ANGLOGOLD ASHANTI LTD

Form 6-K

April 11, 2013

**UNITED STATES** 

SECURITIES AND EXCHANGE COMMISSION

**WASHINGTON, DC 20549** 

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER

PURSUANT TO RULE 13a-16 OR 15d-16 OF

THE SECURITIES EXCHANGE ACT OF 1934

Report on Form 6-K dated April 11, 2013

Commission File Number 1-14846

AngloGold Ashanti Limited

(Name of registrant)

76 Jeppe Street

Newtown, 2001

(P.O. Box 62117, Marshalltown, 2107)

South Africa

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

**Form 20-F X** Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes

#### No X

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes

#### No X

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No X

Enclosure: ANGLOGOLD ASHANTI MINERAL RESOURCE AND ORE RESERVE STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2012

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2012
{
MINERAL RESOURCE
AND ORE RESERVE
REPORT
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#### ABOUT THIS REPORT

AngloGold Ashanti's Mineral Resource and Ore Reserve are reported in accordance with the minimum standards described by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 Edition), and also conform to the standards set out in the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code, 2007 edition).

The Mineral Resource is inclusive of the Ore Reserve component unless otherwise stated. Note also that all Mineral Resources and Ore Reserves listed in this document are attributable unless otherwise stated.

Information is presented either by operating region, country, mine or project. The following tables and graphs are used to illustrate developments across AngloGold Ashanti's operations during 2012:

Inclusive Mineral Resource and Ore Reserve comparison by region, country, mine and project; development sampling results; details of average drill-hole spacing and type; Exclusive Mineral Resource; Mineral Resource below infrastructure; Inclusive Mineral Resource and Ore Reserve by-products; year-on-year reconciliation of the Mineral Resource and Ore Reserve; Inferred Mineral Resource in business plan; Ore Reserve modifying factors; grade tonnage information on the Mineral Resource and lists of appointed Competent Persons. Topics for brief discussion include regional overview; country overview; Mineral Resource estimation; Ore Reserve estimation; location; geology; exploration and projects.

This document, the Mineral Resource and Ore Reserve Report 2012, is a key component of the AngloGold Ashanti suite of 2012 annual reports produced to record the company's performance regarding its finances, operations and sustainability activities for the year ended 31 December 2012. For ease of use, a detailed guide to using the 2012 reports may be found on the flap of the inside back cover of this report. An interactive online guide is to be found at www.aga-reports.com.

Note: Rounding of numbers in this document may result in minor computational discrepancies. Throughout this report, the metric system of measurement is used and dollar or \$ represents US dollar unless otherwise stated. All grade tonnage graphs in this document are for Mineral Resources.

Forward-looking statements

Certain statements contained in this document, other than statements of historical fact, including, without limitation, those concerning the economic outlook for the gold mining industry,

expectations regarding gold prices, production, cash costs and other operating results, return on equity, productivity improvements, growth prospects and outlook of AngloGold

Ashanti's operations, individually or in the aggregate, including the achievement of project milestones, commencement and completion of commercial operations of certain of AngloGold

Ashanti's exploration and production projects and the completion of acquisitions and dispositions, AngloGold Ashanti's

liquidity and capital resources and capital expenditures and

the outcome and consequence of any potential or pending litigation or regulatory proceedings or environmental issues, are forward-looking statements regarding AngloGold Ashanti's

operations, economic performance and financial condition. These forward-looking statements or forecasts involve known and unknown risks, uncertainties and other factors that may

cause AngloGold Ashanti's actual results, performance or achievements to differ materially from the anticipated results, performance or achievements expressed or implied in these

forward-looking statements. Although AngloGold Ashanti believes that the expectations reflected in such forward-looking statements and forecasts are reasonable, no assurance can be

given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other

factors, changes in economic, social and political and market conditions, the success of business and operating initiatives, changes in the regulatory environment and other government

actions, including environmental approvals, fluctuations in gold prices and exchange rates, the outcome of pending or future litigation proceedings, and business and operational risk

management. For a discussion of such risk factors, refer to the section titled "Risk Factors related to AngloGold Ashanti's suite of 2012 reports" on the AngloGold Ashanti online corporate

report website at www.aga-reports.com. These factors are not necessarily all of the important factors that could cause AngloGold Ashanti's actual results to differ materially from those

expressed in any forward-looking statements. Other unknown or unpredictable factors could also have material adverse effects on future results. Consequently, readers are cautioned

not to place undue reliance on forward-looking statements. AngloGold Ashanti undertakes no obligation to update publicly or release any revisions to these forward-looking statements

to reflect events or circumstances after the date of this Mineral Resource and Ore Reserve Report or to reflect the occurrence of unanticipated events, except to the extent required by

applicable law. All subsequent written or oral forward-looking statements attributable to AngloGold Ashanti or any person acting on its behalf are qualified by the cautionary statements

herein. This communication may contain certain "Non-GAAP" financial measures. AngloGold Ashanti utilises certain Non-GAAP performance measures and ratios in managing its

business. Non-GAAP financial measures should be viewed in addition to, and not as an alternative for, the reported operating results or cash flow from operations or any other measures of

performance prepared in accordance with IFRS. In addition, the presentation of these measures may not be comparable to similarly titled measures other companies may use. AngloGold

Ashanti posts information that is important to investors on the main page of its website at www.anglogoldashanti.com and under the "Investors" tab on the main page. This information

is updated regularly. Investors should visit this website to obtain important information about AngloGold Ashanti.

### **CONTENTS GROUP OVERVIEW** 06 Mineral Resource by country (inclusive of Ore Reserve) 07 Mineral Resource by country (exclusive of Ore Reserve) 08 Ore Reserve by country Reconciliation of Mineral Resource Reconciliation of Ore Reserve **SOUTH AFRICA** 16 South Africa 18 Great Noligwa 22 Kopanang 27 Moab Khotsong Mponeng 40 Savuka 43 TauTona 47 Surface operations 52 Uranium **CONTINENTAL AFRICA** Democratic Republic of the Congo 57 Kibali Mongbwalu 64 Ghana 65 Iduapriem 69 Obuasi 75 Guinea 76 Siguiri 83

Mali
84
Morila
87
Sadiola
93
Yatela
97
Namibia
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Navachab
102
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Geita
AUSTRALASIA
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2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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#### **GROUP OVERVIEW**

This section provides an overview of AngloGold Ashanti's Mineral Resource and Ore Reserve position and the changes thereto in 2012.

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12

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1 3

Americas

Continental Africa

South Africa

Australasia

**OPERATIONS** 

1

Argentina

5

Guinea

8

South Africa

9

Tanzania

Cerro Vanguardia (92.5%)

Siguiri (85%)

Vaal River

Geita

2

Australia

6

Mali

Great Noligwa

10

**United States** 

Sunrise Dam

Morila (40%)

Kopanang

Cripple Creek & Victor

3

Brazil

Sadiola (41%)

Moab Khotsong

(CC&V)

Serra Grande

(1)

```
Yatela (40%)
West Wits
AGA Mineração
Namibia
Mponeng
4
Ghana
Navachab
Savuka
Iduapriem
TauTona
Obuasi
Surface operations
(2)
(1)
Effective 1 July 2012, AngloGold Ashanti increased its shareholding from 50% to 100%.
(2)
On 20 July 2012, AngloGold Ashanti acquired First Uranium (Pty) Limited, which owns Mine Waste
Solutions (MWS). MWS is a recently commissioned retreatment operation in South Africa's Vaal River
area in the immediate vicinity of AngloGold Ashanti's own tailings facilities.
MAJOR PROJECTS
11
Colombia
12
DRC
13
Australia
Gramalote (51%)
Kibali (45%)
Tropicana (70%)
La Colosa
Mongbwalu (86.2%)
Percentages in brackets
indicate the ownership
interest of AngloGold
Ashanti, whether held
directly or indirectly. All
operations and projects
are 100%-owned unless
otherwise indicated.
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GROUP OVERVIEW
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The AngloGold Ashanti Mineral Resource and Ore Reserve are reported in accordance with the minimum standards described by the

Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2004 Edition), and also

conform to the standards set out in the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral

Reserves (the SAMREC Code, 2007 edition). Mineral Resource is inclusive of the Ore Reserve component unless otherwise stated.

AngloGold Ashanti strives to actively create value by growing its major asset – the Mineral Resource and Ore Reserve. This drive is

based on active, well-defined brownfields and greenfields exploration programmes, innovation in both geological modelling and mine

planning and continual optimisation of its asset portfolio.

#### MINERAL RESOURCE

The total Inclusive Mineral Resource increased from 230.9Moz in December 2011 to 241.5Moz in December 2012. A gross annual

increase of 15.8Moz occurred before depletion, while the net increase after allowing for depletion is 10.7Moz. Changes in economic

assumptions from December 2011 to December 2012 resulted in a 1.2Moz increase to the Inclusive Mineral Resource, whilst

exploration and modelling resulted in an increase of 14.4Moz. Depletion from the Inclusive Mineral Resource for the year totalled

5.1Moz. The acquisition of the additional 50% of Serra Grande and the purchase of Mine Waste Solutions added a total of 3.8Moz

to the Mineral Resource. A decrease of 3.7Moz resulted from various other factors. The Mineral Resource has been estimated at a

gold price of US\$2,000/oz (2011: US\$1,600/oz).

Inclusive Mineral Resource

Moz

Mineral Resource as at 31 December 2011

230.9

Reductions

Great Noligwa

Revisions due to reduced likelihood of eventual extraction

(2.8)

Obuasi

Revised estimates of historic mining

(2.0)

CC&V

Combination of increased costs and revised metallurgical recoveries

(1.1)

Kopanang

Negative exploration results and depletion

(1.0)

Other

Total of non-significant changes

(1.9)

Additions

Tropicana

Reporting of Havana as an open pit Mineral Resource

Mponeng Revised geological modelling of the Ventersdorp Contact Reef 1.3 La Colosa **Exploration success** 10.6 Other Total of non-significant changes 2.6 Acquisitions Serra Grande Acquisition of the remaining 50% of the operation Mine Waste Solutions Acquisition of Mine Waste Solutions Mineral Resource as at 31 December 2012 241.5 Rounding of figures may result in computational discrepancies. **ORE RESERVE** The AngloGold Ashanti Ore Reserve reduced from 75.6Moz in December 2011 to 74.1Moz in December 2012. A gross annual increase of 3.2Moz occurred before depletion of 4.7Moz. The decrease net of depletion was therefore 1.5Moz. Changes in economic assumptions from 2011 to 2012 resulted in a reduction of 0.6Moz to the Ore Reserve, while exploration and modelling resulted in an increase of 0.6Moz. The acquisition of the remaining 50% of Serra Grande and Mine Waste Solutions added a further 2.8Moz. The remaining increase of 0.4Moz resulted from various other factors. The Ore Reserve has been calculated using a gold price of US\$1,300/oz (2011: US\$1,100/oz). THE YEAR IN REVIEW

AngloGold Ashanti strives to actively create

value by growing its major asset – the

Mineral Resource and Ore Reserve.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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Ore Reserve

Moz

Ore Reserve as at 31 December 2011

75.6

Reductions

Kopanang

Depletion and minor model revision

(1.4)

Obuasi

Revised mine planning parameters and geotechnical review

(0.9)

Great Noligwa

Economic driven reduction of underground mining footprint

(0.7)

Other

Total non-significant changes

(2.7)

Additions

Kibali

Open pit increase due to additional metal defined by grade control drilling

0.4

Geita

Positive economic changes

0.7

Other

Total non-significant changes

0.3

Acquisitions

Serra Grande

Purchase of remaining 50% of the operation

0.4

Mine Waste Solutions

Purchase of Mine Waste Solutions

2.4

Ore Reserve as at 31 December 2012

74.1

Rounding of figures may result in computational discrepancies.

#### **BY-PRODUCTS**

Several by-products are recovered as a result of the processing of the gold Ore Reserve. These include 73,492t of uranium oxide from

the South African operations, 439,564t of sulphur from Brazil and 40.7Moz of silver from Argentina.

#### **COMPETENT PERSONS**

The information in this report relating to exploration results, Mineral Resources and Ore Reserves is based on information compiled by

the Competent Persons. The Competent Persons consent to the inclusion of Exploration Results, Mineral Resource and Ore Reserve

information in this report, in the form and context in which it appears.

During the past decade, the company has developed and implemented a rigorous system of internal and external reviews of Exploration

Results, Mineral Resources and Ore Reserves.

T

he following operations were subject to an external audit in line with the policy that each operation will be audited at least once in a

three-year period:

•

Iduapriem (Mineral Resource only)

•

Kibali (Mineral Resource only)

\_\_\_

Sadiola

•

Vaal River Surface Operations

•

AGA Mineração - Córrego do Sítio

The external audits were conducted by the following three companies QG (Iduapriem and Kibali), Optiro (Sadiola and Vaal River

Surface) and TetraTech (AGA Mineração – Córrego do Sítio). Certificate of competence documentation has been received from all

companies conducting the external audits to state that the Mineral Resource and/or Ore Reserve comply with the JORC Code (2004

edition) and the SAMREC Code (2007 edition).

Numerous internal Mineral Resource and Ore Reserve process reviews were completed and all operational submissions were signed

off by a Competent Person as defined by the JORC (JORC Code, 2004 Edition) and SAMREC codes (The SAMREC Code, 2007

edition). A documented chain of responsibility exists from the Competent Persons at the operations to the company's Mineral Resource

and Ore Reserve Steering Committee. Accordingly, the Chairman of the Mineral Resource and Ore Reserve Steering Committee,

VA Chamberlain, MSc (Mining Engineering), BSc (Hons) (Geology), MGSSA, FAusIMM, assumes responsibility for the Mineral Resource

and Ore Reserve processes for AngloGold Ashanti and is satisfied that the Competent Persons have fulfilled their responsibilities.

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**GROUP OVERVIEW** 

#### MINERAL RESOURCE BY COUNTRY INCLUSIVE OF ORE RESERVE (ATTRIBUTABLE) Tonnes million Grade g/t Contained gold as at 31 December 2012 Category Tonnes Moz South Africa Measured 183.97 2.33 428.52 13.78 Indicated 964.52 2.16 2,080.80 66.90 Inferred 53.34 10.45 557.39 17.92 Total 1,201.83 2.55 3,066.71 98.60 Democratic Republic of the Congo Measured 1.97 3.00 5.89 0.19 Indicated 63.18 3.70 233.93 7.52 Inferred

30.43 2.91 88.69 2.85 Total 95.58 3.44

328.51 10.56 Ghana Measured 64.84 4.63 300.44 9.66 Indicated 103.86 3.87 401.45 12.91 Inferred 150.37 2.87 431.63 13.88 Total 319.07 3.55 1,133.52 36.44 Guinea Measured 38.45 0.63 24.15 0.78 Indicated 125.81 0.72 90.37 2.91 Inferred 56.71 0.82 46.32 1.49 Total 220.97 0.73 160.84 5.17 Mali Measured 9.16 0.94

> 8.63 0.28 Indicated

52.02 1.81 94.30 3.03 Inferred 27.75 0.94 26.00 0.84 Total 88.93 1.45 128.93 4.15 Namibia Measured 17.21 0.64 11.03 0.35 Indicated 96.58 1.22 117.73 3.79 Inferred 7.76 1.08 8.36 0.27 Total 121.55 1.13 137.12 4.41 Tanzania Measured Indicated 103.81 2.63 273.00 8.78 Inferred 39.21

2.78 109.00 3.50

Total

143.02

2.67

382.00

12.28

Australia

Measured

36.46

1.70

62.00

1.99

Indicated

71.84

2.10

150.68

4.84

Inferred

14.98

3.13

46.82

1.51

Total

123.28

2.10

259.50

8.34

Argentina

Measured

11.60

1.59

18.48

0.59

Indicated

36.91

2.87

105.90

3.40

Inferred

7.49

2.98

22.34

0.72

Total

56.00

2.62

146.72

4.72

Brazil

Measured

14.52

84.40

2.71

Indicated

21.01

5.31

111.51

3.59

Inferred

48.74

5.29

257.63

8.28

Total

84.27

5.38

453.54

14.58

Colombia

Measured

15.68

0.85

13.30

0.43

Indicated

34.36

0.79

27.21

0.87

Inferred

1,025.23

0.85

873.63

28.09

Total

1,075.27

0.85

914.14

29.39

**United States** 

Measured

267.56

0.77

207.24

6.66

Indicated

208.89

0.67

140.04

4.50

Inferred

```
0.64
53.87
1.73
Total
561.01
0.72
401.15
12.90
Total
Measured
661.42
1.76
1,164.08
37.43
Indicated
1,882.79
2.03
3,826.92
123.04
Inferred
1,546.58
1.63
2,521.68
81.07
Total
4,090.79
1.84
7,512.68
241.54
Rounding of figures may result in computational discrepancies.
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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Tonnes million Grade g/t Contained gold as at 31 December 2012 Category Tonnes Moz South Africa Measured 16.52 18.23 301.15 9.68 Indicated 249.09 4.56 1,136.02 36.52 Inferred 27.64 8.79 242.82 7.81 Total 293.25 5.73 1,679.99 54.01 Democratic Republic of the Congo Measured 0.37 1.85 0.68 0.02 Indicated 28.38 3.24 91.92 2.96 Inferred 30.43 2.91 88.69 2.85 Total 59.18 3.06 181.29

Ghana

Measured

21.63

7.16

154.96

4.98

Indicated

48.49

3.50

169.84

5.46

Inferred

150.35

2.86

429.66

13.81

Total

220.47

3.42

754.46

24.26

Guinea

Measured

1.03

0.52

0.54

0.02

Indicated

55.92

0.73

40.74

1.31

Inferred

56.71

0.82

46.32

1.49

Total

113.66

0.77

87.60

2.82

Mali

Measured

5.22

0.73

3.82

0.12

Indicated

23.92

35.79 1.15 Inferred 27.75 0.94 26.00 0.84 Total 56.89 1.15 65.61 2.11 Namibia Measured 5.89 0.53 3.12 0.10 Indicated 56.10 1.07 60.17 1.93 Inferred 7.76 1.08 8.36 0.27 Total 69.75 1.03 71.65 2.30 Tanzania Measured Indicated 42.97 2.68 115.34 3.71 Inferred 35.95 2.74 98.59

3.17Total78.92

- 2.71
- 213.93
- 6.88

Australia

Measured

- 3.33
- 1.14
- 3.80
- 0.12

Indicated

- 45.02
- 1.94
- 87.13
- 2.80

Inferred

- 14.98
- 3.13
- 46.82
- 1.51
- Total
- 63.33
- 2.18
- 137.75
- 4.43

Argentina

Measured

- 2.14
- 2.55
- 5.45
- 0.18

Indicated

- 31.31
- 1.69
- 52.91
- 1.70

Inferred

- 7.49
- 2.98
- 22.34
- 0.72

Total

- 40.94
- 1.97
- 80.70
- 2.59

Brazil

Measured

- 4.98
- 6.25
- 31.14
- 1.00

#### 10.36 4.91 50.89 1.64 Inferred 48.40 5.30 256.36 8.24 Total 63.74 5.31 338.39 10.88 Colombia Measured 15.68 0.85 13.30 0.43 Indicated 34.36 0.79 27.21 0.87 Inferred 1,025.23 0.85 873.63 28.09 Total 1,075.27 0.85 914.14 29.39 **United States** Measured 112.75 0.72 81.08 2.61 Indicated 126.54 0.66 83.21 2.68 Inferred 84.56 0.64 53.87

Indicated

```
1.73
Total
323.85
0.67
218.16
7.01
Total
Measured
189.54
3.16
599.05
19.26
Indicated
752.46
2.59
1,951.16
62.73
Inferred
1,517.27
1.45
2,193.45
70.52
Total
2,459.27
1.93
4,743.66
152.51
Rounding of figures may result in computational discrepancies.
MINERAL RESOURCE BY COUNTRY
EXCLUSIVE OF ORE RESERVE (ATTRIBUTABLE)
{
7
GROUP OVERVIEW
```

Tonnes million Grade g/t Contained gold as at 31 December 2012 Category Tonnes Moz South Africa Proved 148.71 0.66 98.04 3.15 Probable 728.45 1.21 883.59 28.41 Total 877.16 1.12 981.63 31.56 Democratic Republic of the Congo Proved 1.59 3.26 5.20 0.17 Probable 35.90 4.12 147.84 4.75 Total 37.49 4.08 153.04 4.92 Ghana Proved 40.88 3.42 139.66 4.49 Probable 52.77 3.67

6.23 Total 93.65 3.56 333.50 10.72 Guinea Proved 36.59 0.63 22.92 0.74 Probable 67.60 0.67 45.56 1.46 Total 104.19 0.66 68.48 2.20 Mali Proved 2.26 1.30 2.93 0.09 Probable 36.61 1.81 66.32 2.13 Total 38.87 1.78 69.25 2.23 Namibia Proved Probable 51.80 1.26 65.29

2.10Total51.80

1.26 65.29 2.10

Tanzania

Proved

-

\_

\_

Probable

65.06

2.59

168.63

5.42

Total

65.06

2.59

168.63

5.42

Australia

Proved

33.13

1.76

58.20

1.87

Probable

26.82

2.37

63.55

2.04

Total

59.95

2.03

121.75

3.91

Argentina

Proved

10.44

1.29

13.49

0.43

Probable

10.90

4.56

49.71

1.60

Total

21.34

2.96

63.20

Brazil Proved 9.29 4.47 41.51 1.33 Probable 12.48 4.39 54.74 1.76 Total 21.77 4.42 96.25 3.09 **United States** Proved 154.81 0.81 126.16 4.06 Probable 82.35 0.69 56.83 1.83 Total 237.16 0.77 182.99 5.88 Total Proved 437.72 1.16 508.11 16.34 Probable 1,170.74 1.53 1,795.90 57.74 Total 1,608.46 1.43 2,304.01 74.08 Rounding of figures may result in computational discrepancies. ORE RESERVE BY COUNTRY

(ATTRIBUTABLE)

**2012** MINERAL RESOURCE AND ORE RESERVE REPORT **8** 

Australia: Sunrise Dam {
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GROUP OVERVIEW

## RECONCILIATION OF MINERAL RESOURCE (AU CONTENT Moz) as at 31 December 2012 Previous year Depletion Gold price Cost Exploration Methodology Other Acquisition/ disposal South Africa Region Great Noligwa 3.860 (0.164)(2.267)(0.393)Kopanang 10.269 (0.303)(0.718)Moab Khotsong 19.946 (0.245)0.018 (0.078)1.260 0.013 Vaal River Surface 4.902 (0.178)(0.032)0.058

# Mine Waste Solutions (0.071)(0.003)2.657 Mponeng 49.519 (0.499)1.621 0.175 Savuka 3.021 (0.060)(0.023)0.015 0.025 TauTona 4.547 (0.293)(0.098)0.329 0.173 0.035 West Wits Surface 1.565 (0.009)0.016 (0.001)Total 97.631 (1.821)1.639 (2.466)

0.271 0.050 2.657 Continental Africa Region Kibali 8.382 (0.048)0.170 Mongbwalu 2.057 Iduapriem 6.585 (0.220)0.648 (0.128)(0.301)0.033 Obuasi 31.858 (0.317)0.038 (0.004)(1.751)Siguiri 5.183 (0.239)0.883 (0.668)0.088 (0.115)0.039

Morila 0.395

(0.073)(0.051)Sadiola 4.397 (0.118)0.110 (0.251)0.014 (0.333)(0.034)Yatela 0.120 (0.035)0.004 Navachab 4.952 (0.117)0.569 0.507 0.013 0.092 (1.608)Geita 12.569 (0.609)1.291 (1.255)0.218 0.105 (0.038)Total 76.499 (1.726)3.505 (1.794)0.323 (0.556)(3.240)

Australasia Region Sunrise Dam 2.966 (0.236)0.664 (0.459)(0.115)Tropicana 4.486 0.056 0.982 Total 7.452 (0.236)0.720 0.523 (0.115)Americas Region Cerro Vanguardia 4.407 (0.251)0.378 0.183 AGA Mineração 11.462 (0.431)0.086 0.487 0.137 0.053 Serra Grande

1.186 (0.138) 0.502 0.052 1.186 Gramalote 1.989 0.397 0.166 La Colosa 16.268 10.570 CC&V 13.982 (0.498)0.835 (1.044)0.020 (0.398)Total 49.295 (1.318)1.318 (1.044)12.123 0.373 (0.345)1.186 Grand total 230.876 (5.102)6.462 (5.304)13.802 0.612

(3.650) 3.843

Rounding of figures may result in computational discrepancies.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

10
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Edgar Filing: ANGLOGOLD ASHANTI LTD - Form 6-K
Current
year
Net
diff
%
Comments
1.036
(2.82)
(73)
Decrease mainly due to a footprint reduction resulting from increased costs for both Vaal Reef
and Crystalkop Reef.
9.248
(1.02) (10)
Decrease mainly due to depletion and exploration – new sampling data received.
20.914
0.97
5
Increase due to new sampling data received from Middle and Lower Mine offset by a decrease
due to new exploration information from Top Mine.
4.756
(0.15)
(3)
Changes were mainly due to depletion.
2.584
2.58 100
Newly acquired Mineral Resource with minor depletion.
50.817
1.30
3
Additional upgraded Carbon Leader Reef south of Savuka boundary offset by depletion and
lower sampling data for the Ventersdorp Contact Reef.
2.978
(0.04)
(1)
Depletion was offset by small year-on-year increases.
4.693
0.15
3 Evaluation and mathodology affect by doubtion and increased aget
Exploration and methodology offset by depletion and increased cost.  1.571
0.01
_
Additions offset depletion.
98.597
0.97
1
8.505
0.12
1

Increase due to additional infill and advanced grade control drilling programmes and identification of additional ore tonnages. 2.057 No updates to Mineral Resource since previous year. 6.619 0.03 Increase due to higher gold price was offset by depletion and model changes. 29.825 (2.03)(6) Decrease mainly due to the correction of the previous year's depletion volumes and mining. 5.171 (0.01)Increase in gold price was largely offset by the increase in costs and model changes. 0.270 (0.12)(31)Decrease due to adjustments to the tailings storage facility estimates based on poor reconciliations and depletion. 3.786 (0.61)(14)Decrease due to model changes after recent infill and advanced grade control drilling programmes. 0.089 (0.03)(26)Changes were mainly due to depletion. 4.408 (0.54)(11)Decrease due to a reduction in interpreted vein volumes in the foot wall of the deposit and the minimising of grade spread during estimation in waste areas. 12.282 (0.29)(2) Decrease due to increase in cut-off grade for underground and increase in cost in the satellite open pit projects. 73.012 (3.49)(5)2.819 (0.15)

Exploration success offset by depletion and changes to Mineral Resource estimation

approach. 5.524

41

```
1.04
23
Increase due to reporting Havana within open pit optimisation shell rather than as an
underground Mineral Resource.
8.343
0.89
12
4.717
0.31
Increase due to exploration mainly for open pit low grade Mineral Resource.
11.794
0.33
3
Increase due to exploration at Córrego do Sítio as well as model changes at Cuiabá and
2.787
1.60
135
Increases by the acquisition of 50% share plus some exploration discoveries.
2.552
0.56
28
Increase due to gold price and exploration adding Inferred Mineral Resource at Monjas West.
26.838
10.57
65
Increase mainly due to gold price and exploration in the central, north and south of La Colosa.
12.897
(1.09)
Increase due to gold price and exploration was offset by adjustments to the metallurgical
model, increased cost and depletion.
61.586
12.29
25
241.538
10.66
5
{
11
```

**GROUP OVERVIEW** 

# RECONCILIATION OF ORE RESERVE (AU CONTENT Moz) as at 31 December 2012 Previous year Depletion Other Model change Change in economics New ounces from projects Scope change South Africa Region Great Noligwa 1.124 (0.073)(0.028)(0.630)Kopanang 2.796 (0.191)(1.212)Moab Khotsong 6.999 (0.185)(0.167)(0.040)Vaal River Surface 4.777 (0.178)(0.031)0.055 0.025

Mine Waste Solutions

43

```
(0.071)
(0.009)
Mponeng
14.024
(0.421)
0.759
(0.555)
Savuka
0.600
(0.040)
(0.017)
TauTona
1.918
(0.205)
(0.064)
West Wits Surface
0.188
(0.009)
0.008
(0.015)
Total
32.427
(1.372)
(0.068)
0.573
0.010
(2.437)
Continental Africa Region
Kibali
4.523
```

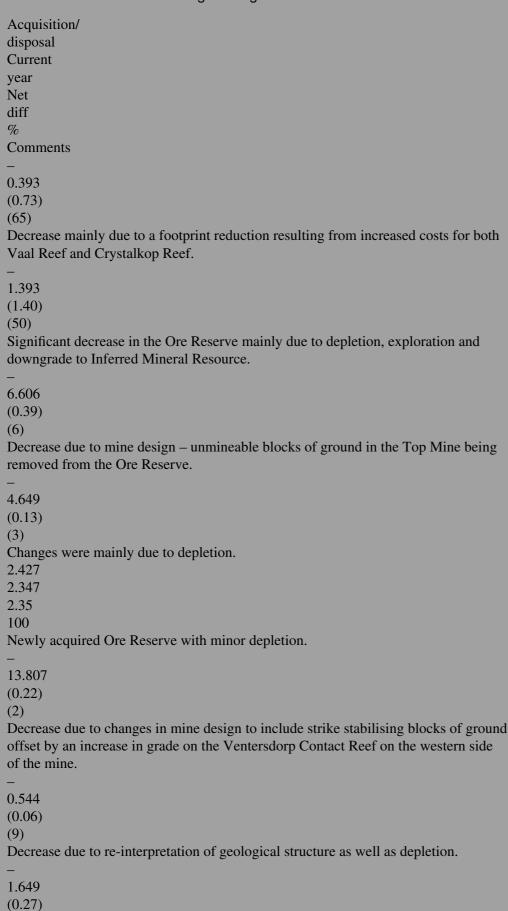
0.397 Iduapriem 2.554 (0.225)(0.269)0.129 0.016 Obuasi 9.368 (0.457)0.092 (0.450)(0.037)Siguiri 2.311 (0.205)0.012 0.056 0.005 0.023 Morila 0.129 (0.073)Sadiola 2.298 (0.137)0.103 0.025 (0.106)0.028 (0.073)Yatela 0.053 (0.021)

Navachab 2.050 (0.117)(0.003)0.169 Geita 4.730 (0.548)0.141 (0.189)0.625 0.663 Total 28.016 (1.782)0.348 (0.433)0.617 0.028 0.798 Australasia Region Sunrise Dam 1.525 (0.245)(0.127)0.012 0.018 Tropicana 2.739 (0.009)Total 4.265 (0.245)(0.009)(0.127)0.012 0.018

Americas Region

# Cerro Vanguardia 2.217 (0.263)0.056 (0.046)0.069 AGA Mineração 2.046 (0.390)0.328 0.400 (0.080)0.027 Serra Grande 0.375 (0.140)0.156 CC&V 6.255 (0.544)(0.208)(0.046)0.383 0.043 Total 10.892 (1.337)0.120 0.565 0.256 0.139 Grand total 75.599 (4.735)0.391 0.579 0.895 0.028 (1.482)Rounding of figures may result in computational discrepancies.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT 12 }



(14)Decrease mainly due to design changes and depletion. 0.171 (0.02)(9)Additions offset depletion. 2.427 31.560 (0.87)(3) 4.921 0.40 Increase due to increased drilling for open pit and underground with a resultant upgrading of Mineral Resource. 2.206 (0.35)(14)Increase in gold price was offset by depletion and Mineral Resource re-categorisation. 8.517 (0.85)(9)Decrease due to depletion, changes in design and Mineral Resource re-categorisation. 2.202 (0.11)(5) Increase in gold price and model changes was offset by depletion. 0.056 (0.07)(56)Changes were mainly due to depletion. 2.138 (0.16)(7) Decrease due to model changes in oxide Mineral Resource offset by depletion and oxide processing complexities. 0.032 (0.02)(40)Changes were mainly due to depletion.

```
2.099
0.05
2
Increase due to inclusion of satellite pits.
5.421
0.69
15
Increase due to higher gold price, lower costs and design improvements in
active pits.
27.592
(0.42)
(2)
1.184
(0.34)
(22)
Decrease due to depletion of the open pit, changes in modelling and depletion in
the underground Ore Reserve.
2.731
(0.01)
Minor changes.
3.914
(0.35)
(8)
2.032
(0.18)
Decrease due to depletion and higher operating costs was offset by additions of
new Mineral Resource.
2.330
0.28
Increase due to exploration and better delineation of Córrego do Sítio and Cuiabá
deposits.
0.373
0.764
0.39
104
Increases by the acquisition of 50% share plus model changes offset by depletion.
5.883
(0.37)
Minor adjustments due to metallurgical recovery changes and gold price.
```

```
0.373
11.009
0.12
1
2.800
74.076
(1.52)
(2)
{
13
GROUP OVERVIEW
```

```
SOUTH AFRICA
}
South Africa: Kopanang
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
14
}
```

#### **REGIONAL OVERVIEW**

AngloGold Ashanti's operations in South Africa have a total Inclusive Mineral Resource of 98.60Moz and an Ore Reserve of 31.56Moz.

The South African operations produced 1.2Moz of gold in 2012, or 31% of group production, and 1.21Mlb of uranium oxide.

**Inclusive Mineral Resource** 

Tonnes

million

Grade

g/t

Contained gold

as at 31 December 2012

Category

Tonnes

Moz

South Africa

Measured

183.97

2.33\*

428.52

13.78

Indicated

964.52

2.16

2,080.80

66.90

Inferred

53.34

10.45

557.39

17.92

Total

1,201.83

2.55

3,066.71

98.60

Ore Reserve

Tonnes

million

Grade

g/t

Contained gold

as at 31 December 2012

Category

Tonnes

Moz

South Africa

Proved

148.71

0.66\*

98.04

```
3.15
Probable
728.45
1.21
883.59
28.41
Total
877.16
1.12
981.63
31.56
*The grade decreased with the acquisition and reporting of Mine Waste Solutions.
This section covers AngloGold Ashanti's six
deep level mines and surface operations in
the South Africa Region.
Contribution to group production
(%)
South Africa
31
Rest of AngloGold Ashanti
Mponeng
33
TauTona
Surface operations
                   14
Kopanang
Moab Khotsong
Great Noligwa
Savuka
Contribution to production by mine
(%)
15
```

**SOUTH AFRICA** 

#### **COUNTRY OVERVIEW**

AngloGold Ashanti's South Africa operations comprise six deep-level underground mines and surface processing operations. These

operations are all located within the Witwatersrand Basin and are centred around two mining districts, the Vaal River and West Wits

areas.

...

The Vaal River operations consist of the Great Noligwa, Kopanang and Moab Khotsong mines and the Vaal River Surface processing

operation. As of July 2012, Mine Waste Solutions also forms part of these operations.

•

The West Wits operations consist of the Mponeng, Savuka and TauTona mines and the West Wits Surface processing operation.

The Vaal River operations are situated near the town of Klerksdorp. The primary reefs mined by these operations are the Vaal Reef (VR),

the Ventersdorp Contact Reef (VCR) and the secondary Crystalkop Reef (C Reef).

The West Wits operations are situated near the town of Carletonville. The primary reefs mined by these operations are the Carbon

Leader Reef (CLR) and the VCR.

All six underground operations are 100% owned by AngloGold Ashanti. In addition, the Vaal River Surface, Mine Waste Solutions and

West Wits Surface operations re-work the waste rock dumps and tailings dams which resulted from the mining and processing of the

primary and secondary reef horizons.

**SOUTH AFRICA** 

**2012** MINERAL RESOURCE AND ORE RESERVE REPORT

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#### MINERAL RESOURCE ESTIMATION

The sampling data used in Mineral Resource estimation includes underground chip samples, underground drill holes and surface drill

holes. All sample locations are reported as a composite over a mineralised width, resulting in a single channel width (cm) and metal

accumulation (cm.g/t) value.

AngloGold Ashanti makes use of a Bayesian geostatistical approach, where in the absence of dense sampling data, gold estimations

are based on a combination of the observed data and external knowledge relating to the data. A Bayesian geostatistical approach

asserts that the area to be evaluated forms part of a larger continuous entity, to which the observed data belongs.

Mixed support co-kriging is used in the estimation of the Mineral Resource. It is a technique that enables the use of data of mixed

support, allowing both drill hole and underground sampling data to be used together. Estimation is performed into large block sizes

>210m x 210m, which fully capture the within block variance, allowing the co-kriging of data of different support sizes over long

ranges. Estimation is done per geological homogeneous zone, in log space because of the highly skewed gold distribution. The

final gold estimates are then calculated by back transforming the estimates, using log normal four parameter distribution models.

Simple kriging is used for grade control and Measured Mineral Resource at a 30m x 30m block size and constrained by the weight

of the mean value.

The Mineral Resource is initially reported as inclusive of the Ore Reserve as it forms the basis for the Ore Reserve conversion

process. Mineral Resource cut-off grades are computed for each operation, by reef horizon. These cut-off grades incorporate a

profit margin that is relevant to the business plan. Grade tonnage curves are produced for each operation, which show the potential

of the deposit at different cut-off grades.

#### ORE RESERVE ESTIMATION

Mine design delineates the mining areas and supporting development for each mining level and section, usually by extrapolating

the existing mining design. The *in-situ* Mineral Resource is scheduled monthly for the full Life of Mine (LOM) plan. The value

estimates for these schedules are derived from the Mineral Resource model.

Modifying factors are applied to the *in-situ* Mineral Resource to arrive at an Ore Reserve. These factors comprise a dilution factor to

accommodate the difference between the milling width and the stoping width, as well as the Mine Call Factor (MCF). Development sampling results – January to December 2012

Development values represent actual results of sampling, no allowances having been made for adjustments necessary in estimating

the Ore Reserve.

Statistics are shown in

Advanced

Sampled gold

Sampled uranium

metric units

South Africa

metres

(total)\* Sampled metres Avg. channel width (cm) Avg. g/t Avg. cm.g/t Avg. kg/t Avg. cm.kg/t Vaal River Great Noligwa Crystalkop Reef 776 322 17.2 154.24 2,653 4.14 72.46 Vaal Reef 1,479 84 152.2 3.12 475 0.34 45.40 Kopanang Mine Vaal Reef 18,451 2,648 21.7 53.13 1,153 2.84 61.43 Moab Khotsong Mine Vaal Reef 15,001 1,328 120.9 34.24 4,140 0.97 123.35 West Wits Mponeng Mine Ventersdorp Contact Reef 14,586 1,566

```
68.2
27.29
1,861

—
—
TauTona Mine
Carbon Leader Reef
7,667
548
20.0
157.25
3,145
1.60
31.61
* This includes both on-reef and off-reef development
{
17
SOUTH AFRICA
```

#### **LOCATION**

Great Noligwa is located about 15km southeast of the town of Orkney, in the southern part of the Klerksdorp Goldfield. The Great

Noligwa mining lease area is about 49km2 and is constrained to the north by Aurora mine, to the east by Buffelsfontein mine, to the

south by Moab Khotsong and the Jersey and De Hoek faults (downward displacement of 1,000m and 900m respectively), and to the

west by Kopanang mine.

The economic horizons are exploited between 1,500m and 2,600m below surface through a mining method that gains access to the

gold-bearing reefs with foot wall haulages and return airway development. Cross-cuts are developed every 180m from the haulages

to the reef horizon. Raises are then developed on-reef to the level above and the reef is mined out on strike.

#### **GEOLOGY**

The Vaal Reef (VR) is the principal economic horizon at Great Noligwa and the Crystalkop Reef (C Reef) is the secondary economic

horizon. Both reefs are part of the Witwatersrand Supergroup and are stratigraphically located near the middle of the Central Rand

Group. The C Reef forms the top of the Johannesburg Subgroup, while the VR is about 265m below the C Reef. The VR unit can reach a maximum thickness of 2m and consists of a thin basal conglomerate (the C facies) and a thicker sequence

of upper conglomerates (the A facies). These two sedimentary facies are separated by the B facies, which is a layer of barren

orthoquartzites. The A facies is the principal economic horizon within the VR, but remnants of the C facies are sporadically preserved

below the A facies. High gold values in the VR are often located at the base of this unit and are associated with high uranium values

as well as the presence of carbon. Uranium is a very important by-product of Great Noligwa.

#### **GREAT NOLIGWA**

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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The C Reef has been mined on a limited scale in the central part of Great Noligwa, where a high-grade, north-south orientated

sedimentary channel, containing two economic horizons, has been exposed. To the east and the west of this channel the C Reef is

poorly developed with relatively small areas of economic interest. As in the case of VR, high uranium values are also often associated

with high gold values and the presence of a 5mm to 2cm thick carbon seam at the base of the conglomerate. To the north of the mine

the C Reef sub-crops up against the Gold Estates Conglomerate Formation and in the extreme south of the mine the C Reef has been

eliminated by a deep Kimberley Erosion Channel and the Jersey fault.

#### **PROJECTS**

Fish Project (Zuiping A Fault loss)

Drilling is on-going within the Zuiping A Fault zone containing remnant blocks of VR. This ground is situated in the eastern part of the

mining lease area and is referred to as the Fish Block. The reef blocks are situated in a high-grade zone within the Zuiping A Fault loss

area. A total of 2,500m of diamond drilling (DD) is planned for 2013 that will enable the geosciences department to finalise the reef

interruption plan, to increase the geological confidence in the proposed mining area and to test for upside potential. Zuiping C Fault loss

Drilling into the Zuiping C Fault loss from the 58 FW haulage is underway using one pneumatic drilling machine with the aim to locate

remnant blocks within the Fault loss. The first drill hole is currently being drilled. An additional 1,000m of DD is planned for 2013 within

the Zuiping C Fault.

C Reef

Drilling is currently in progress with two pneumatic drilling machines with the aim to intersect C Reef and to investigate the prospect

of upgrading some of the low-grade areas to medium-grade areas. The lack of drilling within the lower facies results in an overall

low geological confidence that increases the probability that channels of higher-grade reef may exist within the lower facies.

