

MIRAFLORES MINE DEVELOPMENT

JORC 2012 MINERAL RESOURCE STATEMENT

Metminco Limited ("Metminco" or the "Company") (ASX: MNC; AIM: MNC) announces that it has received a mineral resource estimate for the Miraflores gold deposit in Colombia that has been prepared by Metal Mining Consultants ("MMC") based in Denver, USA, in accordance with the guidelines of the JORC Code (2012 Edition). This mineral resource estimate replaces the previous NI 43-101 statement completed by MMC that was released to the market on 7 March 2016.

The JORC 2012 Mineral Resource Estimate for the Miraflores deposit (using a 1.2g/t Au cut-off grade) is as follows:

Measured Mineral Resources	2.95Mt @ 2.98g/t Au and 2.5g/t Ag
Indicated Mineral Resources	6.24Mt @ 2.74g/t Au and 2.89g/t Ag
Measured & Indicated Mineral Resources	9.19Mt @ 2.81g/t Au and 2.76g/t Ag
Inferred Mineral Resources	0.18Mt @ 1.44g/t Au and 5.49g/t Ag

MMC previously estimated a NI 43-101 Measured and Indicated Mineral Resource of 72.6Mt at a gold and silver grade of 0.78g/t and 1.52g/t respectively, using a cut-off grade of 0.27g/t gold. The mineral resource estimate was based on 25,884 metres of drilling in 73 diamond drill holes and 236 metres of underground channel samples. The mineral resource estimate provided for both an open pit and an underground mining operation.

More recently, Metminco requested that MMC produce a mineral resource estimate in accordance with the guidelines of the JORC Code (2012 Edition), but for an underground mining operation only, and hence a higher cut-off grade of 1.2g/t gold was applied. The Measured and Indicated Mineral Resources estimated by MMC contain 832,000 oz Au and 817,000 oz Ag at the 1.2g/t gold cut-off.

SRK are currently completing a revised mine plan and schedule for the underground mining option which will be available shortly.

Minera Seafield SAS ("Minera Seafield") is now a wholly owned subsidiary of Metminco and has been renamed Miraflores Compania Minera SAS.

Mr William Howe, Managing Director, commented: "This resource statement and the pending mine plan will allow the Company to fast track the completion of the Feasibility Study. A final decision on whether the mine will be developed as a stand-alone underground operation or a combination of an open pit and underground mine as previously contemplated, will be taken once the revised underground mine plan has been completed.

The decision on the development option will take cognisance of community and environmental factors, as well as financial factors. The smaller surface footprint of the underground only mining option remains a very attractive option."

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Introduction

Geology

The Miraflores deposit comprises a magmatic-hydrothermal breccia pipe located within a fertile hypabyssal porphyry cluster breccia-pipe. The breccia pipe is sub-vertical and cylindrical with surface dimensions of 250m x 280m with a known vertical extent of 500m to 600m, but open at depth, with clear contacts with the adjacent basalts of the Barroso Formation. A NNW – SSE fracturing system appears to control the formation of the breccia.

Four types of breccia have been distinguished, namely a Red Breccia, a Green Breccia, a Grey Breccia and a White Breccia. The contacts between the different types of breccias are gradational or transitional. The White Breccia occurs in irregular, elongated vertical zones or pockets, surrounded by Green or Grey breccia's, and is interpreted to have formed later than the other breccias. Furthermore, hydrothermal fluid appears to have washed out the rock flour matrix within the White Breccia contains the highest gold grades with grades of up to 429g/t gold in the vicinity of fault / vein zones.

Steeply-dipping high-grade veins are present, which represent the youngest mineralizing event at Miraflores. Three groups of veins have been identified based on strike direction, namely Group 100 comprising 3 veins with an average strike/dip of 293°/-87°; Group 200 comprising 5 veins with an average strike/dip of 308°/-82°; and Group 800 comprising 13 veins with an average strike/dip of 340°/-82°. Of these veins, Group 100 is the oldest, and the Group 800 is the youngest.

The main mineralization trends of the high-grade veins vary in strike from 325° to 10° and 280° to 60°, and vary in dip from being vertical to dipping 70°E. The veins are defined by a narrow mineralized core (10cm to 60cm) and a wider mineralized halo (1m to 5m). The narrow core consists of increased amounts of sphalerite, galena, pyrite, chalcopyrite, and fine clay. The wider mineralized halo is defined by weak to moderate mineralization along the margins of breccia fragments. The intensity and width of the mineralized halo is controlled by the porosity and permeability of the wall rock. Assay values as high as 429g/t Au have been reported for the veins, with numerous sample values ranging from 10g/t Au to grades exceeding 100g/t Au.

The younger sub-vertical, northeast dipping veins, that cross-cut the breccia are characterized by the development of argillized material that contains large quantities of pyrite, chalcopyrite, sphalerite and galena, with occasional visible gold. The sulfides are present as coarse particles ranging from 100 to 200µm (occasionally greater than 200µm). The lateral continuity of the NNW-SSE structures is important, and is clearly recognized in prior exploitation workings, where high gold grade mineralization can be followed over a strike length in excess of 150 metres (and more than 80 metres in height), with limited displacement by younger structures. Intersection points of cross-cutting structures (veins) form high gold grade 'shoots' of variable dimensions, which can be observed in the underground workings.

Mineral Resource Estimate

General

Three diamond drilling programs have been carried out at Miraflores over the period 2006 to 2013 consisting of 73 drill holes totalling 25,884m.

- Kedahda (4 drill holes totalling 1,415m)
- B2Gold (6 drill holes totalling 2,210m)
- Minera Seafield (63 drill holes totalling 22,259m)

The modelling of the Miraflores deposit has been undertaken using Vulcan[™] and Leapfrog[™] Software. All of the exploration sampling has been used in the geological modelling process. The drill hole database was desurveyed, transformed and validated in the Vulcan[™] software, which was then used for the modelling of the mineral resource.

The statistics have been completed using a combination of Vulcan[™], Microsoft Excel[™] and Sage[™] 2001. Geostatistics have been completed in Vulcan[™] and Sage[™] 2001 and grade interpolation has been undertaken in Vulcan[™]. Compilation of the final model was undertaken in Vulcan[™]. Vulcan[™] software is similar to other mining software systems and relies on a block modelling approach to represent deposit as a series of 3-D blocks to which grade attributes, and virtually any other attributes can be assigned. The software provides numerous means by which attributes can be assigned, and optimization routines are provided that

allow block splitting, such that complex deposit outline details are not lost or smoothed out by regular size blocks.

Drill hole assays for Miraflores were composited using 2m down the hole composite lengths. A total of 13,194 two-metre composites were constructed, starting at the collar of the drill hole. Composite intervals less than 0.75m in length were merged with 2m composites however; some composites less than 2m do exist, as the composites were constrained by geological boundaries.

Basic statistics were compiled for both gold and silver grades in each mineralized lithology and all 21 veins developed within the Miraflores deposit. Capping statistics were determined using histogram and log probability plots of all gold composites in the breccia. A capping value of 45g/t was determined for the breccia, whereas it varied from 0 to 17g/t for the veins. Silver grades were not capped as the silver grades at Miraflores are very low.

Block Model

The resource model for Miraflores was constructed with Vulcan[™] software using a block model. All of the required information about the deposit is stored in each individual block. This includes estimated characteristics of gold and silver and statistical characteristics such as number of samples used in an estimate, distances to the nearest sample and the number of drill holes used. Geological triangulations were also used to identify the rock type of each block, and these structures also controlled the sub-blocking in Vulcan[™] along their boundaries. Geological codes stored in the block model were also used to assign the density within specific geological boundaries.

Grade Estimation

The Inverse Distanced cubed (ID₃) grade estimation methodology was used to estimate gold and silver grades. For the breccia, basalt and saprolite, the variography was modelled to determine appropriate search ellipsoid orientation and search distances, whereas for the 21 veins, the search orientation varied depending on the orientation of the vein.

Density

A total of 2,100 specific gravity measurements were used to define the density of each lithological block in the model.

Mineral Resource

As of 02 April, 2013, MMC estimated a Measured and Indicated Mineral Resource of 72.6mt at a gold and silver grade of 0.78g/t and 1.52g/t respectively using a cut-off grade of 0.27 g/t gold in accordance with NI 43-101. The mineral resource was based on 25,884 m of drilling in 73 diamond drill holes and 236 metres of underground channel samples. The mineral resource estimate provided for both an open pit and an underground mining operation.

More recently, MMC were retained by Metminco to produce a mineral resource that is estimated in accordance with the guidelines of the JORC Code (2012 Edition), but which only provided for the exploitation of the Miraflores deposit via an underground mining operation, and hence a higher cut-off grade of 1.2g/t gold. The revised mineral resource estimate is summarized in Tables 1 and 2 below.

Table 1: Mineral Resource Estimate – Miraflores Gold Project (MMC July 2016).

Classification	Tonnes (000's)	Au (g/t)	Ag (g/t)	Oz Au (000's)	Oz Ag (000's)
Measured	2,948	2.98	2.50	282	237
Indicated	6,245	2.74	2.89	549	580
Measured &Indicated	9,193	2.81	2.76	832	817
Inferred	180	1.44	5.49	8	32

Note:

i) Based on a gold cut-off grade of 1.2g/t.

ii) Rounding-off of numbers may result in minor computational errors, which are not deemed to be significant.

iii) Refer **Appendix A** - Table 1 requirement in support of the JORC Code (2012 Edition).

	Measured and Indicated Mineral Resource (Breccia and Veins)				
Cut-off (Au g/t)	K Tonnes	Au (g/t)	Au (Koz)	Ag (g/t)	Ag (Koz)
0.60	23,455	1.61	1,211	2.13	1,606
0.70	18,983	1.83	1,114	2.27	1,383
0.80	15,868	2.04	1,041	2.39	1,222
0.90	13,571	2.24	978	2.52	1,098
1.00	11,761	2.44	923	2.62	991
1.10	10,361	2.63	875	2.71	903
1.20	9,193	2.81	832	2.76	817
1.30	8,342	2.97	797	2.83	759
1.40	7,614	3.14	767	2.89	708
1.50	6,966	3.29	737	2.96	663

Table 2: Sensitivity of Mineral Resource to varying gold cut-off grades.

