open pit developed at California.
1977	Rosario Resources	Underground production starts at Blag at 150 ft level. 102 percussion holes drilled at La Luna totalling 907 m.
1978	Rosario Resources	Production ceases at Blag. Reportedly, a total of 21,969 tons of ore grading 0.034 oz/ton Au and 1.64 oz/ton Ag was mined from the open pit. Also, an estimated total of 12,165 tons of ore grading 0.042 oz/ton Au and 4.66 oz/ton Ag was produced during underground mining.
1979	Rosario Resources	As of the end of February, Rosario Resources reportedly mined 52,000 tons ore grading 0.094 oz/ton Au and 7.869 oz/ton Ag from the underground workings. Total production from the open pit was reported as 348,280 tons grading 0.072 oz/ton Au and 4.85 oz/ton Ag. Additional production of lower grade ore from the pit included 50,000 tons grading 0.036 oz/ton Au and 2.073 oz/ton Ag.



Year	Company	Activities
1979	CONDEMINA	Rosario Resources assets nationalized. CONDEMINA - Corporación Nicaraguense de Desarrollo Minero.
1979-1982	CONDEMINA	Intermittent underground mining until October 1981. Production information not available due to loss of data. Workings abandoned in March 1982. Ernest Lehman Associates (ELA) were contracted to review the project in 1981; ELA collects 528 soil samples, completes 165 m trenching, and 11 diamond drill holes (1,828.50 m).
1990	HEMCO	A joint venture between Bunker Hill and the McGregor family acquire a majority of the concessions in the region from the CONDEMINA.
1997	Greenstone Resources	Options concessions from HEMCO. Regional scale magnetic and radiometric surveys flown by Terraquest over the entire region.
2001	Greenstone Resources	Files for bankruptcy.
2001	HEMCO	Greenstone options are returned to HEMCO.
2003	RNC Gold Inc.	Acquires 80% of the concessions from HEMCO.
2004	RNC Gold Inc.	Acquires the remaining 20% of the concessions from HEMCO.
2006	Yamana Gold Inc.	Purchases RNC Gold Inc. and all their assets.
2007-2009	Yamana Gold Inc.	Completes limited surface exploration including collection of 51 surface rock samples, 55 soil samples, and excavation of 18 trenches (310.50 m).
2009	Calibre Mining Corp.	Acquires concessions from Yamana and finalizes an option agreement with B2Gold Corp. (July 22, 2009).
2009-2010	Calibre Mining Corp./B2Gold Corp.	Acting as Operator, Calibre completes geological mapping over 176 km <sup>2</sup> concession package, 20 diamond drill holes totalling 4,319.90 m, 24 trenches totalling 735.50 m; collects 814 soil samples, 291 surface rock samples.
2010	Calibre Mining Corp.	Calibre acquires 100% of EBP concessions from B2Gold Corp. (October 20, 2010).
2011-2013	Calibre Mining Corp.	Calibre adds Hemco-Rosita II and Hemco-Rosita III concessions to EBP land package via concession swap (November 27, 2012); completes 28 diamond drill holes totalling 7,333.45 m, 50 trenches totalling 1,161.26 m; collects 5,078 soil samples, 451 rock samples. LiDAR survey flown over the Project area. Inferred Mineral Resource estimates were prepared for La Luna (Wardrop, 2011) and Riscos de Oro (Tetra Tech, 2012).
2014	Calibre Mining Corp.	Finalizes an option agreement with IAMGOLD for EBP concessions (May 27, 2014).
2014-current	Calibre Mining Corp./IAMGOLD Corp.	Acting as Operator, Calibre has completed 154 diamond drill holes totalling 28,458.91 m; collected 24 surface rock samples. High resolution satellite photo and topographic dataset acquired for Hemco-Rosita II concession.

Note. The reader is cautioned that Table 6-1 discloses historical exploration and production data. RPA considers the preceding historical estimate to be relevant but not necessarily reliable. In some cases, these historic data would require a verification program of drill hole twinning and re-sampling to upgrade or verify the historical results. Previous Mineral Resource estimates are superseded by the estimates in Section 14 of this report.



# 7 GEOLOGICAL SETTING AND MINERALIZATION

# **REGIONAL GEOLOGY**

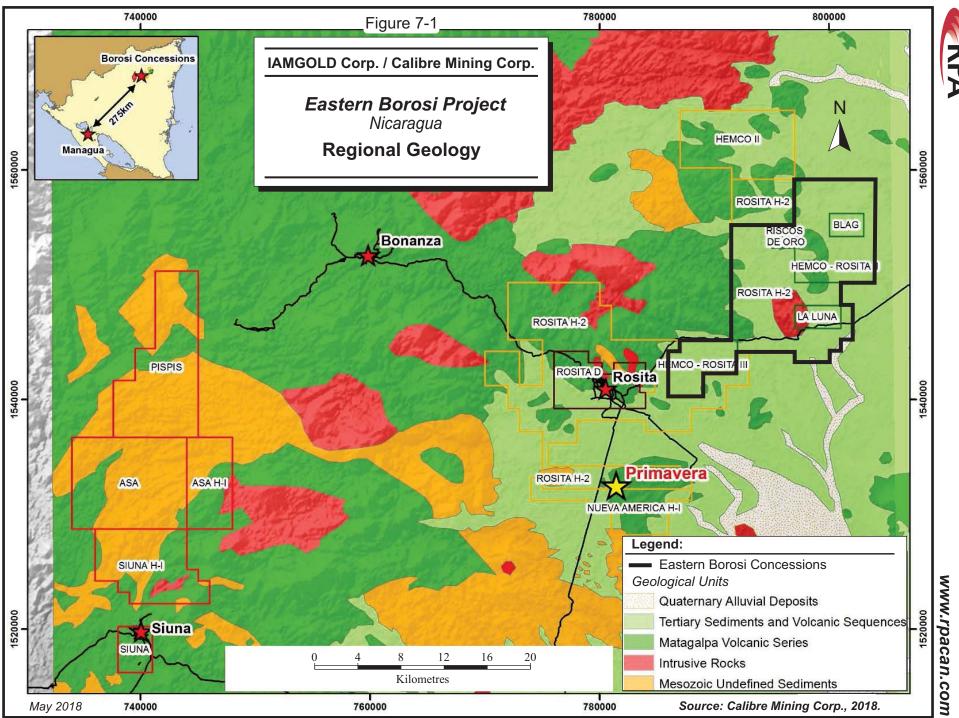
Nicaragua is underlain by the Chortis block of the Caribbean Plate. Basement rocks in the Chortis block are dominantly phyllites and mica schists which are unconformably overlain by Mesozoic stratigraphy (Sundblad 1991). The Mesozoic stratigraphy is represented by limestone, mudstone, greywacke and calcareous mudstone, with lesser andesite tuff and flows, of the Early Cretaceous Todos Santos Formation. Around the EBP, 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 EBP. The Matagalpa Formation is overlain by regionally extensive Miocene ignimbrites (Tamarindo Formation) and by mid-Miocene to Pliocene mafic flows of the Coyol Group; these are exposed mainly in a northwest-trending band east of Lake Nicaragua. Pliocene and younger volcanism has shifted southwest toward the Pacific coastline, where several volcanoes are currently active.

A series of intrusive bodies extend northeasterly through northeastern Nicaragua, including within the EBP. Limited age dating suggests that the oldest of these are Cretaceous; however, there is field evidence that some of them are Tertiary in age. The intrusive rocks consist of fine- to medium-grained diorite, granodiorite, syenite, monzonite and alaskite stocks, plugs, and dykes. Most of these intrusive rocks 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 Project.



7-3



# PROPERTY GEOLOGY

# GEOLOGY

The surficial geology of the EBP has been affected by weathering resulting in saprolite thicknesses ranging from less than one metre to greater than 30 m, commonly averaging 10 m to 15 m. The low lying nature of the topography on the Project has also resulted in the deposition of locally widespread alluvial material when the drainages overflow during the wet season.

The host rocks along the mineralized trends consist of interbedded and alternating ash rich crystal lithic andesite tuff and sparsely to coarsely porphyritic andesite flows. The abundance of tuff increases to the northeast towards the Blag and La Sorpresa vein targets. The reworked coarse tuff unit present at La Sorpresa is especially thick extending to a vertical depth of approximately 125 m. The tuff units are characterized by two centimetre to five centimetre, reworked, sub-rounded to rounded andesite fragments in a fine-grained crystal and ash matrix.

Drill widths of the individual volcanic units at Riscos De Oro and along the Guapinol trend range from two metres to 35 m and the sequence repeats itself several times down hole.

Quartz veins measured within the artisanal pits at surface show a dominant north-northeast and south-southwest orientation with dips ranging from -50° to -90° which has been confirmed by subsequent drilling. Vein intercepts in drill core are often strongly brecciated indicating a high-energy environment, with strong fluid flow and multiple mineralizing events occurring along long-lived structures.

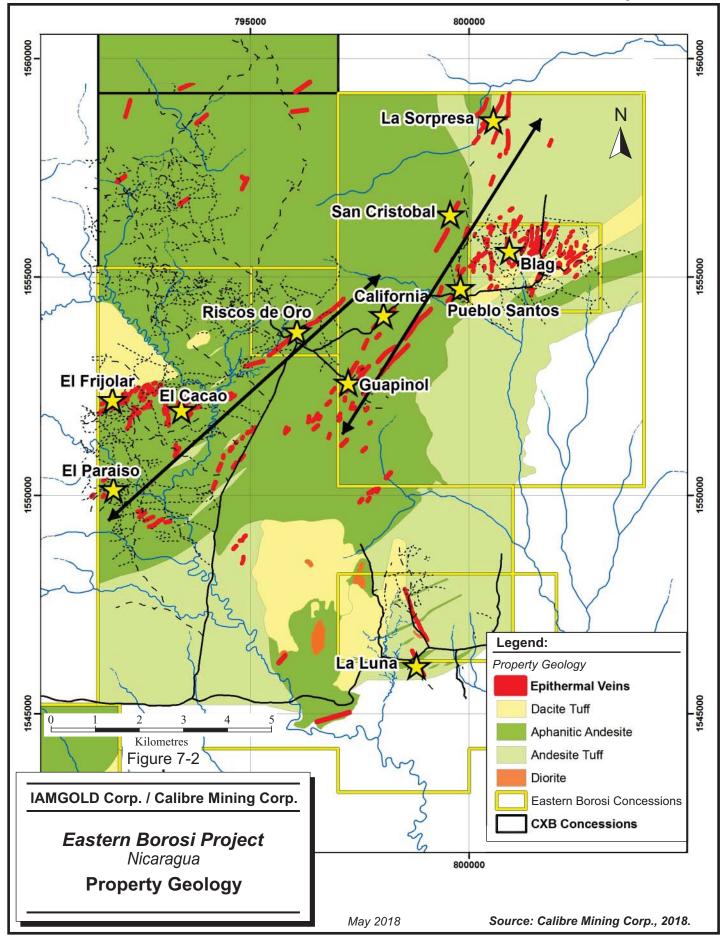
Lithologic units mapped in the target area include:

- Aphanitic to Porphyritic Andesite flows
- Coarsely Porphyritic/Amygdaloidal Andesite
- Mixed Andesitic Ash and Lithic tuffs
- Minor Dacite tuff
- Minor Diorite

The property geology is shown in Figure 7-2.



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# LITHOLOGIES

### SPARSELY PORPHYRITIC ANDESITE FLOW

The unit is medium-dark grey in colour, fine-grained of uniform texture and can contain hornblende phenocrysts up to one millimetre in diameter and 3% abundance (Figure 7-3). Fractures commonly have hematitic halos that extend two centimetres to four centimetres into the surrounding rock. Stratigraphically, the unit lies beneath the porphyritic andesites at the bottom of the volcanic sequence. The unit is not always observed but likely represents the most central and coherent phase of flow volcanism.

# FIGURE 7-3 SPARSELY PORPHYRITIC ANDESITE FLOW

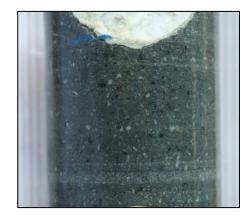


### PORPHYRITIC ANDESITE

The unit is medium grey-green-brown and is characterized by plagioclase phenocrysts one millimetre to 15 mm long and 5% to 20% abundance set in a fine-grained groundmass of andesitic composition (Figure 7-4). Parts of the unit can be weakly to moderately hematized, especially in areas of abundant fracturing. The contacts of the unit are usually gradational over less than a metre but are sharp in some instances. In close proximity to major faults and the vein system, the unit commonly contains elongate 0.5 mm to 10 mm amygdales of 5% to 15% abundance filled with calcite or quartz. Chlorite is a common alteration product contained within or as rims about the amygdules.



# FIGURE 7-4 PORPHYRITIC ANDESITE



#### COARSELY PORPHYRITIC/AMYGDALOIDAL ANDESITE

The unit is medium grey to maroon in colour and is characterized by up to 70% plagioclase phenocrysts to two centimetre long set in an aphanitic andesite matrix (Figure 7-5). Calcite-filled vugs and amygdales up to one centimetre are common and often have fine chlorite rims. Sharp chill margins are often observed over 5 cm to 10 cm. In the Riscos de Oro-Guapinol target areas, the unit is most often intersected near the bottom of drill holes at greater depths.

### FIGURE 7-5 COARSELY PORPHYRITIC/AMYGDALOIDAL ANDESITE



### ASH TUFF

A well-sorted unit characterized by very fine-grained volcanic ash of andesitic composition displaying massive to laminated textures. The unit is maroon to dark grey in colour and in places contains rare small andesite volcanic fragments up to one centimetre in diameter (Figure 7-6). The unit is generally encountered at the bottom of the stratigraphic sequence

beneath the reworked andesite tuff unit. On occasion, the unit has also been observed interbedded within the greater volcanic sequence described above.



## FIGURE 7-6 ASH TUFF

### CRYSTAL-LITHIC TUFF

This transitional unit has variable percentages of lithic fragments, crystals, and ash (Figure 7-7). It commonly displays a crowded, busy texture and is medium grey to light maroon in colour.





#### REWORKED LITHIC TUFF

This poorly sorted, clast-supported unit is characterized by pebble to cobble-sized, subrounded to rounded clasts of intermediate to mafic composition set in a fine-grained tuffaceous matrix (Figure 7-8). The clasts are dominantly and esitic in composition and range from medium to dark grey-green aphanitic to green-brown equigranular porphyritic with 10% plagioclase phenocrysts two millimetres to three millimetres long; rare clasts are hematitic. Occasional light grey dacitic clasts containing 4% plagioclase up to two millimetres have also



been observed. The matrix is medium grey-green in colour and composed of fine-grained andesite tuff containing minor plagioclase crystals up to one millimetre long and 1% to 2% abundance. There is no apparent stratification of the clasts or the matrix material. The upper contact of the unit is poorly defined and often coincident with zones of fracturing or faulting while the lower contact is usually quite sharp.





### STRUCTURE

Outcrops are extremely rare in the EBP area and only limited surface data can be collected related to the structural setting. Principal vein orientations are dominantly northeast-southwest (45° to 60°), with a lesser subset of approximately north-south oriented veins (350° to 010°). Inclinations are commonly 50° to 70° to the northwest but in some areas greater than 80° (i.e., near vertical).

Historic data from previous surface and underground development at the Riscos de Oro mine shows that the vein has an average orientation of 233°/60° through the length of the workings and follows a well-defined fault corridor. Over short distances, the vein changes towards 225°, apparently a result of interaction with numerous faults that dip 45° to 80° towards the northwest, resulting in a more complex style of mineralization (Lehman, 1981).

Structural measurements taken from lesser veins located at surface near the old open pit show that the Riscos de Oro vein system underwent a combination of strike and dip slip (i.e., oblique slip, wrench stress field), with sinistral movement along the principal fault structure.



North-south oriented structures such as La Luna are inferred to have formed during a different stress regime and have auxiliary veins which indicate dextral movement along their host faults (Alliborne, 2010).

The Guapinol, Vancouver, Blag, and East Dome veins all have northeast-southwest orientations similar to Riscos de Oro, while the La Luna vein is orientated north-south. None of these targets have had the benefit of underground mapping.

In the case of East Dome, the occurrence and orientation of the mineralized structure appears, in part, to be controlled by a lithological contact between reworked andesite tuff and more competent variably porphyritic andesite flow.

Based on contact measurements and structural interpretations of select marker horizons observed in drill core, the volcanic stratigraphy in the Riscos de Oro area has an inferred strike of northwest-southeast (168°), and dips to the southwest at 22° (Alliborne, 2010). This bedding orientation can be applied to the nearby Guapinol target located approximately two kilometres to the southeast, but likely changes over the northeast portion of the Project area which is dominated by thick sequences of coarse andesite lithic tuff (125+ m).

### ALTERATION

The EBP is dominated by a moderately deep weathering profile with associated goethite, limonite, hematite, and manganese oxide in addition to strong argillic alteration (illite-smectite). Relict feldspar phenocrysts are commonly sericite altered, although it is common for the secondary sericite to be replaced by clay. In some areas, weathering is less pronounced in subcrop and float, and alteration is characterized by the chloritization of biotite and hornblende and the silicification of groundmass material. Hematite is also noted in the groundmass as is trace epidote and pyrite.

In drill core, weak to moderate propylitic alteration is most common with chlorite, calcite, pyrite, and rare epidote observed (Figure 7-9). Intensity appears largely controlled by fracturing and faulting with weaker units such as the crystal-lithic and reworked lithic tuff containing stronger and more widespread alteration.





FIGURE 7-9 EXAMPLE OF PROPYLITIC ALTERATION

Moderate to strong argillic alteration is found in proximity to the target vein intervals extending as far as 30 m into the host rock depending on lithology (Figure 7-10). The assemblage includes sericite, illite-smectite, and pyrite with minor quartz, calcite, and dolomite. Alteration intensity is often so strong as to obscure primary rock textures making identification of the host rock difficult.



## FIGURE 7-10 EXAMPLE OF ARGILLIC ALTERATION



Moderate to strong silica alteration is prevalent within the quartz vein breccia and stockwork vein breccia intervals (Figure 7-11). It is also commonly observed in the adjacent host rocks. Silica occurs as cement within the multi-phase, high energy breccia intervals along with minor carbonate. Sub-angular to sub-rounded andesite lithic fragments are also commonly silicified within the breccia matrix. Moderate to strong silica alteration may extend for two metres to three metres on either side of the target veins.



## FIGURE 7-11 EXAMPLE OF SILICA ALTERATION

## MINERALIZATION

As many as six paragenetic phases and three styles of mineralization have been noted in drill core on the EBP (Stockton, 2015). Textures range from classic colloform banded low sulphidation veins to high-energy, multi-phase breccias.

The earliest style of mineralization includes massive quartz veins with a low percentage of sulphide minerals from 0.5% to 1% (minor pyrite, minor sphalerite-galena) (Figure 7-12). Multiple, discrete, 0.2 m to one metre wide veins may occur over a four metre to five metre wide interval. The style is characterized by a relatively low Ag/Au ratio. The Guapinol and Vancouver veins are representative of this style (e.g., GP14-010 - Vancouver).



### FIGURE 7-12 MASSIVE QUARTZ VEINING VANCOUVER TARGET (GP14-010).



The second and most prevalent stage of mineralization includes multi-phase quartz vein breccias, which contain a mix of early phase massive quartz fragments, colloform vein fragments, silicified host rocks, and milled rock flour. Three types of breccia are commonly observed: jigsaw, crack-seal, and strongly milled (Figures 7-13 to 7-15, respectively). Although uncommon, unbrecciated intervals of classic low sulphidation colloform banding have been intercepted (Figure 7-16 of RD10-009 - Riscos de Oro). The style has a higher percentage of pyrite and base metal mineralization (sphalerite-galena) from 3% to 7%, and a higher Ag/Au ratio.

At targets such as Blag and East Dome, base metal values are considerably higher which may indicate higher formation temperatures approaching those more in line with intermediate sulphidation or Carbonate Base Metal (CBM) deposits.



## FIGURE 7-13 JIGSAW BRECCIA



FIGURE 7-14 CRACK-SEAL BRECCIA

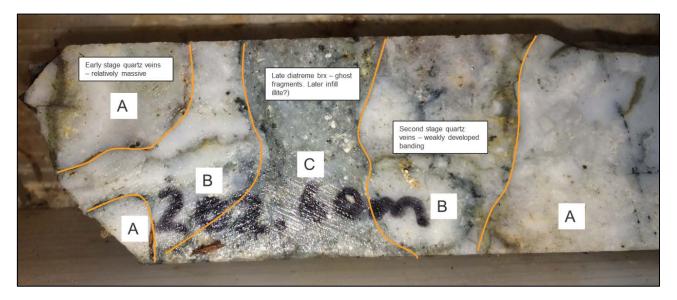




FIGURE 7-15	STRONGLY MILLED BRECCIA
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## FIGURE 7-16 BANDED LOW SULPHIDATION EPITHERMAL QUARTZ VEIN FROM DRILL HOLE RD10-009 (168.60 M). EXAMPLE OF PRESERVED PRIMARY TEXTURES



The third and least common style of mineralization is characterized by Fe-rich, high temperature, black coloured sphalerite overprinting the lower temperature "honey coloured" sphalerite present in the second stage mineral assemblage. This stage also has the addition of pink coloured carbonate, amethyst, and chalcopyrite. This style has some similarities to Carbonate Base Metal (CBM) deposits. It is inferred that this phase has a general enrichment in base metal values. It has been identified in higher grade intervals at Riscos de Oro in the form of incomplete fracture fill (Stockton, 2015).



The common sulphide assemblage found across all veins includes pyrite-sphalerite-galenadark grey sulphosalts+/-minor chalcopyrite. Base metals and silver sulphosalt minerals occur as dark grey, fine grained colloform bands, as rims on reworked quartz vein fragments, and as blebs within the silica rich matrix of the breccia units (Figure 7-17).

## FIGURE 7-17 LATE DIATREME BRECCIA CROSS-CUTTING PRIMARY COLLOFORM BANDED MINERALIZATION



Pyrite is more common occurring within the colloform bands, as blebs within the silica matrix, as one millimetre to three millimetre sulphide veinlets in host rock, and as disseminations within the argillic and propylitic alteration haloes.

Gold occurs primarily as electrum. The electrum is present as liberated particles and as binary particles with non-sulphide gangue, binary particles with sulphides, and within multi-phase assemblages. Silver occurs primarily within silver-copper sulphide minerals. Other silver minerals include acanthite, and silver sulphosalts with selenium, tellurium, and antimony (Roulston and Sloan, 2017).



## 8 DEPOSIT TYPES

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 one kilometre of the paleosurface (Panteleyev 1996). Veins typically have strike lengths in the range of hundreds to thousands 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, 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.

Low sulphidation epithermal deposits are the dominant style of mineralization in the active mining operations in the Bonanza District, 50 km west, and in the two active mines operated by B2Gold Corp. (B2Gold) in the western portion of Nicaragua.



## **9 EXPLORATION**

Exploration on the EBP began in 2009 immediately after Calibre purchased the property from Yamana. Work has been conducted systematically following a progression of geologic mapping, rock sampling, soil sampling, trenching, and diamond drilling. Diamond drilling is described in Section 10.

Recent work can be divided into three separate periods: the early stage Calibre-B2Gold option from 2009 to 2010, the Calibre 100% owned period from 2010 to 2013, and the current stage Calibre-IAMGOLD option from 2014 to present. Tables 9-1 and 9-2 summarize the exploration that has been completed.

## TABLE 9-1 GEOLOGICAL MAPPING EXPLORATION IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Voor(c)	Compony	Exploration Type					
Year(s)	Company	Mapping (km <sup>2</sup> )	Rocks	Soils			
2009-2010	Calibre/B2Gold	176	291	814			
2011-2013	100% Calibre	Completed	451	5,078			
2014-current	Calibre/IAMGOLD	Completed	24	152			
Total		176+	766	6,044			

# TABLE 9-2DRILLING AND TRENCHING EXPLORATIONIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Veer(c)	Compony	Exploration Type					
Year(s)	Company	<b>Trenches/Metres</b>	<b>Drill Holes/Metres</b>				
2009-2010	Calibre/B2Gold	24 / 735.50 m	20 / 4,319.90 m				
2011-2013	100% Calibre	50 / 1,161.26 m	28 / 7,333.45 m				
2014-current	Calibre/IAMGOLD	-	154 / 28,458.91 m				
Total		74 / 1,896.76 m	202 / 40,112.26 m				

For summary of historic exploration see Section 6.

## **GEOLOGIC MAPPING**

Geologic mapping is conducted using a global positioning system (GPS) enabled hand held mobile mapping device. Lithologic stations are created at outcrop, subcrop, and rock sampling



sites. In general, outcrop is rare and one of the primary sources for mapping are the existing small miners workings.

Data collected at the sites include: lithology type, alteration type(s), style of mineralization, sulphide type and percentage, structural measurements and geologic description of the sample or outcrop.

Geological mapping in the artisanal mining pit is depicted in Figure 9-1.



FIGURE 9-1 GEOLOGICAL MAPPING IN ARTISANAL MINING PIT

Data from the mapping is downloaded daily from the mobile mappers and incorporated into the existing mapping data stored in the office server(s).

## ROCK SAMPLING

Rock samples are collected by chip, channel, or grab sampling method and placed inside 13 in. x 17 in. plastic sample bags. The bags are then sealed with plastic cable ties for shipping to the laboratory.