An additional 1,000m will be drilled in this area to improve the geological structure and facies models during 2013. ATIC Project

A block of ground was identified between 61 and 68 Level, where the ATIC Project will focus on improving the mine design and

planning, with a view towards increasing productivity, improving gold recovery, reducing development costs and improving safety.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

C :

Spacing

m (-x-)

Diamond

RC

Blast-

hole

Other Comments

# Great Noligwa Measured 5 x 5 X Chip sampling Indicated 100 x 100 X Underground drilling Inferred 1,000 x 1,000 X Surface drilling Grade/Ore control X See Measured category Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Great Noligwa Category Tonnes Moz Vaal Reef Measured 1.49 19.24 28.69 0.92 Indicated 0.19 17.83 3.35 0.11 Inferred 0.01 20.13

 $\begin{array}{c} 0.17 \\ 0.01 \end{array}$ 

```
Great Noligwa
Total
1.69
19.09
32.21
1.04
{
19
SOUTH AFRICA
```

# Edgar Filing: ANGLOGOLD ASHANTI LTD - Form 6-K **GREAT NOLIGWA continued Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Great Noligwa Category Tonnes Moz Measured 0.37 19.74 7.32 0.24 Indicated 0.05 20.00 1.05 0.03 Inferred 0.00 20.84 0.06 0.00 Great Noligwa Total 0.42 19.78 8.43 0.27 The significant reduction in these figures is due to the scope change, whereby the footprint of the Mineral Resource was reduced due to the resizing of the operation. There is no Exclusive Mineral Resource for the C Reef. Mineral Resource below infrastructure There is no Mineral Resource below infrastructure. **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes

million Grade g/t

Contained gold Great Noligwa Category Tonnes Moz

# Vaal Reef Proved 1.21 8.77 10.60 0.34 Probable 0.19 8.62 1.62 0.05 Great Noligwa Total 1.40 8.75 12.22 0.39 Great Noligwa Mineral Resource reconciliation: 2011 to 2012 3.86 -0.16 0.00 -2.27 -0.39 0.00 0.00 0.00 1.04 Ounces (millions) 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal

2012

## Great Noligwa Ore Reserve reconciliation: 2011 to 2012 1.12 -0.07 0.00 0.00 0.00 -0.63 -0.03 0.00 0.39 Ounces (millions) 1.2 1.0 0.8 0.6 0.4 0.2 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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## Ore Reserve modifying factors as at 31 December 2012 Great Noligwa Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value cm.g/t Au Stoping width cm Dilution % **MCF** % MetRF % Vaal Reef 1,300 6.94 8.75 1,600 179.8 52.5 59.4 95.5 Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade g/t Contained gold Great Noligwa Tonnes Moz Comment Vaal Reef 0.01 20.13 0.17 0.01 Mineral Resource included in business plan but is

Lugai i liilig. ANGLOGOLD ASHANTI LTD - I OIIII O-N
not included in Ore Reserve
Total
0.01
20.13
0.17
0.01
The C Reef does not form part of the business plan. The VR Inferred Mineral Resource is scattered throughout the
mine in the form of
blocks of ground left by previous mining as well as blocks of ground within the major fault loss areas.
Ore Reserve below infrastructure
There is no Ore Reserve below infrastructure.
COMPETENT PERSONS
Category
Name  Pur fraction 1
Professional
organisation  Projections:
Registration
number
Relevant
experience
Mineral Resource
François Vermeulen
GSSA
966 939
7 years
Ore Reserve
Andre Kruger
PLATO
PMS 0114
35 years
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
2
4
8
6
10
10

```
24
Great Noligwa
Grade tonnage curve – Underground (metric)
Tonnes above
cut-off (millions)
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
32
30
28
26
24
22
20
18
16
Tonnes above cut-off
Ave grade above cut-off
21
```

**SOUTH AFRICA** 

#### **LOCATION**

Kopanang is one of three AngloGold Ashanti mines located in the Vaal River district, the other two being Great Noligwa and Moab

Khotsong. Kopanang is located in the Free State province, approximately 170km southwest of Johannesburg and 10km southeast

of the town of Orkney. The current mining lease encompasses an area of 35km2 and is bound by Great Noligwa to the east, Pamodzi

Gold's Number Three Shaft to the north and the Jersey fault (1,000m displacement) to the south. The natural extension of the mine

is to the southwest.

#### **GEOLOGY**

Kopanang is situated in a structurally complex area of the Witwatersrand Basin, which has been subjected to numerous tectonic

events. Two tabular gold and uranium mineralised reef horizons, the Vaal Reef (VR) and Crystalkop Reef (C Reef), have been mined

historically at Kopanang. Currently only the VR is being mined, with limited C Reef mining planned during the Life of Mine (LOM).

The C Reef is situated stratigraphically about 250m above the VR and accessible through the Vaal Reef infrastructure. These

conglomerate units dip at an average of 21° towards the south and occur in a 2,100m thick sedimentary sequence comprising the

Central Rand Group.

The gold-bearing reef horizons are accessed via a twin shaft system which descends to a maximum depth of 2,334m, while the main

working levels are situated between 1,300m and 2,024m below surface. Mining is challenged by the presence of an assortment of

steep  $(85^{\circ}-50^{\circ})$  north dipping and younger low angle  $(50^{\circ}-15^{\circ})$  south dipping faults. The interplay of these main fault regimes, along

with abundant pre- and post-dating dykes, makes for a complex and geologically challenging deposit.

A geological model is employed to delineate variations (either lateral or vertical) in characteristics of the VR. The current geological

model thus subdivides the VR at Kopanang into homogeneous zones based on sedimentological and grade parameters. Currently

a study is underway to help improve the identification of the various geological homogeneous zones by incorporating alteration

mineralogy.

**KOPANANG** 

**2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 

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#### **EXPLORATION**

Exploration targets are located within the current mining lease and the adjacent areas, which form a natural extension to the current

mining front. A surface drilling programme is under way to explore for VR on Gencor 1E and adjacent leases (De Pont Landing,

Witkop and Pilgrims Estate). Results obtained are subject to continuous review, particularly to the west of Gencor 1E, where there is

a general drop in gold values to potentially uneconomic concentrations. A prospecting right has been granted for Witkop to the north

of Gencor 1E and surface exploration drilling has been planned to begin post 2013. Surface drilling in Gencor 1E for the VR above

current infrastructure has been completed. Values returned from the KDPL1 surface hole drilled on the De Pont Landing area were

disappointing at 165cm.g/t.

Long Inclined Borehole (LIB) drilling in the Gencor 1E area, above infrastructure, is ongoing, with the aim of increasing the confidence

in the value prediction and structural interpretation in the area.

Exploration on the VR in the Shaft Fault area has continued during 2012, targeting prospective blocks within the Shaft Steep and PK17

Fault. The drilling in the area was largely completed during 2012 and 0.2Moz have been added since 2009.

Another area being explored is the area below 68 Level that falls beneath current mine infrastructure. These target blocks consist of

VR Inferred and Indicated Mineral Resource and projected blocks towards the Jersey fault. Mineral Resource confidence has been

increased through this drilling.

Exploration on the Ventersdorp Contact Reef (VCR) started during 2011 through surface drilling operations. This reef is situated

approximately 500m stratigraphically above the VR on Kopanang. The planned surface drilling has been completed as per the

schedule during 2012 for delineation of the payable VCR Channels and increased structural confidence. These ounces will not be

published until proved potentially economically viable. Hole KGD8 was drilled to test the distal extension of the higher grade Polymictic

Channel Facies. The hole intersected the targeted facies and a value of 3,633cm.g/t was returned over a channel width of 282cm.

Two exploration holes from underground and an additional surface hole have been planned to test the lateral and distal extent of the

economic VCR facies.

#### **PROJECTS**

The Kopanang 'Above Infrastructure Economic Study' has two reef horizons to target: The Vaal Reef located above the existing

infrastructure and the Ventersdorp Contact Reef (VCR) located approximately 500m above the Vaal Reef. For both reef horizons the

on-lease portions will have to be targeted with new infrastructure and associated development.

The above 42 Level VCR area (on lease) considered for the study was structurally discounted by 30%. The Mineral Resource for the

area is 0.6Moz at a value of 1,104cm.g/t.

The geological model boundaries are broadly interpolated from surface drill holes. 21 drill-hole intersections were used for value

estimation. The potential economic portion of the VCR is within the Polymictic Channel Facies and Oligomictic Basal Conglomerate

Facies. Due to the nature of the deposit, global estimates have been calculated and classified as an Inferred Mineral Resource.

The planned VCR drilling for 2012 has been completed. Holes KGD2, 3, 5, 6, 7, 8, 9 and KDPL2 Intersected VCR. In holes KGD1 and 4,

and KDPL1 and 3, the VCR was faulted out. The acceptable and representative intersection values have been incorporated into the

estimation model for the study.

The VR above 42 Level underground exposures and surface or underground drill locations are too widely spaced to confirm

geological and grade continuity but are spaced close enough for continuity to be assumed with a reasonable level of confidence.

The nature, quality, amount and distribution of data are such as to allow the Competent Person to confidently interpret the

geological framework and to assume geological continuity of mineralisation. The Indicated Mineral Resource for the area is 1.3Moz

at a value of 863cm.g/t.

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**SOUTH AFRICA** 

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

RC

Blast-

hole

Other Comments

Kopanang

Measured

5 x 5

\_

X

Chip sampling

Indicated

100 x 100

X

-

Underground drilling

Inferred

1,000 x 1,000

X

\_

Surface drilling

Grade/Ore control

-

X

See Measured category

**Inclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Kopanang

Category

Tonnes Moz

Crystalkop Reef

Measured

0.07

11.92

0.03 Indicated 0.41 12.87 5.34 0.17 Inferred 0.39 13.46 5.29 0.17 Total 0.87 13.06 11.49 0.37 Vaal Reef Edom Measured 0.19 8.21 1.52 0.05 Indicated 0.87 9.56 8.29 0.27 Inferred 0.24 12.94 3.06 0.10 Total 1.30 9.99 12.87 0.41 Vaal Reef Base Measured 3.82 14.69 56.14 1.81 Indicated 11.23 13.29 149.25

4.80 Inferred 1.48 12.33

18.23 0.59 Total 16.53 13.53 223.62 7.19 Vaal Reef Above Infrastructure Measured 0.00 11.06 0.01 0.00 Indicated 4.78 8.30 39.64 1.27 Inferred 0.00 6.32 0.00 0.00 Total 4.78 8.30 39.65 1.27 Kopanang Total 23.48 12.25 287.64 9.25 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Kopanang Category Tonnes Moz Measured 3.49 13.59 47.43 1.52 Indicated

10.36 143.80 4.62 Inferred 1.98 12.52 24.74 0.80 Kopanang Total 19.34 11.17 215.97 6.94 Approximately 55% of the published Exclusive Mineral Resource is expected to be taken up in safety pillars, remnant blocks of ground, areas beyond the window of opportunity and areas beyond infrastructure if mined. **KOPANANG** continued **2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 24

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#### Mineral Resource below infrastructure as at 31 December 2012 Tonnes million Grade g/t Contained gold Kopanang Category Tonnes Moz Measured 0.03 14.99 0.51 0.02 Indicated 0.36 14.06 5.10 0.16 Inferred 0.31 16.32 4.99 0.16 Kopanang Total 0.70 15.09 10.60 0.34 **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Kopanang Category Tonnes Moz Crystalkop Reef Proved 0.01 5.07 0.03 0.00 Probable 0.20 6.12

1.25 0.04 Total 0.21 6.09 1.28 0.04 Vaal Reef Edom Proved 0.00 10.67 0.02 0.00 Probable 0.05 10.13 0.46 0.01 Total 0.05 10.15 0.48 0.02 Vaal Reef Base Proved 0.86 7.94 6.85 0.22 Probable 4.78 7.27 34.73 1.12 Total 5.64 7.37 41.58 1.34 Kopanang Total 5.90 7.35 43.34 1.39 Ore Reserve modifying factors 31 December 2012 Kopanang Gold price

\$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value cm.g/t Au Stoping width cm Dilution % **MCF** % MetRF % Crystalkop Reef 1,300 6.94 11.54 1,200 104.0 55.7 65.6 96.4 Vaal Reef Base 1,300 6.94 11.54 1,200 104.0 54.7 65.6 96.4 Vaal Reef Edom 1,300 6.94 11.54 1,200 104.0 54.9 65.6 96.4 Mineral Resource reconciliation: 2011 to 2012 10.27 -0.30 0.00

0.00 -0.72 0.00 0.00 0.00 9.25 Ounces (millions) 10.4 10.2 10.0 9.8 9.6 9.4 9.2 9.0 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Kopanang Ore Reserve reconciliation: 2011 to 2012 2.80 -0.19 0.00 0.00 0.00 -1.21 0.00 0.00 1.39 Ounces (millions) 2.8 2.6 2.4 2.0 1.8 1.6 1.4 1.2

Depletion Model change
Change
in
economics
New oz
from
projects
Scope
change
Other
Aquisition/
Disposal
2012
{

**SOUTH AFRICA** 

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#### Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade g/t Contained gold Kopanang Tonnes Moz Comment Crystalkop Reef 0.11 9.81 1.08 0.03 In-situ content Vaal Reef Base 0.08 7.84 0.66 0.02 In-situ content Total 0.19 8.95 1.74 0.05 With appropriate caution, some Inferred Mineral Resource was included in the business plan during the optimisation The VR Inferred Mineral Resource consists mainly of ground below infrastructure and areas within the highly faulted shaft fault system. Exploration drilling is being conducted currently in an attempt to upgrade the Mineral Resource categorisation. Ore Reserve below infrastructure There was no Ore Reserve reported below infrastructure. **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Brenda Freese **GSSA** 966 602 15 years Ore Reserve

Willie Olivier PLATO

```
MS 0136
22 years
KOPANANG continued
10
12
14
16
18
20
22
24
0
2
4
3
5
6
7
8
9
10
11
Kopanang
Grade tonnage curve – Underground (metric)
Tonnes above
cut-off (millions)
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
19
18
17
16
15
14
13
12
11
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
26
}
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#### **LOCATION**

Moab Khotsong is situated near the towns of Orkney and Klerksdorp, about 180km southwest of Johannesburg. The mining lease

area lies to the south of Great Noligwa and Kopanang mines. Moab Khotsong is a relatively new mine and the first gold was produced

in 2003.

The original plan was to exploit two distinct portions of the Moab Khotsong lease area, namely the Middle Mine (85 to 101 Level) and

the Lower Mine (101 to 118 Level). The Middle Mine exploits the Vaal Reef (VR) to depths between 2,600m and 3,054m below surface

on the down-thrown side of the De Hoek and Jersey fault complex. In 2008 the SV4 section of Great Noligwa was incorporated into

Moab Khotsong and this section is now termed the Top Mine.

The extension of Moab Khotsong is strategic because the life of the Vaal River operations could be increased significantly. The initial

development of Moab Khotsong was taken with a view that the new mine would be well positioned to exploit additional surrounding

ore blocks. The most important of these blocks will be the Zaaiplaats block, positioned to the southwest of the current Moab Khotsong

infrastructure and extending some 400m deeper than the existing mine. Mining is based on a scattered mining method with an

integrated backfill support system combined with bracket pillars.

#### **GEOLOGY**

The Vaal Reef (VR) is the only economic horizon that is exploited at Moab Khotsong mine (refer to the description of the VR under

the Great Noligwa section on page 18). The Crystalkop Reef (C Reef) is preserved in the northern part of the mine where the reef has

been intersected by a number of drill holes. No development or stoping has taken place on the C Reef at Moab Khotsong to date.

The geology at Moab Khotsong is structurally complex with large fault-loss areas, but the main block at Zaaiplaats appears to be

comparatively undeformed and only faults of less than 30m displacement are expected. The geological setting is one of crustal

extension, bounded in the northwest and southeast by major south-dipping fault systems with north-dipping Zuiping faults sandwiched

between them. The De Hoek and Buffels East faults structurally bound the reef blocks of the Middle Mine to the northwest and

southeast respectively and the northern boundary is a north-dipping fault. The southern boundary fault of the Middle Mine is currently

not defined. Drilling is currently taking place in the Middle Mine area to obtain structural information below 101 Level. Due to the magnitude of the displacement across the De Hoek fault (more than 700m down to the south), geological structures

encountered on the up-thrown side of the De Hoek fault cannot be locally projected to the down-thrown side and vice versa. It is only

once the development is through the De Hoek fault that geological mapping information has any bearing on the reef blocks, and a

considerable amount of exploration drilling is required to accurately delineate these blocks in this structurally complex area

#### **MOAB KHOTSONG**

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SOUTH AFRICA

#### **EXPLORATION**

Brownfields exploration is currently focused on improving confidence in the geological model. Six surface drilling machines and

nineteen underground drilling machines were in operation during 2012.

Hole MHH2, drilling on the Hormah Prospecting Rights area adjacent to the current Lower Mine Area C, is designed to intersect

high-grade VR that will increase the Zaaiplaats Mineral Resource base and increase confidence in the peripheral reef block. Drilling is

expected to continue through 2013.

Two rigs (MGR6 and MGR8) targeted the periphery of the Zaaiplaats mining area, where multiple structures define the ore block

margins. The deflection drilling programme at drill hole MGR8 was further delayed by technical issues and is now scheduled for

completion during 2013. The long deflection of MGR6 is in progress to increase the structural confidence along the southern margin

of Zaaiplaats and intersections of the VR are expected by the end of 2013.

Two rigs (MMB6 and MMB7) targeted the core of the Zaaiplaats mining area, where dip changes could impact on the Ore Reserve.

The nineteen underground drilling machines that were deployed to carry out capital drilling on the Top, Middle and Lower Mines are

primarily used to obtain structural and grade information aimed at increasing the Mineral Resource base of Moab Khotsong. Four

drilling machines are currently deployed in the Top Mine to obtain structural information on the VR blocks below 76 Level. Five drilling

machines are currently deployed in the Middle Mine to obtain structural information on the Level 3 VR blocks below 101 Level whilst

another four machines are located in the Middle Mine to obtain structural information on both the VR and C Reef horizons in the

northern area of the mine.

Seven drilling machines are currently deployed to carry out capital drilling associated with the Zaaiplaats project. The primary purpose

of the current drilling is to provide required additional geological information for capital development and improve geological confidence.

Additional drilling is planned to improve confidence in both geological and grade distribution across the Moab Khotsong area.

#### **PROJECTS**

The initial development of Moab Khotsong was taken with a view that the new mine would be well positioned to exploit additional

surrounding ore blocks adjacent and contiguous to current mining areas. The most important of these blocks will be the Zaaiplaats

block, positioned to the southwest of the current Moab Khotsong infrastructure and extending below the existing mine. The Moab

Khotsong business plan is expected to produce some 3.0Moz of gold. Project Zaaiplaats will recover 5.4Moz of gold. Currently

0.5Moz attributed to the Phase 2 project forms part of the business plan. The project will extend Moab Khotsong's Life of Mine (LOM)

and this will serve as a gateway for further opportunities beyond the initial project investment.

Phase 1 of Project Zaaiplaats was approved in July 2010. No gold will be produced during this phase which will be used to establish

infrastructure required for phase 2. Phase 2 will create a drilling platform and exploit early opportunities to produce gold. Phase 2 aims

to produce 519,000oz of gold which will supplement the current business plan.

The phase 3 study is currently in pre-feasibility phase and will transition to a feasibility study in 2013. The Zaaiplaats studies are

planned to be completed in 2014. The purpose of this pre-feasibility study is to evaluate various options and identify opportunities

within these options, to reach a single study option outcome.

MOAB KHOTSONG continued

**2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 

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#### MINERAL RESOURCE

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**SOUTH AFRICA** 

Details of average drill-hole spacing and type in relation to Mineral Resource classification Type of drilling Mine/Project Category Spacing m (-x-) Diamond RC Blasthole Other Comments Moab Khotsong Measured 5 x 5 X Chip sampling Indicated 100 x 100, 800 x 800 X Underground drilling Inferred 1,000 x 1,000 X Surface drilling Grade/Ore control X See Measured category

# MOAB KHOTSONG continued Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Moab Khotsong Category Tonnes Moz Vaal Reef Lower Mine – Area A Measured Indicated 0.15 25.62 3.84 0.12 Inferred 0.97 21.93 21.36 0.69 Total 1.12 22.42 25.20 0.81 Vaal Reef Lower Mine – Area B Measured Indicated 3.64 10.10 36.80 1.18 Inferred 1.01 11.47 11.64

0.37 Total 4.65

10.40 48.44 1.56 Vaal Reef Lower Mine – Area C Measured Indicated 1.03 23.09 23.87 0.77 Inferred 2.02 17.34 35.04 1.13 Total 3.05 19.29 58.91 1.89 Vaal Reef Lower Mine – Area PZ 2 Measured Indicated 10.31 18.54 191.11 6.14 Inferred 3.06 21.50 65.79 2.12 Total 13.37 19.22 256.90 8.26 Crystalkop Reef – Middle Mine Area Measured

# Indicated Inferred 1.28 9.58 12.22 0.39 Total 1.28 9.58 12.22 0.39 Vaal Reef - Middle Mine Measured 1.40 21.20 29.69 0.95 Indicated 5.00 22.73 113.73 3.66 Inferred 2.23 20.24 45.18 1.45 Total 8.63 21.84 188.60 6.06 Vaal Reef – Top Mine Measured 0.83 26.95 22.45 0.72 Indicated 0.57 19.13 10.85 0.35

Inferred 0.00 18.90 0.05

0.00 Total 1.40 23.77 33.35 1.07 Vaal Reef – Great Noligwa Shaft Pillar Measured 0.11 16.95 1.83 0.06 Indicated 1.53 16.42 25.06 0.81 Inferred Total 1.64 16.45 26.89 0.86 Moab Khotsong Total 35.14 18.51 650.51 20.91 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade Contained gold Moab Khotsong Category Tonnes Moz Measured 0.72 44.91 32.12 1.03 Indicated

```
19.55
320.18
10.29
Inferred
5.29
15.18
80.26
2.58
Moab Khotsong
Total
22.39
19.33
432.56
13.91
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
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The Exclusive Mineral Resource consists of designed rock engineering bracket pillars, designed dip pillars and the Great Noligwa shaft

pillar on the VR. The major portion of this Exclusive Mineral Resource is located in the Lower Mine area, with minor amounts in the Top

and Middle Mines, C Reef and shaft pillar areas. The bracket pillars are designed for safety reasons and will therefore not be mined,

whereas the shaft pillar can only be safely extracted at the end of the mine life.

Mineral Resource below infrastructure

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Moab Khotsong

Category

Tonnes

Moz

Measured

0.27

26.79

7.20

0.23

Indicated

16.40

14.89

244.31

7.85

Inferred

6.65

18.77

124.77

4.01

Moab Khotsong

Total

23.32

16.14

376.28

12.10

ORE RESERVE

Ore Reserve

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Moab Khotsong

Category

Tonnes

Moz

# Vaal Reef – Lower Mine – Area PZ 2 Proved Probable 13.56 9.59 129.99 4.18 Total 13.56 9.59 129.99 4.18 Vaal Reef - Middle Mine Proved 1.02 9.64 9.86 0.32 Probable 4.66 11.17 52.06 1.67 Total 5.68 10.90 61.92 1.99 Vaal Reef – Top Mine Proved 0.60 12.86 7.76 0.25 Probable 0.66 8.80 5.82 0.19 Total 1.26 10.73 13.58 0.44 Moab Khotsong Total

10.02 205.48 6.61 Ore Reserve modifying factors 31 December 2012 Moab Khotsong Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value cm.g/t Au Stoping width cm Dilution **MCF** % MetRF Vaal Reef - Lower Mine -Area PZ 2 1,300 6.94 3.94 500 127.0 55.4 81.0 96.0 Vaal Reef - Middle Mine 1,300 6.94 2.85 500 175.7 46.5 78.4 95.9 Vaal Reef - Top Mine 1,300 6.94

500 178.0 43.2 83.7 95.8 Moab Khotsong Mineral Resource reconciliation: 2011 to 2012 19.95 -0.25 0.02 -0.08 1.26 0.00 0.01 0.00 20.91 Ounces (millions) 21.0 20.8 20.6 20.4 20.2 20.0 19.8 19.6 19.4 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Moab Khotsong Ore Reserve reconciliation: 2011 to 2012 7.00 -0.19 -0.17 0.00 0.00 -0.04 0.00 0.00

### Ounces (millions) 7.0 6.9 6.8 6.7 6.6 6.5 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 31 **SOUTH AFRICA**

# MOAB KHOTSONG continued Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade g/t Contained gold Moab Khotsong Tonnes Moz Comment Vaal Reef Lower Mine - Area PZ 2 2.49 21.77 54.30 1.75 Vaal Reef - Middle Mine 0.48 14.42 6.95 0.22 Total 2.97 20.58 61.25 1.97 The Inferred Mineral Resource was used for optimisation purposes as it forms part of the business plan, but it was not included in the published Ore Reserve. Ore Reserve below infrastructure as at 31 December 2012 Tonnes million Grade Contained gold Moab Khotsong Category Tonnes Moz Proved Probable

9.59 129.99 4.18 Moab Khotsong Total 13.56 9.59 129.99 4.18 **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Francis Rebaone Gaelejwe **GSSA** 965 326 12 years Ore Reserve Andre Johnson **SACNASP** 400011/06 22 years 0 2 4 6 8 10 12 14 16 18 Moab Khotsong Grade tonnage curve – Underground (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t)Cut-off grade (g/t)

27

```
25
23
21
19
17
38
34
30
26
22
18
14
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
32
}
```

#### **LOCATION**

Situated south of the TauTona and Savuka mines, Mponeng is near the town of Carletonville and approximately 65km west of

Johannesburg. Along with TauTona and Savuka, Mponeng comprises the West Wits Operations. Through the use of two hoisting

shafts, a sub-shaft and two service shafts, Mponeng exploits the Ventersdorp Contact Reef (VCR) between the depths of 2,800m

and 3,000m below surface.

South of the Mponeng lease area lies the Western Ultra Deep Levels (WUDLS) area. This area is currently being explored through

an extensive surface drilling programme and from underground drilling platforms. Part of this area is included in the current Mineral

Resource and has potential to increase the overall Mineral Resource in the future.

#### **GEOLOGY**

The VCR is the reef horizon being mined at Mponeng. The VCR forms the base of the Ventersdorp Supergroup which caps the

Witwatersrand Supergroup through an angular unconformity. The overlying Ventersdorp Lavas halted the deposition of the VCR

preserving it in its current state. The VCR consists of a quartz pebble conglomerate, which can be up to 3m thick in places. The

foot wall stratigraphy, following a period of uplift and erosion, controlled the development and preservation of the VCR. The foot wall

consists of series of sedimentary layers from the Central Rand Group of the Witwatersrand Supergroup, which due to its erosional

nature, exposes VCR from the youngest layers in the west to the oldest in the east.

The foot wall controlled deposition of the VCR also influences the distribution of grade at Mponeng mine. The relatively argillaceous

protoquartzites of the Kimberley Formation are covered by the best-preserved VCR conglomerates. The VCR is characterised by

a series of channel terraces preserved at different relative elevations, and the highest gold values are preserved in these channel

deposits. The different channel terraces are divided by zones of thinner 'slope' reef, which is of lower value and becomes more

prevalent on the higher terraces and on the harder foot wall units. The Elsburg Formation lies to the west and is relatively more durable,

while the eastern side of the mine is dominated by shales and siltstones of the Booysens Formation and due to the erosional nature

of the system, preserved both thick and thinner VCR conglomerates. No VCR is preserved on the Krugersdorp Formation on the far

eastern side of Mponeng.

The other gold-bearing reef that occurs at Mponeng is the Carbon Leader Reef (CLR). This reef has been mined at the adjacent

Savuka and TauTona mines, and plans are being made at Mponeng to mine the CLR in the future. The CLR at Mponeng consists of

(on average) a 20cm thick, tabular, auriferous quartz pebble conglomerate formed near the base of the Central Rand Group. The CLR

is approximately 900m deeper than the VCR. The CLR is divided into three sedimentary units, Unit 1, Unit 2 and Unit 3. The Mponeng

CLR Project area is dominated by Unit 3 with a smaller portion of Unit 2 towards the east. Unit 2 is a complex channel deposit, and

Unit 3 is the oldest of the CLR channel deposits and preserves the relatively lower values that can be contained in the CLR.

Both the VCR and the CLR reefs have been subjected to faulting and are intruded by a series of igneous dykes and sills of various

ages that cross-cut the reefs. There is an inherent risk in mining through these faults and intrusives and a key objective of AngloGold

Ashanti mine geologists is to identify these geological features ahead of the working face to assist with deciding on the best practice

when approaching or mining through these structures.

**MPONENG** 

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**SOUTH AFRICA** 

#### **EXPLORATION**

The current exploration programme is designed to improve the Mineral Resource confidence by generating an updated information

base. It is also critical for confirming the positions of geological structures which could affect future mining.

The drilling targets explore the ground below and adjacent to current infrastructure and will further improve confidence in the Indicated

portion of the Mineral Resource. The Inferred portion of the Mineral Resource which is part of the WUDLS Mineral Resource will be

extensively probed from underground platforms.

At Mponeng, experts in deep diamond drilling have been contracted to drill holes targeting strategic areas of the mine, namely areas

below the 120 Level VCR and deep targets in the WUDLS area. Drilling of the western side of the lease area, into Block 3, has the aim

of increasing the Mineral Resource and Ore Reserve. The CLR is being targeted from TauTona mine platforms into Mponeng, as well

as through vertical holes over 1,000m deep.

The planned extension of Mponeng, through phased projects to deepen the sub and decline shafts, will provide greater mining access

to the CLR and the VCR. This has necessitated an increase in exploration drilling in order to meet the demands for the project start-

up dates. Exploration drilling on both the CLR and the VCR will continue until the results have provided sufficient confidence in the

geological models.

#### **PROJECTS**

Mine expansion projects to increase the Life of Mine (LOM) have been divided into a phased system of planning and reporting. Each

phase will extract a portion of the Mineral Resource currently below infrastructure. The Phase 1 VCR project has successfully accessed

ground to 126 Level where further exploration and reef modelling work will improve the geological model to greater depths on the

VCR reef. The Carbon Leader project Phase 2 will extract CLR below the mined out portion of the TauTona and Savuka mines from

123 and 126 Levels. Exploration drilling currently being done will further benefit future geological modelling on the CLR horizon. Further

phases on VCR and CLR are being considered for economic studies and are dependent on the progress from continued exploration

work.

Work on the intrusive database in 2011 and 2012 and on the geochemistry of igneous intrusives still continues. The microscope

and XRF classification data is being synthesised to seek a better understanding of the alteration distribution and tenor of gold

mineralisation across the lease area.

Ongoing geological studies of CLR mineralisation will improve confidence in areas beyond the available information. MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

```
RC
Blast-
hole
Other Comments
Mponeng
Measured
5 x 5
       X
Chip sampling
Indicated
100 x 100
X
Underground drilling
Inferred
1,000 x 1,000
X
Surface and underground drilling
Grade/Ore control
       X
See Measured category
MPONENG continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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35
SOUTH AFRICA

# **MPONENG** continued **Inclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Mponeng Category Tonnes Moz TauTona Ventersdorp Contact Reef Shaft Pillar Measured 0.49 17.40 8.47 0.27 Indicated 1.25 20.21 25.22 0.81 Inferred Total 1.74 19.42 33.69 1.08 Ventersdorp Contact Reef Above 109 Level Measured 6.40 11.27 72.16 2.32 Indicated 10.96 4.69 51.45 1.65

Inferred

Total 17.36 7.12 123.61 3.97 Ventersdorp Contact Reef 109 to 120 Level Measured 3.81 19.59 74.61 2.40 Indicated 6.54 12.43 81.31 2.61 Inferred 0.65 4.02 2.60 0.08 Total 11.00 14.42 158.52 5.10 Ventersdorp Contact Reef Below 120 Level Measured 0.26 20.49 5.41 0.17 Indicated 10.47 16.10 168.65 5.42 Inferred 0.09 4.10 0.36 0.01 Total 10.82 16.11 174.42 Ventersdorp Contact Reef WUDLS

Measured

Indicated 2.51 14.67 36.78 1.18 Inferred 11.65 14.87 173.20 5.57 Total 14.16 14.84 209.98 6.75 Ventersdorp Contact Reef Block 1 Measured 0.01 16.56 0.08 0 Indicated 3.06 4.00 12.23 0.39 Inferred Total 3.07 4.02 12.31 0.40 Ventersdorp Contact Reef Block 3 Measured Indicated 4.84 5.35 25.94

0.83

## Inferred Total 4.84 5.35 25.94 0.83 Ventersdorp Contact Reef Block 5 Measured 0.05 3.36 0.18 0.01 Indicated 4.23 4.47 18.93 0.61 Inferred Total 4.28 4.46 19.11 0.61 Ventersdorp Contact Reef Outside Project Areas Measured 0.07 4.82 0.34 0.01 Indicated 8.16 3.43 28.02 0.90 Inferred 0.10 3.15 0.32 0.01 Total 8.33

3.44

28.68 0.92 TauTona Carbon Leader Reef Shaft Pillar Measured 0.32 42.35 13.50 0.43 Indicated 1.27 45.74 58.16 1.87 Inferred Total 1.59 45.06 71.66 2.30 Carbon Leader Reef Below 120 Level Measured Indicated 26.25 21.64 567.85 18.26 Inferred 7.60 20.37 154.78 4.98 Total 33.85 21.35 722.63 23.23 Mponeng Total 111.03 14.24 1,580.57 50.82

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

Edgar Filling. ANGLOGOLD AONANT ETD TONNOT
Exclusive Mineral Resource
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Mponeng
Category
Tonnes Moz
Measured
9.09
16.50
150.07
4.82
Indicated
35.27
15.28
538.97
17.33
Inferred
4.87
27.36
133.14
4.28
Mponeng
Total
49.23
16.70
822.18
26.43 The assessment arising a proceeding on the West Wite to leave behind 25% to 50% of the Euclidean Mineral Resource of
The current mining practice on the West Wits to leave behind 35% to 50% of the Exclusive Mineral Resource as
safety and remnant
blocks of ground. These blocks of ground are designed to provide additional stability to the stope faces during mining
operations.
Bracket pillars are also placed around igneous intrusives to improve stability and to minimise risks associated with seismicity around
these structures.
Other areas of the Mineral Resource that do not form part of LOM fall under categories considered to be beyond infrastructure and
below the economic cut-off for the mine.
Mineral Resource below infrastructure
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Mponeng
Category
Tonnes Moz

Tonnes

Moz

## Measured Indicated 17.11 20.34 347.96 11.19 Inferred 17.87 16.72 298.67 9.60 Mponeng Total 34.98 18.49 646.63 20.79 Mponeng Mineral Resource reconciliation: 2011 to 2012 49.52 -0.50 1.62 0.00 0.18 0.00 0.00 0.00 50.82 Ounces (millions) 51.0 50.6 50.2 49.8 49.4 49.0 2011 Depletion Gold price Cost Exploration Methodology Other

Acquisition/

Disposal 2012 Mponeng Ore Reserve reconciliation: 2011 to 2012 14.02 -0.42 0.76 0.00 0.00 -0.55 0.00 0.00 13.81 Ounces (millions) 14.5 14.3 14.1 13.9 13.7 13.5 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012

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**SOUTH AFRICA** 

### **MPONENG** continued **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade Contained gold Mponeng Category Tonnes Moz Ventersdorp Contact Reef Proved 0.62 6.06 3.78 0.12 Above 109 Level Probable 1.04 5.47 5.70 0.18 Total 1.66 5.69 9.48 0.30 Ventersdorp Contact Reef 109 Proved 1.43 9.71 13.86 0.45 to 120 Level Probable 5.33 6.32 33.69 1.08 Total 6.76 7.04 47.55 Ventersdorp Contact Reef Proved 0.26 11.08

2.90 0.09 Below 120 Level Probable 9.80 8.62 84.46 2.72 Total 10.06 8.68 87.36 2.81 TauTona Carbon Leader Reef Proved Eastern Block Probable 0.91 11.70 10.67 0.34 Total 0.91 11.70 10.67 0.34 Carbon Leader Reef Proved Below 120 Level Probable 23.12 11.87 274.40 8.82 Total 23.12 11.87 274.40 8.82 Mponeng Total 42.52

10.10

429.45 13.81 Ore Reserve modifying factors 31 December 2012 Mponeng Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value cm.g/t Au Stoping width cm Dilution % **MCF** % MetRF % Carbon Leader Reef Below 120 Level 1,300 6.94 7.14 750 105.0 12.9 81.0 98.1 TauTona Carbon Leader Reef Eastern Block 1,300 6.94 5.89 750 127.3 62.4 81.8 98.1 Ventersdorp Contact Reef 109 to 120 Level 1,300 6.94

```
5.17
750
145.0
53.5
83.2
98.1
Ventersdorp Contact
Reef Above 109 Level
1,300
6.94
5.17
750
145.0
52.7
82.5
98.1
Ventersdorp Contact
Reef Below 120 Level
1,300
6.94
5.17
750
145.0
47.5
84.5
98.1
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
38
}
```

### Mponeng 0.0 2.5 2.0 1.5 1.0 0.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 Grade tonnage curve – Underground (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t)Cut-off grade (g/t) 115 105 95 85 75 65 19 17 15 13 Tonnes above cut-off Ave grade above cut-off Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade g/t Contained gold Mponeng Tonnes Moz Comment Carbon Leader Reef Below 120 Level 5.67 14.46 81.96

2.63

	_aga: :g: /a_a
Carbon Leader Re	ef Phase 4 and 6 – Level 2 (in-situ)
Total	
5.67	
14.46	
81.96	
2.63	
Ore Reserve below	v infrastructure
as at 31 December	2012
Tonnes	
million	
Grade	
g/t	
Contained gold	
Mponeng	
Category	
Tonnes	Moz
Proved	
_	
_	
_	
_	
Probable	
23.12	
11.87	
274.40	
8.82	
Mponeng	
Total	
23.12	
11.87	
274.40	
8.82	
COMPETENT PE	RSONS
Category	
Name	
Professional	
organisation	
Registration	
number	
Relevant	
experience	
Mineral Resource	
Gareth Flitton	
GSSA	
964 758	
9 years	
Ore Reserve	
Pieter Enslin	
PLATO	
PMS 0183	
20 voore	

30 years

{
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SOUTH AFRICA

#### **SAVUKA**

### **LOCATION**

Savuka mine is located about 18km south of the town of Carletonville and forms part of AngloGold Ashanti's West Wits operations.

The mine exploits the Carbon Leader Reef (CLR) at depths varying from 2,600m to 3,500m below surface. The Ventersdorp Contact

Reef (VCR), which is about 700m above the CLR, has largely been mined out and mining operations on the VCR horizon ceased

in 2010.

Savuka has converted from a longwall configuration to a sequential grid mine and most of the mine's current production is derived from

the CLR. The Ore Reserve at the mine is largely exhausted and minimum mining operations are taking place. GEOLOGY

The CLR is a thin, tabular, auriferous quartz pebble conglomerate formed near the base of the Central Rand Group. The CLR is on

average 20cm thick and has been divided into three stratigraphic units. Economically the most important is Unit 1, which is present as

a sheet-like deposit over the whole mine. Unit 2 is a complex channel deposit that is presently only being mined in the south and west

areas of Savuka. The reef may be over 2m thick where Unit 2 is developed. Unit 3 is preserved below Unit 1 in the southern parts of

Savuka and is the oldest of the three CLR stratigraphic units.

The VCR comprises a quartz pebble conglomerate (up to 5m thick) capping the topmost angular unconformity of the Witwatersrand

Supergroup. The topography of the VCR depositional area is uneven and consists of a series of slopes and horizontal terraces at

different elevations.

The reefs at Savuka are cross-cut by faults and intrusive dykes that displace the reef horizons. The faulting, in conjunction with the

numerous intrusives that also intersect the deposit, is responsible for most of the risk inherent with deep-level gold mining, since

seismicity is associated with these geological features.

**2012** MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **EXPLORATION**

Savuka is a mature mine that is approaching the end of its productive life. No exploration is currently taking place at this operation and

any un-mined ground will be re-allocated to surrounding mines.

#### **PROJECTS**

No projects are currently being undertaken at Savuka as this operation is in closure mode.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m(-x-)

Diamond

RC

Blast-

hole

Other Comments

Savuka

Measured

5 x 5

X

Chip sampling

Indicated

100 x 100

X

Underground drilling

Inferred

1,000 x 1,000

X

Surface drilling

Grade/Ore control

X

See Measured category

**Inclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Savuka

Category

Tonnes Moz Ventersdorp Contact Reef Measured 0.16 12.87 2.02 0.06 Indicated 0.34 13.53 4.64 0.15 Inferred 0.00 8.55 0.01 0.00 Total 0.50 13.32 6.67 0.21 Carbon Leader Reef Measured 1.39 17.00 23.56 0.76 Indicated 3.42 18.24 62.40 2.01 Inferred Total 4.81 17.88 85.96 2.76 Savuka Total 5.31 17.45 92.63 2.98 **Exclusive Mineral Resource** 

as at 31 December 2012

Tonnes million Grade g/t Contained gold Savuka Category Tonnes Moz Measured 1.40 16.53 23.15 0.74 Indicated 2.25 18.64 41.85 1.35 Inferred 0.00 8.55 0.01 0.00 Savuka Total 3.65 17.83 65.01 2.09 As Savuka is in closure mode, almost all of the published Mineral Resource is classified as Exclusive Mineral Resource. Only a small percentage of the published Mineral Resource is not part of the Exclusive Mineral Resource. 41 **SOUTH AFRICA** 

### **SAVUKA** continued ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade Contained gold Savuka Category Tonnes Moz Carbon Leader Reef Proved 0.26 5.78 1.50 0.05 Probable 3.03 5.08 15.40 0.50 Savuka Total 3.29 5.13 16.90 0.54 Ore Reserve modifying factors 31 December 2012 Savuka Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value cm.g/t Au Stoping width cm Dilution

%

**MCF** % MetRF Carbon Leader Reef 1,300 6.94 7.50 900 120.0 63.1 60.1 97.3 Inferred Mineral Resource in business plan No planning or scheduling took place in areas classified as Inferred Mineral Resource. **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Michelle Pienaar **GSSA** 967 796 12 years Ore Reserve Joey Modise **PLATO** MS 0113 25 years Savuka Mineral Resource reconciliation: 2011 to 2012 3.02 -0.06 0.00 -0.020.02 0.02 0.00 0.00 2.98 Ounces (millions) 3.02 3.00 2.98 2.96

2.94

2.92 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Savuka Ore Reserve reconciliation: 2011 to 2012 0.60 -0.04 -0.02 0.00 0.00 0.00 0.00 0.00 0.54 Ounces (millions) 0.61 0.59 0.57 0.55 0.53 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012

Savuka 0

```
1
2
3
4
5
6
0
10
8
6
4
2
12
14
16
18
20
22
24
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
30
28
26
24
22
20
18
16
14
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
42
```

#### **LOCATION**

TauTona forms part of AngloGold Ashanti's West Wits operations and is located just south of Carletonville in the North West Province,

about 70km southwest of Johannesburg. Mining at TauTona takes place at depths ranging from 2,000m to 3,640m. The mine has a

three-shaft system and is in the process of converting from longwall mining to scattered grid mining.

#### **GEOLOGY**

The Carbon Leader Reef (CLR) is the principal economic horizon at TauTona and the Ventersdorp Contact Reef (VCR) is the secondary

economic horizon. The CLR is located near the base of the Johannesburg Subgroup, which forms part of the Central Rand Group.

The Central Rand Group sediments are unconformably overlain by the Klipriviersberg Lavas and the VCR is developed at the interface

between the Central Rand Group sediment and these overlying lavas. The CLR and the VCR at TauTona are vertically separated by

about 800m of shales and quartzites.

The CLR is a thin, on average 20cm thick, tabular, auriferous quartz pebble conglomerate and consists of three sedimentary facies

or units. Economically the most important is Unit 1, which is present as a sheet-like deposit over the whole mine, although reef

development and grades tend to drop off very rapidly where Unit 1 overlies Unit 2. Unit 2 is a complex channel deposit that is only

present along the eastern-most limit of current mining at TauTona. The Unit 2 CLR may be over 2m thick. Unit 3 is preserved below

Unit 1 in the southern parts of TauTona and is the oldest of the CLR conglomerates.

Production on the VCR at TauTona ceased in 2011. The VCR is comprised of a quartz pebble conglomerate (up to 2m thick) capping

the top-most angular unconformity of the Witwatersrand Supergroup. The topography of the VCR depositional area is uneven and the

reef is draped over a series of slopes and terraces at different elevations.

**TAUTONA** 

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**SOUTH AFRICA** 

#### **EXPLORATION**

The drilling of the 1C2 block began at the end of 2011, with three reef intersections drilled in 2012. The drilling programme will

continue in 2013.

Drilling is also taking place from 120 Level at TauTona into Mponeng's ground to assist with information for the below 120 Carbon

Leader project. The information obtained from these drill holes is needed to confirm the geological structure of this area and to refine

the facies model. A total of 2,500m exploration drilling has been planned for 2013.

#### **PROJECTS**

A project was initiated to drill a series of long holes from 112 Level to explore the ground south of the Pretorius Fault Zone.

The programme was abandoned mid-2012 due to methane intersections. The programme will continue with shorter drill holes south

of the Pretorius Fault Zone to investigate the lateral movement of this geological structure and its implications. Information on the

different intrusions, age relationships and characteristics of geological features are required to determine the geotechnical properties

of this area.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

TauTona

Measured

5 x 5

X

Chip sampling

Indicated

100 x 100

X

\_

Underground drilling

Inferred

1,000 x 1,000

X

-

Surface drilling

Grade/Ore control

```
- X
See Measured category
TAUTONA
continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
44
}
```

## Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold TauTona Category Tonnes Moz East of the Bank Between 100 & 112 Levels Measured 0.42 27.62 11.46 0.37 Indicated 2.18 20.36 44.46 1.43 Inferred Total 2.60 21.52 55.92 1.80 Carbon Leader Reef - 1C11 Measured 0.07 18.70 1.34 0.04 Indicated 0.20 26.53 5.44 0.17 Inferred Total 0.27 24.51 6.78

0.22

## Carbon Leader Reef Base Measured 1.30 28.91 37.69 1.21 Indicated 1.50 30.33 45.60 1.47 Inferred Total 2.80 29.67 83.29 2.68 TauTona Total 5.68 25.69 145.98 4.69 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold TauTona Category Tonnes Moz Measured 1.45 28.33 41.05 1.32 Indicated 1.67 27.69 46.28 1.49 Inferred

TauTona Total 3.12 27.99 87.33 2.81 The Exclusive Mineral Resource is dependent on mining strategy, but approximately 1.91Moz of the Exclusive Mineral Resource is expected to be taken up in safety, boundary and remnant blocks of ground ahead of current mining. TauTona Mineral Resource reconciliation: 2011 to 2012 4.55 -0.29 0.00 -0.10 0.33 0.17 0.03 0.00 4.69 Ounces (millions) 4.7 4.6 4.5 4.4 4.3 4.2 4.1 4.0 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 TauTona Ore Reserve reconciliation: 2011 to 2012 1.92 -0.21 -0.06 0.00 0.00

0.00 0.00 0.00 1.65 Ounces (millions) 2.0 1.9 1.8 1.7 1.6 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 {

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**SOUTH AFRICA** 

### **TAUTONA** continued **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade Contained gold TauTona Category Tonnes Moz East of the Bank Between 100 & 112 Levels Proved 0.32 10.40 3.30 0.11 Probable 3.07 7.59 23.27 0.75 Total 3.39 7.85 26.57 0.85 Carbon Leader Reef - 1C11 Proved 0.02 8.76 0.15 0.00 Probable 0.14 10.23 1.43 0.05 Total 0.16 10.07 1.58 0.05 Carbon Leader Reef Base Proved 0.40 11.91 4.81

0.15 Probable

1.60 11.49 18.34 0.59 Total 2.00 11.57 23.15 0.74 TauTona Total 5.54 9.26 51.30 1.65 Ore Reserve modifying factors 31 December 2012 TauTona Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value cm.g/t Au Stoping width cm Dilution **MCF** % MetRF Carbon Leader Reef - 1C11 1,300 6.94 7.89 900 120.0 54.1 79.1 97.5 Carbon Leader Reef Base 1,300

6.94 7.89 900 95.0 58.8 79.1 97.5 East of the Bank Between 100 & 112 Levels 1,300 6.94 7.89 900 95.0 60.2 79.1 97.5 Inferred Mineral Resource in business plan No planning or scheduling took place in areas classified as Inferred Mineral Resource. **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Michelle Pienaar **GSSA** 967 796 12 years Ore Reserve Joey Modise **PLATO** MS 0113 25 years TauTona 0 10 8 6 4 2 12 14 16 18 20 22

```
24
Grade tonnage curve – Underground (metric)
Tonnes above
cut-off
(millions)
Average
grade
above
cut-off
(g/t)
Cut-off grade (g/t)
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
34
32
30
28
26
24
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

#### SURFACE OPERATIONS

#### **OVERVIEW**

Surface operations in the South Africa Region produce gold by treating lower-grade surface material such as waste rock dumps

and the re-treatment of tailings storage facilities. The surface operations comprise the Vaal River Surface and West Wits Surface

operations. In Vaal River the Kopanang, West, Mispah and East gold plants are dedicated surface sources while the Noligwa gold

plant and South uranium plant circuit process reef material for extraction of gold and uranium. Waste rock material is processed in the

Noligwa gold plant (Vaal River), Mponeng and Savuka gold plants (West Wits) when mills are below full capacity. AngloGold Ashanti acquired the Mine Waste Solutions (MWS) tailings retreatment operation in the Vaal River region in July 2012.

