



Rock solid resources.
Proven advice.™

BRIO GOLD INC.

TECHNICAL REPORT ON THE FAZENDA BRASILEIRO MINE, BAHIA STATE, BRAZIL

NI 43-101 Report

Qualified Persons:

Chester M. Moore, P.Eng.

Robert L. Michaud, P.Eng.

Andrew P. Hampton, P.Eng.

May 12, 2016



Report Control Form

Document Title

Technical Report on the Fazenda Brasileiro Mine, Bahia State, Brazil

Client Name & Address

Brio Gold Inc.
4500 Cherry Creek South Drive, Suite 1040
Denver, Colorado 80246

Document Reference

Project #2614

**Status &
Issue No.**

FINAL
Version

Issue Date

May 12, 2016

Lead Author

Chester Moore

(Signed)

Peer Reviewer

Wayne Valliant

(Signed)

Project Manager Approval

Chester Moore

Signed)

Project Director Approval

Deborah McCombe

(Signed)

Report Distribution

Name	No. of Copies
Client	
RPA Filing	1 (project box)

Roscoe Postle Associates Inc.

55 University Avenue, Suite 501
Toronto, ON M5J 2H7

Canada

Tel: +1 416 947 0907

Fax: +1 416 947 0395

mining@rpacan.com

TABLE OF CONTENTS

	PAGE
1 SUMMARY	1-0
Executive Summary	1-0
Economic Analysis	1-6
Technical Summary	1-6
2 INTRODUCTION	2-1
3 RELIANCE ON OTHER EXPERTS	3-1
4 PROPERTY DESCRIPTION AND LOCATION	4-1
Mineral and Surface Rights in Brazil	4-1
Land Tenure	4-2
Royalties	4-2
5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY	5-1
6 HISTORY	6-1
7 GEOLOGICAL SETTING AND MINERALIZATION	7-1
Regional Geology	7-1
Local Geology	7-3
Mineralization	7-7
8 DEPOSIT TYPES	8-1
9 EXPLORATION	9-1
Exploration Potential	9-1
10 DRILLING	10-1
11 SAMPLE PREPARATION, ANALYSES AND SECURITY	11-1
Sampling	11-1
Sample Preparation and Analyses	11-1
Sample Security	11-2
Quality Assurance/Quality Control	11-3
12 DATA VERIFICATION	12-1
13 MINERAL PROCESSING AND METALLURGICAL TESTING	13-1
Mineralogy	13-1
Metallurgical Testing	13-1
14 MINERAL RESOURCE ESTIMATE	14-1
Summary	14-1
Resource Database	14-2
Geological Interpretation	14-3
Statistical Analysis	14-6
Grade Capping	14-8

Bulk Density.....	14-15
Variographic Analysis	14-16
Block Model	14-24
Classification	14-35
Cut-off Grade and Depletion	14-38
Mineral Resource Reporting	14-45
15 MINERAL RESERVE ESTIMATE	15-1
Dilution and Extraction	15-5
RPA Opinion.....	15-8
16 MINING METHODS.....	16-1
Open Pit Mining	16-1
Underground Mining.....	16-1
Production Schedule.....	16-5
Mine Equipment.....	16-6
Mine Ventilation	16-7
17 RECOVERY METHODS.....	17-1
Process Description.....	17-1
Mineral Process Plant Production Statistics	17-10
18 PROJECT INFRASTRUCTURE	18-1
Infrastructure	18-1
Workforce Accommodation	18-3
Security.....	18-3
19 MARKET STUDIES AND CONTRACTS.....	19-1
Markets.....	19-1
Contracts	19-1
20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT	20-1
Introduction.....	20-1
Environmental Licensing	20-1
Socioeconomics.....	20-5
Mine Closure Requirements.....	20-6
Acid Rock Drainage Evaluation.....	20-7
21 CAPITAL AND OPERATING COSTS	21-1
Capital Costs	21-1
Operating Costs.....	21-2
Manpower	21-3
22 ECONOMIC ANALYSIS.....	22-1
23 ADJACENT PROPERTIES.....	23-1
24 OTHER RELEVANT DATA AND INFORMATION.....	24-1
25 INTERPRETATION AND CONCLUSIONS	25-1
26 RECOMMENDATIONS.....	26-1
27 REFERENCES	27-1

28 DATE AND SIGNATURE PAGE.....	28-1
29 CERTIFICATE OF QUALIFIED PERSON.....	29-1

LIST OF TABLES

	PAGE
Table 1-1 MFB Mineral Resources as of December 31, 2015.....	1-1
Table 1-2 MFB Mineral Reserves as of December 31, 2015.....	1-2
Table 1-3 Projected Capital Costs	1-12
Table 1-4 Actual Unit Operating Costs – 2013 to 2015	1-13
Table 1-5 Projected Total Operating Costs (US\$ M)	1-13
Table 1-6 Projected Unit Operating Costs per Tonne Mill Feed	1-13
Table 4-1 Exploration Permit List.....	4-3
Table 4-2 Exploration Claim List.....	4-4
Table 4-3 Mining Concession List.....	4-4
Table 6-1 Exploration History.....	6-1
Table 10-1 Drilling Completed as of September 30, 2015.....	10-1
Table 11-1 Laboratory QA/QC Protocols: 2010 - 2015.....	11-4
Table 11-2 Summary of 2007 – 2008 CRM Results.....	11-5
Table 11-3 Summary of 2012 – 2015 CRM Results.....	11-6
Table 14-1 MFB Mineral Resources as of December 31, 2015.....	14-2
Table 14-2 MFB Database Summary.....	14-3
Table 14-3 MFB Domain Assignments.....	14-4
Table 14-4 Statistics of Resource Raw Assay Values by Domain	14-6
Table 14-5 Capping of Resource Assay Values by Domain	14-8
Table 14-6 Capping of Composite Assay Values by Domain	14-15
Table 14-7 Descriptive Statistics of Composite Values by Domain	14-15
Table 14-8 Average Bulk Density Values.....	14-16
Table 14-9 MFB Variogram Results.....	14-17
Table 14-10 MFB - Block Model Parameters and Variables.....	14-24
Table 14-11 LGT - Block Model Setup.....	14-25
Table 14-12 Ordinary Kriging Grade Estimation Parameters	14-27
Table 14-13 Inverse Distance Grade Estimation Parameters.....	14-27
Table 14-14 Volume Comparison	14-28
Table 14-15 Statistics of Block Grades Compared to Composite Grades by Domain....	14-35
Table 14-16 Correlogram Range Used for Classification	14-36
Table 14-17 MFB Mineral Resources as of December 31, 2015.....	14-45
Table 14-18 Mineral Resource Summary by Zone as of December 31, 2015	14-46
Table 15-1 Mineral Reserve Summary as of December 31, 2015.....	15-2
Table 15-2 Mineral Reserve Summary by Zone as of December 31, 2015	15-2
Table 15-3 Cut-off Grade Calculations.....	15-4
Table 15-5 Recovery and External Dilution Factors by Resource Area (Underground) ...	15-7
Table 15-6 Extra-Ordinary Recovery Factors Applied to Specific Resource Areas (Underground)	15-7
Table 15-7 Monthly Reconciliation - 2015	15-8
Table 16-1 Fazenda Brasileiro Historical Production.....	16-1
Table 16-2 Fazenda Brasileiro Mine Production Schedule.....	16-6
Table 16-3 Fazenda Brasileiro Mill Feed Schedule	16-6

Table 16-4	Fazenda Brasileiro Underground Mining Equipment	16-7
Table 17-1	Fazenda Brasileiro Processing Operating Parameters.....	17-10
Table 19-1	Primary MFB Contracts.....	19-1
Table 19-2	Primary Consumables.....	19-2
Table 20-1	Brio MFB Mining Permit Status	20-2
Table 20-2	Socioeconomics Impacts with Mine Closure	20-6
Table 20-3	Socioeconomics Impacts with Mine Closure	20-7
Table 21-1	Actual Sustaining Capital Costs	21-1
Table 21-2	Projected Capital Costs	21-1
Table 21-3	Actual Operating Costs – 2013 to 2015	21-2
Table 21-4	Actual Unit Operating Costs – 2013 to 2015	21-2
Table 21-5	Projected Unit Operating Costs per tonne mill Feed	21-3
Table 21-6	Projected Total Operating Costs (US\$ M)	21-3

LIST OF FIGURES

	PAGE
Figure 4-1 Location Map.....	4-5
Figure 4-2 Land Status Map	4-6
Figure 7-1 Regional Geology	7-2
Figure 7-2 Weber Belt Surface Geology	7-5
Figure 7-3 Schematic Mine Cross Section	7-6
Figure 10-1 Fazenda Brasileiro Mine - Drilling Plan View.....	10-2
Figure 10-2 Core Logging Template	10-4
Figure 11-1 Scatter Plot of Field Duplicate Samples Analyzed in August 2011	11-9
Figure 11-2 Comparison of 2014 Preparation Duplicates.....	11-10
Figure 11-3 Comparison of 2015 Preparation Duplicates.....	11-11
Figure 11-4 Scatter Plot of Check Assays Analyzed in June 2011	11-13
Figure 11-5 Check Analyses Chart	11-14
Figure 14-1 Drill Hole Location and Resource Wireframes.....	14-5
Figure 14-2 Domain Box Plots	14-7
Figure 14-3 Capping Definition of C Zone	14-9
Figure 14-4 Capping Definition of E Target.....	14-10
Figure 14-5 Capping Definition of F Target	14-11
Figure 14-6 Capping Definition of LGT Target	14-12
Figure 14-7 Capping Definition of Canto Target.....	14-13
Figure 14-8 Capping Definition of G Target	14-14
Figure 14-9 C Zone Correlogram	14-18
Figure 14-10 E Zone Correlogram	14-19
Figure 14-11 F Zone Correlogram	14-20
Figure 14-12 LGT Zone Correlogram.....	14-21
Figure 14-13 Canto Zone Correlogram	14-22
Figure 14-14 G Zone Correlogram.....	14-23
Figure 14-15 Swath Plots for C Zone.....	14-29
Figure 14-16 Swath Plots for E Zone	14-30
Figure 14-17 Swath Plots for F Zone	14-31
Figure 14-18 Swath Plots for LGT Zone.....	14-32
Figure 14-19 Swath Plots for Canto Zone	14-33
Figure 14-20 Swath Plots for G Zone.....	14-34

Figure 14-21	Classification of F and G Zone.....	14-37
Figure 14-22	1.5 g/t Grade Shell Wireframes for F and G Zone.....	14-40
Figure 14-23	Stope and Pit Design for F and G Zone	14-41
Figure 14-24	Buffer Zones for F and G Zone	14-42
Figure 14-25	Non Economic Blocks for F and G Zone.....	14-43
Figure 14-26	Cross Section 88630E (Looking West) F Zone	14-44
Figure 15-1	Slab Model Stope Design Model.....	15-6
Figure 16-1	Typical Underground Development and Stope Mining	16-4
Figure 17-1	Process Flow Sheet.....	17-2
Figure 17-2	MFB Plant Site Layout.....	17-3
Figure 17-3	2015 Fazenda Brasileiro Mill Production, Budgeted vs. Actual	17-11
Figure 17-4	Gold Grade vs. Recovery during 2015.....	17-12
Figure 17-5	Reagent Consumptions during 2015.....	17-13
Figure 17-6	Power Consumption during 2015.....	17-13
Figure 17-7	2015 Plant Unit Operating Costs.....	17-14
Figure 20-1	Legal Reserve Areas	20-4
Figure 20-2	Acid Base Accounting Characterization	20-8
Figure 20-3	Field Lysimeter Design	20-10

1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA) was retained by Brio Gold Inc. (Brio) to prepare an independent Technical Report on the Fazenda Brasileiro Mine (MFB), located in Bahia state, Brazil. The purpose of this report is to document the Mineral Resource and Mineral Reserve estimates prepared by Yamana Gold Inc. (Yamana) for the MFB operations as of December 31, 2015. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. RPA visited the property in March 2015.

On December 14, 2014, it was announced that Brio was formed to hold the MFB gold mines, C1 Santa Luz, and Pilar, as well as some related exploration concessions, all of which were considered non-core assets within Yamana at that time.

MFB is an open pit and underground mine, which has been operational since 1984. Yamana acquired the mine from Companhia Vale do Rio Doce (CVRD) in 2003. MFB started as a heap leach operation, however, a carbon-in-pulp (CIP) milling facility was added in 1988 to process underground ore. In 2015, the operation mined and processed approximately 1.2 million tonnes of ore, producing a total of approximately 61,000 ounces of gold, with most of the ore sourced from the underground mine. MFB's gold production since 1984 totals approximately 3.2 million ounces.

The current Mineral Resource estimate, exclusive of Mineral Reserves, is summarized in Table 1-1.

TABLE 1-1 MFB MINERAL RESOURCES AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Category	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Measured			
Underground	1,250	4.01	161
Open Pit	290	3.24	30
Total Measured	1,539	3.86	191
Indicated			
Underground	342	3.23	35
Open Pit	30	2.32	2
Total Indicated	372	3.15	38
Measured + Indicated			
Underground	1,592	3.84	197
Open Pit	320	3.15	32
Total Measured + Indicated	1,912	3.72	229
Inferred – Underground	840	2.2	60
Inferred – Open Pit	180	5.3	30
Total Inferred	1,020	2.8	90

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are reported at a cut-off grade of 0.5 g/t Au.
3. Mineral Resources are exclusive of Mineral Reserves.
4. Mineral Resources are estimated using a gold price of US\$1,500 per ounce and a US\$/R\$ exchange rate of RL\$3.8 = US\$1.00.
5. A minimum mining width of 3.0 m was used for underground Mineral Resources.
6. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
7. Numbers may not add due to rounding.

The current Mineral Reserve estimate is presented in Table 1-2.

TABLE 1-2 MFB MINERAL RESERVES AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Category	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Proven			
Underground	4,000	1.94	249
Open Pit	599	1.94	37
Sub-total Proven	4,599	1.94	286
Probable			
Underground	1,875	1.74	105
Open Pit	22	1.79	1
Sub-total Probable	1,897	1.74	106
Total Proven & Probable	6,496	1.88	392

Notes:

1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are reported at a cut-off grade of 1.06 g/t Au for underground and 0.40 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US\$1,150 per ounce and a US\$/R\$ exchange rate of RL\$3.8 = US\$1.00.
4. A minimum mining width of 3.0 m was used for underground Mineral Reserves.
5. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
6. Numbers may not add due to rounding.

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

CONCLUSIONS

Based on the site visit, discussions with Yamana and Brio personnel, and available information, RPA offers the following conclusions.

GEOLOGY AND MINERAL RESOURCES

- The geological model employed by Yamana geologists is reasonably well understood, and it is well supported by field observations in both outcrop and drill core.
- Sampling and assaying have been carried out using industry standard quality assurance/quality control (QA/QC) practices. These practices include, but are not limited to, sampling, assaying, chain of custody of the samples, sample storage, use of third-party laboratories, standards, blanks, and duplicates.
- Interpretations of the geology and the three dimensional (3D) wireframes of the estimation domains derived from these interpretations, appear to be reasonable.

- The resource model has been prepared using appropriate methodology and assumptions, including:
 - o Treatment of high grade assays;
 - o Compositing length;
 - o Search parameters;
 - o Bulk density;
 - o Cut-off grade; and
 - o Classification.
- The block model has been validated using a reasonable level of rigour consistent with common industry practice.
- Mineral Resources for MFB comply with all disclosure requirements for Mineral Resources as set out in NI 43-101.
- Exploration potential exists laterally along strike to the north and south and at depth below the existing MFB operations. The area has seen 40 years of extensive geologic exploration along the mineral trend and has successfully identified additional underground and open pit resources that are in various stages of mine development. This exploration success is anticipated to continue into the future, but will include some deeper targets.

MINING AND MINERAL RESERVES

- The mining methods utilized at the MFB include both open pit, and underground mechanized sub-level stoping. These are appropriate methods for the deposit.
- The bulk of the mill feed is being sourced from underground. Small open pits are used to supplement the underground production. Total mining capacity is approximately 3,200 tonnes per day (tpd).
- Four separate declines originate on surface and access the various orebodies over a strike length of several kilometres. The deepest level for underground workings is the -750 RL.
- The underground workings have good ground conditions that do not require any special support to ensure stable openings.
- The life-of-mine (LOM) plan prepared by the MFB mine planning department calls for the mining and processing of a greater number of tonnes than included in the Mineral Reserves. Through annual development and definition diamond drilling programs, MFB expects to convert a sufficient quantity of Mineral Resources to Mineral Reserves to replace the Mineral Reserves extracted and processed during the year. RPA concurs with this approach.
- As Mineral Resources do not have demonstrated economic viability, Brio has prepared a modified MFB LOM plan so that it contains Mineral Reserves only (6.496 Mt grading 1.88 g/t Au) in order to verify economic viability of Mineral Reserves. Any Inferred Mineral Resources included in each year of the MFB LOM plan have been removed, however, all of the planned development (and associated costs) included for each year remains in the model. With continued successful conversion of resources to reserves, however, the actual operations should have a longer life.

- The Mineral Reserve estimates have been prepared using appropriate methodology and assumptions including:
 - o Dilution;
 - o Mining extraction;
 - o Ground conditions;
 - o Access development;
 - o Stope design;
 - o Extraction sequence;
 - o Productivities;
 - o Operating costs;
 - o Sustaining capital costs.
- Through annual development and definition diamond drilling programs, MFB has been successful in converting a sufficient quantity of Mineral Resources to Mineral Reserves to replace the Mineral Reserves extracted and processed during the year. This conversion of Mineral Resources to Mineral Reserves has been repeated annually for more than a decade.
- RPA is of the opinion that the Mineral Reserves are being estimated in an appropriate manner using current mining software and procedures consistent with reasonable practice. RPA is not aware of any mining, metallurgical, infrastructure, permitting, and other relevant factors which would materially affect the Mineral Reserve estimates.

METALLURGICAL TESTWORK AND MINERAL PROCESSING

- The mineral processing facilities are operating well, are achieving near projected ore and gold production levels, and are keeping up with mining rates. The gold grades are expected to decrease in the future and an increased production rate along with the successful discovery of higher-grade material as a result of continued exploration drilling will be ways to compensate for the drop in the mined head grade.
- The plant facilities are in need of some refurbishment as well as normal maintenance. The structural steel in the grinding, leaching, and acid wash circuits is showing significant deterioration due to corrosion. Maintenance work planned for 2016 will include refurbishment of the structural steel supporting the feed conveyors and mill building, replacement of corroded leach and carbon-in-leach (CIL) tanks and agitators, and replacement of the acid wash system in the carbon elution circuit.
- The pre-aeration circuit is configured for processing sulphide and carbonaceous ores. The leach circuit has been converted to allow pre-aeration for sulphide oxidation followed by CIL, which then flows into the CIP circuit, which is now operated as an extension of the CIL circuit. More carbonaceous ores are expected in the future.
- Maintenance work including refurbishment of equipment and structures will be a high priority in the future.

ENVIRONMENTAL ASPECTS

- Yamana has a comprehensive environmental policy, partially inherited from CVRD operations. This policy has been developed in line with the Plan of Recovery of Degraded Area Document (PRAD) as outlined by the relevant authority. The

environmental authorities in Brazil use the PRAD as a commitment for the company to complete the rehabilitation on mine closure.

- MFB is an established gold deposit with a 32-year mining history and an established track record with the Brazilian and Bahian government regulatory agencies. The operation has all relevant permits in place along with management plans and monitoring programs. The permits require periodic renewal. Applications have been submitted to the appropriate agencies for the permits nearing expiration. The water discharge and withdrawal permits are due for renewal in 2017.
- A detailed acid rock drainage (ARD) evaluation of the tailings was carried out in 2012. A total of 57 samples of tailings were collected in the tailings dam and showed that all almost 100% of samples presented a neutralization potential two times higher than the acidity potential.
- The arsenopyrite and pyrrhotite in the tailings ponds have low potential to become future ARD generators, as the proportion of carbonates is well in excess of the amount of these sulphides. Brio has developed a field procedure to test different types of tailings covers which, when implemented, will reduce the amount of contaminants in the dam's toe drains by preventing surface and meteoric water from contacting the tailings.

SOCIAL ASPECTS

- Yamana/Brio has developed an exemplary and creditable program for social and community involvement in the area of the MFB operations, which should be maintained by Brio for the life of the mine.
- The main impacts that will be generated by the MFB closure in the socioeconomic area include unemployment, decreased tax revenues, end of demand for local regional suppliers, reduction in personal income, and the end of projects with the local communities. Brio has developed mitigation measures for some of these impacts.

CAPITAL AND OPERATING COSTS

- The MFB LOM plan capital cost estimate includes sustaining capital expenditures, which is then followed by closure and reclamation. The capital cost of these activities is estimated to total US\$72.8 million and is based on a BRL/USD exchange rate of 3.8.
- MFB LOM plan operating costs are estimated to total US\$201.0 million, which averages US\$30.95 per tonne milled.

RISKS

- MFB has been in production since 1984 and is a mature operation. In RPA's opinion, there are not any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, mineral resource or mineral reserve estimates, or projected economic outcomes.

RECOMMENDATIONS

- Mineralogical studies may help determine what percentage of resource ounces are within white quartz rich zones. The percentages may suggest the use of optical sorters to upgrade feed to the mill. RPA recommends a university level test, or one with established manufacturers to prove the method works before any further expenditures are committed to the use of optical sorters.
- The average Mine Call Factor (MCF) for 2015 is 103% with the greatest variation from the detailed mine planning model vs. process plant comparison. There are also wide monthly fluctuations in the long term model vs. short term model comparison and consistent overestimation of gold content in the short term model vs. detailed mine planning model comparison. RPA recommends that MFB further evaluate the reasons for the variations in all of the models so that appropriate changes can be identified with the goal of improving the model predictive capability and accuracy.
- The plant facilities are in need of refurbishment as well as normal maintenance. Brio should perform refurbishment work in critical areas including grinding, leaching, and CIP and the carbon acid washing and elution circuit.
- Brio should continue work in optimizing the CIL circuit and test any new ore types that will be processed in the future, especially any ores containing significant amounts of carbon.
- ARD generators have been associated with pyrrhotite, pyrite, and arsenopyrite in some of the metallurgical testing at MFB, potentially resulting in increasing acidity within tailings ponds over an extended period of time (years and decades). An ongoing measurement and monitoring program would allow this risk to be minimized.

ECONOMIC ANALYSIS

Under NI 43-101 rules, a producing issuer may exclude the information required for Item 22 Economic Analysis on properties currently in production, unless the Technical Report prepared by the issuer includes a material expansion of current production. Brio is a producing issuer, the MFB mine is currently in production, and a material expansion is not included in the current LOM plans. RPA has carried out an economic analysis of the mine using the estimates presented in this report and confirms that the outcome is a positive cash flow that supports the statement of Mineral Reserves.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The MFB is located in Bahia, Brazil, at 11° 27' south latitude and 39° 03' west longitude. The mine is approximately 180 km northwest of the state capital city of Salvador. Topography is

gently rolling with elevations of 300 metres above sea level (MASL) to 500 MASL. Relief is generally 50 m to 100 m, although there are occasional hills and series of hills rising 200 m to 300 m. Vegetation is generally sparse.

LAND TENURE

The MFB land tenure includes 42 exploration permits, two exploration claims, eight mining concessions, and three mining concessions in application, for a total area of 52,822 ha.

HISTORY

Modern production at MFB began circa 1984. The primary operators of the Project since 1984 have been CVRD (1984-2003), Yamana (2004-2014), and Brio (2015 to present). Approximately 3.16 million ounces of gold have been produced, of which Yamana/Brio has produced approximately 892,000 ounces, as of December 2015.

GEOLOGY AND MINERALIZATION

MFB is located within the Rio Itapicurú Greenstone Belt (RIGB), a 100 km long, 60 km wide north-south trending volcano-sedimentary belt situated within the São Francisco Craton.

The structural history of the area is complex, with at least three phases of ductile and ductile-brittle deformation followed by late brittle faulting, which latterly offset the MFB mineralization by up to 100 m.

MFB is an epigenetic, structurally controlled, and hydrothermally altered Precambrian quartz vein hosted lode gold deposit that has been subjected to greenschist facies metamorphism. There is some suggestion of a partial syngenetic origin for the gold because of the anomalous gold content (0.05 g/t Au to 0.10 g/t Au) throughout visibly unmineralized quartz-chlorite schist.

The main mineralization, in the form of sulphide-bearing quartz veining, is associated with a second deformation event. These multiple vein systems vary in true width from 1.5 m to 40 m and horizontal mining widths vary from a minimum 3 m to 40 m. The veins are generally arcuate east-west trending and 40° to 70° south dipping, and have a shallow to moderate mainly east plunge.

EXPLORATION STATUS

Yamana has conducted annual extensional resource drilling to increase and/or replace resources depleted during mining.

Yamana has primarily focused its efforts on the 10 km long east-west trending and south dipping shear zone (Weber Belt), which is abruptly folded towards the south near its western extremity. The Weber Belt also hosts the Barrocas Oeste, Papagaio, Logoa do Gato, and Canto zones, all of which are present or past small-scale producers.

MINERAL RESOURCES

RPA reviewed and validated the Mineral Resource estimates of the MFB operations as received from Brio. RPA considers the validated models and estimates to be acceptable. In general, RPA found that values and compilations of gold grades were accurately recorded and calculated.

The methodology of estimating Mineral Resources by Yamana/Brio staff includes:

- Statistical analysis and variography of gold values in the assay database.
- Geological and mineralized envelope models developed on Leapfrog Geo software.
- Construction of a block model using Vulcan software.
- Grade interpolation using Ordinary Kriging (OK).

The Mineral Resources for the MFB operations are shown in Table 1-1. As of December 31, 2015, Measured plus Indicated Mineral Resources, exclusive of Mineral Reserves, are estimated to total 1,912,000 tonnes at an average grade of 3.72 g/t Au containing approximately 229,000 ounces of gold. Inferred Mineral Resources are estimated at 1,020,000 tonnes grading 2.8 g/t Au containing approximately 90,000 ounces of gold.

MINERAL RESERVES

RPA reviewed and validated the Mineral Reserve estimates of the MFB operations as received from Brio. These Mineral Reserves are a combination of the open pit and underground operations and stockpiles. The Mineral Reserves are generated based on mine designs applied to the Mineral Resource model. The design methodology uses both the cut-off grade estimation and economic assessment to design and validate the Mineral Reserves.

Wireframes are also created for the mined volumes by the mine survey personnel. The resource models are constrained by stope and development void spaces in the underground mine as well as the volume depleted from the open pit. Brio maintains a system of both ore and low grade stockpiles.

The Mineral Reserves for the MFB operations are shown in Table 1-2. As of December 31, 2015, Proven and Probable Mineral Reserves are estimated to total 6,496,000 tonnes at an average grade of 1.88 g/t Au containing approximately 392,000 ounces of gold.

MINING METHODS

OPEN PIT

Many of the identified mineralized lenses outcrop to surface. Over the course of the operation's history, several shallow open pits have been excavated to extract these near surface deposits. Currently, several small open pits are in operation, and mining is being completed using contractors. Typically, these small pits are 30 m to 50 m deep and employ air-track drills and backhoe excavators for mining, and highway-type trucks for haulage to the mill.

UNDERGROUND

The main access to the underground operation is through a series of declines. Over the life of the operations, eight main declines - the B, C, D, E, F, G, EW, and EDEEP - have been developed along the strike of the mineralization. A main central shaft (470 m deep) exists, however, it is no longer used for hoisting as the portion of the deposit located within economic distance of the shaft has been mined out. The shaft is now utilized only as a part of the escapeway and ventilation circuit.

Underground mining employs blast hole stoping from sub-levels developed along the trend of the mineralization. The stoping areas are accessed initially from 5 m wide by 5.5 m high main haulage ramps developed at 12% road grade in the footwall, which leads to primary development crosscuts of 4.5 m wide by 5.1 m high, and secondary development drifts and crosscuts of 4.5 m wide by 4.7 m high. Sub-levels are spaced at 25 m vertical intervals. Mined out stopes are not backfilled.

Sub-levels are developed into the stoping areas and fan drilling of blast holes into the mineralization is used to further define the boundaries of the mineralization and design the

ultimate blast patterns. Remote-controlled 12 t Load-Haul-Dump (LHD) machines are used to load and haul the ore from the stoping areas to 25 t and 35 t articulated haulage trucks at loading points in the sub-levels.

The sub-horizontal plunge and approximate 45° dip of the orebody, combined with a thickness up to 40 m, provides for low development and operating costs. Maximum stope heights are 20 m. Future operations in the deeper areas of E Ramp will have higher haulage costs that will be partially offset by the shorter underground haulage in the F and G Ramps.

All bodies have a planned dilution of 14%, except for the F Body, which has a dilution of 20%. Planned mining recovery was estimated to be 91%, except for F Body, which is 89%. In a small number of areas, where weaker ground is anticipated, planned mining recovery was estimated between 83% and 85%.

MINERAL PROCESSING

Production at MFB began in 1984 using heap leaching. A conventional cyanide leaching and CIP plant, Circuit 1, was then added to treat the underground ore at a rate of 34 tonnes per hour (tph). In 1991, the plant was expanded by adding a second 95 tph circuit, Circuit 2, to give a total capacity of 120 tph or approximately 960,000 tonnes per annum (tpa). Currently the two leaching circuits operate with pre-aeration and CIL. With improvements made over time, the plant is capable of processing 175 tph, and 1,200,000 tpa. The heap leach operation was discontinued sometime between 2003 and 2007.

PROJECT INFRASTRUCTURE

MFB has been operational for over 30 years and has all of the necessary roads, powerlines, access, medical facilities, and employee support communities. The major assets and facilities associated with the MFB are:

- The open pit mines and associated waste dumps and haul roads.
- The underground mines and mine development.
- Open pit and underground mining equipment and support equipment.
- 960,000 tpa CIP plant with crushers, grinding circuit, cyanide leaching, cyanide destruction, for the recovery of gold, and paste tailings backfill plant.
- On-site and access roads.

- Abundant water from a series of well fields with a total production capacity of 480 m³/h.
- Four lined tailings impoundments.
- Power supplied from the local grid.

MARKET STUDIES

Gold is the principal commodity at MFB and is freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured. Prices are usually quoted in US dollars per troy ounce.

MFB has a large number of contracts in place, which is not uncommon for a typical mining operation located in Brazil. The terms of the various contracts are within Brazilian Law and Yamana protocols. The number of contractors in 2015 was 317. This is explained by the use of multiple small local companies. Yamana prioritizes on sourcing goods and services through local suppliers, contributing to the sustainable economic development of local communities.

ENVIRONMENTAL, PERMITTING AND SOCIAL CONSIDERATIONS

MFB has been operating for over 30 years and therefore all relevant permits have been in place for this period. There are no identified environmental liabilities associated with the tenements.

MFB has a comprehensive environmental policy, partially inherited from CVRD operations. This policy has been developed in line with the PRAD as outlined by the relevant authority. The PRAD was prepared for Yamana by Mineral Engenharia e Meio Ambiente, an external consulting firm. The environmental authorities in Brazil use the PRAD as a commitment for the company to complete the rehabilitation on mine closure.

A detailed ARD evaluation of the MFB tailings was carried out in 2012 and analytical results showed that almost 100% of samples presented a neutralization potential two times higher than the acid generating potential. The risks of ARD generation are controlled by the natural presence of carbonates in the mineralogy of the waste rocks, however, it is still possible to find some elevated arsenic concentrations in the water from the tailings dam lakes, according to the water monitoring campaigns carried out through the 30 years at the MFB site. In order to address the mitigation methods for this potential ARD issue, Yamana/Brio has developed a

field procedure to test different types of tailings covers and to effectively prevent surficial and meteoric water from contact with the tailings.

CAPITAL AND OPERATING COST ESTIMATES

The sustaining and closure/reclamation capital costs for MFB for the LOM period of 2016 to 2022 are estimated to be US\$72.8 million as shown in Table 1-3. These costs are based on an exchange rate of R\$3.8 = US\$1.

TABLE 1-3 PROJECTED CAPITAL COSTS
Brio Gold Inc. – Fazenda Brasileiro Mine

Description	2016 (US\$ M)	2017 (US\$ M)	2018 (US\$ M)	2019 (US\$ M)	2020 (US\$ M)	2021 (US\$ M)	2022 (US\$ M)	Total (US\$ M)
Buildings & Infrastructure	1.657	1.084	0.218	0.092				3.052
Furniture & Fixture	0.019	0.026	0.016	0.014	0.014	0.014		0.104
Hardware & Software	0.186	0.078	0.013					0.277
Machinery & Equipment	4.701	2.427	1.321	0.128	0.041	0.017		8.636
Tailings Dam Maintenance	0.876	0.132	0.224					1.232
Technical Studies	0.727	0.823	0.607	0.309	0.160			2.627
UG Mine Development	7.219	4.847	5.403	5.163	4.001	2.503	0.693	29.829
Vehicles	0.496	0.512	0.520					1.528
Exploration	2.500	1.351	1.296	1.557	0.740			7.444
Expansionary Mine Dev	0.735	0.327						1.062
Tailings Dam Expansion	0.395	0.789						1.184
Other Expansionary	1.053							1.053
Closure & Reclamation							14.749	14.749
Total	20.564	12.397	9.618	7.264	4.957	2.535	15.442	72.776

Operating costs for the period 2013 to 2015 averaged US\$42.76 per tonne milled as shown in Table 1-4.

TABLE 1-4 ACTUAL UNIT OPERATING COSTS – 2013 TO 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2013 (US\$/t milled)	2014 (US\$/t milled)	2015 (US\$/t milled)	Average (US\$/t milled)
Open Pit Mining	3.78	2.91	1.94	3.44
Underground Mining	27.01	26.55	18.02	19.83
Milling	13.43	12.70	12.48	13.60
General & Administration	7.40	4.15	3.65	5.78
Total	51.62	46.30	36.51	42.76
Exchange Rate (BRL/USD)	2.15	2.35	3.33	2.55

LOM operating costs, estimated to total US\$201.0 million, are summarized in Table 1-5 and are based on an exchange rate of R\$3.8 = US\$1. This translates into an average operating cost of US\$30.95 per tonne milled as detailed in Table 1-6.

TABLE 1-5 PROJECTED TOTAL OPERATING COSTS (US\$ M)
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2016	2017	2018	2019	2020	2021	2022	Total
Open Pit Mining	0.3	0.5	0.6	0.7				2.1
Underground Mining	16.6	17.8	17.5	17.3	13.6	13.0	7.4	103.2
Milling	9.0	9.2	9.9	9.7	6.4	7.8	3.1	55.2
General & Administration	7.1	6.8	6.1	6.6	5.3	6.1	2.5	40.6
Total	33.0	34.3	34.2	34.4	25.4	26.9	13.0	201.0

TABLE 1-6 PROJECTED UNIT OPERATING COSTS PER TONNE MILL FEED
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2016	2017	2018	2019	2020	2021	2022	Average
Open Pit Mining	3.35	3.35	3.35	3.35				3.35
Underground Mining	16.96	18.84	17.81	18.47	18.00	14.21	20.28	17.56
Milling	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49
General & Administration	6.74	6.24	5.24	5.80	6.96	6.71	6.96	6.26
Total	31.15	31.51	29.26	30.00	33.45	29.41	35.77	30.95

2 INTRODUCTION

Roscoe Postle Associates Inc. (RPA) was retained by Brio Gold Inc. (Brio) to prepare an independent Technical Report on the Fazenda Brasileiro Mine (MFB), located in Bahia state, Brazil. The purpose of this report is to document the Mineral Resource and Mineral Reserve estimates prepared by Yamana Gold Inc. (Yamana) for the MFB operations as of December 31, 2015. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects.

On December 14, 2014, it was announced that Brio was formed to hold the MFB gold mines, C1 Santa Luz, and Pilar operations, as well as some related exploration concessions, all of which were held as non-core assets within Yamana.

MFB is an open pit and underground mine, which has been operational since 1984. Yamana acquired the mine from Companhia Vale do Rio Doce (CVRD) in 2003. MFB started as a heap leach operation, however, a carbon-in-pulp (CIP) milling facility was added in 1988 to process underground ore. In 2015, the operation mined and processed over 1.1 million tonnes of ore, producing a total of approximately 61,000 ounces of gold, with most of the ore sourced from the underground mine. MFB's gold production since 1984 totals approximately 3.2 million ounces.

SOURCES OF INFORMATION

The site visit to the MFB property was carried out by Robert Michaud, P.Eng., RPA Associate Mining Engineer; and Andrew P. Hampton, P.Eng., RPA Associate Metallurgical Engineer, on March 17, 2015.

RPA held discussions with the following personnel:

- Mauricio Assis, General Manager, MFB
- Mark Stevens, VP Exploration, Brio
- Lance Newman, VP Technical Services, Brio
- Emerson Ricardo Re, Resource and Reserve Manager, Brio
- Gil Clausen, President and CEO, Brio

- Marcus Cavallante, Administrative Manager, MFB
- Diego Freitas, Mine Manager, MFB
- Alvaro Roht, Maintenance Manager, MFB
- Gabriel Sapucaia, Plant Superintendent, MFB
- Thiago Teixeira, Superintendent of Geology and Planning, MFB

Mr. Chester Moore, P.Eng, RPA Principal Geologist, Mr. Michaud, and Mr. Hampton are the Qualified Persons taking responsibility for this Technical Report. Mr. Moore is responsible for the overall preparation of the Technical Report and, in particular, for Sections 7 to 12, and 14. Mr. Michaud is responsible for Sections 15, 16, 19, 21, and 22 and Mr. Hampton is responsible for Sections 13, 17, 18, and 20. All of the authors contributed to Sections 1 to 6 and 23 to 27.

The documentation reviewed, and other sources of information, are 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.

a	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 ²	square metre
cfm	cubic feet per minute	m ³	cubic metre
cm	centimetre	μ	micron
cm ²	square centimetre	MASL	metres above sea level
d	day	μg	microgram
dia	diameter	m ³ /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 ²	square foot	mph	miles per hour
ft ³	cubic foot	MVA	megavolt-amperes
ft/s	feet per second	MW	megawatt
g	gram	MWh	megawatt-hour
G	giga (billion)	oz	Troy ounce (31.1035g)
Gal	Imperial gallon	oz/st, opt	ounces per short ton
g/L	grams per litre	ppb	parts per billion
Gpm	Imperial gallons per minute	ppm	parts per million
g/t	grams per tonne	psia	pounds per square inch absolute
gr/ft ³	grains per cubic foot	psig	pounds per square inch gauge
gr/m ³	grains per cubic metre	RL	relative elevation
ha	hectare	s	second
hp	horsepower	st	short ton
hr	hour	stpa	short tons per year
Hz	hertz	stpd	short tons per day
in.	inch	t	metric tonne
in ²	square inch	tpa	metric tonnes per year
J	joule	tpd	metric tonnes per day
k	kilo (thousand)	US\$	United States dollar
kcal	kilocalorie	USg	United States gallon
kg	kilogram	USgpm	US gallons per minute
km	kilometre	V	volt
km ²	square kilometre	W	watt
km/h	kilometres per hour	wmt	wet metric tonne
kPa	kilopascal	wt%	weight percent
kVA	kilovolt-amperes	yd ³	cubic yard
kW	kilowatt	yr	year

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by RPA for Brio, currently a privately held subsidiary of Yamana. 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 Brio/Yamana, and other third party sources.

For the purpose of this report, RPA has relied on ownership information provided by Brio and the Brazilian subsidiaries of Yamana. RPA has not researched property title or mineral rights for MFB and adjoining deposits and expresses no opinion as to the ownership status of the property. Brazilian mining laws and concession ownership are administered by the National Department of Mineral Production (Departamento Nacional de Produção Mineral, or DNPM), the Federal Mining agency. In Brazil, all mineral ownership belongs to the government and people of Brazil and has standard protocols and applications for all aspects of exploration and mining of mineral deposits.

RPA has relied on Brio for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Fazenda Brasileiro Operations. The mines at MFB have been in continuous operation since 1984.

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

MFB is located in east central Brazil close to the Atlantic coast, in the eastern part of Bahia state, 180 km northwest of the state capital city of Salvador as shown in Figure 4-1. Topographic coordinates of the mine area are 11° 27' south latitude and 39° 03' west longitude.

MINERAL AND SURFACE RIGHTS IN BRAZIL

Exploration and exploitation of mineral deposits in Brazil are defined and regulated in the 1967 Mining Code and overseen by the DNPM. There are two main legal regimes under the Mining Code regulating Exploration and Mining in Brazil: Exploration Permit (“Autorização de Pesquisa”) and Mining Concession (“Concessão de Lavra”).

Applications for an Exploration Permit (EP) are made to the DNPM and are available to any company incorporated under Brazilian law and maintaining a main office and administration in Brazil. EPs are granted following submission of required documentation by a legally qualified Geologist or Mining Engineer, including an exploration plan and evidence of funds or financing for the investment forecast in the exploration plan. An annual fee per hectare ranging from US\$0.35 to US\$0.70, is paid by the holder of the EP to the DNPM, and reports of exploration work performed must be submitted. During the period where a formal EP application has been submitted by a company for an area, but not yet granted, with the exception of drilling, exploration works are permitted. In this document, these areas are referred to as Exploration Claims.

EPs are valid for a maximum of three years, with a maximum extension equal to the initial period, issued at the discretion of the DNPM. The annual fee per hectare increases by 50% during the extension period. After submission of a Final Exploration Report, the EP holder may request a mining concession. Mining concessions are granted by the Brazilian Ministry of Mines and Energy, are renewable annually, and have no set expiry date. The concessions remain in good standing subject to submission of annual production reports and payments of royalties to the federal government.

Areas where the maximum extension of an EP has been reached, and a positive Final Exploration Report and mining concession request has not been submitted by the company,

are designated with a status of “Available”. Following expiry, the DNPM will receive EP applications from the public, including the first owner, for a period of 60 days. In this document, where the first owner is re-applying for these claims, the areas are referred to as “Re-Application for Exploration Permit in Process”. If any valid, external EP applications are submitted during this period in addition to the first owner’s application, the DNPM will review, with consideration of the work completed, and decide to whom they will issue the permit. Before a decision is reached, claim status is set to “In Dispute”.

Surface rights can be applied for if the land is not owned by a third party. The owner of an EP is guaranteed, by law, access to perform exploration field work, provided adequate compensation is paid to third party landowners and the owner accepts all environmental liabilities resulting from the exploration work.

LAND TENURE

The MFB property (Figure 4-2) covers an area totalling 52,822 ha including 42 exploration permits (39,967 ha), two exploration claims (2,567 ha), eight mining concessions (7,732 ha), and three mining concessions in application (2,556 ha). Exploration permits are listed in Table 4-1, exploration claims are listed in Table 4-2, and mining concessions are listed in Table 4-3, and reflect status as of April 2016.

RPA is not aware of any environmental liabilities on the property. Brio, through its parent company Yamana, 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.

ROYALTIES

The Brazilian government collects a 1% gross revenue royalty on all gold operations in Brazil. This royalty is split among the various levels of government with 65% payable to the Municipality (Barrocas (52%), Teofilândia (26%) and Araci (22%)), 23% paid to the Bahia state government, and the remaining 12% paid to the federal government.

Under Brazilian law, surface owners have a right to a 0.5% gross revenue royalty. MFB owns most of the surface rights over planned production areas, however, there are a few small parcels of land for which this royalty applies.