When chip sampling, small chips are taken evenly across the entire outcrop using a rock hammer. In the case where a defined structure is found, the sample is taken as a continuous channel across the structure, at an angle perpendicular to the trend of the structure.

When grab sampling, larger sample pieces are selected from the areas of greater interest (or greater potential for mineralization), after the outcrop has been evaluated (Figure 9-2).

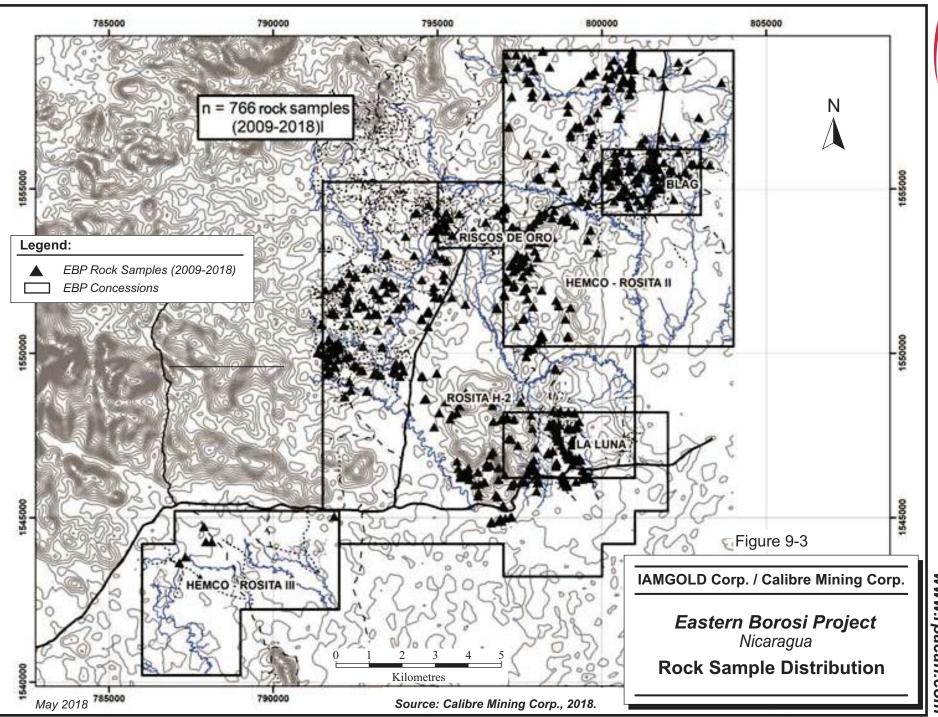
In addition to location data, which is supplied by embedded GPS within the mobile mapping units, the data collected at the time of sampling include: sample number, lithology type, alteration type(s), style of mineralization, sulphide type and percentage, structural measurements, and geologic description of the sample.

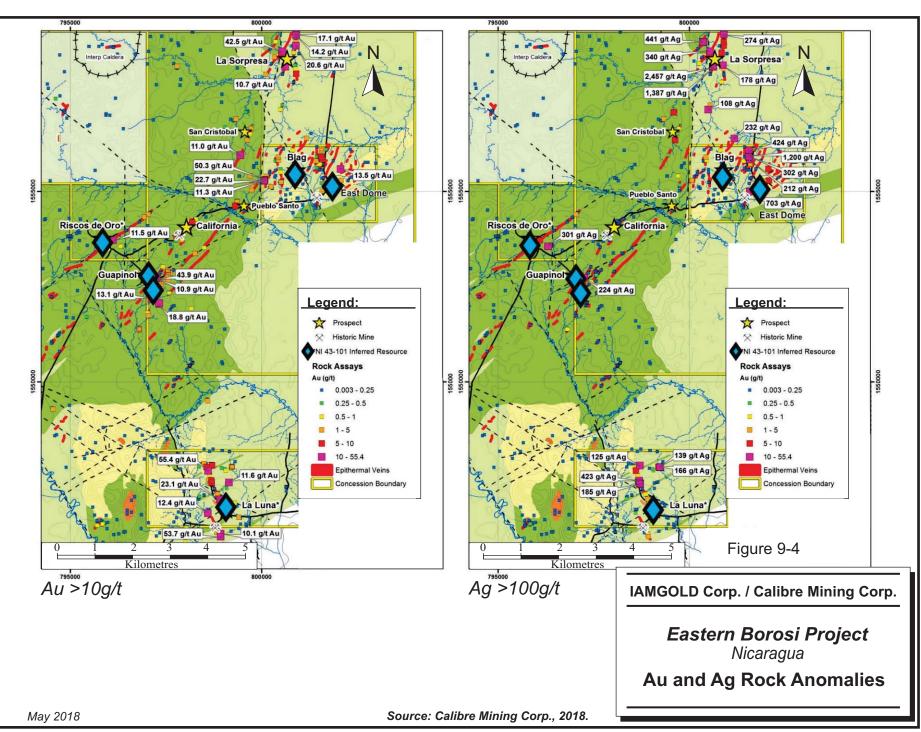
## FIGURE 9-2 ROCK SAMPLES B13R3072 (LA SORPRESA) WITH 14.2 G/T AU AND 274 G/T AG



A summary of the rock samples collected from 2009 to 2018 on the EBP is included in Table 9-1. A location map showing the distribution of rock sampling across the EBP concessions is shown in Figure 9-3. A location map showing rock samples anomalies with grades greater than 10 g/t Au and 100 g/t Ag, respectively, are shown in Figure 9-4.

Rock chip, channel, and grab samples were not used to model Mineral Resources.





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## SOIL SAMPLING

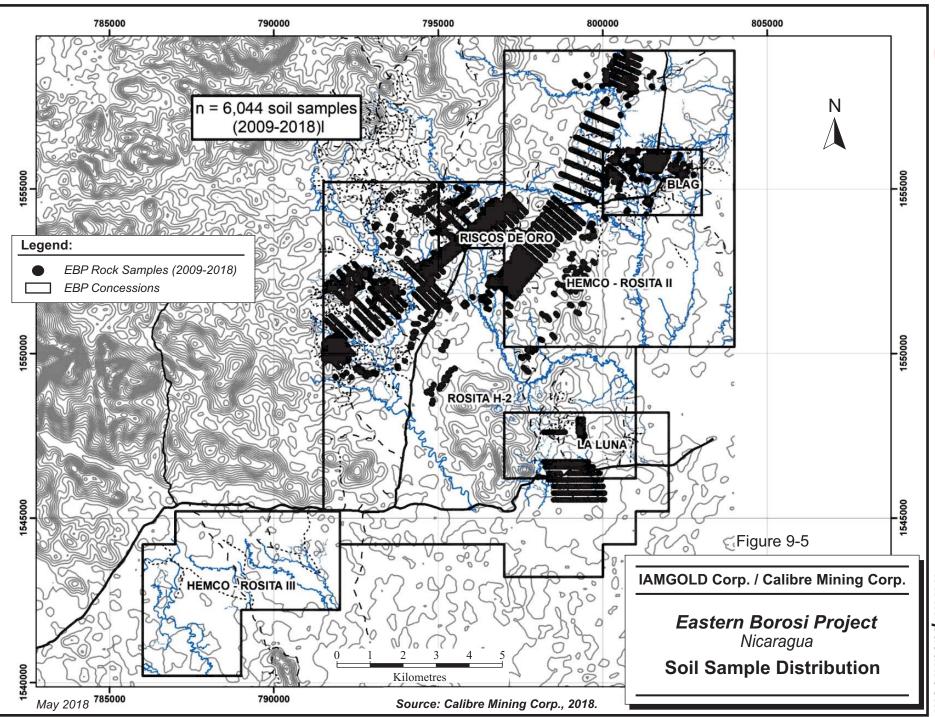
Soil samples are collected using a hand auger from a depth of 0.5 m to 1.2 m (Figure 9-5). Depending on the specific target, soil lines are spaced between 100 m and 400 m apart and samples are taken 10 m to 20 m apart along the lines.

Whenever possible, the sample is collected at the maximum depth of 1.2 m, from the last three auger loads. These are placed in a 4 in. x 6 in. paper soil sample bag, labelled with a combination of Line number and Station number, put inside a new plastic bag, and sealed with flagging tape. After the drying stage, the samples are placed in a 13 in. x 17 in. sample bag and sealed with a cable tie for shipping to the laboratory.

In addition to the GPS location, data collected at the time of sampling includes: Line/Station number, sample depth (m), "C" horizon lithology type, alteration type(s), oxidation level, and environment at collection site.

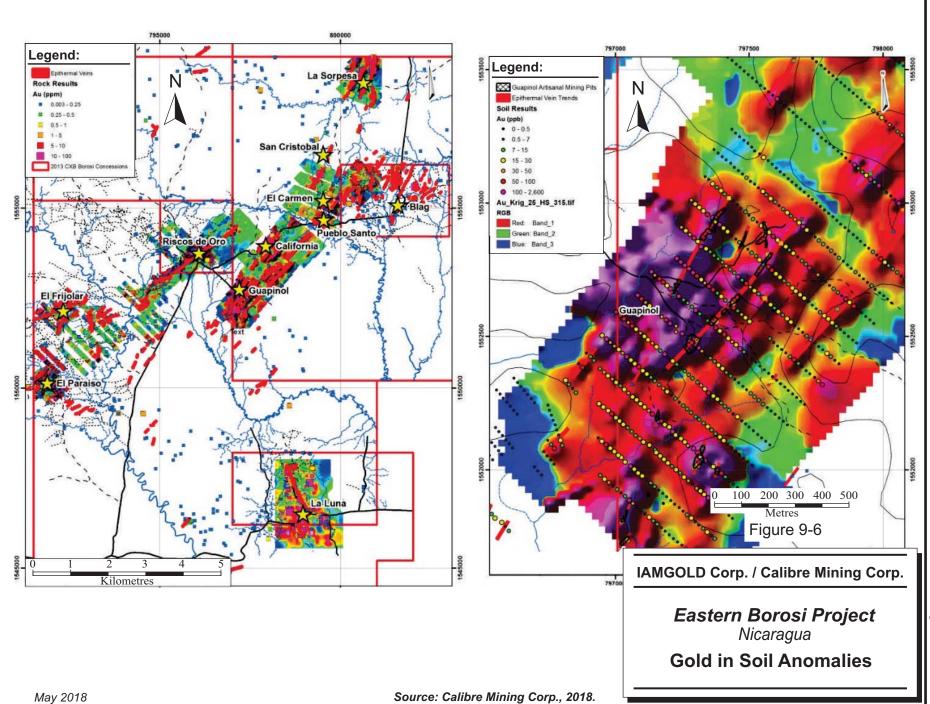
The auger is thoroughly cleaned after each sample to avoid contamination.

A summary of the number of soil samples collected from 2009 to 2018 on the EBP is included in Table 9-1. A location map showing the distribution of soil sampling across the EBP concessions is shown in Figure 9-5 and the EBP gold in soil anomalies are shown in Figure 9-6. A large area of the Project remains unsampled and further work has the potential to generate additional anomalies.



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## TRENCHING

Prior to excavation, the trench location is cordoned off using barbed wire attached to wooden fence posts. The exploration trenches are dug by hand to an average depth of two metres and total width of three metres. Organic topsoil is separated from the mineral soil and is stored in sacks until the final stage of reclamation. For safety purposes, the trenches are constructed using a tiered method and vertical step-downs do not exceed one metre for every one metre of horizontal distance.

After the geologic information has been collected 0.5 m to two metre sample lengths are marked on the trench walls using spray paint. Samples are collected using continuous channel sampling between sample markers approximately 10 cm to 20 cm from the trench floor.

If strongly silicified rock or quartz veining is encountered, a motorized rock saw is used to cut a channel sample on the floor of the trench, perpendicular to the main trend, or across any silicified zone with a defined trend. The rock saw is thoroughly cleaned after each sample to avoid contamination.

In addition to the GPS location and vector data related to the trench (azimuth, length), the data collected at the time of sampling include: sample number, lithology type, alteration type(s), style of mineralization, sulphide type and percentage, structural measurements, and geologic description of the sample.

A prototypical exploration trench is shown in Figure 9-7. Trenches are reclaimed shortly after the assay results are received in reverse order to the excavation, with the organic topsoil being replaced last.

La Luna was sampled by seven trenches with a total length of 173.7 m. A total of 165 samples were collected, of which 27 from four trenches, totalling 23.1 m, were used for the resource estimate.

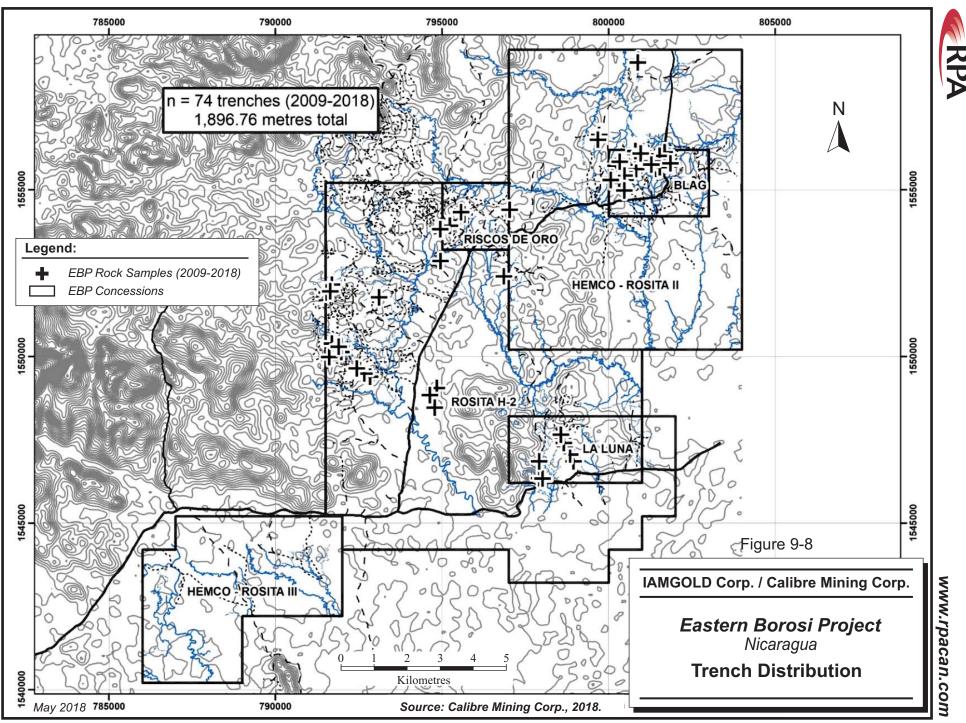
A total of four trenches that sampled the La Luna N1 vein were used to estimate Mineral Resources, complementing drilling data.

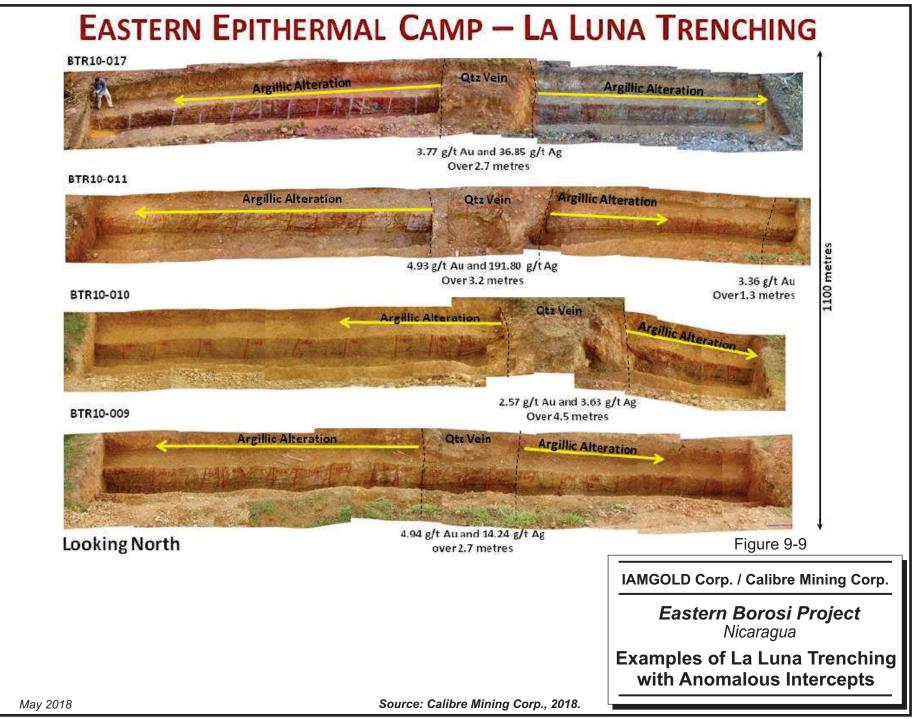




## FIGURE 9-7 PROTOTYPICAL EXPLORATION TRENCH

A summary of the trenches excavated from 2009 to 2018 on the EBP is included in Table 9-2. A location map showing the distribution of trenches across the EBP concessions is shown in Figure 9-8, and examples of trenching with anomalous intercepts are shown in Figure 9-9.





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## **REMOTE SENSING**

Throughout the duration of the Project, Calibre and its partners have endeavoured to acquire large scale remote sensing datasets which cover the entirety of the EBP concessions. In 2010 and 2016, large sets of satellite orthophotos were acquired for the Project. In 2012, a max resolution 0.1 m LiDAR survey was flown covering 52% of the concession area. Figure 9-10 shows the Blag area LiDAR survey with soil sample lines.

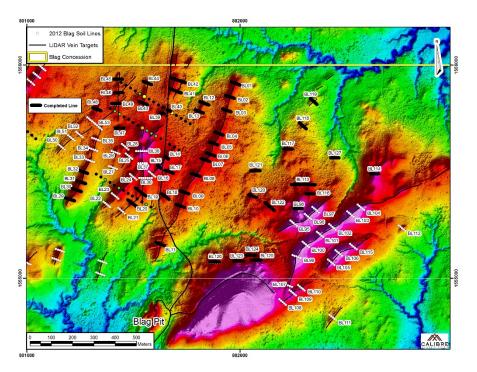


FIGURE 9-10 BLAG AREA LIDAR WITH SOIL SAMPLE LINES

In 2016, an additional one metre resolution topographic dataset (DEM) was acquired, covering an additional 32% of the concession area.

Total satellite orthophoto coverage is 100% of the Project area, while total high-resolution topography coverage is 84% of the Project area.

The satellite orthophoto images and high-resolution topography aid in exploration by allowing geologists to see detailed resistive features related to the silicification of the regional host rocks. These resistant features are commonly related to mineralized epithermal quartz veins.



## **10 DRILLING**

## DRILLING

Drilling on the EBP has been completed in two phases, in 2010 to 2011 by Calibre and 2014 to 2017 by Calibre/IAMGOLD.

## EASTERN BOROSI PROJECT DIAMOND DRILLING (2010-CURRENT)

Diamond drilling on the Project was carried out during the same exploration periods outlined in Section 9. Calibre acted as operator from 2009 to 2010 during the Calibre/B2Gold option period and is currently acting as operator for the Calibre/IAMGOLD option period (2014 to present). A breakdown of the drilling programs with assay results are provided in the subsections below.

## CALIBRE/B2GOLD OPTION (2010)

Drilling commenced on the Project in April 2010. Twenty drill holes were completed at the Riscos de Oro and La Luna vein targets in 2010 for a total of 4,319.90 m.

Both targets have a history of gold production dating from the time of Rosario Resources (open pit/underground) - see Section 6 for details.

The Riscos de Oro drilling focused on confirming the high-grade gold and silver intercepts returned during the 1981 ELA drilling program as well as confirming gold mineralization deeper than the historic 300 ft mining level.

Drilling at La Luna targeted the down dip extensions of the anomalous surface gold results returned from trenching in late 2009 to early 2010.

Rodio Swissboring Nicaragua S.A. was contracted for the 2010 drill program and the work was carried out using a Christensen CS-1000 track mounted rig. Drill holes were HQ diameter with 3.05 m drill runs. A summary of the 2010 EBP drill holes is provided in Table 10-1 and assay results are provided in Table 10-3.



## TABLE 10-12010 EBP DRILL HOLE SUMMARYIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Hole_ID	Target	Depth (m)	Dip (deg)	Azimuth (deg)	Projection	Easting (m)	Northing (m)	Elevation (m)	Date Started	Date Completed
LL10-001	La Luna	200.45	-48	65	WGS84_16N	798858	1546802	52.44	2010-04-20	2010-04-21
LL10-002	La Luna	125.10	-52	65	WGS84_16N	798752	1546130	50.70	2010-04-27	2010-05-02
LL10-003	La Luna	200.20	-53	70	WGS84_16N	798867	1545942	48.42	2010-05-03	2010-05-09
LL10-004	La Luna	258.80	-65	65	WGS84_16N	798752	1546130	50.64	2010-05-09	2010-05-15
LL10-005	La Luna	164.10	-53	65	WGS84_16N	798508	1547631	60.76	2010-05-19	2010-05-20
LL10-006	La Luna	164.10	-48	65	WGS84_16N	798632	1547288	58.25	2010-05-25	2010-05-27
LL10-007	La Luna	200.90	-48	65	WGS84_16N	798763	1547015	50.91	2010-06-02	2010-06-02
LL10-008	La Luna	253.00	-47.6	65	WGS84_16N	798496	1547422	55.37	2010-06-06	2010-06-09
LL10-009	La Luna	154.70	-46.1	50	WGS84_16N	798729	1546184	46.66	2010-06-09	2010-06-14
LL10-010	La Luna	178.90	-50	65	WGS84_16N	798678	1547160	49.53	2010-06-14	2010-06-18
LL10-011	La Luna	259.05	-50	70	WGS84_16N	798702	1546952	55.70	2010-06-25	2010-07-08
RD10-001	Riscos de Oro	221.00	-60	135	WGS84_16N	795927	1553860	72.80	2010-04-30	2010-05-04
RD10-002	Riscos de Oro	240.00	-60	135	WGS84_16N	795951	1553914	72.41	2010-05-10	2010-05-10
RD10-003	Riscos de Oro	324.30	-72	135	WGS84_16N	795837	1553860	73.83	2010-05-19	2010-05-19
RD10-004	Riscos de Oro	390.55	-72	135	WGS84_16N	795848	1553944	68.79	2010-05-26	2010-05-27
RD10-005	Riscos de Oro	277.35	-62	137	WGS84_16N	796158	1554047	75.52	2010-05-30	2010-06-04
RD10-006	Riscos de Oro	244.05	-50	135	WGS84_16N	794880	1553944	70.89	2010-06-06	2010-06-15
RD10-007	Riscos De Oro Ext.	200.70	-60	135	WGS84_16N	796851	1554398	73.46	2010-06-14	2010-07-04
RD10-008	Riscos de Oro	68.55	-60	135	WGS84_16N	796231	1554065	73.47	2010-06-17	2010-07-02
RD10-009	Riscos de Oro	194.10	-60	135	WGS84_16N	796232	1554064	73.49	2010-07-02	2010-07-09

### 100% CALIBRE (2011)

Drilling resumed at the 100% owned Riscos de Oro target in February 2011 after the Calibre/B2Gold option was dissolved in October 2010. Twenty-eight drill holes were completed in 2011 for a total of 7,333.45 m.

The program consisted of moderately spaced infill drilling within the northeast and southwest mineralized shoots at Riscos de Oro.

During this period, a second, deeper, sub-parallel vein structure was intercepted in drill hole RD11-015 which changed the drilling pattern for subsequent holes. Drilling helped delineate gold mineralization along the structures between the priority mineralized shoots at depth.

Previous workers had believed the vein to be pinched out at this location. At the end of the drilling period, gold mineralization had been identified over a strike length of 665 m and depth of 350 vertical m along both sub-parallel structures.



The 2011 drill holes were contracted to Rodio Swissboring S.A. and completed using a Christensen CS-1000 drill rig. Drill holes were HQ diameter with 3.05 m drill runs. A summary of the 2011 EBP drill holes is provided in Table 10-2 and assay results are provided in Table 10-3.