The MWS tailings dams are scattered over an area that stretches approximately 13.5km north-south and 14km east-west. The

MWS Mineral Resource comprises tailings storage facilities that originated from the processing of material from the Buffelsfontein,

Hartebeestfontein and the Stilfontein gold mines.

#### **LOCATION**

The Vaal River Surface operations are located immediately to the north and south of the Vaal River, close to the town of Orkney

in the North West Province of South Africa. These operations extract gold from the waste rock dumps and tailings storage facility

material emanating from the mining and processing of the Vaal Reef (VR) and Ventersdorp Contact Reef (VCR) that are mined at the

Vaal River mines. Approximately 90% of surface gold is produced from the reclamation and treatment of waste rock dumps material.

The remaining 10% comprises of gold from the hydraulic reclamation and re-treatment of a tailings dam called the Sulphur Paydam and

by-product gold from the rehabilitation of surface areas. The rehabilitation is in line with our commitment to care for the environment.

The West Wits Surface operations are located on the West Wits Line, near the town of Carletonville, straddling the border between the

North West and Gauteng Provinces in South Africa. These operations process waste rock dump material sourced from the mining and

processing of the Carbon Leader Reef (CLR) and the VCR that are mined at the West Wits mines in the Carletonville/Fochville area.

The MWS operation is located in the western portion of the Witwatersrand Basin, some 160km from Johannesburg, approximately

8km from the town of Klerksdorp near Stilfontein in the North West Province, South Africa. The operation is within 20km of the Vaal

River Surface operations.

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**SOUTH AFRICA** 

#### WASTE ROCK DUMPS AND TAILINGS STORAGE FACILITIES

The waste rock dumps have been built from waste rock mined from underground workings; hoisted, transported and deposited via

conveyor belt. The gold contained within these dumps was sourced from three areas:

•

minor reefs that were developed in order to access the primary reef;

•

gold-bearing reefs that were contained within small fault blocks that were exposed by off-reef development; and

•

cross-tramming of gold-bearing reef material to the waste tips.

Over the years, the plants' residue resulting from the treatment of gold bearing ore has been pumped in a slurry form to the tailings

storage facilities.

During 2012, 10.7Mt were depleted and 0.1Moz of gold were produced from surface sources material (excluding MWS). The Vaal

River tailings storage facilities have been included as an Ore Reserve since the material will be processed through the MWS operations.

The MWS tailings dams are comprised of tailings material which originated from the processing of the underground ore from the

Buffels and Stilfontein gold mines, which both predominantly extracted gold from conglomerate reefs of the Witwatersrand Basin.

#### **RECLAMATION METHODOLOGY**

Bulldozers are used to create furrows through the waste rock material in order to blend the rock. The material is then loaded onto rail

hoppers by means of a front-end loader and transported to the Noligwa, Mispah, Kopanang and West gold plants.

The Sulphur Paydam is hydraulically reclaimed using high-pressure water. In order to facilitate blending of low and higher grade

material (necessitated by a definite grade gradient that exists from the bottom to the top of the tailings dam),

reclamation takes place

in a three-bench, full-face operation. From the reclamation face, the slurry flows via trenches to the pump station, where oversized and

organic materials are screened out, and then pumped to the East gold plant for processing.

At MWS, the ore is washed from the faces through trenches down into a slurry collector at the pump stations. After the ore has been

treated, it is pumped to the new MWS tailings storage facility – Kareerand. There are currently three reclamation sites, each consisting

of their own monitoring, pumping, piping and plant module infrastructure.

#### **ENVIRONMENTAL REHABILITATION**

Rehabilitation work is ongoing and gold is produced from cleaning up operations at Vaal River where material is treated through the

archive mill. In 2012 almost 5,000oz were produced from remediation operations.

#### **GROWTH**

The Vaal River tailings storage facility reclamation project was initiated in 2011 to recover uranium oxide and gold from existing tailings

storage facilities by utilising new technology which has been developed inhouse. Synergies between the Vaal River and the MWS

tailings storage facilities will allow MWS to now exploit this Ore Reserve. The combined project has resulted in an increase in both the

gold and uranium Ore Reserves.

Currently the MWS material is processed for extraction of gold only; it is envisaged that the uranium circuit will be commissioned in the

fourth quarter of 2013. The Mineral Resource is estimated to contain 56.5Mlb of uranium and 2.6Moz of gold. SURFACE OPERATIONS **continued**2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}

# MINERAL RESOURCE Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Vaal River Surface Category Tonnes Moz Tailings storage facility Measured Indicated 446.58 0.28 123.05 3.96 Inferred Total 446.58 0.28 123.05 3.96 Waste rock dump Measured Indicated 41.71 0.51 21.42 0.69 Inferred 5.05 0.69 3.48 0.11

Total 46.76

0.53 24.90 0.80 Vaal River Surface Total 493.34 0.30 147.94 4.76 Mine Waste Solutions Tailings storage facility Measured 161.32 0.23 36.50 1.17 Indicated 161.55 0.24 39.24 1.26 Inferred 15.51 0.30 4.62 0.15 Mine Waste Solutions Total 338.37 0.24 80.36 2.58 West Wits Surface Tailings storage facility Measured Indicated 175.61 0.24 42.92 1.38 Inferred Total

175.61

0.24 42.92 1.38 Waste rock dump Measured Indicated 12.17 0.49 5.94 0.19 Inferred Total 12.17 0.49 5.94 0.19 West Wits Surface Total 187.78 0.26 48.86 1.57 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Category Tonnes Moz Mine Waste Solutions Measured Indicated 1.20 0.30 0.36 0.01

Inferred

15.51 0.30 4.62 0.15 Total 16.71 0.30 4.98 0.16 West Wits Surface Measured Indicated 178.39 0.24 43.53 1.40 Inferred Total 178.39 0.24 43.53 1.40 The Exclusive Mineral Resource includes a small portion of MWS and the majority of West Wits Surface operations' Mineral Resource. 49

**SOUTH AFRICA** 

#### **SURFACE OPERATIONS continued**

West Wits Surface

Mineral Resource reconciliation: 2011 to 2012

1.57

-0.01

0.00

0.00

-0.00

0.02

0.02

-0.00

0.00

1.57

Ounces (millions)

1.574

1.570

1.566

1.562

1.558

1.554

2011

Deple-

tion

Gold

price

Cost

Explo-

ration

Metho-

dology

Other

o tiller

Acquisition/

Disposal

2012

West Wits Surface

Ore Reserve reconciliation: 2011 to 2012

0.19

-0.01

0.01

-0.02

0.00

0.00

-0.00

0.00

0.17

Ounces (millions)

0.188

0.184

0.180

0.176

0.172

0.168

2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 Mine Waste Solutions Mineral Resource reconciliation: 2011 to 2012 2011 0.00 Depletion -0.07 Gold price 0.00 Cost 0.00 Exploration 0.00 Methodology 0.00 Other -0.00 Acquisition/ Disposal 2.66 2012 2.58 Ounces (millions) 3.0 2.5 2.0 1.5 1.0 0.5 0.0

Mine Waste Solutions

Ore Reserve reconciliation: 2011 to 2012

150

2011 0.00 Depletion -0.07 Model change 0.00 Change in **Economics** 0.00 New ounces from **Projects** 0.00 Scope change 0.00 Other -0.01 Acquisition/ Disposal 2.43 2012 2.35 Ounces (millions) 2.5 2.0 1.5 1.0 0.5 0.0 Vaal River Surface Mineral Resource reconciliation: 2011 to 2012 4.90 -0.18 0.00 0.00 -0.03 0.06 0.01 0.00 4.76 Ounces (millions) 4.95 4.90 4.85 4.80

4.75

4.70 4.65 4.60 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Vaal River Surface Ore Reserve reconciliation: 2011 to 2012 4.78 -0.18 0.05 0.03 0.00 0.00 -0.03 0.00 4.65 Ounces (millions) 4.78 4.74 4.70 4.66 4.62 4.58 2011 Depletion Model change Change economics New ounces from projects Scope change Other Acquisition/

Disposal 2012

**2012** MINERAL RESOURCE AND ORE RESERVE REPORT **50** }

# million Grade g/t Contained gold Vaal River Surface Category Tonnes Moz Tailings storage facility Proved Probable 446.58 0.28 125.46 4.03 Total 446.58 0.28 125.46 4.03 Waste rock dump Proved Probable 41.71 0.46 19.13 0.62 Total 41.71 0.46 19.13 0.62 Vaal River Surface Total 488.29 0.30 144.59 4.65 Mine Waste Solutions

ORE RESERVE
Ore Reserve

Tonnes

as at 31 December 2012

# Tailings storage facility Proved 141.70 0.23 32.63 1.05 Probable 158.64 0.25 40.38 1.30 Mine Waste Solutions Total 300.34 0.24 73.01 2.35 West Wits Surface Waste rock dump Proved Probable 9.39 0.57 5.33 0.17 West Wits Surface Total 9.39 0.57 5.33 0.17 Ore Reserve modifying factors 31 December 2012 Vaal River Surface Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Cut-off value

cm.g/t Au

Stoping width cm Dilution % **MCF** % MetRF % Waste rock dump 1,300 6.94 0.44 97.0 88.8 Tailings storage facility 1,300 6.94 0.24 100.0 51.5 Mine Waste Solutions Tailings storage facility 1,300 6.94 0.24 100.0 51.6 West Wits Surface Waste rock dump 1,300 6.94 0.49 98.0 Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million

### Grade g/t Contained gold Vaal River Surface Tonnes Moz Comment Waste rock dump 5.05 0.65 3.29 0.11 No. 3 waste rock dump Total 5.05 0.65 3.29 0.11 **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource **Raymond Orton PLATO** MS 0132 26 years Ore Reserve Mariaan Gagiano **SAIMM** 705 920 28 years 51 **SOUTH AFRICA**

#### **OVERVIEW**

Uranium is produced at Vaal River by processing the reef material from Moab Khotsong, Great Noligwa and Kopanang in the

Noligwa gold plant/South Uranium plant circuit. The reef is milled at the Noligwa gold plant and treated in the South Uranium plant

for uranium oxide extraction by the reverse leach process. Ammonium diuranate (ADU or 'yellow cake') is the final product of the

South Uranium plant and is transported to Nufcor (located in Gauteng) where the material is calcined and packed for shipment to

the converters. A total of 1.21Mlb of uranium oxide was produced in 2012.

#### **GROWTH**

The expansion project at the South Uranium plant was commissioned in 2012 resulting in all the Kopanang reef being subjected to

the uranium extraction process.

AngloGold Ashanti acquired the Mine Waste Solutions (MWS) tailings retreatment operation in the Vaal River region in July 2012.

Currently the tailings storage facility material is processed for extraction of gold; it is projected that the uranium circuit will be

commissioned in Quarter 4, 2013 for extraction of uranium from the tailings storage facility material. The Inclusive Mineral Resource is

estimated to contain 56.5Mlb of uranium and 2.6Moz of gold.

The Vaal River tailings storage facility reclamation project was commissioned in 2011 to recover uranium oxide and gold from existing

tailings storage facilities by utilising new technology which has been developed inhouse by AngloGold Ashanti. Synergies between

the Vaal River and the MWS tailings storage facilities will allow for the exploitation of the Ore Reserve through the MWS operations.

The combined project has resulted in an increase in both the gold and uranium Ore Reserves.

Inclusive Mineral Resource by-product: Uranium (U

3 O 8

Tonnes

million

Grade

kg/t

Contained uranium oxide

as at 31 December 2012

Category

Tonnes

**Pounds** 

million

Great Noligwa

Measured

\_

-

Indicated

1.68

0.61 1,029 2.27 Inferred 0.01 0.37 3 0.01 Total 1.69 0.61 1,032 2.28 Kopanang Measured Indicated 21.37 0.67 14,336 31.61 Inferred 2.11 0.63 1,329 2.93 Total 23.48 0.67 15,665 34.54 Moab Khotsong Measured 3.64 0.73 2,667 5.88 Indicated 21.94 0.92 20,127 44.37 Inferred 9.57 0.76 7,234 15.95

Total

35.15 0.85 30,027 66.20 Vaal River Surface Measured Indicated 446.58 0.09 42,177 92.98 Inferred Total 446.58 0.09 42,177 92.98 Mine Waste Solutions Measured 161.32 0.07 11,335 24.99 Indicated 159.84 0.08 12,831 28.29 Inferred 15.51 0.09 1,469 3.24 Total 336.67 0.08 25,634 56.52 Mponeng Measured 0.35 0.31

107

```
0.24
Indicated
27.49
0.29
8,049
17.75
Inferred
7.60
0.29
2,240
4.94
Total
35.44
0.29
10,396
22.93
URANIUM
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
}
```

Tonnes million Grade kg/t Contained uranium oxide as at 31 December 2012 Category Tonnes Pounds million Savuka Measured Indicated 4.81 0.28 1,352 2.98 Inferred Total 4.81 0.28 1,352 2.98 TauTona Measured Indicated 5.68 0.31 1,764 3.89 Inferred Total 5.68

0.31 1,764

3.89 West Wits Surface Measured Indicated 175.61 0.07 12,593 27.76 Inferred Total 175.61 0.07 12,593 27.76 Total Total 1,065.10 0.13 140,641 310.06 Ore Reserve by-product: Uranium (U3O8) Tonnes million Grade kg/t Contained uranium oxide as at 31 December 2012 Category Tonnes Pounds million Great Noligwa Proved 1.36 0.27 368 0.81 Probable 0.31 0.27 84

0.19 Total

1.67 0.27 453 1.00 Kopanang Proved 1.02 0.34 352 0.78 Probable 4.87 0.34 1,657 3.65 Total 5.89 0.34 2,009 4.43 Moab Khotsong Proved Probable 20.51 0.44 9,090 20.04 Total 20.51 0.44 9,090 20.04 Vaal River Surface Proved Probable 440.83 0.09 41,562 91.63 Total 440.83 0.09 41,562

```
91.63
Mine Waste Solutions
Proved
131.54
0.07
8,554
18.86
Probable
158.73
0.07
11,825
26.07
Total
290.27
0.07
20,379
44.93
Total
Total
759.18
0.10
73,492
162.03
Inclusive Mineral Resource by-product: Uranium (U3O8) continued
53
```

**SOUTH AFRICA** 

```
CONTINENTAL
AFRICA
}
DRC: Mongbwalu
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
54
}
```

AngloGold Ashanti has eight mining operations in its Continental Africa Region:

Iduapriem and Obuasi in Ghana;

•

Siguiri in Guinea;

•

Morila, Sadiola and Yatela in Mali;

.

Navachab in Namibia; and

•

Geita in Tanzania.

It also has two advanced projects in the Democratic Republic of the Congo (DRC), namely Kibali and Mongbwalu. Combined production from these operations totalled 1.52Moz of gold in 2012, equivalent to 39% of group production.

The Inclusive

Mineral Resource in Continental Africa totalled 73.01Moz at year-end, including an Ore Reserve of 27.59Moz.

**Inclusive Mineral Resource** 

Tonnes

million

Grade

g/t

Contained gold

as at 31 December 2012

Category

Tonnes

Moz

Continental Africa

Measured

131.62

2.66

350.13

11.26

Indicated

545.26

2.22

1,210.79

38.93

Inferred

312.24

2.27

710.00

22.83

Total

989.12

2.30

2,270.92

73.01

Ore Reserve

Tonnes

million

Grade

g/t

# Contained gold as at 31 December 2012 Category Tonnes Moz Continental Africa Proved 81.33 2.10 170.71 5.49 Probable 309.74 2.22 687.48 22.10 Total 391.06 2.19 858.19 27.59 **REGIONAL OVERVIEW** This section covers AngloGold Ashanti's eight mining operations and two advanced projects in six countries within the Continental Africa Region. Contribution to group production (%) Continental Africa Rest of AngloGold Ashanti 61 Geita 35 Obuasi 18 Siguiri 16 Iduapriem 12 Sadiola Morila 5 Navachab 5 Yatela Contribution to production by mine (%)

55

### CONTINENTAL AFRICA

#### **COUNTRY OVERVIEW**

AngloGold Ashanti has two advanced projects in the Democratic Republic of the Congo (DRC), Kibali and Mongbwalu.

Kibali

On 15 October 2009 AngloGold Ashanti acquired a 50% indirect interest in Moto Goldmines Ltd through a joint venture with Randgold

Resources Limited (Randgold). On 21 December 2009, Randgold and AngloGold Ashanti increased their joint venture interest in the

Kibali gold project to 90%, whilst Société L'Office des Mines d'Or de Kilo-Moto (SOKIMO) retained a 10% holding. The project is a joint development between three separate groups:

•

AngloGold Ashanti;

•

Randgold, who is the operator, an African-focused gold mining and exploration business with primary listings on the London Stock

Exchange and Nasdaq; and

•

SOKIMO, the state-owned gold mining company.

The consolidated lease is made up of 10 mining concessions.

Mongbwalu

The Mongbwalu Project is one of AngloGold Ashanti's most important exploration projects and is situated within the 5,487km2

permit covered by Concession 40 in the Ituri Province of north-eastern DRC. Concession 40 has a rich history of gold occurrences

and covers the entire Kilo Archaean granite-greenstone belt that extends approximately 850km west-northwest of Lake Albert.

The concession is held in a joint venture between AngloGold Goldfields Kilo (AGK) and SOKIMO, a government body which currently

holds a 13.8% non-contributory share. AGK is 86.2% owned by AngloGold Ashanti. A feasibility study has been completed around

the old Adidi mine as part of the agreement with the DRC government.

#### MINERAL RESOURCE ESTIMATION

Mineral Resource estimation is undertaken by inhouse Competent Persons or by approved external consultants. The results of both

diamond drilling (DD) and reverse circulation (RC) drilling are used in the estimation process. 3D mineralised envelopes are established

using both grade and geology and these are then statistically verified to confirm their validity for use in grade estimation. Volumes are

then filled with block model cells and these are then interpolated for density, rock type and grade, the latter using Ordinary Kriging.

Grade top cuts are applied to drill-hole data to prevent the spread of high grades during the estimation process.

Drill-hole spacing is used to guide the Mineral Resource classification according to requirements of the relevant reporting codes. The

is used to guide the Mineral Resource classification according to requirements of the relevant reporting codes. The open pit Mineral

Resource is quoted within a limiting shell and underground Mineral Resources are quoted above a specified cut off. ORE RESERVE ESTIMATION

The Ore Reserve for Kibali has been based on the latest Mineral Resource model using Ordinary Kriging. High-grade domains

(1.0-4.0g/t) are commonly surrounded by a low-grade (+0.3g/t) halo.

The open pit Ore Reserve shell optimisations were completed on the Mineral Resource model using 3D Ordinary Kriging.

This incorporated the mining layout, operating factors, stripping ratio and relevant cut-off grade for the Ore Reserve. An open pit –

underground interface was determined as optimal at 5,685mRL between the Karagba, Chauffeur and Durba deposit (KCD) open pit

and underground mine.

A cut-off grade analysis at \$1,000/oz was used to determine a cut-off grade of 2.0g/t for the underground mine. Longitudinal and

transverse stoping methods with hydraulic and waste rock fill were chosen as the preferred mining method. Underground stope

designs were updated from the previously reported Ore Reserve using the Mineral Resource model. Modifying factors for planned and

unplanned rock dilution, backfill dilution and ore loss were applied to obtain the reported Ore Reserve. Metallurgical, environmental,

social, legal, marketing and economic factors were adequately considered in the Kibali feasibility study for the Ore Reserve to

remain viable.

DRC

**2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 

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#### **LOCATION**

The Kibali project is located in the north-eastern part of the Democratic Republic of the Congo (DRC) near the international borders

with Uganda and Sudan. The local office is located in the village of Doko, which is centrally located within the project area. The Kibali

project is approximately 210km by road from Arua, on the Ugandan border and immediately north of the district capital of Watsa.

The project area falls within the administrative district of Haut Uélé in Province Orientale. The town of Bunia, which is the United

Nations controlled entry point to north-eastern DRC, lies about 200km to the south of the project.

#### **GEOLOGY**

The Kibali project is located within the Moto Greenstone Belt, which consists of Archaean Kibalian volcano-sedimentary rocks and

ironstone-chert horizons that have been metamorphosed to greenschist facies. It is cut by regional scale north, east, northeast and

northwest trending faults and is bounded to the north by the Middle Archaean West Nile granite-gneiss complex and the south by the

Upper Zaire granitic complex.

The local geology consists of a volcano-sedimentary sequence comprising fine-grained sedimentary rocks, several varieties of

pyroclastic rocks, basaltic flow rocks, mafic-intermediate intrusions (dykes and sills) and intermediate-felsic intrusive rocks (stocks,

dykes and sills). This sequence is variably altered from slight to intense, such that in some cases the original lithology of the rock is

unrecognisable.

Several major mineralised trends have been outlined by soil geochemistry data and by the distribution of known gold mineralisation.

The Kibali-Durba-Karagba Trend and the Gorumbwa-Kombokolo Splay are anomalous with respect to gold endowment, and together

define a mineralised, northeast-striking 'mineralised corridor', 1.5km wide and 8km long. These corridors host the deposits of Kibali,

Sessenge, Gorumbwa, Karagba, Chauffeur and Durba and Pakaka.

The main Kibali deposit, which comprises the combination of Karagba, Chauffeur and Durba, is colloquially termed the KCD deposit

and hosts 73% of the grant's Mineral Resource and 82% of the Ore Reserve (for both open pit and underground mining options).

The next biggest deposit is Pakaka, which hosts some 6% of the Mineral Resource and 7% of the Ore Reserve.

Currently only the

KCD deposit hosts an underground Ore Reserve and this constitutes 66% of the total KCD Ore Reserve.

Gold mineralisation is generally associated with structural features, resulting in tightly constrained zones which often host pods or lenses of

plunging mineralisation. Alteration is closely associated with the mineralisation and is typically carbonate-silica-albite with minor sulphide.

**KIBALI** 

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**CONTINENTAL AFRICA** 

#### **KIBALI**

#### continued

#### **EXPLORATION**

A large amount of exploration was undertaken by the previous owners of the Kibali project, Moto Goldmines Ltd, and this was focused

primarily on the KCD deposit. Since the acquisition of the concession area by AngloGold Ashanti and Randgold, the dominant

exploration targets have been the KCD underground area and upgrading the confidence in the proposed KCD open pit. During 2012

exploration was focused on confidence upgrades and ore extensions around the KCD deposit. This proved to be successful with

significant amounts of the Inferred Mineral Resource being upgraded to an Indicated Mineral Resource. The advanced and infill grade

control programmes also identified additional ore tonnages.

#### **PROJECTS**

A feasibility study was completed by Randgold in 2011 and as per schedule, implementation began in 2012. A revised feasibility

schedule was issued at the first quarter 2012 board meeting and accordingly open pit mining was moved out from an initial starting

date of April to July 2012. The mining of Mengu Hill was brought forward to offset delays in underground mining. MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m(-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

Kibali

Measured

10 x 5

\_

\_

\_

Indicated

40 x 40

\_

\_

Inferred

80 x 100

-

\_

\_

Grade/Ore control

Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Kibali Category Tonnes Moz Open pit Measured 1.97 3.00 5.89 0.19 Indicated 34.38 2.13 73.24 2.35 Inferred 17.29 1.93 33.37 1.07 Total 53.64 2.10 112.50 3.62 Underground Measured Indicated 24.59 5.23 128.60 4.13 Inferred 8.74

2.6823.43

0.75 Total 33.33 4.56 152.03 4.89 Kibali Total 86.97 3.04 264.52 8.50 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Kibali Category Tonnes Moz Measured 0.37 1.85 0.68 0.02 Indicated 24.18 2.47 59.83 1.92 Inferred 26.03 2.18 56.80 1.83 Kibali Total 50.58 2.32 117.31

The Exclusive Mineral Resource is primarily due to the gold price differential between the Mineral Resource and Ore Reserve.

At the KCD deposit it is also partially due to the selection of a fixed interface between the open pit and the underground mining areas.

The Exclusive Mineral Resource makes up 48% of the total Mineral Resource. The Inferred Mineral Resource component forms a

significant component of this material.

3.77

**2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 

# **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Kibali Category Tonnes Moz Open pit Proved 1.59 3.26 5.20 0.17 Probable 18.51 2.53 46.79 1.50 Total 20.10 2.59 51.99 1.67 Underground Proved Probable 17.39 5.81 101.06 3.25 Total 17.39 5.81 101.06 3.25 Kibali Total 37.49 4.08 153.04 4.92 Ore Reserve modifying factors

% RRF

% MRF as at 31 December 2012 Kibali Gold price \$/oz Cut-off value g/t Au Stoping width cm Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF % Open pit 1,000 0.93 10.0 50.0 28.0 84.5 Underground 1,000 2.00 2,000 8.0

2.46

```
91.3
Inferred Mineral Resource in business plan
There is no Inferred Mineral Resource included in the reported Ore Reserve for Kibali. The current mine plan does not
have any reliance
on the Inferred Mineral Resource to support the economic viability of the project.
Kibali
0
10
20
30
40
50
60
70
0
2
3
4
5
6
7
8
9
10
Grade tonnage curve – Surface (metric)
Tonnes above
cut-off (millions)
Average
grade above
cut-off (g/t)
Cut-off grade (g/t)
16
14
12
10
8
6
4
2
0
Tonnes above cut-off
Ave grade above cut-off
Kibali
0
```

```
20
30
40
50
60
70
80
90
0
2
3
4
5
6
7
8
9
10
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade above cut-off (g/t)
Cut-off grade (g/t)
14
12
10
8
6
4
2
0
Tonnes above cut-off
Ave grade above cut-off
Kibali
Mineral Resource reconciliation: 2011 to 2012
Ounces (millions)
2011
Deple-
tion
Gold
price
Cost
Explo-
ration
Metho-
dology
Other
```

Acquisition/

## Disposal 2012 8.38 0.00 0.00 0.00 -0.05 0.00 0.17 0.00 8.50 8.52 8.48 8.44 8.40 8.36 8.32 Kibali Ore Reserve reconciliation: 2011 to 2012 Ounces (millions) 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 4.95 4.85 4.75 4.65 4.55 4.45 4.52 0.00 0.40 0.00 0.00 0.00 0.00

0.00 4.92 {
59
CONTINENTAL AFRICA

### **COMPETENT PERSONS**

Category

Name

Professional

organisation

Registration

number

Relevant

experience

Mineral Resource

Rodney Quick\*

**SACNASP** 

400014/05

19 years

Ore Reserve

Rodney Quick\*

**SACNASP** 

400014/05

19 years

\* Employed by Randgold Resources Limited

**KIBALI** 

continued

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **LOCATION**

The Mongbwalu project covers an area of 396km2 which forms part of the larger Ashanti Goldfields Kilo (AGK) concession of exploitation

licences, totalling 5,487km2 in the Ituri province of the north-eastern DRC. The district capital of Bunia lies to the southwest of the

concession area, some three hours by road from the project site. Bunia is approximately one hour's flight from the nearest international

airport at Kampala in Uganda.

### **GEOLOGY**

The Mongbwalu Project is located in the Kilo Archaean granite-greenstone belt, approximately 3,000km2 in area and situated 850km

west-northwest of Lake Albert. The Kibalian rocks have been divided into an upper and lower unit. The lower unit is dominated by

magnesium-rich tholeiitic basalts whilst the upper unit is dominated by schists, quartzites and banded iron formations. The relationship

between the upper and lower units appears to be conformable.

The oldest known rocks at Mongbwalu are basement gneisses which have been dated at more than 3,400Ma. Granitoid rocks

comprise more than 80% of the area, which includes rafts of Kibalian rocks, intruded by diorites of variable mineralogy, dated at

2,651Ma.

The Kilo Archaean granite-greenstone belt was part of the Tanzania shield but was separated by Late Proterozoic crustal mobilisation

and then by later rifting along the eastern Rift Valley system. The rocks have undergone regional metamorphism, ranging from upper

greenschist to lower amphibolite facies. During the formation of the east African rift system over the past 100 - 200Ma, north-south faults

formed, along which dolerite-lamprophyre dykes were intruded. There is also evidence of some younger faulting in the region. The area

has undergone weak lateritic weathering to shallow depths. Cover sequences are thin and are generally no greater than 1m thick.

The mineralisation at Mongbwalu is hosted in anatomising mylonite bodies of around 10 - 15m in width. These mylonite bodies have

been subdivided into three main blocks separated by the late north-south trending Nzebi and Adidi faults, which offset mineralisation

by up to 200m. The fault blocks are termed the Western, Central and Eastern blocks – hosting the Nzebi, Adidi and Kanga mylonites

respectively.

**MONGBWALU** 

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CONTINENTAL AFRICA

#### **MONGBWALU**

#### continued

The mylonites are composed of quartz, dolomite, calcite, chlorite, sericite and albite. The main mineralisation is hosted in the Central

and Eastern blocks. The gold is not distributed evenly throughout the mylonite and it primarily occurs in 'boudinaged zones' associated

with quartz veining and silicification, mainly occuring as free gold, and is often visible in greyish quartz veins and veinlets or disseminated

through silicified zones within the mylonite. Minor sulphides present in the mylonite include pyrite, pyrrhotite, chalcopyrite, sphalerite

and galena.

Granitoids dominated by diorite, quartz diorite and tonalite form the foot wall and hanging wall to the mineralisation in the area.

However, at Nzebi Mine, east-west striking talc carbonate schists of mafic to ultramafic composition and massive para-amphibolite

dominate.

#### **EXPLORATION**

Based on the 2008 conceptual study and the 2009 Mineral Resource estimate, it was decided to advance the Mongbwalu project

with a 50m by 25m infill drilling campaign to upgrade the Mineral Resource estimate from an Inferred to Indicated Mineral Resource.

The high-grade areas identified in the conceptual mine design would then be extractable during the first five years of mine life.

Based on the information from the 2009 Mineral Resource model and grade estimate, a programme was designed to upgrade

approximately 1.0Moz of the Inferred Mineral Resource to Indicated Mineral Resource, which has successfully been achieved. Since

2009, 1.2Moz have been upgraded to the Indicated Mineral Resource category.

The need for geometallurgical and geotechnical information from the Mineral Resource area was identified and separate programmes

to meet these requirements were compiled. These programmes included geotechnical drilling for civil engineering purposes, limited

sterilisation and condemnation drilling and water drilling. In 2011 a total of 6,400m of diamond drilling (DD) and 2,750m of reverse

circulation (RC) drilling were completed. In 2012 a total of 19,863m of DD and 9,941m of RC drilling were completed.

### **PROJECTS**

The November 2011 Mineral Resource model was used as the basis for the 2012 figures. The interpretation of the high-grade

mineralisation in this model was based on a geological re-logging exercise that identified three relatively continuous mineralised quartz

ore zones within the mylonite. Three quartz zones were modelled in the updated model, resulting in a thinner, more laterally continuous

mineralised horizon. Due to delays in the 2012 drilling and assaying programme, the Mineral Resource model will be updated during

the first quarter of 2013.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing m (-x-) Diamond RC Blasthole Other Comments Mongbwalu Measured Indicated 50 x 25 Inferred 100 x 100 Grade/Ore control Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Mongbwalu Category Tonnes Moz Underground Measured Indicated 4.20 7.63 32.10

1.03

```
Inferred
4.40
7.25
31.89
1.03
Mongbwalu
Total
8.60
7.44
63.99
2.06
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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```

Exclusive Mineral as at 31 December Tonnes	
million	
Grade	
g/t	
Contained gold	
Mongbwalu	
Category	
Tonnes	Moz
Measured	
_	
_	
_	
Indicated	
4.20	
7.63	
32.10	
1.03	
Inferred	
4.40	
7.25	
31.89	
1.03	
Mongbwalu Total	
8.60	
7.44	
63.99	
2.06	
	Mineral Resource is reported at a cut-off grade of 2.8g/t Au. The mineralisation has been classified
into Inferred and	
Indicated Mineral	Resource and these represent a drill-hole spacing of $100 \text{m} \times 100 \text{m}$ and $25 \text{m} \times 50 \text{m}$ respectively. The
Exclusive and	
	Resource numbers are identical due to the absence of an Ore Reserve.
	below infrastructure
as at 31 December	f 2012
Tonnes million	
Grade	
g/t	
Contained gold	
Mongbwalu	
Category	
Tonnes Moz	
Measured	
-	

## Indicated 4.20 7.63 32.10 1.03 Inferred 4.40 7.25 31.89 1.03 Mongbwalu Total 8.60 7.44 63.99 2.06 **COMPETENT PERSON** Category Name Professional organisation Registration number Relevant experience Mineral Resource Vasu Govindsammy **SACNASP** 400086/04 16 years Mongbwalu 0 5 10 15 20 25 0 1 2 3 4 5 6 7 8 9 10 11 12 Grade tonnage curve – Underground (metric)

```
Tonnes
above
cut-off
(millions)
Average grade
above cut-off (g/t)
Cut-off grade (g/t)
16
14
12
10
8
6
4
2
0
Tonnes above cut-off
Ave grade above cut-off
Mongbwalu
Mineral Resource reconciliation: 2011 to 2012
2.06
0.00
0.00
0.00
0.00
0.00
0.00
0.00
2.06
Ounces
(millions)
2.06
2.05
2.04
2.03
2.02
2011
Deple-
tion
Gold
price
Cost
Explo-
ration
Metho-
dology
Other
Acquisition/
Disposal
2012
```

{

CONTINENTAL AFRICA

#### **COUNTRY OVERVIEW**

AngloGold Ashanti has two mines in Ghana: Obuasi, which has both surface and underground operations and Iduapriem, an open pit

mine. Obuasi and Iduapriem are both wholly owned by AngloGold Ashanti. Obuasi is located in the Ashanti region of southern Ghana,

approximately 80km south of Kumasi. It is primarily an underground mine operating at depths of up to 1,500m with a continuous

history of mining dating back to the 1890s. Iduapriem is located in western Ghana, some 85km from the coast and is currently an

open pit operation, although the options to mine underground may be considered in the future.

### MINERAL RESOURCE ESTIMATION

The underground Mineral Resource block models at Obuasi are estimated within the delineated mineralised ore zones using

geostatistical techniques. The geological interpretation is based on diamond drill and cross-cut sampling information. Estimates are

based on Ordinary Kriging of 20m x 5m x 15m blocks, which approximate the minimum selective mining unit (SMU) used at the mine.

Open pit mining commenced at the Sibi area of Obuasi in 2012. The open pit Mineral Resource at both Obuasi and Iduapriem was

estimated by geostatistical techniques within 3D wireframe models of the mineralisation. These models are based on geological

information and cut-off boundaries defined by sampling results. Geological interpretation is based on trench and reverse circulation (RC) drilling and/or diamond drilling (DD) data. Estimation is by Ordinary Kriging of 30m x 30m x 10m blocks.

Surface stockpiles volumes are based on surveys and grades based on historical sampling. Tailings are part of the Mineral Resource with

tonnes and grades based on combinations of 3D block models of some dams and historical metallurgical discharge data.

### ORE RESERVE ESTIMATION

The 3D Mineral Resource models are used as the basis for the Ore Reserve. An ore envelope is developed using the Mineral Resource

block model, geological information and the relevant cut-off grade, which is then used for mine design. An appropriate mining layout

is designed that incorporates mining extraction losses and dilution factors.

#### **GHANA**

#### **2012** MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **LOCATION**

Iduapriem is located in the western region of Ghana, some 85km north of the coastal city of Takoradi and approximately 8km

southwest of the town of Tarkwa. Iduapriem is an open pit mine which commenced mining operations in 1992. Its processing facilities

include a 4.3 million tonnes per annum (Mtpa) carbon-in-pulp (CIP) plant with a gravity circuit. The gravity feed recovers about 30% of

the gold and the CIP plant recovers the remainder.

Iduapriem is bordered to the north by Goldfields (Ghana) Ltd's Tarkwa Mine and to the east by Ghana Manganese Company (GMC)

- a manganese mine which has existed since the 1920s.

### **GEOLOGY**

Iduapriem is located within the Tarkwaian Group of rocks that form part of the West Africa Craton which is covered to a large extent

by metavolcanics and metasediments of the Birimian Supergroup. In Ghana, the Birimian terrane consists of northeast/southwest

trending volcanic belts separated by sedimentary basins. The Tarkwaian Group was deposited in these basins as shallow water deltaic

sediments. The gold mineralisation at Iduapriem is hosted in the Proterozoic Banket Series conglomerates that were developed within

these sediments.

The Banket Reef Zone (BRZ) comprises a sequence of individual beds of quartz pebble conglomerate, breccia conglomerate, quartzite

and grit. The outcropping Banket Series in the mine lease area forms prominent curved ridges that extend southwards from Tarkwa,

westwards through Iduapriem and northwards towards Teberebie.

All known gold mineralisation within the Banket Series is associated with the conglomerates and is found within the matrix that binds

the pebbles together. The gold content is a function of the size and amount of packing of the quartz pebbles within the conglomeratic

units. At Iduapriem, the gold mineralisation is unrelated to metamorphic or hydrothermal alteration events and the gold is coarse

grained, particulate and free milling. Mineralogical studies indicate that the grain size of native gold particles ranges between 2 and

500µm and averages 130µm. Sulphide mineralisation is present only at trace levels and is not associated with the gold. PROJECTS

A pre-feasibility study has been initiated to investigate the potential to expand current production.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

RC

Blast-

hole

Other Comments

Iduapriem

Measured

```
50 x 50,
50 x 75,
100 x 50
Indicated
50 x 75,
50 x 100,
100 x 75
Inferred
20 x 20,
100 x 100
Old leach pads drilled approximately
20 x 20m
Grade/Ore control
                  10 x 12,
10 x 15
IDUAPRIEM
{
65
CONTINENTAL AFRICA
```

### **IDUAPRIEM**

### continued

Inclusive Mineral Resource

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Iduapriem

Category

Tonnes Moz

Ajopa

Measured

7.44

1.97

14.67

0.47

Indicated

0.71

1.02

0.73

0.02 Inferred

1.70

1.32

2.25

0.07

Total

9.85

1.79

17.65

0.57

Block 3W

Measured

-

-

Indicated

0.00

1.85

0.00

0.00

Inferred

1.74

1.12

1.95

0.06

Total

1.74

1.12 1.95 0.06 Block 5 Measured Indicated 0.00 1.04 0.00 0.00 Inferred 1.48 1.09 1.61 0.05 Total 1.48 1.09 1.61 0.05 Blocks 7 and 8 Measured 9.55 1.36 13.03 0.42 Indicated 48.15 1.66 79.80 2.57 Inferred 47.16 1.61 75.93 2.44 Total 104.86 1.61 168.76 5.43 Stockpile (Full Grade Ore) Measured 6.65 0.83 5.53

0.18

# Indicated Inferred Total 6.65 0.83 5.53 0.18 Stockpile (Other) Measured Indicated Inferred 21.00 0.49 10.35 0.33 Total 21.00 0.49 10.35 0.33 Iduapriem Total 145.59 1.41 205.86 6.62 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Iduapriem Category

Tonnes Moz Measured 1.08 1.67 1.80 0.06 Indicated 24.01 1.64 39.34 1.26 Inferred 73.08 1.26 92.09 2.96 Iduapriem Total 98.17 1.36 133.23 4.28 The Exclusive Mineral Resource listed above is derived mainly from the following: Inferred Mineral Resource located within the optimised Ore Reserve pit shell; and Mineral Resource located outside the Ore Reserve shell but within the optimised Mineral Resource shell. This consists mainly of down-dip extensions of the ore zones, most of which may be mineable at a higher gold price. 2012 MINERAL RESOURCE AND ORE RESERVE REPORT 66

## **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Iduapriem Category Tonnes Moz Ajopa Proved 6.45 1.88 12.12 0.39 Probable 0.71 0.93 0.66 0.02 Total 7.16 1.78 12.78 0.41 Blocks 7 and 8 Proved 9.46 1.29 12.23 0.39 Probable 24.15 1.58 38.07 1.22

50.30

Total 33.61 1.50

1.62

Stockpile (Full Grade Ore)

Proved

6.65

0.83

5.53

0.18

Probable

Total 6.65 0.83 5.53 0.18 Iduapriem Total 47.42 1.45 68.60 2.21 Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Iduapriem Gold price \$/oz Cut-off value g/t Au Dilution Dilution g/t (based tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF MetRF % Ajopa 1,470\*