Inferred Mineral Resource (Breccia only)					
Cut-off (Au g/t)	K Tonnes	Au (g/t)	Au (Koz)	Ag (g/t)	Ag (Koz)
0.60	1,461	0.77	36	3.45	162
0.70	342	1.14	13	3.79	42
0.80	260	1.27	11	4.25	36
0.90	212	1.37	9	4.97	34
1.00	182	1.43	8	5.45	32
1.10	181	1.44	8	5.47	32
1.20	180	1.44	8	5.49	32
1.30	178	1.44	8	5.53	32
1.40	77	1.54	4	2.59	6
1.50	35	1.67	2	0.93	1

Future Work

The Company will use the JORC 2012 mineral resource estimate, as well as the work completed by SRK, as the basis for the conduct of a Feasibility Study, which is scheduled for completion in January 2017.

The Company retained the services of SRK Consulting (U.S.), Inc. ("SRK") to complete a detailed Gap Analysis of key information required to progress the project through to the completion of a Feasibility Study. Although a Feasibility Study was previously initiated Minera Seafield using SRK, it ended abruptly in late 2014 with the appointment of a receiver over its parent company, Seafield Resources Limited.

SRK has been retained to complete an underground only mining study (using paste backfill) as an alternative to the combined open pit and underground mining option developed previously. The results of the study are expected shortly.

William Howe Managing Director

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Competent Persons Statement

Metal Mining Consultants Inc.

The information provided in this ASX Release as it relates to Exploration Results and Mineral Resources of the Miraflores Gold Project is based on information compiled by Scott Wilson, President of Metal Mining Consultants Inc. in Colorado, USA. Mr Wilson, a Qualified Person for JORC (2012 Edition) compliant statements, reviewed the technical information presented in this document.

Mr Wilson has sufficient experience that is relevant to the style of mineralisation and type of mineral deposit under consideration, and to the activity which was undertaken, to make the statements found in this report in the form and context in which they appear. Mr Wilson has consented to be named in this announcement and inclusion of information attributed to him in the form and context in which it appears herein.

Forward Looking Statement

All statements other than statements of historical fact included in this announcement including, without limitation, statements regarding future plans and objectives of Metminco are forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as 'anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will" and other similar words that involve risks and uncertainties.

These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, its directors and management of Metminco that could cause Metminco's actual results to differ materially from the results expressed or anticipated in these statements.

The Company cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. Metminco does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements.

APPENDIX A

JORC Code, 2012 Edition – Table 1 Report

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
Sampling Techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	 Under INGEOMINAS: Geochemical rock chip sampling of outcrops over the five square km project area. 96 samples were collected and analyzed for Au, Ag, Cu, Pb, Zn, Mo and As. Geochemical soil sampling, including ridge-and-spur coverage at 100m sample intervals, over the entire project area, and the installation of a 24-hectare grid with 50m by 50m sample coverage over the main Miraflores area. 142 ridge-and-spur and 88 grid-base soil samples were collected. All were analyzed for Au, Ag and 30 additional elements. Geochemical channel sampling of 8 underground workings at Miraflores, inclusive of vein and wall rock materials to evaluate vein-type and disseminated-type mineralization. 61 wall rock and 93 vein-type samples were collected and analyzed for Au and Ag. Under Kedahda: In total, Kedahda collected 185 rock samples at Miraflores. The majority of these samples were collected as channel and panel samples in the main AMM adit, referred to as the La Cruzada tunnel, and in one of the working adits. La Cruzada is a 270m crosscut oriented at an azimuth of 265°, which cuts many of the known NNW-striking high-grade fault-veins which are the object of the artisanal mining activities at Miraflores. The La Cruzada entrance is located on the eastern margin of the Miraflores breccia, and is essentially developed in a magmatic- hydrothermal breccia along its entire length. La Cruzada is the largest tunnel transecting the Miraflores breccia. A total of 73 drill holes have been completed, totalling 25,884 metres, which have been analysed for Au and Ag, as well as other elements.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Core sampling intervals have been separated by Itihological units.

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
		SGS del Perú S.A.C. analyzed samples for gold by fire assay (FA) (30g sample) with an AA finish (code FAA313; detection limits 5 ppb to 5000 ppb). Over limit gold values were repeated by fire assay with a gravimetric finish (method FAG303) and a lower limit of detection of 0.02 g/t. Multi-element geochemical analyses were conducted by a multi-acid (HNO3 and HCl) digestion and ICP-MS for 48 elements (method ICM40B; Ag, Al, As, Ba*, Be*, Bi, Ca*, Cd, Co, Cr*, Cs, Cu, Fe*, Ga*, Ge, Hf, In, K*, La*, Li, Lu, Mg*, Mn*, Mo, Na*, Nb*, Ni*, P*, Pb, S*, Sb, Sc*, Se, Sn*, Sr*, Ta, Tb, Te, Th, Ti*, TI*, U, V*, W*, Y*, Yb, Zn*, Zr*). SGS indicates that the analysis is partial for elements marked * and depends on the mineralogy. Over limit samples for silver (above 100ppm) and Zn (above 1%) were repeated by four acid digestions and AAS (method AAS41B).
	Aspects of the determination of mineralization that are Material to the Public Report.	During the most recent drilling program (November 2012 to March 2013), samples were prepared by ALS Laboratory in Lima, Peru, who is ISO9001:2008 and ISO 17025 certified, analyzed samples for gold by fire assay (FA) (30g sample) with an AA finish (code Au-AA23; detection limits 0.005 ppm to 10 ppm). Over limit gold values were repeated by fire assay with a gravimetric finish (method Au-GRA21) and a lower limit of detection of 0.05 g/t. Multi- element geochemical analyses were conducted by a four acid "near-total" digestion (HF- HNO3-HCIO4 acid digestion, HCI leach) and ICP-MS for 48 elements (Method ME-MS61; Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Cs, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr). ALS indicates that the four acid digestions are able to dissolve most minerals; however, although the term "near-total" is used, depending on the sample matrix, not all of the elements are quantitatively extracted. Over limit samples for silver (above 100 ppm) and Cu, Ni, Pb, Zn, were repeated by four-acid digestion and AAS (method AA62).
		Core samples and sample rejects are stored at a secure Seafield storage facility in the town of Quinchía.
	In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverized to produce a 30 g charge for fire assay'). In other cases more explanation may	Diamond drill core was utilized for the majority of the samples analysed, with half-core sections having been submitted for preparation and analysis. Sampling intervals of 1 metre were generally taken.
	be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralization types (e.g., submarine nodules) may warrant disclosure of detailed information.	Sample is logged in the tracking system; sample is weighed, dried and finely crushed to > 70% passing a 2 mm screen; make a split of up to 250g using a riffle splitter; pulverize split to > 85% passing a 75 micron (μ m) screen.
Drilling Techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc.).	HQ core was drilled to depths of 400m. Core size was changed to NQ for depths greater than 400m.

Criteria	JORC Code Explanation	Commentary			
	Section 1 Sampling Techniques and Data				
ecovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Standard measurements of recovery were taken prior to splitting the drill core and preparation of the samples. The results showed excellent recovery in general, with selected intervals of lower recovery due to structures or alteration in the host rocks and mineralization. Recovery in the drill core averages above 93%, with recoveries in the mineralized veins and breccias averaging from 95 to 100%.			
ample R	Measures taken to maximize sample recovery and ensure representative nature of the samples.	Core-diameter resizing and triple-tube methods were used to improve recovery in those zones with adverse ground conditions.			
Drill S	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	There is no noted material bias between areas of lower recovery and higher/lower grade. In general, grades tend to increase marginally with improved recoveries, indicating that the loss of core in areas of low recovery is generally commensurate with a decrease in grade. The percentage of low recovery areas (<75%) only represents some 8% of the total core.			
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Geological logging has been completed in sufficient enough detail to differentiate the mineralised lithologies/structures within the deposit. Geotechnical data has been sourced from a geotechnical data collection effort by SRK (2012) and the subsequent conduct of a comprehensive geotechnical specific drilling program consisting of 8 drill holes totalling 2,145 metres. A geotechnical program was conducted for rock mass characterization which quantified the range of variation, especially within the vein structures.			
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Core logging of 73 drill holes has been used for qualitative purposes.			
	The total length and percentage of the relevant intersections logged.	All Miraflores drill holes have been logged (73 drill holes totalling 25,884 metres).			
ub-sampling ques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Core was generally sawn using a diamond saw, although a hydraulic splitter was used in some cases when the diamond saw was inoperative, or to evaluate the possibility of losing material when using a diamond saw. Duplicate samples of drill core were obtained by cutting the reference half of the core in half again with the diamond saw, and taking one of the quarter core samples as the field duplicate sample and leaving the other quarter core for reference purposes.			
5 techn	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable.			