## TABLE 10-22011 EBP DRILL HOLE SUMMARYIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

H ole _ID	Target	Depth	Dip	Azimuth	Projection	Easting	Northing	Elevation (m)	Date Started	Date Completed
RD11-010	Riscos de Oro	254.60	-75	135	WGS84_16N	795937	1553807	71.77	2011-02-21	2011-03-03
RD11-011	Riscos de Oro	234.35	-70	135	WGS84_16N	795936	1553784	72.39	2011-03-03	2011-03-12
RD11-012	Riscos de Oro	275.85	-72	135	WGS84_16N	795885	1553829	72.07	2011-03-12	2011-03-14
RD11-013	Riscos de Oro	346.05	-70	135	WGS84_16N	795909	1553931	70.21	2011-03-28	2011-04-11
RD11-014	Riscos de Oro	215.00	-60	135	WGS84_16N	796192	1554063	73.85	2011-04-11	2011-04-15
RD11-015	Riscos de Oro	214.75	-60	135	WGS84_16N	796233	1554105	74.51	2011-04-15	2011-04-19
RD11-016	Riscos de Oro	295.05	-60	135	WGS84_16N	796196	1554098	74.40	2011-04-25	2011-05-02
RD11-017	Riscos de Oro	324.90	-60.0	135	WGS84_16N	796205	1554146	75.58	2011-05-03	2011-05-09
RD11-018	Riscos de Oro	305.70	-60.0	135	WGS84_16N	796146	1554095	75.83	2011-05-10	2011-05-16
RD11-019	Riscos de Oro	222.75	-70	135	WGS84_16N	795998	1553815	73.52	2011-08-22	2011-08-28
RD11-020	Riscos de Oro	211.10	-70	135	WGS84_16N	795924	1553730	73.69	2011-08-28	2011-09-01
RD11-021	Riscos de Oro	290.15	-70	135	WGS84_16N	795843	1553791	69.52	2011-09-03	2011-09-10
RD11-022	Riscos de Oro	265.20	-75	135	WGS84_16N	795800	1553673	68.37	2011-09-12	2011-09-23
RD11-023	Riscos de Oro	135.55	-50	135	WGS84_16N	796315	1553971	71.68	2011-09-22	2011-09-25
RD11-024	Riscos de Oro	313.55	-60	135	WGS84_16N	796089	1554038	76.14	2011-09-25	2011-10-09
RD11-025	Riscos de Oro	257.50	-60	135	WGS84_16N	796326	1554111	73.22	2011-09-28	2011-10-06
RD11-026	Riscos de Oro	301.30	-60	135	WGS84_16N	796268	1554171	74.03	2011-10-06	2011-10-15
RD11-027	Riscos de Oro	331.30	-65	135	WGS84_16N	796030	1553989	75.35	2011-10-09	2011-10-17
RD11-028	Riscos de Oro	155.65	-60	135	WGS84_16N	796385	1554050	70.14	2011-10-15	2011-10-18
RD11-029	Riscos de Oro	317.10	-70	135	WGS84_16N	795981	1553935	72.49	2011-10-17	2011-10-26
RD11-030	Riscos de Oro	219.60	-55	135	WGS84_16N	796439	1554134	70.63	2011-10-19	2011-10-26
RD11-031	Riscos de Oro	279.60	-70	135	WGS84_16N	796102	1553910	79.92	2011-10-25	2011-10-31
RD11-032	Riscos de Oro	273.55	-65	135	WGS84_16N	796440	1554273	73.75	2011-10-26	2011-11-15
RD11-033	Riscos de Oro	303.40	-70	135	WGS84_16N	795799	1553774	68.87	2011-11-12	2011-11-18
RD11-034	Riscos de Oro	243.05	-75	135	WGS84_16N	795731	1553627	66.61	2011-11-15	2011-11-24
RD11-035	Riscos de Oro	222.75	-72	135	WGS84_16N	795976	1553761	81.95	2011-11-25	2011-11-30
RD11-036	Riscos de Oro	248.00	-64	135	WGS84_16N	796183	1553966	81.38	2011-11-30	2011-12-06
RD11-037	Riscos de Oro	276.10	-80.0	135	WGS84_16N	796069	1553880	77.59	2011-12-07	2011-12-14



# TABLE 10-3 CALIBRE HIGHLIGHT ASSAY DRILL RESULTS 2010–2011 IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Hole ID	Target	Au (g/t)	Ag (g/t)	Length (m)	From (m)	To (m)
RD11-012	Riscos de Oro	7.69	211.9	10.60	249.30	259.90
RD10-009	Riscos de Oro	4.23	384.9	8.53	160.70	169.23
RD11-010	Riscos de Oro	10.25	288.3	5.40	223.00	228.40
RD11-019	Riscos de Oro	9.37	64.8	5.80	121.15	126.95
RD10-009	Riscos de Oro	17.85	2810.0	0.95	168.28	169.23
RD11-017	Riscos de Oro	9.31	336.1	3.90	223.60	227.50
RD11-016	Riscos de Oro	2.72	287.7	7.10	198.50	205.60
RD11-021	Riscos de Oro	4.4	24.1	8.64	241.80	250.44
RD10-001	Riscos de Oro	2.44	292.6	5.80	177.60	183.40
RD10-005	Riscos de Oro	9.04	30.0	4.14	242.91	247.05
RD11-037	Riscos de Oro	8.66	37.6	4.21	250.39	254.60
RD11-025	Riscos de Oro	4.23	449.8	2.95	136.82	139.77
RD11-003	Riscos de Oro	8.81	55.7	3.40	296.30	299.70
RD11-011	Riscos de Oro	6.41	139.2	3.62	198.38	202.00
RD11-012	Riscos de Oro	10.02	268.0	2.00	257.90	259.90
RD11-029	Riscos de Oro	10.3	56.7	2.45	282.52	284.97
RD11-026	Riscos de Oro	8.74	120.5	2.58	208.84	211.42
RD11-015	Riscos de Oro	5.44	405.6	2.20	182.00	184.20
RD11-033	Riscos de Oro	2.38	2.3	8.00	211.00	219.00
RD11-024	Riscos de Oro	7.75	15.5	2.35	287.05	289.40
RD10-009	Riscos de Oro	9.22	217.0	1.27	162.53	163.80
RD11-016	Riscos de Oro	3.2	13.3	4.29	249.42	253.71
RD11-018	Riscos de Oro	9.11	14.3	1.39	273.03	274.42
RD11-027	Riscos de Oro	2.28	11.6	4.60	299.00	303.60
RD11-010	Riscos de Oro	2.5	5.2	4.20	187.40	191.60
RD11-031	Riscos de Oro	2.03	12.2	4.54	219.06	223.60
LL10-002	La Luna	4.63	39.8	9.00	90.00	99.00
LL10-006	La Luna	2.77	19.4	4.00	127.00	131.00
LL10-001	La Luna	1.43	7.5	7.75	115.70	123.45
LL10-004	La Luna	1.63	13.6	6.28	110.72	117.00
LL10-007	La Luna	2.40	4.9	3.35	113.70	117.05
LL10-007	La Luna	2.99	30.7	1.75	18.95	20.70
LL10-011	La Luna	2.89	2.7	1.55	248.00	249.55
LL10-010	La Luna	2.66	27.5	1.45	141.00	142.45
LL10-009	La Luna	1.39	21.6	2.48	97.92	100.40
LL10-006	La Luna	0.85	22.5	2.90	137.60	140.50
LL10-010	La Luna	1.32	5.3	1.42	147.51	148.93
LL10-009	La Luna	2.75	35.5	0.45	138.55	139.00
LL10-009	La Luna	2.40	60.7	0.40	128.10	128.50
LL10-009	La Luna	2.54	7.9	0.48	117.62	118.10



## CALIBRE/IAMGOLD OPTION (2014-CURRENT)

After the 2011 Riscos de Oro drilling program, no drilling was completed on the Project until July 2014. From 2014 to the current time, drilling has been focused on delineating gold mineralization at the Guapinol, Vancouver, Blag, and East Dome vein targets along with reconnaissance drill testing of early stage targets.

The Guapinol vein is located in the central portion of the Project. As of July 2017, 26 drill holes have been drilled at the Guapinol vein target for a total of 5,355.98 m. Mineralization has been defined along a strike length of 300 m and vertical depth of 300 m and is open in multiple directions.

Seventeen drill holes have been completed at the Vancouver target for a total of 2,760.56 m. The Vancouver vein is located 200 m southeast of the Guapinol vein. It was possible to intercept both the Guapinol and Vancouver veins in the southernmost drill holes as the veins converge along strike to the southwest. The mineralization at Vancouver has been defined over a strike length of 200 m and a vertical depth of 175 m and is open in multiple directions.

The Blag vein target has a history of limited open pit and underground gold production dating from the time of Rosario Resources (see Section 6 for details). Recent drilling has included 28 drill holes for a total of 5,551.45 m. The mineralization has been defined over a strike length of 200 m and vertical depth of 265 m and is open in multiple directions.

The East Dome vein is located 400 m east of the Blag vein and historic mine. In 2015, anomalous gold and high grade-silver mineralization was intercepted in reconnaissance drill holes beneath the dominant topographic feature in the area. A total of 22 drill holes have been completed for a total 5,013.67 m. The mineralization has been defined over strike length of 275 m and a vertical depth of 300 m and is open in multiple directions.

Kluane Nicaragua S.A. was contracted in 2014 and has remained as the drill contractor up until the current time. Work has been completed using man portable KD600 and KD1000 drill rigs. Holes have been drilled in HTW and NTW diameter with 1.52 m to 3.05 m drill runs depending on ground conditions. A summary of the relevant 2014 to 2017 EBP drill holes and assay results are provided in Tables 10-4 and 10-5, respectively.



# TABLE 10-42014 – 2017 EBP DRILL HOLE SUMMARYIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Hole_ID	Target	Depth	Dip	Azimuth	Projection	Easting	Northing	Elevation (m)	Date Started	Date Completed
BL14-001	Blag	114.30	-65	100	WGS84_16N	801520	1555213	54.82	2014-09-12	2014-09-14
BL14-002	Blag	112.78	-50	100	WGS84_16N	801512	1555138	53.92	2014-09-15	2014-09-17
BL14-003	Blag	100.58	-50	100	WGS84_16N	801516	1555173	54.92	2014-09-17	2014-09-19
BL14-004	Blag	155.45	-50	100	WGS84_16N	801452	1555110	54.75	2014-09-19	2014-09-26
BL14-005	Blag	138.36	-52	110	WGS84_16N	801509	1555026	52.58	2014-09-27	2014-09-30
BL15-006	Blag	169.16	-50	110	WGS84_16N	801447	1555041	51.91	2015-03-10	2015-03-13
BL15-007	Blag	169.16	-57.5	100	WGS84_16N	801465	1555144	54.77	2015-03-14	2015-03-17
BL15-008	Blag	188.23	-62.5	100	WGS84_16N	801466	1555209	53.49	2015-03-17	2015-03-21
BL15-009	Blag	195.07	-50	110	WGS84_16N	801454	1555084	53.23	2015-03-21	2015-03-26
BL15-010	Blag	135.19	-57.5	115	WGS84_16N	801519	1554972	53.82	2015-03-26	2015-03-28
BL15-011	Blag	92.96	-65	100	WGS84_16N	801542	1554923	53.41	2015-03-28	2015-03-29
BL15-012	Blag	88.17	-60	100	WGS84_16N	801483	1554938	53.05	2015-03-30	2015-04-08
BL15-013	Blag	66.23	-55	100	WGS84_16N	801465	1554865	51.32	2015-05-10	
BL15-014	Blag	275.84	-60	110	WGS84_16N	801406	1555098	52.36	2015-05-13	
BL15-015	Blag	262.13	-57.5	110	WGS84_16N	801388	1555053	51.73	2015-05-18	
BL15-016	East Dome	138.68	-50	105	WGS84_16N	801987	1555248	72.71	2015-05-24	2015-05-27
BL15-017	East Dome	167.12	-55	105	WGS84_16N	801948	1555283	62.53	2015-05-27	2015-05-30
BL15-018	East Dome	144.78	-68	105	WGS84_16N	802014	1555312	61.43	2015-05-31	
BL15-019	Blag	101.63	-90	0	WGS84_16N	801503	1554807	51.10	2015-06-03	
BL16-024	East Dome	242.32	-60	105	WGS84_16N	801907	1555297	62.34	2016-03-09	
BL16-025	East Dome	248.56	-55	105	WGS84_16N	801937	1555359	57.99	2016-03-14	
BL16-026	East Dome	157.07	-50	105	WGS84_16N	802026	1555372	59.52	2016-03-29	2016-03-31
BL16-027	East Dome	140.30	-55	105	WGS84_16N	802003	1555283	66.50	2016-04-01	2016-04-03
BL16-028	East Dome	228.75	-55	105	WGS84_16N	802072	1555434	59.87	2016-04-03	
BL16-029	Blag	152.50	-55	100	WGS84_16N	801442	1554946	51.39	2016-04-08	2016-04-11
BL16-030	Blag	126.05	-55	100	WGS84_16N	801452	1554893	51.36	2016-04-12	2016-04-14
BL16-031	Blag	208.92	-62.5	100	WGS84_16N	801410	1554922	51.46	2016-04-14	2016-04-20
BL16-038	Blag	208.92	-60	110	WGS84_16N	801433	1555004	51.78	2016-05-29	2016-06-01
BL16-039	Blag	215.02	-60	100	WGS84_16N	801417	1555134	52.75	2016-06-02	2016-06-06
BL16-040	East Dome	230.27	-60	105	WGS84_16N	801916	1555252	66.23	2016-06-06	2016-06-10
BL16-041	Blag	258.77	-55	110	WGS84_16N	801339	1555037	52.00	2016-07-22	2016-07-30
BL16-042	Blag	327.87	-55	100	WGS84_16N	801320	1554955	51.36	2016-07-30	2016-08-07
BL16-043	East Dome	155.55	-60	105	WGS84_16N	801933	1555197	80.60	2016-08-07	2016-08-10
BL16-044	East Dome	248.57	-60	105	WGS84_16N	801864	1555224	62.21	2016-08-11	2016-08-16
BL16-045	Blag	333.97	-55	100	WGS84_16N	801347	1554909	51.66	2016-08-27	2016-09-05
BL16-046	Blag	309.57	-58	110	WGS84_16N	801366	1555022	51.37	2016-09-06	2016-09-12
BL16-047	East Dome	143.35	-60	105	WGS84_16N	801962	1555136	112.26	2016-09-13	2016-09-15
BL16-048	East Dome	204.35	-60	105	WGS84_16N	801901	1555150	81.31	2016-09-16	2016-09-20
BL16-049	East Dome	225.70	-60	105	WGS84_16N	801846	1555170	66.07	2016-09-20	2016-09-26
BL17-050	East Dome	144.87	-50	105	WGS84_16N	802031	1555334	60.54	2017-03-21	2017-03-23
BL17-051	East Dome	190.62	-60	105	WGS84_16N	801838	1555102	73.08	2017-03-24	2017-03-28
BL17-052	East Dome	358.37	-60	105	WGS84_16N	801789	1555213	58.73	2017-03-29	2017-04-04
BL17-053	East Dome	272.97	-65	115	WGS84_16N	801803	1555151	63.10	2017-04-05	2017-04-09
BL17-054	East Dome	367.52	-60	105	WGS84_16N	801833	1555286	59.10	2017-04-18	2017-04-24
BL17-055	Blag	373.62	-60	110	WGS84_16N	801324	1555077	52.78	2017-04-26	2017-05-04
BL17-056	Blag	460.55	-57.5	110	WGS84_16N	801277	1555029	52.41	2017-05-05	2017-05-16
BL17-057	Blag	210.45	-60	100	WGS84_16N	801282	1554922	51.16	2017-05-17	2017-05-25
BL17-058	East Dome	373.63	-50	105	WGS84_16N	801829	1555355	56.11	2017-06-18	2017-06-28
BL17-059	East Dome	203.72	-50	105	WGS84_16N	801787	1555028	66.81	2017-06-30	2017-07-06
BL17-060	East Dome	426.60	-62.5	105	WGS84_16N	801794	1555242	58.12	2017-07-07	2017-07-14



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Hole_ID	Target	Depth	Dip	Azimuth	Projection	Easting	Northing	Elevation (m)	Date Started	Date Completed
GP14-001	Guapinol	120.43	-50	100	WGS84_16N	797148	1552726	64.39	2014-07-12	2014-07-18
GP14-002	Guapinol	181.37	-75	115	WGS84_16N	797148	1552727	64.43	2014-07-19	2014-07-22
GP14-003	Guapinol	102.16	-65	120	WGS84_16N	797241	1552847	64.89	2014-07-23	2014-07-25
GP14-004	Guapinol	138.68	-80	120	WGS84_16N	797272	1552887	65.27	2014-07-26	2014-07-28
GP14-005	Guapinol	121.92	-65	120	WGS84_16N	797288	1552956	65.78	2014-07-29	2014-07-31
GP14-006	Guapinol	132.59	-75	120	WGS84_16N	797333	1553013	64.95	2014-08-01	2014-08-04
GP14-007	Guapinol	120.40	-65	120	WGS84_16N	797383	1553109	67.54	2014-08-04	2014-08-06
GP14-008	Guapinol	128.47	-75	120	WGS84_16N	797444	1553188	69.01	2014-08-07	2014-08-09
GP14-009	Guapinol	158.50	-75	120	WGS84_16N	797091	1552615	66.05	2014-08-10	2014-08-13
GP14-010	Vancouver	143.26	-70	120	WGS84_16N	797239	1552511	66.80	2014-08-14	2014-08-17
GP14-011	Vancouver	109.73	-60	130	WGS84_16N	797318	1552590	68.83	2014-08-18	2014-08-20
GP14-012	Vancouver	99.06	-50	130	WGS84_16N	797378	1552657	67.82	2014-08-20	2014-08-22
GP14-013	Vancouver	149.35	-70	130	WGS84_16N	797454	1552727	70.79	2014-08-22	2014-08-25
GP14-014	Vancouver	150.88	-60	115	WGS84_16N	797506	1552847	74.51	2014-08-26	2014-08-29
GP14-019	Guapinol	141.73	-50	120	WGS84_16N	797032	1552515	65.44	2014-10-09	2014-10-12
GP14-020	Guapinol	160.02	-50	120	WGS84_16N	796980	1552417	64.51	2014-10-12	2014-10-16
GP14-021	Vancouver	140.21	-50	130	WGS84_16N	797168	1552443	69.72	2014-10-17	2014-10-20
GP14-022	Vancouver	109.60	-50	130	WGS84_16N	797096	1552370	70.07	2014-10-20	2014-10-22
GP14-023	Vancouver	118.87	-50	130	WGS84_16N	797028	1552298	62.76	2014-10-22	2014-10-24
GP14-024	Guapinol	123.44	-50	120	WGS84_16N	797480	1553286	71.31	2014-10-26	2014-10-29
GP14-025	Vancouver	155.45	-50	130	WGS84_16N	797905	1553114	76.31	2014-11-01	2014-11-05
GP14-027	Guapinol	167.64	-50	125	WGS84_16N	797155	1552907	64.59	2014-11-09	2014-11-13
GP14-028	Guapinol	211.84	-57.5	120	WGS84_16N	797056	1552781	64.05	2014-11-14	2014-11-18
GP14-029	Vancouver	208.79	-50	112.5	WGS84_16N	797145	1552550	66.37	2014-11-19	2014-11-23
GP14-030	Guapinol	182.88	-50	125	WGS84_16N	797117	1552858	64.05	2014-11-24	2014-11-28
GP14-031	Guapinol	208.79	-70	125	WGS84_16N	797117	1552858	64.05	2014-11-28	2014-12-01
GP14-032	Guapinol	237.74	-50	120	WGS84_16N	796993	1552690	62.57	2014-12-02	2014-12-06
GP15-033	Guapinol	355.09	-50	120	WGS84_16N	797028	1553000	68.44	2015-04-08	2015-04-16
GP15-034	Guapinol	362.71	-60	120	WGS84_16N	796976	1552916	67.41	2015-04-16	2015-04-23
GP15-035	Guapinol	313.94	-60	120	WGS84_16N	796971	1552834	66.01	2015-04-23	2015-04-30
GP15-036	Vancouver	140.21	-60	130	WGS84_16N	797253	1552566	68.15	2015-05-01	2015-05-03
GP15-037	Vancouver	123.44	-60	130	WGS84_16N	797190	1552488	67.26	2015-05-03	2015-05-05
GP16-038	Vancouver	221.12	-63	130	WGS84_16N	797227	1552611	69.97	2016-04-30	2016-05-04
GP16-039	Vancouver	250.10	-60	130	WGS84_16N	797126	1552548	67.30	2016-05-05	2016-05-09
GP16-040	Vancouver	215.02	-50	130	WGS84_16N	797087	1552504	67.05	2016-05-09	2016-05-12
GP16-043	Vancouver	250.10	-60	130	WGS84_16N	797040	1552467	65.47	2016-07-10	2016-07-14
GP16-044	Vancouver	175.37	-50	130	WGS84_16N	797017	1552565	62.58	2016-07-14	2016-07-21
GP17-047	Guapinol	109.80	-60	120	WGS84_16N	797136	1552611	66.15	2017-01-19	2017-01-20
GP17-048	Guapinol	152.50	-70	120	WGS84_16N	797128	1552674	67.27	2017-01-21	2017-01-24
GP17-049	Guapinol	442.25	-60	120	WGS84_16N	796882	1552915	69.97	2017-01-25	2017-02-01
GP17-050	Guapinol	423.95	-60	120	WGS84_16N	796934	1553003	69.99	2017-02-02	2017-02-09
GP17-051	Guapinol	299.42	-65	120	WGS84_16N	797048	1552881	66.11	2017-02-15	2017-02-19
GP17-052	Guapinol	257.72	-52.5	120	WGS84_16N	796982	1552759	64.22	2017-06-13	2017-06-16

# TABLE 10-5CALIBRE/IAMGOLD HIGHLIGHT ASSAY DRILL RESULTS 2014–2017

## IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Hole ID	Target	Au (g/t)	Ag (g/t)	Length (m)	From (m)	To (m)
GP15-034	Guapinol	98.72	49.1	1.39	332.23	333.62
GP14-003	Guapinol	25.66	35.2	4.81	69.75	74.56
GP14-010	Vancouver	8.73	11.5	12.90	91.60	104.50
BL15-011	Main Blag	3.08	381.3	10.74	21.86	32.60
GP14-002	Guapinol	14.39	14.5	6.03	112.53	118.56
BL15-017	East Dome	1.11	223.4	19.16	120.50	139.66
BL15-009	Main Blag	5.36	194.6	9.92	135.33	145.25
BL15-010	Main Blag	2.52	246.4	12.82	64.38	77.20
BL15-018	East Dome	0.69	488.6	9.44	91.44	100.88



Hole ID	Target	Au (g/t)	Ag (g/t)	Length (m)	From (m)	To (m)
GP14-030	Guapinol	17.70	16.5	4.15	158.92	163.07
GP17-057	Veta Loca	9.69	2.9	7.45	33.70	41.15
BL16-044	East Dome	2.27	127.9	16.50	194.00	210.50
GP14-028	Guapinol	13.44	14.5	5.07	191.53	196.60
GP17-057	Veta Loca	27.49	5.8	2.50	35.00	37.50
GP17-057	Veta Loca	44.40	9.4	1.50	35.00	36.50
GP16-046	Veta Loca	10.15	6.9	6.31	88.00	94.31
BL16-038	Main Blag	11.13	13.7	5.61	179.82	185.43
BL16-044	East Dome	9.64	404.4	3.38	206.17	209.55
BL14-005	Main Blag	2.18	133.8	12.47	77.45	89.92
GP15-037	Vancouver	6.26	41.4	7.08	102.40	109.48
BL16-043	East Dome	1.21	120.9	15.35	97.65	113.00
LS17-018	Cadillac	4.42	103.4	7.50	121.00	128.50
GP14-001	Guapinol	39.90	132.0	1.00	76.97	77.97
LS15-008	Cadillac	8.93	57.4	4.10	65.60	69.70
BL15-006	Main Blag	5.97	56.1	5.85	149.83	155.68
BL15-023	Santos Trend	5.74	4.8	6.44	60.96	67.40
LS17-020	Cadillac	7.48	116.7	3.49	118.55	122.04
GP14-027	Guapinol	14.49	8.9	1.90	146.20	148.10
BL16-048	East Dome	0.84	73.5	13.72	97.00	110.72
BL16-040	East Dome	2.69	431.6	2.78	162.84	165.62
GP16-040	Vancouver	1.45	4.3	15.34	175.00	190.34
BL17-058	East Dome	0.38	328.3	4.05	296.00	300.05
GP14-031	Guapinol	4.06	4.5	5.03	187.97	193.00
BL16-046	Main Blag	1.57	7.8	12.10	271.45	283.55
BL17-060	East Dome	2.74	42.5	6.00	315.67	321.67
BL17-051	East Dome	0.10	31.0	35.08	134.78	169.86
BL15-015	Main Blag	1.54	19.3	10.70	233.94	244.64
BL16-024	East Dome	1.82	146.3	4.51	211.60	216.11
GP14-004	Guapinol	3.96	4.5	4.41	91.49	95.90
BL17-052	East Dome	1.57	38.3	8.00	259.00	267.00
BL16-042	Main Blag	2.60	10.5	6.23	307.77	314.00
RD14-038	Riscos Ext.	4.42	402.3	1.60	44.50	46.10
LS15-007	Cadillac	9.70	98.0	1.40	74.80	76.20
BL17-054	East Dome	0.70	60.5	9.62	291.38	301.00
BL15-006	Main Blag	5.36	127.8	1.91	138.30	140.21
BL17-056	Blag Main	0.99	15.4	10.90	434.62	445.52
BL16-049	East Dome	0.53	108.0	5.87	172.70	178.57
RD17-047	Riscos Ext.	4.23	4.3	2.95	345.85	348.80
BL15-021	Santos Trend	2.18	3.0	5.65	74.00	79.65
BL15-007	Main Blag	1.79	77.2	4.04	131.60	135.64

## LOCATION AND ORIENTATION OF DRILL HOLES

Drill collar locations were collected using the Ashtech Mobile Mapper 6 and Mobile Mapper 10 hand held GPS units. A differential GPS survey was completed in 2012 and includes drill holes up to the end of the 2011 program. A control point was set up at the Rosita compound as part



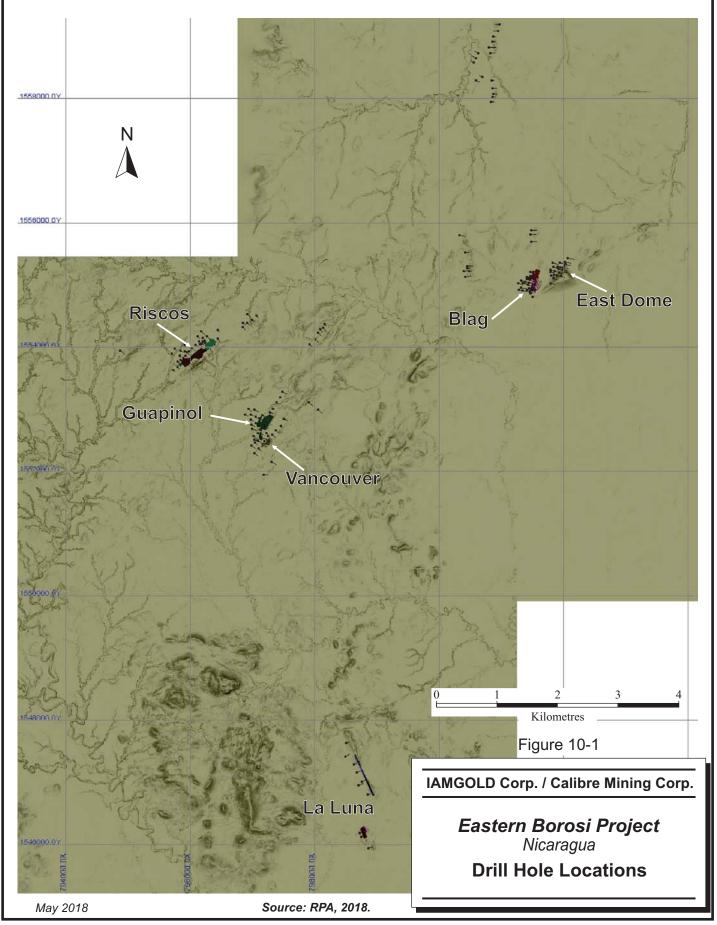
of the 2012 differential GPS survey. Collar elevations are taken from the high-resolution LiDAR dataset which covers all the current vein targets.