TABLE 4-1 EXPLORATION PERMIT LIST
Brio Gold Inc. – Fazenda Brasileiro Mine

DNPM Number	Application Date	Expiry Date	Area (ha)	Status
870.090/15	20-Jan-15	29-Oct-18	220.49	
870.143/12	19-Jan-12	14-Sep-18	998.11	
870.144/12	19-Jan-12	14-Sep-18	490.07	
870.145/12	19-Jan-12	14-Sep-18	948.92	
870.213/11	19-Jan-11	27-Aug-17	755.91	
870.315/12	9-Feb-12	14-Sep-18	193.88	
870.423/11	31-Jan-11	3-Sep-18	26.77	
870.461/12	22-Feb-12	14-Sep-18	77.26	
870.497/11	7-Feb-11	16-Jun-16	582.74	Renewal Pending
870.566/11	10-Feb-11	11-Jun-17	1,634.26	
870.637/09	6-May-09	3-Sep-18	1973.79	
870.765/12	22-Mar-12	14-Sep-18	2,000.00	
870.769/12	22-Mar-12	14-Sep-18	1,920.86	
870.827/11	10-Mar-11	18-Jun-17	1,931.84	
870.946/11	15-Mar-11	16-Jun-16	792.01	Renewal Pending
871.020/89	1-Aug-89	8-May-16	959.12	Renewal Pending
871.169/11	5-Apr-11	27-Aug-17	646.63	
871.261/11	8-Apr-11	27-Aug-17	995.05	
871.807/10	27-Aug-10	11-Jul-17	190.84	
871.863/10	1-Sep-10	18-Jul-17	200.29	
872.022/12	25-Sep-12	15-Sep-18	999.91	
872.045/13	28-Aug-13	8-Dec-18	1,174.79	
872.253/12	22-Oct-12	15-Sep-18	1,105.17	
872.282/12	24-Oct-12	15-Sep-18	999.90	
872.282/13	2-Aug-13	8-Dec-18	1,924.77	
872.307/10	13-Oct-10	11-Mar-17	962.78	
872.308/10	13-Oct-10	25-Feb-17	1,291.95	
872.309/10	13-Oct-10	11-Mar-17	714.30	
872.310/10	13-Oct-10	11-Mar-17	801.02	
872.312/10	13-Oct-10	11-Mar-17	1,080.35	
872.313/10	13-Oct-10	3-Sep-18	1,912.20	
872.318/10	13-Oct-10	11-Mar-17	214.24	
872.736/09	21-Oct-09	11-Mar-17	697.76	
872.791/11	12-Jul-11	24-Nov-17	341.85	
872.895/10	17-Dec-10	13-Mar-18	626.06	
872.899/10	17-Dec-10	11-Jul-17	598.34	
872.905/11	26-Jul-11	29-Oct-17	996.95	
872.906/11	26-Jul-11	29-Oct-17	571.84	
872.907/11	26-Jul-11	24-Oct-17	1,172.49	
872.908/11	26-Jul-11	24-Oct-17	1,439.09	
872.909/11	26-Jul-11	24-Oct-17	1,802.00	
874.678/11	6-Dec-11	15-Sep-18	1,000.05	
Total		42	39,966.65	

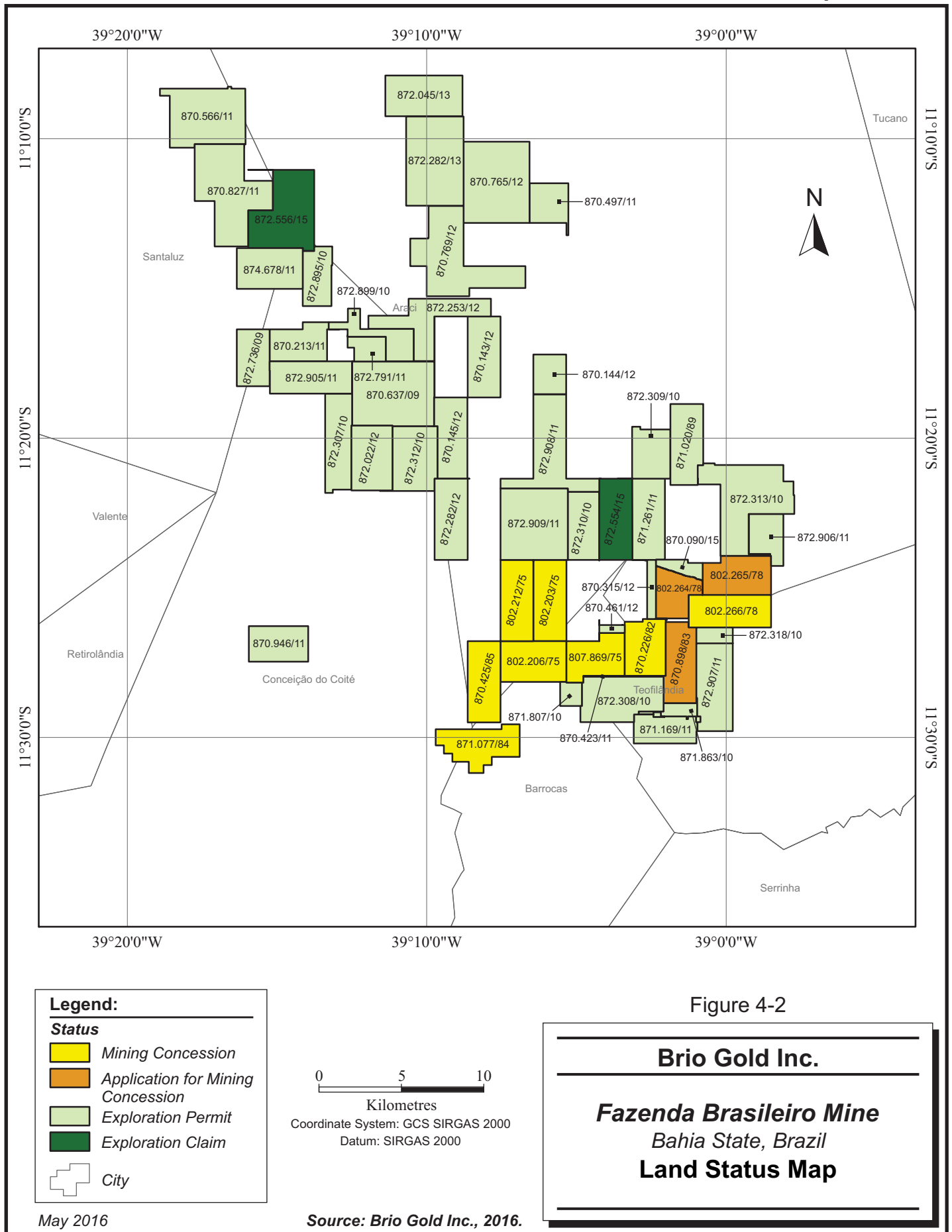
TABLE 4-2 EXPLORATION CLAIM LIST
Brio Gold Inc. – Fazenda Brasileiro Mine

DNPM Number	Application Date	Area (ha)	Status
872.554/15	6-Nov-15	1,000.01	Pending Approval
872.556/15	6-Nov-15	1,566.61	Pending Approval
Total	2	2,566.62	

TABLE 4-3 MINING CONCESSION LIST
Brio Gold Inc. – Fazenda Brasileiro Mine

DNPM Number	Date of Application	Date of Award	Status	Area (ha)
802.203/75	16-Mar-89	28-Jan-94	Mining Concession	1,000.00
802.206/75	16-Mar-89	28-Jan-94	Mining Concession	1,000.00
802.212/75	16-Aug-84	3-Mar-86	Mining Concession	1,000.00
802.266/78	26-Oct-88	28-Jan-94	Mining Concession	1,000.00
807.869/75	17-Nov-83	3-Oct-84	Mining Concession	875.74
870.226/82	10-Oct-90	4-Sep-95	Mining Concession	856.30
870.425/85	5-May-94	14-Aug-06	Mining Concession	1,000.00
871.077/84	29-Jun-05	13-Sep-06	Mining Concession	1,000.00
802.264/78	26-Jun-81		Application Submitted	669.82
802.265/78	29-May-91		Application Submitted	949.68
870.898/83	14-Jul-95		Application Submitted	936.96
Total	11			10,288.50





5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

Access to MFB from the city of Salvador is via 180 km of paved road on highways BR324 and BA409, and secondary paved highways to the village of Teofilândia, which is located 15 km, by road, southeast of the mine. This final 15 km is unpaved but of good quality. There are numerous direct flights daily from Salvador to São Paulo and other major Brazilian cities, from which connections are available to a variety of international destinations. Various secondary and tertiary roads, some of poor quality, lead from the mine area to portions of the exploration properties being assessed by Yamana.

CLIMATE

The climate is semi-arid and seasonal variations are minimal, however, rain is more prevalent between November and January. Average annual rainfall, measured on the site, is approximately 500 mm. The average annual temperature is approximately 24°C with minimal month to month variation. The local climate conditions are conducive to year round mining operations.

LOCAL RESOURCES

The town of Teofilândia serves as the main community for workers at the mine although a smaller village is located between Teofilândia and the mine. The local population base is approximately 20,000, the vast majority of whom live in Teofilândia. The general area of the exploration properties is inhabited largely by subsistence farmers and garimpeiros (local artisanal miners who work prospect pits on a small scale).

In addition to mining, local economic activity consists of subsistence agriculture, goat herding and cattle ranching. Sisal is the main crop with its sword-shaped leaves being transformed into twine and rope-making material, and more recently, into craft objects for export to Europe.

Teofilândia is a full service town and along with the mine has access to electricity from the national power grid. There is a freight-only rail line, which passes through the area in a northwest-southeast direction close to MFB. The rail line is not used by MFB.

INFRASTRUCTURE

Mine site infrastructure includes a 470 m deep vertical shaft; a series of underground ramps; a 960,000 tpa CIP milling facility; plastic-lined heap leach pads and associated processing equipment; a series of plastic lined tailings disposal ponds; a warehouse, and maintenance shops; drill core logging, splitting and storage facilities; a sample preparation facility and assay laboratory; a cafeteria, and several office complexes. In addition, the mine has a water system consisting of a well field located east of Teofilândia, a buried pipeline, and a pumping system to provide potable and processing water to Teofilândia and the mine. The water supply is more than sufficient for the mining operation and has been relied on for years. Sufficient surface area exists for all necessary surface facilities, including mill tailings and waste rock stockpiles.

PHYSIOGRAPHY

Topography is gently rolling with elevations of 300 MASL to 500 MASL. Relief is generally 50 m to 100 m, although in some areas there are hills and series of hills rising 200 m to 300 m. Vegetation is generally sparse. Plant cover is composed of rough, low grasses, algarroba (mesquite-like) trees, and commercially harvested sisal plants. There are very few flowing water courses in the area although there are a number of small, gentle depressions and valleys that carry water during the occasional rainy periods.

6 HISTORY

PRIOR OWNERSHIP AND EXPLORATION HISTORY

The Weber Belt has been explored by CVRD (Vale) since the late 1960s by their exploration wing DOCEGEO. MFB was discovered in the late 1970s and entered into production in 1984.

Table 6-1 summarizes MFB's exploration history prior to Yamana's acquisition.

TABLE 6-1 EXPLORATION HISTORY
Brio Gold Inc. – Fazenda Brasileiro Mine

Year	Description
1969 -1970	Prospecting for alluvial gold along the Itapicurú River was conducted by CPRM, the Brazilian Federal government geologic survey.
1972	DOCEGEO, the exploration division of CVRD, conducted base metal oriented regional stream geochemical surveys in the area. Numerous anomalies detected.
1974 and 1975	DOCEGEO carried out ground follow-up, including detailed stream geochemical surveys. Numerous important copper and zinc anomalies were identified.
1976	DOCEGEO conducted airborne electromagnetic (EM) surveys and 300 of the 2,500 anomalies were selected for follow-up. Surface sampling programs were implemented and the most significant sample returned 2.0 g/t Au. Additional magnetic, induced polarization (IP), and geochemical surveys were conducted at a higher level of detail than previous surveys.
Post-1976	DOCEGEO/CVRD conducted surface exploration programs including significant diamond drilling focusing on the Weber Belt rocks, which contain MFB. CVRD discovered the Fazenda Brasileiro deposit in the late 1970s and began mining operations in 1984 with an open pit heap leach gold operation. In 1988, underground mining operations commenced. The mines have been in continuous production since start up. In the late 1990s, Barrick conducted limited work on some properties in the northern Rio Itapicurú Greenstone Belt (RIGB), which hosts most of the known gold deposits.
2003	Yamana acquired the Project.

Following the purchase of the MFB property in 2003, Yamana completed a number of deeper drilling programs designed to extend MFB's Mineral Resource both at depth and along strike of the deposit. Yamana's drilling campaigns are described in Section 10 of this report.

HISTORICAL RESOURCE ESTIMATES

In 2003, immediately prior to the sale of the Project to Yamana, CVRD estimated a Proven and Probable Mineral Reserve of 2,399,000 t grading 3.39 g/t Au. In addition, CVRD estimated an Indicated Mineral Resource for the G and F zones of 311,000 t at 6.12 g/t Au.

Watts, Griffis and McOuat (WGM) estimated an Indicated Mineral Resource for the EDEEP zone of 462,000 t grading 4.48 g/t Au and reported it in a Technical Report in 2003. A 2.0 g/t Au cut-off grade was applied.

Following the WGM 2003 report, Yamana internally updated the resource estimate on a regular basis. Technical Reports have been prepared for Yamana, the first by MCB Serviços e Mineração Ltda in 2011 and a second by Coffey Consultoria e Serviços Ltda (Coffey) in 2014. Coffey reported an open pit Indicated Resource of 1.5 Mt grading 2.35 g/t Au for a total of 102,600 oz Au and an underground Indicated Resource of 6.8 Mt grading 2.21 g/t Au for a total of 486,800 oz Au as of July 2014. In addition, Inferred Resources were estimated to be 0.5 Mt grading 1.36 g/t Au for a total of 23,300 oz Au for the open pit and 3.1 Mt grading 2.20 g/t Au for a total of 219,400 oz for the underground.

RPA notes that these estimates are considered to be historical in nature and should not be relied upon. A qualified person has not completed sufficient work to classify the historical estimate as a current Mineral Resource or Mineral Reserve and Brio is not treating the historical estimates as current Mineral Resources or Mineral Reserves.

PAST PRODUCTION

MFB began production in 1984 as an open pit mining operation with gold extraction by means of conventional heap leaching. In 1988, underground production operations commenced. The majority of the underground ore has been processed in a CIP plant that has operated continuously since commissioning in 1988. A small amount of heap leach production continued until after 2003, when oxide resources were mostly exhausted.

Figure 6-1 summarizes historic production for both the heap leach and CIP operations. MFB has produced approximately 3.1 million ounces of gold since 1984.

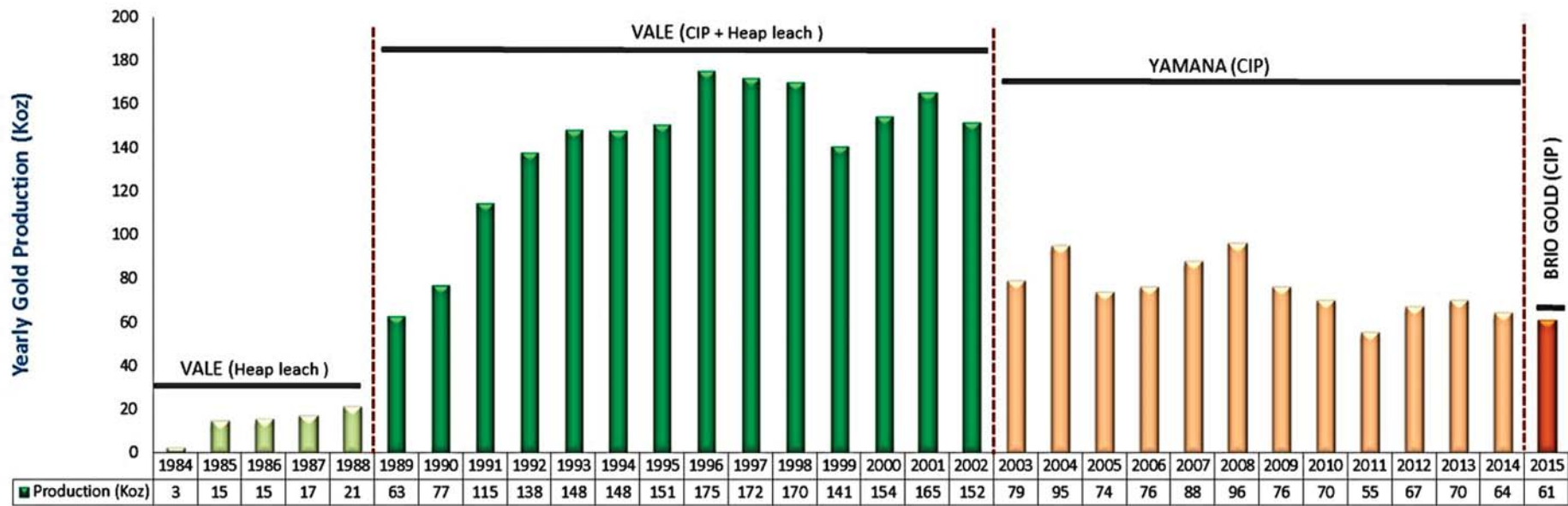


Figure 6-1

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Historical MFB Production

7 GEOLOGICAL SETTING AND MINERALIZATION

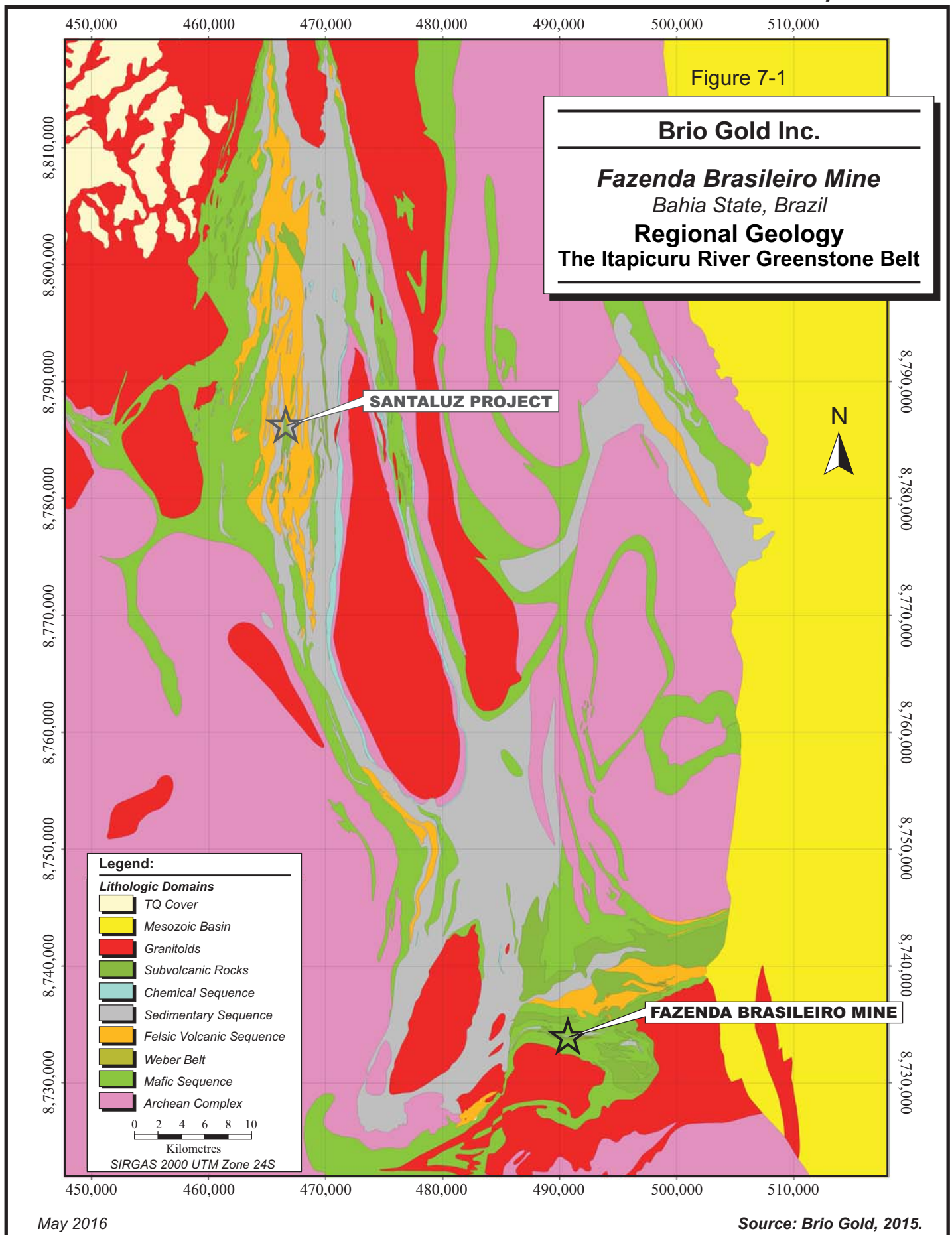
REGIONAL GEOLOGY

MFB is located near the south end of the Rio Itapicurú Greenstone Belt (RIGB), a 100 km long and 60 km wide north-south trending volcano-sedimentary belt situated within the São Francisco Craton (Figure 7-1).

The RIGB is of early Proterozoic age and is generally divided into three lithologic domains:

1. A mafic volcanic domain of pillowed and massive tholeiitic basalts.
2. A felsic volcanic domain of calc-alkaline andesites, rhyodacites, and pyroclastics.
3. A sedimentary domain of fine-grained clastics and conglomerates of volcanic origin. Portions of the RIGB were metamorphosed to middle greenschist facies and amphibolite facies.

These rocks are intruded by Proterozoic granitoids, and are locally metamorphosed up to greenschist or amphibolite facies. The belt is underlain by Archaean basement gneisses and migmatites.



LOCAL GEOLOGY

Outcrop is sparse ($\pm 10\%$) both regionally and locally throughout the MFB area. Most of the detailed geological information is obtained from surface trenching, drilling, and data collected from both the open pit and underground operations at MFB.

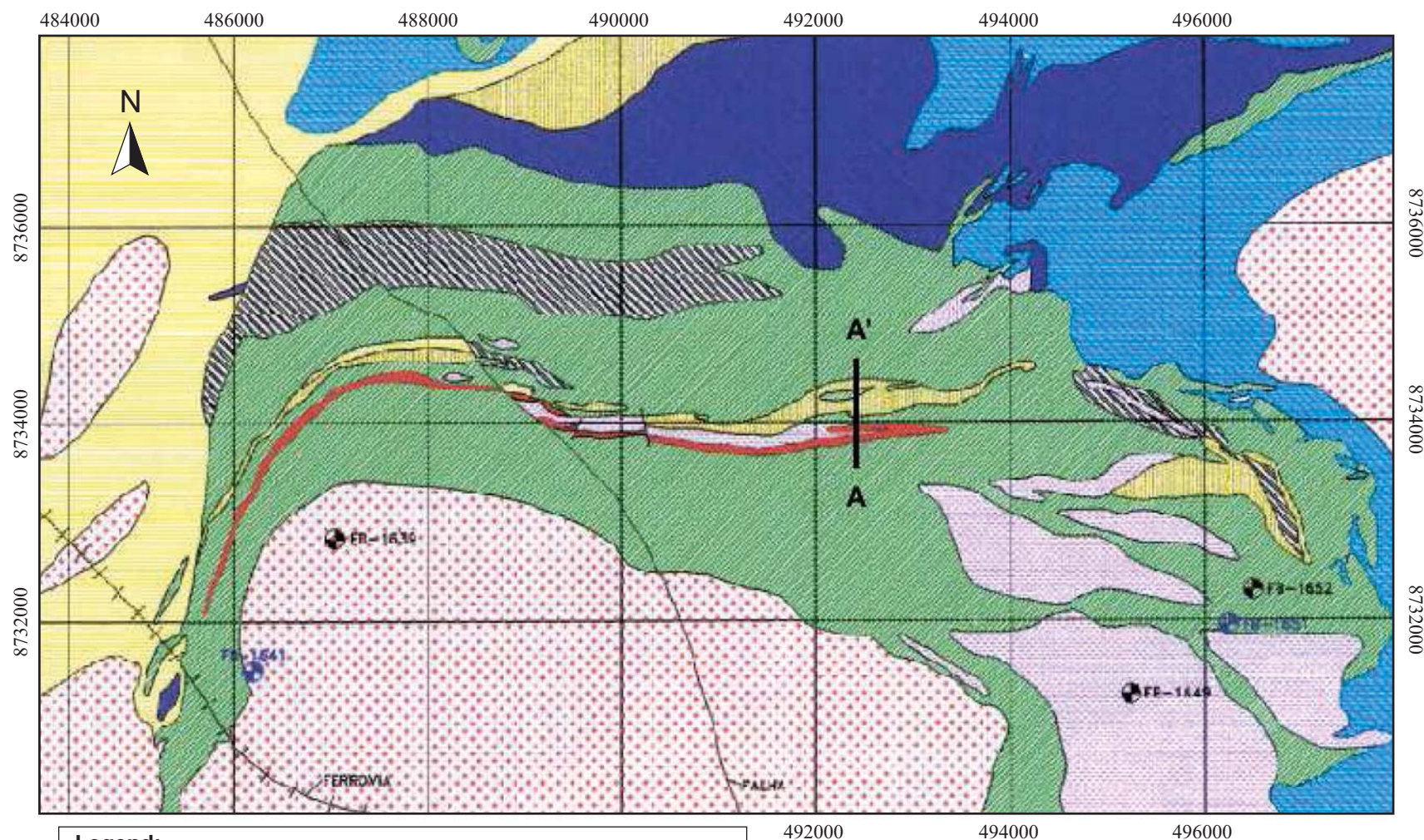
The Weber Belt is a 10 km long arcuate east-west trending, south dipping shear zone. It is abruptly folded towards the south near its western extremity. The Weber Belt is host to the most significant gold mineralization in the RIGB, including MFB. The Weber Belt also hosts the Barrocas Oeste, Papagaio, Lagoa do Gato, and Canto zones, all of which are either in small-scale production or have been in production from small tonnage open pits.

The Weber Belt has been divided into four distinct overturned sequences from south to north:

- The Riacho do Incó unit, composed of carbonate-chlorite schist (CCX) with minor intercalations of carbonaceous schist. The protolith of this rock is assumed to be basaltic lava.
- The Fazenda Brasileiro unit, which is dominated by felsic and mafic schists and contains the most important gold concentrations. This unit is subdivided into three units, namely:
 - o The graphitic schist (GRX), which forms the hanging wall of the main MFB ore zone. Due to its lateral persistence and distinctive character, it is considered a marker horizon.
 - o The magnetic quartz-chlorite schist (CLX), which consists of two major layers of 20 m and 3 m average thickness. Part of this unit is situated at the contact with the GRX and hosts the main MFB ore shoot.
 - o The Intermediate Sequence, which is composed of sericite-chlorite-carbonate schist (CAX) and plagioclase-actinolite schist (PAX). The CAX rocks represent less mafic surrounding basalts. PAX is derived from weakly altered gabbroic bodies, which show ophitic to subophitic textures and occur disseminated within the CAX and sometimes within the CLX units.
- The Canto unit, consisting of fine-grained carbonaceous sediments (pelites and rhythmically banded pelites and psammites), volcanic layers, and an agglomeratic pyroclastic sequence. The pyroclastic sequence is the main host rock for the Canto mineralization.
- The Abóbora unit, located in the northernmost part of the Weber Belt, comprises a thick sequence of basalt flows with local, narrow sedimentary intercalations.

Deformation along the main east-west shear zone has destroyed most of the original features in the rocks in the MFB area. Figures 7-2 and 7-3 show the Weber Belt surface geology and a schematic section of the MFB geology, respectively.

The structural history of the area is complex, with at least three phases of ductile and ductile-brittle deformation followed by late brittle faulting, which laterally offset the MFB ore shoots by up to 100 m. The first phase (D1), which consisted of an intense ductile shearing with no major folds observed, produced an undulating lineation extending east-west. The second event (D2) produced northward-verging asymmetric folds (F2) on all scales, which folded the existing shear fabrics and produced ductile-brittle shear zones. These are oriented approximately east-west, parallel to the axial planes of the folds. This event appears to be responsible for the present southerly dip of the entire local succession. Late localized crenulations to open metre-scale folds have refold the first set of folds but are not important regionally. The main mineralization, in the form of sulphide bearing quartz veining, is associated with the second deformation event.



Legend:

 Metasediments	 Metadiorite
 Tuffaceous Metasediments	 Pyroclastic Agglomerate
 Granite	 Quartz Porphyry
 Meta Basalts	 Andesite
 Meta Gabbros	 Quartz-chlorite schist

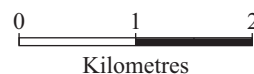


Figure 7-2

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Weber Belt Surface Geology

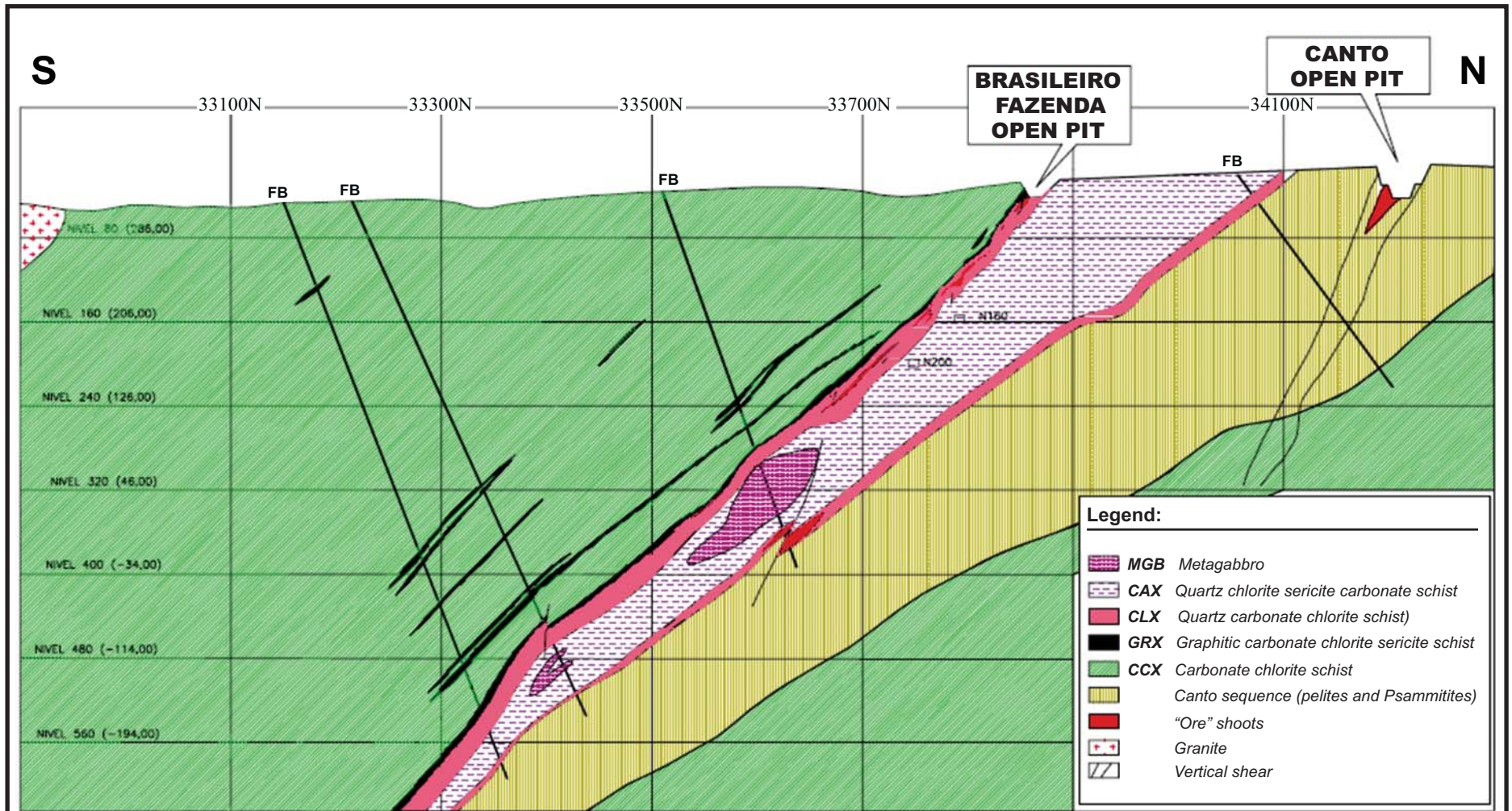


Figure 7-3

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Schematic Mine Cross Section

MINERALIZATION

Gold mineralization is related to multi-phase quartz veining events. The gold occurs in at least three textural settings at MFB: as particles attached to sulphide grains, as particles within fractures in sulphide grains, and as particles within fractures in quartz/albite gangue. Gold grains typically contain less than 5% silver.

The bulk of the mineralization is hosted by quartz-albite-sulphide veins within the chlorite schist (CLX) unit. Individual veins vary from one to four centimetres thick, have irregular margins, and are typically oriented sub-parallel to the predominant east-west trend of the felsic and mafic schists. The veins occur in multiple vein sets which vary in true width from 1.5 m to 40 m and in horizontal mining width from a minimum 3 m to 40 m. The veins are generally arcuate in an east-west trend and south dipping at 40° to 70°, with a shallow to moderate east plunge. The plunge, however, is quite variable, with some zones plunging westerly.

Mineralization is also found stratigraphically below the CLX unit in the CLX2 and Canto horizons. Economic mineralization occurs in horizontal to sub-horizontal shoots, the locations of which are influenced by a combination of folding and shearing. Shoots range from tens of metres to hundreds of metres in length and tens of metres in height.

8 DEPOSIT TYPES

The Fazenda Brasileiro gold deposit is an epigenetic, structurally controlled and hydrothermally altered Precambrian quartz vein hosted lode gold deposit that has been subjected to greenschist facies metamorphism. There is some suggestion of a partial syngenetic origin for the gold because of the anomalous gold content (0.05 g/t Au to 0.10 g/t Au) throughout visibly unmineralized CLX.

Hydrothermal alteration and the style of veining are typical of well-studied greenschist facies deposits such as Sigma and Kerr-Addison in the Canadian Archaean and the Hunt Mine in Western Australia.

RPA notes that the Fazenda Brasileiro deposit area is well known and well studied, with multiple scientific investigations completed over the past forty years. The current models developed by Yamana geologists reflect the large amount of available data in the area, and provide both mining operations and exploration programs with a substantial database to guide further work.

9 EXPLORATION

Since acquisition in 2003, exploration at MFB by Yamana and Brio has mostly been drilling to increase and/or replace reserves depleted during mining. Much of this exploration drilling is now carried out from underground drifts with the objective of identifying new resources and converting resources to reserves. A deeper drilling program has been designed and implemented to extend the underground Mineral Resources at depth and to the east. Yamana's drilling programs are described in Section 10.

EXPLORATION POTENTIAL

Exploration potential exists laterally along strike to the north and south and at depth below the existing MFB operations. The area has seen 40 years of extensive geologic exploration along the mineral trend and has successfully identified additional underground and open pit resources that are in various stages of mine development. This exploration success is anticipated to continue into the future, but will include some deeper targets.

The majority of Yamana's concessions are at an early exploration stage or have seen no exploration activity other than regional mapping, regional geochemical surveys, and airborne surveys completed by the previous owners. RPA is of the opinion that these concessions remain prospective for gold.

10 DRILLING

Diamond drilling at MFB has been carried out since 1979 and totals 50,880 drill holes for an aggregate length of approximately 2.1 million metres. Of this total, 39,252 drill holes for an aggregate length of approximately 1.9 million metres are included in the resource database provided by Brio as of September 30, 2015 (Table 10-1). There has been no drilling since September 30, 2015.

TABLE 10-1 DRILLING COMPLETED AS OF SEPTEMBER 30, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Mine Ownership	Number of Drill Holes	Metres Drilled
CVRD 1979-2003	28,224	1,287,739
Yamana 2003-2015	22,656	842,838
TOTAL	50,880	2,130,577

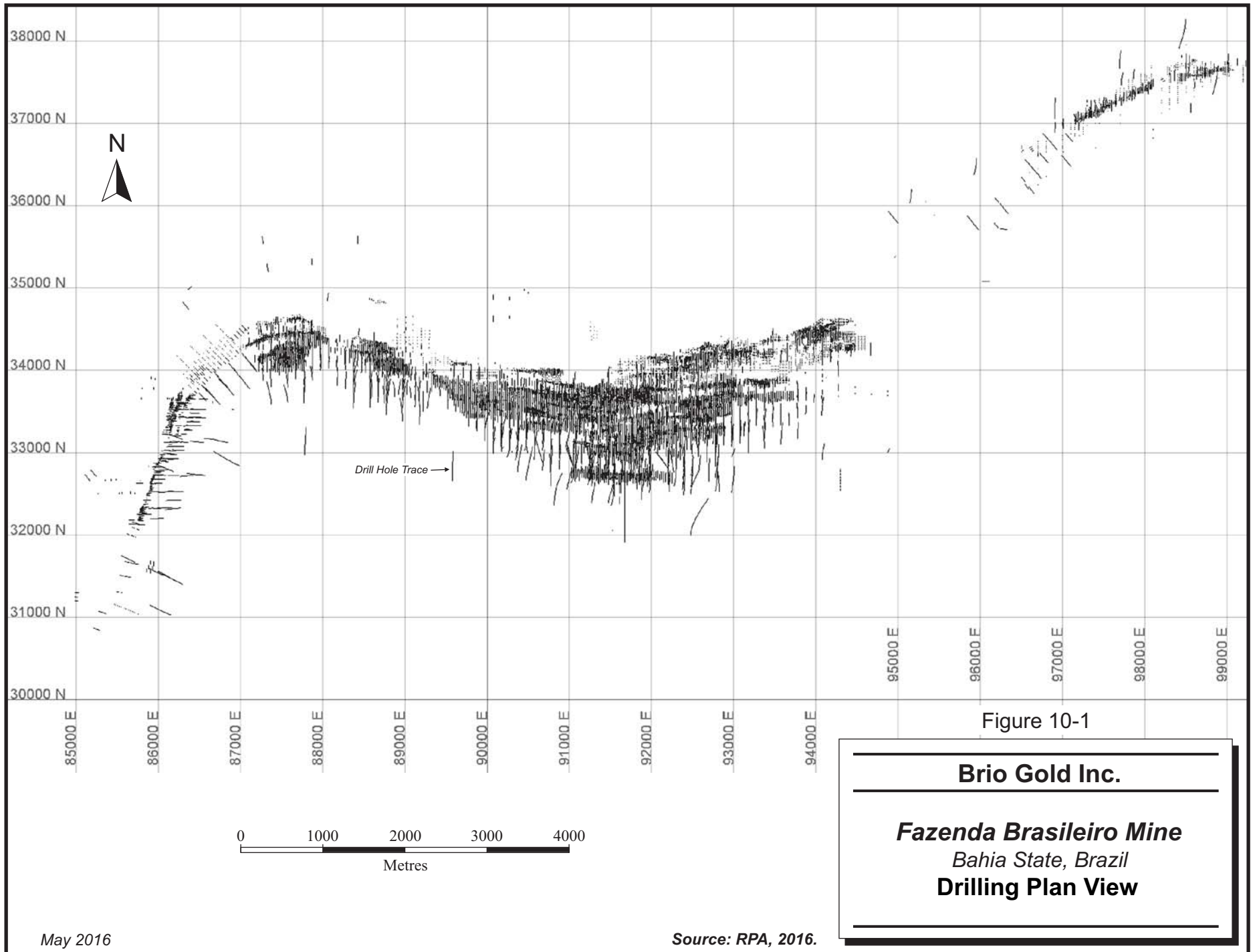
The average recorded core recovery of diamond drilling has been excellent at 98% given the competency of the host rocks within the MFB area (Coffey, 2014).

CVRD DRILLING

Prior to 2003, CVRD conducted surface diamond drilling in the initial search for new mineralization. This was followed by underground fan drilling on a 100 m by 50 m grid using B-sized equipment to establish Indicated Mineral Resources. A-sized core fan drilling on a 25 m by 10 m grid pattern was then used to upgrade from Indicated to Measured Mineral Resources. Generally, A-sized coring was utilized with CVRD machines and crews while B and N-sized coring (both on surface and underground) were completed by contractors.

YAMANA DRILLING

Since 2003, Yamana has maintained the same methodology of drilling as CVRD, and has utilized Diamec 232 (Atlas Copco) diamond drills for exploration, resource delineation, and grade control. In 2015, seven Diamec drilling rigs and one Maquesonda Mach 1200 machine were used for these purposes. These drills have the ability to reach depths up to 130 m and 1,200 m respectively. The collars and traces of the drill hole in the database are plotted on Figure 10-1.



The drill contractor used was DMC Geologia e Sondagem.

Surface diamond drill holes are set up in the field by site geologists and technicians using a global positioning system (GPS). If the site is appropriate for construction of a drilling pad, a more accurate GPS or total station instrument is used to obtain the final collar coordinates. Final positions are collected in UTM coordinates, WGS84 datum - 24 South Zone. In the underground mine, collars are marked up prior to drilling by MFB surveyors who then return when the hole is complete to determine accurate collar coordinates.

Historically, all drill holes were surveyed down hole at 3.0 m intervals with either a Reflex Maxibor or Flexibor instrument. More recently, Yamana has ceased surveying holes that are shorter than 150 m due to the minimal deviation recorded in earlier drilling programs. In 2015, longer drill holes were surveyed using a nonmagnetic multishot instrument manufactured by Devico.

Drill core is placed in wooden core boxes with a nominal capacity of four metres for NQ, 4.6 m for LTK sized drill core, and three metres for HQ sized core. The drill hole number, box number, and downhole depths are stamped onto an aluminum tag and affixed to the edge of the box. Wooden downhole core depth markers are placed in the core box by the driller and affixed with an aluminum tag stamped with the depth, the length of the interval, and the length of the recovered sample.

Core sample recovery is not recorded by the geologist, although a record of the drill hole recovery on a run by run basis is recorded manually by the driller. Recovery in the mineralized zones is generally good, on average better than 90%. Core recovery values are used when considering the reliability of the sample and how to assign grades to any missing sample portions.

Prior to sampling, the geologist logs the core in detail for lithology, structure, mineralization, and alteration (Figure 10-2). Codes are assigned for the oxidation state, lithology, and alteration (including pyrite, pyrrhotite, arsenopyrite, chalcopyrite, silicification, biotitization, sericitization, amphibolitization, and albitization). Angles of structures such as foliation, faults, or quartz veins are recorded, although drill holes are not oriented. In addition, any log observation relevant is also described in the “remarks”, especially the details of mineralized zones. Sample intervals and sample numbers are also recorded on the log.

FIGURE 10-2 CORE LOGGING TEMPLATE

Brio Gold Inc. – Fazenda Brasileiro Mine, Project #2614
Technical Report NI 43-101 – May 12, 2016

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

SAMPLING

Upon receipt of the drill hole core at the logging shed, the entire length of the drill hole is photographed and marked for lithological contacts. Samples are marked down the entire length of the hole at 0.5 m intervals in mineralization and 1.0 m intervals in waste, except at lithological contacts where the sample is selected to respect lithological boundaries. Paper sample number tags are plasticized and stapled to the core box next to the corresponding sample, with a red square marked on the box with a pen indicating the start and end of the sample interval.

The drill core is then sawn in half with an electric diamond core saw. Half core samples are selected by a Yamana geological technician, and placed in a numbered plastic bag along with a paper sample tag. The bags are closed and secured with a tie string. Sample weight is approximately 1.5 kg for mineralization and 3.0 kg for waste.

SAMPLE PREPARATION AND ANALYSES

Yamana has followed the same sampling procedures and methods used by CVRD during its operation of the MFB complex from 1984 to 2003. RPA personnel have evaluated numerous former CVRD gold operations in Brazil and have found all of them to meet international mining industry standards.

RPA visited the MFB laboratories and core logging facilities during the site visit and found them to be clean, well maintained, and serviceable for the functions designed. The MFB laboratory incorporates quality assurance and quality control (QA/QC) procedures, including the insertion of reference material, blank and duplicate samples, which are continually monitored to ensure reliable results. An external professional prepares monthly and annual reports of laboratory performance. The laboratory is accredited with ISO 9001:2008/ISO17025:2005 for gold FA/AAS chemical and geochemical analyzes, certified by ABS Quality Evaluation Inc., Texas (USA) that is accredited by INMETRO (Brazil), RVA (Netherlands) and ANAB (USA). SGS

Geosol uses the *LIMS/CCLAS System* for management of preparation and chemical analysis of the samples.

Sample preparation and assaying procedures are as follows:

- Each sample is dried at 100°C.
- All core samples are coarse crushed to 90% passing 2.0 mm.
- This material is passed through a rotary splitter.
- A 500 g aliquot is taken and pulverized to 95% passing 150 mesh. The crushing and grinding equipment is cleaned with compressed air after each sample and barren silica sand is passed through the equipment prior to running batches of samples.
- Gold determinations are carried out on 50 g (± 0.05 g) samples by fire assay with an Atomic Absorption (AA) finish.
- Granulometric tests are performed three times per shift on the crushing and pulverizing processes. Preparation duplicates are inserted every 20 to 30 samples.

RPA is of the opinion that the analytical methods utilized at MFB are appropriate. Sufficient quality control data exists to allow thorough review of the analytical performance of the site assay laboratory.

SAMPLE SECURITY

Core is normally collected from the drill rig and taken directly to the core yard for sampling. Samples are then sent directly to the laboratory at the mine site, following industry standard sample security procedures. All analytical pulps and archival split core are stored within the secure mine compound.

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

QUALITY ASSURANCE/QUALITY CONTROL

CVRD (1984 – 2003)

The CVRD laboratory was established in 1984. Upon acquisition of MFB in 2003, Yamana maintained the laboratory and incorporated all protocols used by CVRD into its operation of the mine.

CVRD's QA/QC program included insertion of one project specific standard, one blank, and one duplicate sample in each batch of 24 samples (Coffey, 2014). The standards were produced through a round-robin process in ten Brazilian laboratories (owned by CVRD). Entire batches were rerun, if the standard was outside $\pm$ one standard deviation, or if the duplicate was $\pm$ 5% different from the original. Approximately 20 samples every two months were exchanged with the CVRD São Bento mine as umpire assays. CVRD did not use outside independent laboratory auditing of the MFB laboratory.

RPA has not reviewed the QA/QC data generated during CVRD's tenure. The WGM NI 43-101 Technical Report of 2003 (WGM, 2003) found that the CVRD assaying procedures and results were accurate, precise, and acceptable for resource estimation, despite the lack of external umpire assays.

YAMANA (2003 - 2014)

In 2007, Yamana initiated a QA/QC program which included the insertion of blanks, field duplicates, and certified reference material within the sample stream sent to the MFB laboratory, and the sending of pulp reject samples to external laboratories for testing (check assays).

RPA reviewed internal and external reports prepared for the MFB project on QA/QC results collected and analyzed from 2007 to 2008 (Coffey, 2014), from 2012 to 2014 (Yamana, 2015b), and during 2014 (Yamana, 2015c). RPA also reviewed a series of CRM and blank sample control charts, as well as duplicate sample and umpire laboratory sample scatter plots prepared monthly by Yamana from 2010 to 2011.

QA/QC PROTOCOLS

QA/QC protocols in place from 2007 to 2010 included reference material in every batch submitted for analysis. Within a sample group of 25, one certified reference material (CRM)

sample and one blank sample were included, for an individual insertion rate of 4%. In addition, one duplicate sample was taken in each group of 20 samples, an insertion rate of 5%. Pulp reject samples were also sent to umpire laboratories (ALS Limited (ALS), SGS S.A. (SGS), and Acme Analytical Laboratories Ltd.). Total QA/QC samples comprised over 10% of the database. Yamana reviewed the results of the QA/QC samples on an ongoing basis, and prepared monthly and annual internal reports, as well as campaign compilation reports, spanning several years.

Procedures and limits of acceptability for QA/QC results were revised in 2010 under protocol PCS-00-11-3.5-010 (Yamana, 2015a). Laboratory QA/QC protocols are listed in Table 11-1.

TABLE 11-1 LABORATORY QA/QC PROTOCOLS: 2010 - 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

QA/QC Type	Insertion Frequency	Acceptance Criteria
Blank	1 in 30	Assay ≤ 0.04 g/t Au
Preparation Duplicate	1 in 30	Relative Difference $\leq \pm 20\%$
Pulp Replicate	1 in 20	Relative Difference $\leq \pm 10\%$
CRM	1 in 20	95% of samples $\leq \pm 2$ Std. Dev $\leq 1\%$ of samples $\geq \pm 3$ Std. Dev Relative Difference $\leq \pm 10\%$
Check Assay	100 per month sent to 2 external laboratories	Std. Dev $\leq 15\%$ Difference between means $\leq 5\%$ $R^2 \geq 0.9$

RPA considers the QA/QC protocols in place at MFB to be acceptable and in line with standard industry practice.