Criteria	JORC Code Explanation		Commentary		
Section 1 Sampling Techniques and Data					
For all sample types, the nature, quality and appropriatenes sample preparation technique.		Sample types are appropriate. November 2012, samples were the SGS del Peru S.A.C. labora preparation procedures were as >95% passing a 2 mm screen; split to >95% passing a 140 me vibrating ring mill. During the latest drilling campai by ALS Colombia Ltd., in Mede The sample preparation proced system; 2) sample is weighed, of mesh, US Std. No.10) screen; a passing a 75 micron (µm) (Tyle	During the first drill campa prepared by SGS Colomb atory in El Callao, Peru, wh s follows: 1) dry the sample 2) make a 250g split using esh screen in 800 cc chrom ign, November 2012 to Ma Ilín and were assayed at th lures were as follows: 1) sa dried and finely crushed to and 3) a split of up to 250 g r 200 mesh, US Std. No. 2	aign over the period 2010 bia S.A. in Medellin, and a to is ISO 9001 certified. e and crush the entire sat a riffle splitter; and 3) put he steel bowls in a Labted arch 2013, samples were he ALS laboratory in Lima ample is logged in the tra >70% passing a 2 mm (g is taken and pulverized 200) screen.	to analyzed at The sample mple to ilverize the ch LM2 prepared a, Peru. icking Tyler 9 to >85%
		Seafield carried out a comprehe standard reference materials (C field duplicates (FD) in addition QA/QC samples were inserted Within each 100 sample numbe samples. Thus every 100 samp samples (15%) which agrees w	ensive QA/QC program at CSRM), quartz sand blanks to check assays at a third into the sample stream on ers, there are 5 CSRM; 4 b bles contain, on average, 8 ith industry best practise g	Miraflores which compris s, preparation duplicates party laboratory. The ro the basis of every 100 st lanks, 2 PD samples and 37 unknowns and 13 QA/ juideline.	ed certified (PD) and utine amples. d 2 FD QC
			Control Sample Coun	ts	
	maximize representivity of samples.	Control Type	Sample Count	% Insertion Rate]
		Standards	664	5.6	
		Blanks	539	4.5	
		Prep Duplicates	267	2.2	
		Field duplicates	252	2.1	
		Pulp Duplicates	1125	9.4	
		Check samples	513	4.5	

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Field duplicates are taken to test the geological homogeneity of the mineralization and the sample sizes and procedures. Duplicate samples of drill core were obtained by cutting the reference half of the core in half again with a diamond saw, and taking one of the quarter core samples as the field duplicate sample, while leaving the other quarter core for reference. This method may introduce a certain amount of additional variance due to the difference in sample weights, and is a measure of the geological variability of the mineralization and the sample size. All samples have been plotted and show a high degree of scatter. The scatter is interpreted as being attributable to the presence of visible gold, coarse sulfides, the uneven distribution of mineralization in the core sample (due to the brecciated texture), returning samples with poor reproducibility. In order to determine an estimation of precision, a Thompson-Howarth method (T-H uses the Group of 11 sample regression between Grade and Absolute Differences) and the Relative Absolute Difference (RAD) method have been used.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are generally 1/2 core samples from HQ-diameter core. In selected cases, larger samples of whole-core or channel samples have been taken for metallurgical analysis. These sample sizes are appropriate in the context of the nature and grain sizes of the mineralization at Miraflores.

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
tests		SGS del Perú S.A.C. analyzed samples for gold by fire assay (FA) (30g sample) with an AA finish (code FAA313; detection limits 5 ppb to 5000 ppb). Over limit gold values were repeated by fire assay with a gravimetric finish (method FAG303) and a lower limit of detection of 0.02 g/t. Multi-element geochemical analyses were conducted by a multi-acid (HNO3 and HCI) digestion and ICP-MS for 48 elements (method ICM40B; Ag, Al, As, Ba*, Be*, Bi, Ca*, Cd, Co, Cr*, Cs, Cu, Fe*, Ga*, Ge, Hf, In, K*, La*, Li, Lu, Mg*, Mn*, Mo, Na*, Nb*, Ni*, P*, Pb, S*, Sb, Sc*, Se, Sn*, Sr*, Ta, Tb, Te, Th, Ti*, TI*, U, V*, W*, Y*, Yb, Zn*, Zr*). SGS indicates that the analysis is partial for elements marked * and depends on the mineralogy. Over limit samples for silver (above 100ppm) and Zn (above 1%) were repeated by four acid digestions and AAS (method AAS41B).
Quality of assay data and laboratory	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	During the most recent drilling program (November 2012 to March 2013), samples were prepared by ALS Laboratory in Lima, Peru, who is ISO9001:2008 and ISO 17025 certified, analyzed samples for gold by fire assay (FA) (30g sample) with an AA finish (code Au-AA23; detection limits 0.005 ppm to 10 ppm). Over limit gold values were repeated by fire assay with a gravimetric finish (method Au-GRA21) and a lower limit of detection of 0.05g/t. Multi- element geochemical analyses were conducted by a four acid "near-total" digestion (HF- HNO3-HCIO4 acid digestion, HCI leach) and ICP-MS for 48 elements (Method ME-MS61; Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Cs, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr). ALS indicates that the four acid digestions are able to dissolve most minerals; however, although the term "near-total" is used, depending on the sample matrix, not all of the elements are quantitatively extracted. Over limit samples for silver (above 100 ppm) and Cu, Ni, Pb, Zn, were repeated by four-acid digestion and AAS (method AA62). Core samples and sample rejects are stored at a secure Seafield storage facility in the town
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable. All analytical work was laboratory based. Geophysical work was restricted to approximately 750km of magnetic and radiometric surveys that was generated by Anglo and subsequently analysed by Seafield for use in exploration targeting.

Criteria	JORC Code Explanation	Commentary	
	Section 1 Sampling Techniques and Data		
		Routine QA/QC samples are inserted into the sample stream for every batch of 100 samples. Within each batch of 100 samples, there are 5 CSRM samples, 4 blanks, 2 PD samples, 2 FD samples and 87 unknowns. The inclusion of 13 QA/QC samples (15%) is consistent with the best practice industry guidelines. Most of the CSRM samples for gold were purchased from Ore Research & Exploration Pty Ltd., Australia. The Certificates of Analysis for the CSRM can be found on the Ore Research & Exploration web site at www.ore.com.au/oreas/reports. Seven CSRM samples were used, namely Oreas 50c, Oreas 152A, Oreas 52Pb, Oreas 53Pb, Oreas 16b and a high grade CSRM sample was acquired towards the end of 2012 to cover those intervals with higher grades. An additional (new) standard sample was introduced at the end of the year 2012 (CM14) that was acquired from CDN Resource Laboratories Ltd., Canada.	
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	The results for the standards exhibited a very low percentage of failures (0.5%). Four blank samples are submitted with every 100 samples taken. The blank used by Seafield is coarse grained quartz sand purchased in Medellín, Colombia, the results of which yielded a satisfactory performance for gold over time, with reference a 'warning' level placed at 0.025 parts per million (five times limit of detection). Two blanks failed, one of which was reassayed from the pulp material, the re-assay results of which returned a blank value. The second failure was within a very high grade interval and indicates there was weak contamination. Field duplicates are taken to test the geological homogeneity of the mineralization and the sample sizes and procedures. Duplicate samples of drill core were obtained by cutting the reference half of the core in half again with the diamond saw, and taking one of the quarter core samples as the field duplicate sample, leaving the other quarter core for reference. All samples show a poor correlation, with a fairly high degree of scatter. The scatter is interpreted to be a function of the presence of visible gold, coarse sulfides, and the uneven distribution of mineralization within the breccias.	
		Preparation of duplicates are made as a check on adequate sample preparation. Two duplicate sample pulps per 100 samples were routinely prepared at the sample preparation facility. For the preparation duplicate samples, an empty numbered sample bag was submitted as part of the normal sample stream. A note inside the bag instructed the sample preparation facility to prepare a second pulp from a certain sample number. The results of the preparation duplicate sampling show a similar amount of scatter to the field duplicates. When compared to the field duplicates the preparation duplicate samples as shown by a trend line, but this is interpreted to be a random effect caused by the scatter of values rather than a systematic bias. Again the scatter is interpreted to be due to the presence of visible gold, coarse sulfides, or the uneven distribution of mineralization in the breccia zones.	

Criteria	JORC Code Explanation				Comme	ntary			
	Section 1 San	nplin	ng Techniques a	and Data					
			The author collected four quarter split core samples from the samples used in the resource estimate. One sample was collected to confirm low grade; One sample was collected to verify a grade between 1.0 and 2.0 Au g/t; Two samples were collected to confirm high grades greater than 5.1 Au g/t. The low grade and 1.0 to 2.0 g/t assays showed very close correlation to the original assays. However, the two high grade sample (Samples D-23818 and D-23819) returned much lower results than the original assays. Although the resulting check assays are lower, this demonstrates the nugget-like nature of the mineral deposit. Independent Verification Sample Results						
	The verification of significant intersections by either independent or			Sample	De	pth	Au Gra	Au Grade (g/t)	
bu	alternative company personnel.		Drill Hole	No.	From	То	Original	Check Sample	
sayi			QM_DH_50	D-23723	77.3	79.25	1.435	1.255	
ass			QM_DH_50	D-23768	141.75	142.35	0.044	0.048	
and			QM_DH_50	D-23818	214.8	216.8	66.6	8.53	
ling			QM_DH_50	D-23819	216.8	218.4	9.19	2.27	
n of samp									
catio	The use of twinned holes.	The	There are no twinned drill holes at Miraflores.						
Verificati	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Drii spr inc are add rela lab with res ser pot	Drill hole data for Miraflores is logged in the field and entered and maintained in Excel spreadsheets by Seafield. Drill hole logs are manually reviewed for discrepancies and inconsistencies in the sample interval column and the rock code column. Once the drill logs are cleared they are exported and transferred to the master database, which performs additional data validation checks. The drill hole database is built on PostgreSQL, an object-relational database management system. The assay certificates received from the laboratories are delivered in spreadsheets which can be imported directly into the database without manipulation. Access permission for entering and editing data in the database is restricted to the Project Database Administrator. The database is hosted on the Seafield server in Medellin, which routinely backs up every day for protection from data loss due to potential drive failures or other technical issues.						
	Discuss any adjustment to assay data.	No	adjustments we	re made to the	assay data.				

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Down-hole directional surveys were conducted using a reflex instrument. EZ-Shoot measurements have been taken every 50m for drill holes QM- DH-01 to QM-DH-05; every 9m for drill holes QM-DH-06 to QM-DH-16, every 50m for drill holes QM-DH-17 and QM-DH-18 and every 30m for drill holes QM-DH-19 to QM-DH-60 and holes from underground stations UM-DH-01 to UM-DH-04. Drilling related problems impacted negatively on the ability to take measurements with respect to the periodicity mentioned above. The drilling carried out by Kedahda and B2Gold did not include deviation measurements. Initial collar surveys were located using hand-held GPS, whereas final collar locations were surveyed with a differential GPS.
	Specification of the grid system used.	UTM Zone 18 Northern Hemisphere: The mineral contract forms a polygon centred at about 423,650 East, 585,900 North. WGS-84 datum. The mineral contract forms a polygon centred at about 5°17'40"N and 75°41'33"W

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
		Seafield Resources conducted a LiDAR airborne survey of the Quinchía Project area which includes the Miraflores deposit. The LiDAR data was captured by a Riegl VQ-480 laser mounted in a Hughes 500 helicopter. LiDAR is recognized as a very adequate method for quality topographic maps.
		Triangulation of LiDAR Surface showing position of Breccia
	Quality and adequacy of topographic control.	
ing and Ition	Data spacing for reporting of Exploration Results.	Drill spacing is highly variable, but the deposit has been drilled on sections with a nominal 25m spacing. Actual drill spacing for mineralized structures ranges from 10m to some 75m.
Data spac distribu	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The spacing of the data used in the Mineral Resource estimation is sufficient to establish geological continuity and has been considered in the classifications applied.