Downhole orientations were collected using a Tropari device at 50 m intervals during the 2010 and 2011 drill programs at Riscos de Oro and La Luna. Since 2014, drill hole orientations have been collected at 50 m intervals using the Reflex EZ-Shot device.

Collar location are marked using a three inch diameter polyvinyl chloride (PVC) pipe installed in a small cement pad to aid in locating the collars at a later date.

Figure 10-1 presents the location of the drilling available on the EBP. Most of the drilling is concentrated at the location of the resource veins.







## **CORE SAMPLING METHOD AND APPROACH**

The core sampling methodology has remained consistent since 2010 with only minor modifications being made when an opportunity for improvement was recognized.

### CORE PICK-UP AND TRANSPORT

Core boxes are picked up from the drill platform by Calibre personnel once or twice daily depending on the drill rate. The full boxes are stacked orderly in a pallet box in the back of the company truck. A wooden lid is put on top of all boxes and everything is secured to the pallet with ratchet straps. Care is taken so that the pallet box does not slide within the truck. The core is then transported at slow speed back to the logging facility in Rosita.

## **CORE DELIVERY**

Once the boxes are at the logging facility the drill hole numbers and box numbers are checked and reported to the logging geologist to confirm the correct placement of the core boxes on the core benches. The boxes are then laid out on the core bench, ensuring that numeric continuity is maintained and the From-To intervals of the boxes are in order.

## **GEOTECHNICAL DATA COLLECTION**

The steps to collect geotechnical data from the drill core are as follows:

- 1. Wash core using a soft bristle brush and water from hose. Core should be free of drill mud and dirt. Primary rock textures should be clearly visible. Scrub only solid, competent pieces of core. Care should be taken in fault gouge intervals, and in broken zones, to preserve mineralization and maintain contact orientations.
- 2. Inspect the drill core and reconstruct broken intervals if possible. Visually check that the metres written on the drill blocks increase down row, left to right, and are in increments of no more than 1.52 m or 3.05 m. These intervals are used as From-To intervals in the subsequent geotechnical measurements.
- 3. Collect core recovery length and rock quality designation (RQD) measurements.
  - a. Core Recovery Length: Measure the length of core between From-To drilling blocks in metres. Enter the result into the LogChief logging program. With broken core, record the best estimate of recovery by reconstructing and measuring the competent pieces while visualizing the broken fragments as whole core.
  - b. RQD: Measure the total length in metres of solid pieces of core >10 cm measured along the centreline of the core between the From-To intervals. Record the result into the LogChief logging program.



- 4. Mark metre intervals on drill core at one metre intervals with appropriate colour china marker. The drill blocks should be used as a reference but are not considered absolute. Use core recovery for intervals in which there is a discrepancy between blocks and metre intervals. Look for obvious breaks/fault zones, and signs of grinding or rounding from drilling to account for missing core.
- 5. Measure magnetic susceptibility with KT-10 magnetic susceptibility meter on top of, or near, marked metre intervals.
- 6. Label core boxes with individual "From-To" intervals in the designated space on the core box using a permanent black felt marker. "From" equals the depth at start of box (top left corner) and "To" equals the depth at end of box (bottom right corner).

## **CORE LOGGING**

Drill core is logged in detail by a geologist capturing data on the lithology, alteration, mineralization, veining, and structure. The data is entered digitally in standardized LogChief data entry forms which remain consistent between drill programs. Sample lengths are decided by the logging geologist and are between a minimum of 0.3 m and a maximum of two metres. The sample intervals are written on pre-numbered, standardized sample tags supplied by the laboratory. Samples do not cross lithological boundaries and are based on the intensity of alteration and mineralization observed in the drill core. The logging data is downloaded daily from the logging laptop(s) and saved to the main server located in the Rosita office. The data is then imported into Datashed every two to three days by the Calibre database manager.

## **CORE PHOTOS**

The core boxes are transferred to the photo station in sequential order after the geologic logging is complete. The boxes are photographed three at a time using the Canon EOS Utility on logging laptop computers (Figure 10-2). Core photos are backed up daily on the main office server by the logging geologist.





FIGURE 10-2 EXAMPLE CORE PHOTO

## CORE SAMPLING AND CORE STORAGE

From the photo station the core boxes are transferred to pallets located outside the core cutting facility (Figure 10-3). One box of core is loaded to the core-cutting bench at the time. The interval of core to be sampled is cut in half using a top-mounted core saw which uses three stage recycled water for lubrication and dust control. The cut interval is then placed carefully back in the box. The saw is cleaned between samples to avoid contamination.





#### FIGURE 10-3 CORE CUTTING FACILITY

After the cutting stage the core boxes are transferred to the sampling bench. The sample intervals written on the tags during the logging progress by the geologist are transferred to a sample tracking list for back-up purposes. One-half of the cut drill core is placed in a clean, pre-labelled transparent 13 in. x 17 in. sample bag which has been doubled up (2 bags). The sample tag is placed inside of the second outer bag to remain clean and dry. The sample is then sealed with a plastic cable tie and placed on the floor in the sampling area in an orderly manner for easy visual tracking. The sampling bench is thoroughly cleaned after each core box to avoid contamination.

Quality assurance/quality control (QA/QC) samples are inserted into the sample stream as necessary (see Section 11 for details).

After the samples have been collected, the core boxes are transferred to the onsite core storage facility for long term storage (Figure 10-9).



#### SAMPLE SHIPPING

Sample shipments are prepared and sent to the Managua laboratory prep-facility once or twice a week depending on volume. The core/rock samples are lined up in sequential order based on sample number and are put into rice bags. Each rice bag holds approximately 25 kg of weight, and is pre-labelled with the sample range, Company name, Project name and the address of the laboratory.

The laboratory sample submittal form is filled by the logging geologist with help from the database manager, and is authorized by the Project Manager, or designated person, before it is included in the sample shipment. The laboratory is given instruction to notify Calibre of any missing or damaged bags, as well as any missing security seals. The submittal form is put in a plastic bag and placed in the first rice bag of the shipment. Each rice bag is secured with two plastic tie straps and a uniquely numbered non-resealable security strap. The security tag number is recorded in the sample shipment tracking log.

The rice bags are delivered directly from the Rosita office to the prep facility in Managua the same day. If same day delivery is not possible the sample shipment is stored at Calibre's office in Managua overnight and is delivered the following day.

When shipping to Inspectorate/ACME Labs (ACME)/Bureau Veritas Minerals (BVM) laboratories, the samples are delivered by Calibre personnel to the Inspectorate/ACME preparation laboratory located in Managua. The samples are received by laboratory personnel who provide a written notice of receipt. The samples are crushed and pulverized in Managua and the prepared pulps are sent to the Inspectorate/ACME/BVM laboratory in Vancouver, B.C., Canada for analysis.

When shipping to ALS Chemex Minerals the samples are picked up at the Calibre office by courier personnel (UPS or other) and are shipped by airfreight to ALS Chemex Minerals in Vancouver, B.C., Canada where the samples are prepared and analyzed.



# 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

From January 2010 to July 2011, all Project samples were sent to ALS Geochemistry laboratory in Vancouver, B.C. As Inspectorate (owned by BVM) opened a sample preparation facility in Managua, it became the primary laboratory for the Project's rock and drill core samples in August 2011. Here, the samples were prepared and the pulps were shipped to the analytical laboratory in Vancouver. In 2012, BVM also acquired ACME. Samples are still prepared at the Managua laboratory and analyzed in the Vancouver branch of ACME (owned by BVM).

ALS Geochemistry remained the primary laboratory for soil samples until 2017, and it has been the secondary laboratory for checking pulps since 2014 and remains so. Starting in January 2018, soil samples have been prepared and analyzed at BVM.

ALS Minerals is accredited to international quality standards through the International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P-1579 (Mineral Analysis). Inspectorate/ACME (owned by BVM) is accredited to international quality standards through ISO; the analytical laboratory in Vancouver is ISO 9001:2008 certified. All laboratories are independent of Calibre or IAMGOLD.

# SAMPLE PREPARATION

All samples have been prepared using industry standard procedures at independent analytical laboratories as follows.

### ALS GEOCHEMISTRY SOIL PREPARATION

All samples are processed using the sample preparation package PREP-41:

- Sample dried;
- Sieve sample to -180 µm (80 mesh)
- Retain both fractions.



### ALS GEOCHEMISTRY ROCK AND DRILL CORE PREPARATION

All samples are processed using both jaw crushers and ring mill pulverizers, using the sample preparation package PREP-31:

- Dry, crush (<5 kg) 70% -10 mesh (2 mm);
- Riffle split (250 g);
- Pulverize 85% -200 mesh (-75 μm).

### **INSPECTORATE ROCK AND DRILL CORE PREPARATION**

All samples are processed using both jaw crushers and ring mill pulverizers, using the sample preparation package SP-RX-2K:

- Dry, crush (<2 kg) 70% -10 mesh (2 mm);
- Riffle split (250 g);
- Pulverize 85% -200 mesh (-75 μm).

### ACME ROCK AND DRILL CORE PREPARATION

All samples are processed using both jaw crushers and ring mill pulverizers, using the sample preparation package R200 / PRP70-250:

- Dry, crush (<2 kg) 70% -10 mesh (2 mm);
- Riffle split (250 g);
- Pulverize 85% -75 μm.

### **BVM SOIL PREPARATION**

All samples are processed using the sample preparation package SS80:

- Sample dried;
- Sieve up to 100 g to -180 μm (80 mesh);
- Discard plus fraction.

### **BVM ROCK AND DRILL CORE PREPARATION**

All samples are processed using both jaw crushers and ring mill pulverizers, using the sample preparation package PRP70-250:

- Dry, crush (<2 kg) 70% -10 mesh (2 mm);
- Riffle split (250 g);
- Pulverize 85% -200 mesh (-75 μm).



# SAMPLE ANALYSES

All samples (soils, rock, and drill core) have been analyzed using industry standard procedure at independent analytical laboratories as follows.

All samples are analyzed for gold, using 30 g fire assay (FA)/inductively coupled plasma atomic emission spectroscopy (ICP-AES) technique in soils, and 50 g fire assay (FA)/atomic absorption spectroscopy (AAS) technique in rocks and drill core. Multi-element analysis is completed for 36 elements (30 for Inspectorate) using Aqua Regia/ICP-AES technique for all samples.

ALS Geochemistry codes are Au-ICP21 and ME-ICP41 for soils; and Au-AA24 and ME-ICP41 for rocks and drill core. Corresponding Inspectorate codes are Au-1AT-AA and 30-AR-TR for rocks and drill core only.

ACME and BVM codes are FA330-Au and AQ300 for soils; and FA450 and AQ300 for rocks and drill core.

The gold is analyzed by standard FA with AAS finish technique on a 50 g aliquot taken from a 250 g pulp. Samples with results greater than 5 g/t Au are reanalyzed using a standard FA with gravimetric finish technique on a 50 g aliquot taken from the original 250 g pulp.

# SAMPLE SECURITY

All samples have been collected by Calibre personnel with the direct involvement and/or oversight of qualified geologist and technicians. Samples have remained at all times in secured company locations and delivered directly to the independent laboratory facility (Inspectorate/ACME/BVM) for preparation and subsequent analyses.

In RPA's opinion, the sample preparation, analysis, and security procedures at the EBP are adequate for use in the estimation of Mineral Resources.



## QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

Calibre has a well-documented QA/QC program in place, managed by the Supervisor of Quality Control. QA/QC samples were submitted with each batch of samples. These included duplicates, standard reference materials (SRM) and blanks, all of which were inserted in a predetermined sequence, within a group of 25 to 30 samples:

- For drill core samples, the controls included pulp duplicates, crush duplicates, standard SRMs and blanks, inserted at a frequency of one every 25 to 30 samples. Field duplicates were also included during the 2010 to 2011 drilling campaigns, but discontinued in later campaigns.
- For rock samples, the controls consisted of field duplicates, standard SRMs and blanks, inserted at a frequency of one every 30 samples.
- As for the soil samples, only field duplicates were used as QA/QC samples. Duplicates were taken randomly (one in a group of 30 samples), at the same location of the original sample.

The SRMs were purchased from CDN Resource Laboratories Ltd. of Vancouver. The blanks consisted of small pieces of volcanic scoria, collected from Masaya volcano, near Managua.

The laboratory results are reported in comma separated values (csv) files and were directly imported into Datashed. The results for quality control were reviewed as soon as a certificate was received and the following criteria were used by Calibre to determine pass or fail of an assay batch:

- SRM with gold values ±3 standard deviations (SD) was considered a failure and the whole batch re-assayed.
- Two adjacent SRM for gold that were ±2 SD on the same side of the mean was considered a failure and an indication of bias.
- Blanks more than three times the detection limit were considered a failure.

The quality control results are plotted in control charts showing the mean,  $\pm 2$ SD, and  $\pm 3$  SD lines. Table 11-1 summarizes the SRMs used during the 2010 to 2017 drilling campaigns.

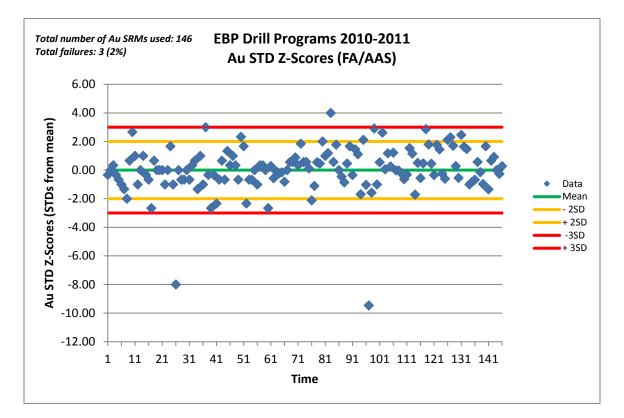
Standard ID	Au Grade (ppm)	2 SD (ppm)	Ag Grade (ppm)	2 SD (ppm)
GS-P8	0.78	0.06		
GS-1E	1.16	0.06		
GS-3G	2.59	0.18		

# TABLE 11-1 SRM CERTIFICATE SUMMARY IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project



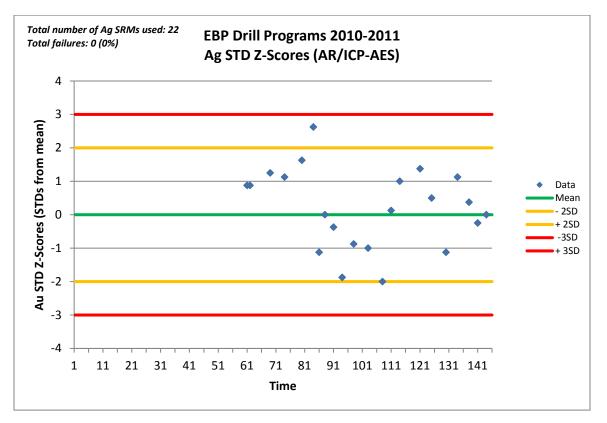
Standard ID	Au Grade (ppm)	2 SD (ppm)	Ag Grade (ppm)	2 SD (ppm)
GS-P7B	0.71	0.07	13.40	1.60
GS-1F	1.16	0.13		
GS-4C	4.26	0.22		
GS-3M	3.10	0.23	95.40	5.60
GS-1Q	1.24	0.08	40.70	2.20
GS-2Q	2.37	0.17	73.20	4.40
GS-P5C	0.571	0.048		

Other SRMs were used occasionally when the regular standards were not available. Since the number of these SRMs is relatively low, they were not included in the table and in the charts. Figures 11-1 and 11-2 show the SRMs used during the 2010 to 2011 drilling campaigns.



### FIGURE 11-1 AU Z-SCORES CHART (2010-2011)





## FIGURE 11-2 AG Z-SCORES CHART (2010-2011)

Figures 11-3 and 11-4 show the SRMs used during the 2014-2017 drilling campaigns.



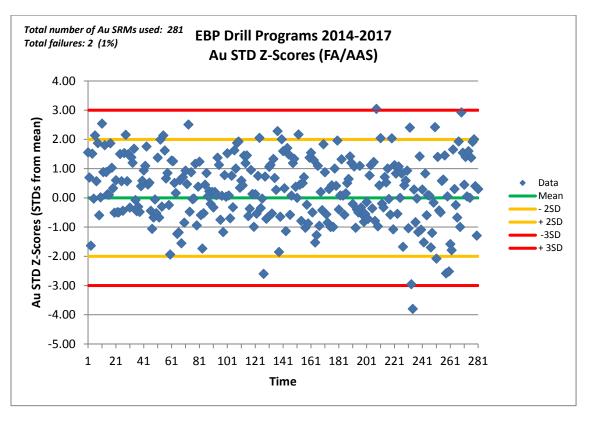
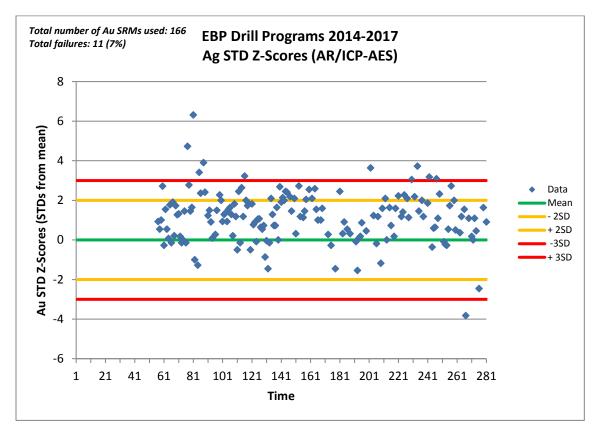


FIGURE 11-3 AU Z-SCORES CHART (2014-2017)

FIGURE 11-4 AG Z-SCORES CHART (2014-2017)





#### BLANK QA/QC

The material used for the Calibre blank was scoria sourced from Masaya volcano outside of Managua. This is not a certified blank, yet historically it has been void of gold.

Over the course of 2010 to 2017, a total of 497 samples were submitted to the laboratories. Between 2010 and July 2011, 138 of those blanks were analyzed at ALS Geochemistry, where the detection limit for Au FA/AAS is 0.01 ppm Au. From August 2011 until the end of 2017, 359 blanks were analyzed at Inspectorate/ACME/BVM, where the detection limit for Au FA/AAS is 0.005 ppm Au. Calibre used three times the detection limit, to monitor for contamination.

One sample (0.72%) exceeded the warning limit at ALS (Figure 11-4), and 25 (6.96%) samples failed at the other laboratories (Figure 11-6). In total, there were 26 failures corresponding to 5.23% of the blank samples.

RPA reviewed the results that report outside of Calibre's thresholds with respect to the cut-off and average grades of the deposits, and is of the opinion that the results are acceptable. Furthermore, RPA recommends that Calibre develop a more practical threshold for identifying failures.



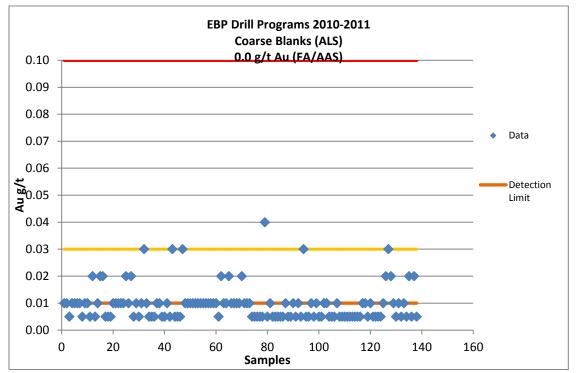
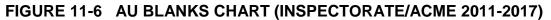
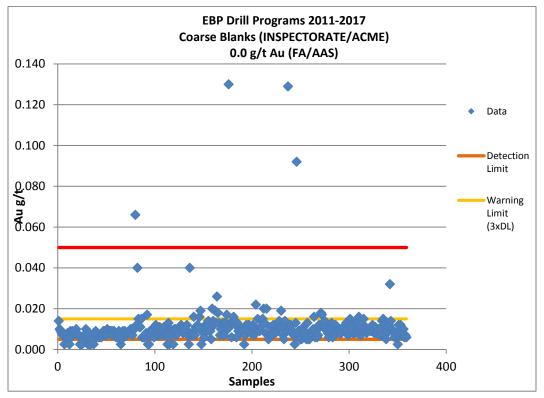


FIGURE 11-5 AU BLANKS CHART (ALS, 2010-2011)

Note: 138 samples.





Note: 359 samples.



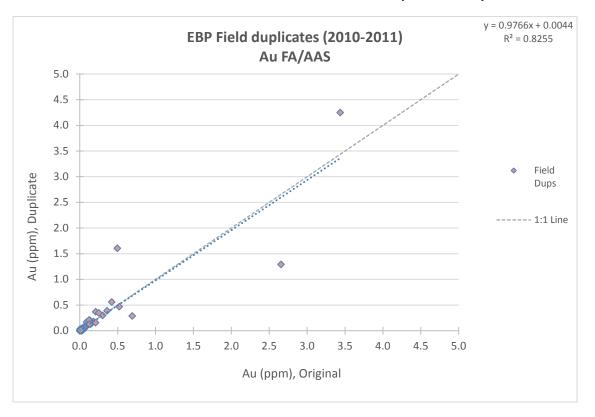
#### DUPLICATE QA/QC

Field duplicates were collected by quarter cutting the drill core and submitting as a separate sample. A total of 221 field duplicate samples were submitted during the 2010 to 2011 drilling campaigns.

Crush duplicates were splits from the coarse material, prepared by the laboratory and labelled as a separate sample. A total of 476 crush duplicates were submitted during the 2010 to 2017 drilling campaigns.

The pulp duplicates were splits from the pulverized material, prepared by the laboratory and labelled as a separate sample. A total of 473 pulp duplicate samples were submitted during the 2010 to 2017 drilling campaigns.

The original and duplicate pulp results are plotted in scatter plots for assessment showing good correlation between the data sets, with rare departures from the centre line (Figures 11-7 to 11-12).