```
96.0
95.0
100.0
94.0
100.0
95.0
Blocks 7 and 8
1,300
96.0
95.0
100.0
94.0
100.0
95.0
* Feasibility study $1,100/oz whittle shell, redesign northern end $1,470/oz whittle shell
Inferred Mineral Resource in business plan
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Iduapriem
Tonnes
               Moz
Comment
Ajopa
1.66
1.27
2.12
0.07
Grade control drilling will be done on every bench
(18m) for better ore definition
Blocks 7 and 8
2.96
1.42
4.21
0.14
Grade control drilling will be done on every bench
(18m) for better ore definition
Total
4.62
1.37
6.33
0.21
Iduapriem
Mineral Resource reconciliation: 2011 to 2012
6.59
-0.22
```

```
0.65
-0.13
0.00
-0.30
0.03
0.00
6.62
Ounces (millions)
7.1
7.0
6.9
6.8
6.7
6.6
6.5
6.4
6.3
6.2
2011
Deple-
tion
Gold
price
Cost
Explo-
ration
Metho-
dology
Other
Acquisition/
Disposal
2012
Iduapriem
Ore Reserve reconciliation: 2011 to 2012
2.55
-0.22
-0.27
0.13
0.00
0.02
0.00
0.00
2.21
Ounces (millions)
2.6
2.5
2.4
2.3
2.2
2.1
```

2.0

### 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 {

**CONTINENTAL AFRICA** 

**67** 

The Inferred Mineral Resource within the Ore Reserve design is 8% of the total ore scheduled (60.32Mt) and exists as pockets of

Inferred Mineral Resource material located within the models of all the deposits.

### **COMPETENT PERSONS**

Category

Name

Professional

organisation

Registration

number

Relevant

experience

Mineral Resource

Kwasi Osei

MAusIMM

112 723

18 years

Ore Reserve

Stephen Asante Yamoah

MAusIMM

304 095

8 years

**IDUAPRIEM** 

### continued

Iduapriem

0

20

40

60

80

100

120

0.00

0.25

0.50

0.75

1.25

1.00

1.50

1.75

2.25

2.00

2.50

Grade tonnage curve – Surface (metric)

Tonnes above

cut-off (millions)

Average

grade

above

cut-off

(g/t)

```
Cut-off grade (g/t)
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
68
}
```

#### **LOCATION**

Obuasi mine is located in the Ashanti Region of Ghana some 320km northwest of the capital Accra. The mine is situated in a largely

forested region, with surrounding land occupied by subsistence farming. The mining concession covers an area of 47.5ha. Eighty

communities lie within a 30km radius of the mine.

#### **GEOLOGY**

The mine is located within the north-easterly striking Ashanti volcanic belt, one of the most significant Proterozoic gold belts discovered

to date. The Ashanti belt predominantly comprises sedimentary and mafic volcanic rocks, and is the most prominent of the five Birimian

Supergroup gold belts found in Ghana. The belt is a 300km wrench fault system that propagated from Dixcove in the southwest to

beyond Konongo in the northeast.

The Birimian was deformed, metamorphosed and intruded by syn- and post-tectonic granitoids during the Eburnean tectonothermal

event around two billion years ago. Folding trends are dominantly north-northeast to northeast. Elongate syn-Birimian basins

developed between the ridges of the Birimian system and these were filled with the Tarkwaian molasse sediments made up primarily

of conglomerates, quartzose and arkosic sandstones and minor shale units. Major faulting has taken place along the same trends.

Gold mineralisation is associated with, and occurs within, graphite-chlorite-sericite fault zones. These shear zones are commonly

associated with pervasive silica, carbonate and sulphide hydrothermal alteration and occur in tightly folded Lower Birimian schists,

phyllites meta-greywackes, and tuffs, along the eastern limb of the Kumasi anticlinorium.

Mineralised shears are found in close proximity to the 'contact' with harder metamorphosed and metasomatically altered intermediate

to basic upper Birimian volcanics. The competency contrast between the harder metavolcanic rocks to the east and the more

argillaceous rocks to the west is thought to have formed a plane of weakness. During crustal movement, this plane became a zone of

shearing and thrusting coeval with the compressional phases.

**OBUASI** 

1 69

**CONTINENTAL AFRICA** 

The Lower Birimian metasediments and metavolcanics are characterised and defined by argillaceous and fine to intermediate

arenaceous rocks. These rocks are represented by phyllites, meta siltstones, meta greywackes, tuffaceous sediments, ash tuffs

and hornstones in order of decreasing importance. Adjacent to the shear zones, these rocks are replaced by sericitic, chloritic and

carbonaceous schists, which may be graphitic in places. Multiple lodes are a common feature in the mine.

#### **EXPLORATION**

Surface exploration

Surface exploration drilling continued in the Obuasi concession to probe the down-dip extension of the Rusty Monkey mineralisation

and improve the confidence in the Mineral Resource at Anyankyirem. Nineteen holes with a total of 7,030m were completed.

The drilling outcomes indicated lack of significant mineralisation at Rusty Monkey. Remodelling of Anyankyirem with

drill-hole intersections is ongoing.

Underground exploration

Underground exploration drilling during 2012 continued to focus on the Brown Sub Vertical Shaft project area.

Drilling was to probe

the down-dip extensions of quartz and sulphide mineralisation hosted within Block 10 and Mineral Resource upgrade below 24 Level

at Sansu3. Thirty one holes with a total of 4,803m were completed. Significant intersections confirm the expected grades.

#### **PROJECTS**

Mining method

The mining method at Obuasi is being changed from transverse and longitudinal open stoping to longitudinal retreat mining in mining

blocks where it is suitable to do so. The major advantage of this method is the up to 50% reduction in waste development; reducing

capital expenditure along with additional reef drive exposure.

Pompora reclamation project

The project to construct a reclamation station and pipeline to enable the reclamation of Kokoteasua and Pompora tailings storage

facilities will commence in 2016.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

RC

Blast-

hole

Other Comments

Obuasi

Measured

20 x 20,

40 x 20

X X - X

-

```
Indicated
30 x 30,
50 x 50,
60 x 60
X
        X
           – X
Inferred
90 x 90,
120 x 120
X X
Grade/Ore control 10 x 10
                      X Channel sampling of cross cuts and
X
        X
               X
definition drilling.
OBUASI
continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
}
```

### Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Obuasi Category Tonnes Moz Anyankyirem Measured 0.40 2.41 0.97 0.03 Indicated 2.86 2.60 7.44 0.24 Inferred 0.78 2.49 1.94 0.06 Total 4.04 2.56 10.35 0.33 Anyinam Measured 0.00 2.35 0.00 0.00 Indicated 0.04 3.20 0.14 0.00 Inferred 0.12 3.74 0.44 0.01 Total 0.16

3.59 0.58

0.02 Gyabunsu-Sibi Measured Indicated 0.16 4.82 0.78 0.03 Inferred 0.21 4.76 0.98 0.03 Total 0.37 4.78 1.76 0.06 Tailings (Kokoteasua) Measured 3.22 1.97 6.33 0.20 Indicated 1.65 1.96 3.24 0.10 Inferred Total 4.87 1.96 9.57 0.31 Tailings (Pompora) Measured Indicated

Inferred 33.61 1.57 52.89 1.70 Total 33.61 1.57 52.89 1.70 Other Surface Resources Measured Indicated 1.24 2.50 3.09 0.10 Inferred Total 1.24 2.50 3.09 0.10 Upper Mine Measured 2.31 10.50 24.26 0.78 Indicated 2.85 8.30 23.64 0.76 Inferred 1.73 7.83 13.54 0.44

Total

6.89 8.92 61.44 1.98 Above 50 Base Measured 31.20 6.77 211.10 6.79 Indicated 41.48 5.49 227.60 7.32 Inferred 27.15 5.54 150.49 4.84 Total 99.83 5.90 589.19 18.94 Adansi 50-60 Measured 2.16 5.28 11.38 0.37 Indicated 1.83 4.46 8.15 0.26 Inferred 6.54 5.03 32.89 1.06 Total 10.53 4.98 52.42 1.69

Stockpile (Heap Leach)

Measured 1.12 0.58 0.65

212

```
0.02
Indicated
Inferred
Total
1.12
0.58
0.65
0.02
Stockpile (Surface Oxides)
Measured
0.03
1.72
0.05
0.00
Indicated
Inferred
Total
0.03
1.72
0.05
0.00
{
71
CONTINENTAL AFRICA
```

## as at 31 December 2012 Tonnes million Grade g/t Contained gold Obuasi Category Tonnes Moz KMS 50-60 Measured 0.63 19.13 12.14 0.39 Indicated 2.88 16.28 46.83 1.51 Inferred 7.16 12.06 86.37 2.78 Total 10.67 13.62 145.34 4.67 Stockpile (Surface Sulphides) Measured 0.13 2.58 0.32 0.01 Indicated Inferred Total 0.13 2.58

0.32 0.01

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Obuasi
Total
173.48
5.35
927.65
29.82
Exclusive Mineral Resource
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Obuasi
Category
Tonnes Moz
Measured
20.56
7.45
153.16
4.92
Indicated
24.49
5.33
130.49
4.20
Inferred
77.27
4.37
337.57
10.85
Obuasi
Total
122.32
5.08
621.22
19.97
The Obuasi Exclusive Mineral Resource is made up of Mineral Resource from underground, open pit and tailings. The
bulk of the
Exclusive Mineral Resource is from underground. The Exclusive Mineral Resource makes up 67% of the total
Mineral Resource
at Obuasi.
Mineral Resource below infrastructure
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Obuasi

Category

Tonnes Moz Measured 2.92 8.31 24.24 0.78 Indicated 4.46 11.69 52.12 1.68 Inferred 13.82 8.79 121.42 3.90 Obuasi Total 21.20 9.33 197.78 6.36 **OBUASI** continued Inclusive Mineral Resource continued Mineral Resource reconciliation: 2011 to 2012 31.86 -0.32 0.00 0.00 0.04 -0.00 -1.75 0.00 29.82 Ounces (millions) 32.0 31.5 31.0 30.5 30.0 29.5 29.0 2011 Depletion Gold price Cost

Explo-

```
ration
Metho-
dology
Other
Acquisition/
Disposal
2012
Obuasi
Ore Reserve reconciliation: 2011 to 2012
9.37
-0.46
-0.45
-0.04
0.00
0.00
0.09
0.00
8.52
Ounces (millions)
9.5
9.3
9.1
8.9
8.7
8.5
8.3
2011
Depletion Model
change
Change
in
economics
New
ounces
from
projects
Scope
change
Other
Acquisition/
Disposal
2012
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
72
```

}

# ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Obuasi Category Tonnes Moz Tailings (Kokoteasua) Proved 1.75 1.96 3.45 0.11 Probable 3.12 1.96 6.12 0.20 Total 4.87 1.96 9.57 0.31 Tailings (Pompora) Proved Probable 1.13 2.10 2.37 0.08 Total 1.13 2.10 2.37 0.08 Other Surface Resources Proved

Probable 0.11

4.28 0.49 0.02 Total 0.11 4.28 0.49 0.02 Above 50 Base Proved 15.99 6.13 98.00 3.15 Probable 20.89 5.35 111.78 3.59 Total 36.88 5.69 209.78 6.74 KMS 50-60 Proved 0.57 14.67 8.34 0.27 Probable 2.66 12.92 34.35 1.10 Total 3.23 13.23 42.69 1.37 Obuasi Total 46.23 5.73 264.90 8.52 Ore Reserve modifying factors % RRF % MRF

as at

31 December 2012

Obuasi Gold price \$/oz Cut-off value g/t Au Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF % Above 50 Base 1,300 4.00\* 12.0 97.5; \*\* 95.0 95.0 85.4 KMS 50-60 1,300 4.00\* 12.0 97.5 95.0

85.4

```
* Fully costed cut-off grade = 4.00g/t, Incremental cut-off grades for Stoping = 2.20g/t and Development = 1.50g/t
were applied as applicable
** Other mining methods = 97.5%; sub-level caving = 95.0%
Inferred Mineral Resource in business plan
as at 31 December 2012
Tonnes
million
Grade
Contained gold
Obuasi
Tonnes
             Moz
Comment
Above 50 Base
2.36
5.58
13.14
0.42
KMS 50-60
0.30
13.47
4.08
0.13
Total
2.66
6.48
17.22
0.55
Ore Reserve below infrastructure
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Obuasi
Category
Tonnes
                 Moz
Proved
0.57
14.67
8.34
0.27
Probable
2.66
12.92
34.35
```

1.10 Obuasi

```
Total
3.23
13.23
42.69
1.37
{
73
CONTINENTAL AFRICA
```

#### **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Clement Asamoah-Owusu MAusIMM 210 145 28 years Ore Reserve Christian Boafo MAusIMM 312 532 15 years **OBUASI** continued Obuasi 0.0 1.0 2.0 3.0 4.0 5.0 0.00 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 2.75 3.00 Grade tonnage curve – Surface (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t) Cut-off grade (g/t) 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 Tonnes above cut-off Ave grade above cut-off Obuasi 0 20

40 60

```
80
100
120
140
0
2
4
6
8
10
12
14
16
18
20
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade
above cut-off (g/t)
Cut-off grade (g/t)
35
30
25
20
15
10
5
0
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
74
```

#### **GUINEA**

#### **COUNTRY OVERVIEW**

The Siguiri mine is AngloGold Ashanti's only operation in the Republic of Guinea. The mine is 85% owned by AngloGold Ashanti and

15% by the government of Guinea. The mine is a conventional open pit operation situated in the Siguiri district in the northeast of

Guinea. It lies about 850km from the capital city of Conakry and 109km from the border with Mali. Gold-bearing ore is mined from

several pits and sent to a CIP plant.

#### MINERAL RESOURCE ESTIMATION

Mineral Resource definition drilling is done with air core (AC), reverse circulation (RC) and diamond drilling (DD). All available geological

drill-hole information is validated for usage in the models and the local geology of the deposit is used to classify the drill-hole information

into appropriate estimation domains. Detailed statistical analyses are conducted on each of these domains and this allows for the

identification of high-grade outlier values. If these values are anomalous to the general population characteristics they may be cut, ie.

reduced back to the appropriate upper limit of the population.

The Mineral Resource model is estimated using Ordinary Kriging into a 3D block model. Geological interpretation is based on

geological drill-hole data. The dimensions of these Mineral Resource blocks range from 10m x 10m x 2.5m to 50m x 25m x 6m block

sizes, guided by the shape of the deposit and the drilling density. The Mineral Resource is declared within an optimised limiting Mineral

Resource pit shell using a gold price, for example \$2,000/oz in 2012.

#### ORE RESERVE ESTIMATION

The Mineral Resource models for each pit are depleted to the current mined out surface. Costs are assigned on a pit-by-pit basis,

reflecting the existing cost structure of the operation. The relevant dilution and ore loss factors are applied and pit optimisation is then

performed. The relevant modifying factors such as metallurgical recoveries, geotechnical parameters, cut-off grades and economics

are applied to generate the final Ore Reserve.

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**CONTINENTAL AFRICA** 

#### **SIGUIRI**

#### **LOCATION**

Siguiri is located in the Siguiri district of north-eastern Guinea, west Africa, and is about 850km from the capital city of Conakry.

The Société Ashanti Goldfields de Guinée (SAG) mining concession consists of four blocks totalling 1,495km2. Siguiri is a multi-pit

oxide gold mining operation. All ore and waste is mined by a mining contractor in a conventional open pit mining operation. Processing

of the ore is done by a CIP plant.

#### **GEOLOGY**

The gold mineralisation at Siguiri occurs in Paleoproterozoic Birimian rocks consisting of turbidites and lesser volcaniclastic sequences.

It is situated in an arcuate zone of a larger anastomosing shear zone system. These zones form part of the northerly trending,

continental scale shear zone system that transects the West African Craton and bordering areas.

There are two types of oxide mineralisation in the Siguiri basin:

. 1

eluvial or alluvial hosted laterite mineralisation; and

•

primary quartz vein and associated shear hosted mineralisation.

The laterite mineralisation occurs as alluvial lateritic gravel adjacent to and immediately above the *in-situ* vein related mineralisation.

The vein related mineralisation is hosted in metasediments and areas of economic gold mineralisation are formed where these veins

are spaced closely together.

The main vein related mineralisation at Siguiri is structurally controlled and associated with a major, east-northeast trending and steep

south dipping sheeted quartz vein sets that generally occur in the coarser, brittle siltstones and sandstones lithologies. The regional

development and consistent orientation of this main vein set, irrespective of the nature of wall rocks or wall-rock structures, indicates

the control of these veins by regional strains.

A deep oxidation (weathering) profile is developed in the region, varying between 50m to 150m. The mineralised saprolite provides the

main oxide feedstock for the CIP plant. The previous practice at Siguiri was to blend the laterite and saprolite ore types and to process

these using the heap-leach method. With the percentage of available laterite ore decreasing, a CIP plant was brought on stream during

2005 to treat predominantly saprolite oxide ore. With continued exploration into deeper fresh rock extensions of the ore deposit, new

treatment options are again under consideration.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **EXPLORATION**

Exploration at Siguiri is focused on finding new oxide Mineral Resources in the saprolite, and upgrading the confidence in the existing

Mineral Resource. This is achieved using geophysics, soil geochemistry and drill-hole sampling in the context of the regional and

pit-scale geological models. There is an ongoing focus to investigate and evaluate the potential mineralisation in fresh rock so that

all opportunities are explored. In 2012, 33,975m of reconnaissance aircore (AC) drilling was completed to test soil sampling and

geophysical targets, 10,029m of RC and DD drilling was done on fresh rock exploration, while infill RC drilling amounted to 85,515m.

A total of 15,388m of sterilisation drilling was completed for waste dump and tailings storage facility extensions. The focus of oxide drilling in 2012 was twofold. Firstly an accelerated capital expenditure was approved to fast-track the infill drilling

required to upgrade Inferred Mineral Resource to Indicated Mineral Resource in the main pit areas. This infill drilling was completed in the

Eureka, Tubani, Kalamagna-Kozan, Soloni and Sokunu areas. The second focus of oxide drilling was to continue the reconnaissance

drilling of the identified exploration target areas. Drilling was concentrated on a number of smaller targets in close proximity to the

current pit areas as well as two larger drilling programmes in new areas at Sintroko South and greater Silakoro. Gravity and Induced

Polarisation (IP) geophysical surveys were conducted over the greater Silakoro area as well as over the far southern portion of the

Block 1 mining lease. The results of the surveys in the southern portion of Block 1 mining lease will be used to guide the 2013 targeting

and drilling exercises. The geophysical surveys will be extended to the northwest of the Seguélén deposit in 2013. PROJECTS

An asset strategy optimisation study was initiated during 2012 as a progression of the scoping study work concluded in 2010 and

2011 to assess the strategic options for Siguiri. The results of this study will be used to refine the Siguiri brownfields exploration plan

for 2013. While the focus will remain on exploring for oxides, the proportion of expenditure on drilling to test the potential of the fresh

rock mineralisation below the significant oxide deposits is likely to increase.

The emphasis on refining the current geological and structural understanding for the Siguiri complex progressed well during 2012, with

significant geological research studies, which form the basis of this project, producing their first models. This project will continue in

2013 and is expected to provide several new targets for further exploration.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

RC

Blast-

hole

```
Other Comments
Siguiri
Measured
Indicated
20 x 40,
25 x 25,
50 x 25
X
Inferred
20 x 40,
50 x 25,
50 x 50
X X
Grade/Ore control 5 x 10,
5 x 12,
10 x 5,
10 x 10
X
77
```

CONTINENTAL AFRICA

#### **SIGUIRI**

#### continued

**Inclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Siguiri

Category

Tonnes Moz

Bidini

Measured

\_

\_

Indicated

4.54

1.09

4.93

0.16

Inferred

5.95

1.04

6.17

0.20

Total

10.49

1.06

11.10

0.36

Eureka East

Measured

\_

\_

Ī

Indicated

-

Inferred

1.96

0.83

1.63

0.05

Total

1.96

0.83 1.63 0.05 Eureka North Measured Indicated 1.40 0.82 1.15 0.04 Inferred 0.40 0.80 0.32 0.01 Total 1.80 0.82 1.47 0.05 Foulata Measured Indicated Inferred 3.81 1.43 5.45 0.18 Total 3.81 1.43 5.45 0.18 Kalamagna Measured

# Indicated 12.80 0.64 8.23 0.26 Inferred 1.69 0.67 1.14 0.04 Total 14.49 0.65 9.37 0.30 Kami Measured Indicated 6.11 0.65 3.97 0.13 Inferred 5.33 0.73 3.87 0.12 Total 11.44 0.68 7.84 0.25 Kosise Measured Indicated 4.38 0.77 3.36 0.11 Inferred 5.12 0.76 3.91

0.13 Total 9.50 0.77 7.27 0.23 Kozan North Measured Indicated 9.70 0.64 6.17 0.20 Inferred 1.23 0.61 0.75 0.02 Total 10.93 0.63 6.92 0.22 Kozan South Measured Indicated 11.36 0.68 7.71 0.25 Inferred 0.10 0.79 0.08 0.00 Total 11.46 0.68 7.79 0.25 Seguélén Measured 9.05

```
0.71
6.46
0.21
Indicated
18.25
0.89
16.22
0.52
Inferred
7.58
0.98
7.42
0.24
Total
34.88
0.86
30.10
0.97
Sintroko South
Measured
Indicated
3.79
1.08
4.11
0.13
Inferred
0.25
1.58
0.39
0.01
Total
4.04
1.11
4.50
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
```

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# Inclusive Mineral Resource continued as at 31 December 2012 Tonnes million Grade g/t Contained gold Siguiri Category Tonnes Moz Sokunu Measured Indicated 10.51 0.80 8.36 0.27 Inferred 2.63 0.78 2.05 0.07 Total 13.14 0.79 10.41 0.33 Soloni Measured Indicated 6.26 0.79 4.93 0.16 Inferred 4.79 0.73 3.49 0.11 Total

11.05 0.76 8.42

0.27 Sorofe Measured Indicated 4.75 0.83 3.95 0.13 Inferred 2.48 0.82 2.04 0.07 Total 7.23 0.83 5.99 0.19 Stockpile (Marginal Ore) Measured 21.59 0.49 10.61 0.34 Indicated Inferred Total 21.59 0.49 10.61 0.34 Stockpile (Full Grade Ore) Measured 7.81 0.91 7.08 0.23 Indicated

Inferred Total 7.81 0.91 7.08 0.23 Stockpile (Spent Heap Leach) Measured Indicated 31.95 0.54 17.29 0.56 Inferred 13.40 0.57 7.61 0.24 Total 45.35 0.55 24.90 0.80 Siguiri Total 220.96 0.73 160.83 5.17 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Siguiri Category Tonnes Moz

Measured

1.03 0.52 0.54 0.02 Indicated 55.92 0.73 40.74 1.31 Inferred 56.71 0.82 46.32 1.49 Siguiri Total 113.66 0.77 87.60 2.82 The Exclusive Mineral Resource at Siguiri includes: Indicated Mineral Resource that is economic at the Mineral Resource gold price of \$2,000/oz, but not at the Ore Reserve price. The Indicated material forms 47% of the Exclusive Mineral Resource. Inferred Mineral Resource not included in the current pit designs. Selected parts of these areas will be included in infill drilling programmes during 2013. This Inferred Mineral Resource forms 49% of the Exclusive Mineral Resource. Inferred Mineral Resource located within the Ore Reserve optimised pit shell. This material forms 4% of the **Exclusive Mineral** Resource. There are portions of Indicated Mineral Resource associated with all the major pits as a result of the material being

sub-economic

under current Ore Reserve optimisation conditions. The Inferred Mineral Resource material associated with the **Exclusive Mineral** 

Resource is not currently supported by sufficient geological information to be classified as Indicated or Measured Mineral Resource

and is therefore not incorporated in the Ore Reserve.

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**CONTINENTAL AFRICA** 

# ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Siguiri Category Tonnes Moz Kalamagna Proved Probable 7.62 0.59 4.47 0.14 Total 7.62 0.59 4.47 0.14 Kosise Proved Probable 1.17 0.84 0.98 0.03 Total 1.17 0.84 0.98 0.03 Kozan North Proved

Probable 1.92

0.64 1.23 0.04 Total 1.92 0.64 1.23 0.04 Kozan South Proved Probable 5.98 0.65 3.89 0.13 Total 5.98 0.65 3.89 0.13 Seguélén Proved 7.20 0.73 5.23 0.17 Probable 10.01 1.02 10.24 0.33 Total 17.21 0.90 15.47 0.50 Sokunu Proved Probable 4.41 0.81 3.56 0.11

# Total 4.41 0.81 3.56 0.11 Soloni Proved Probable 2.54 0.95 2.43 0.08 Total 2.54 0.95 2.43 0.08 Sorofe Proved Probable 1.99 0.74 1.47 0.05 Total 1.99 0.74 1.47 0.05 Stockpile (Marginal Ore) Proved 21.59 0.49 10.61 0.34 Probable Total 21.59

0.49

10.61 0.34 Stockpile (Full Grade Ore) Proved 7.81 0.91 7.08 0.23 Probable Total 7.81 0.91 7.08 0.23 **SIGUIRI** continued Siguiri Mineral Resource reconciliation: 2011 to 2012 5.18 -0.24 0.88 -0.67 0.09 -0.11 0.04 0.00 5.17 Ounces (millions) 6.0 5.8 5.6 5.4 5.2 5.0 4.8 2011 Depletion Gold price Cost Exploration Methodology

Other Acquisition/

```
Disposal
2012
Siguiri
Ore Reserve reconciliation: 2011 to 2012
2.31
-0.20
0.06
0.01
0.00
0.02
0.01
0.00
2.20
Ounces (millions)
2.4
2.3
2.2
2.1
2.0
2011
Depletion Model
change
Change
in
economics
New
ounces
from
projects
Scope
change
Other
Acquisition/
Disposal
2012
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
80
```

}

## Ore Reserve continued as at 31 December 2012 Tonnes million Grade g/t Contained gold Siguiri Category Tonnes Moz Stockpile (Spent Heap Leach) Proved Probable 31.95 0.54 17.29 0.56 Total 31.95 0.54 17.29 0.56 Siguiri Total 104.19 0.66 68.48 2.20 Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Siguiri Gold price \$/oz Cut-off value g/t Au Dilution % Dilution g/t (based

on tonnes)

% RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF % Bidini 1,300 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Eureka East 1,600 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Eureka North 1,600 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Foulata 1,600 0.87

100.0 100.0 100.0 100.0 100.0 90.0\* Kalamagna 1,300 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Kami 1,500 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Kosise 1,500 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Kozan North 1,350 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Kozan South

1,375 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Seguélén 1,500 0.34 100.0 100.0 100.0 100.0 100.0 90.0\* Sintroko South 1,500 0.40 100.0 100.0 100.0 100.0 100.0 90.0\* Sokunu 1,350 0.36 100.0 95.0 100.0 100.0 100.0 90.0\* Soloni 1,500 0.31 100.0 100.0

100.0

100.0 100.0 90.0\* Sorofe 1,350 0.31 100.0 100.0 100.0 100.0 100.0 90.0\* Stockpile (Full Grade Ore) 100.0 100.0 100.0 100.0 100.0 90.0\* Stockpile (Marginal Ore) 100.0 100.0 100.0 100.0 100.0 88.0 Stockpile (Spent Heap Leach) 1,300 0.31 100.0 100.0 100.0 100.0 100.0

90.0

\* Transitional Marginal Ore = 55.0%; Transitional Ore = 75.0%; Marginal Ore = 80%; Oxide Full Grade Ore = 90.0% {
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CONTINENTAL AFRICA

#### Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade g/t Contained gold Siguiri Tonnes Moz Comment Kalamagna 0.02 0.60 0.01 0.00 Within the Indicated pits design Kosise 0.08 1.05 0.09 0.00 Within the Indicated pits design (8% Inferred) Kozan North 0.01 0.37 0.00 0.00 Within the Indicated pits design (0.2% Inferred) Kozan South 0.00 0.20 0.00 0.00 Within the Indicated pits design (0.004%) Seguélén 2.41 0.91 2.20 0.07 Within the Indicated pits design (12% Inferred) Sokunu 0.12 0.65 0.08 0.00 Within the Indicated pits design (2% Inferred) Soloni 0.77 0.90 0.69 0.02

Within the Indicated pits design (22% Inferred)
Sorofe
0.84
0.74
0.62
0.02
Within the Indicated pits design (30% Inferred)
Total
4.25
0.87
3.69
0.11
There are instances where Mineral Resource material classified as Inferred Mineral Resource is included in the business
plan.
This material totals 0.14Moz, which is not significant and only represents 5% of the ounces in the business plan. The
major contributors
of Inferred Mineral Resource material within the Ore Reserve are Seguélén, Soloni and Tubani (Sorofe) at 0.08Moz,
0.03Moz and
0.02Moz respectively.
COMPETENT PERSONS
Category
Name
Professional
organisation
Registration
number
Relevant
experience
Mineral Resource
Craig Duvel
SACNASP
400007/98
18 years
Ore Reserve
Desiderius Kamugisha
MAusIMM
227 181
11 years
SIGUIRI
continued
Siguiri
0
50
100
150
200
250
300
0.0
0.2

0.2 0.4

```
0.6
0.8
1.0
1.2
1.4
1.6
1.8
Grade tonnage curve – Surface (metric)
Tonnes
above cut-off
(millions)
Average
grade
above
cut-off
(g/t)
Cut-off grade (g/t)
2.6
2.2
1.8
1.4
1.0
0.6
0.2
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

#### **COUNTRY OVERVIEW**

AngloGold Ashanti has interests in three operations in the west African country of Mali – Sadiola (41%), Yatela (40%) and Morila (40%).

The Sadiola and Yatela operations are managed by AngloGold Ashanti, while Randgold Resources Limited (Randgold)

manages Morila.

#### MINERAL RESOURCE ESTIMATION

The Mineral Resource is taken as the material that falls within the \$2,000/oz economic shell optimised for each individual deposit

(except for the Yatela main pit where \$1,300/oz was used). Mining finishes at Yatela in early 2014. A 3D surface is generated to create

the outline of the geological model within which grades are estimated. Block sizes are between  $25m \times 25m \times 10m$  and  $30m \times 30m \times$ 

10m (X Y Z) and where appropriate, selective sub-celling is used for definition on the geological and mineralisation boundaries.

All the deposits are estimated by Ordinary Kriging. Where deemed appropriate, a geostatistical technique called Uniform Conditioning

is used to estimate the proportion of material that occurs above the cut-off assuring a selective mining unit (SMU). ORE RESERVE ESTIMATION

The Mineral Resource models are used as the basis for the Ore Reserve. Optimisations are run on the Measured and Indicated

Mineral Resource and the Measured, Indicated and Inferred Mineral Resource. All appropriate costs, metallurgical recovery factors

and geotechnical parameters are applied to generate the final Ore Reserve.

**MALI** 

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CONTINENTAL AFRICA

#### **LOCATION**

The Morila mine is situated some 280km southeast of Bamako, the capital city of Mali. The mine is operated by Morila SA, a joint

venture company incorporating Randgold (40%), AngloGold Ashanti (40%) and the Government of Mali (20%). Randgold took over

the operation of Morila mine from AngloGold Ashanti in February 2008.

Mining of the Morila open pits was successfully completed in April 2009. Consequently the main mining activity for the rest of the

mine's life will consist of re-handling and processing the existing marginal ore and mineralised waste stockpiles at a rate of 4.4Mtpa.

#### **GEOLOGY**

The Morila deposit occurs within a sequence of amphibolites facies Birimian metasediments. The economic mineralisation is located

in these metasediments within a broad north-northwest trending corridor of shearing. This shear zone has both near vertical and

flat lying components and is interpreted as being a second order shear off the main Banafin shear, approximately 25km to the east.

The Doubalakoro granite pluton borders the metasediments to the west and the Massigui granites lie to the east. Gold mineralisation

is associated with silica feldspar alteration and the sulphide minerals arsenopyrite, pyrrhotite, and pyrite (with minor chalcopyrite).

A pushback project on the south of the current pit is being investigated. A preliminary study revealed a total of 23.8Mt to be mined.

including 22.6Mt of waste and 1.2Mt @ 3.00g/t ore to produce 106,000oz of recovered gold over a 22-month activity period from

April 2013. For cost saving reasons, 100% of the waste mined will be dumped in-pit.

#### **PROCESSING**

Ore is processed at a rate of 4.4Mtpa via a conventional carbon-in-leach (CIL) plant, after passing through primary and secondary

crushing processes followed by further comminution via a semi-autogenous grinding (SAG) mill and ball mill. After milling and

classification, the slurried ore passes through the cyanide leach circuit for gold extraction, after which the leached ore is pumped and

deposited into the tailings storage facility. Supernatant water from the tailings storage facility is reclaimed and collected in the return

water dam before being returned to the mill for re-use.

#### **MORILA**

#### 2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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# MINERAL RESOURCE Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Morila Category Tonnes Moz Stockpile (Marginal Ore) Measured 1.54 1.14 1.75 0.06 Indicated Inferred Total 1.54 1.14 1.75 0.06 Stockpile (Mineralised Waste) Measured Indicated Inferred 0.82 0.79 0.65 0.02

Total 0.82 0.79

0.65 0.02 Tailings storage facilities Measured Indicated Inferred 15.57 0.39 6.01 0.19 Total 15.57 0.39 6.01 0.19 Morila Total 17.93 0.47 8.41 0.27 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Morila Category Tonnes Moz Measured Indicated Inferred

16.39

0.41 6.66 0.21 Morila Total 16.39 0.41 6.66 0.21 Morila Mineral Resource reconciliation: 2011 to 2012 0.39 -0.07 0.00 0.00 0.00 0.00 -0.05 0.00 0.27 Ounces (millions) 0.40 0.36 0.32 0.28 0.24 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Morila Ore Reserve reconciliation: 2011 to 2012 0.13 -0.07 0.00 0.00 0.00 0.00 0.00 0.00

0.06

### Ounces (millions) 0.14 0.12 0.10 0.08 0.06 0.04 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012

CONTINENTAL AFRICA

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# **MORILA** continued **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade Contained gold Morila Category Tonnes Moz Stockpile (Marginal Ore) Proved Probable 1.54 1.14 1.75 0.06 Morila Total 1.54 1.14 1.75 0.06 Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Morila Gold price \$/oz Cut-off value g/t Au Dilution Dilution g/t (based tonnes) % RRF

(based

```
on g/t)
(based
on
tonnes)
% MRF
(based
on g/t)
MCF
%
MetRF
%
Stockpile
(Full Grade Ore)
1,000
1.00;
1.30*
100.0
89.0
Stockpile
(Marginal Ore)
1,000
1.00;
1.30*
100.0
88.8
* Lower cut-off = 1.00g/t; top cut-off = 1.30g/t
Competent Persons
Category
Name
Professional
organisation
Registration
number
Relevant
experience
Mineral Resource
Rodney Quick*
SACNASP
```

400014/05

```
19 years
Ore Reserve
Rodney Quick*
SACNASP
400014/05
19 years
* Employed by Randgold Resources Limited
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

#### **SADIOLA**

#### **LOCATION**

Sadiola is situated in western Mali, some 77km to the south of the regional capital of Kayes and about 440km north-west of the capital

city of Bamako. The mine is 41% owned by AngloGold Ashanti, 41% by IAMGOLD Corporation and 18% by the Republic of Mali.

The mine has been in production and operated by AngloGold Ashanti (AGA) since 1996. Current operations are focused on the mining

of oxide material from the Fe3 and Fe4 pits. Mining from the Sadiola main pit has stopped although this pit remains a key project in

the extension of the Life of Mine (LOM) plan with the Sadiola Sulphide Project (SSP) awaiting board approval. Ore is treated in a 4.8Mtpa CIP processing plant. The plant was originally designed to treat only soft oxide ore, but has been

progressively adapted to include a blend of hard oxides as well as batch feeding of a sulphide ore blend. Any hard material making up

the blends currently undergoes preconditioning through primary crushers.

The SSP project aims to mine the underlying sulphide material in the Sadiola main pit and build and commission a new sulphide plant.

The new plant will treat both sulphide stockpiles and then the run-of-mine sulphide material. The existing oxide plant will be converted

to increase the processing capacity of sulphides once oxide treatment has been completed. This project will extend the life of Sadiola

and leverage any further sulphide exploration successes in the region.

#### **GEOLOGY**

The Sadiola gold deposits are located within the Malian portion of the Keniéba-Kedougou Inlier, a major early Paleoproterozoic-

Birimian window along the northeast margin of the Kenema-Man shield. The deposits are in the north of the inlier and positioned in the

Kofi Formation, just east of the Senegalo-Malian Shear Zone (SMS) terrane boundary. Regional metamorphism is greenschist facies

with amphibolites facies metamorphism observed in the contact aureoles around major intrusions.

The gold mineralisation in the Sadiola main pit is related to the interaction of the north-striking Sadiola Fracture Zone (SFZ) and a north-

northeast striking fault array. The SFZ follows the competency contrast between the brittle hanging wall greywacke and the ductile

foot wall marbles and is mineralised over a drilled strike length of approximately 2,500m. The stratigraphy is intruded by discontinuous

diorite and quartz-feldspar porphyry dykes. Mineralisation occurs in all four rock types although most of the mineralisation is hosted in

the foot wall adjacent to the SFZ. The deposit has been intensely weathered to a maximum depth of 200m.

The oxide Ore Reserve of the Sadiola main pit is now fully depleted with the remaining ore below the current pit being part of the SSP.

The primary source of the oxide ore currently comes from two satellite pits located approximately 6km southeast of the Sadiola mine

and processing plant. Mineralisation at the FE3 pits is hosted in marbles adjacent to the upper contact with carbon-rich pelites.

Gold is associated with northeast-east striking faults and lens-shaped breccia zones that are broadly parallel to the northwest-trending

stratigraphy. The FE4 deposit is located in a bedded sandstone and pelite sequence with mineralisation predominantly hosted in

breccia along a northeast-striking regional shear and several subsidiary north-northeast-trending faults.

At this stage all the gold is recovered from mostly soft, oxidised ore from the satellite pits.

#### **EXPLORATION**

The Sadiola exploration strategy is focused to build a comprehensive understanding of the remaining oxide potential in the short term

and drive to extend the sulphide potential in the longer term.

Oxide exploration on the Sadiola concession is reaching maturity and exploration work is focused primarily on follow up drilling at

various prospective targets at Sadiola North East, Mandakoto, Tambali and around the FE3 and FE4 pit areas. Results obtained from

these targets warrant follow up to establish further oxide mineralisation. Infill drilling was done at Tambali and extensions of the FE2

deposits to improve confidence in the Mineral Resource, however exceptionally high rainfall during the year and political instability in

Mali hampered progress at other oxide targets in 2012.

Results from geophysical and geochemical surveys conducted during 2012 aided in further target generation with new anomalies

identified and ranked for additional oxide potential to be followed up over the next two years.

Induced Polarisation (IP) geophysical surveys continued during 2012 with the Sadiola concession now 95% covered.

The survey is

planned to be completed in early 2013. Sadiola mineralisation is a good IP target due to the association of sulphides, silicification and

gold. At the Tambali anomaly south of the Sadiola main pit the mineralisation is well defined by the IP chargeable anomalies and further

investigation is warranted through the use of IP at targets with shallow drilling.

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CONTINENTAL AFRICA

A comprehensive termite mound sampling programme was completed during 2012 and the entire Sadiola concession is now covered

at a resolution of 200m to 150m x 50m. The programme has been successful in highlighting prospective areas on the lease along

the FE trend and northeast extensions of Sadiola mineralisation. Preliminary results from X-Ray Fluorescence (XRF) analysis of termite

mound samples shows good correlations with gold and various indicator elements. The use of XRF data will be expanded in 2013 to

supplement all other analysis to assist in refining exploration targeting.

The 2012 exploration strategy also considered initial exploration for primary ('sulphide') gold mineralisation potential below the current

and planned open pits. A drilling campaign below the Sadiola pit demonstrated continuity of the sulphide mineralisation and also

shows that the Sadiola Shear Zone (SSZ) maintains the width of mineralisation where it starts to steepen with depth (average true

thickness of 46m at 2.57g/t). Drilling of the sulphide mineralisation was also conducted at Tambali where grades in excess of 1.5g/t

were obtained to depths of over 300m. During 2013 and 2014 sulphide exploration will increase substantially as drilling of the oxide

targets is completed.

Hyperspectral core imaging of 93,000m of core from mainly the SSP and other deposits on the lease was completed during the first

quarter of the 2012. Processing of the images continues with results expected in early 2013. These results will provide alteration based

vectors for exploration targeting and will be instrumental in predicting metallurgical parameters.

A three-year research programme by the Centre for Exploration Targeting from the University of Western Australia began in

early 2012. The objective of the project is to revise the mineralisation model and understand the alteration and structural controls

to expand on the geological understanding of the Sadiola-Yatela deposit. This will underpin further oxide and sulphide exploration

programmes.

Although the Sadiola concession is considered a mature exploration area, potential remains for further oxide and sulphide discoveries.

The strategy remains focused on the exploration of both oxide and sulphide potential using a variety of techniques and expertise to

increase the Mineral Resource and extend the LOM at Sadiola.

#### **PROJECTS**

The SSP remains the only major AngloGold Ashanti project in Mali and remains the focus for extension of the LOM plan.

The environmental and social impact assessment (ESIA) has been approved both for the SSP project and for the power line.

Advanced project work has been done on the new oxide pits, with current focus on the Tambali pit. Tambali is situated just south of

the Sadiola main pit, close to the current oxide plant. Permits were issued in December 2012 and production from this pit will begin

in mid-2013.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

```
Category
Spacing
m (-x-)
Diamond
RC
Blast-
hole
Other Comments
Sadiola
Measured
25 x 25
         X
X
Indicated
10 x 10,
25 x 25,
50 x 25
X
         X
Limited diamond drilling (DD) drilled
to define structure, and met test
work.
Inferred
25 x 50,
50 x 25,
50 x 50
X
         X
Limited DD drilled to define structure.
Grade/Ore control 5 x 10
X
SADIOLA
continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

# Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Sadiola Category Tonnes Moz FE2 Measured Indicated 0.71 1.67 1.19 0.04 Inferred 0.04 1.64 0.07 0.00 Total 0.75 1.67 1.26 0.04 FE3 Measured Indicated 2.59 1.66 4.29 0.14 Inferred 0.29 1.91 0.55 0.02 Total

2.881.684.84

0.16 FE4 Measured Indicated 1.44 1.75 2.53 0.08 Inferred 0.37 1.48 0.54 0.02 Total 1.81 1.70 3.07 0.10 FN2 Measured Indicated 0.56 1.26 0.70 0.02 Inferred 0.01 1.21 0.01 0.00 Total 0.57 1.26 0.71 0.02 FN3 Measured Indicated 0.36