Criteria	JORC Code Explanation	Commentary
	Section 1 San	npling Techniques and Data
	Whether sample compositing has been applied.	Drill hole assay results for Miraflores were composited using 2m down the hole composite lengths. A total of 13,194 composites were constructed. Compositing commenced at the collar of the drill hole. Composite intervals less than 0.75m in length were merged with 2m composites. However, some composites less than 2m do exist as the composites were constrained/bound by geological boundaries. The merging of composites was done to reduce the number of short composites used in the resource estimation.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The orientation of drilling is the best that it can be, considering the topographical challenges present in the area. Orientations between drill holes and mineralization varies with the geometry of the mineralized structures and breccias, but is generally designed to be perpendicular to the mineralized structures within the breccia.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material	Most drill holes are angled holes designed to intercept the sub-vertical breccia body and associated high-grade veins. The author is of the opinion that the drill holes and channel samples are appropriate representations of the thicknesses and extent of the mineralization present, based on the evidence available to date.
Sample security	The measures taken to ensure sample security.	Core samples and sample rejects are stored at a secure Seafield storage facility in the town of Quinchía. Samples are transported to the preparation facility by company personnel, and are picked up directly from the storage and logging facility by the laboratory. The chain of custody from the arrival of samples at the preparation facility is well-documented.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Seafield maintained a very detailed QA/QC program using reference materials, Certified Blanks, Field Duplicates, Preparation Duplicates, Pulp Duplicates and Check assay. These established procedures demonstrated that the data gathered is of sufficient quality and quantity for grade interpolation techniques.

Criteria	JORC Code Explanation	Commentary
	Section 2 Rep	orting of Exploration Results
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Miraflores property consists of a single 124-hectare mineral exploitation contract located in the Republic of Colombia, South America. The Miraflores mineral contract forms a polygon centred at 5°17'40"N and 75°41'33"W. Geographically, the mineral title is located within the Municipality of Quinchía, Department of Risaralda, 190km NW of the Colombian capital of Bogota and 55 km to the north of Pereira, the regional capital city of the Department of Risaralda. Contract Number : 010-87M Size (Ha) : 124.092 Registered Title Holder: Minera Seafield S.A.S. (100%) Contract Status: Mining Registry No. GBRK-01
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	On 16 April 2010 Seafield Resources Ltd. of Canada through its Colombian subsidiary Minera Seafield SAS, signed a sale-purchase with the Asociación de Mineros de Miraflores (Miraflores Miners Association, AMM) to purchase a 100% interest in the Miraflores property. As of the date of this report, Seafield had earned a 100% interest in the property.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Modern exploration has been carried out at Miraflores since 1994, and the first diamond drilling was carried out in 2006. In 2000, the Colombian government's geological division, INGEOMINAS, with the permission of the Asociación de Mineros de Miraflores, undertook a series of technical studies at Miraflores, which included geological mapping, geochemical and geophysical studies, and resource calculations not compliant with NI 43-101(Rodriguez et al., 2000). In 2005, Sociedad Kedahda S.A. (Kedahda), now called AngloGold Ashanti de Colombia S.A., a subsidiary of AngloGold Ashanti Ltd., entered into an exploration agreement with the Asociación de Mineros de Miraflores, and carried out exploration including diamond drilling over the period 2005 to 2007, completing 1,415m. In 2007 Kedahda optioned the project to B2Gold Corp who carried out exploration including additional diamond drilling from 2007 to 2009 totalling 2,210m. B2Gold completed a NI 43-101 technical study of the Miraflores Project in 2007 (Gorham, 2007) as well as an internal mineral resource estimate that was not published (McKinnon, 2008). This mineral resource estimate does not comply with NI 43-101 standards and is not described further in this report. On 24 March 2009, B2Gold advised the Asociación de Mineros de Miraflores that it had decided not to make further option payments and the property reverted to AMM under the terms of the option agreement.

Criteria	JORC Code Explanation	Commentary
	Section 2 Rep	orting of Exploration Results
Geology	Deposit type, geological setting and style of mineralization.	Miraflores is a gold and silver rich, magmatic-hydrothermal breccia pipe, located within a fertile hypabyssal porphyry cluster, whose genesis is intimately related to the evolution and cooling of magmatic and hydrothermal fluids emanating from the porphyry cluster's parent magma chamber. Alteration is dominated by lower temperature phyllic, argillic and propylitic varieties, forming peripheral to or above the higher temperature potassic core zones associated with the porphyries themselves. Alteration at Miraflores is strongly propylitic. The increased values of base and trace metals (Zn, Pb, Sb, As) as seen at Miraflores occur peripheral to the core porphyry zones containing Au, Cu and Mo.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or Reduced Level (elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 	See Appendix S2a and Appendix S2c.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Not applicable.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	In reporting Exploration Results, gold grades were cut at 20 g/t before calculating a length weighted average grade. Cut-off Grade (CoG) was set to 0.2 g/t Au. Silver grades were not capped. No more than 6m of internal waste is included in the weighted intervals.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Where exploration results are stated, composited grades based on length weighted averages are used.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values reported.

Criteria	JORC Code Explanation	Commentary
	Section 2 Repo	orting of Exploration Results
ationship between mineralization widths and intercept lengths	Relationship between sample length and true thickness of mineralization (if known; if unknown, this must be stated). These relationships are particularly important in the reporting of Exploration Results.	Due the chaotic nature of the breccia and the multiple orientations of the veins, this relationship cannot be quantified directly. However, efforts were made to intercept the mineralization as perpendicular as possible to derive a best estimate of the true thickness of the mineralization.
	If the geometry of the mineralization with respect to the drill hole angle is known, its nature should be reported.	The Miraflores breccia is sub-vertical and roughly cylindrical with surface dimensions of 250m by 280m with a known vertical extent of 500 to 600m, but is open at depth, with clear contacts with the adjacent basalts of the Barroso Formation. The NNW – SSE fracture system appears to control the formation of the breccia. The main mineralization trends of high-grade veins vary in strike from 325° to 10° and from 280° to 60°, with a dip of between 70°E and vertical.
		Most of the drill holes are angled such that they intersect the mineralised structures perpendicular to their strike/dip direction.
		Refer diagrams below.
Rel		

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Criteria	JORC Code Explanation	Commentary		
	Section 2 Rep	orting of Exploration Results		
		Triangulations of Miraflores Geological Boundaries	Plan View of Miraflores Drilling with Breccia Surface Outline	
	If the geometry of the mineralization with respect to the drill hole angle is known, its nature should be reported.	Image: series	<figure><section-header><section-header></section-header></section-header></figure>	

Criteria	JORC Code Explanation	Commentary
Section 2 Reporting of Exploration Results		
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').	Reporting of significant intercepts includes the statement "True thickness of the mineralization can vary from 35% to 55% of the interval length reported, considering that the breccia pipe body and the mineralized faults are sub-vertical."
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer Appendix S2b
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results	Refer Appendix S2c.
ation data		In 2008 AngloGold Ashanti Colombia S.A. carried out an airborne survey that covered most of the Seafield Properties in Quinchía, collecting a total of 750km of magnetic and radiometric data. The analysis of the data contracted by Seafield in 2010 identified numerous trends and potential faults. Porphyry type deposits such Dosquebradas and Tesorito shows a moderate to good magnetic response. There is a NE-SW set of lineament trends which may represent a set of faults.
Other substantive explora	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Four composite samples were constructed to represent the different characteristics of the deposit: White Breccia, Green Breccia, Basalt, and a channel sample from underground workings. Metallurgical tests such as Cyanide (CN) Dosage Optimization revealed concentrations of CN had little effect on the overall recovery. The tests show that the recoveries for the Green and White Breccias were 85.9% and 89.2% respectively. Gravity+Flotation testing proved to be the better process for recovery which had recoveries of around 95% for both Green and White Breccias.
		B2Gold used immersion testing of 1,772 samples to determine the densities of the breccia pipe and material outside the breccia to be 2.73 t/m ³ and 2.83 t/m ³ respectively.
		Process Mineralogical Consulting Ltd conducted a mineralogy report identifying various minerals with in the three composites from drill holes.

Criteria	JORC Code Explanation	Commentary	
	Section 2 Reporting of Exploration Results		
er work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	The drilling program conducted in support of the resource estimate for Miraflores is considered to be adequate, and any further drilling may only have a limited impact on the estimate. As of the date of this report, MMC has not recommended any further phases of drilling or work programs.	
Furth	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	The drilling conducted to-date has successfully delineated the geometry of the upper portions of the breccia pipe. The extent of the mineralization is well known laterally. However, based on drilling results, the resource is open at depth.	

Criteria	JORC Code Explanation	Commentary
	Section 3 Estimation	and Reporting of Mineral Resources
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Seafield employed a technician whose job was to ensure that the database was error free. The author routinely verified that all newly entered data was correct by comparing the database to assay certificates.
	Data validation procedures used.	 The data used in this report by has been verified by: Visiting the property and confirming the geology and mineralization; Taking check samples at the property; Visiting the core and RC chip storage facility and sample cutting facility in Quinchía; Reviewing core from several holes; Checking the location of some drill holes in the field; and Conducting a review of QA/QC protocols and validation of assay certificates relative to the database.
ite visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits	The author last visited the site on 23 April 2013. Site visits included reviewing core and comparing notes on the geology of the project. Independent verification samples were collected. Meetings were held with the key staff working on the project. The author has visited the site four times prior to the April 2013 site visit.
0)	If no site visits have been undertaken indicate why this is the case.	Not applicable.
	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The geological model for the hydrothermal breccia pipe considered to be representative of the data based on a review by the author of all of the gathered technical information, as well as an underground visit (La Cruzada crosscut).
Geological interpretation	Nature of the data used and of any assumptions made.	Numerous sources of information, both digital and hard copy, were used in the preparation of this report. The data comprises assay information gathered from drilling as well as geological interpretations of the deposit. Inverse Distance grade interpolation techniques were used as the preferred method to establish the quantities and qualities of mineralization. The resources are based on 25,884m of drilling in 73 diamond drill holes and 236m of underground channel samples as of 2 April 2013. This includes 3,624m of drilling in 10 holes carried out by AngloGold Ashanti and B2Gold over the period 2006 to2007.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative interpretations using different search distances were evaluated when the geology of the project was less well known. These methodologies were not dependent on geological boundaries and hence the effect was to have more tonnes and lower grade. These interpretations were useful in the understanding of the volume of the Mineral Resource, but there was no reliance on geological control to mineralization.