CERTIFIED REFERENCE MATERIAL

From 2007 to 2008, Yamana inserted eight different CRMs into the sample stream directed to the MFB laboratory. All CRMs were supplied by Geostats Pty Ltd (Geostats) in Australia. Coffey (2014) compiled statistics of the CRM sample data (Table 11-3) and plotted the results in control charts (not shown). A total of 534 CRM samples sent to the MFB laboratory were reviewed.

Very small biases, both positive and negative, were observed for the CRM submitted to MFB. On average, less than 10% of samples were outside the precision limits, set at 10% of the

expected value of each CRM. Of these, some outliers were identified as probable sample mix-ups by Coffey.

A summary of these results is presented in Table 11-2.

TABLE 11-2 SUMMARY OF 2007 – 2008 CRM RESULTS
Brio Gold Inc. – Fazenda Brasileiro Mine

CRM	Reference Values			No. Analyses	Chemical Analysis Results			QA/QC Results
	Expected Values (g/t)	Min (g/t)	Max (g/t)		Min (g/t)	Max (g/t)	Mean (g/t)	% Inside Precision Limits
G301-13c	1.68	1.51	1.85	75	0.82	1.89	1.64	90.7
G302-6	0.98	0.88	1.08	33	0.92	1.07	0.98	100.0
G305-5	2.43	2.19	2.67	75	0.48	3.13	2.40	96.0
G900-5	3.21	2.89	3.53	52	2.79	3.34	3.16	94.2
G901-10	0.50	0.45	0.55	73	0.27	0.83	0.50	86.3
G902-3	0.43	0.39	0.47	51	0.38	0.50	0.44	84.3
G904-8	5.53	4.98	6.08	75	4.54	5.90	5.39	94.7
G900-2	1.48	1.33	1.63	100	0.76	1.72	1.46	94.0

Source: Coffey (2012)

Coffey considered the results of the CRM data collected over this period to show acceptable accuracy for use in Mineral Resource estimation. RPA concurs with this conclusion.

From 2010 to 2011, monthly QA/QC reports were prepared for the MFB project by a dedicated quality control specialist, employed by Yamana but based off site. Reports included control charts for blank and CRM samples, scatter plots comparing field duplicate and umpire laboratory samples with the original sample, statistical compilation and review of results, and conclusions on the accuracy and precision of the data, as well as a list of actions to address any quality issues identified.

RPA compiled the number of submitted and failed CRM samples for ten months during the period of July 2010 to December 2011 for review, as well as reviewing several charts prepared by Yamana. Seven different CRMs, representing low, medium, and high gold grades, were in use at the Project, all of which were supplied by Geostats. Of the 503 CRM samples submitted to the MFB laboratory during this time period, only 15 samples failed, defined as a gold value reporting more than three standard deviations from the expected value. This is equal to 3% of the dataset, and is considered by RPA to indicate excellent accuracy. None of the 237 CRM

samples submitted to ALS, the check assay laboratory, during these months reported outside three standard deviations from the expected value.

RPA reviewed detailed QA/QC reports prepared by Yamana (Yamana 2015a, 2015b, 2015c) analyzing CRM samples submitted from January 2012 to October 2015. Summary statistics compiled by Yamana are listed in Table 11-3.

TABLE 11-3 SUMMARY OF 2012 – 2015 CRM RESULTS
Brio Gold Inc. – Fazenda Brasileiro Mine

Standard	Expected Value (g/t Au)	Mean Assay Value (g/t Au)	Diff. (g/t Au)	No. Samples	Exceeding Limit 1	Exceeding Limit 2
2012						
G311-3	0.27	0.262	0.008	1977	2	1
G310-5	1.01	1.002	0.008	1625	2	1
G910-3	4.02	4.008	-0.068	1770	0	0
2013						
G303-8	0.262	0.263	-0.001	1628	7	14
G911-10	1.3	1.263	0.037	21	1	1
G310-5	1.01	0.993	-0.017	1483	32	17
ITAK-560	0.967	0.977	-0.010	414	29	21
G903-6	4.13	4.016	0.114	1391	21	9
2014						
G303-8	0.262	0.261	0.001	1182	3	2
G311-3	0.27	0.268	0.002	660	1	0
G310-5	1.01	1.008	0.002	1871	10	6
G910-3	4.02	4.003	0.017	1026	1	1
G903-6	4.13	4.027	0.103	803	2	1
2015						
G303-8	0.262	0.261	0.001	50	1	1
G310-5	1.01	0.960	-0.049	48	1	3
G312-9	5.84	5.864	0.024	50	2	1
G314-3	6.70	6.650	-0.050	74	2	3
G911-4	2.43	2.374	-0.056	115	1	3
G911-10	1.30	1.241	-0.059	50	6	4
G912-5	0.38	0.361	-0.019	110	5	3
G996-7	5.99	5.905	-0.085	24	0	0
G997-6	1.68	1.630	-0.050	53	3	4
G998-6	0.80	0.804	0.004	81	0	2

Source: Yamana 2015a

Limit 1: $\pm 2 \text{ SD} \geq x \leq \pm 3 \text{ SD}$

Limit 2: $x \geq \pm 3 \text{ SD}$

Very low failure rates and negligible bias were recorded for the CRM samples at MFB from 2012 to 2015, with the exception of ITAK-560 during 2013. The moderate performance of ITAK-560 during 2013 was compared against CRMs of similar grades in use at that time, which both showed good performance. Failures above Limit 2 in 2015 were within acceptable range at 3.66%.

RPA is of the opinion that the results of the CRM samples from 2012 to 2015 support the use of samples assayed at the MFB laboratory during this period in Mineral Resource estimation.

BLANKS

From 2007 to 2008, blanks were sourced from a combination of barren quartz and historical core visually assessed as being barren of mineralization (Coffey, 2014). A total of 1,691 blank samples were inserted in the sample stream, 80% of which returned values higher than background value (0.1 g/t Au) at the project, however, only 20% of the samples were above the accepted limit of five times detection limit. Coffey indicated that the most probable cause of this very high failure rate was improper testing of the blank material prior to use (blank material likely had variable gold values).

RPA compiled the number of submitted and failed blank samples for ten months during the period of July 2010 to December 2011 for review, as well as reviewing several charts prepared by Yamana. Only eight of the 812 blank samples submitted to the MFB and ALS laboratories reported above the accepted limit of five times detection limit. These results indicate that the laboratories are employing adequate steps to prevent cross contamination of samples and that the blank samples in use by Yamana during this period do not contain gold, as had been suspected during the 2007 and 2008 campaigns.

RPA reviewed detailed QA/QC reports prepared by Yamana (Yamana 2015a, 2015b, 2015c) analyzing blank samples submitted from January 2012 to October 2015. During this time, only 4% of the almost 8,800 samples submitted for analysis did not meet acceptance criteria. These failed samples were distributed over the years. In 2015, the failure rate climbed to 10.9% suggesting that the laboratory should examine the cleaning of equipment. Some of the failures detected in the first half of 2015, however, did not follow high grade samples, suggesting a problem in the blank sample used. New batches of blank samples have sent for analytical testing to confirm the absence of gold so that failures can be assumed only to result from cross-contamination.

The performance of the blank samples indicate that equipment cleaning protocols in place at MFB are generally adequate to prevent cross-contamination of samples.

DUPLICATES

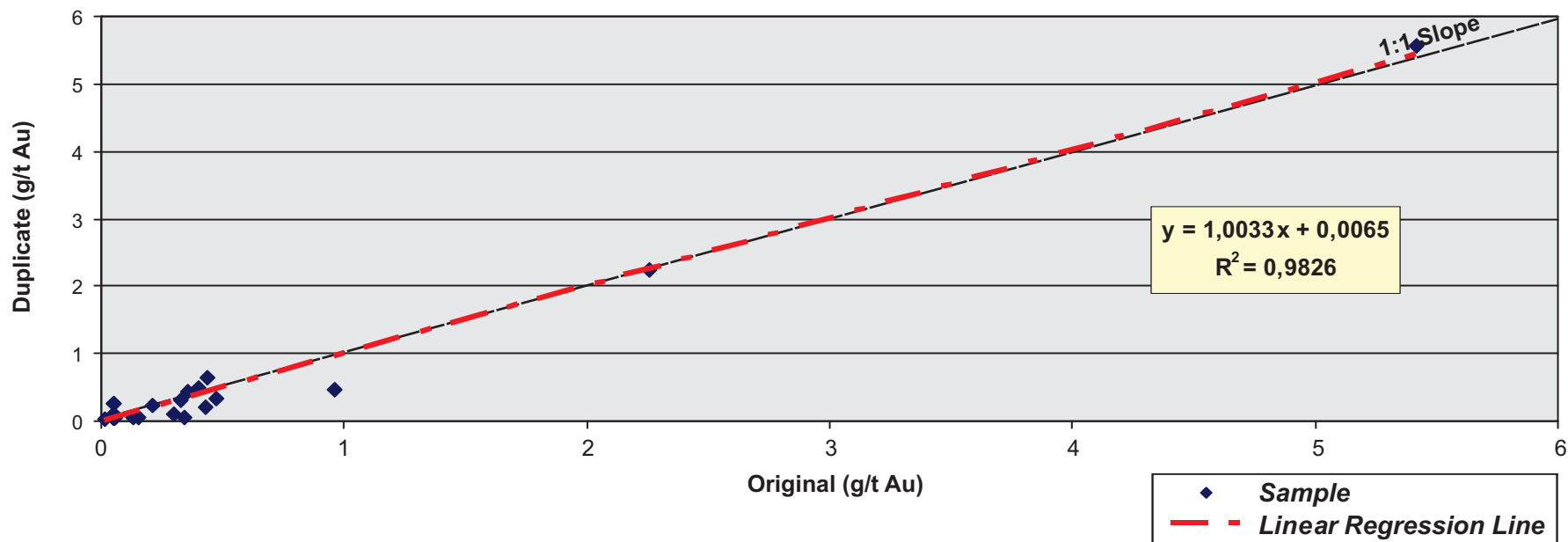
Field duplicates from 2007 to 2008 were prepared by submitting two half core samples for analysis. Pulp replicates during this time were prepared by splitting the prepared pulp sample in half and analyzing each portion separately (Coffey, 2014). A total of 515 pulp replicates and 100 field duplicates were submitted during this time. Based upon basic statistics and graphs prepared by Coffey (2014), Coffey concluded the results indicated an acceptable level of precision. RPA reviewed the analysis presented by Coffey, and agrees with their findings.

RPA reviewed scatter plots and basic statistics of field duplicate samples taken during 2010 and 2011. The number and monthly percent difference statistics of field duplicates submitted from July 2010 and December 2011 were compiled by RPA and graphs prepared by Yamana from ten months during this period, totalling 695 field duplicate sample pairs, were reviewed. The percent difference between sample pairs, compiled monthly by Yamana, ranged from less than one percent to up to 30%. Correlation of samples plotted in the accompanying graphs also ranged significantly and were strongly influenced by outlier sample pairs. Most duplicate pairs submitted were low in gold, and therefore not a good indicator of sample variability in the grade range of interest at the project. RPA notes that, in general, good agreement between duplicate pairs was observed from gold grades of approximately 1 g/t to 10 g/t with erratic results outside of this range. RPA is of the opinion that this result is consistent with the natural variability often seen in orogenic gold deposits. An example plot of the field duplicates prepared by Yamana for August of 2011 is shown in Figure 11-1.

Brio has discontinued collection and analysis of field duplicate samples.

Results of preparation duplicates and pulp replicates submitted from January 2012 to December 2014 were compiled by Yamana (2015b) and reviewed by RPA. A total of 7,330 preparation duplicates and 20,537 pulp replicates were submitted during this time and plotted in scatter plots, Thompson Howarth plots, and histograms of annual performance. Low to moderate precision was observed between preparation duplicates below approximately 0.7 g/t Au, and between pulp replicates below approximately 1.5 g/t Au. Good to excellent precision was observed above these grades in both sample sets. The results of the preparation duplicates analyzed in 2014 are shown in Figure 11-2.

11-9



No. Samples 98
MFB Mean 0.167 g/t Au
ALS Chemex Mean 0.161 g/t Au
% Difference 3.63%

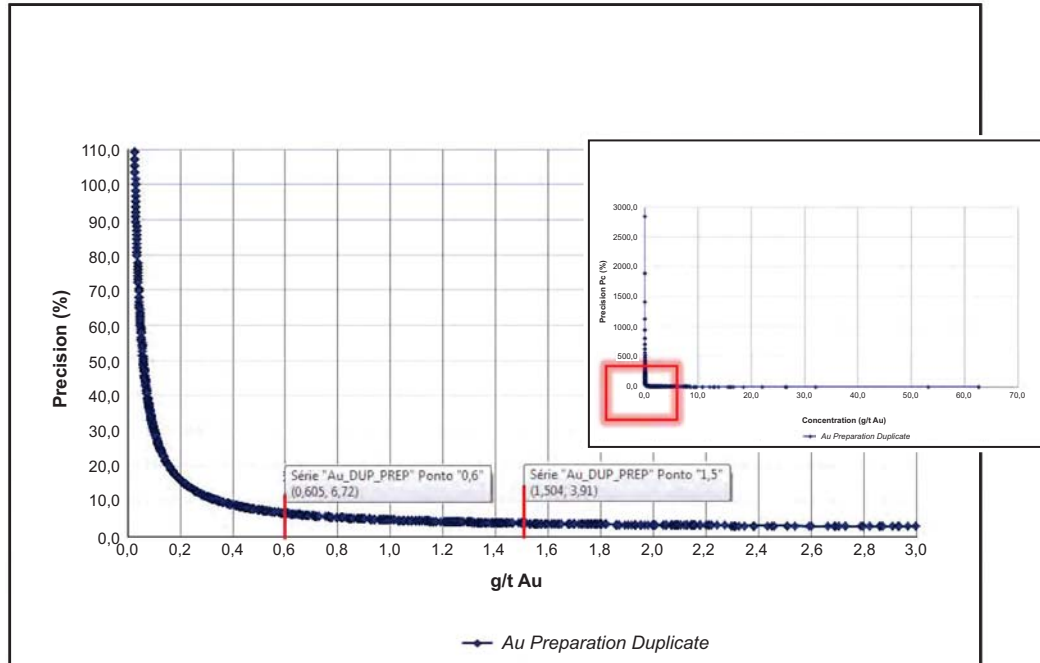
Figure 11-1

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil

**Scatter Plot of Field Duplicate
Samples Analyzed in August, 2011**

Thompson-Howarth Plot



Scatter Plot

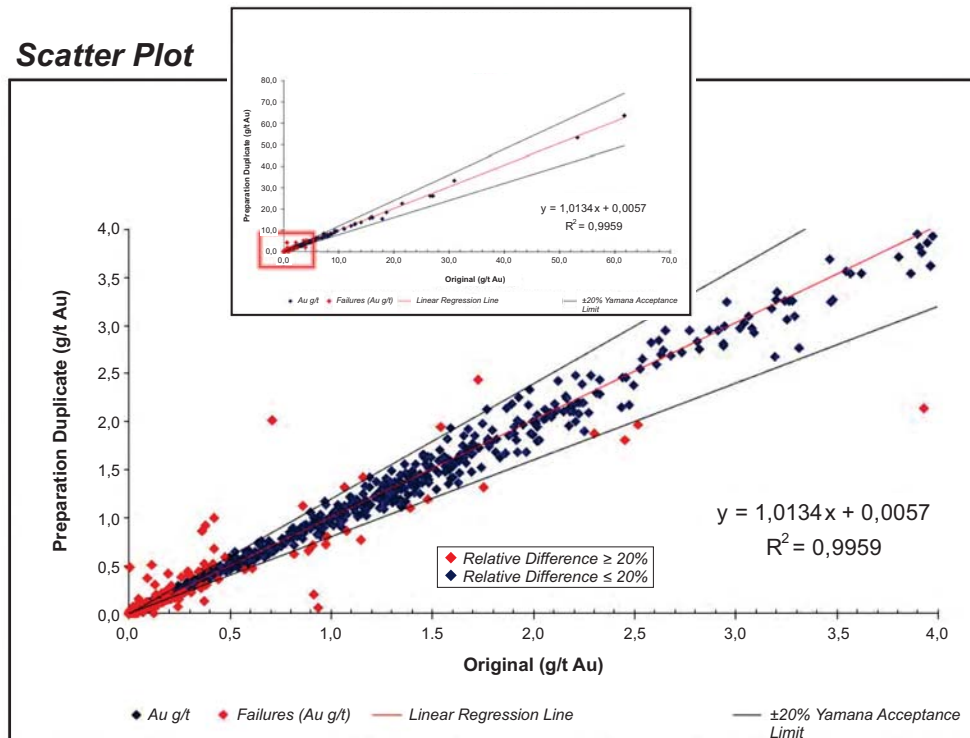


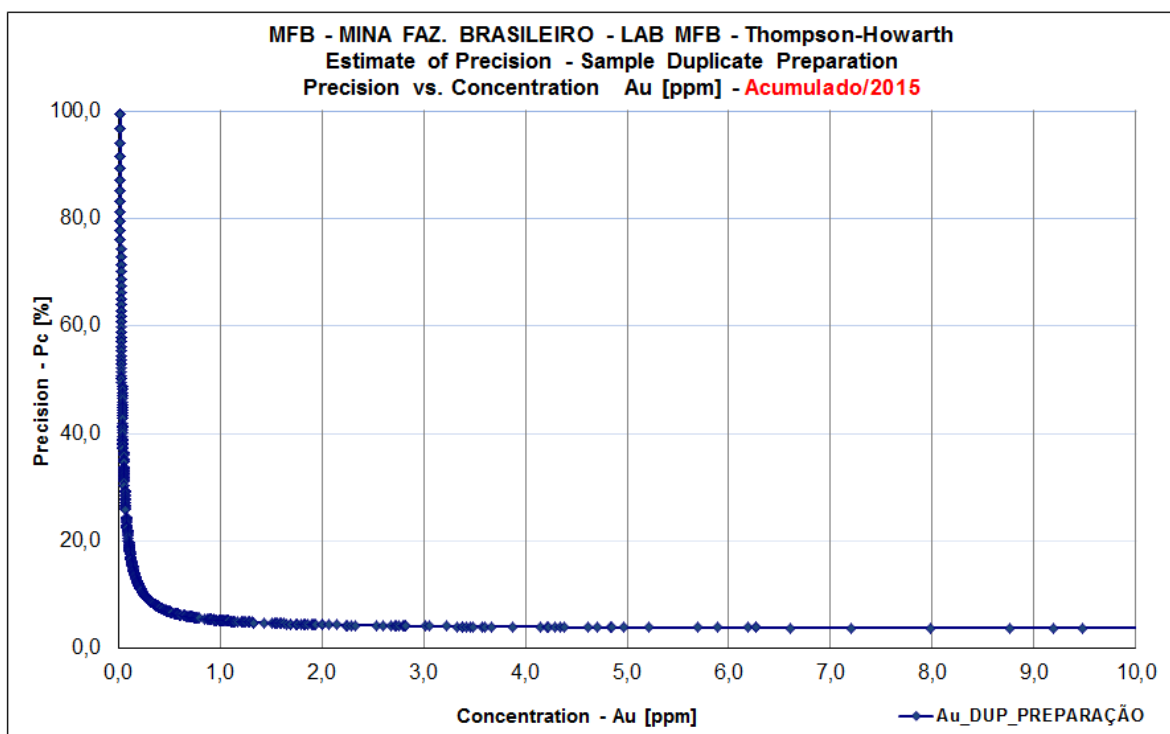
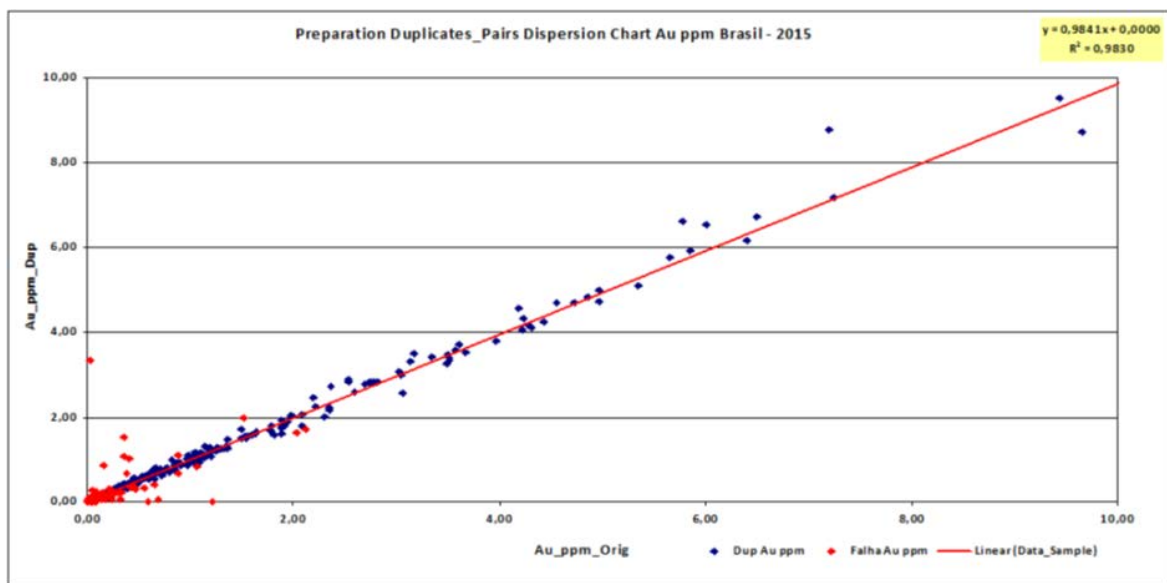
Figure 11-2

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Comparison of 2014
Preparation Duplicates

Results of preparation duplicates submitted from January 2015 to October 2015 were compiled by Yamana (2015a) and reviewed by RPA. A total of 907 preparation duplicates were submitted during this time and plotted in scatter plots and Thompson Howarth plots. Low to moderate precision was observed between preparation duplicates below approximately 0.7 g/t Au. Good to excellent precision was observed above these grades. The results of the preparation duplicates analyzed in 2015 are shown in Figure 11-3.

FIGURE 11-3 COMPARISON OF 2015 PREPARATION DUPLICATES



CHECK ASSAYS

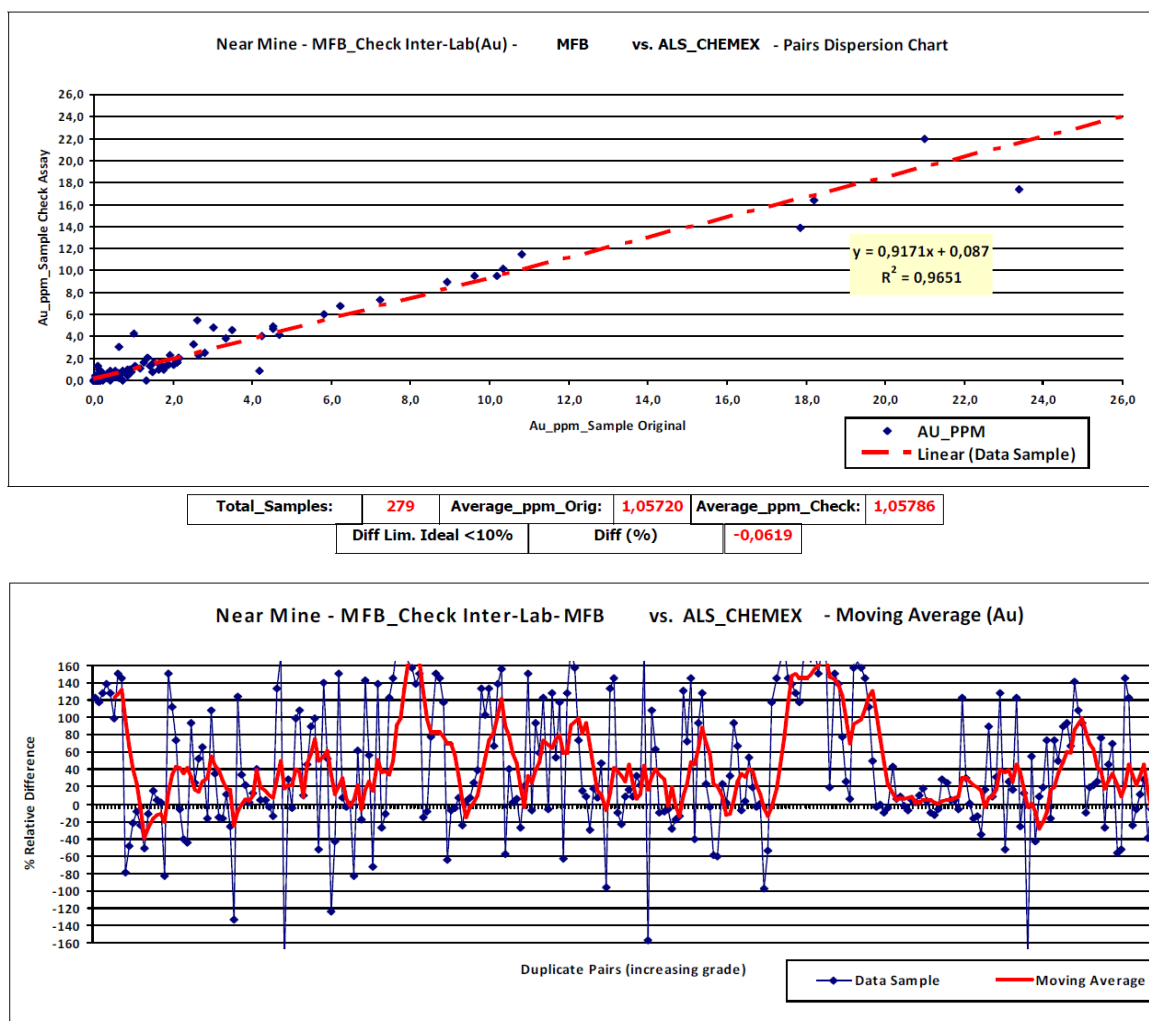
From 2007 to 2008, 81 pulp samples were co-submitted to ALS and SGS laboratories alongside MFB to measure the accuracy of results from MFB laboratory. Coffey compiled and reviewed the results and found high degrees of correlation and relative bias inside acceptance limits. RPA reviewed the graphs prepared by Coffey and agrees with their findings.

RPA reviewed scatter plots, percent relative difference plots, and basic statistics of 1,476 check assay sample pairs within seven monthly reports prepared by Yamana between October 2010 and August 2011. All check assays were sent to ALS Chemex and are compared to results from the onsite MFB laboratory.

The percent difference between sample pairs, compiled monthly by Yamana, was generally less than 1%. During July 2011, several outliers resulted in a percent relative difference of 30% for the 107 pairs submitted. These were not investigated by Yamana, despite reporting outside the defined acceptable limit of $\pm 10\%$. RPA is of the opinion that outlier results should be flagged and investigated. Despite this anomalous month, the results of the check assay program in place during this time indicate that results from the MFB laboratory are accurate and can be relied on for the purposes of Mineral Resource estimation. A comparison of check assays prepared by Yamana during June of 2011 are shown in Figure 11-4.

From 2012 to 2014, Yamana sent over 2,300 pulp replicates to four off site laboratories to compare against assay results at MFB laboratory. Yamana compiled statistical comparison tables, relative difference plots and scatter plots by year for each lab (Yamana, 2015b). RPA reviewed these plots and observed good precision between all sample pairs above an approximate gold grade threshold of 0.5 g/t, with the exception of moderate performance of samples sent to BVQI during 2012 and to SGS during 2014. All other campaigns reported values slightly higher than MFB, indicated a small low bias at MFB. The lower performance of some high grade samples was attributed by Yamana (2015b) to the heterogeneity of samples with free gold, or the composition of the mineral matrix affecting gold recovery during the fire assay process.

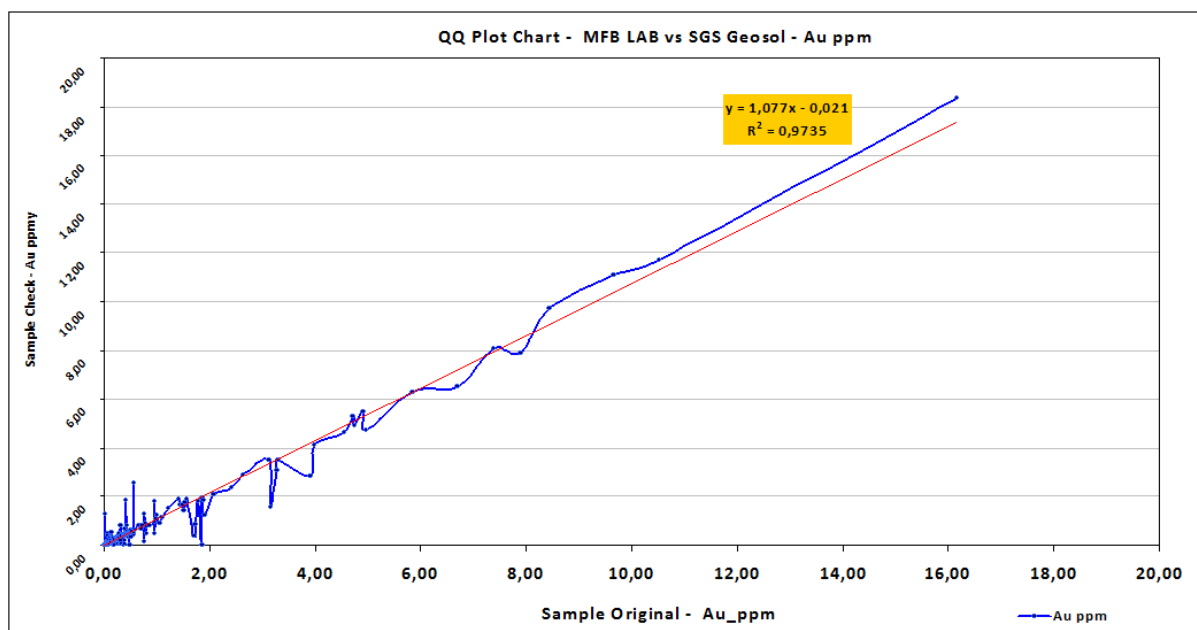
FIGURE 11-4 SCATTER PLOT OF CHECK ASSAYS ANALYZED IN JUNE 2011



In 2015, Yamana sent 385 pulp replicates (1.6% of original samples) to SGS to compare against assay results at MFB laboratory. RPA reviewed the results of these analyses and observed good precision between all sample pairs above an approximate gold grade threshold of 2.0 g/t Au (Figure 11-5).

In RPA's opinion, the QA/QC program as designed and implemented by Yamana, and maintained by Brio, is adequate and the assay results within the database are suitable for use for Mineral Resource estimation.

FIGURE 11-5 CHECK ANALYSES CHART



12 DATA VERIFICATION

RPA reviewed the methods and practices used by MFB and Yamana to generate the resource database (including drilling, sampling, analysis, and data entry) and found the work to be appropriate for the geology and style of mineralization. RPA checked a select number of drill holes to verify the described methods and application of practices. The following checks were made by RPA:

- Reviewed the drill hole traces in 3D, level plan, and vertical sections and found no unreasonable geometries.
- Queried the database for missing or repeated data, unique header, duplicate holes, and gaps or overlapping intervals. No issues were identified.
- Ensured that the total depth recorded in each drill hole database table was consistent. No issues were identified.
- Visited core handling facility.
- Reviewed core logs for a number of drill holes.
- Compared original assay records against the database for holes FSS-952, FSS-965, FSS-1029, FSS-1034, FSS-1087, FSS-1098, FSS-1107, FSS-1110, FSS-1026, FSS-1136, FSS-1149, FSS-1167, FSS-1172, FSS-1178, and FSS-1204. No issues were identified.

No issues were identified with the database, and RPA is of the opinion that the practices and procedures used to generate the MFB database are acceptable to support Mineral Resource and Mineral Reserve estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

MINERALOGY

Gold mineralization is related to multi-phase quartz veining events. The gold occurs in at least three textural settings at MFB: as particles attached to sulphide grains; as particles within fractures in sulphide grains; and as particles within fractures in quartz/albite gangue. Gold grains typically contain less than 5% silver.

The bulk of the mineralization is hosted by quartz-albite-sulphide veins within the chlorite schist (CLX) unit. Veins, often multiple, vary from 10 mm to 40 mm thick, have irregular margins and are typically oriented sub-parallel to the east-west trend of the mine package. The multiple vein systems vary in true width from 1.5 m to 40 m and horizontal mining widths vary from a minimum 3 m to 40 m.

Graphitic schist (GRX) forms the hanging wall of the main MFB ore zone. Due to its lateral persistence and distinctive character, it is considered a marker horizon.

The Canto unit consists of fine grained carbonaceous sediments (pelites and rhythmically banded pelites and psammites), volcanic layers, and an agglomerate pyroclastic sequence. The pyroclastic sequence is the main host rock for the Canto mineralization.

METALLURGICAL TESTING

Metallurgical test work was not available for this report, nor is it applicable because MFB is a well-established mine and mill operation. Metallurgical information used to evaluate the operation consists of current and historical process operating data. Several years of detailed key process indicators have been supplied for review.

RPA recommends that testing programs be carried out on any new ore types encountered that show variation in ore hardness and sulphide content and especially ores containing graphitic carbon.

Brio is now performing regular testing of plant CIP feed samples and ore samples from the current areas scheduled for mining, to determine the preg-robbing characteristics of the naturally occurring carbon in the ore. The focus of the testing is to determine the most effective way to apply the carbon-in-leach (CIL) process, and if necessary, the use of kerosene as a natural carbon blinding agent to reduce losses of gold to naturally occurring carbon.

Brio is also investigating the use of oxygen in the pre-oxidation and leach circuits instead of air to improve sulphide oxidation and metal recovery.

14 MINERAL RESOURCE ESTIMATE

SUMMARY

MFB is a mine with more than 30 years of historic exploration and production conducted by Brio's predecessors and as such several surface areas and underground workings that had been mined in the past had no available survey data and/or had not been converted to digital format to allow for reconciliation of previously depleted resources. To ensure that all Mineral Resources and Mineral Reserves reported in this document are potentially able to be mined, Brio initiated a program in 2015 to survey the historical workings and enter the data into a digital database. This work is continuing in 2016. The Mineral Resources and Mineral Reserves of this report have incorporated all this new survey information, and those stopes that did not meet economic cut-off parameters, or those that have already been mined, are not included in the final Mineral Resource and Mineral Reserve estimate.

For this report, RPA has reviewed and validated the Mineral Resource estimates of the MFB operations as received from Brio. Section 14 describes the validated models and estimates. In general, RPA found that values and compilations of gold grades were accurately recorded and calculated.

The methodology of estimating Mineral Resources by the Brio staff includes:

- Statistical analysis and variography of gold values in the assay database.
- Geological and mineralized envelope models for MFB (including C, E, F, Canto, and G zones) and LGT (Lagoa do Gata zone) developed using Leapfrog Geo software.
- Construction of a block model using Datamine Studio 3 and Vulcan software.
- Grade interpolation using Ordinary Kriging (OK) and Inverse Distance Squared (ID²) methods.

RPA confirms that the Mineral Resources listed in Table 14-1 comply with all disclosure requirements for Mineral Resources set out in NI 43-101.

TABLE 14-1 MFB MINERAL RESOURCES AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Category	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Measured			
Underground	1,250	4.01	161
Open Pit	290	3.24	30
Total Measured	1,539	3.86	191
Indicated			
Underground	342	3.23	35
Open Pit	30	2.32	2
Total Indicated	372	3.15	38
Measured + Indicated			
Underground	1,592	3.84	197
Open Pit	320	3.15	32
Total Measured + Indicated	1,912	3.72	229
Inferred – Underground	840	2.2	60
Inferred – Open Pit	180	5.3	30
Total Inferred	1,020	2.8	90

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are reported at a cut-off grade of 0.5 g/t Au.
3. Mineral Resources are exclusive of Mineral Reserves.
4. Mineral Resources are estimated using a gold price of US\$1,500 per ounce and a US\$/R\$ exchange rate of RL\$3.8 = US\$1.00.
5. A minimum mining width of 3.0 m was used for underground Mineral Resources.
6. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
7. Numbers may not add due to rounding.

RESOURCE DATABASE

The MFB resource database used to develop the geological and mineralized envelope models has an effective date of September 30, 2015 and contains 39,252 drill holes totalling 1,945,486 m. The database includes tables with collar coordinates (local coordinates for the MFB Database and global coordinates for the LGT Database), hole orientation and deviation surveys, and assays. Table 14-2 provides a summary of the drill hole database.

TABLE 14-2 MFB DATABASE SUMMARY
Brio Gold Inc. – Fazenda Brasileiro Mine

Table	Number of Records
Collar	39,252
MFB	36,951
LGT	2,301
Survey	241,016
Assay	1,221,152
Composite (1 M)	48,348

RPA audited drill hole records to ensure that the grade, thickness, elevation, and mineralized zone used in preparing the current resource estimate correspond to mineralization. RPA's data verification procedures included the following:

- Checked for duplicate drill hole traces, twinned holes, etc.
- Checked collar locations for zero/extreme values.
- Checked that drill hole collar coordinates and drill hole deviations were entered in the database, displayed in plan views and sections, and visually compared to relative locations of the holes.
- Checked for gaps and overlapping assay intervals.
- Checked for non-numeric data in assay tables.
- Checked for maximum depth inconsistencies.

The resource database is considered by RPA to be sufficiently reliable for grade modelling and Mineral Resource estimation.

GEOLOGICAL INTERPRETATION

There are six separate mineralized structures/domains based on geology, structural behaviour, and grade continuity (Table 14-3 and Figure 14-1) at MFB.

MFB resource wireframes were modelled based on grade information, geological observations, and short term modelling that considered the historical design shape, several years of mapping, and the continuity of grade along strike and between mine levels.

TABLE 14-3 MFB DOMAIN ASSIGNMENTS
Brio Gold Inc. – Fazenda Brasileiro Mine

Domain	Zone
1	C Target
2	E Target
3	F Target
4	LGT Target
5	Canto Target
6	G Target

Mineralized domains were interpreted using Leapfrog software with a cut-off grade of 1.5 g/t Au for underground zones and 0.5 g/t Au for open pit zones. The sectional outlines are snapped to drill holes (one metre assay intervals) and contain internal waste where appropriate to ensure plausible zone geometries and grade continuity.

RPA reviewed some wireframes to ensure that they correspond to the mineralization defined by drill holes. RPA's review included the following:

- Checked for overlapping wireframes to determine possible double counting.
- Checked that the wireframes were classified as not economic or mined, reserve or resource as of September 30, 2015.
- Validated the solids for closure and consistent topology, and checked that the triangles intersect properly (crossing). Any issues found were corrected with the appropriate Vulcan utility to ensure accurate volume and grade calculations.

RPA's review of the wireframe triangulations found acceptable shapes and volumes in all six domains reviewed.

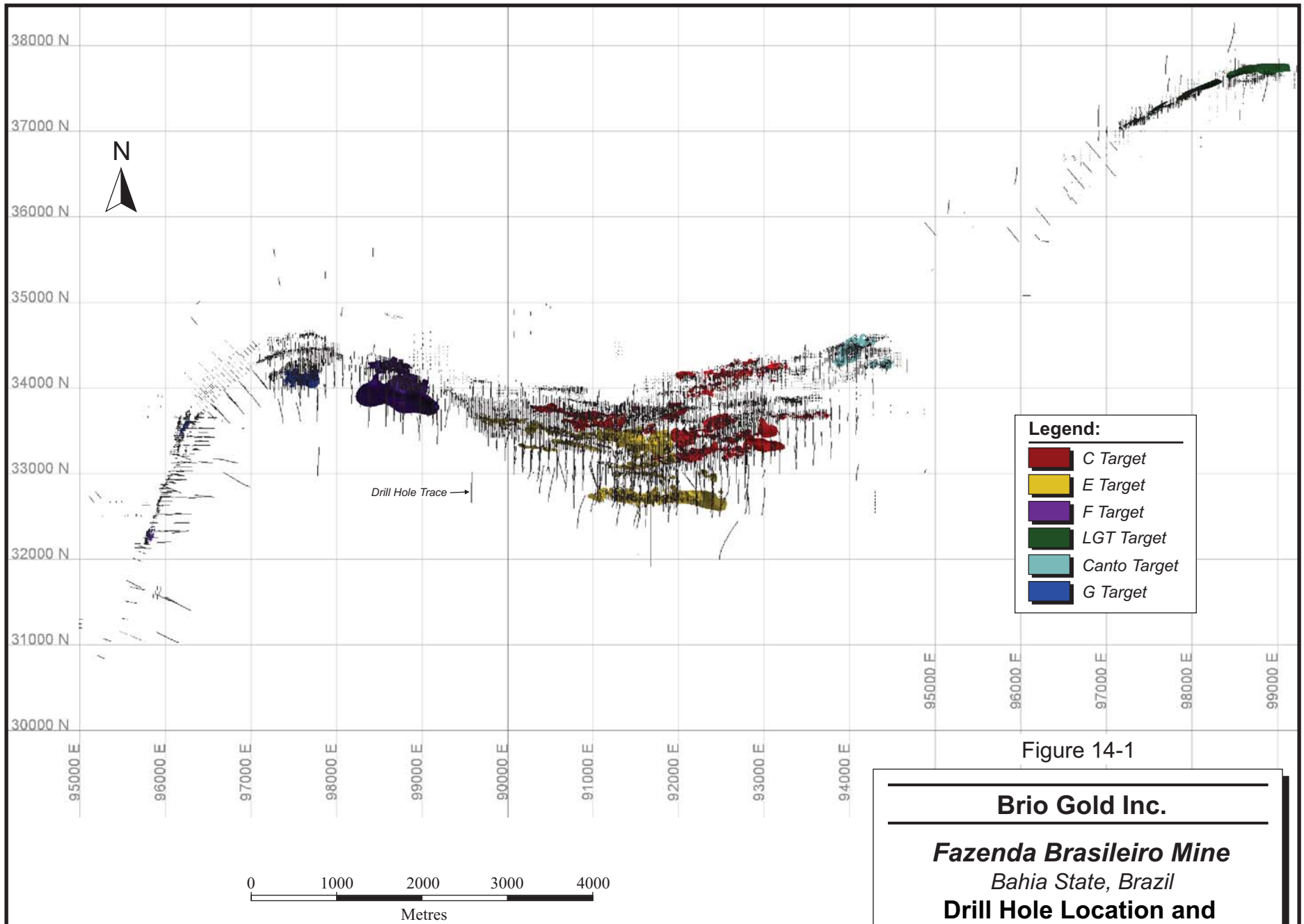


Figure 14-1

Brio Gold Inc.

Fazenda Brasileiro Mine

Bahia State, Brazil

**Drill Hole Location and
Resource Wireframes**

STATISTICAL ANALYSIS

The modelled mineralized wireframes were used to flag drill hole samples in the database. For each mineralized zone, resource assays, descriptive statistics, and histograms were investigated. Table 14-4 presents the descriptive statistics for individual zones.

TABLE 14-4 STATISTICS OF RESOURCE RAW ASSAY VALUES BY DOMAIN
Brio Gold Inc. - Fazenda Brasileiro Mine

Domain	Zone	Count	Minimum	Maximum	Mean	Median	Stdev	Variance	CV
1	C	23,398	0.00	390.55	4.65	2.28	8.26	68.22	1.78
2	E	17,859	0.00	256.00	4.41	2.31	7.38	54.46	1.67
3	F	6,375	0.00	69.37	2.72	1.76	3.63	13.20	1.34
4	LGT	328	0.03	62.06	3.24	1.83	5.79	33.52	1.79
5	Canto	3,297	0.00	198.88	3.07	2.17	6.17	38.06	2.01
6	G	3,448	0.00	48.60	2.25	1.41	3.16	10.01	1.41

Figure 14-2 shows the box plot for each domain.

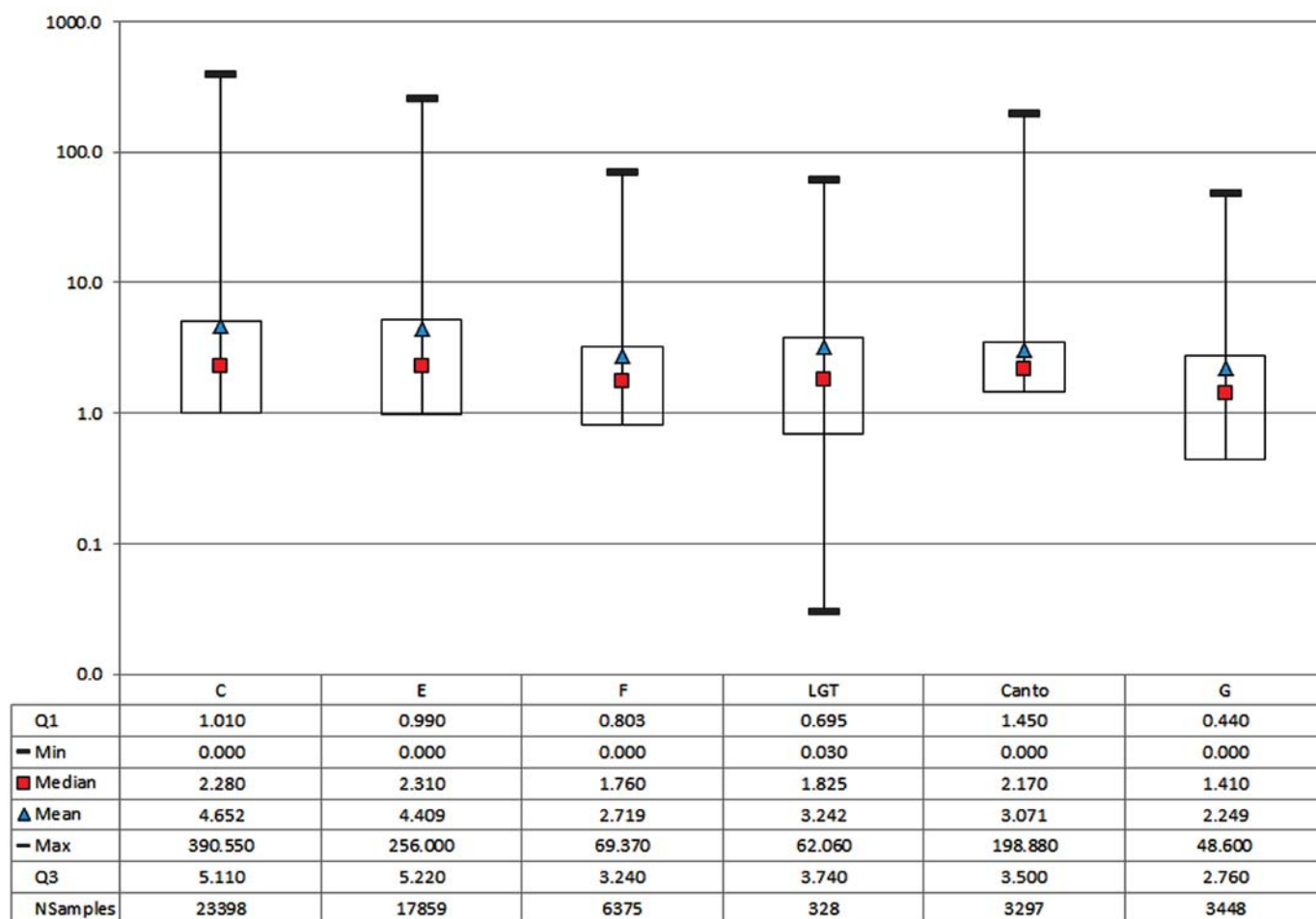


Figure 14-2

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Domain Box Plots

GRADE CAPPING

Where the assay distribution is skewed positively or approaches log-normal, erratic high grade assay values can have a disproportionate effect on the average grade of a deposit. One method of treating these outliers in order to reduce their influence on the average grade is to cut or cap them at a specific grade level. In the absence of production data to calibrate the capping level, inspection of the assay distribution can be used to estimate a capping level.