0.60 0.02 Inferred 0.15 1.32 0.20 0.01 Total 0.51 1.56 0.80 0.03 Total stockpiles Measured 7.08 0.92 6.50 0.21 Indicated 1.41 3.21 4.53 0.15 Inferred Total 8.49 1.30 11.03 0.35 Sekokoto Measured Indicated 0.33 1.41 0.47 0.02 Inferred 0.25 1.53 0.38 0.01 Total

1.66

0.58 1.46 0.85 0.03 Tambali South Measured Indicated 4.51 1.18 5.31 0.17 Inferred 0.44 1.13 0.50 0.02 Total 4.95 1.17 5.81 0.19 SSP (Oxides) Measured 0.00 1.90 0.01 0.00 Indicated 0.57 1.32 0.76 0.02 Inferred 0.11 1.24 0.14 0.00 Total 0.68 1.31 0.91 0.03 SSP (Transitional) Measured

```
Indicated
0.27
1.39
0.37
0.01
Inferred
0.42
1.30
0.54
0.02
Total
0.69
1.33
0.91
0.03
SSP (Sulphides)
Measured
0.00
4.75
0.02
0.00
Indicated
38.77
1.86
72.03
2.32
Inferred
8.93
1.74
15.54
0.50
Total
47.70
1.84
87.59
2.82
Sadiola
Total
69.60
1.69
117.75
3.79
```

89

CONTINENTAL AFRICA

**Exclusive Mineral Resource** 

these stockpiles

SADIOLA **continued** 

are currently not in the mining plan.

as at 31 December 2012 Tonnes million Grade g/t Contained gold Sadiola Category Tonnes Moz Measured 4.87 0.75 3.64 0.12 Indicated 23.81 1.50 35.62 1.15 Inferred 10.99 1.68 18.45 0.59 Sadiola Total 39.67 1.45 57.71 The Exclusive Mineral Resource is defined as the part of the Mineral Resource that was not converted to Ore Reserve. For the Sadiola pits, the Exclusive Mineral Resource is defined as follows: the Mineral Resource that is outside the current Ore Reserve designs but inside the Mineral Resource shells; the Inferred Mineral Resource; and material below the Ore Reserve cut-off grade and above the Mineral Resource cut-off grade. The Exclusive Mineral Resource gives an indication of the future potential of the deposit. This material could be converted to Ore Reserve with an increase in the gold price and favourable costs. The Inferred Mineral Resource portion of the Mineral Resource within the Ore Reserve pit design will be converted to the Ore Reserve through grade control drilling. The low-grade 'mineralised waste'

stockpiles that are currently below the marginal ore cut-off grade are also declared as Exclusive Mineral Resource as

270

### Sadiola Mineral Resource reconciliation: 2011 to 2012 4.40 -0.12 0.11 -0.25 0.01 -0.33 -0.03 0.00 3.79 Ounces (millions) 4.4 4.3 4.2 4.1 4.0 3.8 3.7 3.6 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Sadiola Ore Reserve reconciliation: 2011 to 2012 2.30 -0.14 0.03 -0.11 0.03 -0.07 0.10 0.00 2.14 Ounces (millions) 2.3 2.2 2.1

2.01.9

```
2011
Depletion Model
change
Change
in
economics
New
ounces
from
projects
Scope
change
Other
Acquisition/
Disposal
2012
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
90
```

}

# ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Sadiola Category Tonnes Moz FE2 Proved Probable 0.51 1.70 0.87 0.03 Total 0.51 1.70 0.87 0.03 FE3 Proved Probable 2.01 1.91 3.83 0.12 Total 2.01 1.91 3.83 0.12 FE4 Proved

Probable 0.84

2.17 1.82 0.06 Total 0.84 2.17 1.82 0.06 FN2 Proved Probable 0.15 1.55 0.23 0.01 Total 0.15 1.55 0.23 0.01 FN3 Proved Probable 0.12 1.84 0.22 0.01 Total 0.12 1.84 0.22 0.01 Total stockpiles Proved 2.21 1.29 2.86 0.09 Probable 1.41 3.21

4.53 0.15

Total 3.62 2.04 7.39 0.24 Tambali South Proved Probable 2.14 1.40 3.00 0.10 Total 2.14 1.40 3.00 0.10 SSP (Oxides, Transitional, Sulphides) Proved Probable 27.63 1.78 49.14 1.58 Total 27.63 1.78 49.14 1.58 Sadiola Total 37.02 1.80 66.50 2.14 Ore Reserve modifying factors % RRF % MRF 31 December 2012 Sadiola Gold

price

\$/oz Cut-off value g/t Au Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF SSP (Oxides, Transitional, Sulphides) 1,100 0.71 3.2 0.06 100.0 100.0 100.0 100.0 100.0 76.0 FE2 1,500 0.72 4.7 0.08 90.0 100.0 100.0 100.0

100.0 94.0 FE3 1,250 0.72

2.8 0.05 85.0 100.0 100.0 100.0 100.0 94.0 FE4 1,250 0.72 2.8 0.06 85.0 100.0 100.0 100.0 100.0 94.0 FN2 1,500 0.72 0.8 0.01 90.0 100.0 100.0 100.0 100.0 94.0 FN3 1,500 0.72 5.7 0.11 90.0 100.0 100.0 100.0 100.0 94.0 Tambali South 1,500 0.72 1.9 0.03 90.0 100.0 100.0

100.0 100.0

```
94.0
{
91
CONTINENTAL AFRICA
```

#### **SADIOLA**

#### continued

Inferred Mineral Resource in business plan

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Sadiola

Tonnes Moz

Comment

FE2

0.03

1.65

0.05

0.00

\_

FE3

0.12

2.18

0.27

0.01

\_

FE4

0.09

1.78

0.15

0.00

FN2

0.00

1.30

0.00

0.00

FN3

0.01

2.00

0.02

0.00

-

Tambali South

0.02

1.15

0.02

0.00

\_

SSP (Oxides, Transitional,

Sulphides)

2.40

1.66 3.97 0.13 Total 2.67 1.68 4.48 0.14 The plant feed of the final LOM pit designs includes Inferred Mineral Resource in the final schedule. **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Geoffrey Gushee MAusIMM 207 957 24 years Ore Reserve Steve Kirkpatrick **SAIMM** 703 957 13 years Sadiola 0 50 100 150 200 250 300 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 Grade tonnage curve – Surface (metric) Tonnes above cut-off (millions)

```
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
2.2
1.8
1.4
1.0
0.6
0.2
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
92
}
```

#### **LOCATION**

Yatela mine is situated some 25km north of Sadiola, approximately 50km southwest of Kayes. The mine is 40% owned by AngloGold

Ashanti, 40% by IAMGOLD Corporation and 20% by the Republic of Mali. Yatela is a mature operation which has been operated by

AngloGold Ashanti (AGA) since 2000 and is now operating in closure mode with mining activities due to finish in early 2014. The Yatela

mine is currently mining from two open pits, the Yatela main pit and the Yatela North pit. Mining at the Alamoutala satellite pits, KW18

and Northwest extension pit has now been completed.

Ore is processed through a 3.0Mtpa heap leach plant that was commissioned in 2000. The pregnant liquor pond for gold

recovery uses the carbon-in-solution (CIS) process, with loaded carbon being sent to Sadiola for elution, regeneration, electro-

winning and smelting.

### **GEOLOGY**

The Yatela and Alamoutala deposits are located in northwest Mali within the Keniéba-Kedougou Inlier, a major Paleaproterozoic-

Birimian inlier along the northeast margin of the Kenema-Man shield. The Yatela deposit is located in the north of the inlier and is

hosted in sedimentary rocks of the Kofi Formation, which have been intruded by numerous felsic intrusives. The sedimentary rocks

consist of fine-grained greywackes, pelites and impure limestones with minor tuffs and acid volcanics. The primary gold mineralisation

is hosted along a sheared contact between predominantly dolomitic carbonate rocks of the Kofi Formation to the west and a large,

weakly mineralised dioritic intrusion to the east. The primary mineralisation was concentrated to economic grades through dissolution

of the carbonate and subsequent concentration of the gold by eluvial processes and supergene enrichment.

Karst development at Yatela has formed deep pot-holes, collectively named the Yatela Basin, which were gradually filled by sandstones

and conglomerates during peneplanation of the Proterozoic rocks. Chaotic collapse during karstification, coupled with the infill

sediments resulted in the deposit being hosted in a melange-type of rocks made up of sedimentary rocks and dissolution residues.

Gold is disseminated in the unconsolidated ferruginous, sandy-clayey layer that lines the bottom and walls of a deep trough with

steep margins. The mineralised zone dips steeply on the west wall and more gently to the west on the east wall, following a keel-like

geometry with tight closure towards the south. The supergene enrichment of low-grade primary gold mineralisation associated with

the karstification is the most important geological feature to the economics of the Yatela deposit.

The geology of the Alamoutala deposits comprises north-trending clastic metasediments and calcitic marbles which were intruded by

a coarse-grained granodiorite. In the Alamoutala pits, the gold mineralisation is hosted in saprolitised marbles and karstic rocks in the

south, and in weathered clastic metasedimentary rocks to the north. The mineralisation occurs proximal to the intermittently sheared

and fractured contact, named the Alamoutala Fracture Zone, between the clastic and carbonate units. The Alamoutala deposits are

mined out.

#### **EXPLORATION**

Exploration during 2012 focused on finding additional oxide potential that can be converted into Ore Reserve in the short term due

to the limited mine life remaining at Yatela.

Extensive reverse circulation (RC) drilling took place at the high priority targets of Badji, KW18 and Alamoutala during the first half

of the year. Although gold was intersected at Badji the mineralisation is generally confined to narrow, high-grade veins with short

strike lengths that are unlikely to be economically viable. The mineralisation at KW18 occurs as discrete lenses over a 2.7km strike,

straddling the Keniabandi-Kofi contact. This is characterised by shallow weathering and occasional quartz veining in quartzite and

metagreywacke with most of the significant intercepts in fresh rock. With the initial drilling campaigns now complete, the results from

all three targets are being evaluated to determine if there is any economic mineralisation.

An infill drilling campaign was completed between Yatela and the Yatela North pits to follow up on the lower grade mineralisation in this

area that tends to follow the hard/soft contact. Portions of this area are under the waste rock dumps. The final results of this project

should be available during the first quarter of 2013.

Mapping and grab sampling was completed over the targets of Yiri and Fleri targets which are situated in a low prospective area on the

extreme west of the Kofi formation. Limited drilling was carried out at Yiri targeting geophysical and geochemical anomalies near the

site of artisanal miners. Based on the results, the area continues to be considered to be sub-economic so no further oxide exploration

is planned in this area.

YATELA

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**CONTINENTAL AFRICA** 

Although the exploration of the existing exploration targets has reached maturity, research work will continue to investigate further

oxide potential. Immediate areas of focus will be a geophysical target associated with eastern margin of the diorite at Yatela main pit

and follow up on results from the research project being conducted in conjunction with the University of Western Australia's Centre

for Exploration Targeting. With the aggressive two-year oxide exploration programme essentially terminating at the end of 2012, the

attention will now shift to sulphide exploration. The Alamoutala and Yatela pits may have sulphide potential at depth and the initial

phase of exploration involves conceptual modelling followed by deep drilling.

#### **PROJECTS**

No projects are planned on the Yatela concession. However the exploration programme will continue in 2013 to finalise the exploration

of the remaining oxide targets and assess the sulphide potential beneath the oxide deposits. The company is also looking at possible

partnerships with nearby lease holders which may result in an additional Ore Reserve that could extend the life of the Yatela operation.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m(-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

Yatela

Measured

25 x 25

X X -

Indicated

25 x 25,

35 x 45

X X

Diamond holes drilled for metallurgy

test work.

Inferred

50 x 50

X X -

Grade/Ore control

10 x 5

X -

**Inclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Yatela Category Tonnes Moz Main pit Measured 0.03 1.68 0.05 0.00 Indicated 0.50 3.04 1.53 0.05 Inferred 0.37 2.40 0.89 0.03 Total 0.90 2.74 2.47 0.08 Total stockpiles Measured 0.50 0.61 0.30 0.01 Indicated Inferred

Total 0.50

```
0.61
0.30
0.01
Yatela
Total
1.40
1.98
2.77
0.09
Exclusive Mineral Resource
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Yatela
Category
Tonnes
                 Moz
Measured
0.35
0.52
0.18
0.01
Indicated
0.11
1.49
0.16
0.01
Inferred
0.37
2.40
0.89
0.03
Yatela
Total
0.83
1.49
1.23
0.04
The Exclusive Mineral Resource is defined as the part of the Mineral Resource that was not converted to Ore Reserve.
Due to the short
Life of Mine (LOM) at Yatela, only the Mineral Resource within the final pit designs is declared in this statement. As
such, the Exclusive
Mineral Resource is the material in the final pit design that is lower than the Ore Reserve cut-off but above the Mineral
Resource cut-off.
YATELA
continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
94
}
```

# ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Yatela Category Tonnes Moz Main pit Proved Probable 0.26 3.61 0.92 0.03 Total 0.26 3.61 0.92 0.03 Total stockpiles Proved 0.05 1.36 0.07 0.00 Probable Total 0.05 1.36 0.07 0.00 Yatela Total 0.30 3.26 0.99 Ore Reserve modifying factors % RRF

% MRF as at 31 December 2012 Yatela Gold price \$/oz Cut-off value g/t Au Dilution Dilution g/t (based tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) **MCF** % MetRF % Main pit 1,300 0.45 0.0 0 100.0 100.0 Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade Contained gold Yatela Tonnes Moz

Comment

Edgar I ling. ANGLOGOLD AGNANTI ETD TOMTOR
Main pit
0.37
2.40
0.89
0.03
Inferred material makes up 51% of business plan but
is not included in the Ore Reserve statement
Total
0.37
2.40
0.89
0.03
The high proportion of Inferred Mineral Resource material is included in the plan in order to extend the life of the
Yatela main pit by
enabling a final push back (Pushback 8) to the high-grade mineralisation below the current pit bottom. It was not
possible to upgrade
the Inferred Mineral Resource during 2012 due to access issues as a result of pit infrastructure and mining activity.
Portions of the
deposit will become accessible for infill drilling during 2013 as face positions advance. All areas included in the mine
plan will be
mapped and drilled for grade control prior to extraction.
Yatela
Mineral Resource reconciliation: 2011 to 2012
0.12
-0.03
0.00
0.00
0.00
0.00
0.00
0.00
0.09
Ounces (millions)
0.120
0.120
0.100
0.090
0.080
2011
Deple-
tion
Gold
price
Cost
Explo-ration
Metho-
dology
Other Acquisition/
Acquisition/

Disposal

```
2012
Yatela
Ore Reserve reconciliation: 2011 to 2012
0.05
-0.02
0.00
0.00
0.00
0.00
0.00
0.00
0.03
Ounces (millions)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
2011
Depletion Model
change
Change
in
economics
New
ounces
from
projects
Scope
change
Other
Acquisition/
Disposal
2012
```

95

**CONTINENTAL AFRICA** 

### **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Geoffrey Gushee MAusIMM 207 957 24 years Ore Reserve Steve Kirkpatrick **SAIMM** 703 957 13 years YATELA continued Yatela 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 Grade tonnage curve – Surface (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t)Cut-off grade (g/t) 6.5 6.0 5.5

5.0 4.5 4.0 3.5 3.0 2.5 2.0

291

```
1.0
0.9
0.8
0.7
0.6
0.4
0.2
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
96
}
```

#### **COUNTRY OVERVIEW**

Navachab gold mine, AngloGold Ashanti's sole operation in Namibia, is wholly owned by the company. It is currently the only significant

gold mining operation in Namibia.

#### MINERAL RESOURCE ESTIMATION

Mineral Resource estimation is performed using geostatistical techniques. Grade interpolation is done into blocks with approximate

dimensions of 20m x 20m x 5m using Ordinary and Indicator Kriging methods. A geostatistical technique called Uniform Conditioning

is then used to estimate the proportion of ore that occurs above the Mineral Resource cut-off and this is reported assuming a specified

selective mining unit (SMU).

#### ORE RESERVE ESTIMATION

Optimised pit shells are generated using economic parameters. The final pits are then designed based on the optimised pit shell,

recommended slope geometry and ramp access requirements.

**NAMIBIA** 

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**CONTINENTAL AFRICA** 

#### **LOCATION**

Navachab is located 10km southwest of Karibib and 170km west-northwest of Windhoek, the capital of Namibia. Navachab is mined

as an open-pit mine with a CIP plant that has a production capacity of 120,000tpm. The plant includes mills, CIP and electro-winning

facilities. A dense media separation (DMS) plant with a 200 tonnes per hour (tph) capacity was commissioned during 2010 and a

portion of the CIP feed comes from this pre-concentration plant.

#### **GEOLOGY**

The Navachab gold deposit is located in the Pan-African Damara Orogen and hosted by greenschist-amphibolite facies calc-silicates,

marbles and volcanoclastic rocks. The rocks have been intruded by granite, pegmatite and aplitic dykes and have also been deformed

into a series of alternating dome and basin-like structures.

The mineralisation at Navachab forms a sheet-like body which plunges at an angle of approximately  $20^{\circ}$  to the northwest. The

mineralisation is predominantly hosted in a sheeted quartz vein set (approximately 60% of tonnage) and a replacement skarn

(approximately 40% of tonnage). The mineralisation in the main pit is hosted by a northeast to southwest striking metamorphosed

sequence of calc-silicates, marbles and volcanoclastic rocks that dip at 70° to the west. The gold is very fine-grained and associated

with pyrrhotite and minor amounts of pyrite, chalcopyrite, arsenopyrite, sphalerite, maldonite and bismuthinite. An estimated 90% of

the gold occurs as free gold and the remainder is present in minerals such as maldonite (Au2Bi). Silver is also present with a gold to

silver ratio of approximately 15 to 1.

#### **EXPLORATION**

The exploration strategy at Navachab's main deposit is to evaluate the shallow mineralisation in the NP2 pit (located adjacent to the

main pit) where a second vein swarm plunges down to 250m below surface. Drilling during the year has confirmed the down-plunge

extension of this oreshoot and this near surface mineralisation will assist in unlocking deeper foot wall mineralisation for further

exploitation down to 350m below surface. Drilling during the year has infilled mineralisation information gaps and confirmed the foot

wall down-plunge extension.

Drilling during the next four years will focus on exploration of the satellite deposits to find near-surface, high-grade 'Grid A' type

mineralisation to displace low-grade plant feed during stripping of the main deposit extensions. Current satellite target areas are

Anomaly 16, Gecko, Steenbok, Starling and Klipspringer.

#### **PROJECTS**

Exploration of the Gecko target has produced a shallow, high-grade Mineral Resource containing 0.04Moz. This mineralisation can be

used to supplement the low production years. Exploration of the Anomaly 16 target, which is approximately 7km from the plant, has

produced a lower-grade Mineral Resource of approximately 0.21Moz with the potential to grow significantly. The Mineral Resource for

Anomaly 16 is currently situated in the Valley target area, whilst the Central and Beacon target areas are yet to be explored.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification Type of drilling Mine/Project Category Spacing m (-x-) Diamond RC Blasthole Other Comments Navachab Measured 5 x 10, 10 x 10 X Indicated 25 x 25 X X Inferred 50 x 50 X X Grade/Ore control 5 x 10 X

### **NAVACHAB**

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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### Navachab Mineral Resource reconciliation: 2011 to 2012 4.95 -0.12 0.57 0.51 0.01 0.09 -1.61 0.00 4.41 Ounces (millions) 6.2 5.8 5.4 5.0 4.6 4.2 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Navachab Ore Reserve reconciliation: 2011 to 2012 2.05 -0.12 -0.00 0.00 0.00 0.17 0.00 0.00 2.10 Ounces (millions) 2.10 2.06 2.02 1.98 1.94

1.90 2011

# Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 **Inclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Navachab Category Tonnes Moz Anomaly 16 Measured Indicated 4.13 0.96 3.95 0.13 Inferred 2.63 1.00 2.62 0.08 Total 6.76 0.97 6.57 0.21 Gecko Measured

Indicated 0.52 1.56 0.81 0.03 Inferred 0.30 1.40 0.42 0.01 Total 0.82 1.50 1.23 0.04 Main pit (Anomaly 13) Measured Indicated 91.93 1.23 112.97 3.63 Inferred 4.83 1.10 5.32 0.17 Total 96.76 1.22 118.29 3.80 Stockpile (Marginal Ore) Measured 7.71 0.52 4.00 0.13 Indicated Inferred

Total 7.71 0.52 4.00 0.13 Stockpile (Full Grade Ore) Measured 9.50 0.74 7.03 0.23 Indicated Inferred Total 9.50 0.74 7.03 0.23 Navachab Total 121.55 1.13 137.11 4.41 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Navachab Category Tonnes Moz Measured 5.89 0.53 3.12 0.10 Indicated

56.10

```
1.07
60.17
1.93
Inferred
7.76
1.08
8.36
0.27
Navachab
Total
69.75
1.03
71.65
2.30
The main pit contains the largest portion (1.969Moz) of the Exclusive Mineral Resource. Approximately 0.13Moz of
the Exclusive
Mineral Resource is hosted in the marginal ore stockpiles at a grade of 0.52g/t and the intention is to bring the gold to
account through
pre-concentration (using the DMS plant) in the future. The remainder of the Exclusive Mineral Resource is from
Anomaly 16 (0.08Moz)
and Gecko (0.02Moz).
```

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**CONTINENTAL AFRICA** 

# **NAVACHAB** continued ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Navachab Category Tonnes Moz Gecko Proved Probable 0.44 1.18 0.51 0.02 Total 0.44 1.18 0.51 0.02 Main pit (Anomaly 13) Proved Probable 40.04 1.42 56.89 1.83 Total 40.04 1.42 56.89 Stockpile (Marginal Ore) Proved

Probable

1.82 0.48 0.88 0.03 Total 1.82 0.48 0.88 0.03 Stockpile (Full Grade Ore) Proved Probable 9.50 0.74 7.01 0.23 Total 9.50 0.74 7.01 0.23 Navachab Total 51.80 1.26 65.29 2.10 Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Navachab Gold price \$/oz \$/ZAR exchange rate Cut-off value g/t Au Dilution % Dilution g/t

(based

tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF # % Anomaly 16 1,300 7.17 0.49; 0.78\* 7.5; 17\*\* 100.0 88.1 Gecko 1,300 7.17 0.49; 0.78\* 7.5; 17\*\* 100.0 88.1 Main pit (Anomaly 13) 1,300 7.17 0.49; 0.78\* 7.5;

on

```
17**
100.0
88.1
Stockpile
(Full Grade Ore)
1,300
7.17
0.49;
0.78*
100.0
88.1
Stockpile
(Marginal Ore)
1,300
7.17
0.49;
0.78*
100.0
88.1
DMS = 0.49g/t, CIP = 0.78g/t ** Dilution depending on ore type was applied
Average Life of Mine CIP Met recovery
Inferred Mineral Resource in business plan
as at 31 December 2012
Tonnes
million
Grade
Contained gold
Navachab
Tonnes
              Moz
Comment
```

```
Anomaly 16
0.60
1.30
0.78
0.03
Inferred in business plan from Anomaly 16.
Anomaly 16 not reported as an Ore Reserve.
Gecko
0.07
0.62
0.04
0.00
Inferred in business plan from Gecko pits
Main pit (Anomaly 13)
1.07
1.24
1.33
0.04
Inferred in business plan from main pit
Total
1.74
1.24
2.15
0.07
The Inferred Mineral Resource was used in the pit optimisation process and is present in the designed pits and in the
Life of Mine (LOM)
schedule.
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
100
}
```

### **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Graham Bell MAusIMM 306 709 13 years Ore Reserve George Botshiwe MAusIMM 229 475 12 years Navachab 0 100 200 300 400 500 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 Grade tonnage curve – Surface (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t) Cut-off grade (g/t)

```
0
Tonnes above cut-off
Ave grade above cut-off
{
101
CONTINENTAL AFRICA
```

#### **COUNTRY OVERVIEW**

Geita is the largest of AngloGold Ashanti's seven open-pit mines in Africa. Prior to April 2004, Geita was managed under a joint

venture agreement between Ashanti and AngloGold. Since the merger of the two companies, Geita is a wholly-owned subsidiary

of AngloGold Ashanti.

#### MINERAL RESOURCE ESTIMATION

The mineralisation boundaries for the individual deposits are defined from the detailed logging of all geological drill holes. This

information is validated and then used to create a 3D model. The geological model is subsequently populated with an appropriately

dimensioned block model. Ordinary Kriging is used to interpolate values into the blocks. A geostatistical technique called Uniform

Conditioning is used to estimate the proportion of ore that occurs above the Mineral Resource cut-off and this is then reported

assuming a specified selective mining unit (SMU). The Mineral Resource is reported within a \$2,000/oz optimised pit shell and above

the calculated mineralised waste cut-off grade per pit. Stockpiled material above mineralised waste cut-off grade is included in the

Mineral Resource.

#### ORE RESERVE ESTIMATION

The Mineral Resource models are used as the basis for Ore Reserve estimation. Modifying factors include the input gold reserve price,

mining dilution and recovery, geotechnical, stay in business capital, operating costs, metallurgical recovery, processing capacity, and

mining equipment capacities. Appropriate Ore Reserve cut-off grades are applied and optimised pit shells are generated. Pit designs

are then done on selected shells upon which mine scheduling is done. An Ore Reserve gold price of \$1,300/oz was used

**TANZANIA** 

**2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 

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#### **LOCATION**

The Geita gold mine is located approximately 910km from Dar es Salaam in the Lake Zone of northern Tanzania. The tenements are

situated within the Sukumaland Greenstone Belt of the Lake Victoria goldfields, which hosts other gold mines including Golden Pride,

Bulyanhulu, Tulawaka and Buzwagi. This geological terrain is considered to be one of the most productive Archaean Greenstone Belts

in east Africa. Mining at Geita is currently undertaken by standard open pit mining methods, but underground mining of the down-dip

extension of the known mineralisation is being considered.

#### **GEOLOGY**

The Geita Greenstone belt is a segment of the Sukumaland Greenstone Belt. This Archaean sequence strikes east-west, is 60km long

and up to 15km wide. The Geita terrain is made up of upper to mid-Nyanzian greenschist facies rocks consisting of clastic sedimentary

rocks, black shales, Banded Iron Formation (BIF) and felsic volcaniclastics, which are intruded by a variety of mafic to felsic intrusive

rocks. Within Geita's tenements, supracrustal rocks present variable thickness and are locally estimated to be more than 500m thick,

mostly underlain by the intrusive suites.

The Geita Greenstone belt has been so far separated into three major terrains, namely Nyamulilima Terrain in the west (hosting the

Star and Comet, Ridge 8 and Roberts deposits), Geita Terrain in the central part (hosting the Nyankanga, Geita Hill, Lone Cone and

Chipaka deposits) and Kukuluma Terrain to the northeast (hosting the Matandani, Kukuluma and Area 3 West deposits). Approximately

78% of the Mineral Resource is situated in the Geita sub-terrain, with 16% in Nyamulilima and 6% in Kukuluma Terrain.

Like most other greenstone sequences, the Geita Greenstone belt has been through a protracted history of deformation, which resulted

in a property-scale, multiphase, box-shaped synformal configuration, with 'limbs' trending west-northwest and dipping mostly steeply,

connected by a northeast trending 'hinge zone' dipping moderately to northwest. This large-scale architecture conceals both prior and

post-deformation events, either as older folding systems, or younger shear arrays developing sub-parallel to the rock packages along

its 'hinge and limb' zones. The Geita Terrain comprises mostly the north-easterly 'hinge' zone. To the west, the Nyamulilima Terrain

is mostly underlain by a semi-circular structure surrounding intrusive centers, and internally encompasses fold and fault systems of

variable scale which may locally control gold mineralisation. The Kukuluma Terrain, on the northeast, trends also west-north-westerly,

with sub-vertical limbs being dominant over compressed, multiphase hinge zones. Regional north-north-easterly structures hosting

Proterozoic gabbro dykes are also conspicuous geological features in the area.

#### **EXPLORATION**

A large part of the 2012 exploration effort was dedicated to infill drilling programmes in current open pits (Geita Hill, Nyankanga

and Star & Comet), as well as at their respective extensions. Limited pre-Mineral Resource drilling programmes were undertaken

to test targets. The infill drilling campaigns aimed at increasing the confidence level on the Mineral Resource and allowing for Ore

Reserve conversion.

Since 2011 regional, pre-Mineral Resource exploration drilling has been focused on testing geophysical targets identified by the 2008

Electromagnetic (EM) surveys and 2010 Induced Polarisation (IP) surveys. Twelve EM targets and four IP targets have been drilled

so far. Several bodies of massive sulphides have been intersected, with gold grades ranging from below detection levels up to a few

grams per tonne over variable intervals. The latter usually associated to targets including BIF sequences within the local rock package.

The new drilling data set is now being compiled and interpreted so that geological models can be built for each target, allowing for the

determination of their exploration potential and ranking for additional work.

Besides ground EM and IP surveys, ground gravity and Natural Source Magneto Audio Tellurics (NSMAT) surveys were also conducted

in 2011 – 2012. The first covered the entire Geita tenements, whilst the latter was tested at Kukuluma Terrain. The results are now

being interpreted in conjunction with the current geological knowledge at the respective scales.

During 2011 and 2012 significant progress has been made in understanding the geological setting and controls of gold mineralisation

in the Geita, Nyamulilima and Kukuluma Terrains, and therefore improving the Mineral Resource modelling process and the predictive

capability of the exploration efforts.

**GEITA** 

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**CONTINENTAL AFRICA** 

#### **GEITA**

#### continued

#### **PROJECTS**

Geita's exploration strategy includes two major projects, namely the Geita underground and refractory ore projects. During 2012,

drilling programmes were undertaken to test the continuity of the Nyankanga deposit at depth in the former, and the extensions of

known deposits in the Kukuluma Terrain in the latter.

The Nyankanga underground drilling programme was cut short due to the geological setting of Nyankanga deposit at depth being less

favourable for mineralisation. An intrusive complex underlies the Nyankanga pit towards the southwest and the favourable host rocks

for mineralisation, BIF, are rare. The newly acquired drilling data will enable the geological setting of Nyankanga to be remodelled and

alternative exploration targets to be generated.

The refractory ore drilling programme targeted the potential extensions of Kukuluma, Matandani and Area 3 deposits, where

28 reverse circulation (RC) pre-collared diamond drilling (DD) holes were drilled for a total of 12,049m. Logging and sampling is

underway and the geological modelling will follow in the first quarter of 2013.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

Geita

Measured

\_

\_

-

Indicated

20 x 20,

40 x 40,

50 x 50

X X -

Classification study undertaken in

2011 revealed an optimal spacing.

Inferred

40 x 40,

80 x 50

X X -

```
Classification study undertaken in
2012 revealed an optimal spacing.

Grade/Ore control 5 x 10, 5 x 5

X -

Z012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

# Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Geita Category Tonnes Moz Area 3 West Oxide Measured Indicated 1.58 1.86 2.94 0.09 Inferred 0.04 1.06 0.05 0.00 Total 1.62 1.83 2.99 0.10 Area 3 West (Refractory Ore) Measured Indicated 0.27 2.81 0.76 0.02 Inferred Total 0.27

2.810.76

0.02 Chipaka Measured Indicated 2.06 1.59 3.26 0.10 Inferred 3.87 1.78 6.87 0.22 Total 5.93 1.71 10.13 0.33 Geita Hill (Open pit) Measured Indicated 24.80 2.68 66.50 2.14 Inferred 1.89 2.26 4.27 0.14 Total 26.69 2.65 70.77 2.28 Geita Hill (Underground) Measured Indicated

2.02

3.77 7.62 0.25 Inferred 3.66 3.94 14.44 0.46 Total 5.68 3.88 22.06 0.71 Kalondwa Hill Measured Indicated Inferred 1.27 3.11 3.97 0.13 Total 1.27 3.11 3.97 0.13 Kukuluma (Non-Refractory Ore) Measured Indicated 0.20 2.12 0.43 0.01 Inferred

Total

0.20 2.12 0.43 0.01 Kukuluma (Refractory Ore) Measured Indicated Inferred 1.91 3.47 6.62 0.21 Total 1.91 3.47 6.62 0.21 Lone Cone Measured Indicated 3.32 2.18 7.24 0.23 Inferred 2.50 2.14 5.36 0.17 Total 5.82 2.17 12.60 0.40 Matandani (Non-Refractory Ore) Measured

```
Indicated
1.97
1.85
3.64
0.12
Inferred
0.01
5.55
0.03
0.00
Total
1.98
1.86
3.67
0.12
Matandani (Refractory Ore)
Measured
Indicated
Inferred
3.73
3.19
11.91
0.38
Total
3.73
3.19
11.91
0.38
105
CONTINENTAL AFRICA
```

# **GEITA** continued as at 31 December 2012 Tonnes million Grade g/t Contained gold Geita Category Tonnes Moz Nyankanga (Open pit) Cut 6 Measured Indicated 0.66 3.44 2.28 0.07 Inferred 0.13 1.66 0.21 0.01 Total 0.79 3.15 2.49 0.08 Nyankanga (Open pit) Cut 7 Measured Indicated 10.23 3.84 39.30 1.26 Inferred 1.53 1.84 2.81 0.09 Total

11.76 3.58

42.11 1.35 Nyankanga (Open pit) Cut 8 Measured Indicated 5.70 5.51 31.45 1.01 Inferred 2.54 1.79 4.55 0.15 Total 8.24 4.37 36.00 1.16 Nyankanga (Open pit) Cut 9 Measured Indicated 0.01 0.96 0.01 0.00 Inferred 1.24 2.91 3.62 0.12 Total 1.25 2.89 3.63 Nyankanga (Open pit) Cut 10 Measured

Indicated

8.70 3.08 26.85 0.86 Inferred 4.09 1.53 6.24 0.20 Total 12.79 2.59 33.09 1.06 Nyankanga Others Measured Indicated 0.07 2.45 0.16 0.01 Inferred 1.74 2.83 4.92 0.16 Total 1.81 2.81 5.08 0.16 Nyankanga (Underground) Measured Indicated 2.36 5.12 12.10 0.39 Inferred 3.04 4.22 12.85

0.41

Total 5.40 4.62 24.95 0.80 Ridge 8 (Open pit) Measured Indicated 4.17 1.99 8.29 0.27 Inferred 0.54 2.17 1.16 0.04 Total 4.71 2.01 9.45 0.30 Ridge 8 (Underground) Measured Indicated 1.28 3.86 4.94 0.16 Inferred 2.32 4.30 9.97 0.32 Total 3.60 4.14 14.91 0.48 Roberts Measured

```
Indicated
18.52
1.30
24.13
0.78
Inferred
0.44
3.25
1.41
0.05
Total
18.96
1.35
25.54
0.82
Star and Comet
Measured
Indicated
3.41
4.20
14.33
0.46
Inferred
2.72
2.85
7.75
0.25
Total
6.13
3.60
22.08
0.71
Inclusive Mineral Resource continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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```

}

# as at 31 December 2012 Tonnes million Grade g/t Contained gold Geita Category Tonnes Moz Stockpile (Full Grade Ore) Measured Indicated 3.80 2.09 7.93 0.26 Inferred Total 3.80 2.09 7.93 0.26 Stockpile (Marginal Ore) Measured Indicated 7.41 0.88 6.51 0.21 Inferred Total 7.41 0.88 6.51

0.21

# Stockpile (Refractory Ore) Measured Indicated 1.26 1.85 2.33 0.08 Inferred Total 1.26 1.85 2.33 0.08 Geita Total 143.03 2.67 382.01 12.28 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Geita Category Tonnes Moz Measured Indicated 42.97 2.68 115.34 3.71 Inferred 35.95 2.74

98.59

3.17 Geita Total 78.92 2.71

213.93 6.88

The Exclusive Mineral Resource at Geita includes the underground Mineral Resource plus additional material that occurs between

the Ore Reserve pit shell (at a gold price of \$1,300/oz) and the Mineral Resource pit shell (at a gold price of \$2,000/oz). This material

is sub economic to mine at the current Ore Reserve gold price and forms potential extensions to the current Life of Mine (LOM) in

an elevated gold price environment. A significant portion of this material is in the Inferred Mineral Resource category and infill drilling

programmes are planned to upgrade potentially economic areas to Indicated Mineral Resource.

Nyankanga Cut 9 contains approximately 0.2Moz of Exclusive Mineral Resource and lies immediately southwest of the Nyankanga

Open pit. It could support an additional pushback and drilling will resume once access has been established toward 2015. Further

programmes to upgrade confidence in the Geita Hill East & West, Ridge 8, Star & Comet and Ridge 8 Gap pits are planned for 2013

to consolidate 2012 drilling.

The Exclusive Mineral Resource forming part of the mine's business plan comprises approximately 0.88Moz from underground

extensions to the Nyankanga open pit and a total of 3.17Moz from Inferred Mineral Resource material located within all the design pits.

While the economic viability of the in-pit material is known, scoping and pre-feasibility studies are currently in progress to determine

the economic viability of the underground material. As part of these studies, exploration drives and infill drilling are planned to upgrade

the confidence in the Mineral Resource.

In instances where the mineralisation extends down-dip, below the current LOM design pit shell and where it could potentially be

economically exploited by underground mining methods, a 35m crown pillar forms part of the Exclusive Mineral Resource below the

open pit limits. This material is not planned to be mined.

Inclusive Mineral Resource continued

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CONTINENTAL AFRICA

## **GEITA** continued Mineral Resource below infrastructure as at 31 December 2012 Tonnes million Grade g/t Contained gold Geita Category Tonnes Moz Measured Indicated 5.66 4.35 24.66 0.79 Inferred 9.02 4.13 37.25 1.20 Geita Total 14.68 4.22 61.91 1.99 Geita Mineral Resource reconciliation: 2011 to 2012 12.57 -0.61 1.29 -1.25 0.22 0.10 -0.04 0.00 12.28 Ounces (millions) 13.4

13.0 12.6 12.2 11.8 2011

```
Deple-
tion
Gold
price
Cost
Explo-
ration
Metho-
dology
Other
Acquisition/
Disposal
2012
Geita
Ore Reserve reconciliation: 2011 to 2012
4.73
-0.55
-0.19
0.63
0.00
0.66
0.14
0.00
5.42
Ounces (millions)
5.6
5.2
4.8
4.4
4.0
3.6
2011
Depletion Model
change
Change
in
economics
New
ounces
from
projects
Scope
change
Other
Acquisition/
Disposal
2012
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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```

# **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Geita Category Tonnes Moz Area 3 West Oxide Proved Probable 0.76 2.24 1.70 0.05 Total 0.76 2.24 1.70 0.05 Chipaka Proved Probable 2.18 1.57 3.43 0.11 Total 2.18 1.57 3.43 0.11 Geita Hill (Open pit) Proved

Probable 17.26

```
2.60
44.82
1.44
Total
17.26
2.60
44.82
1.44
Nyankanga (Open pit) Cut 6
Proved
Probable
0.57
3.15
1.81
0.06
Total
0.57
3.15
1.81
0.06
Nyankanga (Open pit) Cut 7
Proved
Probable
9.84
3.80
37.36
1.20
Total
9.84
3.80
37.36
1.20
Nyankanga (Open pit) Cut 8
Proved
Probable
3.76
5.15
19.39
```

# Total 3.76 5.15 19.39 0.62 Nyankanga (Open pit) Cut 9 Proved Probable 0.75 2.96 2.22 0.07 Total 0.75 2.96 2.22 0.07 Nyankanga (Open pit) Cut 10 Proved Probable 5.44 2.99 16.26 0.52 Total 5.44 2.99 16.26 0.52 Ridge 8 (Open pit) Proved Probable 3.20 2.00 6.41 0.21 Total 3.20

6.41 0.21 Roberts Proved Probable 8.30 1.39 11.58 0.37 Total 8.30 1.39 11.58 0.37 Star and Comet Proved Probable 1.86 5.36 9.97 0.32 Total 1.86 5.36 9.97 0.32 Stockpile (Full Grade Ore) Proved Probable 3.80 1.98 7.54 0.24 Total 3.80 1.98 7.54 0.24

Stockpile (Marginal Ore)

# Proved Probable 7.32 0.84 6.13 0.20 Total 7.32 0.84 6.13 0.20 Geita Total 65.06 2.59 168.63 5.42 { 109

CONTINENTAL AFRICA

#### **GEITA**

### continued

Ore Reserve modifying factors

as at

31 December 2012

Geita

Gold

price

\$/oz

Cut-off

value

g/t Au

Dilution

%

Dilution

g/t

% RRF

(based

on

tonnes)

% RRF

(based

on g/t)

% MRF

#

(based

on

tonnes)

% MRF

#

(based

on g/t)

**MCF** 

%

MetRF

%

Area 3 West (Refractory Ore)

1,300

1.15

\_

0.00

0.00

105.0

95.0

98.0

59.0

Area 3 West Oxide

1,300

0.80

-

0.00 0.00 105.0 95.0 98.0 81.0 Chipaka 1,300 0.69 0.00 0.00 105.0 95.0 98.0 86.0 Kukuluma (Non Refractory Ore) 1,300 0.89 0.00 0.00 105.0 95.0 98.0 75.0 Kukuluma (Refractory Ore) 1,300 1.47 0.00 0.00 105.0 95.0 98.0 46.0 Lone Cone 1,300 0.73 0.00 0.00 105.0 95.0

```
88.0
Matandani
(Non Refractory Ore)
1,300
0.76
0.00
0.00
105.0
95.0
98.0
84.0
Matandani (Refractory Ore)
1,300
1.33
0.00
0.00
105.0
95.0
98.0
50.0
Nyankanga (Open pit)
Cut 10
1,300
0.66
0.00
0.00
105.0
95.0
98.0
91.0
Nyankanga (Open pit)
Cut 11
1,300
0.66
0.00
0.00
105.0
95.0
98.0
91.0
Nyankanga (Open pit) Cut 6
1,300
```

```
0.00
0.00
105.0
95.0
98.0
91.0
Nyankanga (Open pit) Cut 7
1,300
0.66
0.00
0.00
105.0
95.0
98.0
91.0
Nyankanga (Open pit) Cut 8
1,300
0.66
0.00
0.00
105.0
95.0
98.0
91.0
Nyankanga (Open pit) Cut 9
1,300
0.66
0.00
0.00
105.0
95.0
98.0
91.0
Nyankanga Others
1,300
0.66
0.00
0.00
105.0
95.0
```

91.0 Ridge 8 (Open pit) 1,300 0.72 0.00 0.00 105.0 95.0 98.0 83.0 Roberts 1,300 0.73 0.00 0.00 105.0 95.0 98.0 89.0 Star and Comet 1,300 0.76 0.00 0.00 110.0 90.0 98.0 88.0 Stockpile (Full Grade Ore) 1,300 0.98 0.00 0.00 89.0\* Stockpile (Marginal Ore) 1,300 0.72

```
0.00
0.00
89.0*
Stockpile
(Refractory Ore)
1,300
1.64
0.00
0.00
52.0**
Geita Hill (Open pit)
1,300
0.73
0.00
0.00
105.0
95.0
98.0
88.0
* Average factors from Nyankanga, Geita Hill and Star and Comet
** Average factors from Kukuluma and Matandani
#
Dilution included in MRF
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

### Inferred Mineral Resource in business plan as at 31 December 2012 **Tonnes** million Grade g/t Contained gold Geita Tonnes Moz Comment Area 3 West Oxide 0.00 1.46 0.00 0.00 Inferred ore within design Geita Hill (Open pit) 1.89 2.26 4.27 0.14 Full Grade Ore from Geita Hill West Cut 3 and East Cut 3 Nyankanga (Open pit) Cut 6 0.08 2.51 0.20 0.01 Inferred within pit design Nyankanga (Open pit) Cut 7 1.53 1.84 2.81 0.09 Inferred within pit design Nyankanga (Open pit) Cut 8 1.64 2.07 3.39 0.11 Inferred within pit design Nyankanga (Open pit) Cut 9 0.15 2.69 0.41 0.01 Inferred within pit design Nyankanga (Open pit) Cut 10 1.70

1.61 2.73

0.09
Inferred within pit design
Ridge 8 (Open pit)
0.06
1.35
0.08
0.00
Inferred within pit design
Star and Comet
0.05
2.59
0.13
0.00
Inferred within pit design
Total
7.10
1.97
14.02
0.45
No Inferred Mineral Resource is included in the pit optimisation exercise. Although it does not contribute to the
economic assessment
of the optimised pit (it is deactivated during the optimisation runs), it is present within the final pit shell as Exclusive
Resource.
COMPETENT PERSONS
Category
Name
Professional
organisation
Registration
number
Relevant
experience
Mineral Resource
Steven Robins
MAusIMM
222 533
17 years
Ore Reserve
Jasper Musadaidzwa
MAusIMM
991 333
15 years
Geita
0
20 40
60
80
100
120

```
1
2
3
4
5
6
7
8
Grade tonnage curve – Surface (metric)
Tonnes above
cut-off (millions)
Average
grade above
cut-off (g/t)
Cut-off grade (g/t)
12
10
8
6
4
2
0
Tonnes above cut-off
Ave grade above cut-off
Geita
0
5
10
15
20
25
30
35
40
0
2
3
4
5
6
7
8
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade above cut-off (g/t)
Cut-off grade (g/t)
```

```
14
12
10
8
6
4
2
0
Tonnes above cut-off
Ave grade above cut-off
{
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CONTINENTAL AFRICA
```

```
Australia: Tropicana
AUSTRALASIA
}
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
112
}
```

AngloGold Ashanti operates the Sunrise Dam gold mine in Western Australia and is currently developing the new Tropicana gold

mine, also in Western Australia, along with joint venture partner Independence Group Ltd., who hold a 30% stake.