Criteria	JORC Code Explanation	Commentary
	Section 3 Estimation a	and Reporting of Mineral Resources
	The use of geology in guiding and controlling the Mineral Resource estimation.	For the Miraflores deposit, geologic shapes were created using Leapfrog [™] and Vulcan [™] , which assist in the interpretation of geological boundaries from the drill hole database. Shapes were created for the breccia pipe, basalt, and saprolite rock types in Leapfrog [™] , and then converted to Vulcan [™] triangulations. The Miraflores deposit also contains 21 veins with a north-west strike. These veins were modelled creating Vulcan [™] triangulations. In Vulcan [™] , these triangulations were used to constrain grade estimations appropriately within each geological boundary.
	The factors affecting continuity both of grade and geology.	Continuity of grade is primarily controlled by the extent of the breccia body. No post- mineralization faulting is evident. The breccia body is open at depth.
Dimensions	The extent of variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower and lower limits of the Mineral Resource.	Mineralization at Miraflores is contained within the Miraflores magmatic-hydrothermal breccia body and in the basalts close to the contact. The Miraflores breccia is a typical breccia-pipe in that it is sub-vertical, cylindrical, with surface dimensions of 250m by 280m with a known vertical extent of 500m to 600m, but is open at depth, with clear contacts with the basalts of the Barroso Formation. The NNW – SSE orientated fracturing system appears to control the formation of the breccia. Younger sub-vertical (75°E to 90°) NNW-SSE and NW – SE striking veins that cross cut the breccia are characterized by the development of argillized material and significant quantities of sulfides (pyrite, chalcopyrite, sphalerite and galena). Some visible gold has also been observed. The sulfides are present as coarse particles ranging from 100 to 200µm and greater than 200µm. The persistence of the NNW-SSE structures is important and is clearly recognized in the exploitation workings of the AMM where high gold grade mineralization can be followed over a strike distance in excess of 150m and more than 80m in height, with almost no displacement of the structure. Cross cutting structures (veins) form high gold grade shoots of variable dimensions that can be observed in the AMM workings.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	The modelling for Miraflores was undertaken using Vulcan [™] and Leapfrog [™] Software. All exploration sampling has been used in the geological modelling process. For the Miraflores deposit, geological shapes were created using Leapfrog [™] and Vulcan [™] , which interprets geological boundaries from the data in the drill hole database. Shapes were created for the breccia pipe (and associated breccia types), basalt, and saprolite rock types in Leapfrog [™] , and then converted to Vulcan [™] triangulations. The Miraflores deposit also contains 21 veins, running in a northwest trend. These veins were modelled creating Vulcan [™] triangulations. In Vulcan [™] , these triangulations were then used to constrain grade estimations within each geological boundary. Inverse distanced cubed (ID3) grade estimation methodology was used to estimate gold and silver grades. For the breccia, basalt and saprolite, variography was completed to determine the search ellipsoid orientation and search distances.

Criteria	JORC Code Explanation	Commentary
	Section 3 Estimation	and Reporting of Mineral Resources
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	B2Gold completed a NI 43-101 technical study of the Miraflores Project in 2007 (Gorham, 2007), as well as an internal mineral resource estimate that was not published (McKinnon, 2008). Mineral Resource estimates were generated for the project in 2011, 2012 and 2013. With each successive estimation, the knowledge from the previous estimates was used to guide the new estimates.
	The assumptions made regarding recovery of by-products.	Silver is assumed to be a by-product of gold for the purposes of this report. Although silver is included in the model, it was not used in the CoG calculation, as its contribution to the overall revenue is minimal. Gravity concentration recovered about 9% to 20% of the silver. Rougher and cleaner flotation of the silver contained in the gravity tailings resulted in overall gravity/flotation silver recoveries of 67.5% to 84.5%. Base-line cyanidation tests demonstrated that 63% to 67% of the silver could be extracted from the cleaner flotation concentrates resulting in overall silver recoveries ranging from about 48% to 61%. Overall silver recovery is estimated at about 50%.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulfur for acid mine drainage characterization).	Given the apparent low sulfidation of the deposit (<1.03% S), the generation of acidic, metal- laden leachates is considered to be minimal. Refer Appendix S3a.

Block Model Framework							
Item	East	North	Elevation				
Minimum Mine Coordinates	422,650	584,700	300				
Maximum Mine Coordinates	423,400	585,450	2,000				
Number of Blocks	750	750	1,700				
Parent Block Size (Wall Rock) in metres	10	10	10				
Parent Block Size (BX, BAS, SAP & Veins) in metres	5	5	5				
Sub-Block Size in Metres	0.5	0.5	0.5				

Grade Estimation Parameters: Breccia, Basalt & Saprolite

Estimation Type	Inverse Distance Cubed (ID3)				
Search Ellipseid	Bearing	Plunge		Dip	
Search Ellipsoid	-51	-51		-21	
Search Distance	Major Axis	Semi-Major Axis		Minor Axis	
Search Distance	90	53		142	
No. of Somplos	Min		Max		
No. of Samples	3			10	
Limit of Samples per drill hole	3				

Grade Estimation Parameters: Veins

Estimation Type	Inverse Distance Cubed (ID3)					
Coorch Ellipsoid	Bearing	Plunge		Dip		
Search Ellipsold	287 to 343	0		-67 to -89		
Secret Distance	Major Axis	Semi-Major Axis		Minor Axis		
Search Distance	50 50		0	20		
No. of Complete	Min		Max			
No. of Samples	1	1		5		
Limit of Samples per drill hole	Nil					

In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.

Criteria	JORC Code Explanation	Commentary		
	Section 3 Estimation a	and Reporting of Mineral Resources		
		Mining Selectivity was considered by sub-blocking the block model at the contacts of the veins within the breccia pipe.		
	Any assumptions behind modelling of selective mining units.	The mineralized veins have an approximate width of 1 to 6m with variable spacing between veins, averaging approximately 12m. In many areas grade is present outside of veins and will be considered for mining. Stope planning widths must be sufficiently flexible to mine multiple veins the same stope. Stope widths will be dependent on the stability of the roof rock and cost of stabilizing the roof. Without additional specific geotechnical data, it is assumed a maximum of three veins can be mined simultaneously. The range of anticipated stope widths are divided into three groups:		
		1 to 6m wide for single vein only mining;		
		6 to 12m wide for single vein with HW/FW mill feed included; and		
		• 12 to 15m wide for double vein mining or single vein with HW/FW mill feed included.		
		Ground support requirements can be specified from these spans and estimates of rock quality.		
	Any assumptions about correlation between variables.	Not applicable.		
	Discussion of basis for using or not using grade cutting or capping.	Basic statistics were compiled for both gold and silver grades in each mineralized lithology and all 21 veins in the Miraflores deposit. Capping statistics were determined on the basis of statistical plots such as histograms and log probability plots of all Au composites in the Breccia. Silver grades were not capped as the silver grades at Miraflores are very low.		
		Refer Appendix 3b.		
	Description of how the geological interpretation was used to control the resource estimates.	The resource estimates were constrained by geological boundaries for the breccia and the associated (21) vein structures.		
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	The database has been validated and certified that the data is clean and error free. Statistical and visual checks were performed by MMC of the estimated block model to ensure there were no discrepancies in the grade estimation routines and to ensure the geometry of mineralization meets the configuration that the geologists expected for both gold and silver estimations. Swath plots were generated to compare grade variations from the block model to the grade distribution derived for both gold and silver because the generated to compare grade variations from the block model to the grade distribution because the generated to the grade distribution form the block model to the grade distribution because the generated to the grade distribution because the generated to be grade distribution form the block model to the grade distribution because the generated to be grade distribution because the generated because the ge		
		distribution derived from the composites. Plots show that the overall grade distribution has been modelled sufficiently well and that there are no extreme deviations of the model from the composite grades.		

Criteria	JORC Code Explanation	Commentary
	Section 3 Estimation	and Reporting of Mineral Resources
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content	Tonnage are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied	Cut-off grades were estimated at 1.20 g/t Au. This is based on a nominal Au price of US\$1,470/oz, metallurgical Au recovery of 91%, 3.2% Royalty, US\$32.00/t mining cost, US\$15.60/t ore processing cost, and US\$3.90/t general and administrative costs. Au price was derived from CMF recommended ore reserve pricing of USD\$1,130 + a 30% Resource premium.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The available geotechnical information indicates that a sublevel longhole stoping method with either waste rock backfill or paste backfill would be successful in obtaining a high extraction ratio in the economic portion of the deposit. The veins and mineralized zone between veins will be accessed via a two ramp system and all material will be truck hauled to surface. Internal and external dilution was not applied to the resource calculation. It is assumed that the veins can be mined separately from the breccia.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Miraflores metallurgical test composites were found to be highly amenable to gold recovery by conventional processing methodologies. Test composites contained significant coarse free gold that was amenable to gravity concentration. Processing by a flowsheet that includes gravity concentration followed by flotation of the gravity tailings and cyanide leaching of the flotation concentrate appears to be the best processing alternative and offers the advantage of a smaller cyanidation circuit, which could significantly improve options for tailings disposal.