Data from each mineralized structure were used to build histograms and probability plots in order to identify outliers and establish capping values. The domain, zone, and capping values are shown in Table 14-5. Figures 14-3 through Figure 14-8 show the probability plots for MFB.

TABLE 14-5 CAPPING OF RESOURCE ASSAY VALUES BY DOMAIN
Brio Gold Inc. - Fazenda Brasileiro Mine

Domain	Zone	Grade Capping (g/t)
1	C Target	70
2	E Target	80
3	F Target	30
4	Lagoa do Gato Target	20
5	Canto target	28
6	G Target	30

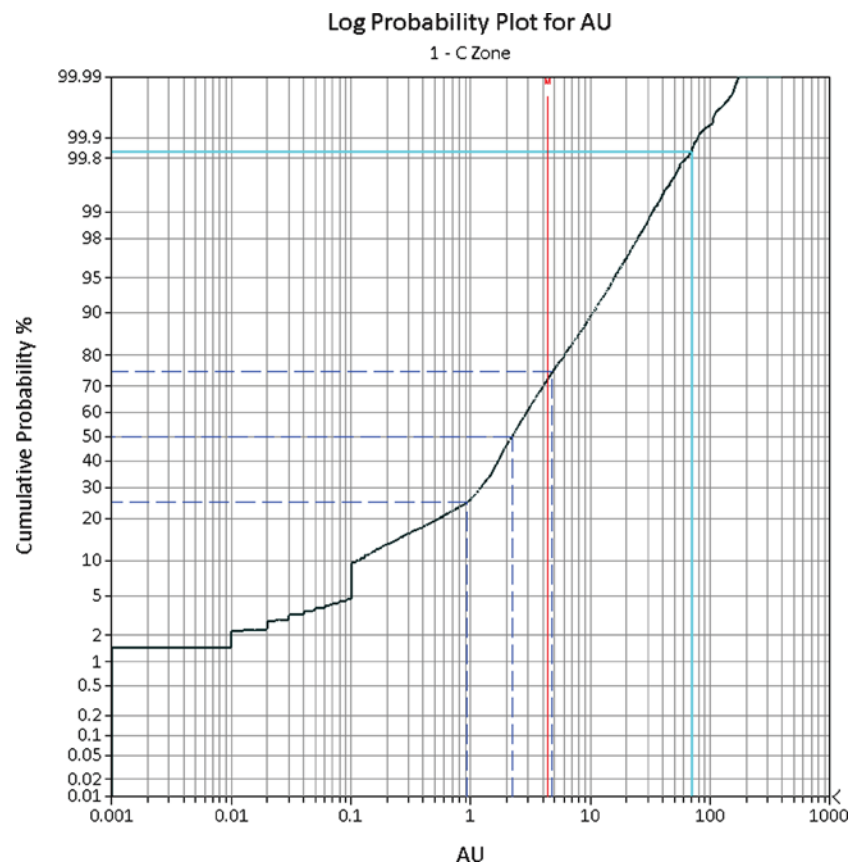
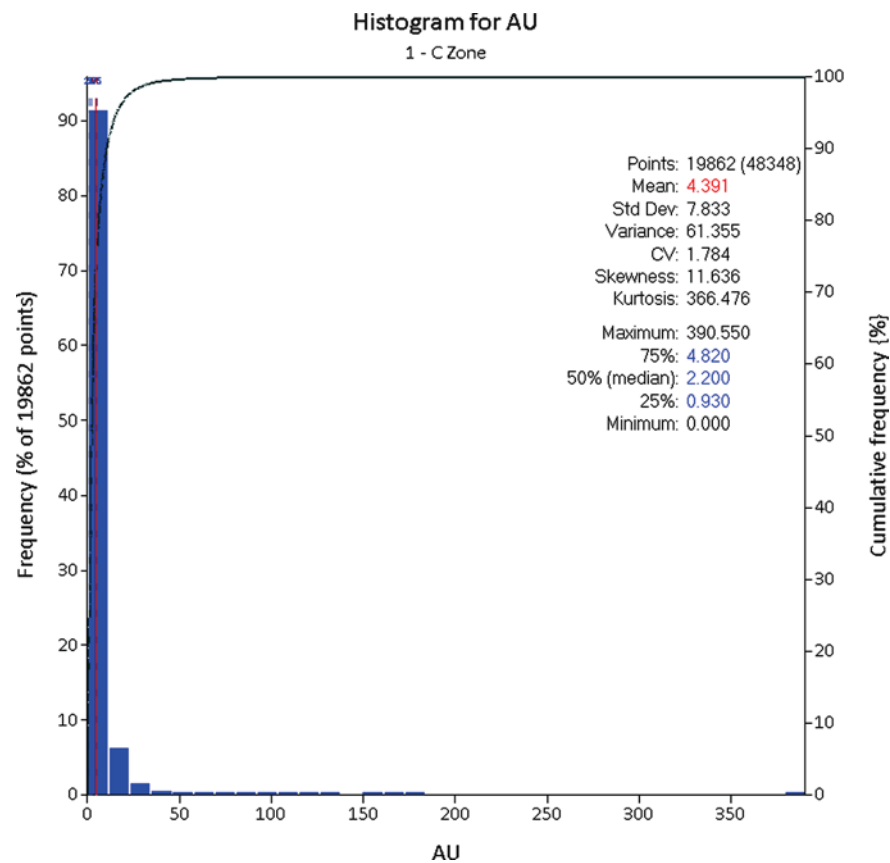


Figure 14-3

Brio Gold Inc.
Fazenda Brasileiro Mine
 Bahia State, Brazil
**Capping Definition of
 C Zone**

14-10

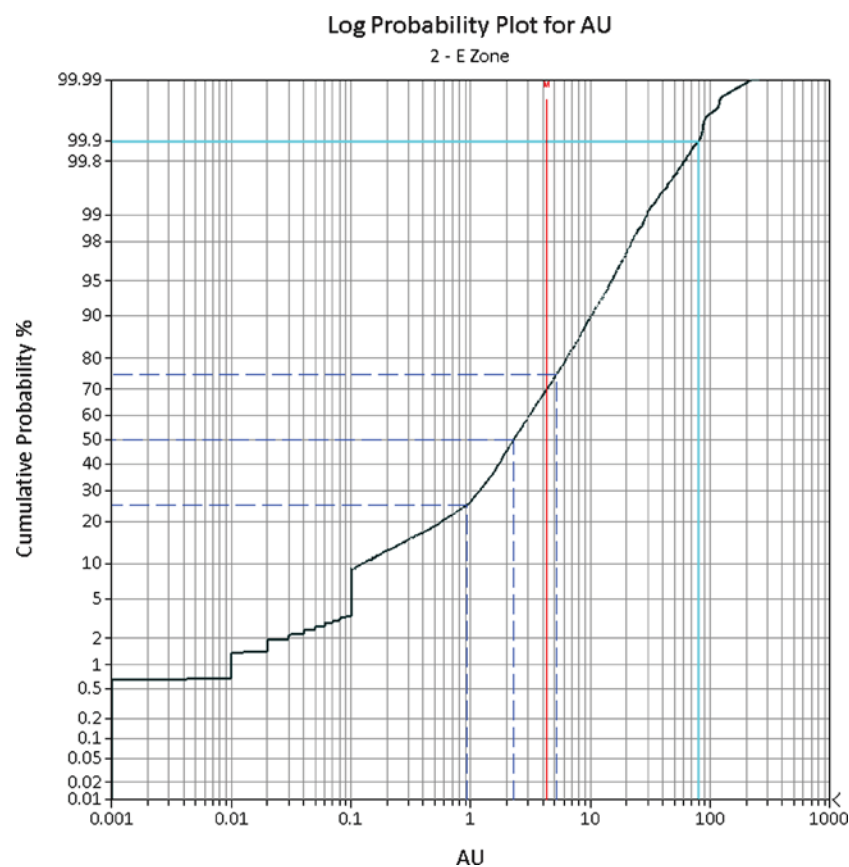
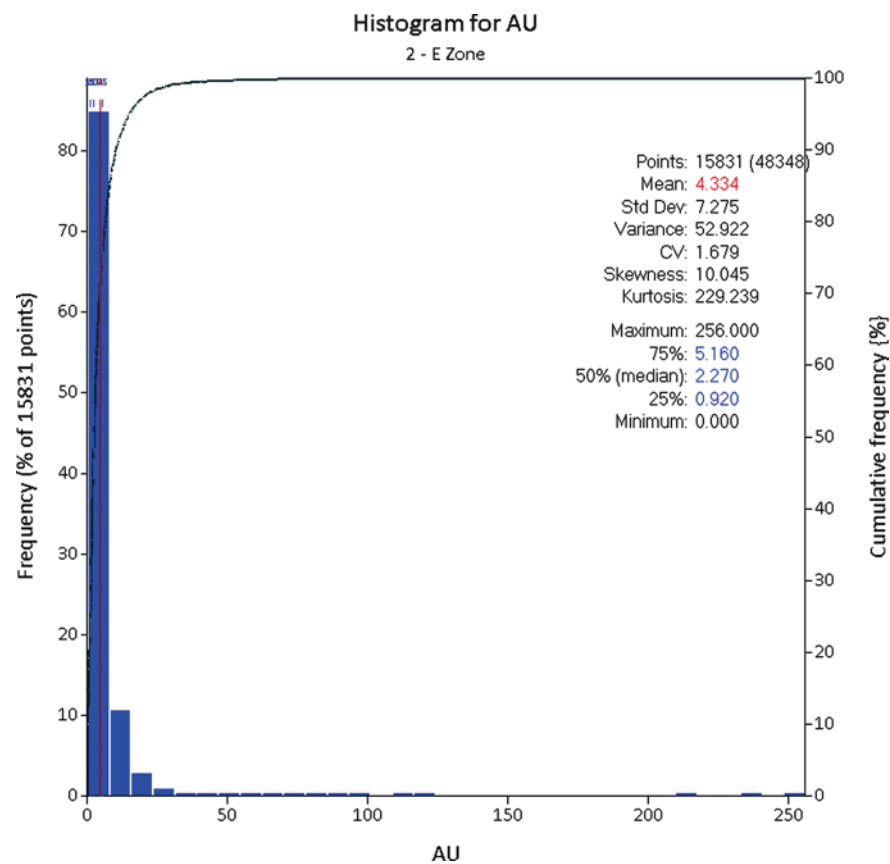


Figure 14-4

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil

**Capping Definition of
E Zone**

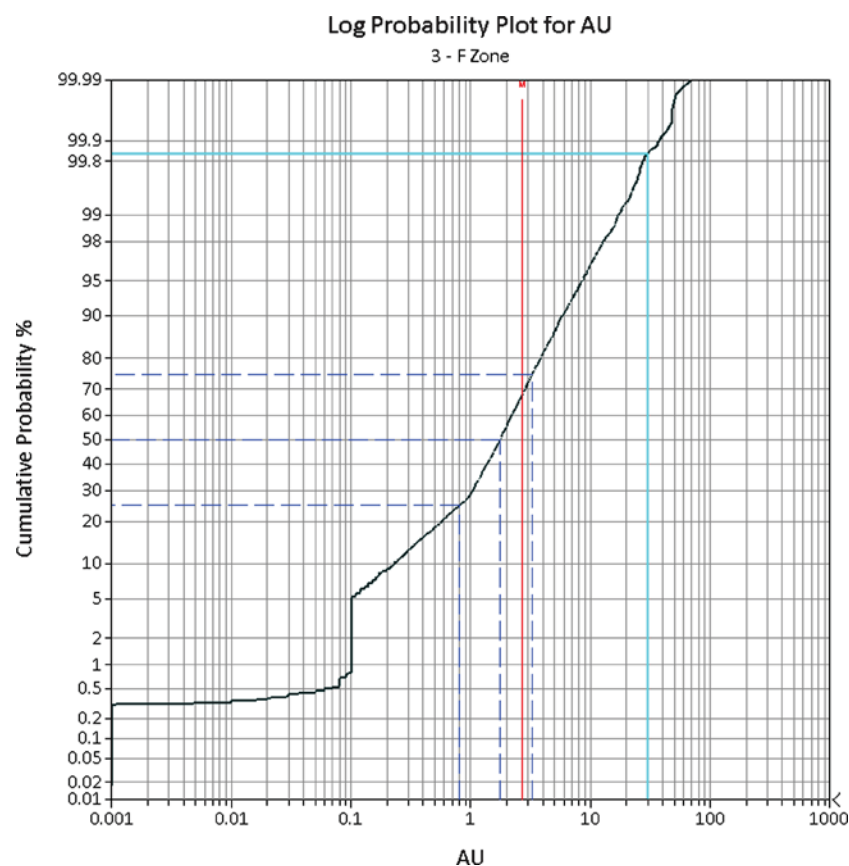
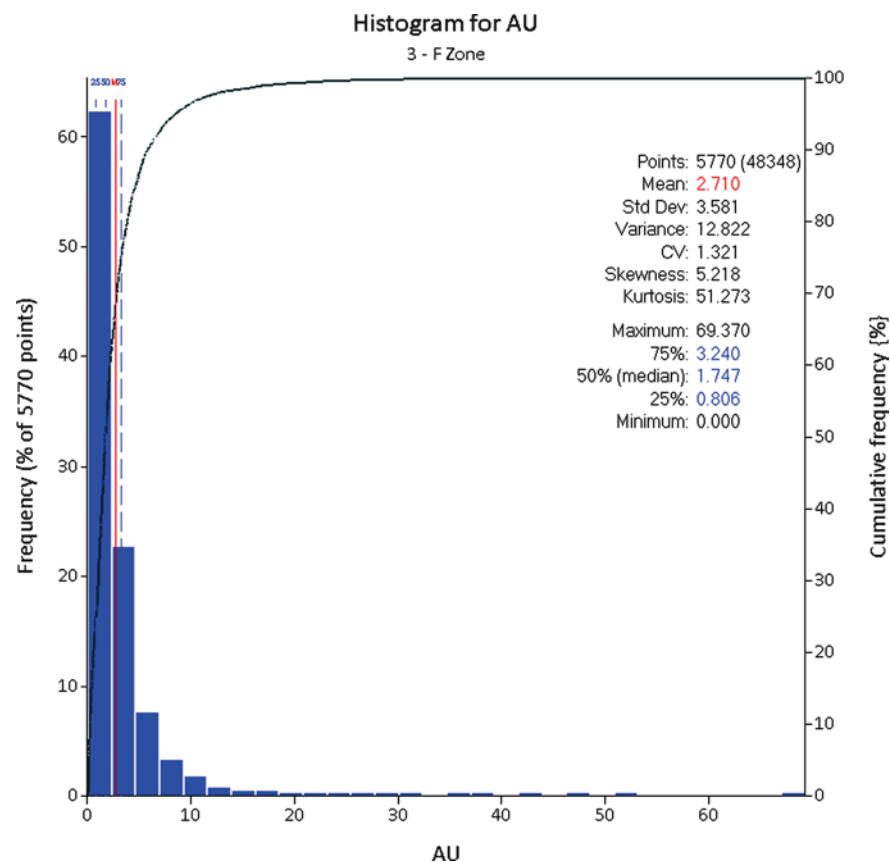


Figure 14-5

Brio Gold Inc.

Fazenda Brasileiro Mine

Bahia State, Brazil

**Capping Definition of
F Zone**

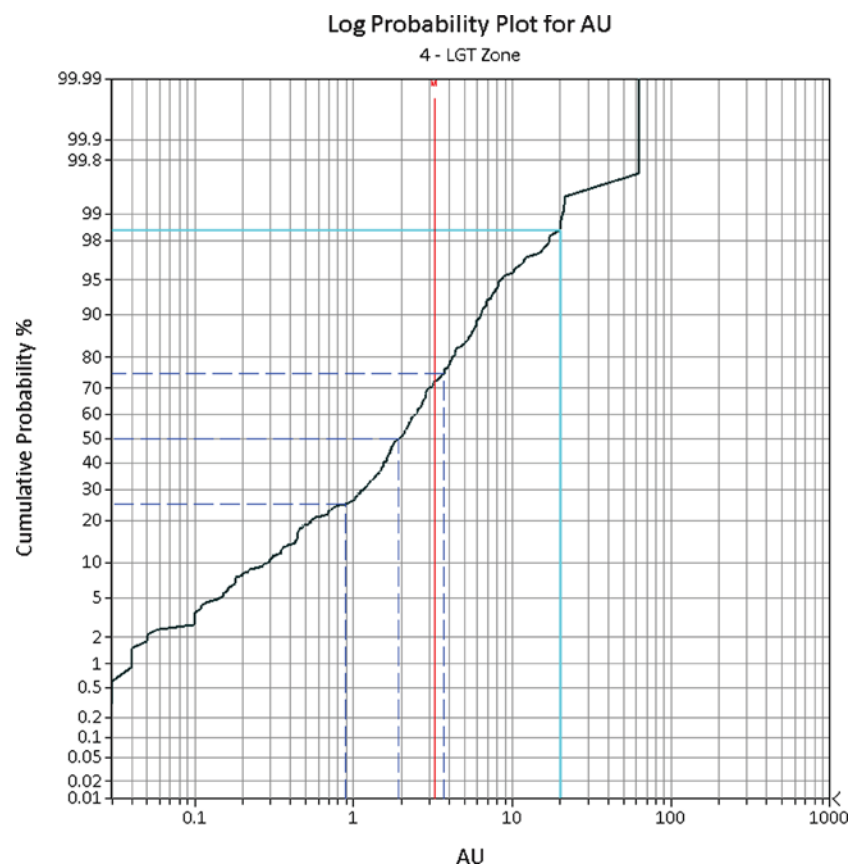
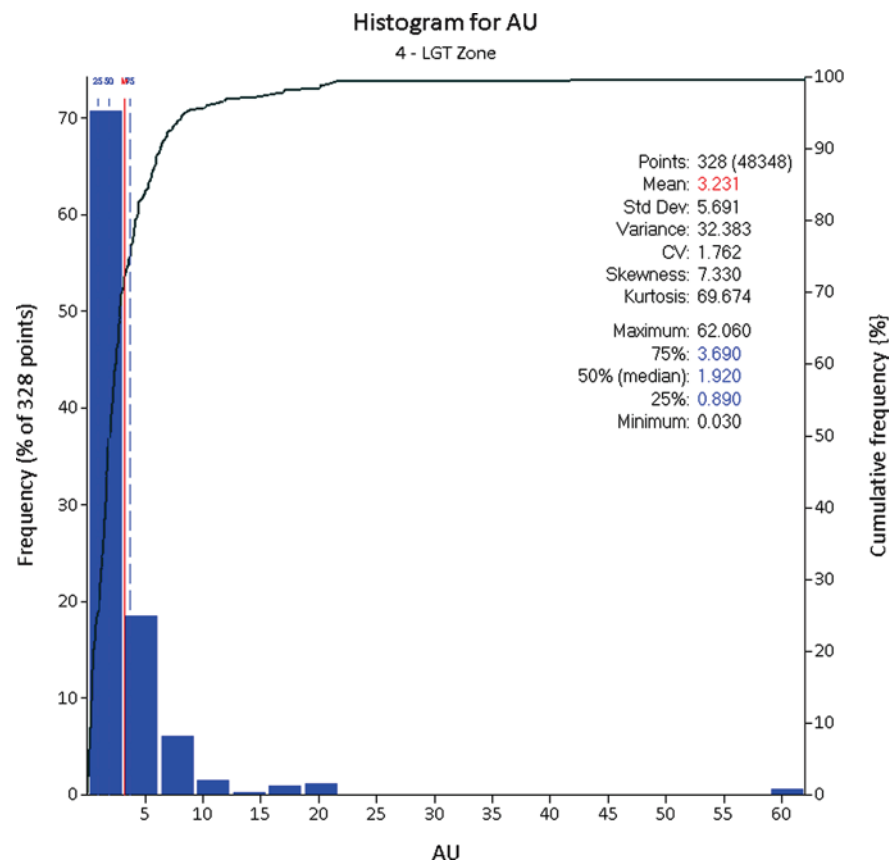


Figure 14-6

Brio Gold Inc.

Fazenda Brasileiro Mine

Bahia State, Brazil

**Capping Definition of
LGT Zone**

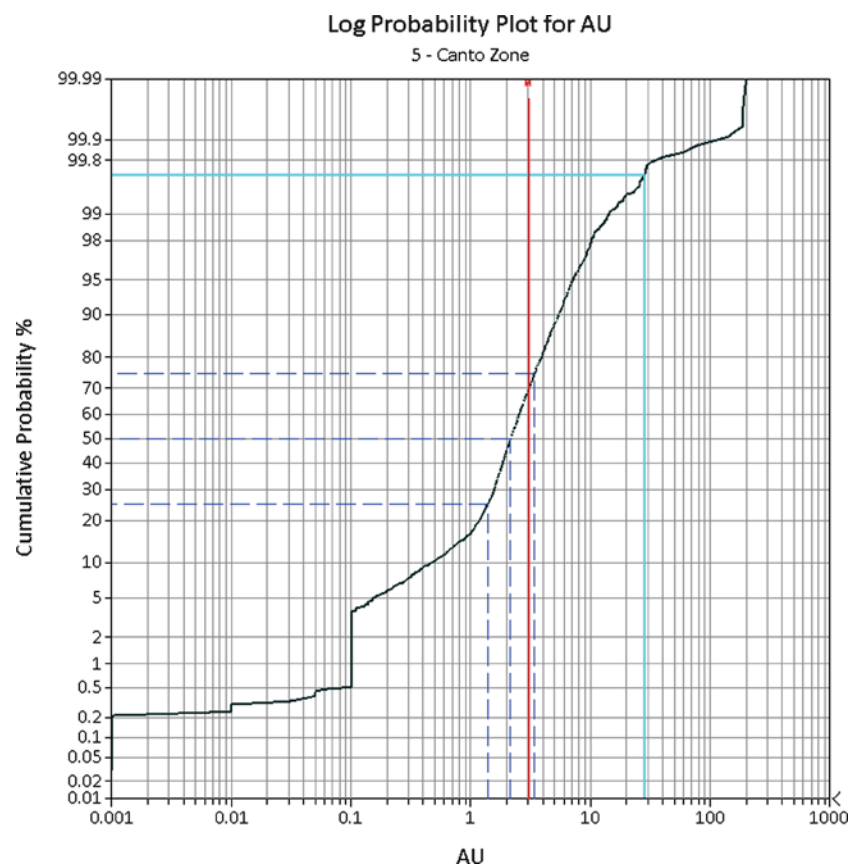
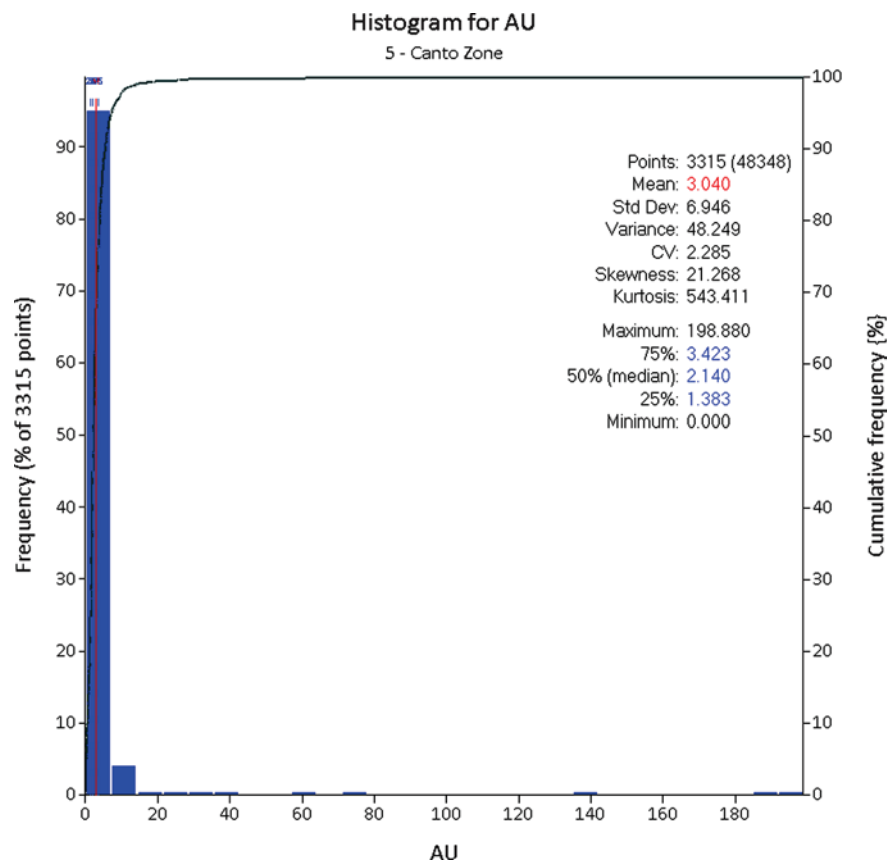


Figure 14-7

Brio Gold Inc.
Fazenda Brasileiro Mine
 Bahia State, Brazil
Capping Definition of
Canto Zone

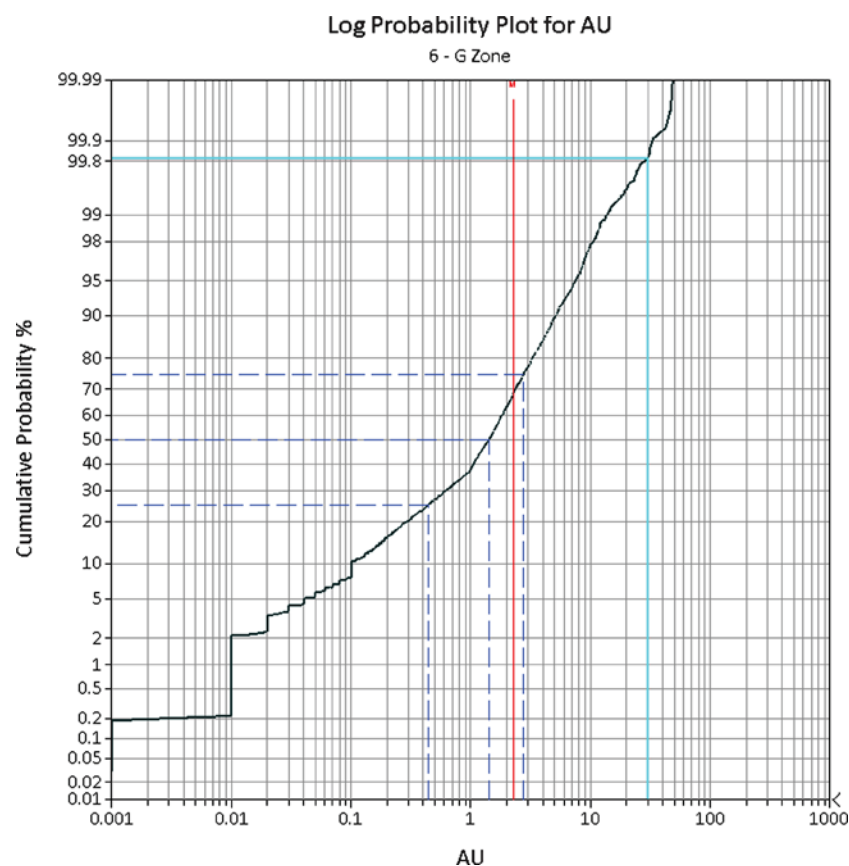
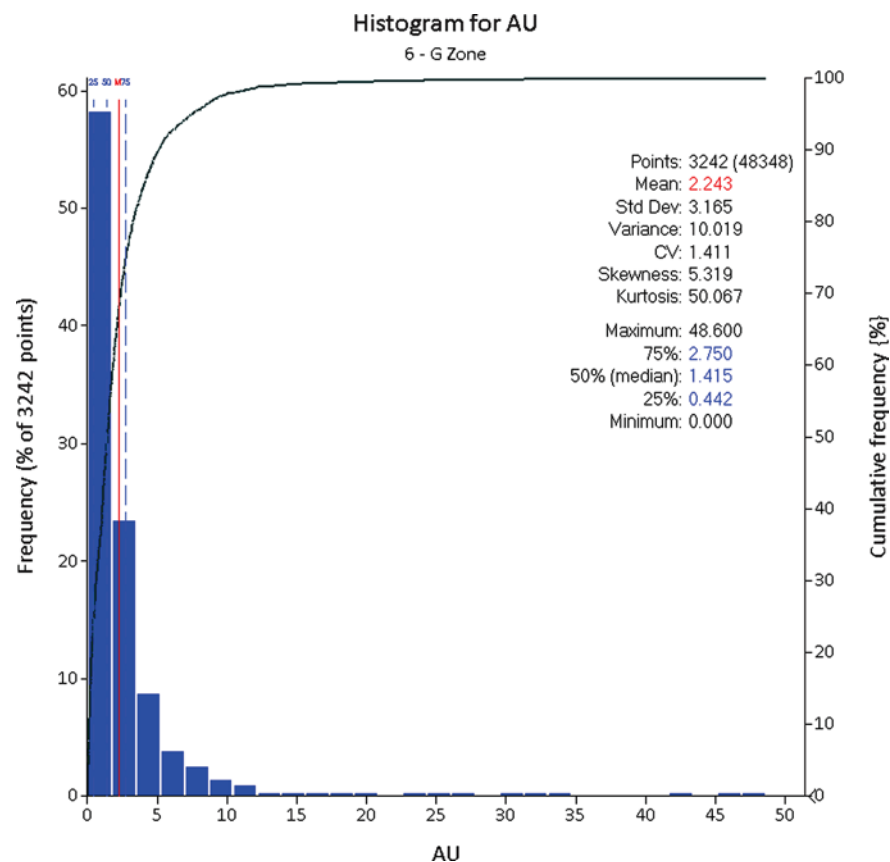


Figure 14-8

Brio Gold Inc.

Fazenda Brasileiro Mine

Bahia State, Brazil

**Capping Definition of
G Zone**

COMPOSITING

After capping, the assays were composited inside the mineralized intercepts. Given that more than 70% of the samples were taken at one metre intervals and considering the width of the mineralization, Brio chose to composite to one metre lengths. The domain, capping values, and total number of capped values are shown in Table 14-6.

TABLE 14-6 CAPPING OF COMPOSITE ASSAY VALUES BY DOMAIN
Brio Gold Inc. - Fazenda Brasileiro Mine

Domain	Zone	Cap Value	Count	# Capped		Mean		CV	
				Count	%	Uncap	Cap	Uncap	Cap
1	C	70	19862	33	0.17%	4.39	4.33	1.78	1.55
2	E	80	15831	11	0.07%	4.33	4.29	1.68	1.51
3	F	30	5770	16	0.28%	2.71	2.69	1.32	1.24
4	LGT	20	328	9	2.74%	3.23	2.97	1.76	1.19
5	Canto	28	3315	6	0.18%	3.03	2.83	2.27	1.03
6	G	30	3242	6	0.19%	2.24	2.23	1.41	1.34

Tables 14-7 present the capped composite descriptive statistics for each zone.

TABLE 14-7 DESCRIPTIVE STATISTICS OF COMPOSITE VALUES BY DOMAIN
Brio Gold Inc. - Fazenda Brasileiro Mine

Domain	Zone	Grade	Count	Minimum	Maximum	Mean	Stdev	Variance	CV
1	C	AU_CAP	19862	0.00	70.00	4.33	6.73	45.29	1.55
3	E	AU_CAP	15831	0.00	80.00	4.29	6.46	41.74	1.51
4	F	AU_CAP	5770	0.00	30.00	2.69	3.32	11.05	1.24
6	LGT	AU_CAP	328	0.03	20.00	2.97	3.54	12.56	1.19
2	Canto	AU_CAP	3315	0.00	28.00	2.83	2.91	8.45	1.03
5	G	AU_CAP	3242	0.00	30.00	2.23	2.97	8.83	1.34

RPA considers that the grade capping procedure used is appropriate for the style and nature of the gold mineralization at MFB and LGT.

BULK DENSITY

Bulk Density (BD) measurements are taken from a 10 cm long sample from each lithology encountered and from each one meter assay interval in each core hole. Measurements are determined by a water displacement method as follows:

- The sample is dried, coated in Vaseline, and then weighed.
- The sample is then placed in a graduated, water-filled cylinder.
- The amount of water displaced is measured.
- The BD is then calculated as the weight of the sample divided by the volume of water displaced.

Table 14-8 summarizes the average BD determined for the main areas of production.

TABLE 14-8 AVERAGE BULK DENSITY VALUES
Brio Gold Inc. - Fazenda Brasileiro Mine

Mine Area	Ore Density (g/cm ³)	Waste Density (g/cm ³)
C Target	2.82	2.92
E Target	2.91	2.86
F Target	2.94	2.94
LGT Target	2.77	2.77
Canto Target	2.68	2.62
G Target	2.96	2.95

The BD determination method is an accepted industry practice although wax is commonly used to coat the samples instead of Vaseline.

VARIOGRAPHIC ANALYSIS

Brio generated downhole, directional, and omnidirectional variograms using Isatis software. Correlograms were used to establish the nugget effect and ranges for the major, semi-major, and minor axis of anisotropy. The orientations of the axes selected were based on the interpreted mineralized zone geometry, which incorporates the known geological controls. Table 14-9 shows the correlogram parameters defined in this work. The principal directions and dip associated with the domains are shown and are aligned with the strike and axes of structures which control the mineralization. The second direction is perpendicular to the first, aligned with dip. The third direction is normal to the plane, aligned to the mineralization thickness.

The correlograms for MFB and LGT are shown in Figures 14-9 to 14-14.

TABLE 14-9 MFB VARIOGRAM RESULTS
Brio Gold Inc. – Fazenda Brasileiro Mine

ZoneAzimuthDipNugget (Z)(Y)C ₀				Structure 1				Structure 2				Structure 3			
				Sill C ₁	Range 1			Sill C ₂	Range 2			Sill C ₁	Range 3		
					Major Axis a2 - m	Semi- Major Axis a2 - m	Minor Axis a2 - m		Major Axis a2 - m	Semi- Major Axis a2 - m	Minor Axis a2 - m		Major Axis a2 - m	Semi- Major Axis a2 - m	Minor Axis a2 - m
C	90	45	0.3	0.5	10	10	5	0.15	35	24	40	0.05	200	100	100
E	100	35	0.3	0.5	10	10	3	0.15	15	30	1	0.05	160	100	50
F	100	35	0.3	0.5	5	10	5	0.15	20	30	15	0.05	120	80	40
LGT	Omni-directional		0.3	0.72	5	5	8	0.22	40	40	40		-	-	-
Canto	75	45	0.3	0.63	8	8	5	0.07	80	35	30	-	-	-	-
G	90	45	0.3	0.6	5	10	5	0.10	40	35	25	-	-	-	-