Tropicana, a

greenfields discovery made by AngloGold Ashanti, is currently under construction and is expected to deliver its first production in 2013.

AngloGold Ashanti is managing the Tropicana project along with a large regional exploration programme that covers some 13,500km2

of tenements along a 600km strike length, considered one of the most prospective regions for new gold discoveries in Australia.

Production from Australasia was steady at 258,000 ounces in 2012, equivalent to 6% of group production.

The Inclusive Mineral Resource for Australasia totalled 8.34Moz at year-end, including an Ore Reserve of 3.91Moz. Inclusive Mineral Resource

Tonnes

million

Grade

g/t

Contained gold

as at 31 December 2012

Category

Tonnes

Moz

Australasia

Measured

36.46

1.70

62.00

1.99

Indicated

71.84

2.10

150.68

4.84

Inferred

14.98

3.13

46.82

1.51

Total

123.28

2.10

259.50

8.34

Ore Reserve

Tonnes

million

Grade

g/t

Contained gold

as at 31 December 2012

Category

Tonnes Moz Australasia Proved 33.13 1.76 58.20 1.87 Probable 26.82 2.37 63.55 2.04 Total 59.95 2.03 121.75 3.91 **REGIONAL OVERVIEW** AngloGold Ashanti's Australasian assets comprise Sunrise Dam and the 70%-owned Tropicana project. Contribution to group production (%) Australasia Rest of AngloGold Ashanti 94 Sunrise Dam 100 Contribution to production by mine 113 **AUSTRALASIA** 

#### **AUSTRALIA**

#### **COUNTRY OVERVIEW**

The Australian assets were acquired by AngloGold Ashanti at the end of 1999 and currently comprise the Sunrise Dam gold mine and

the Tropicana gold mine.

AngloGold Ashanti owns 100% of Sunrise Dam gold mine. The Tropicana gold mine is a joint venture with Independence Group NL in

which AngloGold Ashanti Australia Limited holds 70%.

The Tropicana deposit represents a discovery in a new gold province in which the joint venture partners have a dominant land position

and a competitive advantage in understanding the mineralised system. Exploration potential in the district is high and a number of

large targets have been identified.

#### MINERAL RESOURCE ESTIMATION

Sunrise Dam

The open pit Mineral Resource estimate at Sunrise Dam utilises the geostatistical technique of Multiple Indicator Kriging, whilst the

Golden Delicious deposit has been estimated using Uniform Conditioning. All available geological drill-hole information is validated

for use in the models and the local geology of the deposit is used to classify the drill-hole information into appropriate estimation

domains. Detailed statistical analyses are conducted on each of these domains and this allows for the identification of high-grade

outliers. If these values are anomalous to the general population characteristics they are then cut back to an appropriate upper limit

for the population.

Estimation of the underground Mineral Resource uses the geological model boundaries to subdivide all drill-hole data into appropriate

domains. Statistical analyses are performed on these domains and, in a similar manner to that of open-pit estimation; high-grade

outliers are identified and appropriately cut back to an upper limit. Multiple Indicator Kriging is used to produce estimates of average

gold grade of a pre-determined block size. The geostatistical technique of Conditional Simulation has been used to estimate the

Cosmo and GO ore zones.

Tropicana

Uniform Conditioning is used to estimate the open pit Mineral Resource. All available geological drill-hole information is validated

for use in the models and the local geology of the deposit is used to classify the drill-hole information into appropriate geostatistical

domains. Detailed statistical analyses are conducted on each of these domains and this allows for the identification of and cutting of

high-grade outliers.

The underground Mineral Resource estimate uses drilling completed as part of the Havana Deeps pre-feasibility study, targeting the

down plunge and along strike extents of the Havana deposit outside the current Havana open pit. Work completed to date has largely

focused on obtaining the drilling information required to support the study. Detailed mining, metallurgical and other study investigations

are underway and will be completed during 2013. The study will consider the trade-off between open pit and underground mining

options and will provide recommendations as to the optimal mining approach. The geostatistical method of Ordinary Kriging is used

to estimate the underground Mineral Resource.

#### ORE RESERVE ESTIMATION

The Ore Reserve is estimated within the current pit design using the relevant Mineral Resource models and updated geotechnical and

metallurgical parameters and appropriate operating costs. The recoverable gold Mineral Resource model has been estimated either by

a geostatistical technique called Multiple Indicator Kriging or Uniform Conditioning (non-linear geostatistical methods) which estimate

the proportion of material recovered by mining above a cut-off grade, assuming a specified selective mining unit (SMU).

#### **2012** MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **LOCATION**

Sunrise Dam lies some 220km north-northeast of Kalgoorlie and 55km south of Laverton in Western Australia. The mine, 100% owned

by AngloGold Ashanti, comprises a large open pit and underground mining complex. Mining is carried out by contractors and ore is

treated in a conventional gravity and CIL process plant. The mining of the open pit has been extended to extract the high grade crown

pillar at the base of the Mega Pit. The final open pit design depth will reach 500m below surface and is expected to be finished in 2013.

The underground mine is undergoing a significant growth phase with production expected to reach 1.9Mt of ore in 2013.

#### **GEOLOGY**

At Sunrise Dam, gold mineralisation is structurally controlled and vein hosted. The style of mineralisation can be differentiated

depending on the structure or environment in which it is hosted. There are three dominant domains recognised:

shear-related and high strain – e.g. Sunrise Shear Zone,

•

stockwork development in planar faults with brittle characteristics (these occur in all rock types and are commonly concentrated at

lithofacies contacts within the volcanic stratigraphy or the porphyry margin and within hinge domains within the magnetite shales) –

e.g. Western Shear Zone, Watu, Cosmo, Summercloud; and

•

placer-style mineralisation hosted within the fluvial sediments.

The vein and shear styles of gold mineralisation are introduced primarily during the third and fourth deformation stages and variations

in structural style, ore and gangue mineralogy and alteration intensity are observed locally. Secondary (supergene) gold mineralisation

is also an important part of the Cleo-Sunrise ore system and is highlighted by extremely high gold grades developed near the base of

Tertiary paleochannels and horizontal blankets of mineralisation related to iron redox fronts and associated water tables.

#### **EXPLORATION**

Near-mine exploration at Sunrise Dam is specifically focused on a two-stage strategy of developing and advancing proximal

opportunities to the open pit and underground operations, whilst determining long-term opportunities that exist up to 1.5km below the

mine. The focus for 2013 will continue to extend the known underground Mineral Resource whilst specific deep drilling programmes

to vertical depths up to 2km will be undertaken. These will determine the extent of the main mineralising shoots of Dolly, Midway

Shear and the newly delineated Vogue mineralisation. The Vogue mineralisation may prove to be an extensive mineralised system that

exploration intends to delineate and develop into an Inferred Mineral Resource in 2013. This work forms part of a Mine Life Extension

(MLE) study that will determine the full extent of prospectivity of the Sunrise Dam mine area.

**SUNRISE DAM** 

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**AUSTRALASIA** 

#### **SUNRISE DAM**

#### continued

#### **PROJECTS**

The underground Life of Mine (LOM) project seeks to delineate the deep Mineral Resource below the mine area and forms part of the

MLE. The extensions of the current mineralisation can be traced to depths in excess of 1.2km vertical and extend over a strike length

of 2.5km. This forms the framework for the LOM at Sunrise Dam delivering in excess of 350,000oz per year. A skilled and dedicated

exploration team, based at the mine, is well prepared to undertake this challenge that will establish Sunrise Dam as a continued

investment and world-class gold producer.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m(-x-)

Diamond

RC

Blast-

hole

Other Comments

Surface

Measured

25 x 25

X X

Indicated

40 x 40 X X

Inferred

100 x 100

X X

Grade/Ore control 6 x 8

X

Underground

Measured

# Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Sunrise Dam Category Tonnes Moz Golden Delicious Measured 0.61 1.69 1.04 0.03 Indicated 1.88 1.50 2.82 0.09 Inferred 0.01 1.38 0.01 0.00 Total 2.50 1.55 3.87 0.12 Stockpile (Open pit) Measured 14.84 1.09 16.18 0.52 Indicated Inferred

Total 14.84 1.09

Indicated 16.50 2.65 43.72 1.41 Inferred 6.68 3.50 23.36 0.75 Total 23.18 2.89 67.08 2.16 Stockpile (Underground) Measured 0.14 4.03 0.55 0.02 Indicated Inferred Total 0.14 4.03 0.55 0.02 Sunrise Dam Total 40.66 2.16 87.69 2.82 **Exclusive Mineral Resource** 

16.18 0.52

Underground Measured

Ec	ar Filing: ANGLOGOLD ASHANTI LTD - Form 6-K
as at 31 December 2012 Tonnes million Grade g/t Contained gold Sunrise Dam Category Tonnes Moz Measured 0.61 1.69 1.04 0.03 Indicated 13.39 1.98 26.47 0.85 Inferred 6.69 3.50 23.37 0.75 Sunrise Dam Total 20.69	ar Filing: ANGLOGOLD ASHANTI LTD - Form 6-K
2.46 50.88 1.64 The Exclusive Mineral Resource estimation and mine planning is yet to take place. In Exclusive Mineral Resource due to the material bei requirements. The entire Inferred Mineral Resource in the Inferred material	
2.97 -0.24 0.00 0.00 0.66 -0.46 -0.12	2011 to 2012

0.00 2.82 Ounces (millions) 3.4 3.2 3.0 2.8 2.6 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Sunrise Dam Ore Reserve reconciliation: 2011 to 2012 1.53 -0.24 -0.13 0.01 0.00 0.02 0.00 0.00 1.18 Ounces (millions) 1.6 1.5 1.4 1.3 1.2 1.1 2011 Depletion Model change Change economics New ounces from

projects Scope

```
change
Other
Acquisition/
Disposal
2012
{
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```

# **SUNRISE DAM** continued ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Sunrise Dam Category Tonnes Moz Stockpile (Open pit) Proved 14.84 1.09 16.18 0.52 Probable Total 14.84 1.09 16.18 0.52 Underground Proved Probable 4.98 4.03 20.07 0.65 Total 4.98 4.03 20.07 0.65 Stockpile (Underground) Proved 0.14 4.03 0.55

0.02 Probable Total 0.14 4.03 0.55 0.02 Sunrise Dam Total 19.97 1.84 36.81 1.18 Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Sunrise Dam Gold price \$/oz AUD/\$ exchange rate Cut-off value g/t Au Stoping width cm Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF

(based on g/t)

```
MCF
%
MetRF
Underground -
Stockpile
1,300
1.02
2.71
10.0
0.20
30.4
46.6
92.9
92.9 100.0
85.2
Underground
1,300
1.02
2.71
2,600.0
10.0
0.20
-100.0
85.2
Surface – Stockpile
(Open pit)
1,300
1.02
0.60;
0.80*
0.0
0
100.0
100.0
100.0
100.0 100.0
85.5
* Oxide\ cutoff = 0.60\ g/t
Inferred Mineral Resource in business plan
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
```

Sunrise Dam Tonnes Moz Comment Underground 0.37 1.89 0.71 0.02 Top of Vogue bulk development, will be converted to Indicated in Q2 2013 Total 0.37 1.89 0.71 0.02 Inferred Mineral Resource in the business plan for 2013 plan will come from bulk sampling development in the top of Vogue domain, comprised of an estimated amount of 373,000 tonnes. This part of Vogue will be converted to an Indicated Mineral Resource during the bulk development process. 2012 MINERAL RESOURCE AND ORE RESERVE REPORT 118

#### **COMPETENT PERSONS**

Category

Category

Name

Professional

organisation

Registration

number

Relevant

experience

Surface

Mineral Resource

Fraser Clark

MAusIMM

226 390

11 years

Ore Reserve

Peter Merry

MAusIMM

306 163

31 years

Underground

Mineral Resource

Fraser Clark

MAusIMM

226 390

11 years

Ore Reserve

Salih Ramazan

MAusIMM

222 870

10 years

Sunrise Dam

0

2

4

6

8 10

12

14

16

18

0.00 0.25 0.50

1.00

0.75

1.25 1.50 1.75 2.00 2.25 2.50 2.75 3.00

Grade tonnage curve – Surface (metric)

Tonnes above

cut-off (millions)

```
Average
grade above
cut-off (g/t)
Cut-off grade (g/t)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Tonnes above cut-off
Ave grade above cut-off
Sunrise Dam
0
20
40
60
80
100
120
140
0
2
4
3
5
6
7
8
9
10
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade above cut-off (g/t)
Cut-off grade (g/t)
20
16
12
8
4
0
Tonnes above cut-off
Ave grade above cut-off
```

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#### **TROPICANA**

#### **LOCATION**

The Tropicana gold project is located 330km east-northeast of Kalgoorlie, Western Australia. The mineral deposit is hosted in the

eastern margin of the Yilgarn Craton. Tropicana is the first deposit discovered in this remote portion of the Great Victoria Desert and

is widely regarded as defining an emerging greenfields gold province.

Together, the Tropicana, Havana, Havana South and Boston Shaker deposits define a northeast trending mineralised corridor,

approximately 1.2km wide and 5km long, that has been tested to vertical depth of over 1,200m. The Mineral Resource remains

open down-dip from Tropicana, Havana and Boston Shaker deposits and has potential for extension to the north and south. Neither

the immediate metamorphic host rocks nor the mineralised zones are exposed at surface due to the presence of widespread cover

sequences, between 0.5m and 15m thick.

#### **GEOLOGY**

The Tropicana deposit comprises a mineralised zone up to 50m thick, predominantly hosted in quartzo-feldspathic gneiss, comprised

of subordinate thin (3m to 5m), discontinuous mineralised lenses that typically return intercepts of >0.5g/t gold, with a garnet gneiss

dominated hanging wall package. The Havana deposit comprises a lower, laterally continuous, higher-grade lode up to 50m thick

that is overlain, in the central and southern parts of the proposed pit, by stacked, typically lower-grade and thinner (up to 25m thick)

mineralised zones dominantly hosted in quartzo-feldspathic gneiss, again with a garnet gneiss dominated hanging wall.

Mineralisation within the ore zones is accompanied by pyrite (2% to 8%) with accessory pyrrhotite, chalcopyrite, electrum and other

minor sulphides and tellurides. The gold mineralisation is related to shear planes that postdate the main gneissic fabric developed

during peak granulite-facies metamorphism.

#### **EXPLORATION**

The Tropicana joint venture has assembled a dominant landholding within an emerging greenfields belt hosting the Tropicana gold

project. Maximising the value of the known Mineral Resource and capitalising on the strategic ground holding is dependent on the

timely application of exploration expenditure. The progressive focusing of expenditure in tenure shown to be more prospective will

increase the probability of new discoveries. This approach is being applied by the joint venture and will be achieved through sustained

investment in a systematic exploration programme.

Capitalising on the joint venture 'first mover' advantage is dependent on systematic exploration of regional targets (further than

60km from Tropicana), near resource targets (closer than 60km), and extensions of the known Mineral Resource that form part of

the underground Mineral Resource. The exploration strategy aims to balance short to longer term value creation through sustained

deployment of expenditure within the portfolio of early, mid and later stage prospects and targets.

The key objectives for 2013 can be summarised as follows:

•

exploration of priority targets on the mining leases, including extensions to Boston Shaker, Tropicana and northeast of Havana as

well as targets at Springbok and north and south of the known mineralisation;

•

aircore (AC) drill testing supported by ground geophysics (IP) across conceptual targets and geochemical targets to define prospects

for reverse circulation (RC) and diamond drill (DD) testing;

•

RC and DD testing of key prospects (Rosetta, Ninja, Monsoon, Beetle Juice, Mojito, Long Island, Wild Voodoo, Voodoo Child) with

potential to deliver both satellite and stand-alone Mineral Resources; and

•

advance the understanding of the orogen through geochronology, metamorphic, protolith geochemical studies and geological

mapping to further define prospective domains to focus exploration activities.

#### **PROJECTS**

An extensive drilling programme has been completed for the Havana Deeps pre-feasibility study, which has now entered the study

phase and is due for completion in Q3 2013. This study will examine the trade-off between open pit and underground mining of the

Havana Deeps deposit. Potential exists for a portion of the current Havana Deeps underground Mineral Resource to be mined via a

large open pit cutback on the Havana pit.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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# MINERAL RESOURCE Details of average drill-hole spacing and type in relation to Mineral Resource classification Type of drilling Mine/Project Category Spacing m (-x-) Diamond RC Blasthole Other Comments Tropicana Measured 25 x 25 Indicated 50 x 50 Inferred 100 x 100 Grade/Ore control 10 x 12 **Inclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade Contained gold Tropicana Category Tonnes Moz Boston Shaker - BS01 Measured

Indicated 2.34

2.29 5.35 0.17 Inferred 0.07 2.58 0.17 0.01 Total 2.41 2.29 5.52 0.18 **Boston Shaker Shell** Measured Indicated 2.49 2.82 7.01 0.23 Inferred 2.02 3.14 6.35 0.20 Total 4.51 2.96 13.36 0.43 Tropicana Starter pit – TP01 Measured 4.79 2.00 9.59 0.31 Indicated 0.17 1.03 0.18 0.01 Inferred 0.00 0.99 0.00 0.00

Total

4.96 1.97 9.77 0.31 Tropicana pit – TP02 Measured 3.93 1.87 7.34 0.24 Indicated 5.94 1.90 11.32 0.36 Inferred 0.01 1.91 0.03 0.00 Total 9.88 1.89 18.69 0.60 Tropicana Shell Measured 0.12 1.36 0.17 0.01 Indicated 3.04 1.82 5.53 0.18 Inferred 1.47 1.99 2.92 0.09 Total 4.63 1.86 8.62 0.28 Havana Starter pit – HA01 Measured 9.40 2.29 21.52

0.69 Indicated 0.57 1.77 1.02 0.03 Inferred Total 9.97 2.26 22.54 0.72 Havana Stage 3 – HA03 Measured 1.59 1.90 3.02 0.10 Indicated 4.24 1.87 7.92 0.25 Inferred 0.00 1.02 0.00 0.00 Total 5.83 1.87 10.94 0.35 Havana Stage 4 and 5 – HA05 Measured 0.68 2.75 1.87 0.06 Indicated 5.67 1.75 9.91 0.32 Inferred 0.00

2.88

```
0.00
0.00
Total
6.35
1.86
11.78
0.38
Havana Stage 6 – HA06
Measured
Indicated
7.60
1.37
10.40
0.33
Inferred
0.00
1.24
0.00
0.00
Total
7.60
1.37
10.40
0.33
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AUSTRALASIA
```

# as at 31 December 2012 Tonnes million Grade g/t Contained gold Tropicana Category Tonnes Moz Havana Stage 6 Shell Measured Indicated 2.09 1.43 3.00 0.10 Inferred 0.28 1.66 0.46 0.01 Total 2.37 1.46 3.46 0.11 Havana Shell Measured 0.04 5.00 0.18 0.01 Indicated 17.64 2.07 36.57 1.18 Inferred 0.18 2.43 0.43 0.01 Total 17.86 2.08

37.18 1.20

# Stockpile (Open pit) Measured 0.32 1.67 0.53 0.02 Indicated Inferred Total 0.32 1.67 0.53 0.02 Underground Measured Indicated 1.66 3.58 5.93 0.19 Inferred 4.26 3.07 13.07 0.42 Total 5.92 3.21 19.00 0.61 Tropicana Total 82.62 2.08 171.81 5.52 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes

million Grade g/t Contained gold Tropicana Category Tonnes Moz Measured 2.72 1.02 2.76 0.09 Indicated 31.63 1.92 60.66 1.95 Inferred 8.30 2.83 23.45 0.75 Tropicana Total 42.65 2.04 86.87 2.79 The Exclusive Mineral Resource includes Inferred Mineral Resource at depth in the designed pits, as well as the deeper portions of the Havana Deeps underground Mineral Resource, which are not yet drilled to a level of confidence to establish an Ore Reserve. **TROPICANA** 

#### continued

Inclusive Mineral Resource continued

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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# Mineral Resource below infrastructure as at 31 December 2012 Tonnes million Grade g/t Contained gold Tropicana Category Tonnes Moz Measured Indicated 1.66 3.58 5.93 0.19 Inferred 4.26 3.07 13.07 0.42 Tropicana Total 5.92 3.21 19.00 0.61 ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Tropicana Category Tonnes Moz Boston Shaker - BS01 Proved Probable 2.34

2.29

5.35 0.17 Total 2.34 2.29 5.35 0.17 Tropicana Starter pit – TP01 Proved 4.32 2.15 9.30 0.30 Probable 0.06 1.16 0.07 0.00 Total 4.38 2.14 9.37 0.30 Tropicana pit – TP02 Proved 3.54 2.00 7.09 0.23 Probable 5.19 2.07 10.73 0.35 Total 8.73 2.04 17.82 Havana Starter pit – HA01 Proved 7.95 2.48 19.73 0.63 Probable 0.47 1.93 0.91 0.03

Total

8.42 2.45 20.64 0.66 Havana Stage 3 – HA03 Proved 1.39 2.12 2.96 0.10 Probable 3.53 2.13 7.53 0.24 Total 4.92 2.13 10.49 0.34 Havana Stage 4 and 5 – HA05 Proved 0.65 2.90 1.87 0.06 Probable 4.70 2.05 9.62 0.31 Total 5.35 2.15 11.49 0.37 Havana Stage 6 – HA06 Proved Probable 5.54 1.67 9.27 0.30 Total 5.54 1.67

9.27

0.30 Stockpile (Open pit) Proved 0.29 1.76 0.51 0.02 Probable Total 0.29 1.76 0.51 0.02 Tropicana Total 39.99 2.12 84.94 2.73 Tropicana Mineral Resource reconciliation: 2011 to 2012 4.49 0.00 0.00 0.00 0.06 0.98 0.00 0.00 5.52 Ounces (millions) 5.6 5.4 5.2 5.0 4.8 4.6 4.4 4.2 2011 Depletion Gold price Cost Explo-

ration

Methodology Other Acquisition/ Disposal 2012 Tropicana Ore Reserve reconciliation: 2011 to 2012 2.74 0.00 0.00 0.00 0.00 0.00 -0.01 0.00 2.73 Ounces (millions) 2.739 2.737 2.735 2.733 2.731 2.729 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 123

**AUSTRALASIA** 

### Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Tropicana Gold price \$/oz AUD/\$ exchange rate Cut-off value g/t Au Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF % Boston Shaker -**BS01** 1,300 1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Havana Stage 3 – **HA03**

1,300

1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Havana Stage 4 and 5 - HA051,300 1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Havana Stage 6 – **HA06** 1,300 1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Havana Starter pit -HA01 1,300 1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Stockpile (Open pit)

1,300

1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Tropicana pit – TP02 1,300 1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Starter pit - TP01 1,300 1.02 0.70 0.0 0.00 100.0 100.0 100.0 100.0 100.0 90.0 Inferred Mineral Resource in business plan Inferred Mineral Resource within the open pit design is included in the business plan, but makes up only a small proportion (<1%) of the total mineralised material. **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Mark Kent MAusIMM

203 631

15 years Ore Reserve Salih Ramazan MAusIMM 222 870 10 years **TROPICANA** continued Tropicana 0 100 200 300 400 500 600 700 800 0.00 0.25 0.50 1.00 0.75 1.25 1.50 1.75 2.00 Grade tonnage curve – Surface (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t) Cut-off grade (g/t) 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 Tonnes above cut-off Ave grade above cut-off Tropicana 0 1 2 3

4

```
5
6
7
0
4
3
5
7
8
9
10
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade
above cut-off (g/t)
Cut-off grade (g/t)
11
9
7
5
3
Tonnes above cut-off
Ave grade above cut-off
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

Australia: Tropicana {
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AUSTRALASIA

```
AMERICAS
}
Colombia: La Colosa
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

AngloGold Ashanti has the Cripple Creek & Victor (CC&V, 100%) mine in the USA, the Cerro Vanguardia SA mine in Argentina (92.5%),

AngloGold Ashanti Córrego do Sítio Mineração operations and the Mineração Serra Grande, both in Brazil (both 100%).

The Americas represents one of the most significant growth regions for AngloGold Ashanti. The main projects are in Colombia with

additional projects and future mine expansions in progress in the USA, Argentina and Brazil maintaining and upgrading the current

production profile.

Combined production from these operations increased by 6% to 0.95Moz ounces of gold in 2012, equivalent to 24% of group

production.

The total Inclusive Mineral Resource across the Americas was 61.59Moz at the end of 2012 and the Ore Reserve was 11.01Moz.

AngloGold Ashanti also conducts an extensive greenfield exploration programme across the Americas, most notably in Colombia,

where it holds a significant land position and has made two greenfield exploration discoveries – Gramalote and La Colosa – which

together account for 29.39Moz of the Americas' Inclusive Mineral Resource.

**Inclusive Mineral Resource** 

Tonnes

million

Grade

g/t

Contained gold

as at 31 December 2012

Category

Tonnes

Moz

Americas

Measured

309.37

1.05

323.43

10.40

Indicated

301.17

1.28

384.65

12.37

Inferred

1,166.02

1.04

1,207.47

38.82

Total

1,776.55

1.08

1,915.55

61.59

Ore Reserve

```
Tonnes
million
Grade
g/t
Contained gold
as at 31 December 2012
Category
Tonnes
Moz
Americas
Proved
174.55
1.04
181.16
5.82
Probable
105.74
1.53
161.28
5.19
Total
280.29
1.22
342.44
11.01
REGIONAL OVERVIEW
Contribution to group production
(%)
Americas
24
Rest of AngloGold Ashanti
AGA Mineração
41
CC&V
26
Cerro Vanguardia
23
Serra Grande
Contribution to production by mine
The Americas Region is an important growth area
for AngloGold Ashanti, with operations in Argentina,
Brazil and the United States and projects in Colombia.
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```

**AMERICAS** 

#### **COUNTRY OVERVIEW**

AngloGold Ashanti has a single operation in Argentina, the Cerro Vanguardia mine, which is a joint venture with Formicruz (the province

of Santa Cruz). The province of Santa Cruz holds 7.5% and the remaining 92.5% belongs to AngloGold Ashanti. MINERAL RESOURCE ESTIMATION

The geological model is a critical part of the Mineral Resource estimation process. The mineralisation boundaries for each geological

entity (veins, stock work and wall rock) are defined from the detailed logging of all geological drill holes. This data is validated and the

information is then used to create a three dimensional model. This model is subsequently overlain with a 5m x 25m x 5m block model.

The block sizes used are chosen to represent the dimensions in which the deposit is intended to be mined.

Volumetric measurements of the deposit are subsequently computed in the system using the relevant block dimensions. Ordinary

Kriging is used to perform the grade interpolation and field tests are conducted to determine appropriate *in-situ* densities.

Conditional Simulations are performed in the main deposits for uncertainty assessment and the Mineral Resource is then classified into

the Measured, Indicated and Inferred Mineral Resource categories according to stringent AngloGold Ashanti guidelines.

#### ORE RESERVE ESTIMATION

The appropriate Mineral Resource models are used as the basis for the Ore Reserve. All relevant modifying factors such as mining

dilution and costs are used in the Ore Reserve conversion process. This is based on the original block grades and tonnage and

includes waste material (both internal and external). Appropriate Ore Reserve cut-off grades are applied and all blocks above this

cut-off are reported.

It is important to emphasise the importance of the silver during the optimisation of the pits, since silver is a significant by-product at

Cerro Vanguardia. The ratio of silver to gold commonly ranges from 10 to 15g/t of silver per 1g/t of gold.

Cerro Vanguardia uses conventional open-pit mining with a doubled bench height of 20m and underground methods. Open-pit

mining is distributed between multiple operating pits, typically three to five at any one time; depending on the plant feed requirements.

Currently, there are three underground mines which are mined at same time. Waste dumps and heap-leach stockpiles are located

adjacent to each pit. Plant grade ore feed is trucked to either the long-range or short-range stockpiles in order to smooth out the head

grades and avoid recovery losses due to higher than planned silver grades.

#### **ARGENTINA**

**2012 MINERAL RESOURCE AND ORE RESERVE REPORT** 

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#### CERRO VANGUARDIA

#### **LOCATION**

Cerro Vanguardia is located in Santa Cruz Province, southern Argentina, approximately 110 km north-northwest of the coastal town

of San Julián. The mining lease encompasses an area of approximately 540km2. Access to the area is by plane from Buenos Aires to

Comodoro Rivadavia or Rio Gallegos and subsequently by road to the mine site.

#### **GEOLOGY**

Cerro Vanguardia is located in the central portion of the 60,000km2 Deseado Massif, one of the most extensive volcanic complexes in

southern Patagonia, Argentina. The Deseado Massif consists of Paleozoic low-grade metamorphic basement rocks, unconformably

overlain by a thick sequence of Lower to Upper Jurassic volcanic and volcaniclastic rocks of intermediary and acidic composition.

These older rocks are exposed in erosional windows through overlying Cretaceous sediments and Tertiary to Quaternary basalts.

The Chon Aike Formation (Middle to Upper Jurassic volcanics) hosts a low sulphidation epithermal type gold and silver deposit.

The thickness of the ignimbrite sequence is estimated to have exceeded 1,000m, but some lateral thickness variations have been

identified across the district. Epithermal Au-Ag bearing structures cut across all Jurassic rocks in the stratigraphy. The two main

ignimbrite units, Masiva-Lajosa and Granosa, host the majority of mineralised veins. The Masiva-Lajosa ignimbrite occurs at the

top of the sequence whilst the Granosa ignimbrite occurs towards the bottom. These two ignimbrites are separated by two thinner,

polymictic ignimbrite units (Brechosa and Brechosa Base) and a sequence of stratified crystal to ash rich tuffs. The base of the

sequence is a mixed unit of stratified ignimbrite intercalated with fine-grained tuffs.

The mineralisation is concentrated in steeply dipping quartz veins that cut the flat-lying ignimbrites and volcaniclastic rocks. The Cerro

Vanguardia district contains around 100 gold and silver-bearing epithermal veins for a cumulative exposed vein strike extension of

more than 240km. Fifty seven veins are currently known to contain economic gold and silver mineralisation.

All veins at Cerro Vanguardia consist mainly of quartz, adularia and minor electrum, native gold, silver sulphides and native silver as

fine-grained disseminations. Vein textures are mainly characterised by pseudomorphic quartz-lattice textures, colloform-crustiform

banding, massive to vuggy quartz veins and breccias.

#### **EXPLORATION**

The 2012 exploration programme included 44,000m of diamond drilling (DD), 23,000m of reverse circulation (RC) drilling and more

than 8,000m of trenching. This allowed the current Mineral Resource to be increased to contain approximately 400,000oz of gold.

The objectives for the 2012 drilling programme were as follows:

incorporate an additional 300,000oz in the Mineral Resource;

define new targets for 2013; and

enne new targets for 2013; and

incorporate low grade targets for heap leach operation.

The main veins drilled during 2012 were Loma del Muerto, Lucy, Vanguardia 3, Fortuna, Luciana. Gabriela vein is located in the north

of the central area and has mineralisation from surface to 200m. The Fortuna vein is also in the north of the central area and recent

drilling has extended its potential northwards and deeper to 150m. The Loma del Muerto vein, one of the largest in Cerro Vanguardia,

is located in the central area and its mineralisation extends from 20m down to a depth of 300m. The Luciana vein is located in the north

of the central area and mineralisation is associated with several quartz veins, yielding well-mineralised intervals to a depth of 300m.

The Lucy vein is located in the south of the central area and the mineralisation is associated with three quartz veins and stockworks,

extending from 30m down to 350m. Osvaldo Diez is located in the core of the central area and the mineralisation extends from surface

to 200m deep. Vanguardia 3 is located in the northern area and mineralisation extends from surface to 200m deep. Verónica is located

in the northwestern of the central area and mineralisation extends to a depth of 175m. The additional Mineral Resource that was

generated was separated into full-grade vein material and low-grade heap-leach material.

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**AMERICAS** 

#### **PROJECTS**

Cerro Vanguardia currently mines from multiple open pits that are up to 200m deep. The highest grade and thickest veins were mined

first to maximise the net present value. Mining costs and strip ratios have increased as grades have decreased over the years. Higher

gold prices have extended the life of Cerro Vanguardia, but at higher stripping ratios and operating costs.

The recent start up of the heap leach turned low-grade material associated with some veins into new exploration targets.

A study to start mining open pits of exclusively low-grade ore for heap leach is ongoing. Mapping and exploration is also focused to

discover domes and other potential bulk-tonnage, low-grade mineralisation deposits not previously investigated within the district.

The underground mining at Cerro Vanguardia is complementing the current open-pit production. The tonnage from the open pits

will decrease to an average of 800,000tpa as the highest stripping ratio open pits are replaced with underground operations. The

underground mines are expected to increase their production to 230,000tpa. There are currently two veins being mined from

underground: Mangas and Osvaldo Diez. Underground development is also taking place at Osvaldo 4 and Osvaldo 10 and there are

several more projects planned, such as Cuncuna, Zorro, Osvaldo 8, Osvaldo 9, Osvaldo 12, Luciana 3, Loma del Muerto, Serena,

Liliana and Verónica.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

Cerro Vanguardia

Measured

3 x 15,

12.5 x 5

X

X Channel sampling only for

underground

Indicated

40 x 40

X X -

— T---4

Inferred

80 x 80

X X

Grade/Ore control 3 x 15, 12.5 x 5 X X Channel sampling only for underground Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Cerro Vanguardia Category Tonnes Moz Vein Resources (Open pit) Measured 1.60 6.10 9.78 0.31 Indicated 13.89 5.08 70.49 2.27 Inferred 2.88 4.95 14.26 0.46 Total 18.37 5.15 94.53 3.04 Heap leach Measured 9.75 0.69 6.71 0.22 Indicated

20.29 0.48 9.79 0.31

```
Inferred
3.86
0.49
1.89
0.06
Total
33.90
0.54
18.39
0.59
Vein Resources (Underground)
Measured
0.25
8.02
1.99
0.06
Indicated
2.73
9.37
25.61
0.82
Inferred
0.75
8.25
6.19
0.20
Total
3.73
9.05
33.79
1.09
Cerro Vanguardia
Total
55.99
2.62
146.72
4.72
CERRO VANGUARDIA continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

Argentina: Cerro Vanguardia {
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AMERICAS

### **CERRO VANGUARDIA continued**

**Exclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Cerro Vanguardia

Category

Tonnes

Moz

Measured

2.14

2.55

5.45

0.18

Indicated

31.31

1.69

52.91

1.70

Inferred

7.49

2.98

22.34

0.72

Cerro Vanguardia

Total

40.94

1.97

80.70

2.59

The Exclusive Mineral Resource is primarily located in the volume lying between the pit design and the Mineral Resource shell and is

due to the difference in the economic parameters that have been used. In marginal deposits, where the grade of Au and Ag are above

the Mineral Resource cut-off but below the Ore Reserve cut-off, significant zones of Exclusive Mineral Resource will be generated. Very

deep Mineral Resource will also not be converted in the near term to Ore Reserve and is therefore listed as Exclusive Mineral Resource.

Inclusive Mineral Resource by-product: Silver (Ag)

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained silver

Cerro Vanguardia

Category

Tonnes Moz

### Measured 11.60 30.87 358.00 11.51 Indicated 36.91 63.18 2,331.88 74.97 Inferred 7.49 79.51 595.41 19.14 Cerro Vanguardia Total 56.00 58.67 3,285.29 105.62 **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Cerro Vanguardia Category Tonnes Moz Vein Resources (Open pit) Proved 1.16 5.83 6.75 0.22 Probable 6.39 5.23 33.41 1.07 Total 7.55 5.32 40.16 1.29 Heap Leach

Proved

9.18 0.66 6.09 0.20 Probable 2.46 0.46 1.13 0.04 Total 11.64 0.62 7.22 0.23 Vein Resources (Underground) Proved 0.11 6.12 0.65 0.02 Probable 2.06 7.37 15.17 0.49 Total 2.17 7.31 15.82 0.51 Cerro Vanguardia Total 21.35 2.96 63.20 2.03 Cerro Vanguardia Mineral Resource reconciliation: 2011 to 2012 4.41 -0.25 0.00 0.00 0.38 0.18 0.00 0.00 4.72 Ounces (millions) 4.8 4.7

4.6

4.5 4.4 4.3 4.2 4.1 4.0 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 Cerro Vanguardia Ore Reserve reconciliation: 2011 to 2012 2.22 -0.26 0.06 -0.05 0.00 0.07 0.00 0.00 2.03 Ounces (millions) 2.25 2.20 2.15 2.10 2.05 2.00 1.95 1.90 2011 Depletion Model change Change economics New ounces from

projects Scope

```
change
Other
Acquisition/
Disposal
2012
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

# Ore Reserve modifying factors as at 31 December 2012 Cerro Vanguardia Gold price \$/oz ARS/\$ exchange rate Cut-off value g/t Au Dilution % Dilution g/t % RRF (based tonnes) % RRF (based on g/t) % MRF (based on tonnes) % MRF (based on g/t) MCF % MetRF % Heap Leach 1,500 4.30 0.35 100.0 61.3 Vein Resources (Open pit)

1,500 4.30

```
2.24
45.0
97.0
96.0
93.0
94.3
Vein Resources
(Underground)
1,500
4.30
2.50
30.0
93.0
94.3
Inferred Mineral Resource in business plan
as at 31 December 2012
Tonnes
million
Grade
g/t
Contained gold
Cerro Vanguardia
Tonnes
Moz
Comment
Vein Resources (Open pit)
0.51
4.09
2.06
0.07
Represent 5% of Open pit schedule
Heap Leach
0.16
0.50
0.08
0.00
Represent 2% of Heap Leach schedule
Vein Resources (Underground)
0.62
7.09
4.42
0.14
Represent 22% of Underground schedule
```

Total 1.29 5.09 6.56 0.21 The Inferred Mineral Resource that has been included in the pit design is not included in the Ore Reserve statement. These resources are normally located in the deep and lateral zones of the Mineral Resource models. In order for ore from the Inferred Mineral Resource to be included in the production plan, it must be upgraded by infill drilling. Ore Reserve by-product: Silver (Ag) as at 31 December 2012 Tonnes million Grade g/t Contained silver Cerro Vanguardia Category Tonnes Moz Proved 10.44 24.47 255.58 8.22 Probable 10.90 92.77 1,011.63 32.52 Cerro Vanguardia Total 21.34 59.36 1,267.21 40.74 **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Juan Paredes MAusIMM 227 738 16 years Ore Reserve

```
Jorge Sanguin
MAusIMM
310 925
20 years
Cerro Vanguardia
0
2
4
6
8
10
12
14
16
18
20
0
2
4
3
5
6
7
8
9
10
Grade tonnage curve – Surface (metric)
Tonnes above
cut-off (millions)
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
18
16
14
12
10
8
6
4
Tonnes above cut-off
Ave grade above cut-off
Cerro Vanguardia
0.0
0.5
1.0
```

1.5

```
2.0
2.5
3.0
3.5
4.0
0
2
4
8
6
10
12
14
16
18
20
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade
above cut-off (g/t)
Cut-off grade (g/t)
30
26
22
18
14
10
Tonnes above cut-off
Ave grade above cut-off
133
AMERICAS
```

#### **COUNTRY OVERVIEW**

AngloGold Ashanti's operations in Brazil comprise AngloGold Ashanti Córrego do Sítio Mineração (AGA Mineração) in the Quadrilátero

Ferrífero, Minas Gerais plus Mineração Serra Grande, in Goiás. AGA Mineração consists of several operations, namely Cuiabá,

Lamego, Córrego do Sítio as current operating mines and Nova Lima Sul as a conceptual project.

#### MINERAL RESOURCE ESTIMATION

Iron Quad Operations (AGA Mineração)

Cuiabá mine is the largest gold producer in Brazil, and has been in operation since 1984. The mine is hosted in a greenstone

belt environment and consists of gold mineralisation in massive to disseminated sulphides (mainly pyrite, subordinate arsenopyrite

and pyrrhotite). The main mineralisation host rock is Banded Iron Formation (BIF), sealed by graphite schists and metabasic rocks

alternating in the hanging wall and foot wall depending on the structural position in the folded structure. Mining levels are 60m to 66m

vertically apart, the deepest development at Cuiabá is currently at 1,111m depth. Shaft facilities are currently at the last loading level at

Level 11 (about 1,200m depth).

The Cuiabá dataset consists of channel samples and drill-hole samples. The 3D modelling and estimation is performed with two

estimation domains, namely the thick mineralisation, consisting of Fonte Grande Sul (FGS) and Serrotinho (SER), and the narrow vein

domain consisting of Balancão, Galinheiro and Canta Galo. All channel and drill-hole samples are used in the 3D geological models

and identify rock types, in order to incorporate lithological proportions into the grade estimates. Conditional simulation is applied to

determine the uncertainty in the block models and classify the Mineral Resource into Measured, Indicated and Inferred.

Lamego shows similar rock assemblage but higher structural complexity than Cuiabá. The BIF which contains the mineralisation is

more structurally deformed and sometimes is described as 'metachert'. Lamego is part of the Cuiabá complex – they are 7km apart,

with existing infrastructure to truck the ore by sealed road to Cuiabá. The Lamego Run of Mine (ROM) product is treated at Cuiabá's

gravity gold plant. The sulphide concentrates from both mines are transported to the Queiroz plant complex for the last process of the

metallurgical recovery which consists of a roaster, which produces gold and sulphur acid. The estimation method applied at Lamego

is also Ordinary Kriging and classification of the Mineral Resource is also based on simulation techniques.

Córrego do Sítio is a new mine, comprising sulphide underground operations (currently Cachorro Bravo, Laranjeiras and Carvoaria,

and the under development Sangue de Boi) and open pit oxide operations (currently Rosalino, Carvoaria and Laranjeiras).