Criteria	JORC Code Explanation	Commentary						
Section 3 Estimation			and Reporting of Mineral Resources					
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Waste rock will primarily be used as embankment material for construction of the flotation Tailings Storage Facility (TSF) dam embankment with small amounts (2.73 Mt of rockfill) being used as underground backfill for the stopes. It is assumed that the waste rock can be graded onsite to formulate the engineered fill for the embankment. All geochemical testing of waste rock samples completed to-date, confirms that the waste rock is not acid generating and will not generate ARD. Humidity cell tests are still ongoing, but results to-date show no signs of ARD. Full geochemistry testing results will be included with the Feasibility Study evaluations. SRK developed a conceptual design for a 0.44 Mt leached residue tailings facility located on the ridgeline to the east of and below both the mine and the mill site. The leached residue impoundment will be a fully double-lined facility consisting of an HDPE liner underlain by a low-permeability clay liner. Since this facility must be excavated into the ridgeline, construction must be complete before the mill commences production. Excess waste material cut from the leached residue TSF in the amount of 1.32 Mm ³ (approximately 2.50Mt) will either be used for coffer dam construction upstream of the flotation TSF and/or stockpiled and reserved for backfill of stopes as the underground mine progresses. The alternative of using a smaller dry stacked tailings facility is to be investigated, as this will reduce the size of the TSF and eliminate the need for the emplacement of costly embankment material. The use of paste backfill as an alternative to waste rock will also evaluated.						
	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	Based on the results of previous work conducted in support of the April 2012 and Augus 2013 Preliminary Economic Assessments conducted by SRK.						
ensity		A to litho	tal of 2,100 specific gravity measurements w ology block in the model. Rock Types & Correspo	ere used to define the c nding Density Values	ensity of each			
ulk	The bulk density for bulk material must have been measured by		Rock Type	No. of Samples	Ave Density			
В	methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones		Breccia Pipe and Veins	1,805	2.75			
	within the deposit.		Basalt	233	2.87			
			Saprolite	18	2.67			
			Other (dacite, diorite, andesite, fault)	44	2.81			

Criteria	JORC Code Explanation	Commentary
	Section 3 Estimation	and Reporting of Mineral Resources
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The resource model incorporates different bulk densities for each of the rock types.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Mineral resources are categorized on the basis of distance from samples and the quantity of sample information used in the estimate. This classification includes the following criteria: Measured Resource = At least 3 drill holes within an average distance of 25m; Indicated Resource = At least two drill holes within an average distance of 50m \underline{or} blocks estimated within the veins in the second estimation pass; and Inferred Resource = all other estimated blocks.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The data used in this report has been verified by: visiting the property and confirming the geology and mineralization; taking check samples at the property; visiting the core and storage facility and sample cutting facility in Quinchía; reviewing core from several drill holes; checking the location of some drill holes in the field; and reviewing the QA/QC. The author concludes that: exploration drilling, sampling, sample preparation, assaying, and density measurements have been carried out in accordance with best current industry standard practices and are suitable to support resource estimates. Exploration and drilling programs are well planned and executed and provide sufficient information for resource estimates and resource classification. Sampling and assaying includes quality assurance procedures; and exploration databases are professionally structured and are sufficiently error-free to support resource estimates.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The reported mineral resource includes all of the available information relevant to the project. Based upon our site visits, correspondence and professional judgment, we believe this is an accurate assessment of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	During 2013, Golder Associates as well as SRK Denver reviewed the estimation methodologies for Miraflores. In both cases, the results of the audits found that acceptable standards had been used in the estimation of the mineral resources for the project.

Criteria	JORC Code Explanation	Commentary
	Section 3 Estimation	and Reporting of Mineral Resources
ative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	A significant mineral resource has been identified at Miraflores. Drill plans were designed to: (a) improve confidence in the estimate of gold in all resource categories; and (b) to expand and confirm the extent of the overall known resource. The intention of the current resource estimate was to use it as a basis for ongoing studies. Assaying, density measurements, and drill hole surveys have been carried out in accordance with best industry standard practices and are suitable to support resource estimates. Sampling and assaying includes quality assurance procedures, including submission of blanks, reference materials, pulp duplicates and coarse reject duplicates, and the execution of check assays by a second laboratory. Mineral resources are classified as Measured and Indicated Mineral Resources and as Inferred Mineral Resources. The Mineral Resources has been estimated in accordance with the JORC (2012 Edition) guidelines.
Discussion of rel	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used	Globally, the estimation is biased approximately 3% low compared to de-clustered composite grades, and the bias fluctuates between +/-25% on a local basis, by vein. This is due to the minimal data in some veins compared to others, as well as the varying density of data for the breccia zones. Visually the blocks compare well with the composite grades.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The project is not currently an operating mine, and no historic production data exists that can corroborate the Mineral Resource statement.

Appendix S2a

Miraflores Drill Holes

HOLE	UTM Easting	UTM Northing	UTM Altitude (m)	Azimuth (degrees)	Inclination (degrees)	Length (m)
QM_DH_01	423218	585097	1368	230	-60	543.5
QM_DH_02	423176	585131	1407	180	-60	345.1
QM_DH_03	423190	585176	1421	235	-50	596
QM_DH_04	423036	585251	1494	235	-50	400.75
QM_DH_05	423021	585295	1509	225	-50	359
QM_DH_06	422973	585185	1547	225	-60	235
QM_DH_07	422975	585189	1547	0	-60	181
QM_DH_08	423034	585136	1491	45	-50	232.6
QM_DH_09	423030	585134	1493	240	-60	349.9
QM_DH_10	423044	585052	1472	235	-50	245.3
QM_DH_11	423127	585033	1434	240	-55	369.7
QM_DH_12	423128	585031	1434	180	-60	275.3
QM_DH_13	423137	585131	1426	263	-52	532.1
QM_DH_14	423255	585072	1364	291	-56	574.1
QM_DH_15	423138	585131	1427	291	-57	509
QM_DH_16	423137	585131	1426	246	-63	620
QM_DH_17	423365	585173	1331	254	-52	620
QM_DH_18	423124	585301	1455	197	-76	506
QM_DH_19	423365	585173	1331	254	-65	534.5
QM_DH_20	423265	584986	1369	260	-48	610
QM_DH_21	423284	584939	1369	307	-62	620.5
QM_DH_22	423265	584986	1369	266	-65	614.5
QM_DH_23	423034	585139	1493	282	-73	619
QM_DH_24	423267	584980	1370	263	-55	620
QM_DH_25	423126	585034	1434	226	-55	421.1
QM_DH_26	422986	585000	1515	270	-58	275
QM_DH_27	422986	585000	1515	230	-50	175
QM_DH_28	423177	584938	1441	230	-45	314.3
QM_DH_29	423295	584840	1404	250	-45	350
QM_DH_30	423283	584935	1370	226	-40	288

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METMINCO LIMITED

HOLE	UTM Easting	UTM Northing	UTM Altitude (m)	Azimuth (degrees)	Inclination (degrees)	Length (m)
QM_DH_31	423283	584935	1370	217	-63	620
QM_DH_32A	423256	585069	1365	240	-45	528.5
QM_DH_33	423233	584954	1408	292	-46	550
QM_DH_34	423223	584954	1408	274	-49	440
QM_DH_35	423055	585179	1474	244	-53	290
QM_DH_36	423118	585198	1453	241	-46	375
QM_DH_37	423122	585300	1454	234	-51	400
QM_DH_38	423246	585001	1370	257	-57	340
QM_DH_39	423008	584969	1494	287	-47	89.3
QM_DH_40	423129	584963	1438	246	-48	313.8
QM_DH_41	423037	584983	1479	247	-47	110
QM_DH_42	423079	584960	1460	254	-43	147
QM_DH_43	423189	584970	1425	263	-45	151.2
QM_DH_44	423047	585003	1477	262.9	-47	105
QM_DH_45	423127	585031	1435	257	-45	250
QM_DH_46	423027	585132	1493	265	-47	141.5
QM_DH_47	423111	585056	1440	257	-50	86
QM_DH_48	423102	584984	1454	252	-43	222
QM_DH_49	423067	585049	1460	252	-47	175
QM_DH_50	423184	585044	1405	262	-60	415.6
QM_DH_51	423040	585198	1484	248	-43	130
QM_DH_52	423176	585133	1408	252	-56	500
QM_DH_53	423034	585250	1492	243	-71	251.5
QM_DH_54	423093	585121	1451	259	-58	267
QM_DH_55	423059	585240	1491	245	-73	423.3
QM_DH_56	423022	585079	1485	256	-49	112.2
QM_DH_57	423123	585202	1453	252	-56	300
QM_DH_58	423063	585235	1490	235	-55	300.5
QM_DH_60	423191	585177	1418	266	-58	350
UM_DH_001	423108	585059	1365	252	-27	203.6
UM_DH_002	423108	585059	1365	252	-45	230
UM_DH_003	423123	585098	1365	254	-26	220
UM_DH_004	423123	585098	1365	255	-50	285

ASX ANNOUNCEMENT

METMINCO LIMITED

HOLE	UTM Easting	UTM Northing	UTM Altitude (m)	Azimuth (degrees)	Inclination (degrees)	Length (m)					
MI_DDH_001*	423,105	585,061	1,364	257.5	-60	238.15					
MI_DDH_002*	423,110	585,063	1,364	78.5	-61	224.6					
MI_DDH_003*	423,107	585,064	1,364	347.5	-50	340					
MI_DDH_004*	423,108	585,056	1,440	360	-90	612					
MI_DDH_005**	423,178	585,134	1,407	225	-80	301.1					
MI_DDH_006**	423,133	585,192	1,448	225	-70	353.7					
MI_DDH_007**	423,052	585,238	1,495	200	-70	376.7					
MI_DDH_008**	423,031	585,135	1,492	225	-70	352.05					
MI_DDH_009**	423,060	584,992	1,474	45	-85	341.55					
MI_DDH_010**	422,987	584,996	1,516	45	-80	485					
Total metres				Total metres 25,884.1							

Source: Seafield, 2013

* Drill holes carried out by Kedahda

** Drill holes carried out by B2Gold

Appendix S2b



Plan and Section Views – Miraflores Block Model

Diagrams show the distribution of blocks with gold grades in excess of 1.2g/t gold as they occur within the breccia pipe (shaded area) and the vein structures. The area between the blue line and the yellow line represents basalts that are located adjacent to the breccia.