### FIGURE 11-7 AU FIELD DUPLICATES (2010-2011)



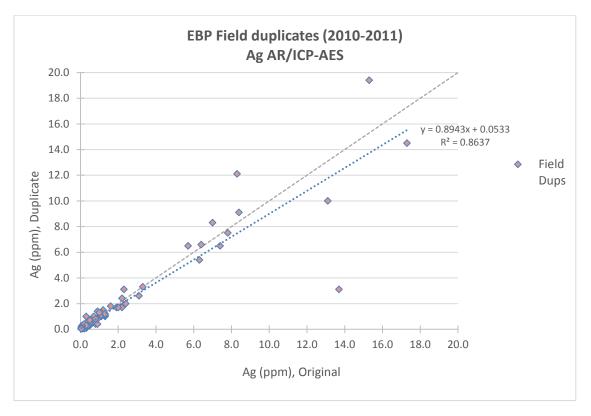
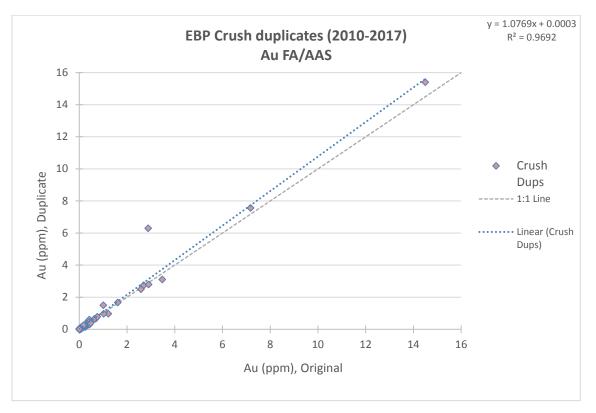


FIGURE 11-8 AG FIELD DUPLICATES (2010-2011)

FIGURE 11-9 AU CRUSH DUPLICATES (2010-2017)





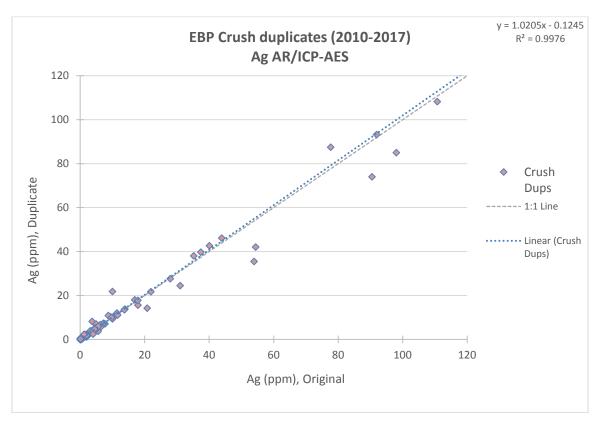
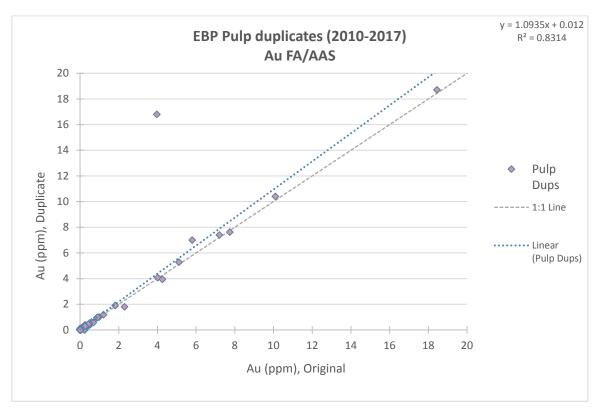


FIGURE 11-10 AG CRUSH DUPLICATES (2010-2017)

FIGURE 11-11 AU PULP DUPLICATES (2010-2017)





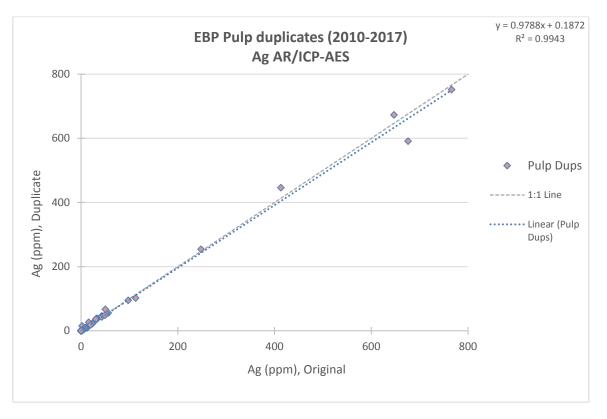
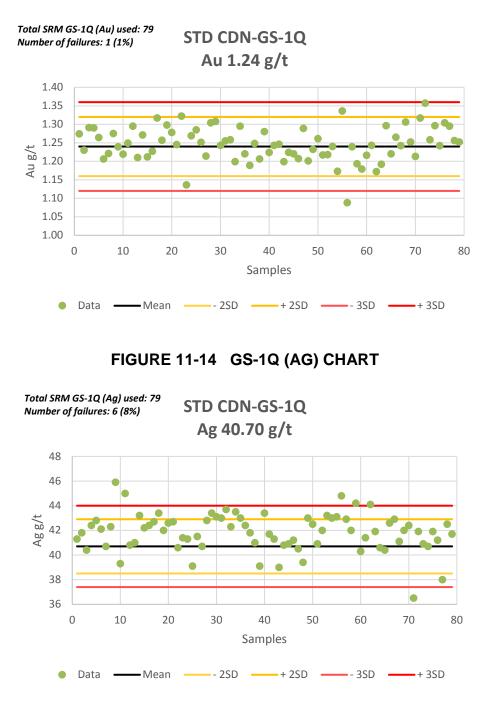


FIGURE 11-12 AG PULP DUPLICATES (2010-2017).

#### STANDARD REFERENCE MATERIAL GS-1Q

SRM GS-1Q is the most commonly used SRM (79 samples) and the SRM used over the longest period of time (four years). The SRM GS-1Q has expected values of 1.24 g/t Au and 40.70 g/t Ag. The 79 samples submitted by Calibre during the drilling campaigns averaged 1.25 g/t Au and 41.84 g/t Ag. From those samples, one failed the accuracy limits for Au (Figure 11-13), and six failed for Ag (Figure 11-14).



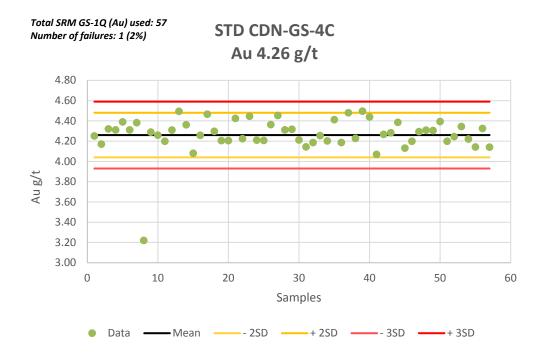


### FIGURE 11-13 GS-1Q (AU) CHART

#### STANDARD REFERENCE MATERIAL GS-4C

SRM GS-4C is the second most commonly used SRM and has an expected value of 4.26 g/t Au. The 57 samples submitted by Calibre during the drilling campaigns averaged 4.26 g/t Au, with one sample outside of the accuracy limits (Figure 11-15).





## FIGURE 11-15 GS-4C (AU) CHART

In RPA's opinion, the QA/QC program as designed and implemented by Calibre is adequate and the assay results within the database are suitable for use in a Mineral Resource estimate.



# **12 DATA VERIFICATION**

IAMGOLD provided RPA with an up to date Geovia GEMS project for EBP. The Project database contains tables with collar, downhole deviation survey, assay, lithology, mineralization, alteration, and RQD.

RPA performed routine database validation checks specific to GEMS to ensure the integrity of the database records. RPA also performed visual drill hole trace inspection and checks on extreme and zero assay values, intervals not sampled or missing, and interval overlapping.

Calibre provided RPA with copies of assay certificates for database validation. RPA selected randomly assay certificates containing assay results for drilling and trench samples for comparison with the database. Approximately 10% of the assay values for gold and silver were reviewed. No major issues were identified.

Mr. Tudorel Ciuculescu, P.Geo, RPA Senior Geologist, carried out a site visit on October 27-29, 2017. During the site visit, Mr. Ciuculescu reviewed drill core and logs from several drill holes, and visited drilling collar locations and historical production sites. A hand-held GPS was used to record positions of drill collars, historical and artisanal pit edges, and features related to historical production facilities. The positions recorded on site were found to be within few metres from the coordinates in the database.

RPA collected four check samples to confirm the presence of gold mineralization. The samples were taken from veins where no historical production was recorded, two from East Dome and two from Guapinol. Table 12-1 presents the assay values for check samples and corresponding original samples. The veins with recorded historical production did not require confirmation of gold mineralization.



# TABLE 12-1CHECK SAMPLESIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Check sample	Au (ppm)	Ag (ppm)	Original sample	Au (ppm)	Ag (ppm)	Vein
133247	13.3	775	174469	14.4	668	East Dome
133248	1.35	31	133164	1.195	36.1	East Dome
133249	3.78	2	127424	1.200	1.20	Guapinol
133250	2.39	2	127459	1.832	2.6	Guapinol

RPA is of the opinion that the drill hole database complies with the industry standards and is adequate for Mineral Resource estimation.



# 13 MINERAL PROCESSING AND METALLURGICAL TESTING

The following section is summarized from Roulston and Sloan, 2017.

The metallurgical test program, performed in December 2016 - February 2017, focused on the analysis of two composites of material from the EBP: Composite 1 was prepared from Blag material, while Composite 2 was prepared from Guapinol material.

A series of comminution tests, chemical head assays, and mineralogical investigations were conducted on the two composites prepared for this program. These important characteristics of the composites tested are discussed in the following sub-sections.

# **COMMINUTION TEST RESULTS**

A Bond ball mill work index test and a Bond Abrasion test were conducted on the two composites. Table 13-1 displays a summary of the results of this testing.

# TABLE 13-1 COMMINUTION TEST RESULT SUMMARY IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Composite	BWi kWhr/tonne	Ai
Composite 1 (Blag)	18.7	0.186
Composite 2 (Guapinol)	18.0	0.108

The Bond ball work index tests produced work indices of 18.7 kWhr/t and 18.0 kWhr/t for Composites 1 and 2, respectively. These values would describe the samples as hard in terms of ball milling. The samples measured only mildly abrasive, returning abrasion indices of approximately 0.186 and 0.108 for Composites 1 and 2, respectively.

# CHEMICAL CONTENT

The gold and silver content of each of the composites was measured in duplicate through standard analytical methods. Table 13-2 displays the average values of these duplicate head assays for the two composites.



# TABLE 13-2HEAD ASSAY SUMMARYIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

	Assay -	g/ tonne
Composite	Ag	Au
Composite 1 (Blag)	323	5.99
Composite 2 (Guapinol)	5.0	6.81

Both composites measured similar levels of gold, at approximately 6 g/t and 7 g/t for Composites 1 and 2, respectively. Composite 1 measured a much higher silver content than Composite 2, at 323 g/t Ag versus 5 g/t Ag.

#### TRACE MINERAL SEARCH – GOLD RESULTS

Trace Mineral Searches (TMS) via QEMSCAN were conducted on each composite at 80  $\mu$ m to 82  $\mu$ m K80 looking for gold and silver grains. The assessment was done on sized fractions after screening the sample at 38  $\mu$ m. Figure 13-1 displays a summary of the results for gold.

Gold was found to be present within the gold and silver alloy, electrum. The electrum was present as both liberated particles as well as binary particles with non-sulphide gangue, binary particles with other sulphides, and within multiphase assemblages. When in binary particles or multiphase assemblages, the electrum was either located as an adhesion on the particle or an inclusion within the particle. Inclusions were completely surrounded by the other mineral(s) within the particle. As the electrum was not exposed, it would not be as amenable to extraction processes such as cyanidation leaching without finer primary grinding. Adhesions in contrast, are located on the surface of a particle and would be exposed to such a process. Particles were also present that contained multiple gold grains which were present as both adhesions and inclusions in their respective particles.

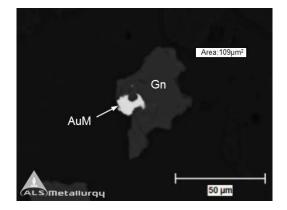
Most of the located electrum in the composites was either liberated or present as adhesions. The located electrum grains in the composites were fine; as a result, very little liberated gold was present in the coarser fraction.



## FIGURE 13-1 TRACE MINERAL SEARCH GOLD RESULTS

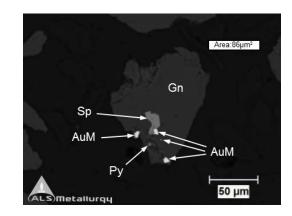
	Gold Distribution - %			
Composite	>38 µm	<38 µm		
Composite 1 (Blag)	40.0	60.0		
Composite 2 (Guapinol)	48.6	51.4		

Note: Sizings were completed on the composites at a nominal 80 µm K80 primary grind sizing.



Gold/Electrum-Gangue Binary Adhesion Example

Notes: a) Particle 2 – Composite 2 >38µm. b) AuM – Gold/Electrum; Gn – Gangue. Gold/Electrum Multiphase Adhesion Inclusion Example



Notes:

- a) Particle 27 Composite 2 >38µm.
- b) AuM Gold/Electrum; Gn Gangue; Py Pyrite; Sp Sphalerite.

### **TRACE MINERAL SEARCH – SILVER RESULTS**

Figure 13-2 displays a summary of the silver deportment and silver mineral associations of located silver occurrences from the TMS.

Silver was present in several minerals. In Composite 1, which measured a much higher silver content than Composite 2, the silver was primarily present within silver-copper sulphide minerals. There were also notable levels of silver sulphides, such as acanthite, and a variety of silver sulphosalts containing selenium, tellurium, and antimony. Some electrum was also detected as well as a silver mercury mineral.

In Composite 2, approximately three quarters of the silver was located in electrum. The remaining one quarter of the silver was located within silver sulphide and silver-copper sulphide minerals as well as silver sulfosalts containing selenium and tellurium.

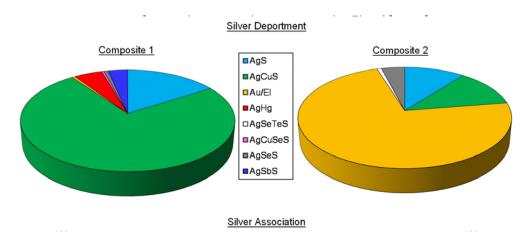


The silver occurrences located in the coarser fractions were poorly liberated. There were also higher percentages of silver minerals located as inclusions in the coarser fraction. Very little of the silver detected in the finer fraction was present as inclusions within other particles.

### FIGURE 13-2 TRACE MINERAL SEARCH SILVER RESULTS

	Silver Distribution - %		
Composite	>38 µm	<38 µm	
Composite 1 (Blag)	41.7	58.3	
Composite 2 (Guapinol)	43.3	56.7	

Note: Sizings were completed on the composites at a nominal 80 µm K80 primary grind sizing.



# METALLURGICAL PERFORMANCE

Knelson gravity concentration tests, as well as cyanidation bottle roll leach tests were conducted on each of the composites at a nominal 80 µm K80 primary grind target. The Knelson gravity tests recovered approximately 24% of the gold from Composite 1 and approximately 35% of the gold from Composite 2; silver recoveries measured approximately 17% and 24% for Composites 1 and 2, respectively. Panning of the Knelson concentrate was used to reduce mass recovery to more closely simulate an operating gravity circuit.

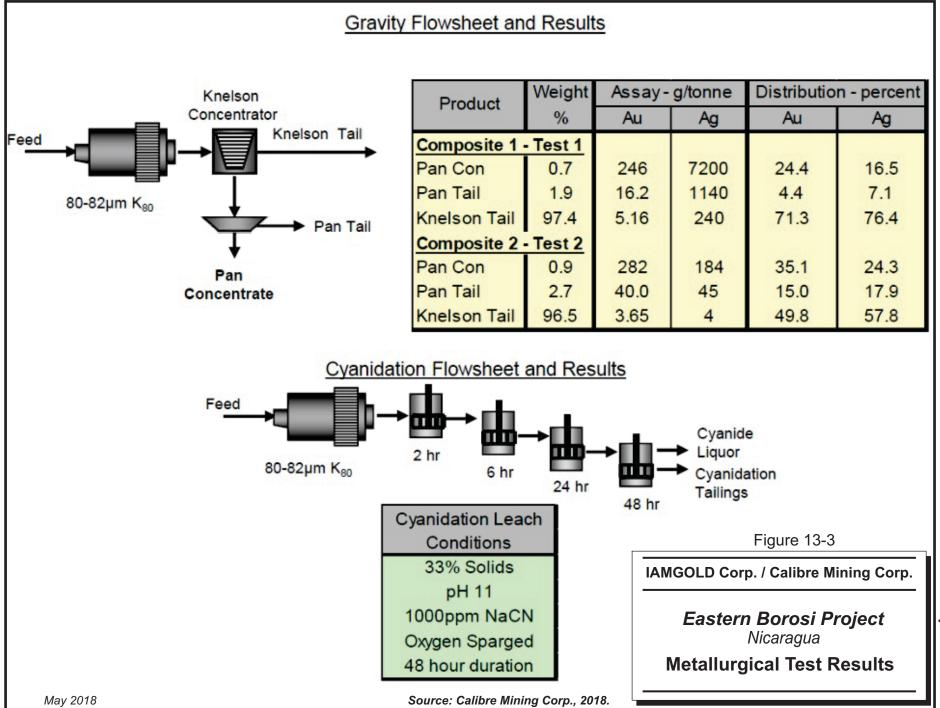
The cyanidation bottle roll tests were completed over 48 hours at pH 11 with a 1,000 ppm sodium cyanide concentration and oxygen sparging. Kinetics for gold extraction were quite rapid for both composites with the extraction nearing completion after six hours, only slight increases in gold extraction were noted after 24 hours. Gold extraction was recorded at 95% and 97% for Composites 1 and 2, respectively, after 48 hours.



Silver extraction kinetics were slower for Composite 1, measuring 68% after 48 hours, which may reflect the higher silver content as well as a possible slower solubility of the silver-copper sulphide minerals that were abundant in this sample. Silver extraction was more rapid for Composite 2, measuring 85% after 48 hours. Silver extraction did not appear to reach completion after 48 hours for Composite 1.

Cyanide consumptions for Composites 1 and 2 were recorded at 2.3 kg/t and 1.2 kg/t feed, respectively. The higher cyanide consumption for Composite 1 was likely due to the higher silver content and possibly higher content of other cyanide soluble minerals; a mineralogical analysis would be required to confirm. Lime consumptions were recorded at 0.4 kg/t and 0.6 kg/t feed for Composites 1 and 2, respectively.

Acid base accounting (ABA) and net-acid generation (NAG) tests were completed on the airdried tailings from each cyanidation test.



RPA



# CONCLUSION AND RECOMMENDATIONS

A metallurgical program has been completed on two composites from the EBP in Nicaragua on behalf of Calibre.

Composite 1, representing Blag material, contained approximately 6 g/t Au and 323 g/t Ag. Comminution testing recorded a Bond ball work index of 18.7 kWhr/t and an abrasion index of 0.186. Composite 2, representing Guapinol material, contained approximately 7 g/t Au and 5 g/t Ag. This material recorded a Bond ball work index of 18.0 kWhr/t and an abrasion index of 0.108. Bond ball work index results would characterize both composites as hard in terms of ball milling.

The nature of the gold and silver within the two samples was investigated using QEMSCAN TMS protocols. In both samples, the gold was almost entirely present as the gold-silver alloy, electrum. The silver in Composite 1 was primarily detected within silver-copper sulphide minerals as well as in various other sulphide minerals. The silver in Composite 2 was primarily contained within electrum, with lesser amounts in sulphide minerals.

The potential of gravity extraction of gold and silver was tested for both composites using a Knelson gravity concentrator with hand panning of the Knelson concentrate. Approximately 24% of the gold and 17% of the silver were recovered to the gravity concentrate from Composite 1 and approximately 35% of the gold and 24% of the silver were recovered to the gravity concentrate from Composite 2. These gravity gold recoveries may be high enough to merit inclusion of a gravity circuit within a concentration process.

Cyanidation bottle roll tests were completed over 48 hours at pH 11 with a 1,000 ppm sodium cyanide concentration.

Gold extraction was quite rapid for both composites with most extraction occurring within the first six hours.

Gold extractions were recorded at approximately 95% and 97% after 48 hours for Composites 1 and 2, respectively.



Silver extraction was measured to be slower with approximately 68% of the silver being extracted from Composite 1 after 48 hours and approximately 85% of the silver being extracted from Composite 2 after 48 hours.

The extraction of silver did not appear to reach completion after 48 hours. It is also possible that the higher grade of silver in Composite 1 may result in the need for more intense leach conditions.

Recommendation for future testing would include:

- A larger mass gravity recoverable gold test to better understand the potential of a product gravity concentrate.
- Testing a combined gravity/cyanidation flowsheet to assess if a gravity circuit would improve overall recovery.
- Testing a longer duration (72 hours or 96 hours) for the cyanidation bottle roll tests to better understand the end point extraction for silver extraction.
- Testing alternative chemical conditions in the cyanidation bottle roll tests, such as a higher sodium cyanide concentration, or the use of lead nitrate to improve silver leach kinetics.



# **14 MINERAL RESOURCE ESTIMATE**

## SUMMARY

RPA prepared initial Mineral Resource estimates for Blag, East Dome, Guapinol, and Vancouver veins, and updated the Mineral Resource estimates for the Riscos de Oro and La Luna veins. The models were interpreted under the assumption that an open pit mining method would potentially be used for La Luna veins, while the rest of the veins would potentially be mined by underground methods. The Mineral Resource includes 3.219 Mt at average grades of 6.03 g/t Au and 104 g/t Ag, containing 624,000 ounces of gold and 10.758 Moz of silver from the underground, and 1.199 Mt at average grades of 1.98 g/t Au and 16 g/t Ag, containing 76,500 ounces of gold and 601,000 ounces of silver from the open pit. Mineral Resources were assigned to the Inferred category (Table 14-1).

This Mineral Resource estimate was completed using Geovia GEMS 6.7 software. Four 3D geological models were built and used to constrain and populate resource block models. The block grade estimate was based on the inverse distance squared (ID<sup>2</sup>) interpolation method. The Mineral Resource is reported at a cut-off grade of 2.0 g/t gold equivalent (AuEq) for the underground and at a cut-off grade of 0.42 g/t AuEq for the open pit resources using a gold price assumption of US\$1,500 per ounce and a silver price of US\$23 per ounce. High grade gold assays were capped at values ranging from 8 g/t to 40 g/t and high grade silver assays were capped at values ranging from 40 g/t to 800 g/t depending on domain.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.



# TABLE 14-1 SUMMARY OF MINERAL RESOURCES – MARCH 15, 2018 IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Category	Method/Vein	Tonnage (000 t)	Grade Au (g/t)	Metal Au (oz)	Grade Ag (g/t)	Metal Ag (oz)	Grade AuEq (g/t)	Metal AuEq (oz)
Inferred	Underground							
	Blag	740	3.01	71,500	117	2,776,000	4.16	99,000
	East Dome	513	2.23	37,000	219	3,611,000	4.38	72,500
	Riscos	1,184	5.73	218,000	106	4,046,500	6.77	258,000
	Guapinol	612	12.74	251,000	12	243,500	12.86	253,000
	Vancouver	170	8.54	46,500	15	82,000	8.69	47,500
	Total Underground	3,219	6.03	624,000	104	10,758,500	7.05	729,500
Inferred	Open Pit							
	La Luna	1,199	1.98	76,500	16	601,000	2.13	82,000
Inferred	Total Underground and Open Pit	4,418	4.93	700,500	80	11,359,500	5.72	812,000

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Mineral Resources are estimated at a cut-off grade of 2.0 g/t AuEq for resources potentially mined by underground methods and 0.42 g/t AuEq for resources potentially mined by open pit methods.

3. Gold equivalent values were calculated using the formula: AuEq (g/t) = Au (g/t) + Ag (g/t) / (101.8)

4. Mineral Resources are estimated using a long-term gold price of US\$1,500 per ounce of gold, US\$23 per ounce of silver.

5. A minimum mining width of 2.4 m was used for underground and 3 m for open pit.

6. Bulk density is 2.65 t/m<sup>3</sup> for Blag, East Dome, Riscos, and La Luna, and 2.60 t/m<sup>3</sup> for Guapinol and Vancouver.

7. Numbers may not add due to rounding.

# MINERAL RESOURCE DATABASE

RPA was provided with a database for the four deposits containing 170 drill holes, with a total length of 35,970.22 m, and 10,556 samples, with a total sampled length of 14,482.69 m. Table 14-2 summarizes the drilling by deposit. The resource estimate is based on a total core sample length of 415.19 m from 77 drill holes. Table 14-3 presents details of the drill hole sampling used in Mineral Resource estimation for each deposit.

In addition, La Luna was sampled by seven trenches with a total length of 173.7 m. A total of 165 samples were collected, of which 27, totalling 23.1 m, from four trenches were used for the resource estimate.



# TABLE 14-2DRILL HOLE DATABASEIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Deposit	No. holes	Length (m)	Sample count	Sample length (m)
Blag	60	12,219.95	2,985	3,236.38
Riscos de Oro	47	12,234.12	4,616	7,339.40
Guapinol	52	9,356.85	1,817	1,946.46
La Luna	11	2,159.3	1,138	1,960.45

# TABLE 14-3RESOURCE DRILL HOLE DATAIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Deposit	No Holes	Length	<b>Resource samples</b>	Resource sample length
Blag	30	6,340.53	171	145.43
Riscos de Oro	23	6,374.22	100	114.93
Guapinol	16	3,089.55	74	58.49
La Luna	8	1,542.00	94	96.34

The drill hole database contains information including: collar location, downhole deviation surveys, gold and silver assays, lithology, alteration, mineralization, and RQD.

Drilling at La Luna was carried out at a variable, wide drill hole spacing of approximately 150 m. The Blag vein was drilled on a 60 m spacing and the East Dome vein, on an 80 m spacing. Drilling at the Guapinol and Vancouver veins used a 90 m drill hole spacing and the Riscos veins, an 80 m drill hole spacing.

The majority of the resource drill holes have core recovery data available, covering approximately 90% of the samples located within the resource domains. Core recovery by lens is generally above 90% with Riscos S being the only exception at 87% core recovery.