The entire Córrego do Sítio complex comprises 23 mineral deposits reported as Mineral Resources plus some exploration targets

being developed. Currently the Córrego do Sítio complex is the largest Mineral Resource within the Brazilian assets. Mineralisation

occurs in a greenstone belt geological environment, associated with quartz and sulphides (mainly arsenopyrite) in a structural

controlled corridor approximately 16 – 20km in strike length and about 500m vertical extent. The Mineral Resource is estimated by

Ordinary Kriging, and classified using geostatistical Conditional Simulation techniques.

In Brazil's world famous Iron Quadrilateral, the Nova Lima Sul project consists of the Raposos Mine, Morro da Glória Mine (both

underground mines) and Luzia da Mota oxide Mineral Resource. Raposos was estimated by the geostatistical Uniform Conditioning

technique, and both Morro da Glória and Luzia da Mota were estimated by Ordinary Kriging.

Serra Grande

In July 2012, AngloGold Ashanti purchased Kinross' 50% share of Mineração Serra Grande S.A, bringing its ownership to 100%.

The mine complex is located in the municipality of Crixás, in the central portion of Brazil, 400km from the Capital, Brasília, and about

350km from the state capital of Goiás, Goiânia.

The geological setting of Crixás mine is also a greenstone belt, with metasedimentary and metavolcanic rocks. The mineralisation is

associated with quartz veins, massive to disseminated sulphides and different degrees of alteration. It is distributed in stratigraphically

layers in the metamorphic sequence. Geometry of the mineralised deposits is typically complex, with pinch and swell, folded and

boudinage shapes, dipping from  $10^\circ$  to  $25^\circ$  and with greatest continuity along northwest plunging structures.

**BRAZIL** 

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The main producing areas are Corpo IV and the open pit (all part of Mina III), Palmeiras (a three-year old developing mine) and Mina

Nova, which is the lowest dip angle structure. In 2012 Cajueiro, a new discovery, was evaluated and is reported as an Inferred Mineral

Resource.

The Mineral Resource is estimated by Ordinary Kriging.

ORE RESERVE ESTIMATION

The gold price, projected operational performance and costs as well as metallurgical recoveries are taken into consideration in

determining the Ore Reserve. Mining parameters such as the mining method, minimum mining width, MCF, dilution and recovery are

all applied in the process.

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**AMERICAS** 

#### **OVERVIEW**

The wholly-owned AGA Mineração mining complex is located in south-eastern Brazil, in the state of Minas Gerais. It lies south and

east of the city of Belo Horizonte and has operations in the municipalities of Nova Lima, Sabará and Santa Bárbara. This area hosts

numerous other historic and current gold mining operations, as well as open-pit limestone and iron ore operations. Reorganisation of AGA Mineração was completed during the first half of 2010 and the new company is called AngloGold Ashanti

Córrego do Sítio Mineração (commonly referred to as AGA Mineração). The aim was to capture the operating and financial synergies

of the numerous mining operations in this historical mining district. The company now encompasses the mining operations at Cuiabá,

Lamego, Queiroz, Córrego do Sítio and the former São Bento Mine, which is part of the Córrego do Sítio Complex. AGA Mineração has mining rights over 61,864ha and ore is sourced from the Cuiabá and Lamego underground mines and processed

at the Cuiabá and Queiroz plants, while the Córrego do Sítio open pit mine has a heap-leaching facility. A conceptual study on the

Nova Lima Sul project, which involves the re-opening of the mothballed Raposos mine, is in progress. All these operations are primarily

gold mines, but sulphur (for the production of sulphuric acid) is a by-product of the Cuiabá and Lamego mining operations.

### MINERAL RESOURCE

**Inclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

AGA Mineração

Category

Tonnes

Moz

Measured

8.71

6.87

59.82

1.92

Indicated

16.80

5.55

93.18

3.00

Inferred

37.62

5.68

213.84

6.88

AGA Mineração

Total

63.13

5.81 366.84 11.79 **Exclusive Mineral Resource** Exclusive Mineral Resource is detailed by mine in the appropriate section. Mineral Resource below infrastructure as at 31 December 2012 Tonnes million Grade g/t Contained gold AGA Mineração Category Tonnes Moz Measured 0.92 6.03 5.57 0.18 Indicated 11.59 4.80 55.56 1.79 Inferred 34.18 5.73 195.79 6.29 AGA Mineração Total 46.69 5.50 256.92 Inclusive Mineral Resource by-product: Sulphur (S) Sulphur as at 31 December 2012 Tonnes million Grade %S **Pounds** AGA Mineração Category million Mt Measured 5.01 6.6

0.33

```
731
Indicated
7.63
5.7
0.43
957
Inferred
14.11
5.9
0.84
1,846
AGA Mineração
Total
26.75
6.0
1.60
3,534
AGA MINERAÇAO
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}
```

### **ORE RESERVE** Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold AGA Mineração Category Tonnes Moz Proved 4.68 5.99 28.07 0.90 Probable 9.54 4.66 44.41 1.43 AGA Mineração Total 14.22 5.10 72.48 2.33 Ore Reserve below infrastructure as at 31 December 2012 Tonnes million Grade Contained gold AGA Mineração Category Tonnes Moz Proved 0.23 8.12 1.88 0.06 Probable 3.92

4.89 19.16 0.62

Total

AGA Mineração

4.15 5.07 21.04 0.68 Ore Reserve by-product: Sulphur (S) Sulphur as at 31 December 2012 Tonnes million Grade %S Pounds AGA Mineração Category million Mt Proved 3.18 5.5 0.18 386 Probable 6.03 4.4 0.26 583 AGA Mineração Total 9.21 4.8 0.44 969 AGA Mineração Mineral Resource reconciliation: 2011 to 2012 11.46 -0.43 0.09 0.00 0.49 0.14 0.05 0.00 11.79 Ounces (millions) 11.9 11.7 11.5 11.3 11.1 10.9 2011

Deple-

tion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 AGA Mineração Ore Reserve reconciliation: 2011 to 2012 2.05 -0.39 0.40 -0.08 0.00 0.03 0.33 0.00 2.33 Ounces (millions) 2.4 2.3 2.2 2.1 2.0 1.9 1.8 1.7 1.6 1.5 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012

AGA Mineração

```
0
2
3
4
5
6
7
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Grade tonnage curve – Surface (metric)
Tonnes above
cut-off (millions)
Average
grade above
cut-off (g/t)
Cut-off grade (g/t)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
Tonnes above cut-off
Ave grade above cut-off
AGA Mineração
25
30
35
40
45
50
55
60
65
70
0.0
1.0
0.5
1.5
2.0
2.5
3.0
```

3.5

```
4.0
4.5
5.0
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade
above cut-off (g/t)
Cut-off grade (g/t)
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
Tonnes above cut-off
Ave grade above cut-off
137
AMERICAS
```

#### **CORREGO DO SITIO**

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### AGA MINERAÇAO -

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#### **LOCATION**

Córrego do Sítio (CdS) is located 60km east of the city of Belo Horizonte, which is in the Minas Gerais State of Brazil. The southern

portion of this mining complex is referred to as Córrego do Sítio I (CdS I) whilst the northern portion (formerly known as São Bento)

has been renamed Córrego do Sítio II (CdS II).

#### **GEOLOGY**

CdS is located in the eastern part of the lower to middle greenschist facies Archaean Rio das Velhas greenstone belt. The CdS I and

CdS II gold deposits and associated targets are located in a gold trend that extends for about 11km in a north-easterly direction, from

Grota Funda (CdS I areas) in the south to Jambeiro (São Bento/CdS II areas) in the north. The main gold targets and deposits are

distributed over three trends, namely the CdS trend, the Donana Trend and the Cristina Trend.

The CdS deposits consist of narrow northeast/southwest elongated lenses of mineralisation dipping at 20° to 30°. CdS is an orogenic

type deposit and comprises many hydrothermal lodes with quartz veins and low sulphide content disseminated in the wall rocks.

The deposits are narrow, elongated and folded. In general, the mineralisation consists of sericitic zones and quartz veinlets. The gold

occurs as microscopic or sub microscopic inclusions in arsenopyrite and sometimes iron-antinomy sulphide berthierite (FeSb2S4).

Other typical sulphide minerals are pyrrhotite, pyrite and chalcopyrite.

### **PROJECTS**

The CdS project reached full production level in 2012. The sulphide plant started operating in January 2012 and reached full capacity

in the second half of the year. The mine production ramp up is ongoing and full stope production was reached in late December 2012.

The main ventilation system is working and the mine dewatering system and other infrastructure works were completed in 2012.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

AGA Mineração –

Córrego do Sítio

Measured

25 x 25

```
X
X
     Channel sampling in the oxide
Indicated
30 x 25,
50 x 30,
50 x 50
X
Inferred
25 x 40,
30 x 25,
40 x 100,
50 x 30,
50 x 50,
100 x 50,
100 x 100,
200 x 200
X
Grade/Ore control 3 x 3,
5 x 4
    Channel sampling in the oxide
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}
```

# Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Córrego do Sítio Category Tonnes Moz CdS I (Cachorro Bravo) Measured 1.20 7.65 9.19 0.30 Indicated 0.65 6.75 4.38 0.14 Inferred 0.63 7.93 5.02 0.16 Total 2.48 7.49 18.59 0.60 CdS I (Carvoaria) Measured Indicated 0.73 11.47 8.34 0.27 Inferred 0.42 8.21 3.44 0.11 Total

1.15 10.28

11.78 0.38 CdS I (Secondary) Measured 0.01 2.72 0.03 0.00 Indicated 1.13 4.84 5.47 0.18 Inferred 3.93 3.87 15.23 0.49 Total 5.07 4.09 20.73 0.67 CdS I (Laranjeiras) Measured 0.57 6.23 3.52 0.11 Indicated 1.46 5.84 8.55 0.27 Inferred 3.06 7.16 21.90 0.70 Total 5.09 6.68 33.97 1.09 CdS I (Transitional) Measured 0.26 6.56 1.73 0.06 Indicated

1.13 4.21 4.77 0.15 Inferred 0.89 2.86 2.55 0.08 Total 2.28 3.96 9.05 0.29 CdS I (Oxides) Measured 1.13 3.90 4.39 0.14 Indicated 2.28 3.51 8.02 0.26 Inferred 1.81 2.74 4.95 0.16 Total 5.22 3.33 17.36 0.56 CdS II (Pinta Bem) Measured Indicated Inferred 0.18 3.32 0.60

0.02

Total 0.18 3.32 0.60 0.02 CdS II (Sangue de Boi) Measured Indicated 0.52 6.27 3.28 0.11 Inferred 2.09 5.74 12.03 0.39 Total 2.61 5.85 15.31 0.49 CdS II (Sao Bento) Measured Indicated Inferred 2.04 8.00 16.32 0.52 Total 2.04 8.00 16.32 0.52 CdS II (Pari) Measured

Indicated Inferred 2.68 3.15 8.44 0.27 Total 2.68 3.15 8.44 0.27 CdS II (Secondary) Measured Indicated Inferred 0.26 3.65 0.93 0.03 Total 0.26 3.65 0.93 0.03 CdS II (Transitional) Measured Indicated 0.00 2.92 0.01 0.00 Inferred

0.10

```
3.70
0.35
0.01
Total
0.10
3.68
0.36
0.01
CdS II (Oxides)
Measured
Indicated
0.29
4.04
1.17
0.04
Inferred
1.29
3.53
4.54
0.15
Total
1.58
3.62
5.71
0.18
Córrego do Sítio
Total
30.74
5.18
159.15
5.12
```

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**AMERICAS** 

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Exclusive Mineral Resource as at 31 December 2012 Tonnes million Grade
g/t Contained gold Córrego do Sítio Category Tonnes Moz
Measured 2.17 5.93 12.86 0.41
Indicated 5.90 4.93 29.11
0.94 Inferred 19.37 4.97 96.30
3.10 Córrego do Sítio Total 27.44 5.04
138.27 4.45 The Exclusive Mineral Resource includes all of the CdS areas. It also includes the Cachorro Bravo, Laranjeiras and Carvoaria
underground deposits. The Inferred Mineral Resource that has been included in the pit shells of the oxidised mineralisation is also part of the Exclusive Mineral Resource.  ORE RESERVE  Ore Reserve
as at 31 December 2012 Tonnes million Grade
g/t Contained gold Córrego do Sítio Category Tonnes
Moz CdS I (Cachorro Bravo) Proved

0.69

4.98 3.42 0.11 Probable 0.40 4.75 1.91 0.06 Total 1.09 4.89 5.33 0.17 CdS I (Carvoaria) Proved Probable 0.80 6.89 5.52 0.18 Total 0.80 6.89 5.52 0.18 CdS I (Laranjeiras) Proved 0.25 4.64 1.16 0.04 Probable 0.76 4.19 3.18 0.10 Total 1.01 4.31 4.34 0.14 CdS I (Oxides) Proved 0.56 2.52 1.42 0.05

# Probable 1.14 2.11 2.40 0.08 Total 1.70 2.24 3.82 0.12 CdS II (Sangue de Boi) Proved Probable 0.37 4.82 1.77 0.06 Total 0.37 4.82 1.77 0.06 CdS II (Oxides) Proved Probable 0.04 2.46 0.09 0.00 Total 0.04 2.46 0.09 0.00 Córrego do Sítio Total 5.00 4.17 20.87 0.67 **CORREGO DO SITIO** continued

AGA MINERAÇAO –

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}

# Ore Reserve modifying factors as at 31 December 2012 Córrego do Sítio Gold price \$/oz BRL/\$ exchange rate Cut-off value g/t Au Stoping width cm Dilution % Dilution g/t % RRF (based tonnes) % RRF (based on g/t) % MRF (based on tonnes) % MRF (based on g/t) MCF % MetRF % CdS I (Cachorro Bravo) 1,300 1.62 3.71 15.0 0.00

-95.0

```
88.0
CdS I (Carvoaria)
1,300
1.62
3.71
15.0
0.00
-95.0
88.0
CdS I (Laranjeiras)
1,300
1.86
3.71
15.0
0.00
-95.0
88.0
CdS I (Oxides)
1,300
1.62
0.61
28.0
0.20
-92.0
88.0
CdS II
(Sangue de Boi)
1,300
1.62
3.71
15.0
0.00
-95.0
88.0
```

CdS II (Oxides)

1,300 1.62 0.65 28.0 0.20 -92.088.0 Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade g/t Contained gold Córrego do Sítio Tonnes Moz Comment CdS I (Oxides) 0.52 2.15 1.11 0.04 CdS II (Oxides) 0.02 3.20 0.05 0.00 Total 0.54 2.15 1.16 0.04 The Inferred Mineral Resource has been included in the mine design, but not in the mine plan. Inferred Mineral Resource has been located in the mining panels in the lower areas of some sulphide deposits such as Cachorro Bravo, Laranjeiras, Carvoaria and Sangue de Boi. **COMPETENT PERSONS** Category Name Professional organisation Registration number

Relevant
experience
Mineral Resource
Alessandro Henrique Medeiros Silva
MAusIMM
224 831
11 years
Ore Reserve
Glauber Luvizotto
MAusIMM
311 842
8 years
{
141
AMERICAS

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### AGA MINERAÇAO - CUIABA

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#### **LOCATION**

Cuiabá is located near Sabará, southeast of the city of Belo Horizonte within the mining district referred to as the Iron Quadrangle.

This region is the second largest producer of iron, gold and manganese in Brazil.

#### **GEOLOGY**

Cuiabá mine has gold mineralisation associated with sulphides and quartz veins hosted in Banded Iron Formation (BIF) and volcanic

sequences. The ore is strongly stratiform due to the selective sulphidation of the iron-rich layers. Steeply plunging shear zones tend to

control the materialisation shoots, which commonly plunge parallel to intersection lineation between banding and foliation associated

with a reclined fold.

Apparent intersection of thrust faults with tight isoclinal folds in a ductile environment often control the mineralisation structures.

The host rocks are mostly BIF with lesser mafic volcanics (mainly with basaltic composition). Mineralisation is interpreted to be due

to the interaction of low salinity, carbon dioxide rich gold-bearing fluids with the high-iron BIF, basalts and carbonaceous graphitic

schists. Sulphide mineralisation consists of pyrite and pyrrhotite with subordinate arsenopyrite and chalcopyrite; the latter tends to

occur as a late-stage fracture fill and is not associated with gold mineralisation. Wallrock alteration is typically carbonate, potassic and

silicic, showing clear zonation in the underground environment. The ore is mainly concentrated in the silicic and sulphidation zones,

inside the BIF or in potassic (and sericitic) zones near the basalts. The main mineralised deposits at Cuiabá are as follows:

\_

normal limb: Fonte Grande Sul (FGS) and Serrotinho (SER); and

•

overturned limb: Balanção (BAL), Galinheiro (GAL) and Canta Galo (CGL).

### **EXPLORATION**

Cuiabá has four satellite deposits: Surucucu, Dom Domingos, Galinheiro Foot wall (GAL-FW) and Viana. The first two are located in

the BIF and the other two in schists in the foot wall and hanging wall respectively. During 2011 exploration drilling was undertaken

at the Surucucu deposit. Results showed that the mineralisation of the Serrotinho deposit extends towards Surucucu on Levels 16

and 17. Further drilling was completed on the Dom Domingos mine on Levels 15 and 16 to identify extensions to the mineralisation.

The exploration work will be reinforced in 2013 based on two main projects:

•

define the Mineral Resource above Level 21 by evaluating the satellite deposits' potential (Viana, Dom Domingos, GAL-FW) and the

strike extension of the main deposit; and

•

deep exploration aiming to define down-plunge extension of main and satellite deposits to Level 32. Exploration results will be the

foundation of the Cuiabá Deeps Projects, which is part of the asset strategy optimisation exercise.

The exploration plan comprises underground drilling and deep holes from surface to intercept below Level 24, or deeper than 1,400m.

Two new underground rigs were acquired in 2012 to work exclusively inside the mine checking the continuity of satellites and main

deposits.

### **PROJECTS**

A conceptual study of Cuiabá Deeps Project started this year. The strategy is to optimise future production from Cuiabá

without abandoning the narrow vein deposits and extend the Life of Mine (LOM) by adding Mineral Resource below Level 21.

The components of this study will be: exploration, rock engineering, transport alternatives, infrastructure, tailings dam and metallurgy.

During 2012, sub-level bench mining method was implemented and a new trial mining with drill up blind-hole stoping was done,

allowing sub-levels at low inclination stopes. It is expected that production from sub-level benches will represent more than 50% of

total production by the end of 2013.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

AGA Mineração -

Cuiabá

Measured

30 x 60

X

X

Channel sampling for underground,

short holes only to intercept hanging

wall contact

Indicated

30 x 60

X

\_

Inferred

80 x 80

X

\_

\_

Grade/Ore control 5 x 5

X – – X

Channel sampling for underground,

short holes only to intercept hanging

wall contact

**Inclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Cuiabá

Category

Tonnes Moz

Main Deposits

Measured

2.10 10.52 22.04 0.71 Indicated 1.17 9.43 11.07 0.36 Inferred 5.00 8.82 44.14 1.42 Total 8.27 9.34 77.25 2.48 Narrow Veins Measured 1.55 5.59 8.68 0.28 Indicated 3.82 5.15 19.67 0.63 Inferred 4.71 5.93 27.92 0.90 Total 10.08 5.58 56.27 1.81 Secondary areas Measured 0.76 6.22 4.75 0.15 Indicated 0.17 6.78

1.15 0.04

Inferred 0.32 6.08 1.92 0.06 Total 1.25 6.26 7.82 0.25 Cuiabá Total 19.60 7.21 141.34 4.54 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Cuiabá Category Tonnes Moz Measured 1.74 7.51 13.07 0.42 Indicated 1.30 6.00 7.79 0.25 Inferred 10.03 7.37 73.97 2.38 Cuiabá Total 13.07 7.26 94.83

At Cuiabá, 2.80Moz of the Exclusive Mineral Resource comes from the Main and Narrow Vein deposits. This Exclusive Mineral

Resource is Inferred Mineral Resource that is in the process of being upgraded via conversion drilling. The Exclusive Mineral Resource

is located below infrastructure, starting on Level 17 (at FGS and SER) and Level 14 (at BAL, GAL and CGL). In addition, secondary areas consisting of old stoping panels and satellite deposits are also considered Exclusive Mineral Resource. {

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AMERICAS

### ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Cuiabá Category Tonnes Moz Main Deposits Proved 1.69 9.00 15.25 0.49 Probable 0.97 7.99 7.75 0.25 Total 2.66 8.63 23.00 0.74 Narrow Veins Proved 1.22 4.82 5.86 0.19 Probable 3.33 4.65 15.51 0.50 Total 4.55 4.70 21.37 0.69 Cuiabá Total 7.21 6.15 44.36

Ore Reserve modifying factors

% RRF

# % MRF as at 31 December 2012 Cuiabá Gold price \$/oz BRL/\$ exchange rate Cut-off value g/t Au Stoping width cm Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF Main Deposits 1,300 1.90 5.01 6.0 95.0 93.0 Narrow Veins

1,300

1.90 3.75 0.3 95.0 93.0 Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade Contained gold Cuiabá Tonnes Moz Comment Main Deposits 0.23 5.98 1.37 0.04 Part of FGS Level 15/16 and SER deposit Levels 15/16/17 Narrow Veins 0.21 5.62 1.20 0.04 Part of deposits BAL and GAL from Level 12 to 15 Total 0.44 5.81 2.57 0.08 **COMPETENT PERSONS** Category Name Professional organisation Registration number Relevant experience Mineral Resource Rodrigo Martins

MAusIMM

```
311 050
8 years
Ore Reserve
Paulo Peruzzo Filho
MAusIMM
312 703
23 years

AGA MINERAÇAO – CUIABA
continued

2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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#### **LOCATION**

Lamego is located in the north-western part of the Iron Quadrangle metallogenetic province, close to Cuiabá gold mine. The mine is

located to the east of the city of Belo Horizonte city, which is in the Minas Gerais State in the south-eastern region of Brazil.

#### **GEOLOGY**

The gold mineralisation at Lamego is characterised by bodies associated with two horizons of chemical sedimentary rocks, viz.

BIF and metachert (MCH), and also with shear zones containing abundant quartz veinlets. The proportions of these lithotypes vary

substantially from one deposit to another. In the BIF, sulphide mineralisation is associated with the gold, whilst in the MCH and quartz

veins the gold occurs either as native gold or in sulphides. Mineralisation is characterised by sulphidation in the form of disseminated

sulphide bands or as fracture filling, and rarely as compact sulphide, hosted in BIF/MCH. Sulphide bands are rare in MCH. The plunge

of the mineralised zones coincides both with the fold axis of the first two structural events and with the mineral stretching lineation.

The Arco da Velha deposit is located on the eastern side of a large fold and extends for 250m along the strike. In the north-eastern

portion the mineralisation is concentrated in the MCH, whilst in the south-western portion it is concentrated in the BIF. Carbonaceous

phillite and clorite/sericite schists occur in the hanging wall contact, while the hydrothermal alteration zone marked by the meta-

andesite occurs in the foot wall.

The Cabeça de Pedra deposit is located in the hinge region of the large Lamego structure. The area which has shown the best

economic potential contains BIF and MCH (80% of the area consists of BIF and the remaining 20% is MCH). The presence of faulting

makes the stratigraphy complex in some areas. The carbonaceous phillite and clorite/sericite schists normally occur in the hanging

wall and meta-andesites in the foot wall.

Carruagem is the main deposit that opened the way for the resumption of the Lamego project. Structurally, it is located at the junction

or in close proximity to two fold limbs in the northeast portion of the major structure. It is a boudinaged body with two large disruptions

in the structure (pinch and swell), followed by eastward displacement. The gold mineralisation is mainly associated with hydrothermal

zones within the BIF.

AGA MINERAÇAO – LAMEGO ~

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**AMERICAS** 

#### **EXPLORATION**

Lamego is included in the Cuiabá-Queiroz project. In 2012 the exploration programme was focused on down plunge extension of Arco

da Velha and Carruagem and to check the potential of shallow resources, which could be mined by open pit. In 2013, the exploration

work will continue to investigate the down plunge extension of main deposits such as Carruagem and Cabeça de Pedra, both from

surface and underground.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

AGA Mineração -

Lamego

Measured

20 x 10

X

X

Channel sampling for underground,

short holes only to intercept hanging

wall contact

Indicated

125 x 25

123 X 2

X

\_

\_\_

Inferred

300 x 50

X

Grade/Ore control 2 x 3

-

X

Channel sampling for underground, short holes only to intercept hanging

wall contact

**Inclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million Grade g/t Contained gold Lamego Category Tonnes Moz Arco da Velha Measured 0.11 4.52 0.49 0.02 Indicated 0.33 4.06 1.36 0.04 Inferred 0.48 3.50 1.68 0.05 Total 0.92 3.82 3.53 0.11 Cabeca de Pedra Measured 0.34 3.94 1.34 0.04 Indicated 1.17 3.53 4.11 0.13 Inferred 0.83 4.15 3.44 0.11 Total 2.34 3.81

8.89 0.29

Carruagem Measured

0.08 11.28 0.90 0.03 Indicated 0.92 7.73 7.09 0.23 Inferred 1.54 5.52 8.53 0.27 Total 2.54 6.50 16.52 0.53 Secondary Areas Measured 0.07 7.86 0.52 0.02 Indicated 0.05 8.23 0.40 0.01 Inferred 1.23 4.31 5.29 0.17 Total 1.35 4.63 6.21 0.20 Lamego Total 7.15 4.92 35.15 1.13 **Exclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

```
g/t
Contained gold
Lamego
Category
Tonnes
               Moz
Measured
0.41
5.54
2.27
0.07
Indicated
1.27
5.03
6.39
0.21
Inferred
3.75
4.72
17.67
0.57
Lamego
Total
5.43
4.85
26.33
0.85
AGA MINERAÇAO – LAMEGO
continued
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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### ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Lamego Category Tonnes Moz Arco da Velha Proved 0.11 2.61 0.29 0.01 Probable 0.19 2.87 0.55 0.02 Total 0.30 2.77 0.84 0.03 Cabeca de Pedra Proved 0.11 2.86 0.30 0.01 Probable 0.48 2.72 1.30 0.04 Total 0.59 2.74 1.60 0.05 Carruagem

Proved 0.06 6.77 0.38 0.01 Probable 1.06

4.18 4.44 0.14 Total 1.12 4.30 4.82 0.15 Lamego Total 2.01 3.62 7.25 0.23 Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 Lamego Gold price \$/oz BRL/\$ exchange rate Cut-off value g/t Au Stoping width cm Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based tonnes) % MRF (based on g/t) MCF

% MetRF

% Arco da Velha 1,300 1.90 2.13 350.0 5.0 94.5 93.0\* Cabeca de Pedra 1,300 1.90 2.13 350.0 5.0 94.5 93.0\* Carruagem 1,300 1.90 2.13 350.0 5.0 94.5 93.0\* \* Blended average recovery. Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade Contained gold Lamego Tonnes Moz

Comment

Cabeca de Pedra
0.29
2.84
0.83
0.03
Mainly Cabeca de Pedra at Level 5 and a remaining
portion at Levels 6 and 7
Carruagem
0.21
2.56
0.53
0.02
From Level 6 to the deepest levels of Carruagem
Total
0.50
2.72
1.36
0.05
According to the standard adopted by AngloGold Ashanti, the Inferred Mineral Resource is not transformed into an
Ore Reserve, but
may be included for the purpose of defining the business plan. Modifying factors are applied and the resultant Mineral
Resource is
then specified as a Mineable Resource. The modifying factors that have been applied are:
•
planned dilution: intrinsic to the minimum operating width in accordance with the size of equipment used, creating an
actual width
in the mine face of at least 3.5m;
•
operating dilution of 5%;
•
mining recovery of 95%; and
•
MCF of 94.5%.
At Lamego the Inferred Mineral Resource that was transformed into a Mineable Resource is located at the Carruagem,
L06 down to L09,
and Cabeça de Pedra at L05.
COMPETENT PERSONS
Category
Name
Professional
organisation
Registration
number
Relevant
experience
Mineral Resource
Rodrigo Martins
MAusIMM
311 050
8 years
Oro Dagarya

Ore Reserve

```
Renato Queiroz de Castro
MAusIMM
312 329
8 years
{
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AMERICAS
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#### **LOCATION**

The Nova Lima Sul project is located in the western portion of the Rio das Velhas greenstone belt, and all the deposits are within a

16km radius of the Queiroz metallurgical plant. Nova Lima Sul comprises mothballed operations (Raposos underground mine), old

mines (Mina Grande, Morro da Glória, Bicalho, Faria, Bela Fama), as well as old prospects (Luzia da Mota,

Limoeiro) and several old

surface workings (Saboeiro Rasgão, Urubu and Luzia's Mina Grande). The main exploration goal is to add and convert the Mineral

Resource in order to fill the current Queiroz plant's spare capacity.

#### **GEOLOGY**

The Nova Lima Sul deposits are situated in the south-western portion of the Iron Quadrangle in the Minas Gerais State of Brazil.

The area is located in the volcanic sedimentary sequence of the Nova Lima Group (Rio das Velhas Supergroup), in the Rio das Velhas

greenstone belt.

The Nova Lima Group hosts the main gold mines and mineral occurrences in the Iron Quadrangle and consists of a basal tholeittic—

komatiitic volcanic unit with abundant chemical sedimentary rocks, which is overlain by a volcaniclastic unit with associated

felsic volcanic rocks. This is in turn overlain by an upper clastic unit. The mineralised deposits in the Rio das Velhas greenstone

belt are structurally controlled and are associated with hydrothermal alteration along D2 thrust shear zones, on a regional scale.

The mineralisation is epigenetic and the most common styles at Nova Lima Sul are massive, banded and disseminated sulphides

hosted in Banded Iron Formation (BIF) and albitised greywacke.

Economic Mineralisation is around 0.5m to 20m in thickness and can be more than 5,000m in length (along plunge direction).

The mineralisation plunge is defined by the stretching lineation and it is parallel to the fold axis of the first two regional deformation events.

Geology of Raposos

The Raposos sequence is interpreted as a ductile thrust that occurred during the first deformation event. The main mineralised area is

associated with an anticline. The stratigraphic sequence, repeated by folds, has ultramafics at the base, overlain by komatiitic basalts,

basalts and andesites with layers of BIF. Pelites and metavolcaniclastic occur at the top of the sequence. The BIF is oxide facies

(magnetite and quartz), with carbonatisation in the mineralised areas.

The mineralisation is primarily located in the BIF, and is surrounded by concentric hydrothermal alteration zones consisting of

sericitisation, carbonatisation and chloritisation that extend from the deposit outwards.

Geology of Morro da Glória

In the Morro da Glória area the rocks consist of komatiitic ultramafics, graphite phyllite, felsic metavolcaniclastic associated with

metapelites and several layers of BIF.

The larger-scale structures at Raposos and Morro da Glória are anticlinal and the mineralisation is associated with folds and shear

zones, surrounding by concentric hydrothermal alteration zones consisting of sericitisation, carbonatisation and chloritisation. BIF is

oxide facies (magnetite and quartz), with carbonatisation in the mineralised areas. The gold is associated with sulphides and quartz

veins in the BIF and the altered schists.

#### **EXPLORATION**

The exploration strategy at Nova Lima Sul is to focus first on Mineral Resource additions from Raposos and Morro da Glória for

the coming years through a drilling campaign initiated in 2011. In 2012 the exploration focused on underground drilling at Raposos

and surface drilling at Morro da Glória. Depending on the drilling results, a conceptual study update will be carried out during 2013.

At Raposos a total of 1,300m of underground drilling was completed in 2012 to verify the down-plunge extension of this mineralisation.

An additional drilling campaign of 1,500m will be conducted during 2013 to update the geological model.

At Morro da Glória, exploration work included a review of the database and the existing borehole core aimed at improving the

geological understanding. A total of 2,000m of diamond drilling (DD) was also executed in 2012 to check down plunge continuity

of some deposits.

AGA MINERAÇAO - NOVA LIMA SUL

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **PROJECTS**

The projects and abandoned mines in the southern region of Nova Lima are part of the Nova Lima Sul targets. The main driving force

of this project is to take advantage of the current infrastructure (like the Raposos operating shaft and mining infrastructure) and current

spare capacity in the Queiroz plant (Raposos circuit for non-refractory ore) to improve the production of the region. The Nova Lima Sul targets comprise the exploration and mine re-opening in areas such as Raposos and Morro da Glória. In 2013

exploration work will continue at Raposos, Morro da Glória and other targets aiming to increase the Mineral Resource.

#### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m(-x-)

Diamond

**RC** 

Blast-

hole

Other Comments

Nova Lima Sul

Measured

15 x 15,

30 x 30

X X

Surface channel sampling and DD

plus 34 Level open

Indicated

 $30 \times 30$ ,

60 x 60

X

X

Surface channel sampling and DD

plus 34 Level open

Inferred

60 x 60,

100 x 100

X

X

Channel sampling in the levels and

DD

Grade/Ore control  $3 \times 3$ 

X

**Inclusive Mineral Resource** as at 31 December 2012

Tonnes million Grade g/t Contained gold Nova Lima Sul Category Tonnes Moz Morro da Glória Measured Indicated Inferred 1.26 6.52 8.21 0.26 Total 1.26 6.52 8.21 0.26 Raposos Measured 0.18 7.01 1.29 0.04 Indicated 0.41 6.85 2.80 0.09 Inferred 2.25 6.44 14.50 0.47 Total 2.84 6.53 18.59 0.60

### Luzia da Mota Measured 0.35 2.72 0.96 0.03 Indicated 0.56 2.75 1.54 0.05 Inferred 0.63 3.03 1.90 0.06 Total 1.54 2.86 4.40 0.14 Nova Lima Sul Total 5.64 5.53 31.20 1.00

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**AMERICAS** 

### AGA MINERAÇAO – NOVA LIMA SUL

### continued

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**Exclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Nova Lima Sul

Category

Tonnes Moz

Measured

0.54

4.19

2.25

0.07

Indicated

0.97

4.48

4.34

0.14

Inferred

4.14

5.95

24.62

0.79

Nova Lima Sul

Total

5.65

5.53

31.21

1.00

The Nova Lima Sul project currently does not have any declared Ore Reserve and the Exclusive and Inclusive Mineral Resource

numbers are therefore identical.

**COMPETENT PERSON** 

Category

Name

Professional

organisation

Registration

number

Relevant

experience

Mineral Resource

Rodrigo Martins

MAusIMM

311 050

8 years

**2012** MINERAL RESOURCE AND ORE RESERVE REPORT **150** }

#### **SERRA GRANDE**

#### **LOCATION**

Since May 2012, Serra Grande has been wholly owned by AngloGold Ashanti and controls, or has an interest or agreements in,

approximately 48,207ha in and around the Crixás mining district in the north-western area of the Goiás State in central Brazil. Serra

Grande is located 5km from the city of Crixás and 420km from the national capital, Brasilia.

The Serra Grande operation comprises three underground mines, namely Mina III, Mina Nova (including the Pequizão deposit) and

Palmeiras, and one open pit mining the shallow portions of the Mina III mineralised zone (between surface and Level 50). The

processing circuit is equipped with grinding, leaching, filtration, precipitation and smelting facilities, and is able to process 1.2 Mtpa.

#### **GEOLOGY**

The Serra Grande gold deposits are hosted in a typical greenstone belt sequence. The host rocks belong to the Crixás Group of the

Upper Archaean in the Crixás greenstone belt. Gold mineralisation is associated with metasediments and metavolcanics from the

Ribeirão das Antas and Rio Vermelho formations respectively. The Crixás greenstone belt is surrounded by granitic gneiss terrains from

the Anta and Caiamar complexes and metasedimentary rocks from the Santa Terezinha Group.

Two main deformation events have been identified in the region. The first event is a thrust event (east over west, D1) developed with

irregular thrust ramp geometry. This event was responsible for stacking and inverting the stratigraphic sequence. The second event

(D2) was the thrusting of the Santa Terezinha sequence over the Crixás greenstone belt, folding the rocks (F2) and generating the

structures that control the gold mineralisation, generally parallel to the fold axis.

The mineralised zones at Serra Grande have been separated into four main domains called Structures II, III, IV and Palmeiras.

In Structure II the mineralisation is arsenopyrite associated with quartz as veinlets in carbonaceous metapelite as seen in the new

deposit, Cajueiro. In Structure III, the mineralisation is located in quartz veins that are hosted in graphitic schists, representing the

highest Au grades (>8 g/t, with free gold). This structure is also associated with massive and disseminated sulphides (mainly pyrrhotite

and arsenopyrite) that occur in a sequence of hydrothermally altered schists.

The mineralisation of Structure IV comprises quartz veinlets and disseminated sulphide (pyrrhotite) hosted in graphite schists. The

mineralised zones are hosted in sericite and chlorite schists with massive and disseminated sulphide concentrated in folded zones.

The oreshoots plunge to the northwest and the dips vary between  $6^{\circ}$  and  $35^{\circ}$ .

Those mineralised structures that were originally identified near the current mines, are now better understood and have now been

identified in the north-western portion of the Greenstone belt, opening new exploration possibilities.

#### **EXPLORATION**

From 2006 to 2010, the exploration team focused on adding to the Mineral Resource. A fast-track exploration programme, completed

during 2011 and 2012, resulted in a Mineral Resource addition from 2008 of 1.8Moz, with 554,000oz in 2012 (including model

changes) at an average cost of US\$21/oz.

Over the past six years, more than 270,000m of drilling was completed along the main geological structures in the area. In 2012, the

exploration team drilled a total of 65,000m and the exploration was divided into distinct blocks, namely:

•

near the current Mineral Resource of Pequizão (Baru and Pequizão deposits);

•

Mina III (IV, VQZ, Sul, Urucum, Sucupira and A deposits);

•

Mina Nova (9A, 11, 26, 27 and Mina Venâncio deposits); and

•

advanced work: Manifesto de Mina (Cajueiro deposit).

In 2012, the exploration strategy was reviewed to focus on increasing the average gold grade as well as the Mineral Resource.

To achieve the first objective, the exploration team is now focusing on high-grade targets and working in synergy with the geological

teams at the currently developed areas (VQZ Deep, Palmeiras North and South). To increase the Mineral Resource, the team assessed

the full potential of the targets located near the operating mines and resumed regional target generation outside the Crixás greenstone

belt area, like Crixás Norte and NW, where the new deposit Cajueiro has been found.

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**AMERICAS** 

### SERRA GRANDE **PROJECTS** No projects are currently being undertaken at Serra Grande. MINERAL RESOURCE Details of average drill-hole spacing and type in relation to Mineral Resource classification Type of drilling Mine/Project Category Spacing m (-x-) Diamond RC Blasthole Other Comments Serra Grande Measured 10 x 10, 20 x 10 X X Channel sampling Indicated 10 x 20, 20 x 50, 100 x 25 X X Channel sampling Inferred 50 x 50, 100 x 50 X X Grade/Ore control $2 \times 2$ , 10 x 10 X X Channel sampling **Inclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t

Contained gold Serra Grande Category Tonnes Moz

Mina Nova Measured 2.94 3.40 10.02 0.32 Indicated 1.15 3.19 3.66 0.12 Inferred 2.32 3.32 7.70 0.25 Total 6.41 3.34 21.38 0.69 Mina III Measured 1.01 4.73 4.76 0.15 Indicated 1.32 4.51 5.95 0.19 Inferred 1.67 5.03 8.41 0.27 Total 4.00 4.78 19.12 0.61 **Palmeiras** Measured 0.50 7.28 3.62 0.12

Indicated 0.22 6.39

Inferred 1.03 5.01 5.15 0.17 Total 1.75 5.83 10.20 0.33 Pequizao Measured 0.76 5.74 4.35 0.14 Indicated 1.18 5.28 6.24 0.20 Inferred 4.75 3.95 18.77 0.60 Total 6.69 4.39 29.36 0.94 Cajueiro Measured Indicated Inferred 1.22 2.89 3.52 0.11 Total 1.22

1.43 0.05

2.89 3.52 0.11 Open pit Measured 0.54 3.14 1.69 0.05 Indicated 0.34 3.11 1.04 0.03 Inferred 0.13 1.88 0.24 0.01 Total 1.01 2.97 2.97 0.10 Total stockpiles Measured 0.08 1.96 0.15 0.00 Indicated Inferred Total 0.08 1.96 0.15 0.00 Serra Grande Total 21.14 4.10 86.70 2.79

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## **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold Serra Grande Category Tonnes Moz Measured 0.12 5.60 0.69 0.02 Indicated 0.92 3.54 3.25 0.10 Inferred 11.12 3.94 43.79 1.41 Serra Grande Total 12.16 3.93 47.73 Mineral Resource below infrastructure as at 31 December 2012 Tonnes million Grade g/t Contained gold Serra Grande Category Tonnes Moz Measured Indicated

Inferred 10.99 3.96 43.56 1.40 Serra Grande Total 10.99 3.96 43.56 1.40 { 153 AMERICAS

#### SERRA GRANDE

#### continued

Serra Grande

Mineral Resource reconciliation: 2011 to 2012

-0.14

0.00

0.00

0.50

0.05

0.00

1.19

2.79

Ounces (millions)

2.8

2.6

2.4

2.2

2.0

1.8

1.6

1.4

1.2

1.0

0.8

2011

Deple-

tion

Gold

price

Cost

Explo-

ration

Metho-

dology

Other

Acquisition/

Disposal

2012

Serra Grande

Ore Reserve reconciliation: 2011 to 2012

0.37

-0.14

0.16

0.00

0.00

0.00

0.00

0.37

0.76

Ounces (millions)

0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 2011 Depletion Model change Change in economics New ounces from projects Scope change Other Acquisition/ Disposal 2012 ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold Serra Grande Category Tonnes Moz Mina Nova Proved 1.97 2.18 4.30 0.14 Probable 0.46 2.70 1.25 0.04 Total

2.432.285.55

0.18 Mina III Proved 0.85 3.09 2.63 0.08 Probable 0.97 3.42 3.33 0.11 Total 1.82 3.27 5.96 0.19 **Palmeiras** Proved 0.47 4.40 2.07 0.07 Probable 0.15 4.73 0.69 0.02 Total 0.62 4.48 2.76 0.09 Pequizao Proved 0.69 3.74 2.59 0.08 Probable 1.04 3.88 4.04 0.13 Total 1.73 3.82 6.63

> 0.21 Open pit Proved

0.55 3.10 1.69 0.05 Probable 0.32 3.19 1.02 0.03 Total 0.87 3.13 2.71 0.09 Total stockpiles Proved 0.08 1.96 0.15 0.00 Probable Total 0.08 1.96 0.15 0.00 Serra Grande Total 7.55 3.15 23.77 0.76 Ore Reserve modifying factors as at 31 December 2012 Serra Grande Gold price \$/oz BRL/\$ exchange rate Cut-off value g/t Au

Stoping

width cm Dilution Dilution g/t % RRF (based on tonnes) % RRF (based on g/t) % MRF (based on tonnes) % MRF (based on g/t) MCF % MetRF Mina III 1,300 1.77 2.08 15.0 95.0 93.7 Mina Nova 1,300 1.77 1.96 7.0 95.0 93.7

**Palmeiras** 

471

```
1,300
1.77
1.92
12.0
95.0
93.7
Pequizao
1,300
1.77
1.92
12.0
95.0
93.7
Open pit
1,300
1.77
1.00
7.0
99.0
100.0
95.0
93.7
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
154
```

}

```
0.0
0.2
0.4
0.6
0.8
1.0
0
1
2
4
3
5
6
7
8
9
10
Serra Grande
Grade tonnage curve – Surface (metric)
Tonnes
above
cut-off
(millions)
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
12
10
8
6
4
2
Tonnes above cut-off
Ave grade above cut-off
Serra Grande
6
8
10
12
14
16
18
20
22
0.0
0.5
1.0
1.5
```

2.0