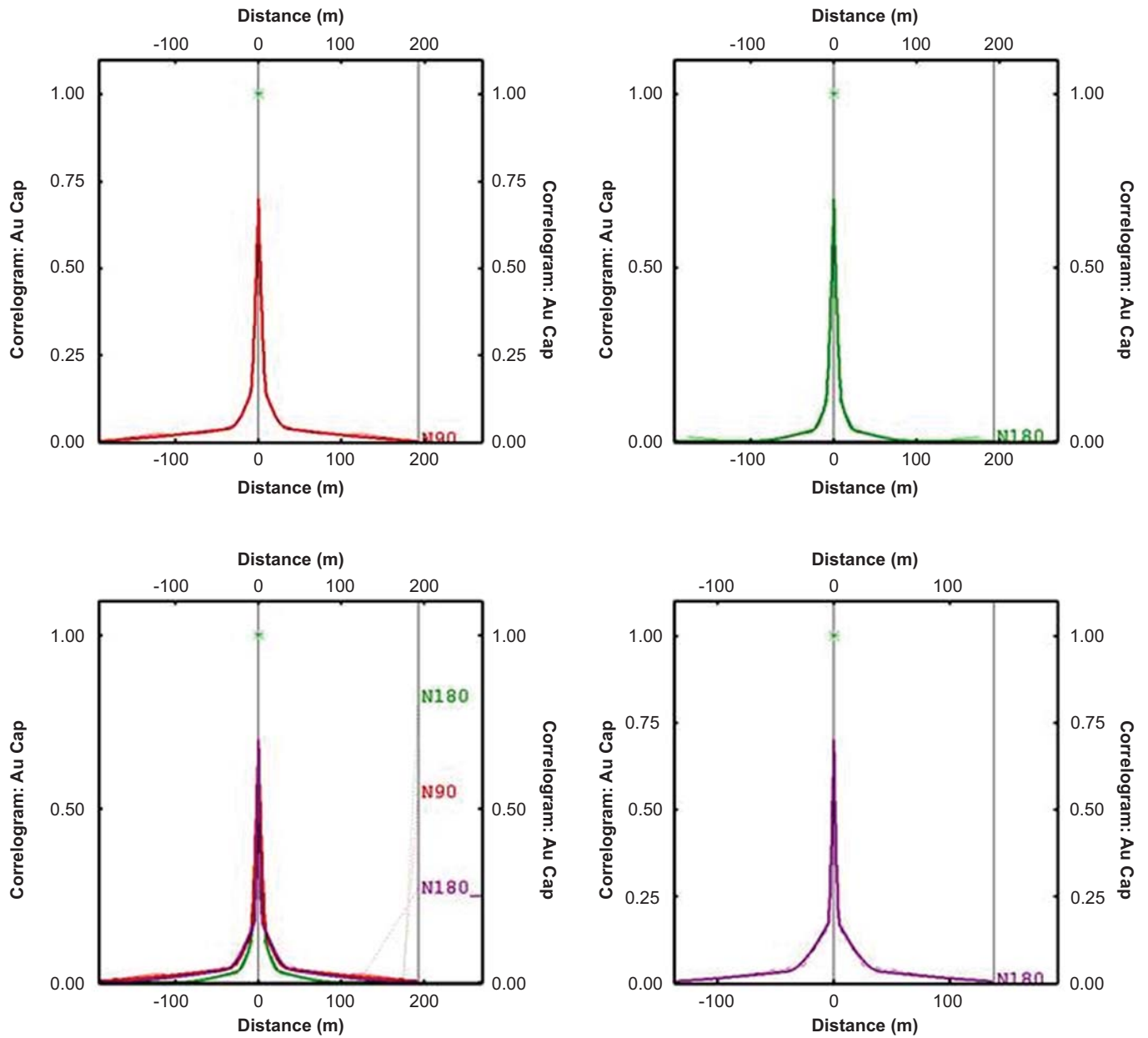


Figure 14-9

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
C Zone Correlogram

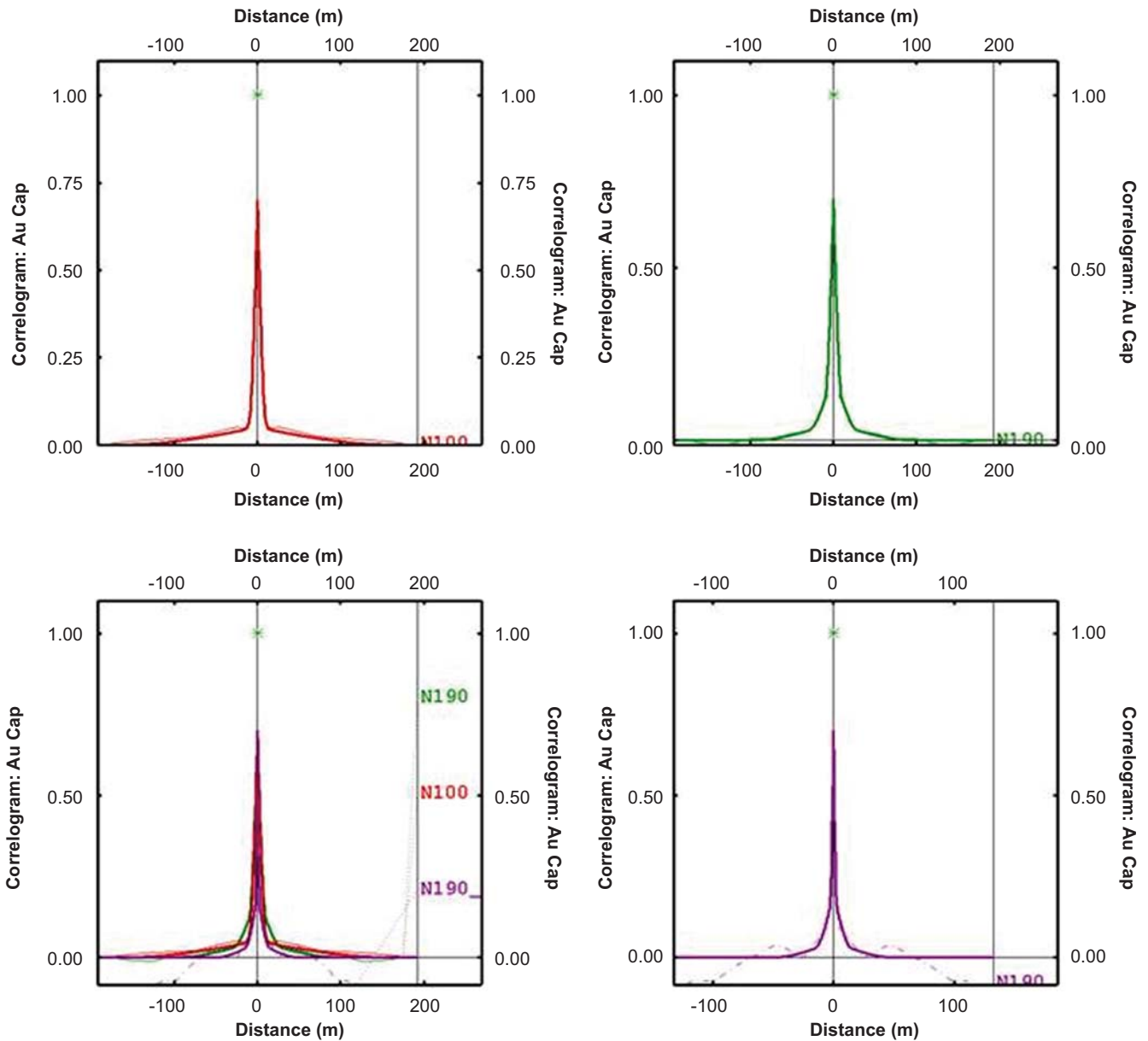


Figure 14-10

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
E Zone Correlogram

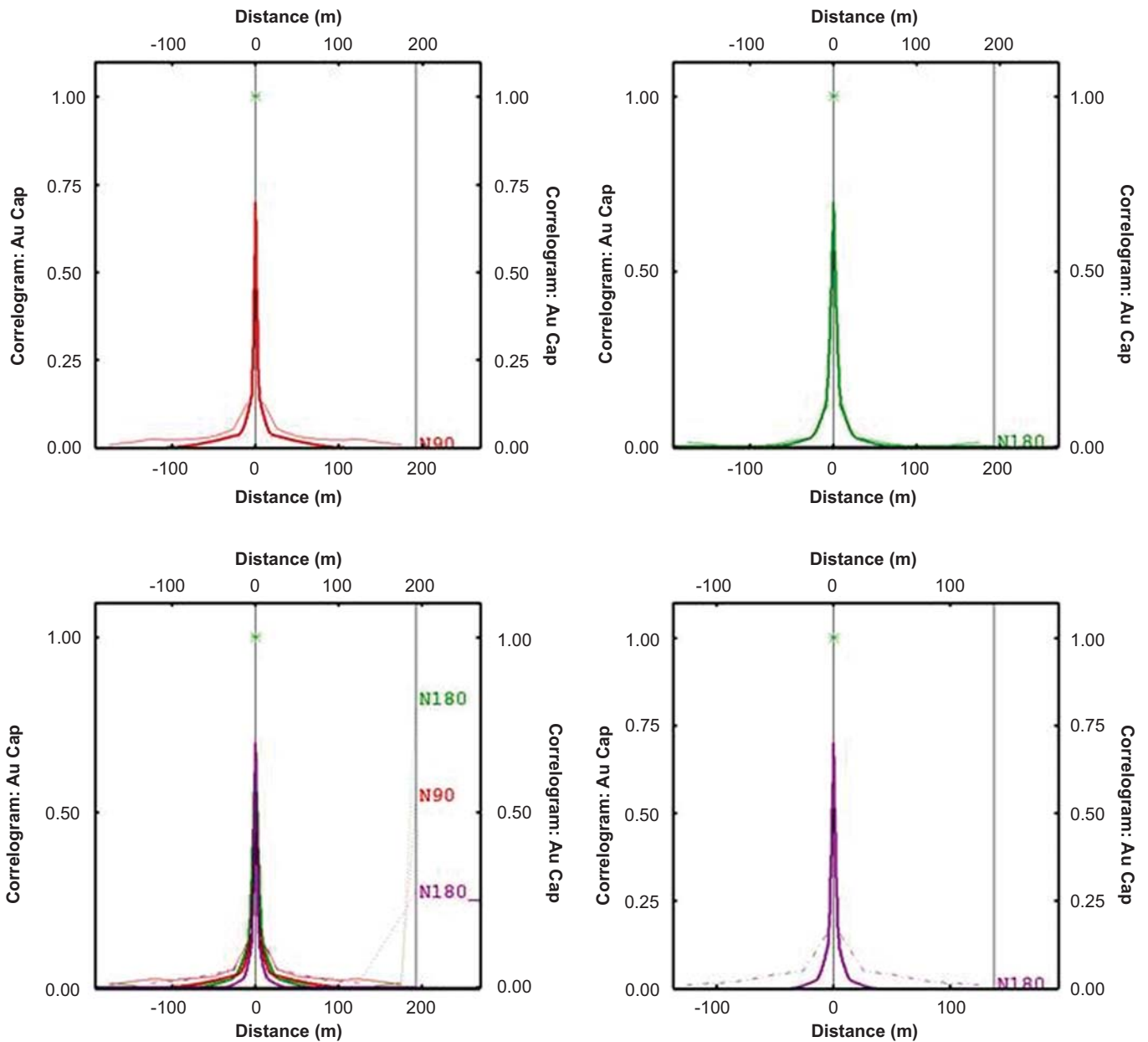


Figure 14-11

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
F Zone Correlogram

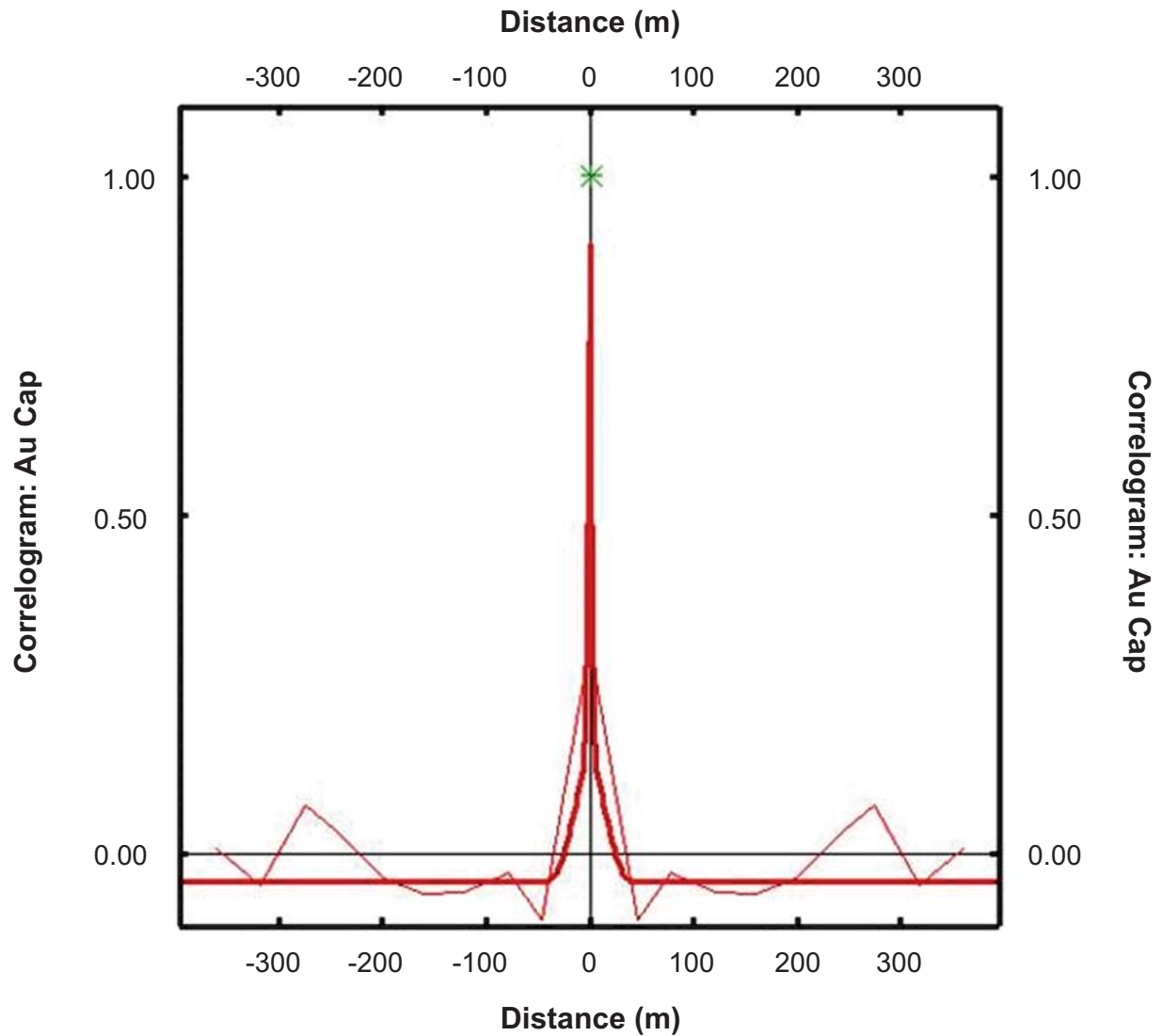


Figure 14-12

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
LGT Zone Correlogram

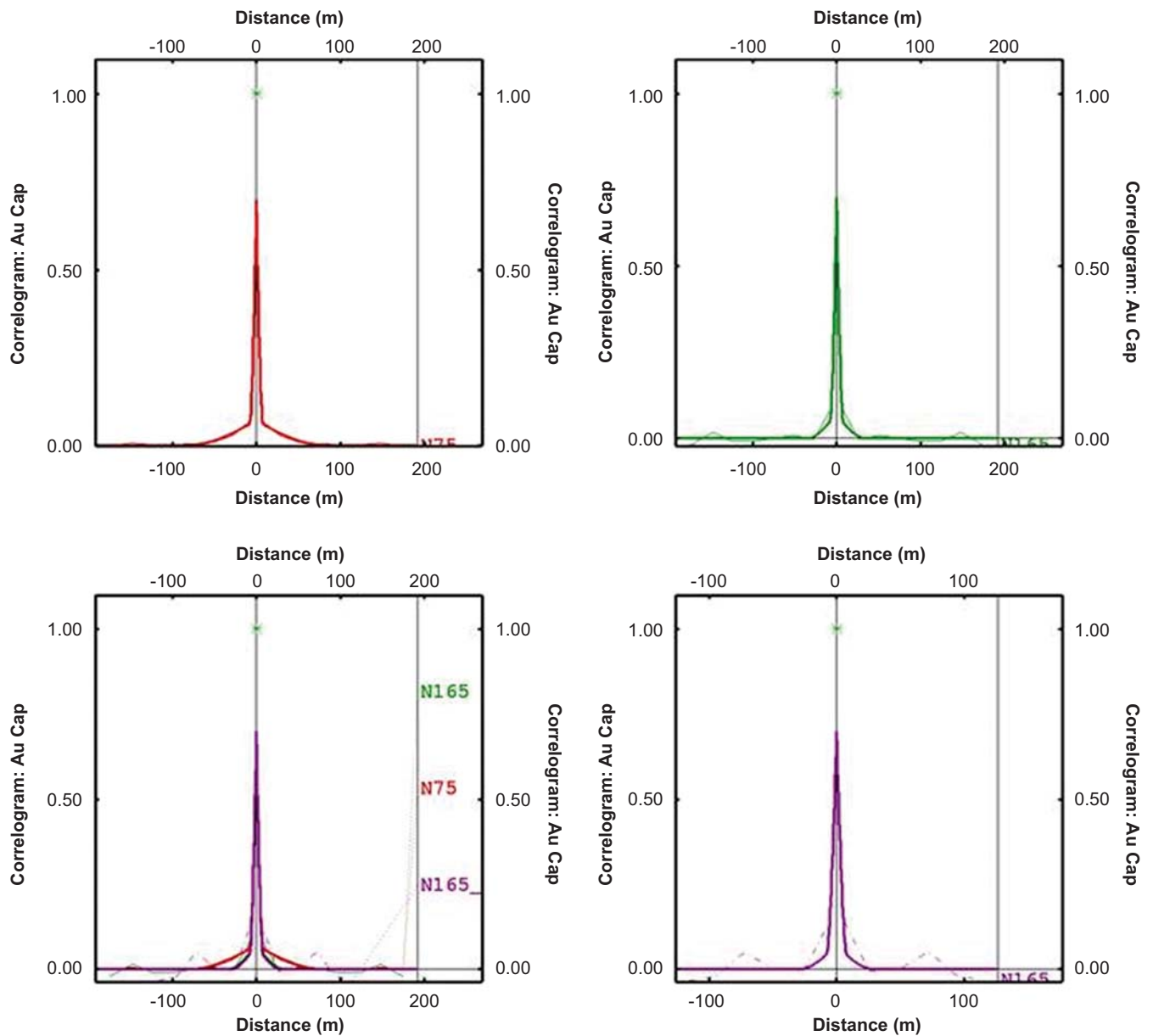


Figure 14-13

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Canto Zone Correlogram

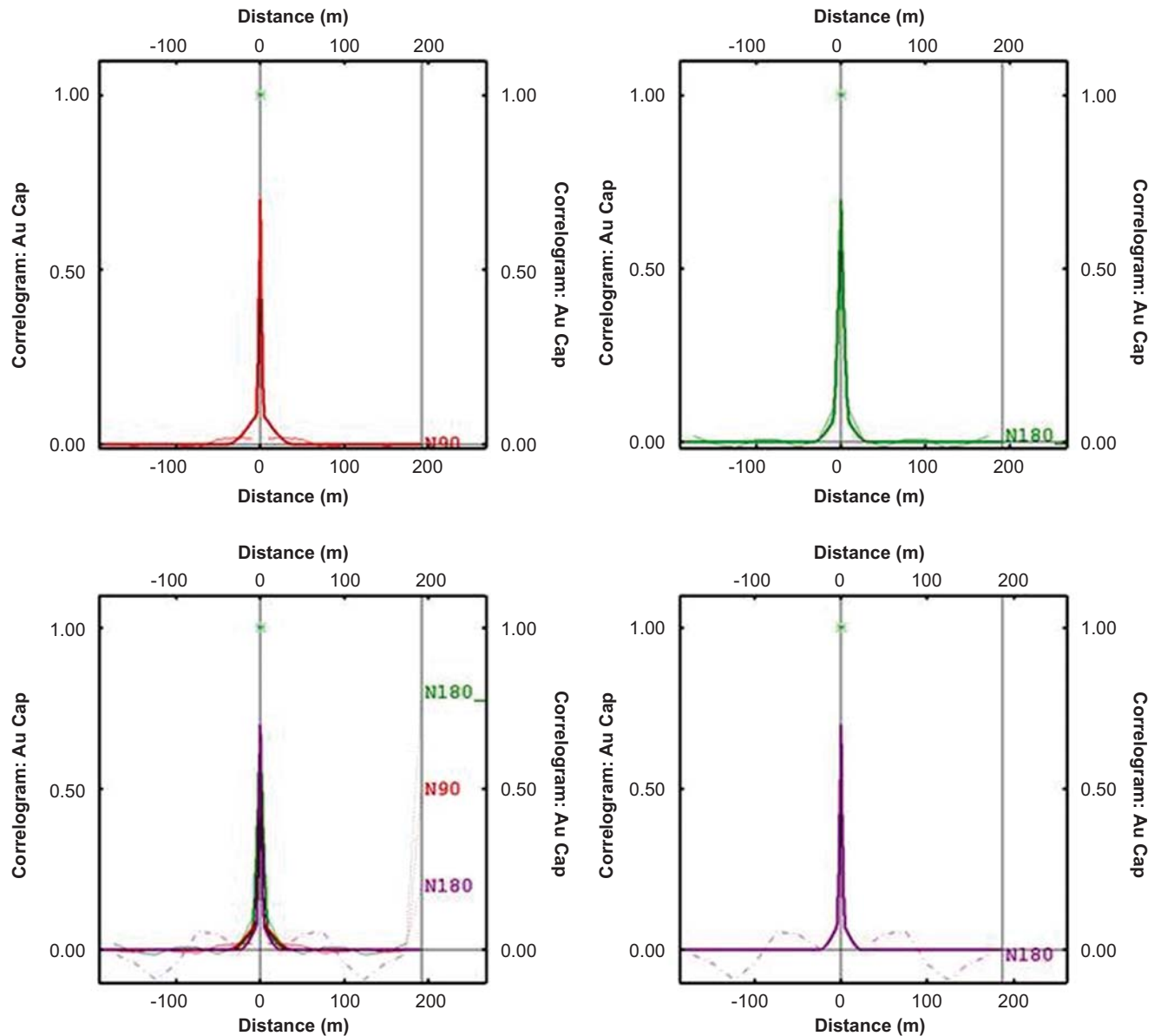


Figure 14-14

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
G Zone Correlogram

BLOCK MODEL

Two block models were created by Brio in Datamine to support the resource estimate, MFB and LGT. Tables 14-10 and 14-11 list the properties of the MFB and LGT block models, respectively.

Drill hole spacing defined a parent block size of 12.5 m x 12.5 m x 1 m (x, y and z). Irregular sized sub-blocks with minimum block size of 0.52 m x 0.52 m x 0.001 m were used at the solid envelope boundaries to give the appearance of a more accurate volume representation. The models are oriented with an azimuth of 0.0°, dip of 0.0°, and a plunge of 0.0°. The MFB model origin (lower-left corner at lowest elevation) is set at local coordinates 85,000 mE, 32,000 mN and -800 m elevation. The model contains 18,369,197 blocks. LGT model origin (lower-left corner at lowest elevation) is set at local coordinates 97,000 mE, 37,000 mN and -200 m elevation. This model contains 2,045,581 blocks.

RPA considers the MFB block model parameters to be acceptable but recommends that in future model updates the irregular sized sub-blocks be regularized to a multiple of the parent block size with minimum size being 1.0 m x 1.0 m x 0.5 m (x, y, and z).

TABLE 14-10 MFB - BLOCK MODEL PARAMETERS AND VARIABLES
Brio Gold Inc. – Fazenda Brasileiro Mine

	East (X)	North (Y)	Elevation (Z)
Minimum Coordinates	85,000	32,000	-800
Maximum Coordinates	94,562.5	34,700	450
Parent Block Size	12.5	12.5	1.0
Sub-Block Size	0.52	0.52	0.001
Rotation	Azimuth = 0° / Dip = 0° / Plunge = 0°		
Total Number of Blocks	18,369,197		

Variables	Default Value	Type	Description
xc	0	float	Datamine field : xc
yc	0	float	Datamine field : yc
zc	0	float	Datamine field : zc
xinc	12.5	float	Datamine field : xinc
yinc	12.5	float	Datamine field : yinc
zinc	1	float	Datamine field : zinc
ijk	0	float	Datamine field : ijk
rocktype	2	float	Datamine field : rocktype
mined	-99	float	Datamine field : mined
au_final	-99	float	Datamine field : au_final

Variables	Default Value	Type	Description
density	-99	float	Datamine field : density
ton	-99	float	Datamine field : ton
class	-99	float	Datamine field : class
xmorig	85000	float	Datamine field : xmorig
ymorig	32000	float	Datamine field : ymorig
zmorig	-800	float	Datamine field : zmorig
nx	765	float	Datamine field : nx
ny	216	float	Datamine field : ny
nz	1250	float	Datamine field : nz
rpa_buffer	-99	double	Buffer Zone
rpa_reserve_op	-99	double	Reserve Open Pit Flag
rpa_reserve_ug	-99	double	Reserve UG Flag
rpa_resource_ug	-99	double	Resource UG Flag
rpa_not_economic_or_mined	-99	double	Not Economic or Mined Flag
rpa_class	-99	integer	Class
rpa_categ	-99	integer	Category reserve or resource
rpa_resource_op	-99	double	Resource Open Pit Flag

TABLE 14-11 LGT - BLOCK MODEL SETUP
Brio Gold Inc. – Fazenda Brasileiro Mine

	East (X)	North (Y)	Elevation (Z)
Minimum Coordinates	97,000	37,000	-200
Maximum Coordinates	100,000	38,000	400
Parent Block Size	12.5	12.5	1
Sub-Block Size	0.52	0.52	0.001
Rotation	Azimuth = 0° / Dip = 0° / Plunge = 0°		
Total Number of Blocks	2,045,581		

Variables	Default Value	Type	Description
xc	0	float	Datamine field : xc
yc	0	float	Datamine field : yc
zc	0	float	Datamine field : zc
xinc	12.5	float	Datamine field : xinc
yinc	12.5	float	Datamine field : yinc
zinc	1	float	Datamine field : zinc
ijk	0	float	Datamine field : ijk
rocktype	4	float	Datamine field : rocktype
reman	0	float	Datamine field : mined
au_final	-99	float	Datamine field : au_final
density	-99	float	Datamine field : density
ton	-99	float	Datamine field : ton
class	-99	float	Datamine field : class
xmorig	97000	float	Datamine field : xmorig
ymorig	37000	float	Datamine field : ymorig

Variables	Default Value	Type	Description
zmorig	-200	float	Datamine field : zmorig
nx	240	float	Datamine field : nx
ny	80	float	Datamine field : ny
nz	600	float	Datamine field : nz
rpa_class	-99	double	Class
rpa_reserve_op	-99	double	Reserve Open Pit Flag
rpa_resource_ug	-99	double	Resource UG Flag
rpa_resource_op	-99	double	Resource Open Pit Flag
rpa_not_economic_or_mined	-99	double	Not Economic or Mined Flag

GRADE INTERPOLATION

Grade estimation was made on regular parent cell model using Isatis and then sub-blocked in Datamine using OK or ID² interpolation methods. Search ellipses were oriented along determined trends within the mineralized wireframes.

Table 14-12 presents the grade estimation parameter for OK and Table 14-13 presents the grade estimation parameter for ID². Due to the large number drill holes, most of the blocks and domains for MFB were estimated by OK, while LGT used ID² estimation.

TABLE 14-12 ORDINARY KRIGING GRADE ESTIMATION PARAMETERS
Brio Gold Inc. – Fazenda Brasileiro Mine

Target	Azimuth (°)	Dip (°)	Major Axis (m)	Semi- major Axis (m)	Minor Axis (m)	Min No. of Samples	No. of Sectors	No. of Samples per Sector	Min Distance between Samples (m)	Max No. of Empty Sectors	Min No. of Samples per Hole	Max No. of Samples per Hole
C	90	45	240	120	120	4	4	2	1	4	2	2
E	100	45	200	120	60	4	4	2	1	4	2	2
F	100	35	150	100	50	4	4	2	1	4	2	2
LGT	Omni-directional		50	50	50	4	4	2	1	4	2	2
Canto	75	45	100	35	35	4	4	2	1	4	2	2
G	90	45	50	40	30	4	4	2	1	4	2	2

TABLE 14-13 INVERSE DISTANCE GRADE ESTIMATION PARAMETERS
Brio Gold Inc. – Fazenda Brasileiro Mine

Target	Azimuth (°)	Dip (°)	Major Axis (m)	Semi- major Axis (m)	Minor Axis (m)	Min No. of Samples	No. of Sectors	No. of Samples per Sector	Min Distance between Samples (m)	Max No. of Empty Sectors	Min No. of Samples per Hole	Max No. of Samples per Hole
C	90	45	400	200	200	3	4	2	1	4	2	2
E	100	45	400	250	100	3	4	2	1	4	2	2
F	100	35	300	200	100	3	4	2	1	-	2	2
LGT	Omni-directional		350	300	200	3	4	2	1	-	2	2
Canto	75	45	300	100	100	3	4	2	1	4	2	2
G	90	45	300	200	100	3	4	2	1	4	2	2

BLOCK MODEL VALIDATION

RPA validated the block model by visual inspection, volumetric comparison, statistical comparison of composite versus block grades, and reviewing swath plots. Visual comparison on vertical sections and plan views, statistical analysis, and a series of swath plots found good overall correlation between the block grade estimates and supporting composite grades.

VOLUME COMPARISON

Wireframe volumes were compared to block volumes for each domain at MFB. This comparison is summarized in Table 14-14 and results show good agreement between the wireframe volumes and block model volumes within the buffer zones for C, E, F, and G zones. The differences range from less than one to 10%. Volume differences within the LGT and Canto zones are attributed to wireframes not being completely filled with blocks.

TABLE 14-14 VOLUME COMPARISON
Brio Gold Inc. – Fazenda Brasileiro Mine

Domain	# Points	# Triangles	Surface Area (m ²)	Wireframe Volume (m ³)	Block Model Volume (m ³)	%Δ
1511_FBDM_C (non buffer).00t	157,121	315,340	1,936,568	1,694,192	1,348,203	79.58%
1511_FBDM_C (buffer zone).00t	48,742	97,290	554,012	568,490	518,884	91.27%
1511_FBDM_C_Rev1.00t	141,389	282,414	2,393,124	2,262,832	1,867,087	82.51%
1511_FBDM_E (non buffer).00t	104,821	209,436	1,486,576	1,239,385	1,220,944	98.51%
1511_FBDM_E (buffer zone).00t	67,350	134,564	878,979	782,315	800,802	102.36%
1511_FBDM_E_rev1.00t	117,121	234,516	2,318,222	2,021,711	2,021,746	100.00%
1511_FBDM_F (non buffer).00t	39,832	79,688	783,982	530,256	363,698	68.59%
1511_FBDM_F (buffer zone).00t	24,768	49,540	427,468	451,389	410,365	90.91%
1511_FBDM_F.00t	48,315	96,692	1,196,155	981,647	774,063	78.85%
1511_FBDM_LGT.00t	51,686	103,352	1,438,450	772,440	546,175	70.71%
1511_FBDM_Canto.00t	24,758	49,478	424,853	464,726	240,573	51.77%
1511_FBDM_G (non buffer).00t	20,030	40,088	266,792	212,506	210,576	99.09%
1511_FBDM_G (buffer zone).00t	10,046	20,056	87,542	75,397	74,559	98.89%
1511_FBDM_G.00t	18,202	36,492	344,807	287,904	285,135	99.04%

VISUAL COMPARISON

Block grades were visually compared with drill hole composites on cross-sections, longitudinal sections, plan views, and swath plots. The block grades and composite grades correlate very well visually within the MFB block models. Figures 14-15 through 14-20 show the swath plots for the individual zones.

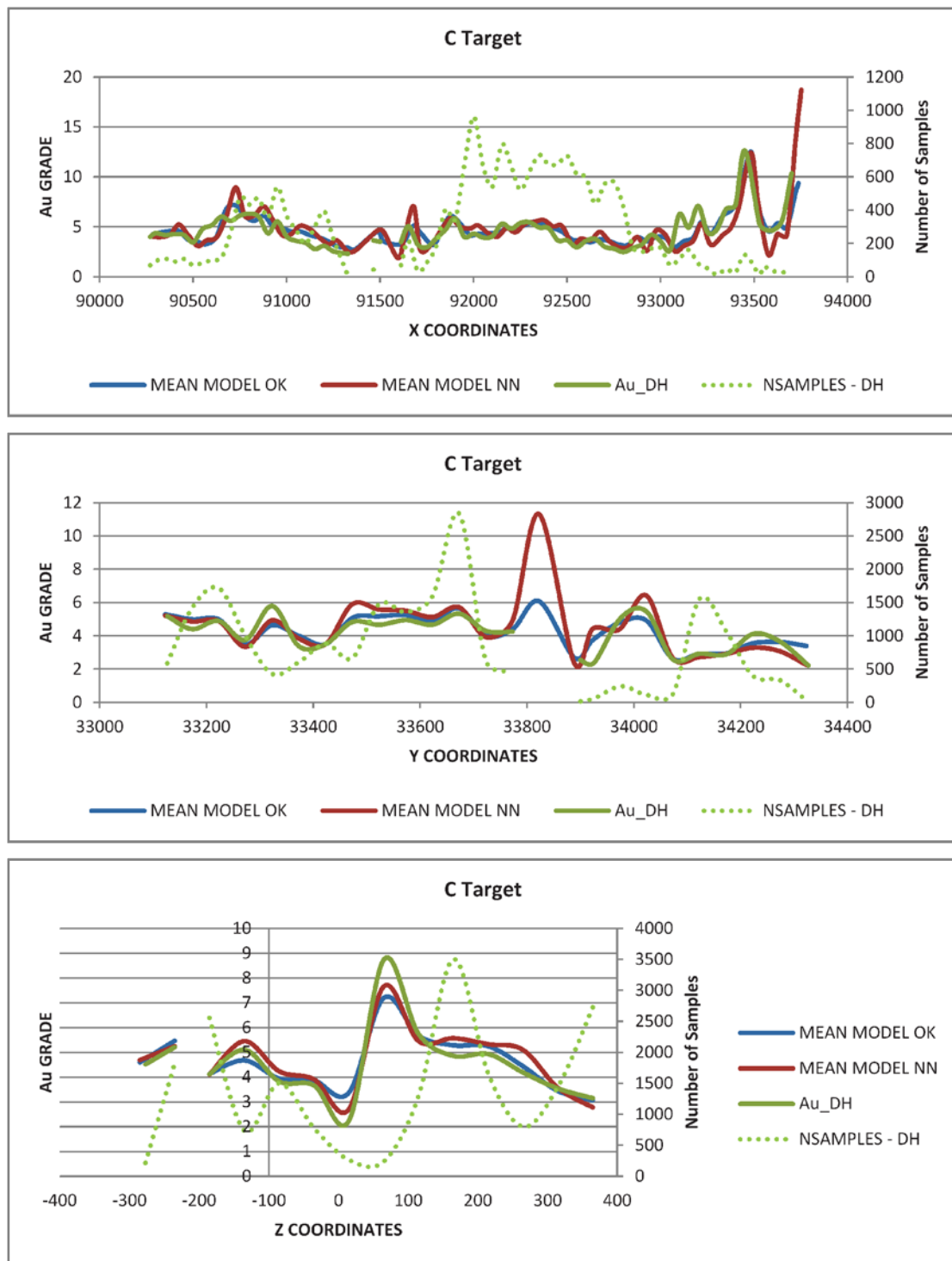


Figure 14-15

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Swath Plot for C Zone

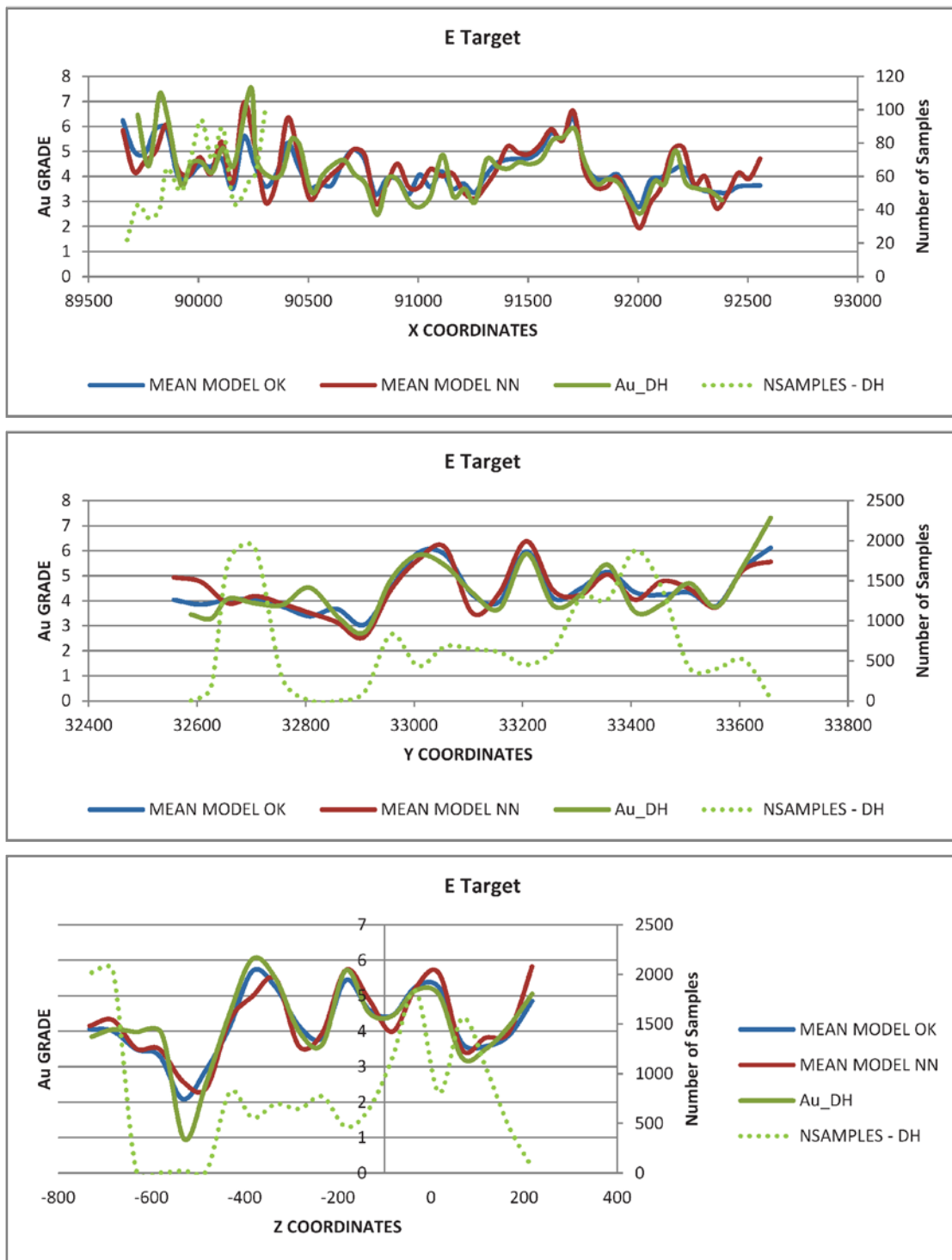


Figure 14-16

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Swath Plot for E Zone

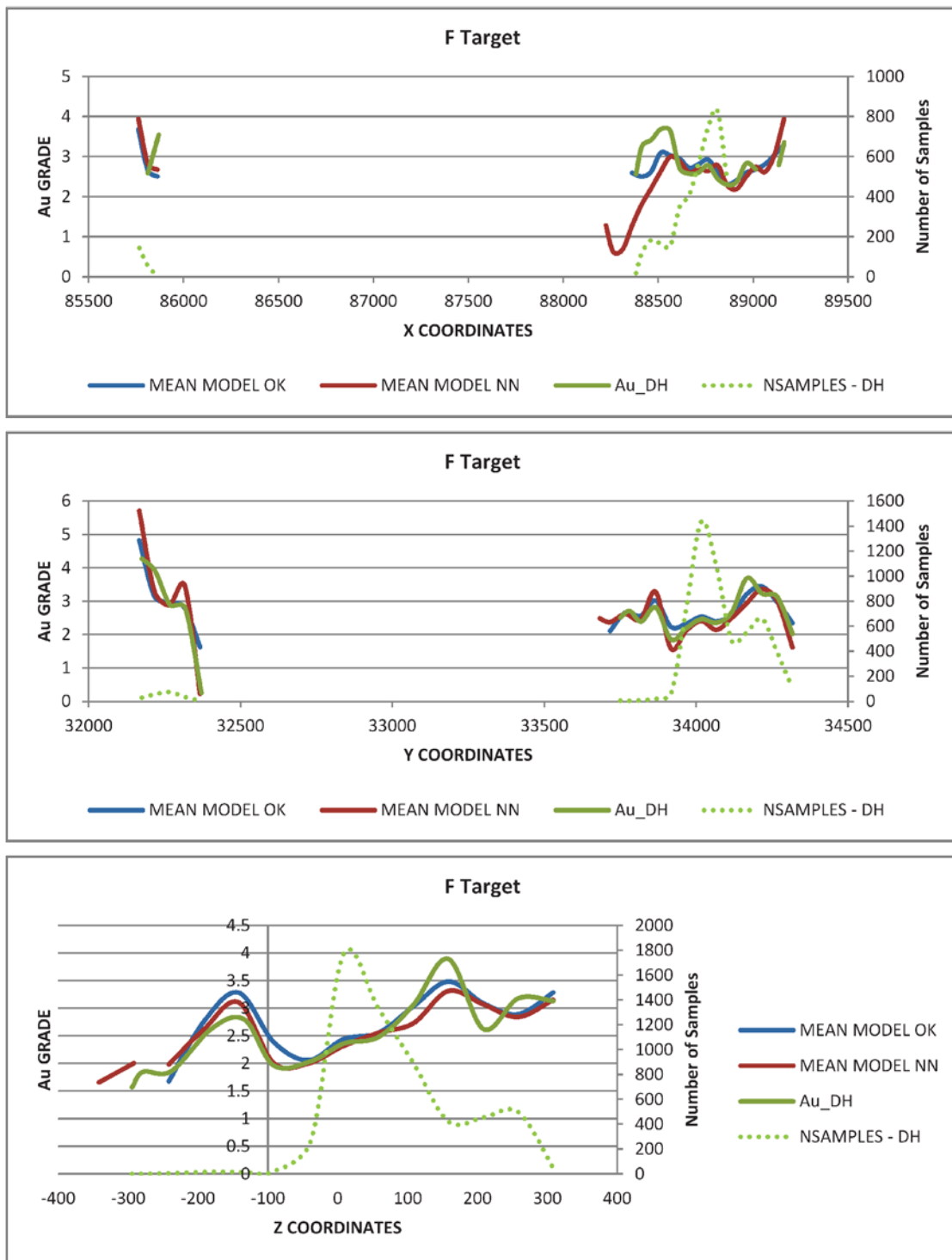


Figure 14-17

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Swath Plot for F Zone

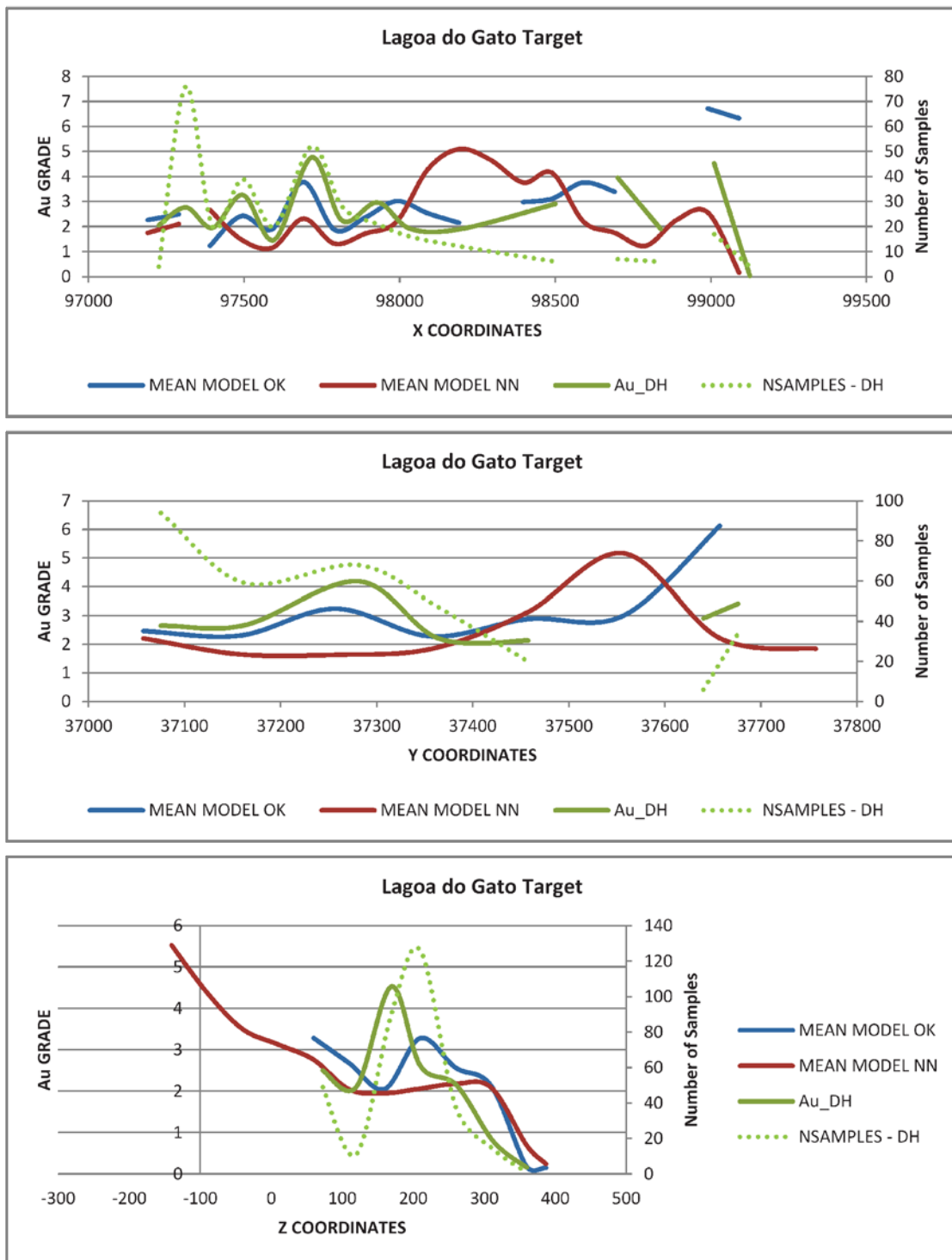


Figure 14-18

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Swath Plot for LGT Zone

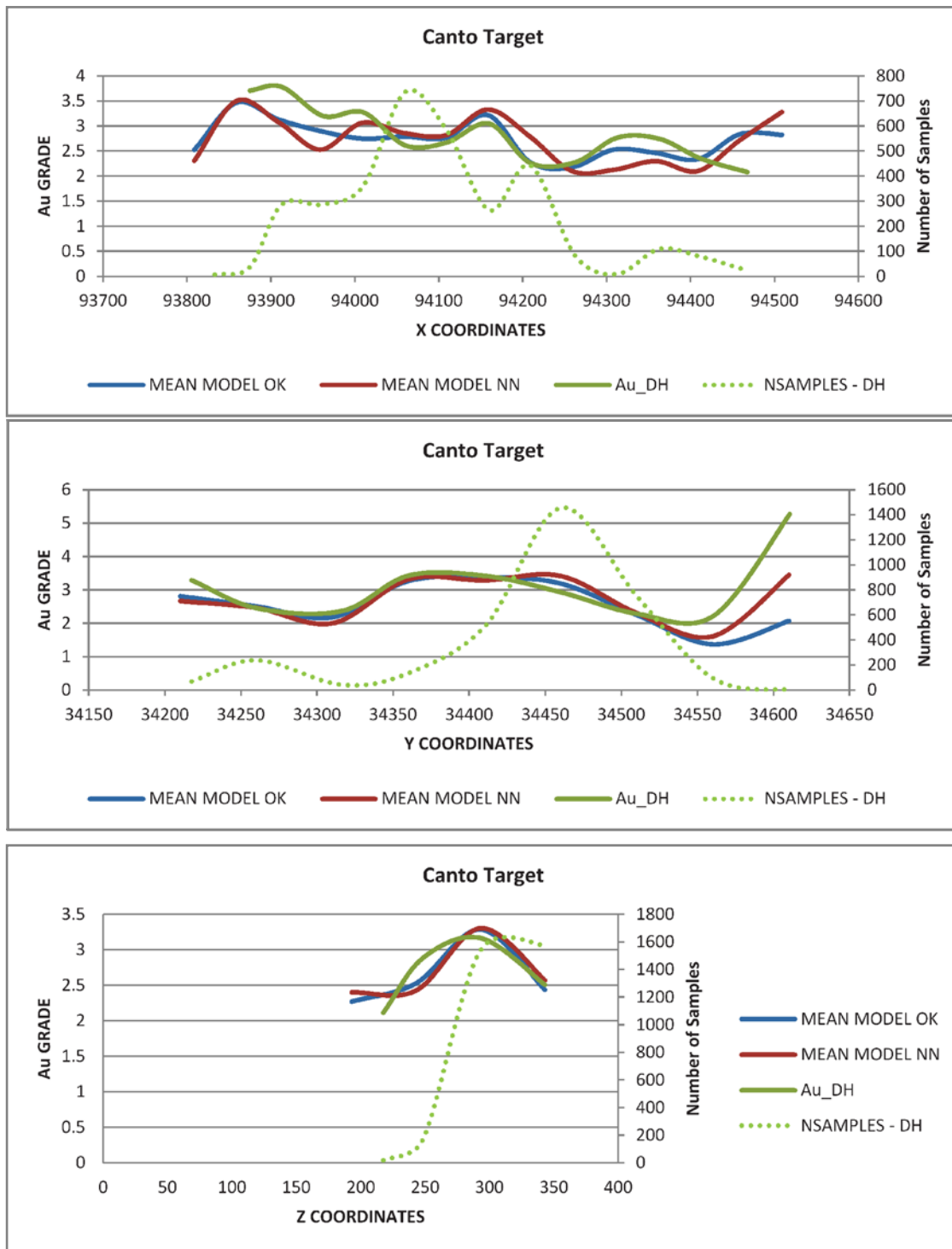


Figure 14-19

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Swath Plot for Canto Zone

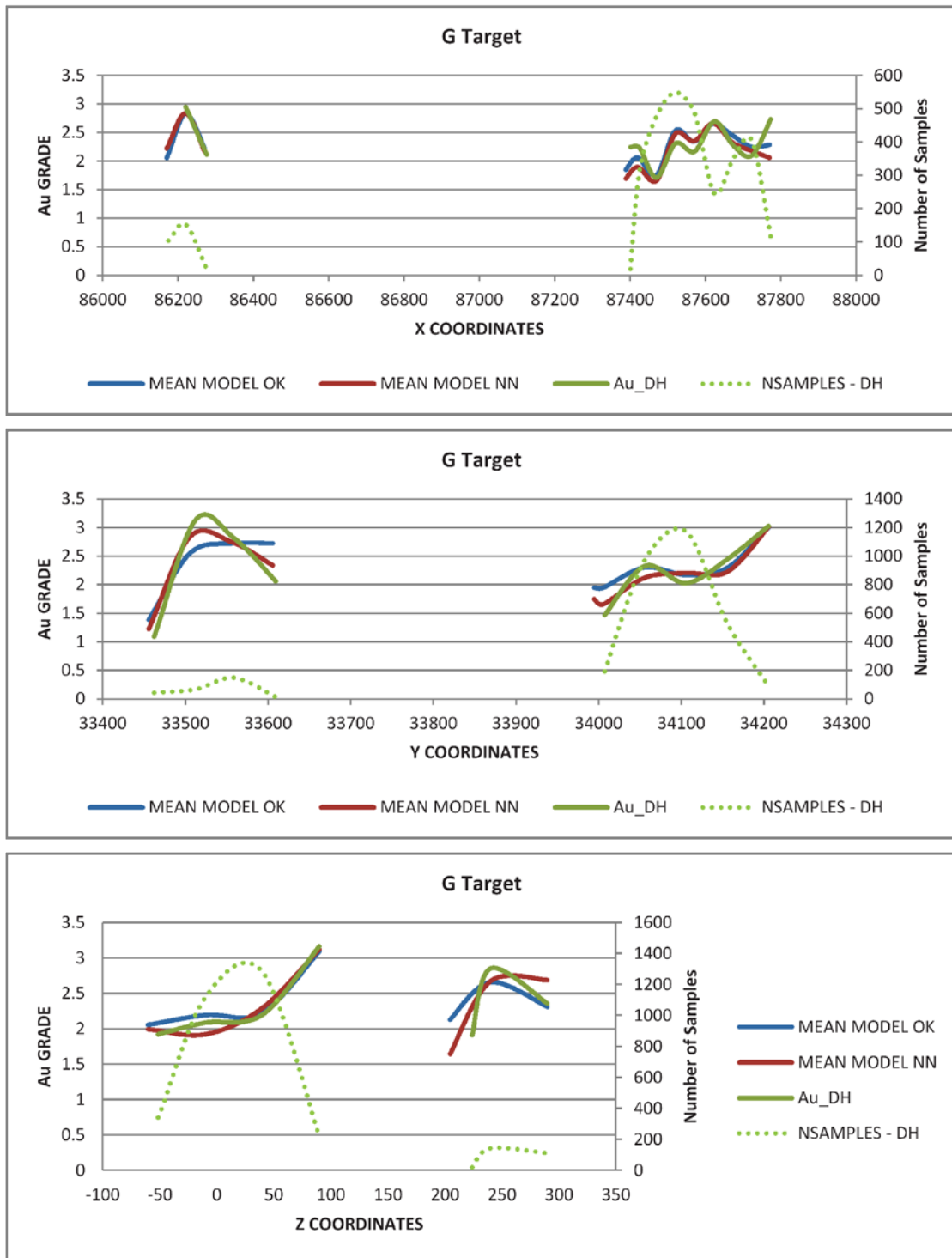


Figure 14-20

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Swath Plot for G Zone

STATISTICAL COMPARISON

Statistics of the block grades are compared with statistics of composite grades in Table 14-15 for all blocks and composites within the MFB and LGT domains.

TABLE 14-15 STATISTICS OF BLOCK GRADES COMPARED TO COMPOSITE GRADES BY DOMAIN
Brio Gold Inc. – Fazenda Brasileiro Mine

Domain	C Zone		E Zone		F Zone	
	Comps	Block	Comps	Block	Comps	Block
Count	19,862	8,292,191	15,831	4,975,531	5,770	3,447,710
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	70.00	34.25	80.00	25.21	30.00	11.02
Mean	4.33	4.63	4.29	4.07	2.69	2.53
Stdev	6.73	2.76	6.46	1.89	3.32	1.19
Variance	45.29	7.62	41.74	3.56	11.05	1.43
CV	1.55	0.60	1.51	0.46	1.24	0.47

Domain	LGT Zone		Canto Zone		G Zone	
	Comps	Block	Comps	Block	Comps	Block
Count	328	2,045,581	3,315	1,302,316	3,242	351,449
Minimum	0.03	0.00	0.00	0.00	0.00	0.00
Maximum	20.00	11.57	28.00	10.52	30.00	12.53
Mean	2.97	2.00*	2.83	2.61	2.23	2.29
Stdev	3.54	2.02	2.91	1.02	2.97	1.05
Variance	12.56	4.09	8.45	1.05	8.83	1.11
CV	1.19	1.01	1.03	0.39	1.34	0.46

Note:

* The difference in the mean values for LGT is due to the fact that the composite database is calculated with all of the drilling in the area, while the block model values is based on only those values that have not been depleted by open pit.