For the Blag deposit, historical reports were available with maps, a plan view, and a longitudinal section. Location of historical drilling was digitized and referenced relatively to recognizable features, resulting in a total of 45 holes intersecting, or located in the proximity of, the Blag\_A, Blag\_B, and Blag\_C veins, and a total of five holes in the proximity of the East Dome vein. Due to the lack of documentation for assay data and absence of proper referencing, these drill holes were not used for resource estimation; however, the historical drilling was used to complement recent drilling data and guide the geological interpretation and vein definition.



The Geovia GEMS database validation routines were applied to the resource database. No errors were detected in the critical data tables. Based on this assessment and other checks, it is the QP's opinion that the drill hole database is appropriate to support the Mineral Resource estimate work for the Eastern Borosi deposits.

# **GEOLOGICAL MODELLING**

The mineralized wireframes modelled for the Eastern Borosi deposits were based on favourable geology and grades above specific thresholds. A gold equivalent was used, taking into consideration contributions from both gold and silver grade. The gold equivalent is based on metal prices of US\$1,500/oz of gold and US\$23/oz of silver, and other recovery and process costs assumptions discussed below (Table 14-19). The gold equivalent value was calculated for each sample using the following formula:

AuEq (g/t) = Au (g/t) + Ag (g/t)/(101.8)

Wireframe models representing the Blag, Riscos de Oro, and Guapinol deposits, based on an underground mining method, were developed at a nominal 2 g/t AuEq cut-off grade over a minimum true thickness of 2.4 m. For La Luna, considering an open pit mining method, a nominal 0.4 g/t AuEq cut-off grade over a minimum true thickness of 3.0 m was used for the wireframes models.

The wireframes were built in Geovia GEMS. Three dimensional (3D) rings snapped to drill holes, representing the mineralized contours, were interpreted on cross sections, then stitched together into a 3D wireframe. The mineralized wireframes included occasional lower grade intercepts in order to preserve wireframe continuity. Subsequently, a manually drawn contour defining the extension limit of the mineralized lens was used to clip the initial shapes. Additionally, for mineralized wireframes located in areas with historical mining, clipping contours were used for removing portions of the wireframes. These historical mining clipping contours were based on georeferenced maps and sections of underground developments or stoping, and the bottom of open pits.

The four deposits are spread in an area of approximately 8 km by 10 km and display different lens orientation and grades, sometimes even between veins of the same deposit. Figure 14-



1 presents the Eastern Borosi deposits, modelled lenses, and drilling available in the area. Table 14-4 lists the mineralized lenses by deposit.

Deposit	Lens
Blag	Blag_A
	Blag_B
	Blag_C
	East Dome
Riscos de Oro	RiscosN_1
	RiscosN_2
	RiscosN_3
	RiscosS
Guapinol	Guapinol
	Vancouver
La Luna	LaLuna_N1
	LaLuna_N2
	LaLuna_S1
	LaLuna_S2

# TABLE 14-4 EASTERN BOROSI DEPOSITS AND LENSES IAMGOLD Corp. / Calibre Corp. – Eastern Borosi Project

The Blag deposit has been mined historically, with open pit operation starting in 1975, followed by underground development in 1977. By the time the mining activity ceased in 1978, a shaft had been sunk to access Level 150 (150 ft below surface) and Level 150 was developed. Contours of the drifts were used to clip the current mineralized Blag\_A and Blag\_B wireframes. These wireframes were also clipped with the bottom of the Blag pit. Figure 14-2 shows the Blag and East Dome lenses.

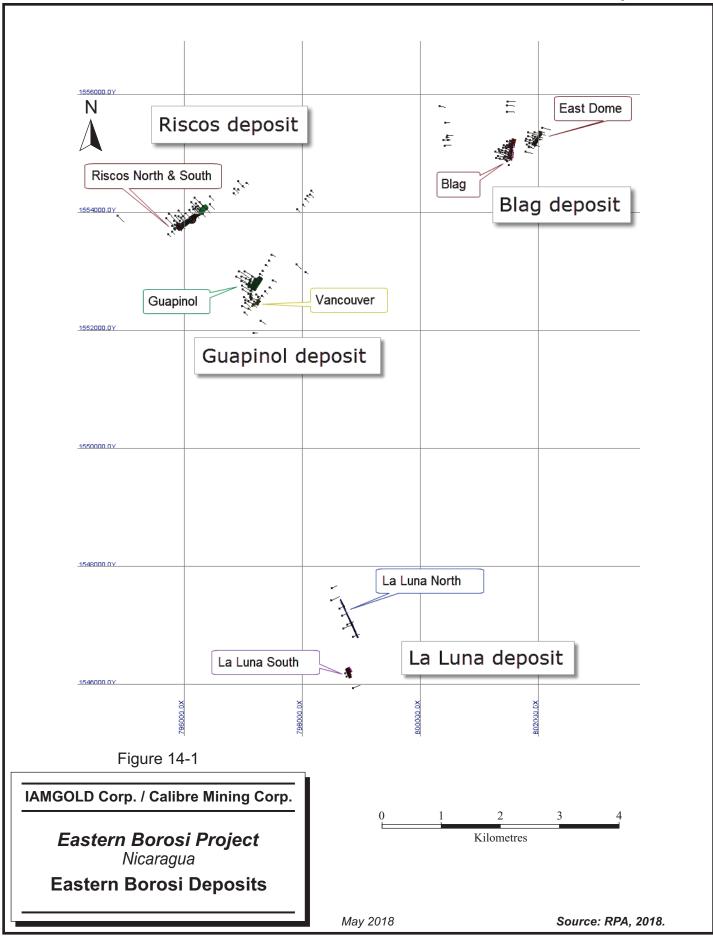
The Riscos de Oro deposit has also been mined historically, with open pit mining starting in 1972. In 1975, a shaft was sunk to the 450 ft depth and production drifts were developed at 150 ft and 300 ft. Open pit mining ceased in 1979 and underground mining continued intermittently until 1982. A surface projection of underground developments and a longitudinal section with drifts and stopes were provided and RPA used these for constraining the current resource wireframes. Adopting a conservative approach, RPA clipped the Riscos N1 and Riscos N2 lenses above Level 300. The modelled Riscos S wireframes are located below Level 300 and clipping was not necessary (Figure 14-3).

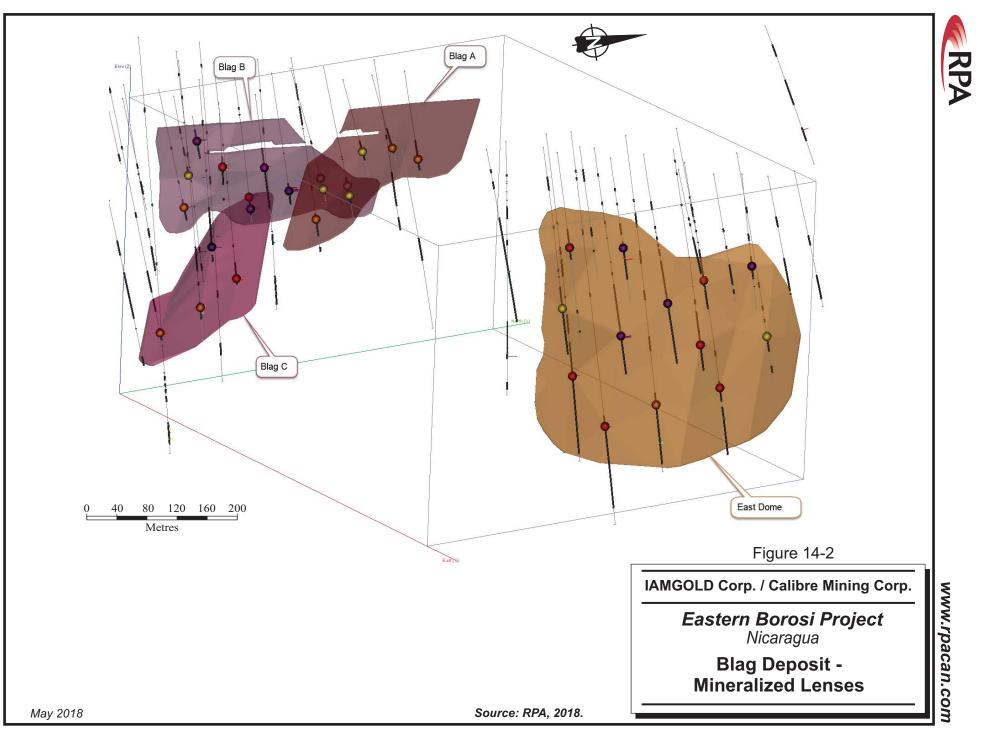
The mineralized lenses of the Guapinol deposit are shown in Figure 14-4.

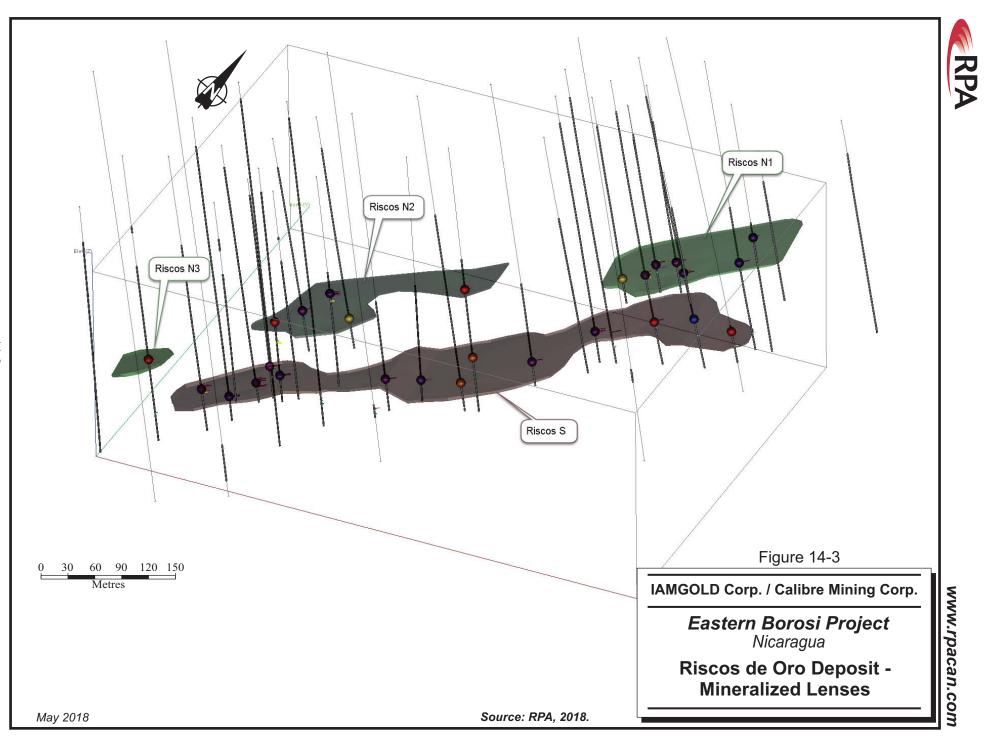


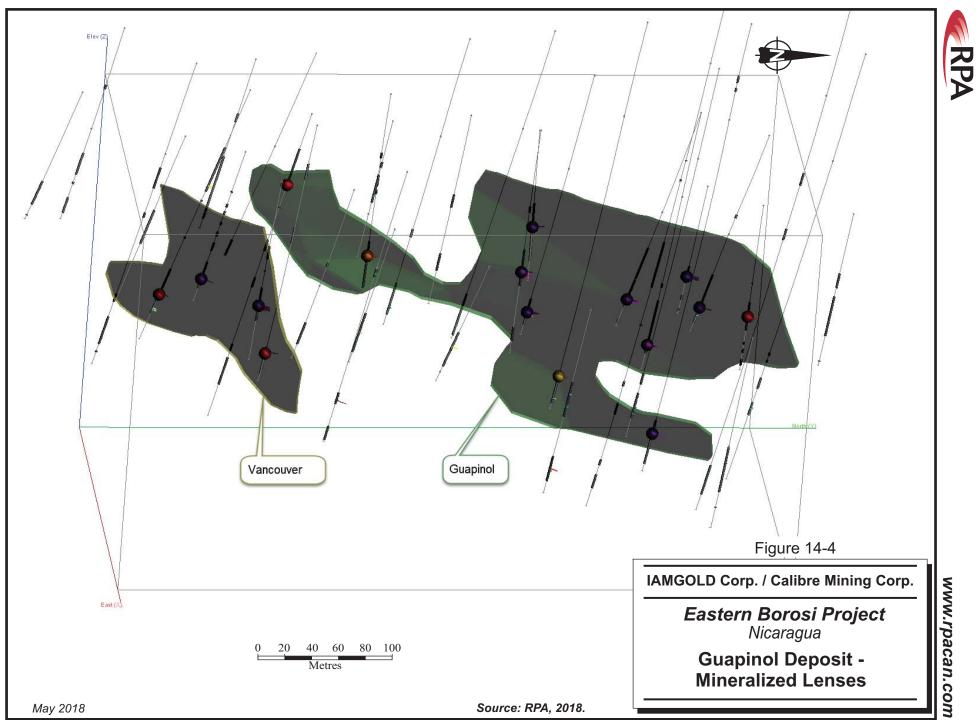
La Luna deposit mineralized lenses and pit shells are shown in Figure 14-5. No underground resources are reported at La Luna since very few blocks are above the underground cut-off grade of 2.0 g/t AuEq. RPA investigated the potential for underground mining below the pit and concluded that the benefit for the La Luna resources would be negligible.

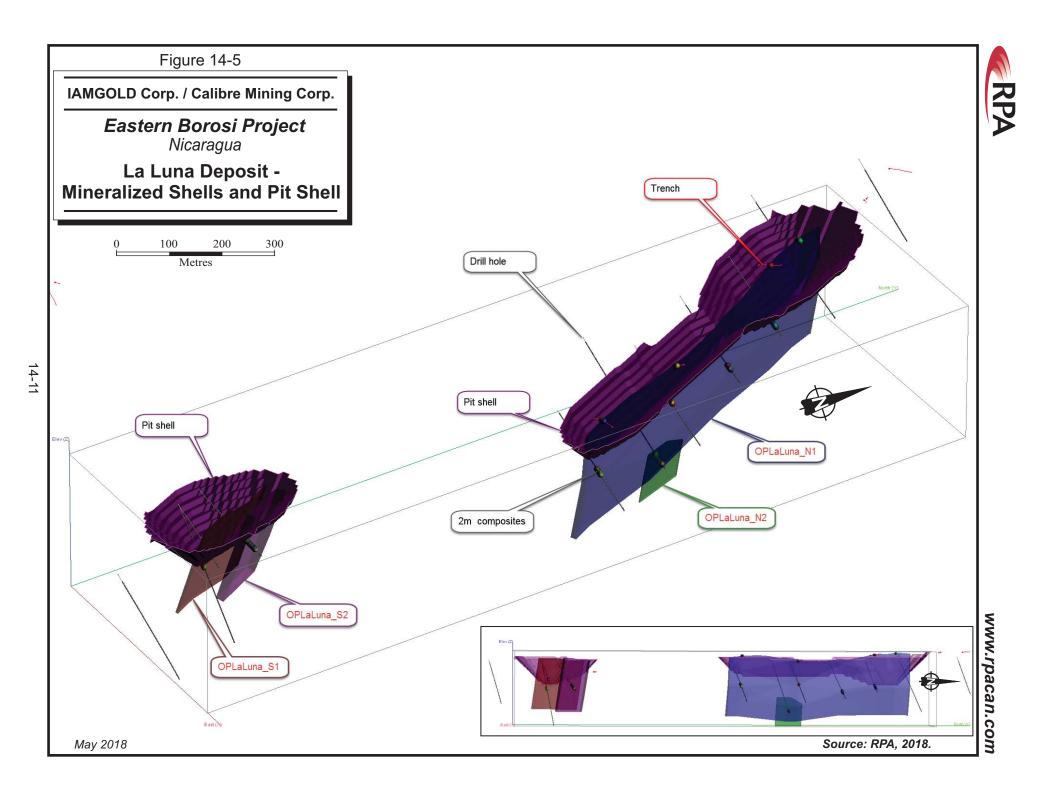
















### **DESCRIPTIVE STATISTICS**

Descriptive statistics of the assays captured inside the resource mineralized wireframes are presented in Table 14-5. La Luna descriptive statistics include core and trench samples.

		2 00.pl						
Deposit	Element	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
Blag	Ag	171	0.15	2579.00	205.18	337.77	114088.44	1.65
	Au	171	0.00	57.60	3.14	5.79	33.53	1.85
Riscos	Ag	100	1.20	2810.00	146.99	368.97	136138.53	2.51
	Au	100	0.02	27.40	5.74	6.16	37.91	1.07
Guapinol	Ag	74	0.15	224.00	19.48	35.96	1292.92	1.85
	Au	74	0.02	152.00	14.42	23.81	566.95	1.65
La Luna	Ag	121	0.10	353.00	16.30	44.30	1962.41	2.72
	Au	121	0.01	15.30	1.50	2.32	5.38	1.55

### TABLE 14-5 ASSAY DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Corp. – Eastern Borosi Project

### CAPPING

Typical precious metals deposits present positively skewed assay populations, with few outliers of very high grade compared to the majority of the samples. These erratic high grade samples could have a disproportionate influence on the estimated block grades. Capping anomalously high grade values prior to block grade estimation is one of the means of preventing the outliers to produce undesired results.

Typically, production reconciliation data is used for establishing capping levels. In the absence of production data, as is the case for the Eastern Borosi deposits, a statistical approach is used to determine the appropriate capping levels. Histograms, log probability plots, and decile analysis were performed for each of the deposits.

The capping values used for the estimate are listed in Table 14-6.



## TABLE 14-6CAPPING LEVELS SUMMARYIAMGOLD Corp./Calibre Corp. – Eastern Borosi Project

Deposit	Elem	ent
Deposit	Au (g/t)	Ag (g/t)
Blag-East Dome	20	670
Guapinol-Vancouver	40	40
Rosita	no cap (27.4)	800
La Luna	8	70

An example of the capping analysis for gold assays in the Blag deposit consisting of the histogram, log probability plot, and decile analysis is presented in Figures 14-6 and 14-7, and Table 14-7.

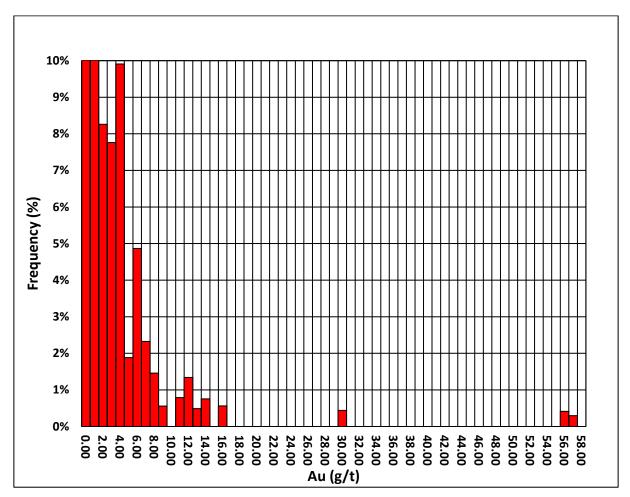


FIGURE 14-6 BLAG AU ASSAY HISTOGRAM



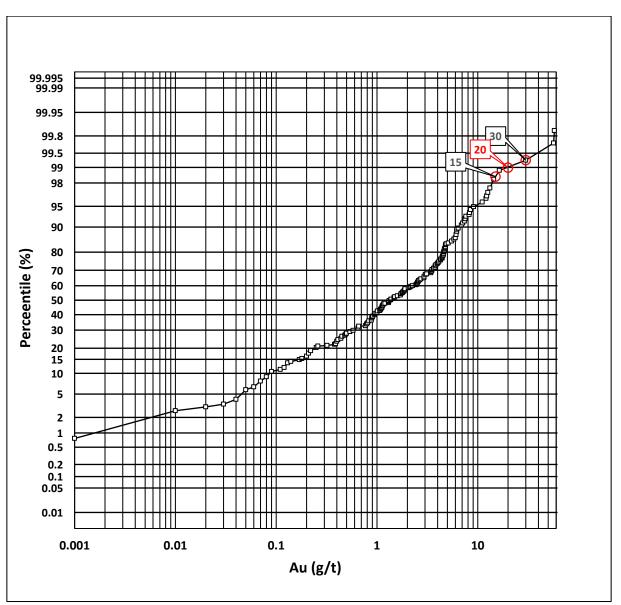


FIGURE 14-7 BLAG AU ASSAY LOG PROBABILITY PLOT



## TABLE 14-7BLAG AU ASSAY DECILE ANALYSISIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

			Capping	Grade	
	Percentile	Uncapped	30	20	15
Total Metal		456	428	412	402
Percent Metal Loss		0%	6%	10%	12%
Average Grade		3.14	2.95	2.83	2.77
CV		1.85	1.44	1.27	1.20
Capping Grade Percentile		1	0.993	0.990	0.985
Number of Caps		0	2	3	4
	0.90	2%	2%	2%	2%
	0.91	3%	3%	3%	3%
	0.92	3%	3%	3%	3%
t	0.93	2%	2%	2%	3%
nte	0.94	3%	4%	4%	4%
Metal Content	0.95	3%	3%	3%	3%
stal	0.96	3%	4%	4%	4%
ě.	0.97	4%	4%	4%	4%
	0.98	6%	7%	7%	7%
	0.99	17%	12%	8%	6%
	0.9 - 1	47%	43%	41%	40%

Detailed descriptive statistics of capped and uncapped assay data by individual vein and by deposit are presented in Tables 14-8 through 14-11.



# TABLE 14-8BLAG ASSAY DESCRIPTIVE STATISTICS (G/T)IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Domain	Element	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
Blag_A	Ag	25	0.15	609	112.02	153.69	23620.55	1.37
	Ag Cap	25	0.15	609	112.02	153.69	23620.55	1.37
	Au	25	0	6.4	1.3	1.51	2.28	1.16
	Au Cap	25	0	6.4	1.3	1.51	2.28	1.16
Blag_B	Ag	58	0.8	1656	233.23	346.64	120159.61	1.49
	Ag Cap	58	0.8	670	184.56	181.98	33117.07	0.99
	Au	58	0.01	16.4	3.48	3.65	13.31	1.05
	Au Cap	58	0.01	16.4	3.48	3.65	13.31	1.05
Blag_C	Ag	26	2.1	160	29.2	37.32	1392.41	1.28
	Ag Cap	26	2.1	160	29.2	37.32	1392.41	1.28
	Au	26	0.05	57.6	6.06	12.58	158.37	2.08
	Au Cap	26	0.05	20	4.09	5.36	28.68	1.31
East Dome	Ag	62	12.4	2579	278.47	403.26	162615.09	1.45
	Ag Cap	62	12.4	670	223.42	214.6	46054.05	0.96
	Au	62	0.01	14.4	2.25	2.85	8.11	1.27
	Au Cap	62	0.01	14.4	2.25	2.85	8.11	1.27
All Blag	Ag	171	0.15	2579.00	205.18	337.77	114088.44	1.65
-	Ag Cap	171	0.15	670.00	167.27	190.87	36433.03	1.14
	Au	171	0.00	57.60	3.14	5.79	33.53	1.85
	Au Cap	171	0.00	20.00	2.83	3.59	12.88	1.27



# TABLE 14-9 RISCOS DE ORO ASSAY DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Domain	Element	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
RiscosN_1	Ag	26	2.2	2810	313.78	526.09	276773.33	1.68
	Ag Cap	26	2.2	800	249.53	270.03	72915.93	1.08
	Au	26	0.02	18.7	4.8	5.48	30.03	1.14
	Au Cap	26	0.02	18.7	4.8	5.48	30.03	1.14
RiscosN_2	Ag	14	1.9	1990	137.1	443.49	196685.55	3.23
	Ag Cap	14	1.9	800	78.15	179.33	32160.95	2.29
	Au	14	0.61	16.59	5.47	4.91	24.08	0.9
	Au Cap	14	0.61	16.59	5.47	4.91	24.08	0.9
RiscosN_3	Ag	3	1.2	3.5	2.32	1.23	1.5	0.53
	Ag Cap	3	1.2	3.5	2.32	1.23	1.5	0.53
	Au	3	1.29	5.3	3.66	2.42	5.84	0.66
	Au Cap	3	1.29	5.3	3.66	2.42	5.84	0.66
RiscosS	Ag	57	1.6	1380	83.39	234.57	55023.06	2.81
	Ag Cap	57	1.6	800	67.12	150.24	22571.54	2.24
	Au	57	0.03	27.4	6.4	6.91	47.7	1.08
	Au Cap	57	0.03	27.4	6.4	6.91	47.7	1.08
All Riscos	Ag	100	1.20	2810.00	146.99	368.97	136138.53	2.51
	Ag Cap	100	1.20	800.00	113.02	204.36	41763.13	1.81
	Au	100	0.02	27.40	5.74	6.16	37.91	1.07
	Au Cap	100	0.02	27.40	5.74	6.16	37.91	1.07

# TABLE 14-10 GUAPINOL ASSAY DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Domain	Element	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
Guapinol	Ag	55	0.15	132	16.02	26.66	710.58	1.66
	Ag Cap	55	0.15	40	11.46	13.83	191.33	1.21
	Au	55	0.02	152	14.77	24.34	592.22	1.65
	Au Cap	55	0.02	40	11.88	14.5	210.23	1.22
Vancouver	Ag	19	0.7	224	28.67	53.44	2855.86	1.86
	Ag Cap	19	0.7	40	15.45	15.12	228.54	0.98
	Au	19	0.16	69.2	13.48	23.01	529.6	1.71
	Au Cap	19	0.16	40	9.59	13.64	185.93	1.42
All Guapinol	Ag	74	0.15	224.00	19.48	35.96	1292.92	1.85
	Ag Cap	74	0.15	40.00	12.56	14.19	201.29	1.13
	Au	74	0.02	152.00	14.42	23.81	566.95	1.65
	Au Cap	74	0.02	40.00	11.25	14.20	201.65	1.26



Demein	<b>F</b> I	0	M:		Maan	04.1	Manlanaa	<b>O</b> V
Domain	Element	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
LaLuna_N1	Ag	78	0.2	353	17.39	53.04	2813.21	3.05
	Ag Cap	78	0.2	70	10.13	16.74	280.1	1.65
	Au	78	0.01	8.05	1.41	1.8	3.25	1.27
	Au Cap	78	0.01	8	1.41	1.8	3.25	1.27
LaLuna_N2	Ag	3	0.1	3.2	1.43	1.75	3.08	1.23
	Ag Cap	3	0.1	3.2	1.43	1.75	3.08	1.23
	Au	3	0.2	3.7	1.64	1.97	3.89	1.21
	Au Cap	3	0.2	3.7	1.64	1.97	3.89	1.21
LaLuna_S1	Ag	19	0.4	115	23.26	33.05	1092.44	1.42
	Ag Cap	19	0.4	70	19.05	22.15	490.42	1.16
	Au	19	0.15	15.3	2.72	4.02	16.16	1.48
	Au Cap	19	0.15	8	2.15	2.47	6.1	1.15
LaLuna_S2	Ag	21	0.7	60.7	7.56	12.33	152.03	1.63
	Ag Cap	21	0.7	60.7	7.56	12.33	152.03	1.63
	Au	21	0.04	2.75	0.54	0.78	0.61	1.44
	Au Cap	21	0.04	2.75	0.54	0.78	0.61	1.44
All La Luna	Ag	121	0.10	353.00	16.30	44.30	1962.41	2.72
	Ag Cap	121	0.10	70.00	11.07	17.27	298.40	1.56
	Au	121	0.01	15.30	1.50	2.32	5.38	1.55
	Au Cap	121	0.01	8.00	1.40	1.85	3.44	1.33

# TABLE 14-11 LA LUNA ASSAY DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Trench data was used for the resource estimate of vein N1 in the La Luna deposit. The trench samples show average grades that are twice the average grades of the core samples (Table 14-12). In RPA's opinion, this is not currently a concern given the small number of both trenches and drill holes, as well as the wide spacing between them; however, RPA recommends infill drilling to be completed closer to the surface.