Appendix S2c

Significant Gold Intercepts in Seafield Drill holes at Miraflores

Drill Hole No	Depth (metres)	Interval (motros)	Au Grada (a/t)	
	From	То	interval (inetres)	Au Grade (g/t)	
QM-DH-01	70.7	82.9	12.2	0.659	
and	139.8	218	78.2	0.475	
and	264.5	270.5	6	0.593	
and	390.9	402.9	12	0.38	
and	425.5	437	11.5	0.451	
QM-DH-02	19.15	329.7	310.55	0.369	
Incl.	59.2	93.2	34	0.8	
QM-DH-03	53.1	502.15	449	1.033	
Incl.	231.85	241.85	10	2.868	
and	282.55	306.5	23.95	4.666	
QM-DH-04	27.55	111.7	84.15	0.461	
Incl.	66	105.7	39.7	0.764	
and	123.3	201.3	78	0.565	
Incl.	127.3	168.3	41	0.943	
QM-DH-05	63.5	73.05	11.55	0.531	
QM-DH-06	52.5	71.8	19.3	0.298	
QM-DH-07	40.5	66.7	26.2	0.41	
QM-DH-08	161	163.65	2.65	1.083	
QM-DH-09	3.7	258.8	255	0.49	
Incl.	3.7	49	45.3	0.561	
and	93.1	131	37.9	0.869	
Incl.	101	118.7	17.7	1.229	
and	149	207	58	0.72	
QM-DH-10	1.6	245.3	243.7	0.47	
Incl.	1.6	144.4	142.8	0.628	
and	160.6	184.7	24.1	0.725	
QM-DH-11	0	369.7	369.7	1.003	
Incl.	4.2	71.7	67.5	0.508	
and	87.55	107.65	20.1	2.195	
and	251.9	344.95	93.05	2.422	

Drill Hole No.	Depth (metres)	Interval (metres)	Au Grade (g/t)
QM-DH-12	0.8	243.2	242.4	0.544
Incl.	0.8	72.6	71.8	1.18
Incl.	2.8	55.1	52.3	1.526
QM-DH-13	11.2	20.15	8.95	0.34
and	48	60	12	0.3
and	64	101.6	37.6	0.43
and	105.3	122.7	17.4	1.71
Incl.	121.2	122.7	1.5	14.05
and	137.9	154.2	16.3	1.43
and	158.2	164.4	6.2	0.62
and	180.3	200.75	20.45	0.85
and	218.75	273.8	55.05	0.83
and	279.8	322.5	42.7	0.64
and	327.35	337.35	10	0.32
and	345.35	371.2	25.85	0.25
QM-DH-14	97.05	115.2	18.15	0.64
and	131.2	208.7	77.5	0.35
and	220.5	295.7	75.2	0.28
and	312.2	332.9	20.7	0.69
and	337	402	65	0.35
and	480.25	493.1	12.85	0.91
and	538.05	547.9	9.85	0.28
QM_DH_15	19.7	39.6	19.9	0.34
and	50.2	312.1	261.9	0.8
Incl.	91.6	99.6	8	1.35
Incl.	183	226.1	43.1	1.45
Incl.	232.1	273.8	41.7	1.35
Incl.	277	303.9	26.9	0.73
and	323.55	350	26.45	0.34
and	374	379.1	5.1	0.86
and	394.55	422	27.45	0.35
QM-DH-16	12.9	22.3	9.4	0.6
and	43.65	55.8	12.15	0.31

Drill Hole No.	Depth (metres)		Interval (metres)	Au Grade (g/t)
	From	То		
and	73.8	106	32.2	0.36
and	110	123.5	13.5	2
and	132.7	146.7	14	0.35
and	154.7	173	18.3	0.49
and	175	285.4	110.4	1.31
Incl.	251	277	26	2.11
and	294.6	358.2	63.6	0.75
Incl.	297.4	317.6	20.2	1.21
and	366.2	432.6	66.4	0.69
Incl.	374.2	404	29.8	1.05
and	455.1	478.8	23.7	0.36
and	504.9	546.6	41.7	0.34
and	551.55	561.8	10.25	0.8
QM-DH-17	337.8	343.8	6	0.26
and	446.3	454.3	8	0.21
and	483.5	503.5	20	0.21
and	565	574.5	9.5	0.22
and	581.8	599.8	18	0.29
QM-DH-18	205.1	211.3	6.2	0.28
and	280.8	289.7	8.9	0.56
and	304.9	312.9	8	0.4
QM-DH-19		No Significa	ant Intervals	
QM-DH-20	165.4	187.7	22.3	0.31
and	197	311.25	114.25	0.97
and	323.8	336.75	12.95	0.28
and	345	361.3	16.3	0.87
and	367.3	413.4	46.1	0.25
and	421.65	462.3	40.65	0.44
and	468.3	477.1	8.8	0.2
QM-DH-21	247.4	271.4	24	0.27
and	312.4	328.7	16.3	0.29
and	353.5	380	26.5	0.33
and	385.75	429.8	44.05	0.33

Drill Hole No	Depth (metres)	Interval (metres)	Au Grade (g/t)	
	From	То	interval (metres)	Au Orade (grt)	
and	438.9	450.05	11.15	0.22	
and	460	537.55	77.55	0.32	
and	570.4	591.7	21.3	0.22	
QM-DH-22	228.65	234.65	6	0.32	
and	268.65	274.65	6	0.32	
and	380.5	388.5	8	0.28	
and	405.3	419.3	14	0.23	
and	550.3	565.6	15.3	0.24	
and	584.4	593.3	8.9	0.29	
and	595.5	607.5	12	0.26	
QM-DH-23	16.15	27.2	11.05	0.75	
and	33	200.2	167.2	0.73	
and	206.2	241.95	35.75	1.22	
and	259.95	388.2	128.25	0.6	
Incl.	288.2	322.9	34.7	0.91	
and	396.35	491.8	95.45	0.4	
QM-DH-24	178.9	346.65	167.75	1.05	
including	258.7	302.8	44.1	2.94	
and	361.8	368.7	6.9	0.3	
and	376.3	417.6	41.3	0.31	
and	433.6	445.6	12	0.45	
and	465.6	477.6	12	0.35	
QM-DH-25	0.7	107.8	107.1	0.52	
and	121.95	128.4	6.45	3.02	
and	133	294	161	0.78	
Incl.	153.1	189.4	36.3	0.95	
and	307.45	352.3	44.85	0.5	
Incl.	309.45	329.45	20	0.86	
and	367.1	391.1	24	0.25	
QM-DH-26	0.1	32.7	32.6	0.53	
and	64.7	74.3	9.6	0.59	
QM-DH-27	0	19.9	19.9	0.4	
and	31.9	48.5	16.6	0.37	

Drill Hole No.	Depth (metres)	Interval (metres)	Au Grade (g/t)	
	From	То		Au Orade (grt)	
and	134.9	144.9	10	0.61	
QM-DH-28	206.9	216.4	9.5	0.31	
QM-DH-29	5	26.6	21.6	0.46	
and	274.55	281.45	6.9	0.56	
QM-DH-30	278.7	288	9.3	1.12	
QM-DH-31	221.5	329.4	107.9	0.61	
Incl.	278.6	295.1	16.5	1.82	
and	352.5	383.6	31.1	0.4	
and	399.1	413.3	14.2	0.3	
and	417.9	425.9	8	0.34	
and	433.3	456.4	23.1	0.4	
and	470	481.6	11.6	0.44	
and	531.4	539.5	8.1	0.47	
QM-DH-32A	0	13.3	13.3	0.46	
and	105.1	135.8	30.7	0.71	
and	141.8	153.4	11.6	0.57	
and	159.4	354.3	194.9	1.57	
Incl.	201	222.15	21.15	1.66	
Incl.	255.7	281.7	26	3.86	
Incl.	343.1	349.1	6	11.04	
and	368.3	417	48.7	0.62	
and	422.7	439.2	16.5	0.4	
and	461.9	471.9	10	0.42	
and	501.5	508.6	7.1	0.25	
and	516.5	528.5	12	0.4	
QM-DH-33	31.9	39.2	7.3	0.2	
and	104.3	177.9	73.6	0.64	
and	185.9	300.6	114.7	1.89	
Incl.	233	243.6	10.6	11.97	
and	322.6	345.6	23	0.74	
and	351.6	383.2	31.6	1.4	
and	388.9	407	18.1	0.56	
and	461.1	468.5	7.4	0.38	

Drill Hole No.	Depth (Depth (metres) Interval (metres)		Au Grade (g/t)
OM-DH-34	109	10	13	0.38
and	129.5	145.1	15.6	0.33
and	129.5	143.1	15.0	0.52
and	149.1	178	28.9	0.95
and	183	344.15	161.15	3.23
Incl.	225	285	60	5.48
and	360.9	376.9	16	3.89
and	383.75	406.6	22.85	2.11
and	412.6	440	27.4	2.09
QM-DH-35	0	24.5	24.5	0.38
and	60.4	87.5	27.1	0.66
and	92.2	108.6	16.4	0.54
and	118.5	144.8	26.3	0.56
and	150.2	177	26.8	0.44
and	191.6	207.6	16	0.35
and	219.6	239.6	20	0.35
and	265.6	275.6	10	0.39
QM-DH-36	22	163	141	0.89
Incl.	67.75	72.1	4.35	7.93
and	173	238.8	65.8	1.01
Incl.	194.8	220.1	25.3	1.63
and	244.8	265.1	20.3	0.71
and	312.8	326.8	14	3.20
QM-DH-37	101	107	6	0.90
and	180	193.85	13.85	0.35
and	198.4	234.8	36.4	0.81
and	238.8	391.4	152.6	1.03
Incl.	281.6	293.6	12	3.66
Incl.	341.6	351.2	9.6	1.54
QM-DH-38	139	148.3	9.3	0.32
and	153.6	167.6	14	1.64
and	179.3	293	113.7	1.63
Incl.	219.2	250.95	31.75	3.78
and	299	318.6	19.6	0.98