RPA considers the MFB block model estimates to be acceptable.

CLASSIFICATION

The MFB Mineral Resources have been classified by Brio as Measured, Indicated, or Inferred Resources. The resource classification was based on the number of samples and distance to drill holes used to estimate a block within a certain range. A good criterion to ensure that the distance to drill holes is appropriate is to use the range of the correlogram, as this establishes spatial continuity of a variable:

- Measured Resource - 50% of the gold correlogram range and at least eight samples and four holes.
- Indicated Resource - 100% of the gold correlogram range and at least eight samples and four holes.
- Inferred Resource - remaining blocks.

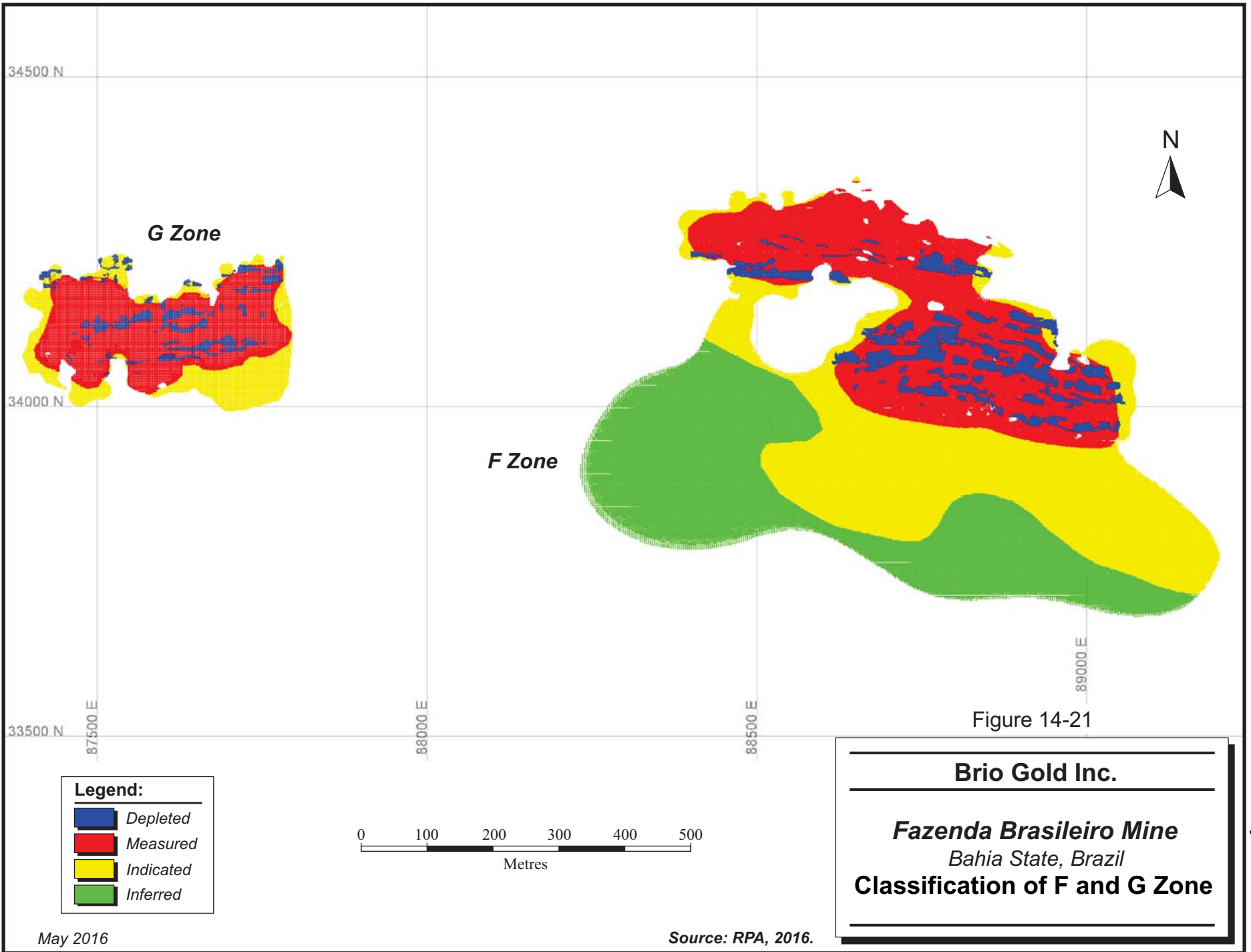
Each target was considered as independent for estimation and classification as listed in Table 14-16. After the classification was completed, the Brio geologist made a manual review of blocks by applying a smoothing envelope along the edges to eliminate any inconsistencies. Figure 14-21 shows the classification for the F and G zones.

TABLE 14-16 CORRELOGRAM RANGE USED FOR CLASSIFICATION
Brio Gold Inc. – Fazenda Brasileiro Mine

Target	Measured Classification		% of Blocks Classified within a 25 m Grid	Search Range (m)		
	Min Samples	Min Drill Holes		X	Y	Z
C	8	4	92	100	50	50
E	8	4	90	80	50	25
F	8	4	60	60	40	20
LGT	8	4	19	20	20	20
Canto	8	4	85	40	17	15
G	8	4	99	20	17	12

Target	Indicated Classification		% of Blocks Classified within a 50 m grid	Search Range (m)		
	Min Samples	Min Drill Holes		X	Y	Z
C	8	4	100	200	100	100
E	8	4	97	160	100	50
F	8	4	79	120	80	40
LGT	8	4	40	40	40	40
Canto	8	4	99	80	34	30
G	8	4	100	40	34	24

RPA considers the Mineral Resource classification of the MFB zones to be appropriate and consistent with those defined by CIM (2014) and adopted by NI 43-101.



CUT-OFF GRADE AND DEPLETION

After completing all final modelling routines (classification), estimations, data and geostatistical analysis, Brio geologists depleted the wireframes from all known mined areas by flagging blocks in those areas as “mined”. These blocks were excluded from final resource estimate.

The model(s) were then passed to the Reserves Team to evaluate all the resources with the Mineable Shape Optimizer (underground) or NPV (open pits) Datamine software routines to determine what is economic to be mined without mine sequencing.

Following this phase, the underground stope development and open pit models were delivered to the Resources Team, which created a new “Buffer Zone” wireframe (seven metre wide extension around the stopes). All blocks outside of this buffer zone were then flagged as “Not Economic” and removed from the final resource estimate.

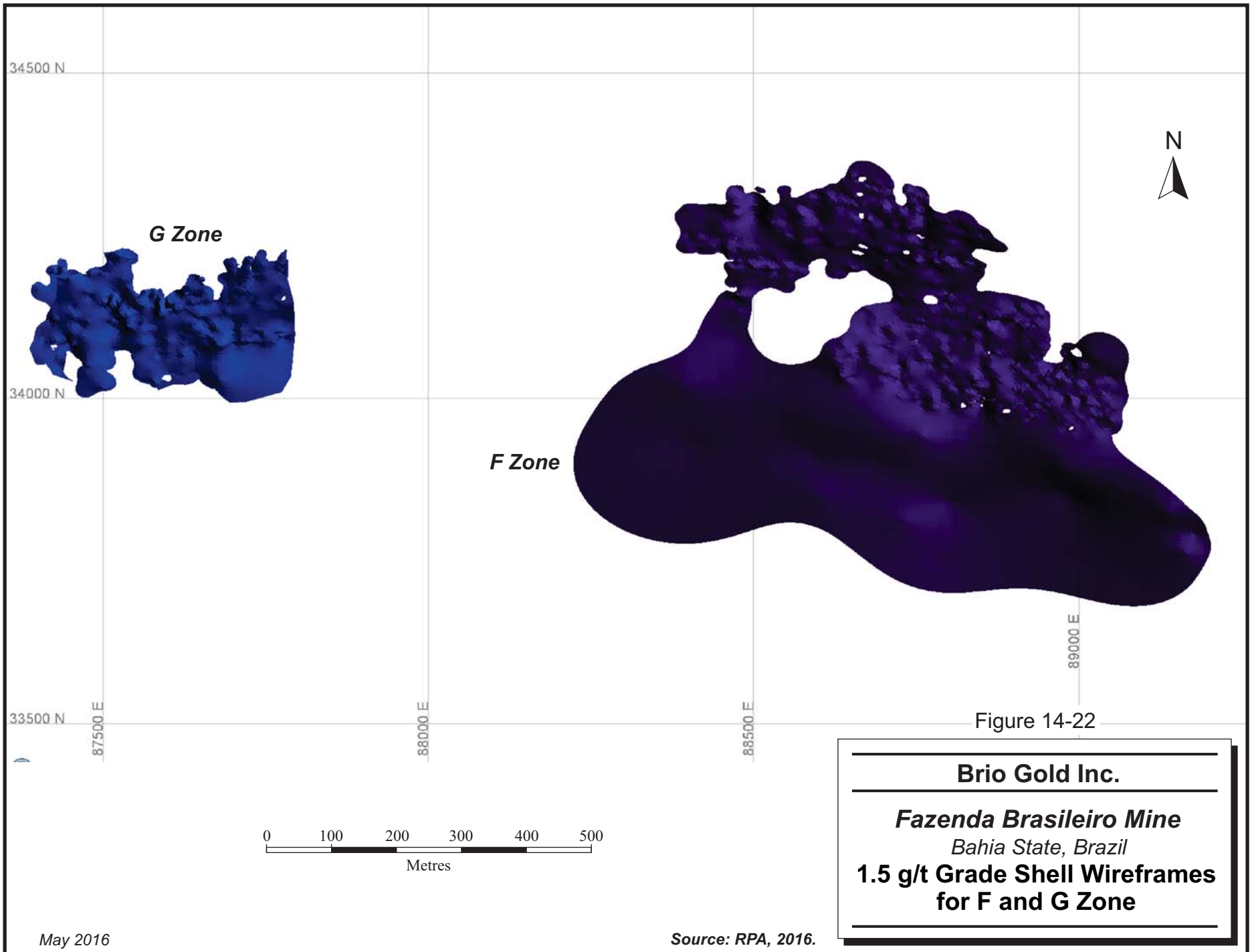
For the MFB zones, a conceptual open pit optimization using US\$1,500/oz of Au was used to constrain the resources close to the surface, at an open pit cut-off grade of 0.5 g/t Au. The underground resources were reported at a 0.5 g/t Au cut-off grade to represent potential underground mining.

Listed below are the steps performed to prepare the final Mineral Resource and Mineral Reserve estimates for MFB.

1. Build original wireframes using 1.5 g/t cut-off for underground and 0.5 g/t cut-off for open pit. (Figure 14-22).
2. Estimate block grade using OK or ID².
3. Classify blocks as Measured, Indicated, or Inferred Mineral Resources
4. Deplete the model from mined volumes by flagging blocks as “mined” and exclude these from resource estimate.
5. Develop economic criteria, economic stopes, drifts, and open pits (Figure 14-23).
6. Create an economic “buffer zone” wireframe (Figure 14-24).
7. Flag all blocks outside the buffer zone as “Not Economic” and exclude them from the resource estimate (Figure 14-25).

8. Complete reserve and resource estimates (Figure 14-26):
 - a. Underground reserves are flagged inside the buffer zones and within the stopes/drifts (1.06 g/t cut-off grade)
 - b. Underground resources are flagged outside the stopes but within the buffer zone and contained in the original wireframe (0.5 g/t cut-off grade)
 - c. Open pit resources are flagged using \$1,500/oz (0.5 g/t cut-off grade)
 - d. Open pit reserves are flagged using \$1,150 oz (0.4 g/t cut-off grade)
9. Calculate waste tonnage using volume of stopes/drifts which do not have associated blocks and are outside the original wireframes (step 1) and multiplying them by the appropriate bulk density value.
10. Remove pillar material which needs to remain in place from the final resource estimate.

RPA considers the MFB mine block model estimates to be acceptable. RPA considers the waste tonnage calculation to be acceptable but recommends that in the future the waste volume(s) should be filled with blocks with an assigned grade value of zero for reconciliation.



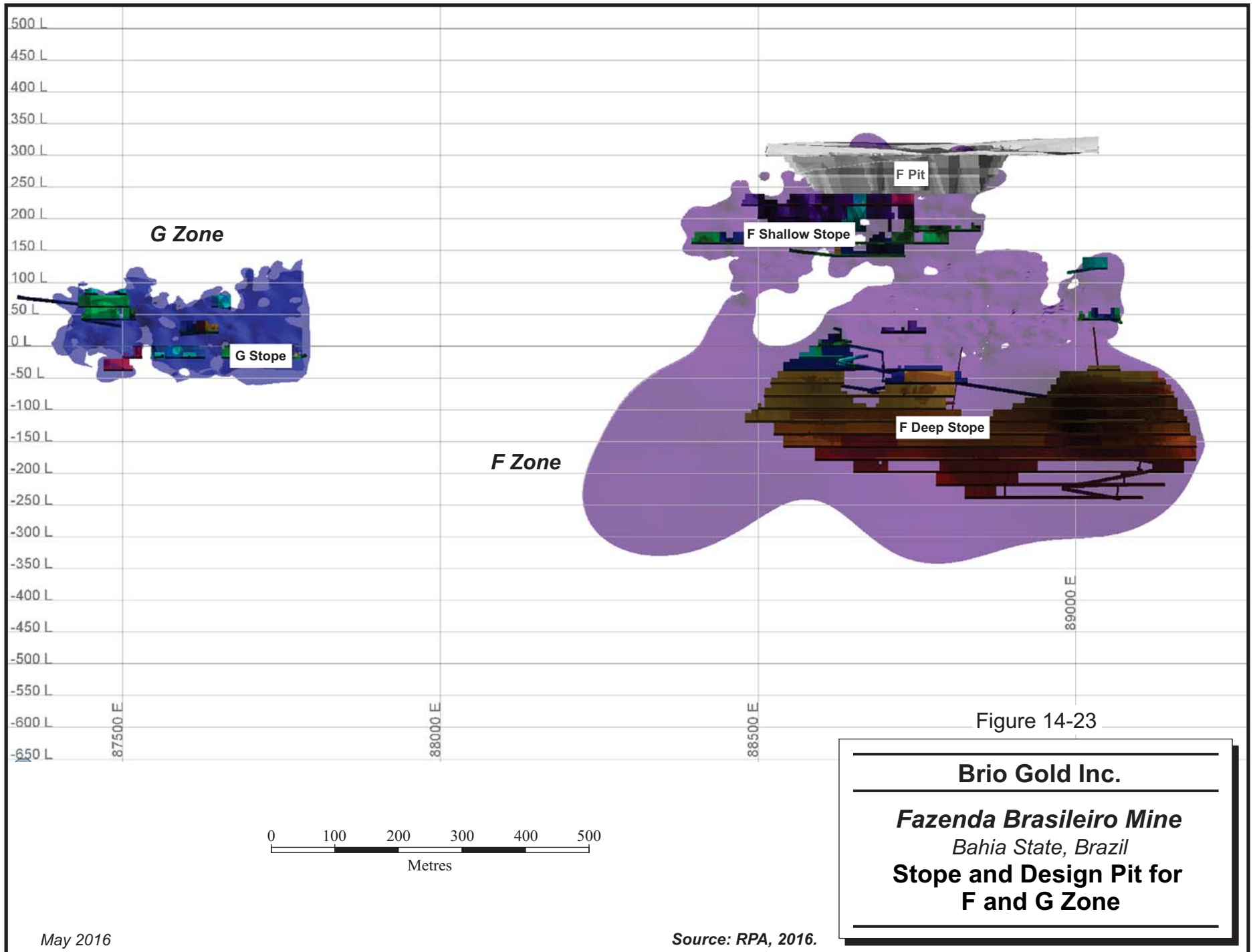
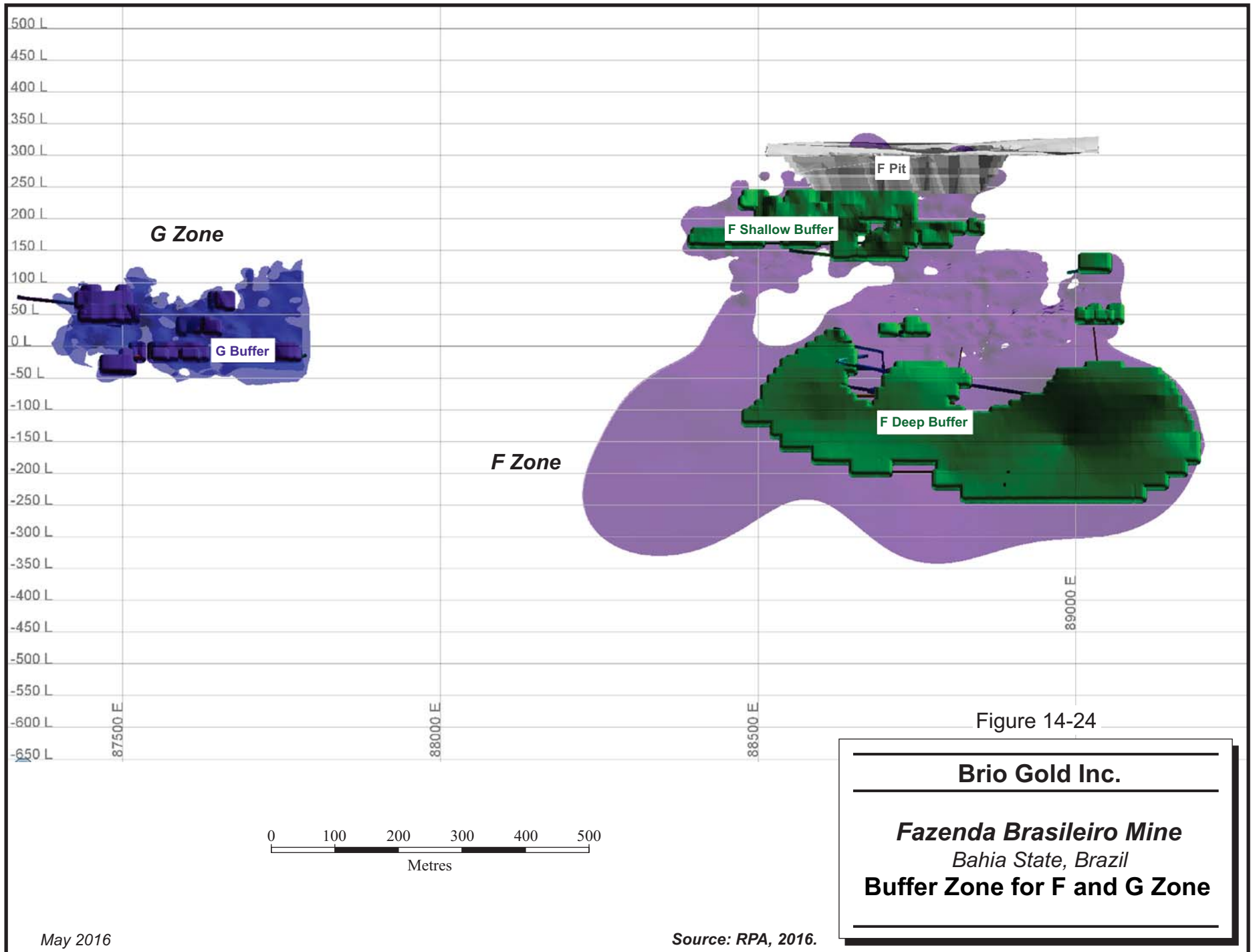


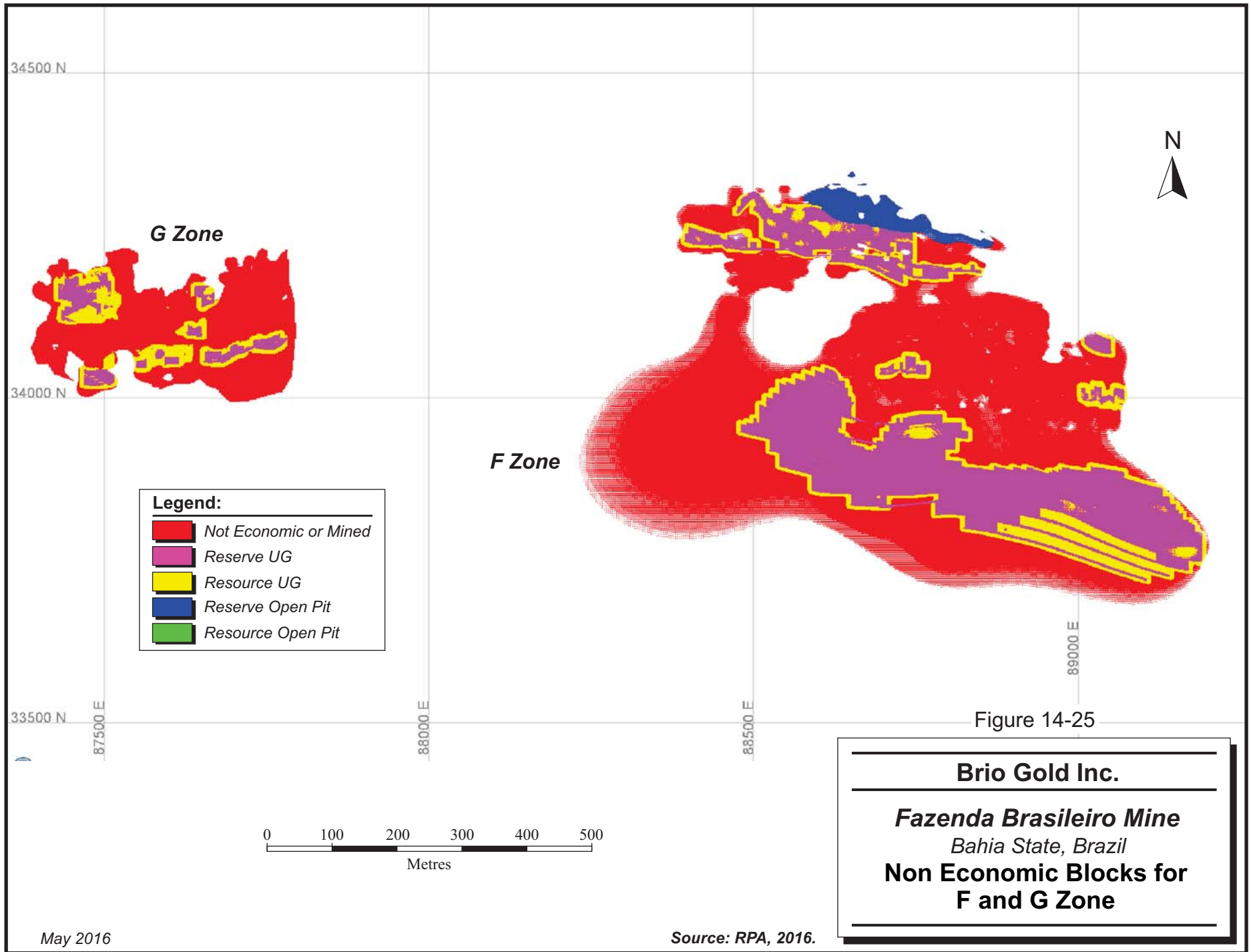
Figure 14-23

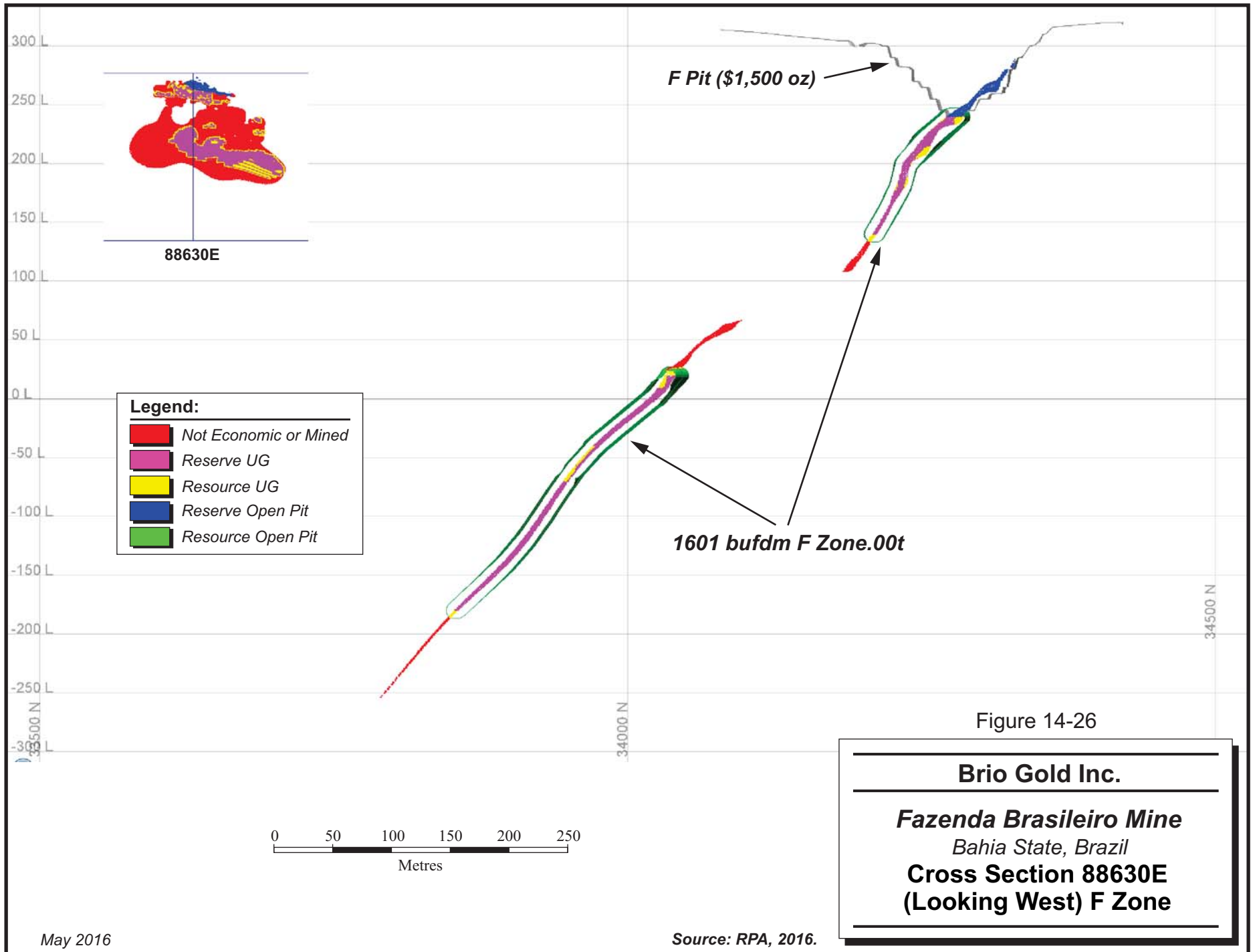
Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil

**Stope and Design Pit for
F and G Zone**







MINERAL RESOURCE REPORTING

A summary of the Mineral Resource estimate as of December 31, 2015 for MFB is provided in Tables 14-17 and 14-18.

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

TABLE 14-17 MFB MINERAL RESOURCES AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Category	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Measured			
Underground	1,250	4.01	161
Open Pit	290	3.24	30
Total Measured	1,539	3.86	191
Indicated			
Underground	342	3.23	35
Open Pit	30	2.32	2
Total Indicated	372	3.15	38
Measured + Indicated			
Underground	1,592	3.84	197
Open Pit	320	3.15	32
Total Measured + Indicated	1,912	3.72	229
Inferred			
Inferred – Underground	840	2.2	60
Inferred – Open Pit	180	5.3	30
Total Inferred	1,020	2.8	90

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are reported at a cut-off grade of 0.5 g/t Au.
3. Mineral Resources are exclusive of Mineral Reserves.
4. Mineral Resources are estimated using a gold price of US\$1,500 per ounce and a US\$/R\$ exchange rate of RL\$3.8 = US\$1.00.
5. A minimum mining width of 3.0 m was used for underground Mineral Resources.
6. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
7. Numbers may not add due to rounding.

TABLE 14-18 MINERAL RESOURCE SUMMARY BY ZONE AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Orebody	Tonnage (000)	Measured		Tonnage (000)	Indicated		Tonnage (000)	Inferred	
		Grade (g/t Au)	Contained Metal (000 oz Au)		Grade (g/t Au)	Contained Metal (000 oz Au)		Grade (g/t Au)	Contained Metal (000 oz Au)
Underground									
C Target	426	4.58	63	57	4.11	7	0	0.00	0
E Target	616	4.14	82	160	3.54	18	0	0.00	0
F Target	102	2.94	10	113	2.32	9	266	1.23	11
LGT Target	0	0.00	0	0	0.00	0	574	2.68	50
Canto Target	0	0.00	0	0	0.00	0	0	0.00	0
G Target	106	1.99	7	13	2.19	1	0	0.00	0
Total Underground	1,250	4.01	161	342	3.23	35	840	2.22	60
Open Pit									
C Target	187	3.52	21	0	6.38	0	0	0.00	0
E Target	0	0.00	0	0	0.00	0	0	0.00	0
F Target	5	3.82	1	0	0.00	0	0	0.00	0
LGT Target	0	0.00	0	0	0.00	0	180	5.27	31
Canto Target	57	2.64	5	21	2.36	2	0	0.00	0
G Target	41	2.68	4	10	2.21	1	0	0.00	0
Total Open Pit	290	3.23	30	30	2.32	2	184	5.26	31
TOTAL UG + OP	1,539	3.86	191	372	3.15	38	1,020	2.77	91

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Underground Mineral Resources are reported at a cut-off grade of 0.5 g/t Au.
3. Mineral Resources are exclusive of Mineral Reserves.
4. Open Pit Mineral Resources are estimated using a short-term gold price of US\$1,500 per ounce.
5. A minimum mining width of 3.0 m was used for underground Mineral Resources.
6. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
7. Numbers may not add due to rounding.

15 MINERAL RESERVE ESTIMATE

RPA has reviewed the Mineral Reserve estimates for five mineralization zones at MFB. RPA visited the site, met with management, and carried out a number of checks to verify the procedures and numerical calculations used by Brio in the preparation of the MFB Mineral Reserve estimate.

The Mineral Reserves were estimated using a cut-off grade of 1.06 g/t Au for underground operations and 0.40 g/t Au for open pit operations.

For underground reserves, Yamana followed a three step process:

1. Design a reserve envelope based on Indicated Mineral Resources using a cut-off grade of 1.06 g/t Au using the Mineable Shape Optimizer (MSO) mine design software package. The reserve envelopes are composed of stopes respecting such operating factors as planned dilution, hydraulic radius, slot raise 45°, etc.
2. Yamana prepares a development and stoping design for each of the areas being evaluated (declines, access drifts, ventilation raises, etc).
3. An economic evaluation of each stope is prepared. If the cash flow is positive, the stopes are added to the Mineral Reserve.

Table 15-1 summarizes the December 31, 2015 Mineral Reserves. Table 15-2 summarizes the December 31, 2015 Mineral Reserves by zone.

TABLE 15-1 MINERAL RESERVE SUMMARY AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Category	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Proven			
Underground	4,000	1.94	249
Open Pit	599	1.94	37
Sub-total Proven	4,599	1.94	286
Probable			
Underground	1,875	1.74	105
Open Pit	22	1.79	1
Sub-total Probable	1,897	1.74	106
Total Proven & Probable	6,496	1.88	392

Notes:

1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are reported at a cut-off grade of 1.06 g/t Au for underground and 0.40 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US\$1,150 per ounce and a US\$/R\$ exchange rate of RL\$3.8 = US\$1.00.
4. A minimum mining width of 3.0 m was used for underground Mineral Reserves.
5. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
6. Numbers may not add due to rounding.

TABLE 15-2 MINERAL RESERVE SUMMARY BY ZONE AS OF DECEMBER 31, 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Category	Zone	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Proven	Underground			
	C	1,390	2.04	91
	E	2,222	1.94	139
	F	266	1.64	14
	G	121	1.27	5
	Sub-Total Underground	4,000	1.94	249
	Open Pit			
	C	122	2.31	9
	F	170	1.33	7
	Canto	307	2.14	21
	Sub-Total Open Pit	599	1.94	37

Category	Zone	Tonnage (000)	Grade (g/t Au)	Contained Metal (000 oz Au)
Probable	Underground			
	C	267	2.22	19
	E	543	1.82	32
	F	1,057	1.57	53
	G	8	1.48	0
	Sub-Total Underground	1,875	1.74	105
	Open Pit			
	C			
	F	3	1.30	0
	Canto	19	1.87	1
	Sub-Total Open Pit	22	1.79	1
Total Proven and Probable		6,496	1.88	392

Notes:

1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are reported at a cut-off grade of 1.06 g/t Au for underground and 0.40 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US\$1,150 per ounce and a US\$/R\$ exchange rate of R\$3.8 = US\$1.00.
4. A minimum mining width of 3.0 m was used for underground Mineral Reserves.
5. Bulk density ranges from 2.92 t/m³ to 3.00 t/m³.
6. Numbers may not add due to rounding.

CUT-OFF GRADE

Brio estimates the cut-off grade (COG) based upon projected budget costs and metal prices as set by Yamana. Metal prices used by Yamana in estimating the Mineral Reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources.

Cut-off grades are estimated on both a fully costed basis and an incremental basis. The COG calculations are shown in Table 15-3 and 15-4 for underground and open pit mining, respectively.

RPA concurs with the form of the COG estimation and notes that the December 2015 year to date (YTD) costs are 21% higher than the projected unit costs used to calculate the COG. Unit operating costs in 2015 were based on a less favourable exchange rate of US\$1 = R\$3.3, whereas, the higher exchange rate used by MFB to calculate the underground COG (US\$1 = R\$3.8) accounts for the difference between projected unit operating costs and 2015 actual unit

costs. When the 2015 unit costs are adjusted to the higher exchange rate, the COGs calculated by MFB are comparable.

TABLE 15-3 CUT-OFF GRADE CALCULATIONS
Brio Gold Inc. – Fazenda Brasileiro Mine

		RPA 2015 YTD	RPA Adjusted	MFB
Au price	\$/oz	1,150	1,150	1,150
Au recovery	%	91	91	91
value/gram	\$/g	33.65	33.65	33.65
less mining royalty (1%)	\$/g	0.34	0.34	
net \$/gram	\$/g	33.31	33.31	33.65
Operating Cost				
Mine	\$/t	20.38	17.86	13.52
Process	\$/t	12.48	10.94	8.49
G&A	\$/t	3.65	3.20	8.46
Total	\$/t	36.51	31.99	30.47
COG (Mill Feed)	g/t		0.96	0.91
COG (In-Situ)	g/t		1.14	1.06

The open pit COG calculations are shown in Table 15-4.

TABLE 15-4 OPEN PIT CUT-OFF GRADE ESTIMATION
Brio Gold Inc. – Fazenda Brasileiro Mine

		RPA 2015 YTD	RPA Adjusted	MFB
Au price	\$/oz	1,150	1,150	1,150
Au rec	%	91	91	91
value/g	\$/g	33.65	33.65	33.65
less mining royalty (1%)	\$/g	0.34	0.34	
net \$/gram	\$/g	33.31	33.31	33.65
Operating Cost				
Mine	\$/t	1.89	1.66	3.35
Process	\$/t	12.48	10.94	8.49
Total	\$/t	14.37	12.60	11.84
COG	g/t	0.43	0.38	0.40

DILUTION AND EXTRACTION

The process of mining factors analysis is based on the comparison between the estimated and actual tonnage and grades produced. This information is provided by Brio and presented in a series of spreadsheets on a monthly basis to determine the dilution and recovery factors.

For the open pits, dilution is calculated by comparing actual excavation volumes with those predicted from the pit shell designs.

For the underground mine, the dilution is calculated by the ratio of overbreak volume and stope ore volume. Reconciliation of planned stope tonnes to actual mined is based on measurements taken in the mining stopes using a Cavity Monitoring Systems (CMS) and production records.

Based on local experience, the quantity of dilution is related to the geo-mechanical properties of the stope, as expressed as the Hydraulic Radius. This information is used in economic analysis to optimize the stope dimensions. The stope design criteria seeks to establish the highest recovery with the least possible dilution, with the main objective of ensuring the stability of underground openings and to minimize unplanned dilution, beyond the use of slab model (Figure 15-1).

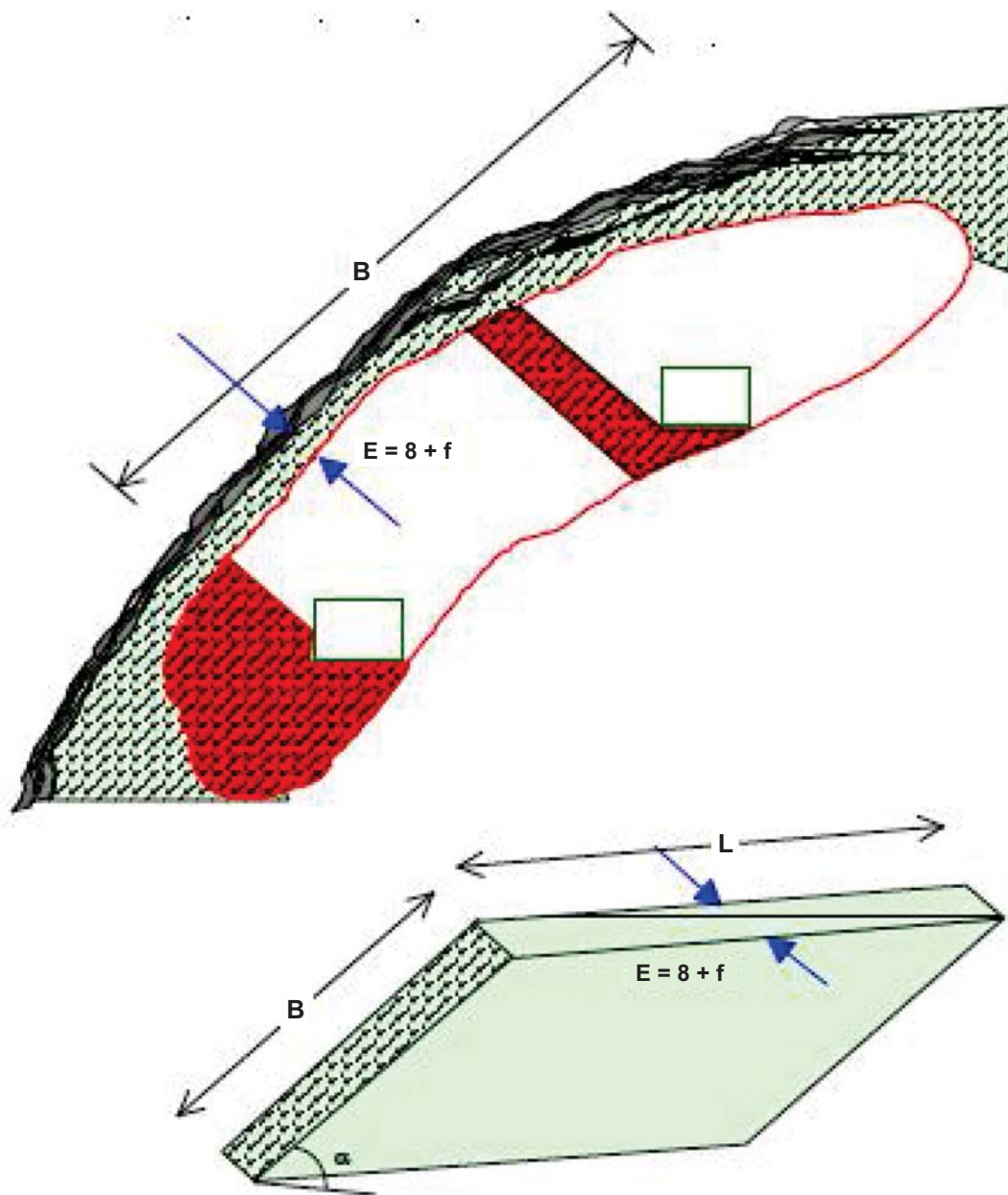


Figure 15-1

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil

Slab Model Stope Design Model

The underbreak is an effective estimate of ore loss or ore recovery and overbreak is an effective measure of ore dilution. Typical mining recovery and dilution parameters that were applied to the Mineral Resources in the stope design process are shown in Table 15-5.

TABLE 15-5 RECOVERY AND EXTERNAL DILUTION FACTORS BY RESOURCE AREA (UNDERGROUND)
Brio Gold Inc. – Fazenda Brasileiro Mine

Orebody Name	Under Break %	Mine Recovery	Over Break %	Dilution %
C	9%	91%	14%	86%
E	9%	91%	14%	86%
F	11%	89%	20%	80%
G	9%	91%	14%	86%

In specific areas of the deposit, a lower mining recovery was applied to account for weaker ground or adverse structural features which resulted in a lower hydraulic radius requiring that additional pillars be left to maintain overall stability. These are shown in Table 15-6 below.

TABLE 15-6 EXTRA-ORDINARY RECOVERY FACTORS APPLIED TO SPECIFIC RESOURCE AREAS (UNDERGROUND)
Brio Gold Inc. – Fazenda Brasileiro Mine

Panel Name	Mine Recovery
C220	85%
C560	85%
CDeep	85%
E388	85%
Er4	85%
FDeep	83%
FShallow	83%

MODEL RECONCILIATION

On an ongoing basis, MFB evaluates the estimated gold content from three different phases of mine design and planning. The first (MM) compares the estimated contained gold in the long term model with the short term model (oz Au LT/oz Au ST). This is intended to evaluate the quality of the two models. The second (MP) compares the estimated contained gold in the short term model with the detailed mine planning model (oz Au Planned/oz Au ST). This is intended to evaluate the quality of the mine plan and the planned mine recovery. The third

(MO) compares the estimated gold contained in the detailed mine planning model with the process plant (oz Au Planned/oz Au Executed). This is intended to evaluate mining quality control. The three comparisons are then multiplied together to generate a Mine Call Factor (MCF) which compares actual mill feed gold content to the long term model. Monthly results for MFB are shown in Table 15-7.

TABLE 15-7 MONTHLY RECONCILIATION - 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Month	MM	MP	MO	MCF
January	91%	106%	81%	78%
February	85%	107%	94%	86%
March	78%	98%	86%	65%
April	110%	103%	95%	108%
May	116%	104%	90%	110%
June	120%	103%	94%	117%
July	130%	103%	100%	133%
August	131%	100%	88%	115%
September	110%	102%	73%	83%
October	100%	109%	87%	94%
November	111%	128%	92%	131%
December	107%	105%	110%	123%
Total	107%	106%	91%	103%

The average MCF for 2015 is 103% with the greatest variation from the MO comparison. There are also wide monthly fluctuations in the MM comparison and consistent overestimation of gold content in the MP comparison. RPA recommends that MFB further evaluate the reasons for the variations in all of the models so that appropriate changes can be identified with the goal of improving the model predictive capability and accuracy.

RPA OPINION

RPA is of the opinion that the Mineral Reserves are being estimated in an appropriate manner using current mining software and procedures consistent with reasonable practice.

RPA is not aware of any mining, metallurgical, infrastructure, permitting, and other relevant factors which would materially affect the Mineral Reserve estimates.

16 MINING METHODS

The mining methods utilized at MFB include both open pit, and underground mechanized sub-level stoping. Both of these methods are well known and widely used in the mining industry. Both methods have been in continuous use since mining operations were initiated in 1984. The bulk of the mill feed is being sourced from underground. The small open pits are being used to supplement the underground production. Annual production for the previous three years (2013 through 2015) is presented in Table 16-1.

TABLE 16-1 FAZENDA BRASILEIRO HISTORICAL PRODUCTION
Brio Gold Inc. – Fazenda Brasileiro Mine

Year	Mill Feed Tonnes (000 t)	Gold Grade g/t	Gold Contained (000 oz)	Gold Recovery %	Gold Recovered (000 oz)
2013	1,103	2.17	77.0	91.0	70.1
2014	1,114	2.00	71.6	89.8	64.2
2015	1,172	1.87	70.5	86.3	60.9
TOTAL	3,389	2.01	219.1	89.1	195.2

OPEN PIT MINING

Many of the identified mineralized lenses outcrop to surface. Over the course of the operation's history, several shallow open pits have been excavated to extract these near surface deposits. Currently, several small open pits are in operation, and mining is being completed using contractors. Typically, these small pits are 30 m to 50 m deep using air-track drills and backhoe excavators for mining, and highway-type trucks for haulage to the mill. Open pit production is a small component of total annual mill feed. Most of the mill feed is generated from underground mining. Pit depths are dependent on the economics of stripping overlying waste. Mineralization exceeding pit depths is considered for underground mining.

UNDERGROUND MINING

UNDERGROUND ACCESS

The main access to the underground operation is through a series of declines. Over the life of the operations, eight main declines, the B, C, D, E, F, G, EW, and EDEEP have been

developed along the strike of the mineralization. The B, C, D, E, and G declines have surface portals and the F decline was developed from an underground split from the G decline. The EW and EDEEP declines were developed from an underground split from the E decline. A main central shaft (470 m deep) exists, however, it is no longer utilized for hoisting as the portion of the deposit located within economic distance of the shaft has been mined out. The shaft now is utilized only as a part of the escape way and ventilation circuit.

MINING METHOD

Underground mining employs blast hole stoping from sub-levels developed in the footwall of the mineralization. The stoping areas are accessed initially from 5 m wide by 5.5 m high main haulage ramps developed at 12% road grade in the footwall, which leads to primary development cross cuts of 4.5 m wide by 5.1 m high, and secondary development drifts and cross cuts of 4.5 m wide by 4.7 m high. Sublevels are spaced at 25 m vertical intervals. Mined out stopes are not backfilled.