## TABLE 14-12LA LUNA N1 VEIN DRILL HOLE VS. TRENCH SAMPLES -<br/>ASSAY STATISTICS (G/T)

Sample Type	Element	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
Drilling	Ag	51	0.90	73.20	7.17	10.18	103.54	1.42
	Au	51	0.01	8.05	1.00	1.50	2.25	1.50
	Ag Cap	51	0.90	70.00	7.14	10.03	100.60	1.40
	Au Cap	51	0.01	8.00	1.00	1.50	2.24	1.50
Trench	Ag	27	0.20	353.00	39.65	90.51	8,191.49	2.28
	Au	27	0.34	6.79	2.32	2.09	4.37	0.90
	Ag Cap	27	0.20	70.00	16.62	25.03	626.46	1.51
	Au Cap	27	0.34	6.79	2.32	2.09	4.37	0.90

#### IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

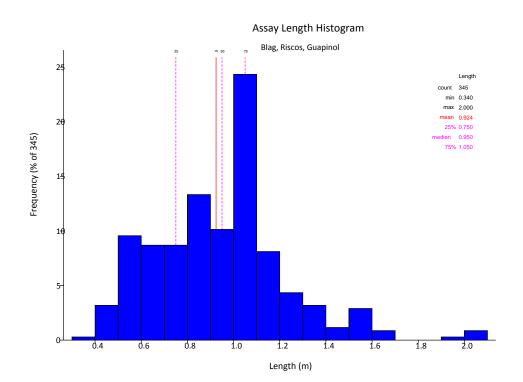
#### COMPOSITING

Capped gold and silver assays were used for compositing and the capped composites were used for block grade interpolation.

For the Blag, Riscos de Oro, and Guapinol deposits, compositing to the full mineralized solid intercept was carried out. Figure 14-8 shows the combined sample length histogram for the Blag, Riscos de Oro, and Guapinol deposits. Composite descriptive statistics for each deposit are shown in Table 14-13 to Table 14-15.



#### FIGURE 14-8 BLAG, RISCOS DE ORO AND GUAPINOL SAMPLE LENGTH HISTOGRAM





# TABLE 14-13 BLAG COMPOSITE DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Domain	Grade	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
Blag_A	Ag	5	83.01	236.05	125.08	61.17	3,741.88	0.49
	Ag Cap	5	83.01	236.05	125.08	61.17	3,741.88	0.49
	Au	5	0.15	2.00	1.42	0.71	0.50	0.50
	Au Cap	5	0.15	2.00	1.42	0.71	0.50	0.50
Blag_B	Ag	9	40.75	400.67	233.21	134.79	18,167.56	0.58
	Ag Cap	9	40.75	285.12	184.53	95.89	9,194.83	0.52
	Au	9	0.87	7.13	3.48	1.94	3.78	0.56
	Au Cap	9	0.87	7.13	3.48	1.94	3.78	0.56
Blag_C	Ag	6	8.21	72.69	31.27	25.07	628.71	0.80
	Ag Cap	6	8.21	72.69	31.27	25.07	628.71	0.80
	Au	6	0.66	20.95	5.45	6.58	43.32	1.21
	Au Cap	6	0.66	7.95	3.70	2.40	5.78	0.65
East Dome	Ag	13	34.26	1,092.46	278.44	264.58	70,004.64	0.95
	Ag Cap	13	34.26	473.82	223.38	134.89	18,194.65	0.60
	Au	13	0.21	5.46	2.25	1.64	2.70	0.73
	Au Cap	13	0.21	5.46	2.25	1.64	2.70	0.73
All Blag	Ag	33	8.21	1,092.46	205.14	200.62	40,248.51	0.98
_	Ag Cap	33	8.21	473.82	167.23	121.54	14,771.98	0.73
	Au	33	0.15	20.95	3.14	3.20	10.24	1.02
	Au Cap	33	0.15	7.95	2.83	1.91	3.63	0.67

# TABLE 14-14 RISCOS DE ORO COMPOSITE DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Domain	Grade	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
RiscosN	Ag	13	2.32	695.23	226.97	207.20	42,933.57	0.91
	Ag Cap	13	2.32	469.41	170.78	156.49	24,488.47	0.92
	Au	13	1.41	13.05	4.90	3.17	10.03	0.65
	Au Cap	13	1.41	13.05	4.90	3.17	10.03	0.65
RiscosS	Ag	14	4.00	288.01	83.38	99.57	9,914.81	1.19
	Ag Cap	14	4.00	179.89	67.11	70.35	4,949.65	1.05
	Au	14	0.24	10.24	6.40	2.78	7.74	0.43
	Au Cap	14	0.24	10.24	6.40	2.78	7.74	0.43
All Riscos	Ag	27	2.32	695.23	146.93	169.18	28,623.48	1.15
	Ag Cap	27	2.32	469.41	112.99	125.25	15,688.12	1.11
	Au	27	0.24	13.05	5.74	2.99	8.92	0.52
	Au Cap	27	0.24	13.05	5.74	2.99	8.92	0.52



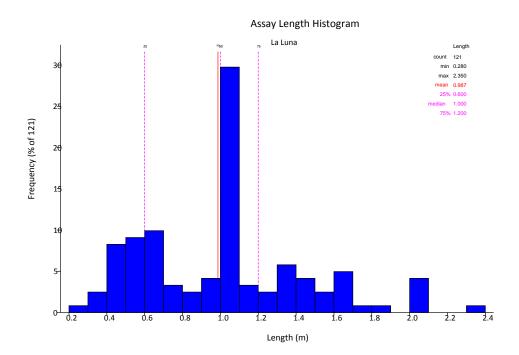
Domain	Grade	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
Guapinol	Ag	12	1.95	48.70	16.02	15.01	225.32	0.94
	Ag Cap	12	1.95	25.40	11.46	7.98	63.63	0.70
	Au	12	1.91	55.23	14.77	14.38	206.73	0.97
	Au Cap	12	1.91	27.21	11.87	8.36	69.96	0.70
Vancouver	Ag	4	2.25	86.35	28.68	35.50	1,260.07	1.24
	Ag Cap	4	2.25	21.72	15.46	8.99	80.83	0.58
	Au	4	3.09	23.20	13.48	10.32	106.58	0.77
	Au Cap	4	3.09	15.43	9.59	6.23	38.86	0.65
All Guapinol	Ag	16	1.95	86.35	19.48	21.43	459.26	1.10
	Ag Cap	16	1.95	25.40	12.55	8.10	65.59	0.65
	Au	16	1.91	55.23	14.42	13.02	169.55	0.90
	Au Cap	16	1.91	27.21	11.25	7.68	58.96	0.68

# TABLE 14-15 GUAPINOL COMPOSITE DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

For La Luna, with thicker mineralized wireframes, the assays were composited to a two metre equal length, discarding composites (orphans) at the end of the interval if shorter than 0.5 m. Three orphan composites from drill holes were discarded. The two metre composite length ensured that both angled drilling and surface trench samples are properly represented at the interpolation stage. The two metre length helps to avoid excessive sample splitting for a population where a significant proportion of the samples are shorter than one metre, as shown in Figure 14-9. Table 14-16 presents the composite descriptive statistics for La Luna.



#### FIGURE 14-9 LA LUNA SAMPLE LENGTH HISTOGRAM





Domain	Grade	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
LaLuna_N1	Ag	39	0.33	178.27	17.44	39.31	1,545.58	2.25
	Au	39	0.04	5.64	1.40	1.44	2.08	1.03
	Ag Cap	39	0.33	58.04	10.15	14.26	203.39	1.40
	Au Cap	39	0.04	5.64	1.40	1.44	2.08	1.03
LaLuna_N2	Ag	2	0.10	2.09	1.43	1.41	1.98	0.99
	Au	2	0.20	2.35	1.64	1.52	2.32	0.93
	Ag Cap	2	0.10	2.09	1.43	1.41	1.98	0.99
	Au Cap	2	0.20	2.35	1.64	1.52	2.32	0.93
LaLuna_S1	Ag	11	1.15	86.11	23.19	27.46	754.19	1.18
	Au	11	0.52	9.70	2.73	3.34	11.17	1.22
	Ag Cap	11	1.15	62.98	18.84	18.56	344.37	0.98
	Au Cap	11	0.52	7.21	2.15	2.16	4.66	1.01
LaLuna_S2	Ag	11	1.84	24.54	7.56	7.01	49.11	0.93
	Au	11	0.10	1.78	0.54	0.49	0.24	0.91
	Ag Cap	11	1.84	24.54	7.56	7.01	49.11	0.93
	Au Cap	11	0.10	1.78	0.54	0.49	0.24	0.91
All La Luna	Ag	63	0.10	178.27	16.27	33.23	1,104.44	2.04
	Ag Cap	63	0.10	62.98	11.00	14.31	204.76	1.30
	Au	63	0.04	9.70	1.49	1.90	3.61	1.28
	Au Cap	63	0.04	7.21	1.38	1.53	2.33	1.11

# TABLE 14-16 LA LUNA COMPOSITE DESCRIPTIVE STATISTICS (G/T) IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

#### VARIOGRAPHY AND GRADE TRENDS

RPA carried out variography and trend analysis for the largest lenses: La Luna N1, Riscos S, Guapinol, and East Dome. The wide drill hole spacing and small dataset rendered the results inconclusive; however, for East Dome, ranges of approximately 100 m for gold and 150 m for silver were observed.

Most of the mineralized wireframes present small changes in dip and occasional local azimuth variations, which might be an indication of vein variability at a smaller scale than what is revealed at the current drill hole spacing. The Blag, Riscos, and Guapinol veins commonly have a 200 m to 300 m dimension both down dip and along strike. The Riscos S lens spans 600 m along strike, however, the gentle bend present close to its middle might be the result of joining two distinct veins, slightly offset.



### DENSITY

A set of 324 specific gravity measurements on core samples from Blag, Guapinol, and Riscos were available to RPA. RPA retained all the measurements taken in mineralization, totalling 172 samples, and determined average values for these deposits, which were then used for the estimate. A density value of 2.65 g/cm<sup>3</sup> was used for Blag and Guapinol, and 2.60 g/cm<sup>3</sup> for Riscos. Figure 14-10 presents the box plot graph and descriptive statistics for density data by zone.

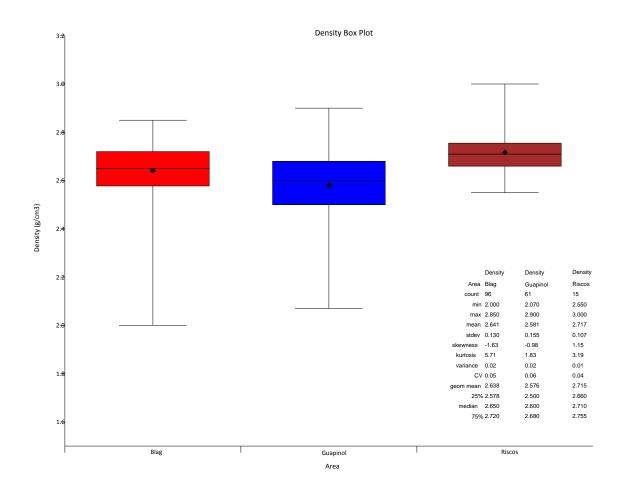


FIGURE 14-10 DENSITY VALUES BY AREA

Density measurements were not available for La Luna. RPA assigned a value of 2.65 g/cm<sup>3</sup> to both mineralized material and waste at La Luna, and this value is comparable to other epithermal deposits. RPA recommends carrying out specific gravity measurements on the existing La Luna core.



### **BLOCK MODEL**

The resource estimate is supported by four separate block models built in Geovia GEMS 6.7. A block size of 10 m by 3 m by 10 m or 3 m by 10 m by 10 m was used such that the short dimension was oriented across the resource wireframes. Three of the models were rotated to align with the local orientation of the mineralization. Table 14-17 presents a summary of the four block model properties.

Element	Blag	Riscos	Guapinol	La Luna
Minimum East (m UTM16)	801,402	795,850	796,800	798,600
Minimum North (m UTM16)	1,554,802	1,553,400	1,552,550	1,545,450
Maximum Elevation (m UTM16)	120	100	100	100
Number of Row	65	140	65	220
Number of Column	250	110	210	430
Number of Level	50	50	45	40
Row size (m)	10	3	10	10
Column size (m)	3	10	3	3
Level size (m)	10	10	10	10
Rotation (deg. GEMS convention)	0	40	330	25

#### TABLE 14-17 BLOCK MODELS PROPERTIES IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Blocks in each block model were flagged with rock codes for each lens and the percent of each block inside the mineralized solids. The grade attributes in all block models were then populated with interpolated values, density, and classification. Gold equivalent values were calculated based on interpolated grades.

#### INTERPOLATION

Gold and silver block grades were estimated using the ID<sup>2</sup> interpolation method in one pass. A hard boundary was applied to composites from different lenses. For La Luna, two metre composites were the basis for interpolation, while the other deposits used the full intercept composites. Table 14-18 summarizes the sample selection strategy and interpolation parameters.



## TABLE 14-18 SAMPLE SELECTION AND INTERPOLATION PARAMETERS IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Mining Method	Interpolation Method	Composite min	Composite max	Composites max per hole	Ellipse orientation (Az/Dip/Az)	Ellipse ranges (m)
OP	ID <sup>2</sup>	2	9	3	Along lens	150/150/30
UG	ID <sup>2</sup>	1	3	-	Isotropic	110/110/110

### **BLOCK MODEL VALIDATION**

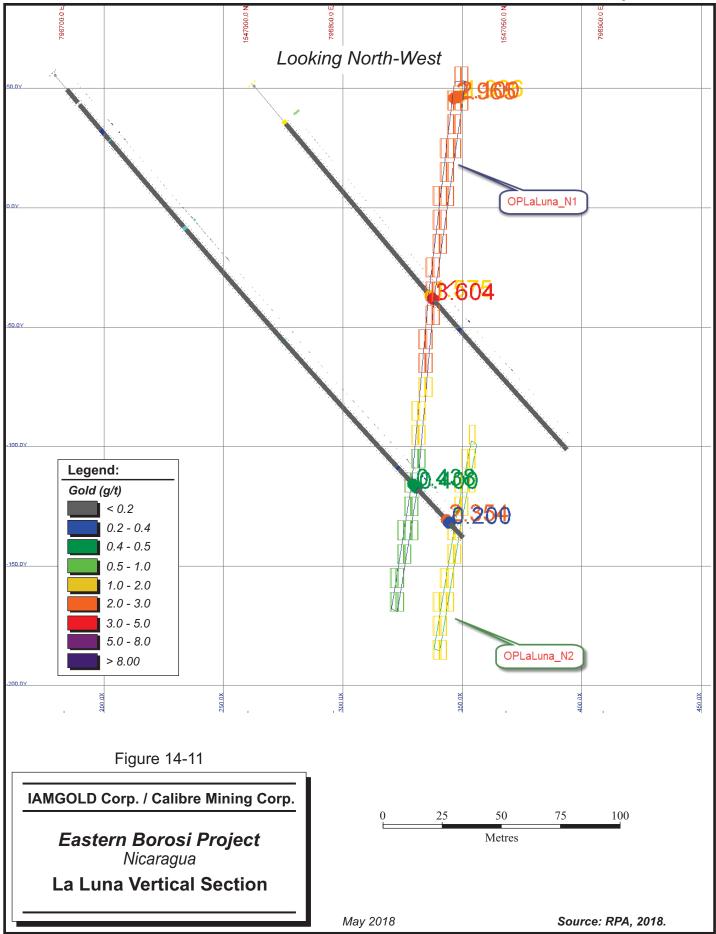
The estimated grades were validated by various methods, including visual comparison of interpolated block grades versus composite grades in plan and vertical sections, and comparison with alternative interpolation methods.

A typical cross section in La Luna North showing drill hole traces, mineralized wireframe contour, composites, and interpolated block grades is shown in Figure 14-11, while Figure 14-12 shows a typical plan view at the 45 m elevation.

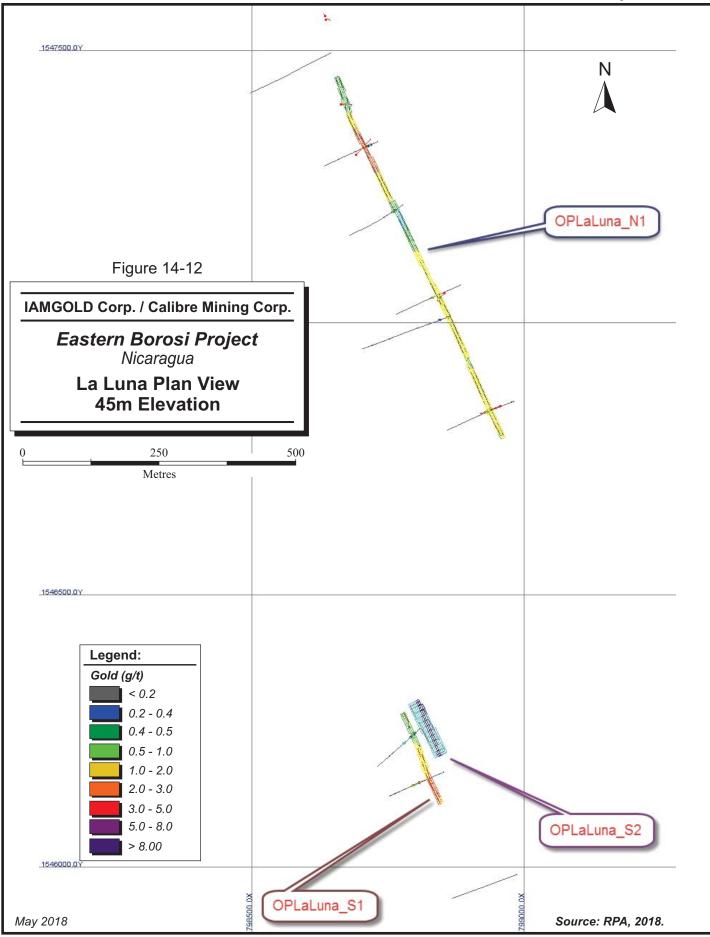
Drill holes, interpolated blocks, and composites for the Blag, East Dome, Riscos do Oro, Guapinol, and Vancouver veins are shown in Figures 14-13 to 14-16.

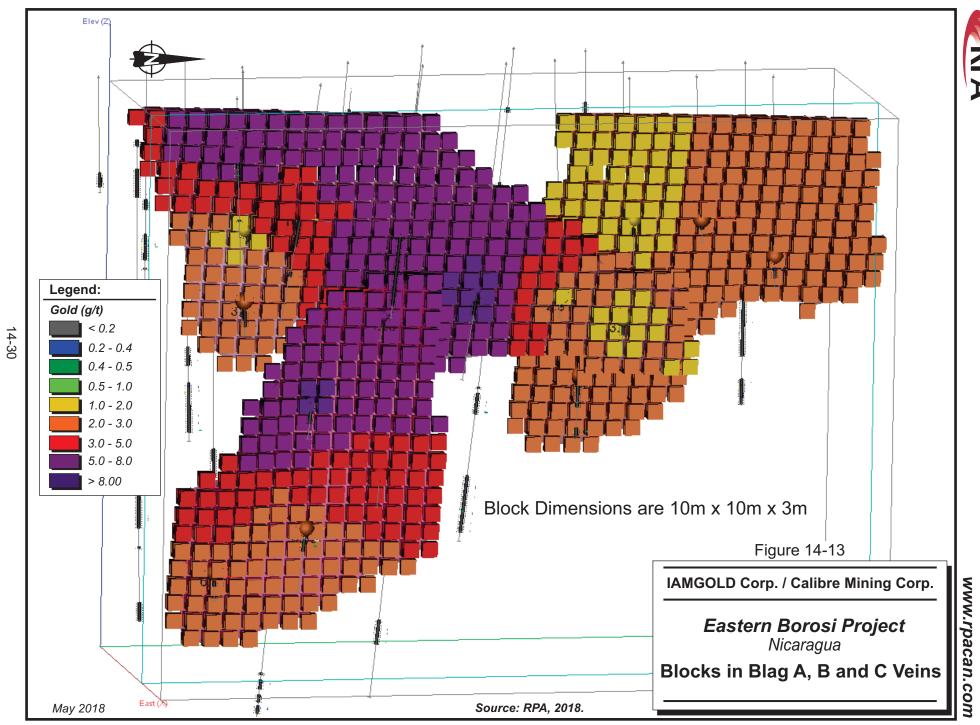


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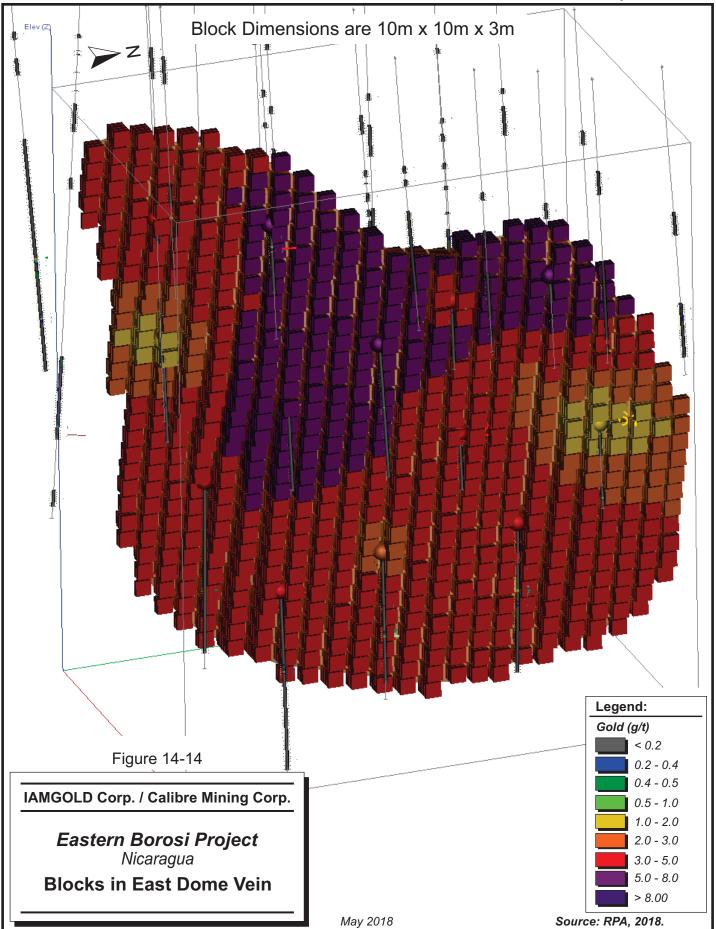