Drill Hole No.	Depth (metres)	Interval (metres)	Au Grade (q/t)	
	From	То		, la el ado (g, l)	
and	327.5	338.1	10.6	0.37	
QM-DH-39	6.6	68.75	62.15	1.18	
Incl.	31.2	36.7	5.5	2.59	
Incl.	63.9	68.75	4.85	5.28	
QM-DH-40	38	66.35	28.35	0.54	
and	69.45	180	110.55	0.78	
Incl.	73.45	107.2	33.75	1.55	
and	197.8	261.3	63.5	0.41	
QM-DH-41	11.1	41.4	30.3	1.35	
and	44.6	51	6.4	0.87	
and	85.7	108.7	23	3.51	
QM-DH-42	19.1	37.3	18.2	0.77	
and	42.15	58.15	16	0.29	
and	83.85	117	33.15	0.88	
and	122.55	147	24.45	0.93	
QM-DH-43	12.9	16.9	4	1.15	
and	48.3	56.5	8.2	0.39	
and	90.4	140.25	49.85	0.75	
QM-DH-44	45	105	60	0.69	
Incl.	74.4	87.4	13	1.03	
QM-DH-45	0.7	121	120.3	0.47	
Incl.	83.2	110	26.8	0.89	
and	127.25	179.15	51.9	0.35	
and	202.25	239.4	37.15	0.45	
QM-DH-46	3	51.4	48.4	0.52	
and	61.4	122	60.6	0.50	
and	127.8	138.8	11	0.46	
QM-DH-47	28.7	86	57.3	1.29	
Incl.	48.4	63.9	15.5	2.63	
QM-DH-48	3	20.1	17.1	0.66	
and	30.75	86.3	55.55	0.82	
and	106.3	131.7	25.4	1.24	
and	141.7	182.85	41.15	0.67	

Drill Hole No.	Depth (metres)	Interval (metres)	Au Grade (g/t)	
	From	То			
and	189.4	212.4	23	0.77	
QM-DH-49	31.3	72	40.7	0.62	
and	77.15	102.85	25.7	0.36	
and	122.4	137.15	14.75	0.69	
and	159.4	175	15.6	0.46	
QM-DH-50	61.75	141.75	80	0.61	
and	146	384.15	238.15	2.06	
Incl.	182.8	242	59.2	5.72	
Incl.	247.5	273.95	26.45	2.08	
Incl.	292.3	310.3	18	1.85	
and	396.15	412.15	16	0.68	
QM-DH-51	1.9	121.00	119.1	1.34	
Incl.	10.6	31.5	20.9	4.68	
Incl.	73.1	102.65	29.55	0.75	
QM-DH-52	13.4	27.35	13.95	0.41	
and	80.9	137.8	56.9	0.36	
and	140.9	181.1	40.2	1.03	
and	183.6	254.65	71.05	1.07	
and	256.25	430.3	174.05	1.15	
Incl.	258.25	318.2	59.95	2.33	
and	480.3	491.7	11.4	0.41	
QM-DH-53	124.80	214.9	90.1	0.85	
Incl.	158.20	165.70	7.5	3.03	
and	224.70	251.50	26.8	0.60	
QM-DH-54	34.5	101.9	67.4	0.91	
and	107.3	267	159.7	1.66	
Incl.	123.9	144.9	21	4.46	
Incl.	161.85	189.1	27.25	3.41	
Incl.	230.2	242.2	12	1.42	
QM-DH-55	136	199.7	63.7	0.66	
and	221.2	256.8	35.6	0.40	
and	261	284.3	23.3	2.08	
and	312.5	324.5	12	0.45	

Drill Hole No.	Depth (metres)		Interval (metres)	Au Grade (g/t)
and	From	To 264	22.5	0.22
	340.3	304	23.5	0.52
and	401.9	419.4	17.5	0.35
QM-DH-56	0.0	54.65	54.65	0.70
and	71.70	102.2	30.5	0.40
QM-DH-57	25.55	34.4	8.85	0.47
and	40.1	59.25	19.15	0.35
and	67.3	100.4	33.1	0.57
and	106.05	300	193.95	0.94
Incl.	146.6	162.6	16	1.22
Incl.	186.15	206.3	20.15	1.89
Incl.	219.6	231	11.4	3.17
Incl.	253.6	275.6	22	1.02
QM-DH-58	43.3	103.8	60.5	0.50
and	113.7	258.25	144.55	0.96
Incl.	137.4	142.1	4.7	3.57
Incl.	155.4	197.7	42.3	1.42
Incl.	238	251.6	13.6	1.65
QM-DH-60	136.9	173.7	36.8	0.28
and	181.7	318.20	136.5	0.53
Incl.	219.20	245.6	26.4	0.83
Incl.	255.6	286.15	30.55	0.73
and	324.80	350.0	25.2	0.49
UM-DH-001	0	58.2	58.2	0.55
and	61.8	84.1	22.3	1.02
and	98.50	106.10	7.6	1.04
and	116	128.4	12.4	0.43
and	151.4	159.9	8.5	1.09
and	167.6	203.6	36	0.75
UM-DH-002	1.8	19.9	18.1	0.79
and	35.3	149.6	114.3	1.33
Incl.	63.1	73.3	10.2	4.02
Incl.	82.8	102.7	19.9	2.97
and	155.85	201.8	45.95	0.59

Drill Hole No	Depth (metres)	Interval (motros)	Au Grade (g/t)	
Dim noie No.	From	То	interval (inetres)	Au Grade (g/t)	
and	207.8	227.8	20	0.45	
UM-DH-003	11.25	91	79.75	0.73	
Incl.	56	72.1	16.1	1.67	
and	162.75	198.85	36.1	0.94	
UM-DH-004	6	21.6	15.6	0.53	
and	29.6	141	111.4	1.52	
Incl.	113.6	137	23.4	3.91	
and	149	167	18	1.76	
and	199.6	214.3	14.7	0.53	
and	224	270.8	46.8	1.21	
Incl.	231.4	252.2	20.8	2.39	

Source: Seafield, 2013

- CoG 0.2 g/t Au. Intervals above 0.3 g/t Au listed in the table above.
- No more than 6.0 m of internal waste is included in the intervals.
- Gold grades cut to 20 g/t before calculation of length-weighted average.
- True thickness of the mineralization can vary from 35% to 55% of the intervals length reported, considering that the breccia pipe body and the mineralized faults are sub-vertical.

Appendix S3a

		Composite Sample ID				
ltem	Units	Green Breccia Comp Ave	White Breccia Comp Ave	Basalt Comp Ave	Argillized Comp Ave	Analytical Method
Au	ppm	0.59	0.38	0.80	21.45	AU-1AT-AA
S	%	0.58	0.83	0.59	3.99	S-LECO
Ag	ppm	1.87	2.67	2.00	76.2	Ag-AR-TR
Ag	ppm	1.80	2.40	2.20	-	30-4A-TR
AI	%	6.86	6.80	7.03	6.59	30-4A-TR
As	ppm	67	72	52	192	30-4A-TR
Ba	ppm	445	455	106	672	304A-TR
Bi	ppm	7.33	11.50	<2	10	30-4A-TR
Ca	%	7.11	7.13	7.58	2.5	30-4A-TR
Cd	ppm	3.47	13.93	12.73	248.5	30-4A-TR
Co	ppm	34	35	38	30	30-4A-TR
Cr	ppm	331	334	363	299	30-4A-TR
Cu	ppm	146	257	217	3961	30-4A-TR
Fe	%	6.37	6.43	7.01	6.86	30-4A-TR
Fe	%	6.63	6.79	7.57	7.30	Fe-4A-OR-ICP
K	%	1.39	1.22	0.65	3.48	30-4A-TR
La	ppm	<10	<10	<10	<10	30-4A-TR
Mg	%	4.22	4.19	4.37	1.67	30-4A-TR
Mn	ppm	2003	1818	1700	1101	30-4A-TR
Мо	ppm	<1	<1	<1	<1	30-4A-TR
Na	%	0.80	0.90	0.94	0.15	30-4A-TR
Ni	ppm	115	120	110	77	30-4A-TR
Р	ppm	352	325	264	343	30-4A-TR
Pb	ppm	184	361	228	14667	30-4A-TR
Sb	ppm	<5	<5	<5	22.00	30-4A-TR
Sc	ppm	40	39	44	27	30-4A-TR
Sr	ppm	202	219	126	177	30-4A-TR
Ti	%	0.44	0.42	0.48	0.36	30-4A-TR
TI	ppm	<10	<10	<10	<10	30-4A-TR
V	ppm	241	238	263	172	30-4A-TR
W	ppm	<10	13.00	15.33	258	30-4A-TR
Zn	ppm	437	1231	1153	21067	30-4A-TR
Zr	ppm	28	24	27	31	30-4A-TR

Phase 1 Multi-Element Head Analyses of each metallurgical test composite

Source: Inspectorate – 2012

ltem	Au g/t ⁽¹⁾	Ag g/t ⁽²⁾	Fe %	Cu %	Pb %	Zn %	S total %	S sulfide %	C org %	As ppm	Sb ppm	Hg ppm
OP White Breccia	0.76	2.30	6.13	0.020	0.023	0.170	0.94	0.92	0.15	60	12	0.14
OP Green Breccia	1.65	1.33	5.63	0.011	0.015	0.040	1.03	1.01	0.14	83	14	0.26
UG White Breccia	1.71	1.50	5.82	0.030	0.024	0.082	0.82	0.76	0.11	55	<5	0.30

Phase 2 Multi-Element Head Analyses of metallurgical test composite

Source: Inspectorate, 2013

(1) Average of 6 replicate assays

(2) Average of triplicate assays

Appendix S3b

Composite Capping Values for Au and Ag

Rock Type	Block Model Code	Au Cap (ppm)	Ag Cap (ppm)
Breccia	2	45	No Cap
Basalt	3	No Cap	No Cap
Saprolite	4	No Cap	No Cap
Vein	110	9	No Cap
Vein	120	4	No Cap
Vein	140	5	No Cap
Vein	200	No Cap	No Cap
Vein	220	10	No Cap
Vein	230	9.6	No Cap
Vein	240	No Cap	No Cap
Vein	280	4.6	No Cap
Vein	800	24	No Cap
Vein	805	5.2	No Cap
Vein	810	No Cap	No Cap
Vein	815	No Cap	No Cap
Vein	820	No Cap	No Cap
Vein	825	17	No Cap
Vein	830	No Cap	No Cap
Vein	835	2.5	No Cap
Vein	840	No Cap	No Cap
Vein	845	No Cap	No Cap
Vein	850	2.8	No Cap
Vein	880	12	No Cap
Vein	890	No Cap	No Cap

Au Cap - Breccia