At MFB, active stoping areas are called bodies with the following names: C, D, E, F, and G. All bodies have a planned dilution of 14%, except for the F Body, which has a dilution of 20%. Planned mining recovery is estimated to be 91%, except for F Body, which is 89%. In local areas of weaker than average ground conditions within the bodies, planned mining recoveries are in the 83% to 85% range.

From the sub-levels, access drifts are developed into the stoping areas and fan drilling of blast holes into the mineralization is used to further define the boundaries of the mineralization and design the ultimate blast patterns. Remote-controlled 12 t Load-Haul-Dump (LHDs) machines are used to load and haul the ore from the stoping areas to 25 t and 35 t articulated haulage trucks at loading points in the sub-levels.

The sub-horizontal plunge and approximate 45° dip of the orebody, combined with a thickness up to 40 m provides for low development and operating costs. Maximum stope heights are 20 m. Future operations in the deeper areas of E Ramp will have higher haulage costs that will be partially offset by the shorter underground haulage in the F and G Ramps. Operations to date have seen most of the waste rock hauled to surface. As noted by RPA et al., the disposal of waste rock in abandoned underground workings should be investigated, which would reduce costs. Figure 16-1 is a schematic of the development and mining method.

HYDROGEOLOGY

The mine produces a small amount of water and most of the pumping requirements are the direct result of mining activities.

Mine dewatering is carried out with a series of pump stations in the main ramps extending to the bottom of the central ventilation raise. Water is then pumped to surface through two additional pump stations.

GROUND SUPPORT

The underground workings have good ground conditions that do not require any special support to ensure stable openings. Development headings are typically scaled and bolted, which use a combination of hand and a single-boom scaler with rock bolts installed by single boom bolters. Cable bolts are also used to secure the hanging wall in the rib pillar area at the entrance of the stoping areas from the sub-levels.

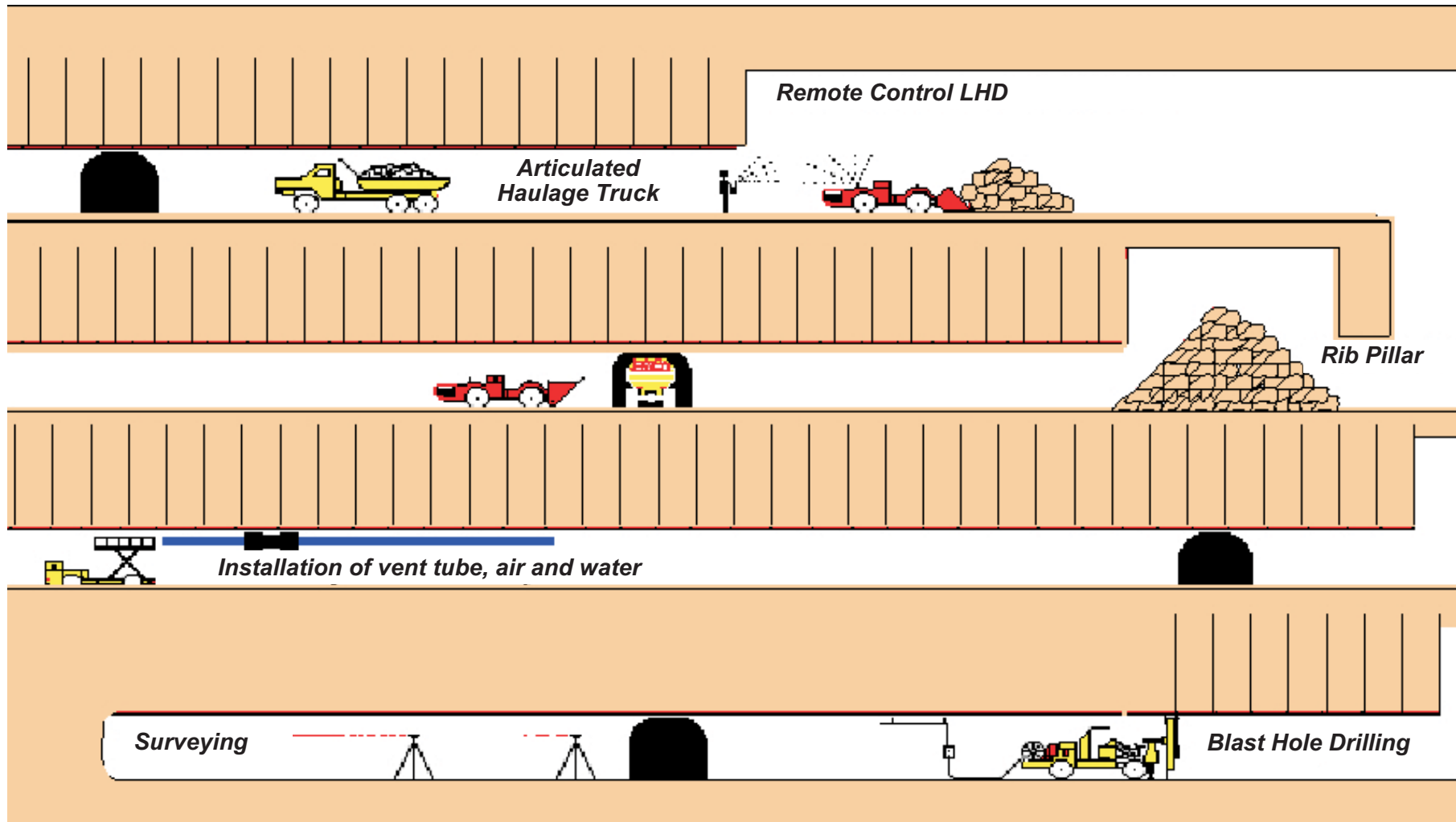


Figure 16-1

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil

**Typical Underground
Development and Stope Mining**

PRODUCTION SCHEDULE

The life-of-mine (LOM) plan prepared by the MFB mine planning department calls for the mining and processing of a greater number of tonnes than included in the Mineral Reserves. The LOM plan contains both Mineral Reserves and Mineral Resources and is used by the operation as the basis to prepare both short and medium term financial plans and budgets.

Brio expects that, through annual development and definition diamond drilling programs, MFB will be successful in converting a sufficient quantity of Mineral Resources to Mineral Reserves to replace the Mineral Reserves extracted and processed during the year. RPA concurs with Brio's view on the continuity of resource to reserve conversion at MFB, and the ability of those mines to continue operating into the future.

As Mineral Resources do not have demonstrated economic viability, Brio has prepared a modified MFB LOM plan that contains Mineral Reserves only (6.496 Mt grading 1.88 g/t Au) in order to verify economic viability of Mineral Reserves. Any Inferred Mineral Resources included in each year of the LOM Plan have been removed, however, all of the planned development (and associated costs) included for each year remains in the model. The current LOM based on the modified LOM is estimated at 6.5 years (2016 to 2022). With continued successful conversion of resources to reserves, however, the actual operations should have a longer life.

The modified LOM production schedule is based on mining Mineral Reserves only and presented in Table 16-2. RPA has reviewed the plan and considers it to be reasonable and achievable based on actual historical and recent performance and results as previously shown in Table 16-1.

TABLE 16-2 FAZENDA BRASILEIRO MINE PRODUCTION SCHEDULE
Brio Gold Inc. – Fazenda Brasileiro Mine

	2016	2017	2018	2019	2020	2021	2022	Total
Underground								
Tonnes Mined (kt)	976	943	983	937	758	915	364	5,876
Grade (g/t Au)	2.14	1.99	1.84	1.88	1.68	1.70	1.77	1.88
Waste Mined (kt)	423	360	279	361	267	57	138	1,885
Open Pit								
Tonnes Mined (kt)	82	145	185	209				621
Grade (g/t Au)	1.89	1.76	1.81	2.18				1.93
Waste Mined (kt)	1,497	1,355	1,300	934				5,086
Strip Ratio	18.19	9.33	7.03	4.48				8.19
TOTAL								
Tonnes Mined (kt)	1,058	1,088	1,168	1,146	758	915	364	6,496
Grade (g/t Au)	2.12	1.96	1.84	1.93	1.68	1.70	1.77	1.88

The LOM processing schedule is summarized in Table 16-3.

TABLE 16-3 FAZENDA BRASILEIRO MILL FEED SCHEDULE
Brio Gold Inc. – Fazenda Brasileiro Mine

	2016	2017	2018	2019	2020	2021	2022	Total
Mill Feed Tonnes (kt)	1,058	1,088	1,168	1,146	758	915	364	6,496
Grade (g/t Au)	2.12	1.96	1.84	1.93	1.68	1.70	1.77	1.88
Contained Gold (000 oz)	72.0	68.5	68.9	71.2	40.9	50.0	20.7	392.3
Recovered Gold (000 oz)	65.5	62.4	62.7	64.7	37.3	45.6	18.9	357.0

MINE EQUIPMENT

Decline and sub-level development is carried out using two-boom electric hydraulic jumbos and stope drilling is performed with single-boom electric hydraulic fan jumbos. Stope mucking is carried out with remote control 12 t LHD units. Articulated 25 t and 35 t trucks are used for ramp haulage of both ore and waste. The mine employs an equipment monitoring and control system located on surface that tracks and dispatches the mobile equipment to the various workplaces as required. The mine dispatch operates with daily plans as well as ongoing progress and availability of equipment to optimize the allocation. Table 16-4 lists the main underground mobile production equipment.

TABLE 16-4 FAZENDA BRASILEIRO UNDERGROUND MINING EQUIPMENT
Brio Gold Inc. – Fazenda Brasileiro Mine

Type	Manufacturer	Model	Units
Truck	Volvo	A35C	1
Truck	Scania	P420 6X4	16
LHD	Caterpillar	R1700G	5
LHD	Sandvik	LH514	1
Loader	Caterpillar	950H	2
Fan Drill	Atlas Copco	SIMBA H253	1
Fan Drill	Atlas Copco	SIMBA H 1254	3
Jumbo	Sandvik	Axera - DD320-26X	4
Scaler	Getman	S324N-4WD	1
Scaler	Doosan	DX53X	4

MINE VENTILATION

The mine is primarily ventilated by a series of raises that exhaust air to surface and the declines and shaft, which provide for fresh air intake. The raises are connected to the main ramp in the active mining areas and secondary ventilation fans and tubing are used to carry fresh air into individual stoping areas.

There are a total of 11 ventilation raises to surface. In the inactive mining areas, the ventilation raises downcast fresh air.

Air quality underground, as experienced by RPA representatives during the site visit, appeared to be reasonable for an underground operation using diesel-powered mining equipment.

17 RECOVERY METHODS

PROCESS DESCRIPTION

Production at MFB began in 1984 using heap leaching. A conventional cyanide leaching and carbon-in-pulp (CIP) plant, Circuit 1, was then added to treat the underground at a rate of 34 tonnes per hour (tph). In 1991, the plant was expanded by adding a second 95 tph circuit, Circuit 2, to give a total capacity of 120 tph or approximately 960,000 tpa. Currently, the two leaching circuits operate with pre-aeration and carbon-in-leach (CIL). With improvements made over time the plant is capable of processing 175 tph, and 1,200,000 tpa. The heap leach operation was discontinued sometime between 2003 and 2007. The process flow sheet for the plant is presented in Figure 17-1 and the plant layout is shown in Figure 17-2.

The overall process flow sheet consists of:

- Three stage crushing
- Ball mill grinding consisting of two mills in parallel closed with cyclones
- Gravity concentration using centrifugal concentrators; treating the underflow of one cyclone in each of the grinding cyclone clusters
- Thickening producing a leach feed of 50% solids
- Cyanide leaching in two parallel circuits, Circuits 1 and 2
- CIL in two parallel circuits, Circuits 1 and 2
- Zadra pressure stripping of the carbon
- Intensive cyanidation of the centrifugal concentrator concentrates
- Electrowinning of the carbon eluent and gravity concentrate leach solution
- Casting of gold bars in an induction furnace

ORE DELIVERY FROM THE MINE

Ore is delivered from the underground mine using articulated 25 t and 35 t Volvo haul trucks. The ore is dumped directly into the primary crusher feed hopper, which is equipped with a static grizzly with 800 mm openings. A hydraulic impact hammer is used to break the large rocks that are retained by the grizzly.

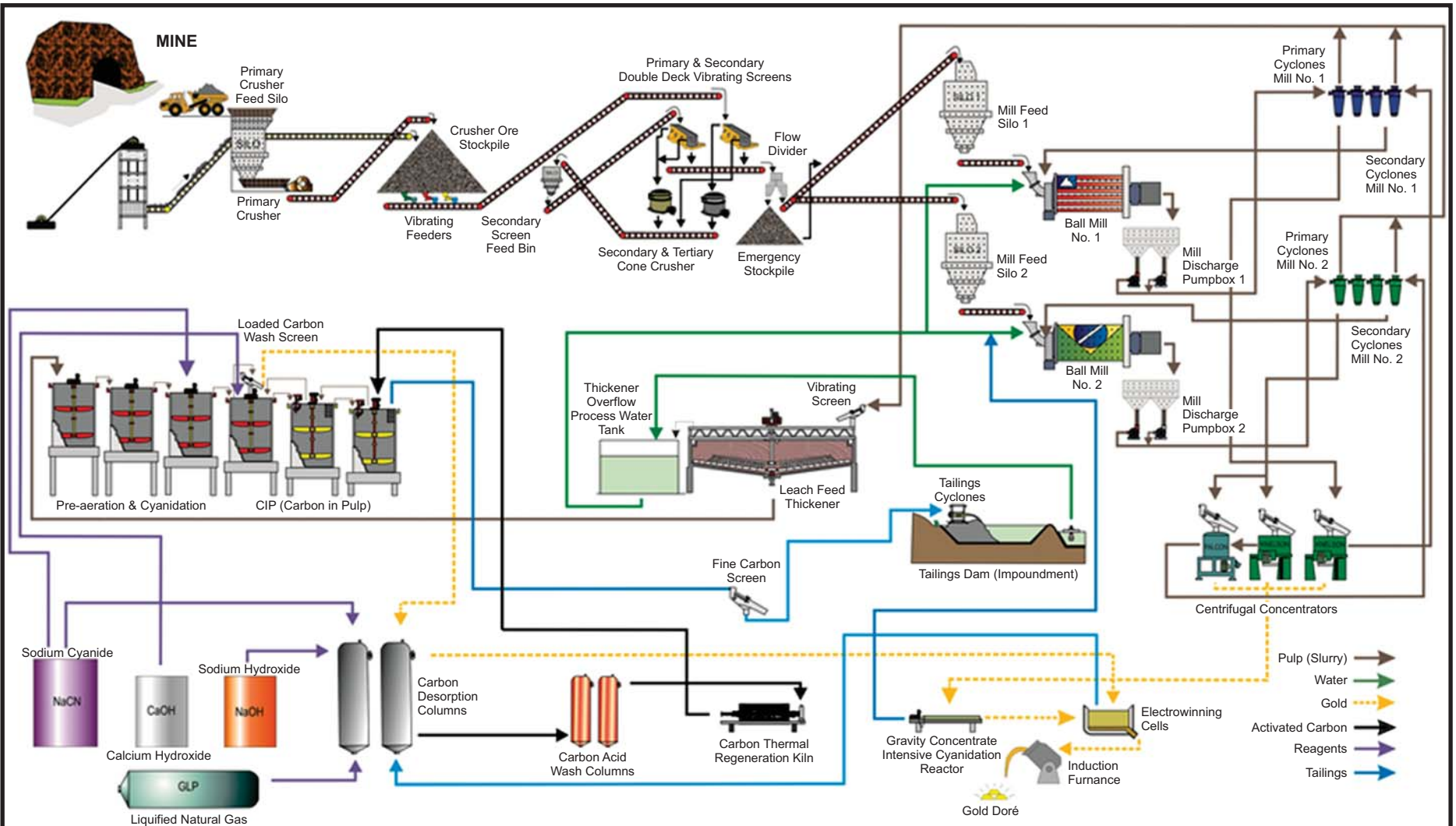


Figure 17-1

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Process Flow Sheet



- 1- Coordinates & elevations in metres
- 2- The Origin of the system of coordinates has the following correspondence with the UTM system:

UTM System
N=8,733.00
E=490.000

Project System
Y=50.000
X=10.000

Reference Drawings:

- 1- Topographical Survey Plan Map
500F-17-001 and 014

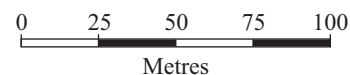
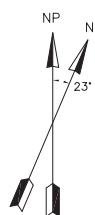


Figure 17-2

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
MFB Plant Site Layout

May 2016

Source: FMB, 2006.

PRIMARY CRUSHING

The ore flows from the feed hopper to a twin shaft Blake type 1,200 mm by 900 mm primary jaw crusher with a closed side setting of 89 mm. The discharge from the primary crusher is conveyed to a crushed ore stockpile with a nominal capacity of 19,000 tonnes. The stockpile may also be fed from the shaft, however, the shaft is not currently in operation.

SECONDARY/TERTIARY CRUSHING

The crushed ore is drawn from the stockpile by two vibrating feeders, installed in a tunnel under the stockpile, and conveyed to the secondary/tertiary crusher area. The ore is conveyed to the primary double deck, vibrating screen. The upper deck has 30 mm openings and the bottom deck has 12 mm openings. The oversized material from both decks feeds a Metso HP300 secondary cone crusher with a closed side setting of 19 mm. The secondary crusher product is conveyed to the secondary screen feed bin and then to two secondary double deck vibrating screens operating in parallel. The upper and lower decks of the secondary screens have 12 mm screen openings. The oversized material from the secondary screens feeds two tertiary Metso HP200 cone crushers operating in parallel, with closed side settings of 10 mm. The tertiary crushers operate in closed circuit with the secondary screens, therefore, the discharge of the tertiary crushers is conveyed to the secondary screen feed bin and to the secondary vibrating screen closing the circuit.

The -12 mm undersized material from the primary screen joins the undersize material from the secondary screen and is conveyed through a flow divider to the grinding mill feed silos, where a reversible conveyor distributes the ore between the two silos. There are separate feed bins for each of the two parallel mills. The flow divider allows for bypassing material from secondary/tertiary crushing to an emergency stockpile with a capacity of 6,000 t. The emergency stockpile provides feed for the mills during interruptions in crusher operation, typically for maintenance.

GRINDING

The crushed ore is drawn from the mill feed bins by belt feeders into the two overflow ball mills operating in parallel. One ball mill is 3.8 m diameter by 7.3 m long with a 1,500 kW drive and a capacity of 116 tph. The second mill is a 3.0 m diameter by 5.2 m long with a 635 kW drive and a capacity of 45 tph. The discharges of the ball mills are fitted with trommel screens to remove ball chips.

The ball mills operate at a slurry density of approximately 75% solids. The slurry discharges into separate cyclone feed sumps. Each mill operates with a separate set of cyclones for classification. The cyclone clusters include two dedicated cyclones that feed a portion of the cyclone underflow slurry to the gravity concentration circuit. The cyclone feed slurry density is controlled at approximately 50% solids resulting in a cyclone overflow density of 30% solids and a particle size distribution of 80% passing 74 microns. The cyclone underflow slurry will have a density of approximately 75% solids.

The ball mill work indexes of the underground and open pit ores are 16 kWh/t and 10.5 kWh/t respectively and the ball consumption is in the range of 720 g/t.

The cyclone underflow from each set of cyclones flows to the ball mill feed chute, closing the circuit. The overflow slurry from all of the cyclones will flow to the leach feed thickener.

GRAVITY SEPARATION

The smaller, 3.0 m diameter ball mill feeds a bank of four cyclones, with two cyclones operating and two in reserve. The cyclone overflow flows to the leach feed thickener. A portion of the cyclone underflow is diluted to 40% solids and feeds a centrifugal concentrator. The balance of the underflow slurry returns by gravity to the ball mill feed chute. The larger, 3.8 m diameter mill feeds two banks of cyclones, each with one cyclone operating and three in reserve. The cyclone underflow slurry from the first bank is diluted to 40% solids and flows to three centrifugal concentrators operating in parallel. The underflow slurry from the second bank returns by gravity to the 3.8 m ball mill feed. The tailings from the centrifugal concentrators are pumped to the second bank of cyclones. The underflow returns to the ball mill feed chute and the overflow will advance to the leach feed thickener.

The concentrate from the centrifugal concentrators is pumped to the intensive cyanidation, Acacia, reactor. The Acacia reactor is an automated system providing security for the processing of gravity gold concentrates. The concentrate is leached for twelve hours at 54°C, in a solution of 2.5% sodium cyanide and 1.5% sodium hydroxide to recover the gold. The pregnant Acacia leach solution is then pumped to a storage tank in the refinery area in preparation for electrowinning.

THICKENING

The cyclone overflow slurry is pumped to a horizontal vibrating screen for the removal of trash and other impurities. The screen underflow flows by gravity to a 32 m diameter leach feed thickener where it is diluted to 15% solids, flocculent is added and directed into the thickener feed well. The thickener underflow slurry density is controlled to approximately 50% solids using density measurement and variable speed underflow pumps. The underflow slurry is then pumped to the cyanide leach tanks. The thickener overflow solution flows to the process water tank for distribution to the processing facilities, including the grinding circuit for use as dilution water.

LEACHING AND CARBON-IN-LEACH (CIL)

The thickener underflow slurry is pumped to two parallel trains of leach and CIL tanks.

Train 1 consists of six 350 m³ leach tanks in series, followed by six 110 m³ CIL tanks in series. Leach tanks 1 through 3 are being used for pre-aeration, to oxidize sulphides in order to reduce cyanide consumption. Lime is added and air is sparged into the tanks during pre-aeration. Cyanide is added to tank 4 to begin leaching and carbon is being transferred to tanks 5 and 6 from the CIP circuit to operate as CIL tanks. The six CIP tanks are now operating as CIL tanks, though no air is sparged into the tanks. In summary, Train 1 consists of three aeration, one leach, two 350 m³ CIL, and six 110 m³ CIL tanks.

Train 2 consists of eight 500 m³ leach tanks in series followed by six 350 m³ CIL tanks. Similar to Train 1, leach tanks 1 through 3 are pre-aeration, tank 4 is a leach tank, where cyanide is being added, and leach tanks 5 through 8 are CIL tanks. The six CIP tanks are operating as CIL tanks. In summary, Train 2 consists of three pre-aeration tanks, one leach tank, four 500 m³ CIL tanks, and six 350 m³ CIL tanks.

Each leach circuit, including pre-aeration, leaching, and CIL is designed for a total retention time of 32 hours. Each CIP circuit is designed for retention times of six hours. The leach configuration is intended to address two issues: sulphide minerals, especially pyrrhotite, and naturally occurring carbon in the ore. The pre-aeration tanks will oxidize weakly bound sulphur that would combine with cyanide during leaching to form thiocyanate, CNS, increasing cyanide consumption. Lime added during pre-aeration would react with the free sulphur to form calcium sulphate. The CIL tanks are intended to address the presence of naturally occurring

carbon, which could adsorb some of the gold cyanide that is formed during leaching. The activated carbon has a higher affinity for the gold cyanide and will load it in preference to the natural carbon, so activated carbon is added during the leaching process to compete with the natural carbon. Any gold loaded onto the natural carbon will be lost as it is very fine grained and will not be captured by the carbon retention screens.

The activated carbon is added to the last downstream tank in the CIL circuits and transferred from tank to tank counter current to the slurry flow. The carbon is loaded to approximately 800 g/t Au. Loaded carbon is pumped from the first CIL tank to the loaded carbon wash screens. The carbon passes over the screen and is collected in portable carbon transfer bins. The carbon is transferred to the carbon desorption and regeneration, ADR, circuit, while the screen underflow slurry returns to the first CIL tank.

Process controls in the leaching circuit include analyzers for both pH and cyanide concentration.

CARBON ELUTION AND REGENERATION

The gold is eluted from the carbon using the pressure Zadra process. The process treats the carbon in four tonne batches.

The first step of the process is acid washing, which removes impurity metals and scaling compounds such as calcium carbonate and sodium silicate from the carbon prior to elution. The carbon is added to a four tonne capacity acid wash column. The column is then filled with a 3% hydrochloric acid solution and allowed to soak for 30 minutes. Fresh water is then added to displace the acid solution, wash, and neutralize the carbon prior to transferring it to one of two, four tonne capacity carbon elution columns.

The carbon is contacted with an upward flow of solution containing 0.2% sodium cyanide and 2.0% sodium hydroxide at a temperature of 140°C and a pressure of 360 kPa. The solution is circulated through the elution column to elute gold from the carbon, then through a heat exchanger, where the solution is cooled to 80°C, and then on to the pregnant eluent tank. The solution is then pumped through electrowinning cells operating at a current density of 0.05 A/cm² and the gold is plated out on stainless steel cathodes. The barren solution is then pumped to the barren solution tank, where the cyanide and caustic concentrations are

adjusted. The barren solution is then pumped through a heat exchanger to raise the temperature back to 140°C and recirculated through the elution column, completing the circuit. The solution is circulated in this manner for 16 to 18 hours at a flow rate of two bed-volumes per hour. The gold concentration in the eluent is monitored and when it reaches 5 mg/L, the elution process is stopped. The carbon is then discharged from the column, over a carbon dewatering screen, and into the barren carbon storage bin ahead of the carbon regeneration kiln. The barren solution is then pumped to the head of the CIL circuit.

CARBON REGENERATION

The barren carbon is reactivated in a horizontal gas fired rotary kiln operating at 720°C. The hot carbon exiting the kiln is cooled in a quench tank and screened to remove carbon fines. The carbon fines report to the tailings. The regenerated carbon is then transferred to the CIP circuit to be reloaded. The capacity of the carbon regeneration kiln is 300 kg/h.

CYANIDE DESTRUCTION

The slurry leaving the last CIL tank passes through a carbon safety screen to recover fine carbon and then flows to the cyanide detoxification circuit. The detoxification circuit consists of four, 40 m³ mixed tanks in series. A mixture of sodium meta-bisulphite and copper sulphate is added to the slurry to destroy the cyanide, and lime is added to control the pH. The target for cyanide destruction is less than 10 ppm WAD cyanide.

ELECTROWINNING AND DORE CASTING

The carbon eluent and the pregnant gold solutions from the Acacia intensive cyanidation reactor are processed by electrowinning. The solutions are circulated through electrowinning cells and the gold in solution is plated out onto stainless steel cathodes. Once the cathodes are loaded, the cathodes are removed from the cells and the gold is washed from the cathodes with high pressure water. The resulting gold mud is filtered and then dried in a drying oven. The dried mud is then mixed with fluxes and melted in an electric induction furnace at 1,200 degrees C to produce gold doré bars for sale. The doré from the leaching circuit typically assays 86% gold, and the doré from the gravity and intensive cyanidation circuit typically assays 90% gold.

TAILINGS

There are four lined tailings impoundments, or “lakes” at MFB. Lakes 1, 2, and 3 are full and Lake 4 is currently in operation. The CIL tailings slurry is pumped to a cluster of 16, 4 in. (14 operating and two standby) cyclones located at the tailings impoundment. The cyclone underflow slurry is stacked on Lake 1. Liquid recovered from Lake 1 is pumped to Lake 4. The cyclone overflow slurry flows by gravity into a pumpbox, from which, it is pumped to Lake 4. The ore forms beaches and the clear solution percolates to a low point collection area, from which it's pumped back to the process water tank in the process plant. The water balance is managed to maintain water freeboard levels as low as possible.

REAGENT STORAGE AND MIXING

SODIUM CYANIDE

Sodium cyanide is received in tanker trucks as a 33% aqueous solution. The solution is transferred to storage tanks where it is diluted to 25% for storage and distribution to hydrometallurgy. The sodium cyanide concentration in the leach tank solution is maintained at 600 ppm NaCN resulting in a specific NaCN consumption of approximately 700 g NaCN/tonne ore.

SODIUM HYDROXIDE

Sodium hydroxide is received in tanker trucks as a 50% aqueous solution. Sodium hydroxide is used to elute gold in the carbon desorption solutions, to neutralize the activated carbon after acid washing and to neutralize the waste acid wash solutions. The specific consumption of sodium hydroxide is approximately 100 kg/t ore.

HYDROCHLORIC ACID

Hydrochloric acid is delivered in tanker trucks as a 33% aqueous solution. Hydrochloric acid is primarily used in the acid washing of carbon. The specific consumption is approximately 50 kg/t ore.

HYDRATED LIME

Hydrated lime is delivered as a solid powder in one tonne bags. The lime is then mixed with water to form a 5% milk of lime solution. Lime is used to control the pH in the leach circuits.

MINERAL PROCESS PLANT PRODUCTION STATISTICS

Table 17-1 presents key operating parameters and performance indicators for MFB processing facilities for year-end 2014 and 2015.

TABLE 17-1 FAZENDA BRASILEIRO PROCESSING OPERATING PARAMETERS
Brio Gold Inc. – Fazenda Brasileiro Mine

Operating Parameter Description	2014 Actual	2015 Actual
Mine Production, Total tpa	1,150,773	1,172,911
Open Pit	155,221	87,702
Underground	995,552	1,085,209
Mill Production, tpa	1,113,922	1,171,786
Production Rate, tph	143	155
Grinding Availability, %	95	92
Grinding Utilization, %	88	95
Production Efficiency %	92	98.7
Overall Efficiency%	78	86.3
Grind Particle Size P ₈₀ , µm	74	74
Gold Head Grade, g/t	2.0	1.87
Tailing Grade, g/t	0.20	0.136
Overall Gravity Recovery, %	41.1	34.9
CIL Recovery, % Au, 75 µm	69.3	51.4
Overall Recovery, % Au	89.8	86.3
NaCN Consumption, kg/t	0.67	0.734
Grinding Media, kg/t	0.70	0.704
Lime, kg/t	1.6	1.575
Power, kWh/t	57	57
Carbonaceous ore blend, % Max	10	10

The mine primarily supplied ore from the MFB underground operation. In addition, an open pit provided 13.5% of the production in 2014 and 7.5% in 2015. Carbonaceous ore is not a common problem, but when it is encountered, it is blended to a maximum 10% of the total plant feed. The MFB cyanide leaching circuit includes a CIL section to protect against losses due to naturally occurring carbon.

The capacity of the MFB process plant is limited by the grinding circuit, which is capable of consistently processing the MFB mine ore at a rate of 158 tph, which with an availability of 91% would result in annual production of 1,260,000 t. The highest monthly production in 2015 occurred in September, during which the mill processed 111,107 t at an average production rate of 169 tph. The actual production for the year was 1,171,786 t and an average operating

rate of 155 tph. The overall operating availability for 2015 was 86.3%. Production at MFB is primarily affected by ore supply from the mine and plant availability due to maintenance. Figure 17-3 is a plot of the budgeted versus actual production for 2015. The mill was available consistently throughout the year.

FIGURE 17-3 2015 FAZENDA BRASILEIRO MILL PRODUCTION, BUDGETED VS. ACTUAL

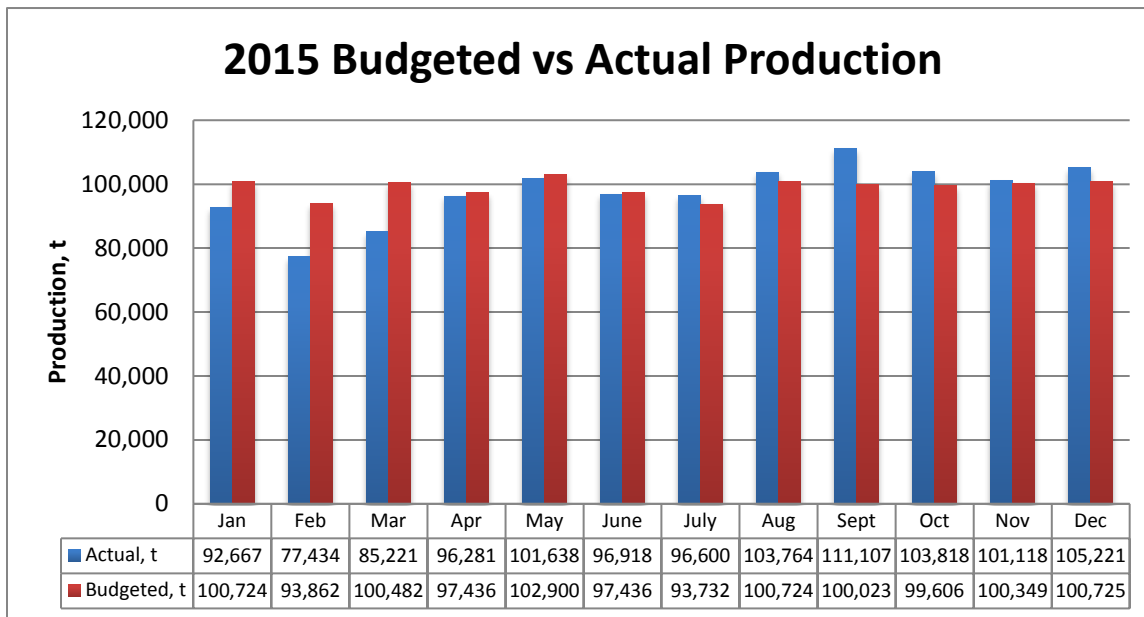


Figure 17-4 is a plot of gold head grade, gravity gold recovery, and total gold recovery. The total gold recovery was 86.3% in 2015. Gravity gold recovery averaged 34.9% in 2015. Gold recovery for the month of April was anomalously low at 62.0%. Based on the monthly reports, the gold inventory was very high during the month, presumably due to the carbon stripping and refining schedule. The inventory returned to average during the month of May.

FIGURE 17-4 GOLD GRADE VS. RECOVERY DURING 2015

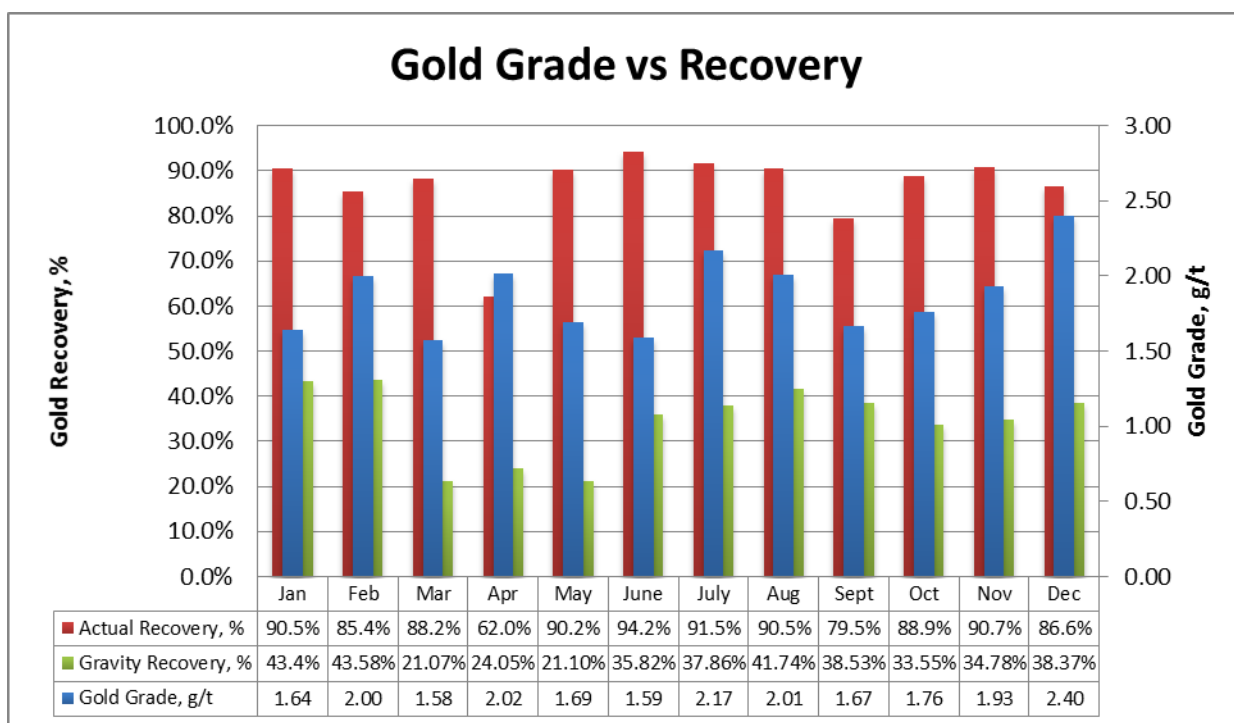


Figure 17-5 shows the reagent consumptions during 2015. Cyanide consumption was consistent throughout 2015 with an average usage of 0.73 kg/t. Grinding media consumption was also consistent with an average of 0.7 kg/t. Lime consumption ranged from 2.0 kg/t to 1.1 kg/t with an average usage for the year of 1.6 kg/t.

FIGURE 17-5 REAGENT CONSUMPTIONS DURING 2015

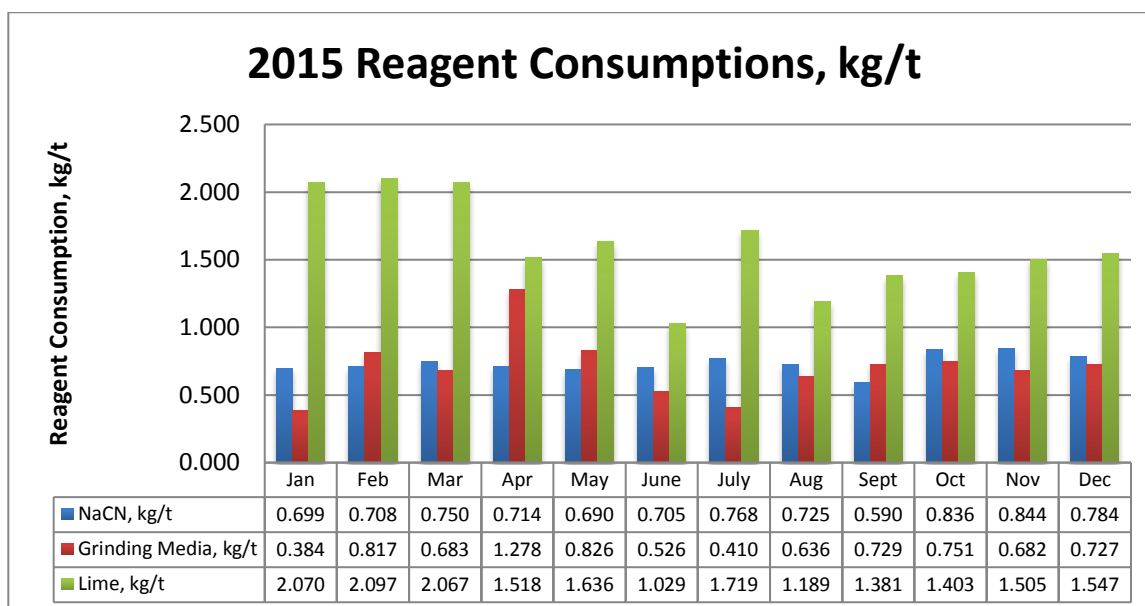


Figure 17-6 presents the unit power consumption for 2015. Power usage ranged from 51.4 kWh/t in September to 66.45 kWh/t in February and averaged 57 kWh/t for the year.

FIGURE 17-6 POWER CONSUMPTION DURING 2015

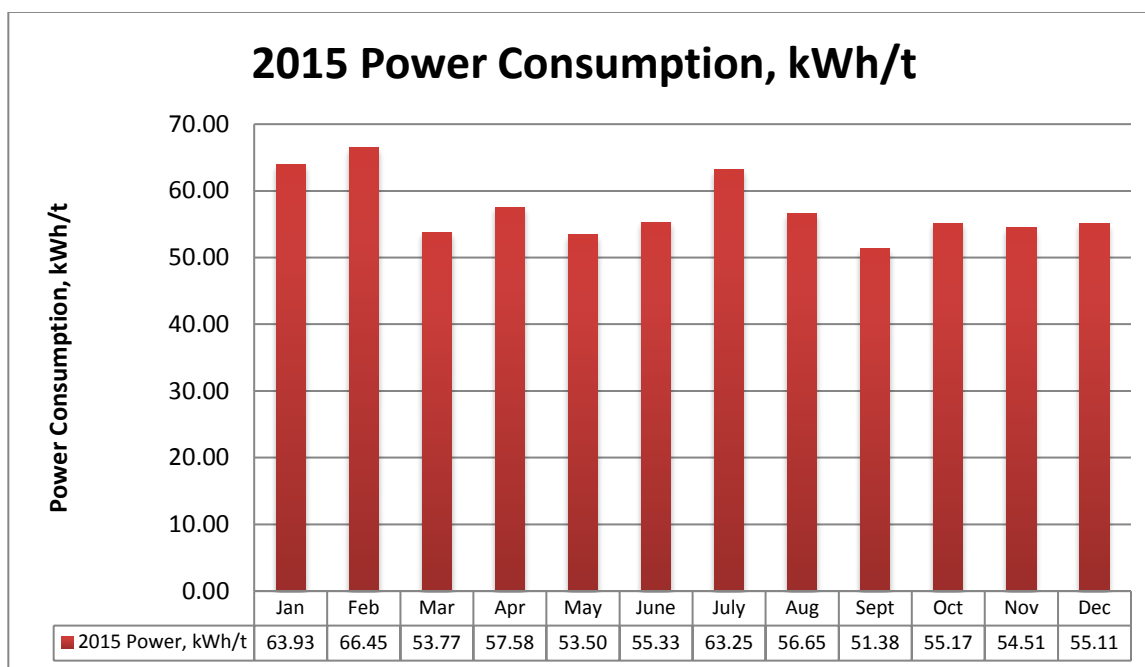
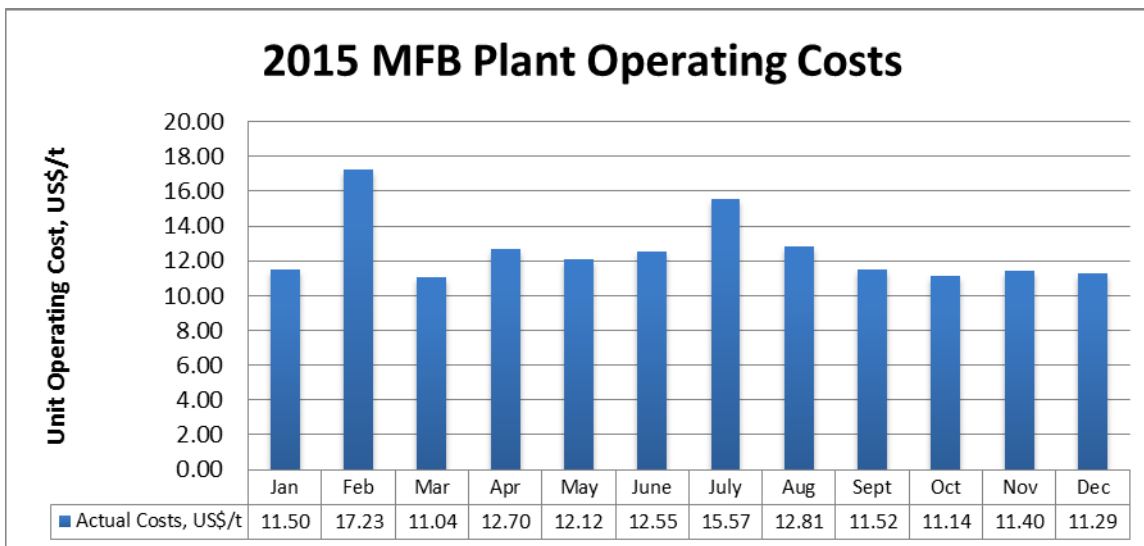


Figure 17-7 presents the plant unit operating costs for 2015. The total operating costs for the year were US\$12.48/t milled.

FIGURE 17-7 2015 PLANT UNIT OPERATING COSTS



In RPA's opinion, the mineral processing facilities are operating consistently and efficiently. The mine has been near the end of its life for many years, so maintenance has been minimized. The physical structures are in need of maintenance and in some areas refurbishment, especially now that the mine life has been extended through successful exploration and resource development. The structural steel in the grinding, leaching, and acid wash circuits is showing significant deterioration due to corrosion. Maintenance work planned for 2016 will include refurbishment of the structural steel supporting the feed conveyors and mill building, replacement of corroded leach and CIL tanks and agitators, and replacement of the acid wash system in the carbon elution circuit.

RPA understands that the open pit ore will be from the Canto area during 2016 and the amount of carbonaceous ore will increase, which may result in a decrease in recoveries. Currently, carbonaceous ore is blended to less than 10%. All ore will be from underground in 2017. The grade of the ore is decreasing so the plant will be compensating with increased production. The grinding circuit is operating under its design rate of 175 tph at an average 155 tph, so there should be some excess capacity, without affecting the product particle size.

RPA finds, based on the operating reports, that the gravity circuit is effective, with four centrifugal concentrators operating in the primary cyclone underflow. The concentrate is pumped to the Acacia reactor in a locked building. The Acacia system operates automatically and the leach solution is pumped directly to the electrolyte storage tank in the refinery area. The gravity recovery averaged 34.9% during 2015.

The two parallel leach circuits are now being operated in two stages. Pre-aeration and CIL. The former CIP circuit is being operated, along with tanks 5-8 of the leach circuit, as a continuous CIL circuit. CIL recoveries averaged 51.6% during 2015. Close attention is being given to the presence of carbonaceous ore, which is the reason that the pre-oxidation and CIL stages are being optimized. Overall recovery was lower in 2015 at 86.3% in comparison to 89.8% in 2014.

Sufficient water supplies are available for all mill and mine requirements.

18 PROJECT INFRASTRUCTURE

INFRASTRUCTURE

MFB has been operational for 32 years and has all the necessary roads, powerlines, access, medical facilities, and employee support communities that one would expect to find in one of the state's major employers.

Teofilândia is a full service town and along with the mine has access to electricity from the national power grid. There is a freight-only rail line, which passes through the area in a northwest-southeast direction close to the mine. The rail line is not used by the mine.

ACCESS ROADS

The mine is located in the municipality of Barrocas in northeastern Bahia state. The mine can be accessed from Salvador (population approximately 2.7 million) by way of approximately 180 km of paved road. The mine is accessible by air and by road. Locally, the mine is accessed by a 12 km graded road from Teofilândia (population approximately 20,000).