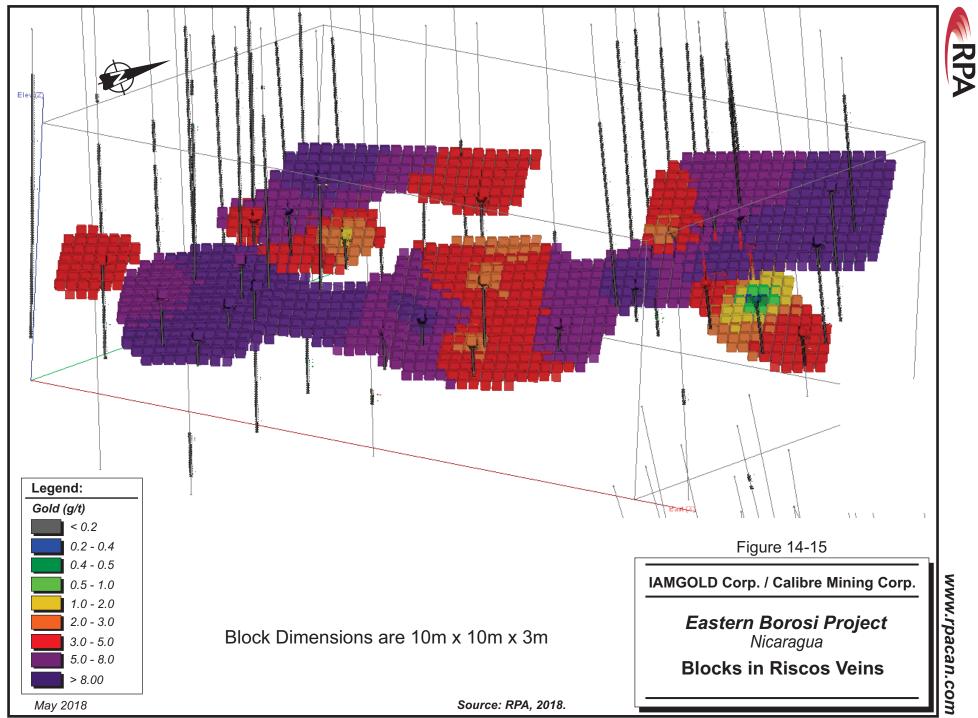


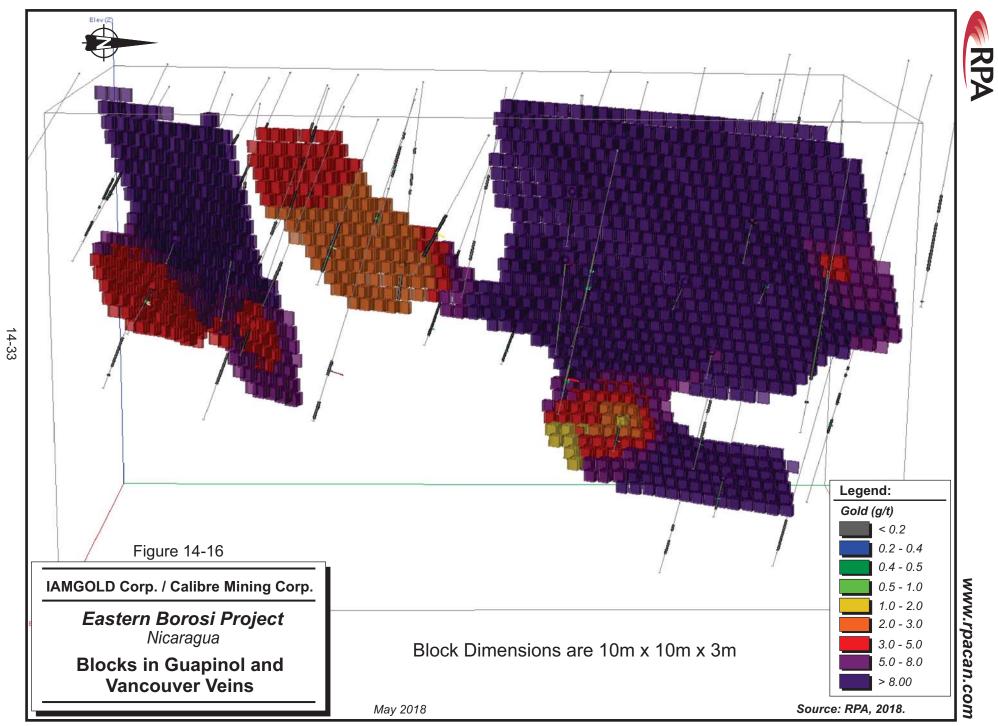














### CLASSIFICATION

Definitions for resource categories used in this report are consistent with those defined by CIM (2014) and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as "a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction".

All the interpolated blocks in the underground and open pit models were classified as Inferred.

### **CUT-OFF GRADE**

#### **OPEN PIT CUT-OFF GRADE**

Based on the parameters outlined in Table 14-19, a cut-off grade of 0.42 g/t AuEq was selected for La Luna open pit. Classified blocks above the cut-off grade and located within the resource shell were reported as Mineral Resource.

#### UNDERGROUND CUT-OFF GRADE

Mineralized wireframes were modelled at a nominal cut-off grade of 2 g/t AuEq over a width of 2.4 m. Occasionally, lower grade intercepts were included in order to preserve mineralized lens continuity, then a manual contour was used as a "cookie cutter" to retain portions of lenses with contiguous mineralization above the nominal cut-off value. All the material captured inside the final mineralized lenses is reported as underground Mineral Resource.

#### WHITTLE PIT OPTIMIZATION

Mineral Resources have to demonstrate "reasonable prospects for eventual economic extraction" (CIM, 2014). For this purpose, a Lerchs-Grossmann preliminary pit optimization exercise was performed using GEOVIA's Whittle software. Table 14-19 lists the main parameters used for the pit optimization.



Parameter	Unit	Input
Pit Slopes (Rock)	degrees	50
Mining Cost	US\$/tonne	2.75
Process and G&A Cost	US\$/tonne	18.00
Au Price	US\$/oz	1500
Ag Price	US\$/oz	23
Au Recovery	%	90.0
Ag Recovery	%	60.0
Au Selling Costs	US\$/oz	5.00
Au Selling Costs	US\$/oz	0.50
Mining Extraction	%	100
Mining Dilution	%	0
Estimated Cut-off Grade	AuEq g/t	0.42

## TABLE 14-19LA LUNA PIT OPTIMIZATION PARAMETERSIAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

### **OPEN PIT RESOURCE SENSITIVITY**

The Mineral Resources are relatively insensitive to a change in cut-off grade. Increasing the cut-off grade from 0.42 g/t AuEq to 0.8 g/t AuEq (approximately 100% increase) results in virtually no change for La Luna North, whereas La Luna South resources diminish by 15%. Table 14-20 lists the open pit Inferred Resources reported at various cut-off grades for La Luna North and La Luna South.



## TABLE 14-20IN-PIT INFERRED RESOURCES SENSITIVITY TO CUT-OFF<br/>GRADE

Zone	Cut-off AuEq (g/t)	Tonnage (t*1000)	Grade Au (g/t)	Metal Au (oz)	Grade Ag (g/t)	Metal Ag (oz)
La Luna N	>3.00	57	3.31	6,000	37	68,500
	>2.50	129	2.84	11,500	31	128,500
	>2.00	640	2.27	46,500	17	353,500
	>1.80	734	2.21	52,000	16	383,000
	>1.60	782	2.18	54,500	16	395,500
	>1.40	799	2.16	55,500	16	400,000
	>1.20	808	2.15	56,000	16	402,500
	>1.00	815	2.14	56,000	15	405,000
	>0.90	839	2.10	57,000	15	412,000
	>0.80	841	2.10	57,000	15	412,500
	>0.70	842	2.10	57,000	15	413,000
	>0.60	844	2.10	57,000	15	413,000
	>0.42	848	2.09	57,000	15	414,000
	>0.40	848	2.09	57,000	15	414,000
La Luna S	>3.00	96	3.49	10,500	30	92,500
	>2.50	108	3.38	12,000	29	101,500
	>2.00	121	3.24	12,500	28	109,500
	>1.80	128	3.16	13,000	27	113,000
	>1.60	142	3.00	13,500	26	120,000
	>1.40	155	2.87	14,500	25	125,500
	>1.20	163	2.78	14,500	24	128,500
	>1.00	266	2.06	17,500	19	163,000
	>0.90	296	1.94	18,500	18	173,000
	>0.80	296	1.94	18,500	18	173,000
	>0.70	297	1.94	18,500	18	173,500
	>0.60	325	1.82	19,000	17	181,000
	>0.42	351	1.72	19,500	17	187,000
	>0.40	351	1.72	19,500	17	187,000

#### IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

#### **COMPARISON WITH PREVIOUS ESTIMATES**

A comparison between the current Mineral Resources for La Luna and Riscos de Oro deposits and the previous estimates reflects changes that include the overall modelling approach, the proposed mining method, cut-off for mineral resource wireframing, and available support data. Table 14-21 presents the evolution of the Mineral Resources for the La Luna and Riscos de Oro deposits.



## TABLE 14-21 COMPARISON WITH PREVIOUS RESOURCE ESTIMATES IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Deposit	La Luna	La Luna	Difference	Riscos de Oro	Riscos de Oro	Difference
Date	Feb-11	Mar-18		Sep-12	Mar-18	
Mining Method	underground	open pit		underground	underground	
Cut-off AuEq (g/t)	0.6	0.4		0.6	2.0	
Category	Inferred	Inferred		Inferred	Inferred	
Tonnes (Mt)	2.54	1.20	-53%	2.16	1.18	-45%
Gold (g/t)	1.56	1.98	27%	3.2	5.73	79%
Silver (g/t)	14.01	16	14%	59.67	106	78%
Gold (oz)	127,700	76,000	-40%	222,300	218,000	-2%
Silver (oz)	1,144,000	600,500	-48%	4,142,000	4,046,000	-2%

The current La Luna estimate contains half the tonnage, 40% less gold ounces, and half the silver ounces compared to the previous estimate. The previous estimate was based on a selective underground mining method, with the mineralized wireframes based on a cut-off grade of 0.2 g/t AuEq over a minimum 2 m horizontal width. The previous database included data from ten historical drilling from 1975 and 1976. The historical drilling was removed from the database prior to the current resource estimate as the records were not considered to be complete and auditable.

The current Riscos de Oro resource has approximately half the tonnage, 79% higher gold grade and 78% higher silver grade, while the metal content is similar. New drilling and higher resource wireframe cut-off values were used for the current estimate.



### **15 MINERAL RESERVE ESTIMATE**



### **16 MINING METHODS**



### **17 RECOVERY METHODS**



### **18 PROJECT INFRASTRUCTURE**



### **19 MARKET STUDIES AND CONTRACTS**



### 20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT



### **21 CAPITAL AND OPERATING COSTS**



### **22 ECONOMIC ANALYSIS**



### **23 ADJACENT PROPERTIES**

Joint venture partner Calibre controls 876 km<sup>2</sup> within the Mining Triangle District defined by the mining towns of Bonanza, Rosita, and Siuna (Figure 23-1). These areas and prospects, plus other properties of interest, are described below.

## AREA OPTIONED TO CENTERRA GOLD INC. – SIUNA PROJECT

The 253 km<sup>2</sup> Siuna Gold-Silver Project is located in the southwest portion of the Borosi Concessions, 50 km west of the EBP, and contains the La Luz Mine that previously produced 17.1 million tonnes of ore grading 4.14 g/t Au (2.3 million oz gold) between 1912 and 1968. One kilometre south of the La Luz Mine, Calibre has defined an Inferred Mineral Resource, at the Cerro Aeropuerto gold-silver deposit containing 707,750 oz gold and 3.14 million oz silver (6.0 Mt grading 3.64 g/t Au and 16.2 g/t Ag). Drilling by Yamana at the Cerro Aeropuerto deposit suggests that the system follows a north-trending, steeply west-dipping zone that can be traced for over 500 m along strike and over 300 m down-dip. Calibre/Centerra have been actively exploring the Siuna Project since 2015 and work has included project-wide soil sampling, rock sampling, selected trenching, induced polarization (IP) and ground magnetic geophysics, and additional technical studies.

Immediately adjacent to the La Luz Mine is the Cerro Potosi Target which hosts near-surface, gold-bearing garnet-epidote skarn mineralization parallel to and in the footwall of the historic mine. In 2008, Yamana completed a drill program that highlighted several near-surface intercepts including 16.2 m grading 4.18 g/t Au (39.3 m to 55.5 m), 32.0 m grading 2.50 g/t Au (56.0 m to 88.0 m), and 15.0 m grading 1.78 g/t Au (39.0 m to 54.0 m).

#### **ROSITA MINING JOINT VENTURE**

Rosita Mining Corporation (Rosita), formerly Alder Resources, signed an option agreement with Calibre in August 2011 to earn a 65% interest in the 33 km<sup>2</sup> Rosita D concession by expending \$4 million on exploration and issuing Calibre one million common shares of over four years. Rosita was designated as operator for the Project. Rosita completed earn-in on the property on November 30, 2015, and formally created a joint venture with Calibre on



September 14, 2016. The property hosts the historic open pit Santa Rita mine from which 5.37 Mt of ore grading 2.06% Cu, 0.93 g/t Au, and 15.08 g/t Ag was extracted by La Luz Mines Ltd. and Rosario Resources. The mine closed in 1975 due to low copper prices.

Rosita completed several drill programs and metallurgical test work at Santa Rita examining the six historic dumps and the tailing. The current resource estimation, prepared in February 2016, contains a total Indicated Mineral Resource in the six dumps of 6.5 million tonnes at 0.47 g/t Au, 0.50% Cu, and 7.32 g/t Ag. An additional Inferred Mineral Resource in the six dumps contains 3.4 million tonnes at 0.46 g/t Au, 0.61% Cu, and 8.66 g/t Ag. The tailings contain an Inferred Mineral Resource of 2.0 million tonnes at 0.56 g/t Au and 9.65 g/t Ag.

#### **BONANZA MINE**

The Bonanza mine is located on an exploitation concession to the 40 km west of the EBP. The mine is presently owned and operated by HEMCO, an arms-length company owned by Mineros of Columbia. The mine has produced an estimated 3.3 M oz of gold from low sulphidation epithermal veins between 1939 and 2017 from both open pit and underground operations as well as from a series of agreements with local small-mining cooperative. The last publicly stated resource for Bonanza was by RNC Gold Inc. (RNC) in 2005 prior to RNC being acquired by Yamana.

#### **OTHER CALIBRE PROJECTS**

Calibre controls 100% of an additional 413 km<sup>2</sup> within the region. The additional projects include a series of mineralized zones and targets which have received variable amounts of exploration including soil and rock sampling, ground and airborne geophysical surveys, trenching, auger drill sampling, and diamond drilling.

The Primavera Project is 100% owned by Calibre and located 20 km southwest of the eastern EBP, contains a classic porphyry style gold-copper mineralization. In the first phase of drilling, a total of 32 holes totalling 13,400 m were drilled at the Primavera Project which outlined a higher-grade core to the gold-copper porphyry mineralization over an area 400 m long, 250 m wide, and to a depth of 300 m. In December 2016, Calibre announced an initial Inferred Mineral Resource estimate of 45.0 million tonnes grading 0.54 g/t Au, 1.15 g/t Ag, and 0.22 % Cu (0.84 g/t AuEq) containing 782,000 ounces of gold, 1.7 million ounces of silver, and 219

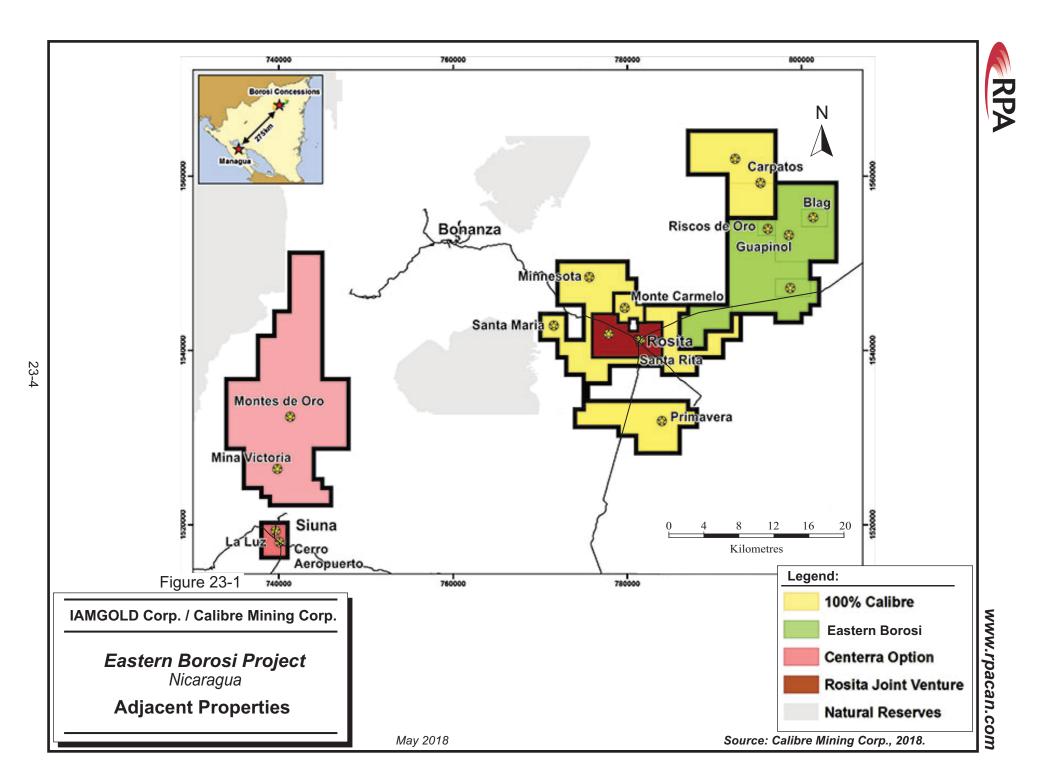


million pounds of copper (1.2 million AuEq ounces). Exploration is ongoing and a reverse circulation drilling program consisting of 2,758 m in 19 holes was completed in 2017.

Calibre owns 100% of the Minnesota Project, located 20 km west of the EBP, where the 2014 reconnaissance diamond drilling program consisting of seven widely spaced drill holes totalling 992 m tested three areas along the 3.5 km by 1.0 km trend defined by a strong auger and goldin-soil anomaly and surface rock sampling. Drilling results include 31.35 m grading 0.63 g/t Au (including 12.40 m grading 1.07 g/t Au) and 47.00 m grading 0.63 g/t Au and 3,703 ppm Zn (including 4.50 m grading 3.43 g/t Au and 5,699 ppm Zn).

Additional mineralization in the district controlled by Calibre displays a number of different styles including high-grade gold skarn (Monte Carmelo – 20 km west), and low sulphidation epithermal gold-silver (Santa Maria – 25 km west), where maiden diamond drilling programs on both were completed in 2017. The Carpatos Project located immediately north of the EBP includes a series of gold-silver and base metal anomalies in soil and rock sampling.

RPA has not independently verified the information on the adjacent properties and this information is not necessarily indicative of the mineralization at the EBP.





# 24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.



### **25 INTERPRETATION AND CONCLUSIONS**

The EBP is located in the Mining Triangle District in north-central Nicaragua, in the Rosita municipality of the Región Autónoma de la Costa Caribe Norte, approximately 300 km northeast of Managua and 90 km west of the coastal town of Puerto Cabezas.

In RPA's opinion, the sample preparation, analysis, and security procedures at the EBP and the QA/QC program as designed and implemented by Calibre is adequate and the assay results are suitable for use in the estimation of Mineral Resources. In RPA's opinion, the drill hole database complies with industry standards and is adequate for Mineral Resource estimation.

RPA prepared initial Mineral Resource estimates for Blag, East Dome, Guapinol, and Vancouver veins, and updated the Mineral Resource estimates for the Riscos de Oro and La Luna veins. The models were interpreted under the assumption that an open pit mining method would potentially be used for La Luna veins, while the rest of the veins would potentially be mined by underground methods. The Mineral Resource includes 3.219 Mt at average grades of 6.03 g/t Au and 104 g/t Ag, containing 624,000 ounces of gold and 10.758 million ounces of silver from the underground, and 1.199 Mt at average grades of 1.98 g/t Au and 16 g/t Ag, containing 76,500 ounces of gold and 601,000 ounces of silver from the open pit. Mineral Resources were assigned to the Inferred category.

This Mineral Resource estimate was completed using Geovia GEMS 6.7 software. Four 3D geological models were built and used to constrain and populate resource block models. The block grade estimate was based on the ID<sup>2</sup> interpolation method. The Mineral Resource is reported at a cut-off grade of 2.0 g/t AuEq for the underground and at a cut-off grade of 0.42 g/t AuEq for the open pit using price assumptions of US\$1,500 per ounce of gold and US\$23 per ounce of silver. High grade gold assays were capped at values ranging from 8 g/t to 40 g/t and high grade silver assays were capped at values ranging from 40 g/t to 800 g/t depending on domain. The Mineral Resource estimate was constrained by a preliminary pit optimization shell for the open pit and by mineralized wireframes for the underground component.



The current Mineral Resource estimate reflects a number of changes from the previous Mineral Resource estimates, including exclusion of historic drilling from the database, higher resource wireframe cut-off values, and new drilling.



### **26 RECOMMENDATIONS**

It is RPA's opinion that additional exploration expenditures are warranted. Two separate exploration programs are proposed. Phase 2 is dependent on the results of Phase 1 and should be completed or adjusted upon the completion of Phase 1.

#### PHASE 1 – EASTERN BOROSI PROJECT RESOURCE EXPANSION

Phase 1 is designed primarily to expand the current resource at the Project by testing the strike and dip extension of the deposit as well as other geochemical and geophysics targets. This will entail diamond drilling with additional work on metallurgical testing, rock mechanics, and surveying. The drilling campaign should be designed to target the potential strike extensions of the Project. Drill hole spacing should continue at approximately 50 m along section and 50 m to 75 m vertically on section in order to support an Inferred Mineral Resource. Table 26-1 summarizes the exploration program proposed.

Item	Note	Amount (US\$)
Diamond Drilling	9,200 m @ \$150/m	1,380,000
Assays	3,000 samples @ \$40/sample	120,000
Salaries / Technical Support	-	220,000
Metallurgical Testing	-	30,000
Surveying	-	40,000
Additional Technical Studies	-	55,000
Resource Update	-	60,000
Consumable Supplies and Camp Costs	-	95,000
Total		2,000,000

### TABLE 26-1 EASTERN BOROSI PROJECT PHASE 1 EXPLORATION IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Note: Drilling includes all drilling related charges.

#### PHASE 2 – EASTERN BOROSI PROJECT RESOURCE EXPANSION AND ADVANCEMENT

Phase 2 includes both infill drilling, additional metallurgical testing, an environmental baseline study and a Preliminary Economic Assessment (PEA). The drilling campaign should target the core areas of the Eastern Borosi deposits, particularly in the areas of thicker and higher grade mineralization. Table 26-2 summarizes the proposed Phase 2 program.



### TABLE 26-2 EASTERN BOROSI PROJECT PHASE 2 EXPLORATION IAMGOLD Corp./Calibre Mining Corp. – Eastern Borosi Project

Item	Note	Amount (US\$)
Diamond Drilling	11,000 m @ \$150/m	1,650,000
Assays	3,500 samples @ \$40/sample	140,000
Salaries	-	280,000
Metallurgical Testing	-	60,000
Additional Technical Studies	-	65,000
Environmental Studies	-	65,000
Consumable Supplies and Camp Costs	-	95,000
Preliminary Economic Assessment	-	145,000
Total		2,500,000

Note: Drilling includes all drilling related charges.



### **27 REFERENCES**

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### **28 DATE AND SIGNATURE PAGE**

This report titled "Technical Report on the Eastern Borosi Project, Nicaragua" and dated May 11, 2018 was prepared and signed by the following author:

(Signed and Sealed) "Tudorel Ciuculescu"

Dated at Toronto, ON May 11, 2018 Tudorel Ciuculescu, M.Sc., P.Geo. Senior Geologist



### 29 CERTIFICATE OF QUALIFIED PERSON

#### TUDOREL CIUCULESCU

I, Tudorel Ciuculescu, M.Sc., P.Geo., as the author of this report entitled "Technical Report on the Eastern Borosi Project, Nicaragua" prepared for IAMGOLD Corporation and Calibre Mining Corp. and dated May 11, 2018, do hereby certify that:

- 1. I am Senior Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.
- 2. I am a graduate of University of Bucharest with a B.Sc. degree in Geology in 2000 and University of Toronto with a M.Sc. degree in Geology in 2003.
- 3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #1882). I have worked as a geologist for a total of 16 years since my graduation. My relevant experience for the purpose of the Technical Report is:
  - Preparation of Mineral Resource estimates.
  - Over 5 years of exploration experience in Canada and Chile.
- 4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I visited the Eastern Borosi Project on October 27 to 29, 2017.
- 6. I am responsible for the preparation of all sections of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 11<sup>st</sup> day of May, 2018

#### (Signed and Sealed) "Tudorel Ciuculescu"

Tudorel Ciuculescu, M.Sc., P.Geo.