TAILINGS DAM

There are four lined tailings impoundments, or "lakes", at MFB. Lakes 1, 2, and 3 are full, and Lake 4 is currently in operation. The CIP tailings slurry is pumped to a cluster of 12, 4 in. (10 operating and two standby) cyclones located at the tailings impoundment. The cyclone underflow slurry is stacked on Lake 1. Liquid recovered from Lake 1 is pumped to Lake 4. The cyclone overflow slurry flows by gravity into a pumpbox, from which, it is pumped to Lake 4 and is spiggoted around the periphery of the Lake 4 tailings impoundment for better distribution. The processed spent tailings form beaches and the clear solution percolates to a low point collection area from which it is pumped back to the process water tank in the process plant. The water balance is managed to maintain water freeboard levels as low as possible.

ELECTRICAL POWER SUPPLY

The power requirement for the MFB and site facilities is approximately 8 MW, which is supplied by the local grid. Figure 17-6 presented the unit power consumption for 2015. Power usage ranged from 51.4 kWh/t in September to 66.45 kWh/t in February and averaged 57 kWh/t for

the year. The goal is to reduce this consumption to approximately 53.23 kWh/tonne through efficiency improvements.

WATER SUPPLY

Water is supplied by a series of well fields with a total production capacity of 480 m³/h. The water is supplied through a 10 in. diameter, 36.3 km long pipeline and supplies local municipalities, communities, and MFB. The aquifer is reported to be very large, therefore, water supply appears to be secure.

SITE FACILITIES

Mine, administration, and process facilities are well established and include:

- 470 m vertical shaft
- Series of underground ramps
- 960,000 tpa carbon in pulp milling facility
- Lined heap leach pads and associated process equipment
- Lined tailings disposal ponds
- Warehouse
- Maintenance shops
- Drill core logging, splitting and storage facilities
- Assay laboratory
- Cafeteria
- Helipad for emergency use and shipment of gold bullion
- Office complexes
- Water system consisting of a well field located east of Teofilândia, a buried pipeline and water pumping system to provide potable and processing water to Teofilândia and the mine
- Fuel station
- Explosive magazine

WORKFORCE ACCOMMODATION

The town of Teofilândia serves as the main community for workers at the mine although a smaller village is located between Teofilândia and the mine. The local population base is approximately 20,000; the vast majority of whom live in Teofilândia. The general area of the exploration properties is inhabited largely by subsistence farmers and garimpeiros (artisanal miners).

SECURITY

The process plant, mines, and dams are surrounded by a security fences to restrict access. The main entrance has a manned gatehouse, and security staff will ensure the security of the site, explosives, and accessories depots, as well as provide protection during gold pours. Gold product is stored in a safe until it is transported off-site.

19 MARKET STUDIES AND CONTRACTS

MARKETS

The principal commodity at MFB is gold and is freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured. RPA used a gold price of US\$1,150 per ounce for the Base Case and estimation of Mineral Reserves.

CONTRACTS

MFB has a large number of contracts in place, which is not uncommon for a typical mining operation located in Brazil. The terms of the various contracts are within Brazilian Law and Yamana protocols. The number of contractors is about 315. This is explained by the use of multiple small local companies. Yamana prioritizes on sourcing goods and services through local suppliers, contributing to the sustainable economic development of local communities.

The primary contracts of service are summarized in Table 19-1. The Monthly Spend is the actual average value for the year 2015 based on an exchange rate of US\$1 = R\$3.32. In RPA's opinion, these costs are within reasonable ranges.

TABLE 19-1 PRIMARY MFB CONTRACTS
Brio Gold Inc. – Fazenda Brasileiro Mine

Description	Monthly Spend - US\$ (000)
Energy	450
Waste Transport	127
Equipment Rental	19
Staff Service	14
Food Service	33
Personnel Transport	30
Maintenance	153
Vehicle Rental	74
Gold Transport	46

MFB has contracts for various mine consumables, of which the primary items are listed in Table 19-2. As the case in Table 19-1, the Monthly Spend is the actual average value for the year 2015 based on an exchange rate of US\$1 = R\$3.33. In RPA's opinion, these costs are also within reasonable ranges.

TABLE 19-2 PRIMARY CONSUMABLES
Brio Gold Inc. – Fazenda Brasileiro Mine

Description	Monthly Spend - US\$ (000)
Diesel	165
Cyanide	170
Spare parts – Caterpillar	57
Spare parts – Scania	70
Spare parts – Other suppliers	159
Steel grinding balls	68
Ammonium nitrate	70
Explosives	61

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

INTRODUCTION

Yamana has a comprehensive environmental policy, partially inherited from CVRD operations. This policy has been developed in line with the Plan of Recovery of Degraded Area Document (PRAD) as outlined by the relevant authority. The PRAD was prepared for Yamana by Mineral Engenharia e Meio Ambiente, an external consulting firm. The environmental authorities in Brazil use the PRAD as a commitment for the company to complete the rehabilitation on mine closure.

The guidelines are, in essence, re-vegetation of the areas with native species, coverage of the pits or conversion of the pits for storing water, along with stabilization and rehabilitation of waste dumps and tailing dams. The demolition and removal of all structures and facilities that will not be used in the future is also included. A summary of the items developed in the PRAD are presented below.

ENVIRONMENTAL LICENSING

The Brazilian Environmental Policy was created in 1981 (law no 6938/81). Based on this policy, the Resolution CONAMA 01/86 defined the nature of the studies required for permitting the different types of activities which have the potential to cause environmental impacts. MFB currently has several licences and water permits. These permits were issued by the Environmental Resources Centre through processes in the Environmental State Board.

The permits currently effective at MFB are tabulated in Table 20-1 and summarized below.

TABLE 20-1 BRIO MFB MINING PERMIT STATUS
Brio Gold Inc. – Fazenda Brasileiro Mine

Document	Description	Certificate Number	Process Number	Granting Date	Expiry Date	Status
Licence to operate wastewater treatment for housing in Teofilândia	Dwellings and wastewater treatment for mine work force	INEMA 8.143/2014	2013.001.000486/INEMA/LIC-000486	16/08/2014	17/08/2022	ACTIVE
Water Discharge Permit	Discharge to River do Inco	INEMA 7.848/2014	2011-001492/OUT/RENOV-0217	28/12/2013	29/12/2017	ACTIVE
Water Withdrawal Permit	Grant for use of resource water - Biritinga	INEMA 6.616/2013	2011-001492/OUT/ RENOV-0217	28/12/2013	29/12/2017	ACTIVE
Operating Permit	Operating Permit for Mine, Mineral Processing Facilities, Waste Rock Storage and Tailings Dam	INEMA 11.387/2016	2014.001.000549/INEMA/LIC-00549	03/04/2016	03/04/2018	ACTIVE

- The new integrated operating permit for mining, mineral processing, waste rock storage and tailings management facilities was issued in 2016.
- Operating permit for wastewater treatment plant for company housing in Teofilândia.
- Water discharge permit for Rio do Inco.
- Grant for use of resource water at Biritinga.

MFB has been operating for over 32 years and therefore all relevant permits have been in place for this period. There are no identified environmental liabilities associated with the tenements.

LAND USE

The site currently occupies an area of 1,181 ha which belongs to Mineração Fazenda Brasileiro, in Teofilândia town. If it is required to use a third party area, a contract is formalized for land use with royalty payments according to the production in that area. The contract also includes the responsibility by the company for the reclamation of that area.

Figure 20-1 shows the legal reserve areas near the current infrastructure.

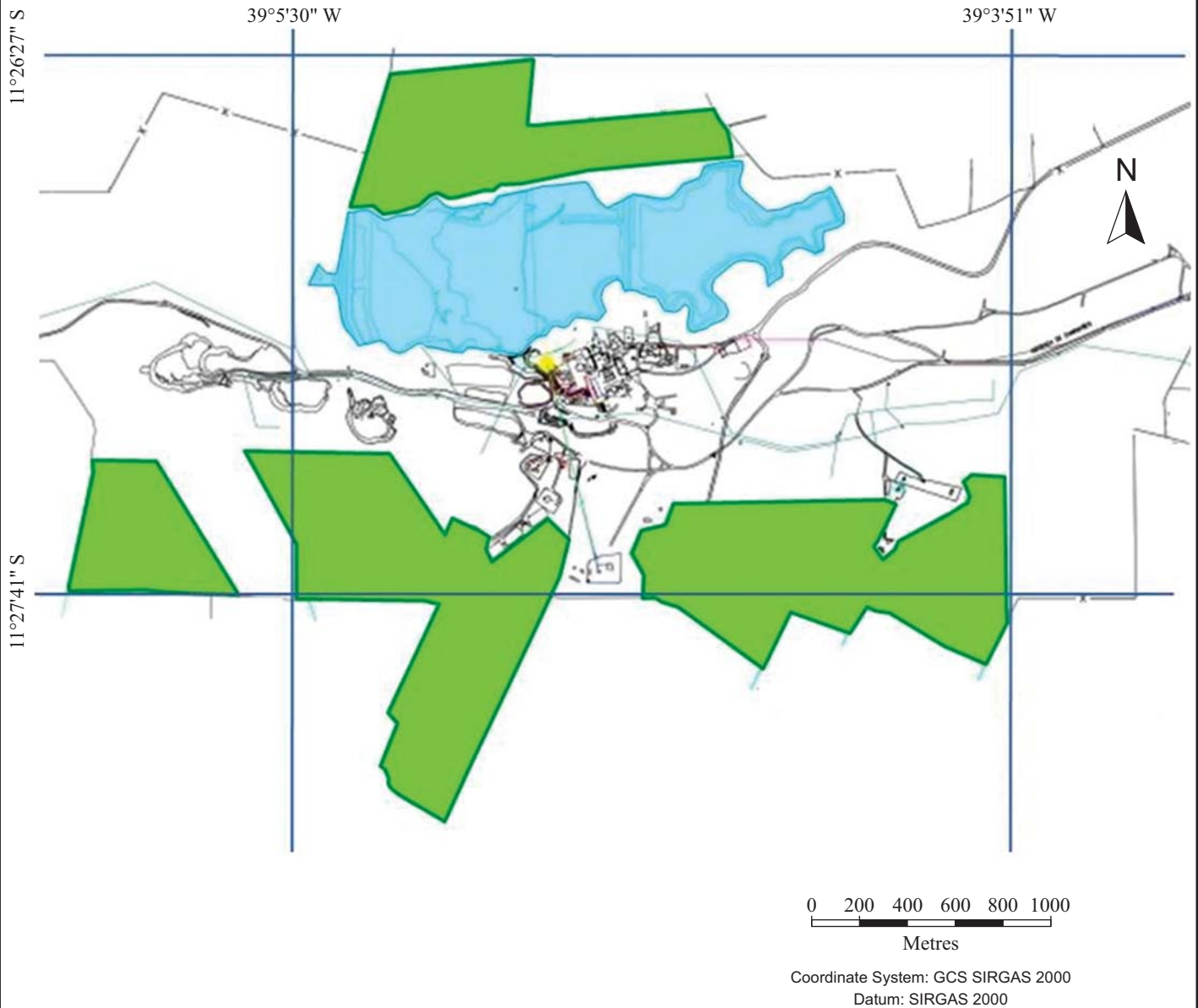


Figure 20-1

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Legal Reserve Areas

ENVIRONMENTAL IMPACTS AND MITIGATION ACTIONS

The MFB mining unit currently has an environmental control plan in place that was developed before the operation started. All the impacts generated are monitored and addressed as required. The impacts to be mitigated during the closure phase of the project were also addressed in the closure plan update prepared by Mineral Engenharia e Meio Ambiente.

The programs contemplated in the environmental control plan are:

- Environmental Management System
- Environmental Education Program
- Erosive Processes Prevention and Control Program
- Liquid Effluents Control Program
- Fauna and Flora Control Program
- Degraded Areas Rehabilitation Program
- Solid Residues Management Program
- Surface Waters Quality Monitoring Program
- Hydrogeological Monitoring Program
- Atmospheric Emissions and Air Quality Monitoring Program
- Noise and Vibration Monitoring and Control Program

SOCIOECONOMICS

The environmental impact assessment (EIA) identified the main impacts that will be generated by the MFB closure in the socioeconomic area such as unemployment, decreased tax revenues, end of demand for local regional suppliers, reduction in personal income, and the end of projects with the local communities. A summary of these impacts is presented in Table 20-2.

TABLE 20-2 SOCIOECONOMICS IMPACTS WITH MINE CLOSURE
Brio Gold Inc. – Fazenda Brasileiro Mine

Impact	Frequency	Severity	Coverage	Nature	Mitigation possibility
Unemployment	Probable	High	Regional	Negative	Mitigable
Termination of tax collection	Probable	High	Regional	Negative	Non mitigable
End of the demand for suppliers	Probable	High	National	Negative	Mitigable
Income decrease	Probable	High	Regional	Negative	Mitigable
End of the projects with the community	Probable	Medium	Regional	Negative	Non mitigable

The unemployment can be mitigated by the relocation of individual workers to other Yamana operations. The nearest Brio site is located at C1 Santa Luz. The relocation to other mining projects and other mining companies within the state is also a possibility.

The loss of tax revenue income is irreversible in the short and medium terms because there are no prospective new enterprises scheduled, or on the planning boards in the MFB Project's area of influence. The services and materials suppliers will have to look for new clients but there are some possibilities of being suppliers for the C1 Santa Luz Project. The reduction of personal income can be partially offset with the implementation and support of sustainable projects within the communities and educational training of the people before the project closure.

The end of the projects involving the community partnership program can be mitigated by intensifying the investments in projects during the pre-closure phase (2018 to 2022). This investment support has the objective of developing the autonomy and the sustainability of these projects, mainly in the generation of employment and income.

MINE CLOSURE REQUIREMENTS

The estimated closure costs for the Fazenda Brasileiro Mine are presented in Table 20-3.

TABLE 20-3 SOCIOECONOMICS IMPACTS WITH MINE CLOSURE
Brio Gold Inc. – Fazenda Brasileiro Mine

Closure (R\$)	Total (R\$000)
Executive closure study elaboration	1,000
Environmental Compensation	625
Canto II open pit and waste piles reclamation	13,296
Closure of open pits Corpo B / Corpo D / Corpo EW	300
Closure of the open pit “Cava da Cerca”	64
Closure of the open pit “Cava da Barragem”	159
Tailings dam reclamation	18,687
Sealing and closure of body G	806
Sealing and closure of body FW Oeste	1,174
Closure of the open pit Cava Corpo F	2,582
Closure of the open pit Cava Canto 1 Sul	1,744
Closure of the open pit Cava Canto 2 Sul	1,005
Closure of the open pit Cava Estrada Oeste	426
Closure of the open pit Cava Leste 2	4,169
Closure of the open pit Pau-a-Pique	276
Closure of the open pit Portaria	799
Corpo Sul	1,113
Topographic contouring of waste pile	1,861
General revegetation	1,380
CIP, HL plant and shop closure decommissioning	2,521
Revegetation Maintenance	772
UG mine stabilization and closure	507
Soil and water monitoring 5 years after closure	215
Soil remediation of CIP Plant	564
Total (Closure)	56,046

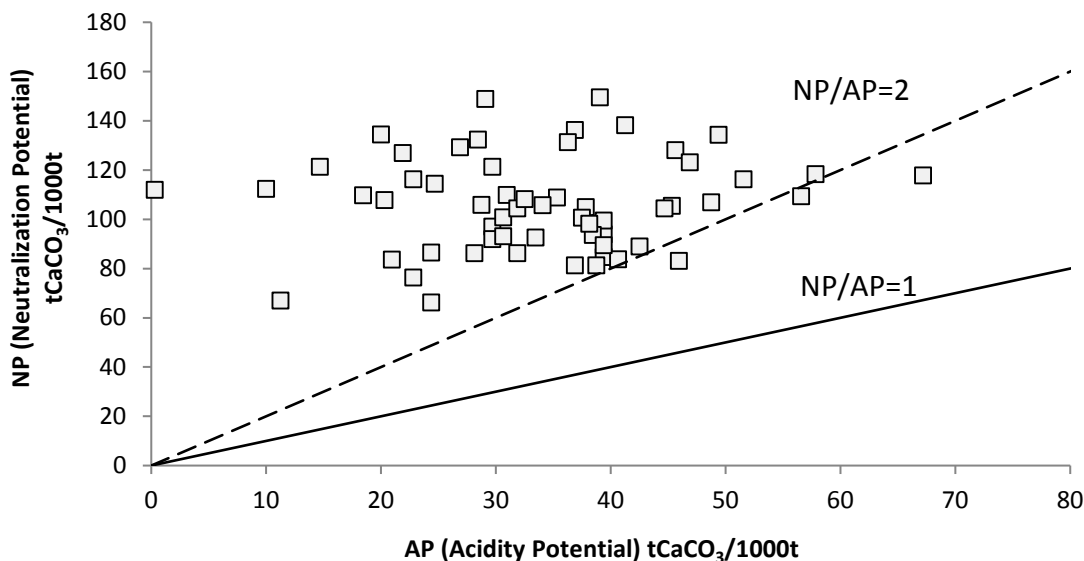
Note. Numbers may not add due to rounding.

At an exchange rate of R\$3.8 = US\$1, the total closure costs are estimated at US\$14.749 M.

ACID ROCK DRAINAGE EVALUATION

A detailed acid rock drainage (ARD) evaluation of the MFB tailings was carried out in 2012. A total of 57 samples of tailings were collected in the tailings dam and analytical results showed that almost 100% of samples presented a neutralization potential two times higher than the acid generating potential. Figure 20-2 shows the acid-base accounting of these samples.

FIGURE 20-2 ACID BASE ACCOUNTING CHARACTERIZATION



These results showed that although sulphides like arsenopyrite, pyrite, and pyrrhotite are present in the mineralogy of the site, the presence of carbonates are proportionately well in excess of the amount of these sulphides. From these results it is possible to conclude that ARD generation will not be a significant risk for the MFB operation and closure.

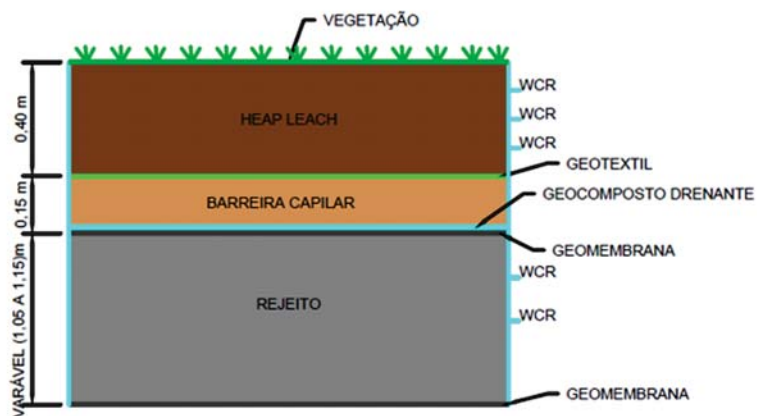
Even with the risks of ARD generation controlled by the natural presence of carbonates in the mineralogy of the waste rocks, it is still possible to find some elevated arsenic concentrations in the water from the tailings dam lakes, according to the water monitoring campaigns carried out through the 32 years at the MFB site. According to these results, consultants have recommended that the arsenic mobility should be controlled after the closure stage in order to avoid potential contamination for the surrounding areas of the site.

In order to address the mitigation methods for this potential ARD issue, the Yamana/Brio staff working with consultants developed a field procedure to test different types of tailings covers and to effectively prevent surficial and meteoric water from contact with the tailings. The most successful of the procedures is shown in a cut-away view of a field lysimeter implemented as shown in Figure 20-3.

Twelve months of testing of these barriers was carried out from 2013 to 2014. The results from these tests showed that a cover layer with 30 cm of oxide material from an exhausted

heap leach pad combined with a capillarity break layer of 15 cm is sufficient to prevent the infiltration of water through the cover and infiltrating into the tailings. It was possible to identify also that the grass grew in the top layers of the soil barrier cover without any problems.

Implementing a cover layer with this configuration should gradually decrease the arsenic concentrations in the dam's toe drain discharge water since the amount of water in contact with the tailings will decrease significantly after the cover implementation.



DETALHE INSTRUMENTAÇÃO - LISÍMETRO 03
SEM ESCALA

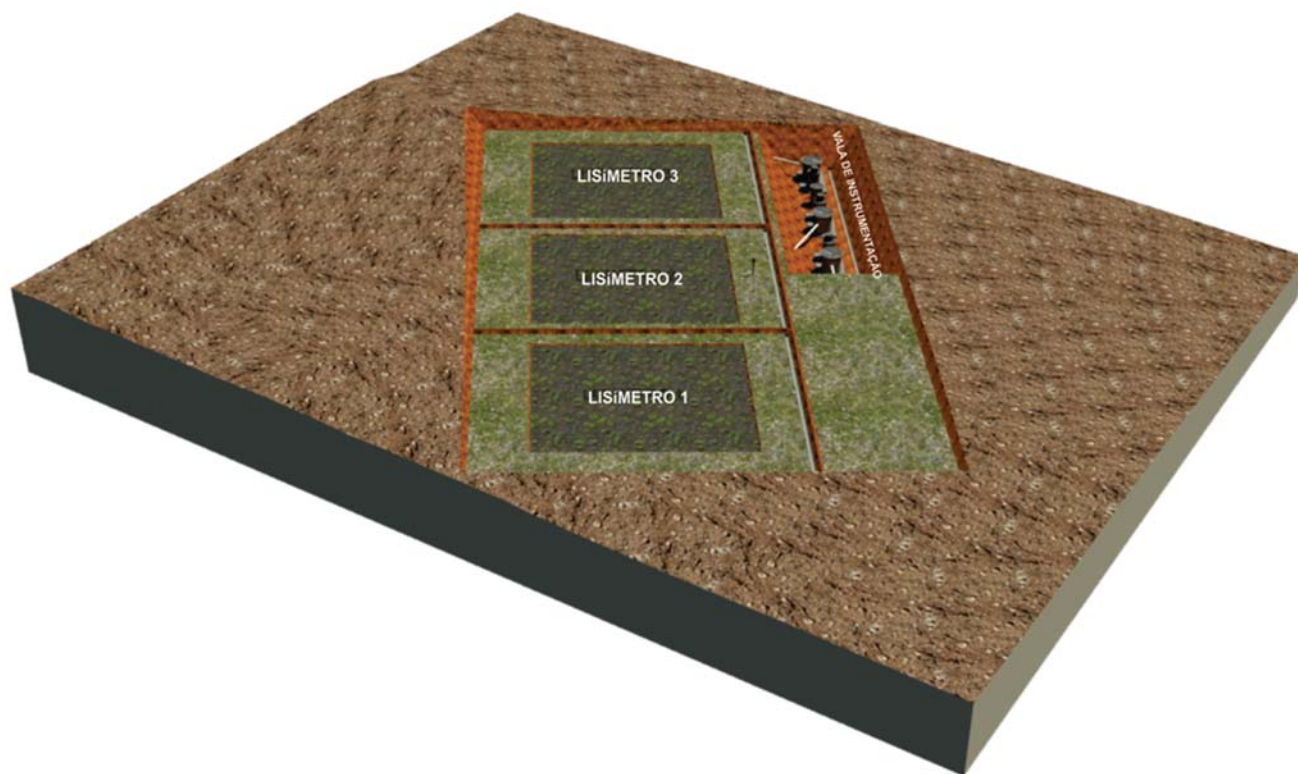


Figure 20-3

Brio Gold Inc.

Fazenda Brasileiro Mine
Bahia State, Brazil
Field Lysimeter Design

21 CAPITAL AND OPERATING COSTS

CAPITAL COSTS

The 2014 and 2015 actual sustaining capital costs for MFB (including exploration) were \$15.5 million and \$12.9 million, respectively, as presented in Table 21-1. The BRL/USD exchange rate was 2.35 for 2014, and was 3.33 for 2015.

The MFB LOM plan sustaining capital cost estimate totals \$72.8 million as shown in Table 21-2. These costs are based on a BRL/USD exchange rate of 3.8.

TABLE 21-1 ACTUAL SUSTAINING CAPITAL COSTS
Brio Gold Inc. – Fazenda Brasileiro Mine

Description	2014 (US\$ million)	2015 (US\$ million)
Buildings & Infrastructure	1.539	0.968
Machinery & Equipment	5.448	3.093
Mine Development	6.938	6.559
Technical Studies	0.774	0.003
Exploration	0.619	2.310
Total	15.474	12.933

TABLE 21-2 PROJECTED CAPITAL COSTS
Brio Gold Inc. – Fazenda Brasileiro Mine

Description	2016 (US\$ M)	2017 (US\$ M)	2018 (US\$ M)	2019 (US\$ M)	2020 (US\$ M)	2021(U S\$ M)	2022 (US\$ M)	Total (US\$ M)
Buildings & Infrastructure	1.657	1.084	0.218	0.092				3.052
Furniture & Fixture	0.019	0.026	0.016	0.014	0.014	0.014		0.104
Hardware & Software	0.186	0.078	0.013					0.277
Machinery & Equipment	4.701	2.427	1.321	0.128	0.041	0.017		8.636
Tailings Dam Maintenance	0.876	0.132	0.224					1.232
Technical Studies	0.727	0.823	0.607	0.309	0.160			2.627
UG Mine Development	7.219	4.847	5.403	5.163	4.001	2.503	0.693	29.829
Vehicles	0.496	0.512	0.520					1.528
Exploration	2.500	1.351	1.296	1.557	0.740			7.444
Expansionary Mine Dev	0.735	0.327						1.062
Tailings Dam Expansion	0.395	0.789						1.184
Other Expansionary	1.053							1.053
Closure & Reclamation							14.749	14.749
Total	20.564	12.397	9.618	7.264	4.957	2.535	15.442	72.776

OPERATING COSTS

Actual operating costs for 2013, 2014, and 2015 are presented in Table 21-3. Unit operating costs for the three-year period averaged \$42.76/t milled including mining, milling and general and administration costs, as presented in Table 21-4. The average BRL/USD exchange rate for the three-year period was 2.55.

TABLE 21-3 ACTUAL OPERATING COSTS – 2013 TO 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2013 (US\$ M)	2014 (US\$ M)	2015 (US\$ M)	Total (US\$ M)
Open Pit Mining	4.166	3.243	1.866	9.275
Underground Mining	29.802	29.574	22.006	81.382
Milling	14.821	14.141	14.624	43.586
General & Administration	8.161	4.617	4.292	17.070
Total	56.950	51.575	42.788	151.313

TABLE 21-4 ACTUAL UNIT OPERATING COSTS – 2013 TO 2015
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2013 (US\$/t milled)	2014 (US\$/t milled)	2015 (US\$/t milled)	Average (US\$/t milled)
Open Pit Mining	3.78	2.91	1.94	3.44
Underground Mining	27.01	26.55	18.02	19.83
Milling	13.43	12.70	12.48	13.60
General & Administration	7.40	4.15	3.65	5.78
Total	51.62	46.30	36.51	42.76
Exchange Rate (BRL/USD)	2.15	2.35	3.33	2.55

As shown previously in Table 16-2, the MFB operation is scheduled to extract 5.7 Mt of material from the various open pits during the 2016 to 2022 LOM plan. Included are 621,000 t of ore and 5.1 Mt of waste rock. In addition, a total of 7.8 Mt of material are scheduled to be extracted from the underground operations. This includes 5.88 Mt of ore and 1.9 Mt of waste rock. As previously shown in Table 16-3, a total of 6.496 Mt are scheduled to be processed in the mill during the LOM plan spanning 2016 to mid-2022. Projected unit operating costs for this mill feed are shown in Table 21-5. The LOM plan estimated unit operating cost averages \$30.95/t milled. Operating costs are based on planned operating metrics and recent actual results modified to reflect a projected BRL/USD exchange rate of 3.8.

TABLE 21-5 PROJECTED UNIT OPERATING COSTS PER TONNE MILL FEED
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2016	2017	2018	2019	2020	2021	2022	Average
Open Pit Mining	3.35	3.35	3.35	3.35				3.35
Underground Mining	16.96	18.84	17.81	18.47	18.00	14.21	20.28	17.56
Milling	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49
General & Administration	6.75	6.24	5.24	5.80	6.96	6.71	6.94	6.26
Total	31.15	31.51	29.26	30.00	33.45	29.41	35.77	30.95

Total operating costs for the MFB LOM plan (2016 to 2022) of \$201.0 million are detailed by year in Table 21-6.

TABLE 21-6 PROJECTED TOTAL OPERATING COSTS (US\$ M)
Brio Gold Inc. – Fazenda Brasileiro Mine

Activity	2016	2017	2018	2019	2020	2021	2022	Total
Open Pit Mining	0.3	0.5	0.6	0.7				2.1
Underground Mining	16.6	17.8	17.5	17.3	13.6	13.0	7.4	103.2
Milling	8.9	9.2	9.9	9.7	6.4	7.8	3.1	55.2
General & Administration	7.1	6.8	6.1	6.6	5.3	6.1	2.5	40.6
Total	33.0	34.3	34.2	34.4	25.4	26.9	13.0	201.0

MANPOWER

The total MFB work force in 2015 included 496 employees and 317 contractors.

22 ECONOMIC ANALYSIS

Under NI 43-101 rules, a producing issuer may exclude the information required for Item 22 Economic Analysis on properties currently in production, unless the Technical Report prepared by the issuer includes a material expansion of current production. Brio is a producing issuer, the MFB mine is currently in production, and a material expansion is not included in the current LOM plans. RPA has carried out an economic analysis of the mine using the estimates presented in this report and confirms that the outcome is a positive cash flow that supports the statement of Mineral Reserves.

23 ADJACENT PROPERTIES

There are no adjacent properties relevant to the MFB Operations.

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

Based on the site visit, discussions with Yamana and Brio personnel, and available information, RPA offers the following conclusions.

GEOLOGY AND MINERAL RESOURCES

- The geological model employed by Yamana geologists is reasonably well understood, and it is well supported by field observations in both outcrop and drill intersections.
- Sampling and assaying have been carried out using industry standard QA/QC practices. These practices include, but are not limited to, sampling, assaying, chain of custody of the samples, sample storage, use of third-party laboratories, standards, blanks, and duplicates.
- Interpretations of the geology and the 3D wireframes of the estimation domains derived from these interpretations, appear to be reasonable.
- The resource model has been prepared using appropriate methodology and assumptions, including:
 - o Treatment of high grade assays;
 - o Compositing length;
 - o Search parameters;
 - o Bulk density;
 - o Cut-off grade; and
 - o Classification.
- The block model has been validated using a reasonable level of rigour consistent with common industry practice.
- Mineral Resources for MFB comply with all disclosure requirements for Mineral Resources as set out in NI 43-101.
- Exploration potential exists laterally along strike to the north and south and at depth below the existing MFB operations.

MINING AND MINERAL RESERVES

- The mining methods utilized at the MFB include both open pit, and underground mechanized sub-level stoping. These are appropriate methods for the deposit.
- The bulk of the mill feed is being sourced from underground. Small open pits are used to supplement the underground production. Total mining capacity is approximately 3,200 tonnes per day (tpd).
- Four separate declines originate on surface and access the various orebodies over a strike length of several kilometres. The deepest level for underground workings is the -750 RL.

- The underground workings have good ground conditions that do not require any special support to ensure stable openings.
- The LOM plan prepared by the MFB mine planning department calls for the mining and processing of a greater number of tonnes than included in the Mineral Reserves. Through annual development and definition diamond drilling programs, MFB expects to convert a sufficient quantity of Mineral Resources to Mineral Reserves to replace the Mineral Reserves extracted and processed during the year. RPA concurs with this approach.
- As Mineral Resources do not have demonstrated economic viability, Brio has prepared a modified MFB LOM plan so that it contains Mineral Reserves only (6.496 Mt grading 1.88 g/t Au) in order to verify economic viability of Mineral Reserves. Any Inferred Mineral Resources included in each year of the MFB LOM plan have been removed, however, all of the planned development (and associated costs) included for each year remains in the model. With continued successful conversion of resources to reserves, however, the actual operations should have a longer life.
- The Mineral Reserve estimates have been prepared using appropriate methodology and assumptions including:
 - o Dilution;
 - o Mining extraction;
 - o Ground conditions;
 - o Access development;
 - o Stope design;
 - o Extraction sequence;
 - o Productivities;
 - o Operating costs;
 - o Sustaining capital costs.
- Through annual development and definition diamond drilling programs, MFB has been successful in converting a sufficient quantity of Mineral Resources to Mineral Reserves to replace the Mineral Reserves extracted and processed during the year. This conversion of Mineral Resources to Mineral Reserves has been repeated annually for more than a decade.
- RPA is of the opinion that the Mineral Reserves are being estimated in an appropriate manner using current mining software and procedures consistent with reasonable practice. RPA is not aware of any mining, metallurgical, infrastructure, permitting, and other relevant factors which would materially affect the Mineral Reserve estimates.

METALLURGICAL TESTWORK AND MINERAL PROCESSING

- The mineral processing facilities are operating well, are achieving near projected ore and gold production levels, and are keeping up with mining rates. The gold grades are expected to decrease in the future and an increased production rate along with the successful discovery of higher-grade material as a result of continued exploration drilling will be ways to compensate for the drop in the mined head grade.
- The plant facilities are in need of refurbishment as well as normal maintenance. The structural steel in the grinding, leaching, and acid wash circuits is showing significant deterioration due to corrosion. Maintenance work planned for 2016 will include

refurbishment of the structural steel supporting the feed conveyors and mill building, replacement of corroded leach and CIL tanks and agitators, and replacement of the acid wash system in the carbon elution circuit.

- The pre-aeration circuit is configured for processing sulphide and carbonaceous ores. The leach circuit has been converted to allow for pre-aeration for sulphide oxidation followed by CIL, which then flows into the CIP circuit, which is now operated as an extension of the CIL circuit. More carbonaceous ores are expected in the future.
- Brio is now performing regular testing of plant CIP feed samples and ore samples from the current areas scheduled for mining, to determine the preg-robbing characteristics of the naturally occurring carbon.

ENVIRONMENTAL ASPECTS

- Yamana has a comprehensive environmental policy, partially inherited from CVRD operations. This policy has been developed in line with the Plan of Recovery of Degraded Area Document (PRAD) as outlined by the relevant authority. The environmental authorities in Brazil use the PRAD as a commitment for the company to complete the rehabilitation on mine closure.
- MFB is an established gold deposit with a 32-year mining history and an established track record with the Brazilian and Bahian government regulatory agencies. The operation has all relevant permits in place along with management plans and monitoring programs. The permits require periodic renewal. Applications have been submitted to the appropriate agencies for the permits nearing expiration. The water discharge and withdrawal permits are due for renewal in 2017.
- A detailed ARD evaluation of the tailings was carried out in 2012. A total of 57 samples of tailings were collected in the tailings dam and showed that all almost 100% of samples presented a neutralization potential two times higher than the acidity potential.
- The arsenopyrite and pyrrhotite in the tailings ponds have low potential to become future ARD generators, as the proportion of carbonates is well in excess of the amount of these sulphides. Brio has developed a field procedure to test different types of tailings covers which, when implemented, will reduce the amount of contaminants in the dam's toe drains by preventing surface and meteoric water from contacting the tailings.

SOCIAL ASPECTS

- Yamana/Brio has developed an exemplary and creditable program for social and community involvement in the area of the MFB operations, which should be maintained by Brio for the life of the mine.
- The main impacts that will be generated by the MFB closure in the socioeconomic area include unemployment, decreased tax revenues, end of demand for local regional suppliers, reduction in personal income, and the end of projects with the local communities. Brio has developed mitigation measures for some of these impacts.

CAPITAL AND OPERATING COSTS

- The MFB LOM plan capital cost estimate includes sustaining capital expenditures, which is then followed by closure and reclamation. The capital cost of these activities is estimated to total US\$72.8 million and is based on a BRL/USD exchange rate of 3.8.
- MFB LOM plan operating costs are estimated to total US\$201.0 million, which averages US\$30.95 per tonne milled.

RISKS

- MFB has been in production since 1984 and is a mature operation. In RPA's opinion, there are not any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, mineral resource or mineral reserve estimates, or projected economic outcomes.

26 RECOMMENDATIONS

RPA has the following recommendations:

- Mineralogical studies may help determine what percentage of resource ounces are within white quartz rich zones. The percentages may suggest the use of optical sorters to upgrade feed to the mill. RPA recommends a university level test, or one with established manufacturers to prove the method works before any further expenditures are committed to the use of optical sorters.
- The average MCF for 2015 is 103% with the greatest variation from the detailed mine planning model vs. process plant comparison. There are also wide monthly fluctuations in the long term model vs. short term model comparison and consistent overestimation of gold content in the short term model vs. detailed mine planning model comparison. RPA recommends that MFB further evaluate the reasons for the variations in all of the models so that appropriate changes can be identified with the goal of improving the model predictive capability and accuracy.
- The plant facilities are in need of refurbishment as well as normal maintenance. Brio should perform refurbishment work in critical areas including grinding, leaching, and CIP and the carbon acid washing and elution circuit.
- Brio should continue work in optimizing the CIL circuit and test any new ore types that will be processed in the future, especially any ores containing significant amounts of carbon.
- ARD generators have been associated with pyrrhotite, pyrite, and arsenopyrite in some of the metallurgical testing at MFB, potentially resulting in increasing acidity within tailings ponds over an extended period of time (years and decades). An ongoing measurement and monitoring program would allow this risk to be minimized.

27 REFERENCES

- Alves da Silva, F.C., Chauvet, A., and Faure, M., 1998, General Features of the Gold Deposits in the Rio Itapicuru Greenstone Belt (RIGB, NE Brazil, Discussion of the Origin Timing and Tectonic Model. *Revista Brasileira de Geociencias*, 28, pp. 377-390.
- Coelho, C.E.S., & Silva, F.H.F., 1998, The Structural Control of the Gold Deposits of the Fazenda Maria Preta Gold District at Rio Itapicuru Greenstone Belt, Northeastern Brazil *Revista Brasileira de Geosciências*. 28 (3): 367-376.
- Coffey Consultoria e Serviços Ltda, 2014, Independent Technical Report on Mineral Resources and Mineral Reserves in the Fazenda Brasileiro Gold Mine, Bahia State, Brazil, prepared for Yamana Gold Inc., July 31, 2014.
- Higa, J., 2012, New Economic Exploitation Plan for MFB MultiGeo Private Report to Yamana, portions translated from Portuguese. November 23, 2012.
- Pulz, G.M., Jost, H., Giuliani, G., and Michel, D., 1994, Multistage gold deposition in the Archean Maria Lázara gold deposit (Goias, Brazil), in *Mineralium Deposita*, v. 29, Issue 1, pp. 94-97.
- Pulz, G.M., Jost, H., Giuliani, G., and Michel, D., 1991, Maria Lázara gold deposit (Goias State, Brazil): An Example of intense fluid/rock interaction associated with a triple point structure, in *Source, Transport and Deposition of Metals*, Pagel & Leroy (editors) 1991 Balkema, Rotterdam, pp. 117-118.
- Reinhardt, M.C., Davison, I., 1990, Structural and lithologic controls on gold deposition in the shear zone-hosted Fazenda Brasileiro Mine, Bahia state, northeast Brazil, in *Economic Geology*, v. 85, pp. 952-967.
- Roscoe Postle Associates Inc., 2015, Technical Report on the Fazenda Brasileiro Mine, Bahia State, Brazil, a NI 43-101 Report prepared by Michaud R.L., Moore, C.M., and Hampton, A.P., for Brio Gold Inc., August 21, 2015.
- Soares, L.M., and Rodriguez, P.C., 2014. Independent Technical Report on Mineral Resources and Mineral Reserves in the Fazenda Brasileiro Gold Mine, Bahia State, Brazil. Prepared by Coffey Consultoria e Serviços Ltda on behalf of Yamana Gold Inc.
- Teixeira, J.B.G., Kishida, A., Marimon, M.P.C., Xavier R.P., McReath, I., 1990, The Fazenda Brasileiro Gold deposit, Bahia geology, hydrothermal alteration, and fluid inclusion studies, in *Economic Geology*, v. 85, pp. 990-1009.
- Watts, Griffis and McOuat Limited, 2003, A Technical Review of the Fazenda Brasileiro Gold Mine and Adjacent Exploration Property in Bahia State, Brazil for Santa Elina Mines Corporation - July 2003 (Internal Report)
- Xavier, R.P., Foster, R.P., 1999, Fluid evolution and chemical controls in the Fazenda Maria Preta (FMP) gold deposit, Rio Itapicuru Greenstone Belt, Bahia, Brazil, in *Chemical Geology*, v. 154, Issues 1-4, pp. 133-154.

Yamana, 2015a, QA/QC Yamana Gold: Fazenda Brasileiro-MFB Mine – Brazil - Annual QA/QC Report – January 2015 to October 2015 (Internal Report)

Yamana, 2015b, QA/QC Yamana Gold: Laboratório da Mineração Fazenda Brasileiro - MFB – Brasil, Relatório de QA/QC – Janeiro/2012 a Dezembro/2014 (Internal Report)

Yamana, 2015c, QA/QC Yamana Gold: Fazenda Brasileiro-MFB Mine – Brazil - Annual QA/QC Report – January 2014 to December 2014 (Internal Report)

28 DATE AND SIGNATURE PAGE

This report titled “Technical Report on the Fazenda Brasileiro Mine, Bahia State, Brazil”, and dated May 12, 2016 was prepared and signed by the following authors:

(Signed and Sealed) “*Chester M. Moore*”

Dated at Toronto, ON
May 12, 2016

Chester M. Moore, P.Eng
Principal Geologist

(Signed and Sealed) “*Robert L. Michaud*”

Dated at Lakewood, CO
May 12, 2016

Robert L. Michaud, P.Eng.
Associate Mining Engineer

(Signed and Sealed) “*Andrew P. Hampton*”

Dated at Lakewood, CO
May 12, 2016

Andrew P. Hampton, P.E.
Associate Principal Metallurgist

29 CERTIFICATE OF QUALIFIED PERSON

CHESTER M. MOORE

I, Chester M. Moore, P.Eng., as an author of this report titled "Technical Report on the Fazenda Brasileiro Mine, Bahia State, Brazil" prepared for Brio Gold Inc. and dated May 12, 2016, do hereby certify that:

1. I am Principal Geologist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.
2. I am a graduate of the University of Toronto, Toronto, Ontario, Canada in 1972 with a Bachelor of Applied Science degree in Geological Engineering.
3. I am registered as a Professional Engineer in the Province of Ontario (Reg. #32455016). I have worked as a geologist for over 40 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Mineral Resource and Mineral Reserve estimation, feasibility studies, due diligence, corporate review and audit on exploration projects and mining operations world wide
 - Various advanced exploration and mine geology positions at base metal and gold mining operations in Ontario, Manitoba and Saskatchewan
 - Director, Mineral Reserve Estimation and Reporting at the corporate offices of a major Canadian base metal producer
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 NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I have not visited the MFB property.
6. I am responsible for Sections 7 to 12, and 14 and share responsibility with my co-authors for Sections 1 to 6 and 23 to 27 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 previously prepared a Technical Report dated August 21, 2015, on the property that is the subject of this 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 12th day of May, 2016.

(Signed and Sealed) “*Chester M. Moore*”

Chester M. Moore, P.Eng.

ROBERT L. MICHAUD

I, Robert L. Michaud, P.Eng., as an author of this report entitled "Technical Report on the Fazenda Brasileiro Mine, Bahia State, Brazil" prepared for Brio Gold Inc. and dated May 12, 2016, do hereby certify that:

1. I am Associate Principal Mining Engineer with RPA (USA) Ltd. of Suite 505, 143 Union Boulevard, Lakewood, Colorado, USA 80228.
2. I am a graduate of Queen's University in 1976 with a B.Sc. Degree in Mining Engineering. I am a graduate of Queen's University in 1977 with a M.Sc. Degree in Mining Engineering.
3. I am registered as a Professional Engineer in the Provinces of Ontario (31570013) and Quebec (37287). I have worked as a mining engineer for a total of 376 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Operations management of several underground mines;
 - Project management of the construction and start-up of several underground mines;
 - Management numerous mine designs and technical studies.
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 NI 43-101) 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 MFB property on March 17, 2015.
6. I am responsible for Sections 15, 16, 19, 21, and 22 and share responsibility for Sections 1 to 6 and 23 to 27 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 previously prepared a Technical Report dated August 21, 2015, on the property that is the subject of this 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 12th day of May, 2016.

(Signed and Sealed) "Robert L. Michaud"

Robert L. Michaud, P.Eng.

ANDREW P. HAMPTON

I, Andrew P Hampton, P.Eng., as an author of this report entitled "Technical Report on the Fazenda Brasileiro Mine, Bahia State, Brazil" prepared for Brio Gold Inc. and dated May 12, 2016, do hereby certify that:

1. I am an Associate Principal Metallurgist with Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.
2. I am a graduate of Southern Illinois University in 1979 with a B.S. Degree in Geology, and a graduate of the University of Idaho in 1985, with an M.S. Degree in Metallurgical Engineering.
3. I am registered as a Professional Engineer in the Province of British Columbia, Licence No. 22046. I have worked as an extractive metallurgical engineer for a total of 27 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Process plant engineering, operating and maintenance experience at mining and chemical operations, including the Sunshine Mine, Kellogg, Idaho, Beker Industries Corp, phosphate and DAP plants in Florida and Louisiana respectively, and the Delamar Mine in Jordan Valley Oregon.
 - Engineering and construction company experience on a wide range of related, precious metal projects and studies, requiring metallurgical testing, preliminary and detailed design, project management, and commissioning and start-up of process facilities and infrastructure. EPCM companies included Kilborn Engineering Pacific Ltd., SNC Lavalin Engineers and Constructors, Washington Group International Inc. and Outotec USA, Inc.
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 NI 43-101) 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 MFB property on March 17, 2015.
6. I am responsible for preparation of Sections 13, 17, 18 and 20 of the Technical Report, and share responsibility for Sections 1 to 6 and 23 to 27.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have previously prepared a Technical Report dated August 21, 2015, on the property that is the subject of this 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 12th day of May, 2016.

(Signed and Sealed) “Andrew P. Hampton”

Andrew P. Hampton, P.Eng.