```
2.5
3.0
3.5
4.0
Grade tonnage curve – Underground (metric)
Tonnes
above
cut-off
(millions)
Average grade
above cut-off (g/t)
Cut-off grade (g/t)
6.2
5.8
5.4
5.0
4.6
4.2
3.8
Tonnes above cut-off
Ave grade above cut-off
COMPETENT PERSONS
Category
Name
Professional
organisation
Registration
number
Relevant
experience
Mineral Resource
Edijarbas Martins Araujo
MAusIMM
224 825
31 years
Ore Reserve
Wanderlucio Gomes Martins
MAusIMM
311 568
12 years
Inferred Mineral Resource in business plan
No planning or scheduling took place in areas classified as Inferred Mineral Resource.
155
```

**AMERICAS** 

#### **COLOMBIA**

#### **COUNTRY OVERVIEW**

Systematic regional greenfields exploration has been undertaken by AngloGold Ashanti and its joint venture partners (B2Gold, Glencore

International and Mineros S.A.) in Colombia since 2004. AngloGold Ashanti has consolidated the tenement position from roughly

100,000km in 2009 to 15,815km2 at the end of 2011 through a variety of structures, including joint ventures and the relinquishment

of non-prospective areas.

At the wholly-owned La Colosa project, brownfields exploration drilling and pre-feasibility development has resumed after delays

due to water-related issues. AngloGold Ashanti secured regional opportunities surrounding La Colosa and exploration of the greater

La Colosa area is continuing with the objective of discovering and quantifying similar gold-rich porphyry mineralisation styles.

At Gramalote (51% AngloGold Ashanti, 49% B2Gold), the joint venture partners renegotiated their agreement, resulting in AngloGold

Ashanti assuming management of the project via a project pre-feasibility study team. Pre-feasibility drilling began during the last

quarter of 2010, after a hiatus of more than 12 months.

### MINERAL RESOURCE ESTIMATION

Gramalote

At Gramalote, about 51,280m of drilling (44,300m at Gramalote Central and 7,000m at the Trinidad area) was used to support the

estimation of Inferred, Indicated and Measured Mineral Resource. The Mineral Resource estimate was generated using Ordinary

Kriging whereby the deposit was separated into different geological homogeneous zones according to the grades and lithology.

All available geological drill hole and mapping information, both surface and underground, has been validated for use in the

modelling process.

La Colosa

At La Colosa, some 17,000m of drilling was used to support the estimation of an Inferred Mineral Resource. Gold grades were

estimated using Ordinary Kriging. Kriging was performed into a block size of 50m x 50m x 10m using lithological domains (wireframes)

in a grade based mineralisation envelope and for the waste surrounding the mineralisation. All available geological drill hole, surface

sampling and mapping information has been validated for use in the modelling process.

### 2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **GRAMALOTE**

#### **LOCATION**

The Gramalote property is located near the town of Providencia and San Jose del Nus belonging to the municipality of San Roque,

northwest of the Department of Antioquia, Colombia. It is approximately 230km northwest of the Colombian capital of Bogota

and 124km northeast of Medellin, the regional capital of Antioquia Department, with a population of more than two million people.

The municipalities of San Roque and Maceo are within 20km of the project site.

### **GEOLOGY**

The Gramalote gold deposit is hosted in the late Cretaceous Antioquia Batholith. This intrusive covers an area of 7,221km2 and

composes the core of the Central Cordillera at the Antioquia Department (Gonzalez, 2001). The Antioquia Batholith is composed

of 92% tonalite and granodiorite ('normal phase'), with 8% being comprised of two subordinate rock types: granodiorite to quartz—

monzonite and gabbro.

Gramalote is interpreted to be an intrusive-hosted structurally controlled stockwork gold and silver deposit. Gold mineralisation is

controlled by northeast-southwest trending shear zones and north-northwest to south-southeast trending shear extensional zones

affecting the tonalites and granodiorites of the Antioquia Batholith. Mineralisation is associated with stock work veining and particularly

quartz with fine-pyrite veins, quartz-carbonate veins, and quartz with coarse pyrite veins.

The deposit is completely underlain by medium to coarse-grained biotite ± hornblende tonalite and granodiorite. Detailed lithology,

alteration and structural mapping within the Gramalote Ridge area emphasises the homogeneity of the tonalite intrusive with more than

95% of the rock mass comprised of tonalite-granodiorite. Alteration assemblages related to mineralisation are variable and are closely

linked to the structural evolution of the area.

Gramalote comprises three distinct deposits, Central Gramalote, Trinidad and Monjas West, within a greater mineral tenement block

of some 35,000ha exclusively retained under licence by the joint venture.

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**AMERICAS** 

The main zone of mineralisation defined by drilling has been traced along strike to the northeast for approximately 1,100m.

Mineralisation occurs within several zones that periodically coalesce both along strike and down-dip. Zones vary in width from tens

of metres to 200m in true width with vertical to sub-vertical dips to the south-southeast. The Trinidad mineralised zone is located

approximately 3km north-northwest of the Gramalote Ridge. Monjas West is located 2.6km along the westward strike extension of

the Gramalote Ridge zone. The style of alteration and mineralisation of both satellite deposits is similar to the Gramalote Ridge area.

A total of 214 diamond drill holes (plus a 240m underground tunnel) have been drilled or developed at Gramalote Ridge and the

nearby exploration targets. Based upon regional and property scale mapping, the Gramalote Ridge and surrounding zones of interest

are located between two west-northwest-trending macro-scale curved lineaments which splay off the Palestina fault to the east and

transect the Antioquian Batholith. These include the Nus River lineament and the El Socorro lineament. Differential movement along

the Nus and El Socorro lineaments is thought to have generated north-northwest, northsouth and northeast striking tensional dilation

within the tonalite, reflected in the formation of stockwork style as well as sheeted quartz and quartz carbonate veins. EXPLORATION

Exploration strategy during 2012 was focused on two deposits, Central Gramalote and Monjas West, where drilling programmes were

aimed at proving up the potential Mineral Resource. In addition to these, sterilisation, infrastructure, hydrogeology and geotechnical

drilling were performed.

Based on lithological continuity (Antioquia Batholith), similar structural setting and mineralisation style and the presence of historical

artisanal mining over the entire area, the exploration potential in the district is considered to be promising. Less than 10% of the

large tenement position has been explored to date. A comprehensive exploration programme, commencing with geophysical and

geochemical surveys, is being advanced to assist on defining exploration targets expected to confirm the potential of the project area.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

RC

Blast-

hole

Other Comments

Gramalote

Measured

25 x 25

X

Indicated 50 x 50 X Inferred 100 x 100 X Grade/Ore control Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold Gramalote Category Tonnes Moz Main Zone Measured 15.68 0.85 13.30 0.43 Indicated 34.36 0.79 27.21 0.87 Inferred 81.19 0.25 20.16 0.65 Total 131.23 0.46

60.67

1.95 Trinidad Measured Indicated Inferred 30.83 0.44 13.55 0.44 Total 30.83 0.44 13.55 0.44 Monjas West Measured Indicated Inferred 8.35 0.62 5.16 0.17 Total 8.35 0.62 5.16 0.17 Gramalote Total 170.41 0.47 79.38 2.55 **GRAMALOTE** continued

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The Mineral Resource estimate was independently audited and endorsed by Quantitative Group (QG) in February 2012. Since then,

only the Monjas West model has been updated.

**Exclusive Mineral Resource** 

as at 31 December 2012

Tonnes

million

Grade

Contained gold

Gramalote

Category

Tonnes Moz

Measured

15.68

0.85

13.30

0.43

Indicated

34.36

0.79

27.21

0.87

Inferred

120.37

0.32

38.87

1.25

Gramalote

Total

170.41

0.47

79.38

2.55

Mineral Resource below infrastructure

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

Gramalote

Category

Tonnes Moz

Measured

15.68

0.85

13.30

0.43

Indicated

34.36

0.79 27.21 0.87 Inferred 120.37 0.32 38.87 1.25 Gramalote Total 170.41 0.47 79.38 2.55 **COMPETENT PERSON** Category Name Professional organisation Registration number Relevant experience Mineral Resource Alessandro Henrique Medeiros Silva MAusIMM 224 831 11 years Gramalote Mineral Resource reconciliation: 2011 to 2012 1.99 0.00 0.40 0.00 0.17 0.00 0.00 0.00 2.55 Ounces (millions) 2.6 2.5 2.4 2.3 2.2 2.1 2.0 1.9 1.8 2011

Deple-

```
tion
Gold
price
Cost
Explo-
ration
Metho-
dology
Other
Acquisition/
Disposal
2012
Gramalote
0
50
100
150
200
250
300
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
Grade tonnage curve – Surface (metric)
Tonnes above
cut-off (millions)
Average
grade
above
cut-off (g/t)
Cut-off grade (g/t)
2.0
1.6
1.2
0.8
0.4
0.0
Tonnes above cut-off
Ave grade above cut-off
159
```

**AMERICAS** 

#### LA COLOSA

#### **LOCATION**

La Colosa was discovered by AngloGold Ashanti's Colombian greenfields exploration team in 2006. The project is 100% owned by

AngloGold Ashanti and is located 150km west of Colombia's capital city, Bogota, and 30km west of the major town of Ibague, which

falls within the department of Tolima.

#### **GEOLOGY**

The La Colosa project is centered on a late Miocene (8.1Ma) multiphase diorite porphyry gold complex intruded into reduced

Paleozoic metasedimentary rocks. Although the porphyry system is generally copper-poor, a 0.1 - 0.2% Cu anomaly associated

with Mo>150ppm occurs laterally and at depth. The highest grade gold mineralisation is closely associated with a suite of early

porphyry intrusions/breccias with potassic and sodic-calcic alteration, high intensity of Au-sulphide veinlets, and sulfur values generally

exceeding 2.5%. The multiphase diorite porphyry gold complex can be divided into three phases (early, intermineral and late) and

is elliptical in shape with a known maximum north-south axis of at least 1,200m. The complex strikes N10W with a dip of 75° east-

northeast, the contacts are mostly structurally bound.

The late phase of dacite porphyry intrusions occurs as a series of dykes that are all less than 40m in thickness but showing continuity

over at least 600 vertical metres. These dykes are assumed to be lateral offshoots of a ~1km2 mapped body of dacite porphyry

occurring in the north-eastern corner of the project area. The main mapped body at least in part covers early-intermineral diorite

mineralisation, both evidenced by drilling and geophysics.

Alteration and mineralisation

The paragenesis of the main alteration starts with pervasive sodic-calcic alteration overprinted by potassic alteration and in turn,

cut by a sodic-calcic event. Potassic alteration, biotite and subordinate K-feldspar, occurs mainly as a pervasive replacement of the

porphyries, especially the early phases. The second sodic-calcic alteration clearly overprints the potassic assemblage and is largely

confined to irregular, centimetre-scale patches and well defined veinlets. The patches and veinlets contain epidote, actinolite and

chlorite, typically with white, 'albite-rich' haloes. Intermediate argillic and sericitic alteration are only weakly developed and only form

mappable zones in the dacite and in the northern limit of the deposit.

The early and intermineral porphyry appear to have been altered and mineralised at the time of their intrusion, since there is scant

evidence for veinlets crossing intrusive contacts. The gold content generally declines from early to intermineral diorite and is lowest

for late dacite porphyry.

The veinlets at La Colosa appear to span mostly the potassic to sodic-calcic alteration events. The earliest veinlets are composed of

quartz, biotite, K-feldspar, actinolite albite and pyrite/pyrite. The later Cu-Mo anomaly displays an increase in magnetite veinlets with

0.2% chalcopyrite and up to 0.5% molybdenite.

The main control of the bulk gold grade in the diorite or dacite intrusive stock is the intrusive phase where the mineralisation is hosted.

Early intrusive phases present higher and more consistent gold grade (average >1.1g/t). The inter-mineral diorite has average gold

grades less than 0.7g/t, the late dacite phase generally only has >0.3g/t gold grades close to the contact with early diorite phases.

The limited high grade zone in the northeast forming the >1.5 g Au/t envelope is centered on north-south striking steeply dipping

eastward faults within a >100m wide zone of deformation. Hydrothermal alteration includes a weak sericite overprint and pale biotite

(-smectite) alteration.

San Antonio is a small intrusive-breccia complex at the southern end of the La Colosa mineralised system. Intrusive rocks are

comparable to intermineral-late phase.

Gold deportment

Gold grains vary from almost pure gold to lesser amounts of gold-silver telluride. The gold grains are generally fine grained

around 15 $\mu$ m. Coarse grained gold (116 $\mu$ m) was found in samples from metamorphic rocks and from high grade intercepts.

Gold grains occur as both liberated and 'locked' in sulphides and silicates. A significant amount of gold is associated with

silicates such as K-feldspar and plagioclase. Sulphide minerals associated with gold are dominantly pyrite, with lesser amounts

of pyrrhotite and arsenopyrite.

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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#### **EXPLORATION**

The La Colosa Mineral Resource is located in a forest reserve as defined by the Colombian Government. An area of 6.39ha has been

temporarily extracted within a boundary of 515ha allowing for drill platforms, access and camp sites. An additional area exchange

programme is in progress requesting additional platforms both in grass and forest covered areas.

The current exploration strategy is to define the overall limits of the deposit. Drilling is being done with man-portable drill rigs. Platforms

and elevated access trails have been constructed in the forest to allow for Mineral Resource and geotechnical drilling in potentially

higher grade sectors. Metallurgical samples to test for comminution and gold recovery have been collected from the intrusive rocks,

schists, oxide and the San Antonio material.

The drilling programme is ongoing and a total of 97,224m (259 holes) have been drilled to support the estimation of the Inferred Mineral

Resource. The overall increase in the Mineral Resource at La Colosa is related to mineralisation found in the higher grade sector in

the north-east, the north-south striking contact along the main axis between the intrusive diorite and hornfelsed schist, and the fault

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**AMERICAS** 

#### LA COLOSA

#### continued

bound north contact of the porphyry complex with diorite dykes extending into schists. Mineralisation in the schists further to the

south, however, becomes more structurally controlled (axial plane foliation, brittle structures) and intercepts become narrower with

spotty high grades in proximity to the dykes.

An oxide potential has been recognised and is related to secondary enrichment above intermediate argillically altered quartz diorite

and dacite, mostly occurring in the north and northeast of the extracted exploration area.

### **PROJECTS**

Following the significant drilling programme in 2012, a pre-feasibility study is underway. The Mineral Resource drilling plan for 2013

will focus on:

•

an infill high-grade starter pit area;

•

a medium and deep holes project; and

.

an oxide potential project.

A detailed structural geological model is required for starter pit (and backfill) areas in metamorphic rocks and the limits of mineralisation

in higher grade sectors. This work was initiated in 2011 and is on-going. The La Colosa porphyry centre appears to be related to a

north-east opening graben structure. High-grade intercepts are related to northwest-southeast brittle structures.

The present average drill spacing of 100m x 100m has been reviewed for Mineral Resource classification. The Mineral Resource

classification will require the construction of additional platforms in the forest reserve, and therefore, additional forest extraction permits.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m (-x-)

Diamond

RC

Blast-

hole

Other Comments

La Colosa

Measured

-

\_

Indicated

=

\_

Inferred 100 x 100 X Plus additional drill holes at different spacing, angles and depth Grade/Ore control Inclusive Mineral Resource as at 31 December 2012 Tonnes million Grade g/t Contained gold La Colosa Category Tonnes Moz Open pit Measured Indicated Inferred 904.86 0.92 834.76 26.84 La Colosa Total 904.86 0.92 834.76 2012 MINERAL RESOURCE AND ORE RESERVE REPORT 162

}

## La Colosa Mineral Resource reconciliation: 2011 to 2012 16.27 0.00 0.00 0.00 10.57 0.00 0.00 0.00 26.84 Ounces (millions) 28 26 24 22 20 18 16 14 2011 Depletion Gold price Cost Exploration Methodology Other Acquisition/ Disposal 2012 La Colosa 0 400 800 1,200 1,600 2,000 0.00 0.50 1.00 1.50 2.00 2.50 2.80 Grade tonnage curve – Surface (metric)

Tonnes above

490

cut-off (millions) Average grade above cut-off (g/t) Cut-off grade (g/t) 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 Tonnes above cut-off Ave grade above cut-off **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold La Colosa Category Tonnes Moz Measured Indicated Inferred 904.86 0.92 834.76 26.84 La Colosa Total 904.86 0.92 834.76 The La Colosa Mineral Resource is reported at a cut-off grade of 0.3g/t. The mineralisation has been classified as an

Inferred Mineral

Resource on the basis of an average drill-hole spacing of 100m x 100m. The Exclusive and Inclusive Mineral Resource numbers are

currently identical due to the absence of an Ore Reserve. Mineral Resource below infrastructure as at 31 December 2012 Tonnes million Grade g/t Contained gold La Colosa Category Tonnes Moz Measured Indicated Inferred 904.86 0.92 834.76 26.84 La Colosa Total 904.86 0.92 834.76 26.84 **COMPETENT PERSON** Category Name Professional organisation Registration number Relevant experience Mineral Resource Rudolf Jahoda MAusIMM 990 544 21 years 163

**AMERICAS** 

#### **COUNTRY OVERVIEW**

AngloGold Ashanti currently operates one mine in the United States of America near Cripple Creek, Colorado. The Cresson Mine

is operated by the Cripple Creek and Victor Gold Mining Company (CC&V), a wholly-owned subsidiary of AngloGold Ashanti Ltd.

The corporate office for the Americas is located in Denver, Colorado.

CC&V currently controls over 85% of the patented claims within the district and 100% of the land containing the 2012 Mineral

Resource. The Ore Reserve and Mineral Resource are stated at 100% ownership basis, although portions of the Ore Reserve are

subject to third party royalties that vary according to individual agreements with the underlying property owner.

### MINERAL RESOURCE ESTIMATION

A single unified Mineral Resource model has been developed for the entire district. The unified model encompasses all known deposits

and drilling within the CC&V property. The estimation method is Multiple Indicator Kriging and the primary variable estimated is the

recoverable gold.

An estimated iron and oxide model is utilised to interpolate block specific coefficients for input into the metallurgical recovery function.

The method for calculating nominal shake leach values is a regression technique using geologically logged categorical variables.

Updated drill-hole information is used throughout. The drill-hole database is thoroughly reviewed before each Mineral Resource

estimation and the estimation domains are based on lithology and structural domains for each deposit.

#### ORE RESERVE ESTIMATION

The Ore Reserve pit designs were based on Lerch-Grossman (LG) optimisations of the Mineral Resource model. The LG algorithm

applies economic values to individual blocks and then generates a pit shell based on geotechnical constraints.

Successive nested

shells are generated until the economic limits of the pit are established. These shells are then used as a template for final mine design.

Pit slope designs for all deposits were based on geotechnical studies and range between 32° and 57°. All pits were designed using a

35 feet (10.7m) bench height except South Cresson, which utilises 20 feet (6.1m).

#### UNITED STATES OF AMERICA

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#### **LOCATION**

The mining operations at CC&V are located in central Colorado, USA, approximately 25km east of Colorado Springs. The mining

district is located between the communities of Cripple Creek, to the northwest, and Victor, in the south.

#### **GEOLOGY**

The dominant geological feature of the district is a 34Ma to 28Ma diatreme-intrusive that erupted through Precambrian rocks.

The diatreme-intrusive complex is 6.4km long, 3.2km wide and consists of diatremal breccia that has been intruded by

dykes and discordant breccias. Diatremal breccia lithologies include breccias composed exclusively of volcanic,

Precambrian or

sedimentary material or any combination of the three. Early intrusions are predominantly within these alkaline phonolite-phonotephrite

series of rocks and were followed by later lamprophyres. All rocks have undergone minor structural deformation and a

history of hydrothermal alteration. Gold mineralisation, dated between 27.8Ma and 26.6Ma, is hosted in all rock types as veins.

The mineralisation can also be disseminated or can occur in structurally-controlled deposits. Primary ore minerals include microscopic

native gold, native gold with pyrite and gold tellurides. Silver is present but has minimal economic importance.

#### **EXPLORATION**

Exploration activities during 2012 focused on three different programmes:

upgrading of the Mineral Resource to allow for conversion to Ore Reserve for the low-grade, heap-leach operations;

further definition of higher-grade zones within the open-pit design shells; and

drill testing of high-grade zones that lie outside the pit designs, but could be mined by underground methods. A total of 39,000m was drilled during 2012, which included approximately 32,000m of reverse circulation (RC) drilling and 7,000m of

diamond drilling (DD).

#### **PROJECTS**

The exploration activities were conducted under the Mine Life Extension-2 (MLE-2) project as well as the underground project.

MLE-2 is evaluating the extension of the mine life by adding low-grade, heap-leach tonnes to the Ore Reserve with the construction

of a plant to process high-grade zones of mineralisation that are intersected during the open pit mining activity. The underground

programme is exploring for tonnes that can be mined underground to supplement plant feed.

### MINERAL RESOURCE

Details of average drill-hole spacing and type in relation to Mineral Resource classification

Type of drilling

Mine/Project

Category

Spacing

m(-x-)

Diamond

RC

Blast-

hole

Other

Comments CC&V Measured 30 x 30 X X RC primarily, diamond drill core is used for confirmation of RC drilling results, metallurgical testing and geotechnical high wall design Indicated 45 x 45 X X Inferred 75 x 75 X X Grade/Ore control 5 x 6 X CC&V 165

**AMERICAS** 

### CC&V

### continued

Inclusive Mineral Resource

as at 31 December 2012

Tonnes

million

Grade

g/t

Contained gold

CC&V

Category

Tonnes Moz

Wild Horse

Measured

10.14

0.60

0.00

6.13

0.20

Indicated

6.83

0.60

4.09

0.13

Inferred

2.60

0.56

1.47

0.05

Total

19.58

0.60

11.68

0.38

Wild Horse Extension

Measured

40.73

1.06

42.98

1.38

Indicated

18.63

0.74

13.86

0.45

Inferred

2.17

0.48

1.03

0.03

Total

61.53

0.94

57.87

1.86

Altman

Measured

18.48

1.06

19.55

0.63

Indicated

13.28

0.99

13.11

0.42

Inferred

5.28

1.00

5.27

0.17

Total

37.04

1.02

37.92

1.22

Schist Island

Measured

27.96

0.67

18.75

0.60

Indicated

15.42

0.59

9.10

0.29

Inferred

2.47

0.47

1.15

0.04

Total

45.85

0.63

29.00

0.93

Globe Hill

Measured

41.66

0.58

24.00

0.77

Indicated 39.73 0.59 23.53 0.76 Inferred 13.17 0.66 8.70 0.28 Total 94.56 0.59 56.23 1.81 Ironclad Measured 10.79 0.55 5.93 0.19 Indicated 17.23 0.52 9.04 0.29 Inferred 19.87 0.53 10.52 0.34 Total 47.89 0.53 25.49 0.82 Cresson Measured 99.69 0.74 73.88 2.38 Indicated 89.54 0.66 59.15 1.90 Inferred

> 35.09 0.61 21.47

0.69 Total 224.32 0.69 154.51 4.97 Portland Measured 2.87 1.05 3.00 0.10 Indicated 3.92 1.15 4.49 0.14 Inferred 3.27 1.14 3.73 0.12 Total 10.06 1.12 11.23 0.36 South Cresson Measured 15.25 0.85 13.02 0.42 Indicated 4.31 0.85 3.68 0.12 Inferred 0.64 0.82 0.53 0.02 Total 20.20 0.85 17.22 0.55 CC&V Total 561.02

```
0.72
401.15
12.90
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

Americas: CC&V {
167
AMERICAS

## CC&V continued CC&V Mineral Resource reconciliation: 2011 to 2012 13.98 Depletion -0.50 Gold price 0.83 Cost -1.04 Exploration 0.02 Methodology 0.00 Other -0.40 Acquisition/ Disposal 0.00 2012 12.90 Ounces (millions) 14.4 14.2 14.0 13.8 13.6 13.4 13.2 13.0 12.8 12.6 Ore Reserve reconciliation: 2011 to 2012 2011 6.25 Depletion -0.54 Model change -0.05

Change in

economics 0.38

New ounces from projects 0.00 Scope change 0.04 Other -0.21 Acquisition/ Disposal 0.00 2012 5.88 Ounces (millions) 6.3 6.2 6.1 6.0 5.9 5.8 5.7 5.6 5.5 **Exclusive Mineral Resource** as at 31 December 2012 Tonnes million Grade g/t Contained gold CC&V Category Tonnes Moz Measured 112.75 0.72 81.08 2.61 Indicated 126.54 0.66 83.21 2.68 Inferred 84.56 0.64 53.87 1.73

CC&V

Total 323.85 0.67 218.16 7.01 The Exclusive Mineral Resource material lies immediately outside the designed shells that hold the Ore Reserve. The zones are generally extensions of those seen within the Ore Reserve shells and some of these tonnes will convert to Ore Reserve with additional drilling. ORE RESERVE Ore Reserve as at 31 December 2012 Tonnes million Grade g/t Contained gold CC&V Category Tonnes Moz Cresson Proved 57.03 0.83 47.51 1.53 Probable 33.76 0.74 25.11 0.81 Total 90.79 0.80 72.62 2.33 South Cresson Proved 14.66 0.87 12.78 0.41 Probable 3.85 0.98 3.77 0.12 Total 18.51 0.89

16.55 0.53 Wild Horse Extension Proved 33.51 1.07 35.83 1.15 Probable 13.27 0.74 9.80 0.32 Total 46.78 0.98 45.63 1.47 Globe Hill Proved 32.86 0.57 18.87 0.61 Probable 25.44 0.57 14.57 0.47 Total 58.30 0.57 33.44 1.07 Schist Island Proved 16.77 0.67 11.18 0.36 Probable 6.04 0.59 3.59 0.12 Total 22.81

0.65 14.77 0.47 CC&V

```
Total
237.16
0.77
182.99
5.88
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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}
```

# Ore Reserve modifying factors % RRF % MRF as at 31 December 2012 CC&V Gold price \$/oz Cut-off value g/t Au Dilution % Dilution g/t (based on tonnes) % RRF (based on g/t) (based on tonnes) % MRF (based on g/t) MCF % MetRF Cresson 1,300 0.17 0.00 0.00 95.0 101.0 103.0 98.0 43.0 to 95.0\* \*Recovery factor varies according to ore type. Inferred Mineral Resource in business plan as at 31 December 2012 Tonnes million Grade

g/t

Eagai Filling. / IVAECACED / ICH / IVAI C IV	
Contained gold CC&V	
Tonnes Moz Comment Cresson 3.30 0.59 1.93 0.06	
South Cresson 0.45 1.40 0.63 0.02	
Wild Horse Extension 1.03 0.49 0.51 0.02	
Globe Hill 5.24 0.58 3.07 0.10	
Schist Island 0.88 0.47 0.41 0.01	
Total 10.90 0.60 6.55 0.21	
The Inferred Mineral Resource in business plan is approximately 4.6% of the Proved and Probable Ore Reserve tonnes and 3.6% of the Proved and Probable Ore Reserve ounces of gold.  The Inferred Mineral Resource is not used in the optimisation process for the Ore Reserve shells. The Inferred Mineral Resource tonnes are generally located near the surface of pits that have not yet been mined. Some of this material is also found at the bottom of the Ore Reserve pits where the drill density is not as quite as uniform as in other areas.  COMPETENT PERSONS	
Cotogony	

Category Name

Professional organisation Registration number Relevant experience Mineral Resource Tim Brown MAusIMM 226 857 26 years Ore Reserve Jeff Gaul **SME** 4156 989 22 years CC&V 0 100 200 300 400 500 600 700 800 0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 Grade tonnage curve – Surface (metric) Tonnes above cut-off (millions) Average grade above cut-off (g/t)Cut-off grade (g/t) 2.2 1.8 1.4 1.0 0.6 0.2 Tonnes above cut-off

Ave grade above cut-off

{ **169**DEFINITIONS

#### MINERAL RESOURCE

The JORC Code, 2004 edition, definition of a Mineral Resource is as follows:

A 'Mineral Resource' is a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in

such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity,

grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into

Inferred, Indicated and Measured categories.

The Mineral Resource is estimated using all drilling and sampling information along with a detailed geological model. The geological models are based on core logging, mapping, geophysics, geochemistry and geological understanding that have

been developed for each deposit. Most of the AngloGold Ashanti deposits have been the subject of research by world experts

in the class of gold deposits.

The grade estimation for each deposit has been developed over the life of the mine and is constantly reviewed in terms of grade control

information and reconciliation with the metallurgical plant. In general, the deep South African mines utilise a process of compound log

normal macro co-kriging for the estimation of the Mineral Resource, while the open pits and shallow underground mines generally use

recoverable Mineral Resource models, estimated using Uniform Conditioning or multiple indicator kriging.

In order to comply with the economic requirement of the definition of Mineral Resource, all AngloGold Ashanti Mineral Resources

are constrained at an upside gold price, with all other parameters being kept the same as used for estimation of the Ore Reserve.

In the underground gold mines, scoping studies are conducted on all coherent blocks of ground that lie above the calculated Mineral

Resource cut-off. These studies include all cost and capital requirements to access the block. In the case of open pit operations,

pit optimisations are conducted at the Mineral Resource gold price and all material outside these shells is excluded from the Mineral

Resource, unless it is potentially mineable from underground.

It is the opinion of AngloGold Ashanti that the Mineral Resource represents a realistic view of an upside potential to the Ore Reserve.

In interpreting the Mineral Resource it is critical to factor in the following:

The Mineral Resource is quoted in situ and has not been corrected for dilution, mining losses or recovery.

The Mineral Resource includes a high percentage of Inferred material, which, following further exploration drilling may be converted

to an Indicated or Measured Mineral Resource.

Many of the areas lying in the exclusive Mineral Resource are currently being actively drilled and are the subject of economic and

technical studies. It can, however, not be assumed at this stage that the company has intent to mine these areas. Mineral Resource classification is based on the '15% Rule'. A Measured Mineral Resource should be expected to be

Mineral Resource classification is based on the '15% Rule'. A Measured Mineral Resource should be expected to be within 15% of the

quarterly metal estimate at least 90% of the time, while for an Indicated Mineral Resource estimate the annual metal estimate should

be within 15% of the metal estimated at least 90% of the time. For an Inferred Mineral Resource the annual error may for 90% of the

time, be greater than 15%.

The process and methodology of classification are at the discretion of the Competent Person and involves expressing the  $^{\circ}15\%$ 

Rule' as a required level of information, in tangible terms the spacing of the drill hole or tunnel spacing in a particular deposit.

Techniques such as conditional simulation or even an empirical reconciliation-based approach are employed.

However, all operations

are responsible for demonstrating, through reconciliation, that their classification system conforms to the 15% rule set out above.

AngloGold Ashanti quotes its Mineral Resource as inclusive of the Ore Reserve. However, in this document the exclusive Mineral

Resource is also quoted. The exclusive Mineral Resource is defined as the inclusive Mineral Resource less the Ore Reserve before

dilution and other factors are applied.

**DEFINITIONS** 

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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The exclusive Mineral Resource consists of the following components:

•

Inferred Mineral Resource within the optimised shell;

.

Other Inferred Mineral Resource;

•

Measured and Indicated Mineral Resource that lies between the Life of Mine pit shell/mine design and the Mineral Resource pit shell.

This material will become economic if the gold price increases; and

•

Mineral Resource where the technical studies to engineer an Ore Reserve have not yet been completed.

### **ORE RESERVE**

The JORC Code, 2004 edition, definition of an Ore Reserve is as follows:

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting

materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have

been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic,

marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting

that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable

Ore Reserves and Proved Ore Reserves.

The reference point at which Reserves are defined, usually the point where the ore is delivered to the processing plant, must be

stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement

is included to ensure that the reader is fully informed as to what is being reported.

Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves. In the underground operations, the Ore Reserve is based on a full mine design and in the case of open pits on a pit optimisation

followed by a final pit design. The Ore Reserve is reported according to tonnage, mean grade(s), and contained metal inclusive of

mining dilution, mining ore losses and mine call factors. These modifying factors are based on measurements, rather than estimates.

Tonnage and grade estimates for surface stockpile materials that meet Ore Reserve criteria are itemised separately. Only the Ore Reserve included for treatment in the business unit plan production schedule is considered in the Ore Reserve statement.

These sometimes include marginal or sub-grade ores as well as the Inferred Mineral Resource. This Inferred Mineral Resource is not

included in the Ore Reserve statement.

For all new projects, an audited pre-feasibility (as a minimum requirement) must have been completed that demonstrates the viability

of the project and meets the company's investment requirements. This study must be signed off at the appropriate executive level in

order to demonstrate an intent on the part of the company to proceed to feasibility and ultimately to implement the project.

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**DEFINITIONS** 

#### **ALL TERMS**

**BIF** 

Banded Ironstone Formation. A chemically formed iron-rich sedimentary rock.

By-products

Any products that emanate from the core process of producing gold, including silver, uranium and sulphuric acid.

Calc-silicate rock

A metamorphic rock consisting mainly of calcium-bearing silicates such as diopside and wollastonite, and formed by metamorphism

of impure limestone or dolomite.

Capital expenditure

Total capital expenditure on tangible assets which includes stay-in-business and project capital.

Carbon-in-leach (CIL)

Gold is leached from a slurry of gold ore with cyanide in agitated tanks and adsorbed on to carbon granules in the same circuit.

The carbon granules are separated from the slurry and treated in an elution circuit to remove the gold.

Carbon-in-pulp (CIP)

Gold is leached conventionally from a slurry of gold ore with cyanide in agitated tanks. The leached slurry then passes into the

CIP circuit where carbon granules are mixed with the slurry and gold is adsorbed on to the carbon. The granules are separated from

the slurry and treated in an elution circuit to remove the gold.

Comminution

Comminution is the crushing and grinding of ore to make gold available for treatment. (See also 'Milling').

Contained gold

The total gold content (tonne multiplied by grade) of the material being described.

Cut-off grade – surface mines (COG)

The minimum grade at which a unit of ore will be mined to achieve the desired economic outcome.

Dense media separation (DMS)

Dense media separation (using high density liquids to separate ore).

**Depletion** 

The decrease in quantity of ore in a deposit or property resulting from extraction or production.

Development

The process of accessing a deposit through shafts and/or tunnelling in underground mining operations.

Electro-winning

A process of recovering gold from solution by means of electrolytic chemical reaction into a form that can be smelted easily

into gold bars.

Elution

Recovery of the gold from the activated carbon into solution before zinc precipitation or electro-winning.

Full grade ore (FGO)

FGO is ore material with sufficient grade to carry the full operating cost. FGO cut-off is the break-even grade where cost is representative

of all costs to carry the full operation excluding direct mining cost.

Gold produced

Refined gold in a saleable form derived from the mining process.

Grade

The quantity of gold contained within a unit weight of gold-bearing material generally expressed in ounces per short ton of ore (oz/t),

or grams per metric tonne (g/t).

Induced Polarisation (IP)

A geophysics technique widely used in the exploration for deposits.

GLOSSARY OF TERMS
2012 MINERAL RESOURCE AND ORE RESERVE REPORT
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Leaching

Dissolution of gold from crushed or milled material, including reclaimed slime, prior to adsorption on to activated carbon.

Life of Mine (LOM)

Number of years that the operation is planning to mine and treat ore, and is taken from the current mine plan.

Marginal ore (MO)

MO is ore material with grade below the FGO cut-off that can be economically treated at the end of mine life when overhead and

mining costs are reduced. MO cut-off is the break-even grade where cost is representative of the reduced cost that will be experienced

after mining has ended.

Metallurgical plant

A processing plant erected to treat ore and extract gold.

Milling

A process of reducing broken ore to a size at which concentrating can be undertaken. (See also 'Comminution') Mine call factor (MCF)

The ratio, expressed as a percentage, of the total quantity of recovered and unrecovered mineral product after processing with

the amount estimated in the ore based on sampling. The ratio of contained gold delivered to the metallurgical plant divided by the

estimated contained gold of ore mined based on sampling.

Metallurgical recovery factor (MetRF)

A measure of the efficiency in extracting gold from the ore deposit.

Mineral deposit

A mineral deposit is a concentration (or occurrence) of material of possible economic interest in or on the Earth's crust. Mining reconciliation factor (MRF)

This is the variance between the gold called for as defined by the ore perimeters and what the processing plant receives. It is

expressed in both a grade and tonnage number.

Net present value (NPV)

The difference between the present value of cash inflows and the present value of cash outflows.

Ounce (oz) (troy)

Used in imperial statistics. A kilogram is equal to 32.1507 ounces. A troy ounce is equal to 31.1035 grams.

Pay limit

The grade of a unit of ore at which the revenue from the recovered mineral content of the ore is equal to the total cash cost including

Ore Reserve Development and stay-in-business capital. This grade is expressed as an *in-situ* value in grams per tonne or ounces per

short ton (before dilution and mineral losses).

Reclamation

In the South African context, reclamation describes the process of reclaiming slimes (tailings) dumps using high-pressure water

cannons to form a slurry which is pumped back to the metallurgical plants for processing.

Recovered grade

The recovered mineral content per unit of ore treated.

Reef

A gold-bearing sedimentary horizon, normally a conglomerate band that may contain economic levels of gold.

Refining

The final purification process of a metal or mineral.

Region

Defines the operational management divisions within AngloGold Ashanti, namely South Africa, Continental Africa (DRC, Ghana, Guinea,

Mali, Namibia and Tanzania), Australasia (Australia) and the Americas (Argentina, Brazil, Colombia and the United States of America).

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**GLOSSARY OF TERMS** 

#### Rehabilitation

The process of reclaiming land disturbed by mining to allow an appropriate post-mining use. Rehabilitation standards are defined

by country-specific laws including, but not limited to the South African Department of Mineral Resources, the US Bureau of Land

Management, the US Forest Service, and the relevant Australian mining authorities, and address among other issues, ground and

surface water, topsoil, final slope gradient, waste handling and re-vegetation issues.

Resource to Reserve reconciliation factor (RRF)

This is the variance between the Mineral Resource model and the Ore Reserve parameters.

Seismic event

A sudden inelastic deformation within a given volume of rock that radiates detectable seismic energy.

Shaft

A vertical or subvertical excavation used for accessing an underground mine; for transporting personnel, equipment and supplies; for

hoisting ore and waste; for ventilation and utilities; and/or as an auxiliary exit.

**Smelting** 

A pyro-metallurgical operation in which gold is further separated from impurities.

SMU

The selective mining unit (SMU) reflects mining selectivity and it is the smallest unit that can be mined at a particular operation with

the equipment available at that site.

Stay-in-business capital

Capital expenditure to maintain existing production assets. This includes replacement of vehicles, plant and machinery, ore reserve

development and capital expenditure related to safety, health and the environment.

Stope

Underground excavation where the mineralised deposit is extracted.

Stoping

The process of excavating ore underground.

Stripping ratio

The ratio of waste tonnes to ore tonnes mined calculated as total tonnes mined less ore tonnes mined divided by ore tonnes mined.

**Tailings** 

Finely ground rock of low residual value from which valuable minerals have been extracted.

Tailings dam (slimes dam)

Dam facilities designed to store discarded tailings.

Tonne

Used in metric statistics. Equal to 1,000 kilograms.

Tonnage

Quantity of material measured in tonnes.

Waste

Material that contains insufficient mineralisation for consideration for future treatment and, as such, is discarded.

**GLOSSARY OF TERMS** 

## continued

2012 MINERAL RESOURCE AND ORE RESERVE REPORT

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# **ABBREVIATIONS** Degrees kg/t Kilograms per tonne Minutes km Kilometres United States dollars Long inclined borehole 3D Three-dimensional space **LOM** Life of Mine AC Aircore drilling M or m Metre or million, depending on the context Ag Silver Square metre **AGA** AngloGold Ashanti **MCF** Mine Call Factor **AGK** Ashanti Goldfields Kilo **MetRF** Metallurgical Recovery Factor **ARS** Argentinian Peso Mlb Million pounds Australian Securities Exchange Moz Million ounces Au Contained gold **MRF** Mining Reconciliation Factor **AUD** Australian dollar mRL Metres relative level Avg.

Mt
Million tonnes (metric)
BAL
Balancão
Mtpa
Million tonnes per annum
BP
Business Plan
NPV
Net present value
BRL
Brazilian Real
OZ
Ounces (troy)
capex
Capital expenditure
R or ZAR
South African rand
CdS
Córrego do Sítio
RC
Reverse circulation drilling
CLR
Carbon Leader Reef
RRF
Resource to Reserve reconciliation factor
cm
Centimetres
S
Sulphur
cm.g/t
Centimetre grams per tonne
SAMREC
The South African Code for the Reporting of
C Reef
Crystalkop Reef
Exploration Results, Mineral Resources and
DD
Diamond drilling
Mineral Reserves (The SAMREC Code)
DRC
Democratic Republic of the Congo
SER
Serrotinho deposit
DMS
Dense Media Separation
SMU
Selective mining unit
ESIA
Environmental and social impact assessment

Average

**SSP** Sadiola Sulphide Project **EM** Electromagnetic Tonnes (metric) **FGS** Fonte Grande Sul Tonnes per annum Grams **TSF** Tailings storage facility GC Grade control tph Tonnes per hour Grams per tonne Tonnes per month ha Hectare U 3 O 8 Uranium Oxide **JORC** Australasian Code for Reporting Exploration Ventersdorp Contact Reef Results, Mineral Resources and Ore Reserves **VR** Vaal Reef **JSE** Johannesburg Stock Exchange Limited XRF X-ray fluorescence kg Kilograms 175

**ABBREVIATIONS** 

#### ADMINISTRATIVE INFORMATION

AngloGold Ashanti publishes important information about the company on the main page of its website www.anglogoldashanti.com under the "Investors" tab. This information is updated regularly. Investors are encouraged to regularly visit the website to access this information.

## ANGLOGOLD ASHANTI LIMITED

Registration No. 1944/017354/06

Incorporated in the Republic of South Africa

Share codes:

ISIN:

ZAE000043485

JSE:

ANG

LSE:

AGD

NYSE:

AU

ASX:

**AGG** 

GhSE (Shares):

**AGA** 

GhSE (GhDS):

**AAD** 

JSE Sponsor:

UBS (South Africa) (Pty) Limited

Auditors:

Ernst & Young Inc.

Offices:

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#### 6696/12

The Annual Integrated Report, the primary document in the suite of reports which has been produced in line with the recommendations of the King Code of Governance for South Africa, 2009 (King III) and the Listings Requirements of the Johannesburg Stock Exchange (JSE), the home of our primary listing. We have taken cognisance of local and international recommendations on integrated reporting in developing our report content, and the style of reporting. It contains an holistic view of our business – now and in the future – containing operational, financial and non-financial information. As this is a group-level report, operational targets and performance are discussed at a group level. This report is available online and, on request, as a printed report. Stakeholders seeking more detailed and specific information are referred to the reports listed below.

The Annual Financial Statements, which has been prepared in accordance with: the International Financial Reporting Standards (IFRS); the South African Companies Act, 71 of 2008 (as amended); and the Listings Requirements of the JSE. This report is submitted to the JSE in South Africa, as well as the London, New York, Ghana and Australian stock exchanges on which AngloGold Ashanti is listed. This report is available online and, on request, as a printed report. Our Sustainability Report, which provides insight into our approach to sustainability, and objectives, strategy and performance. This global report focuses on those sustainability issues that have been determined to be most important to us and to our stakeholders. This report is available online and, on request, as a printed report.

Our Online Sustainability Report, which provides a more comprehensive view of our business, has been produced in accordance with the Global Reporting Initiative's (GRI) 3.0 guidelines, as well as GRI's Mining and Metals Sector Supplement, the Sustainable Development Framework of the International Council on Metals and Mining (ICMM), the principles of the United Nations Global Compact (UNGC) and the Extractive Industries Reporting Initiative (EITI). This report is available online.

This report, our Mineral Resource and Ore Reserve Report, which records our Mineral Resource and Ore Reserve in accordance with the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code, 2007 edition), and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004 edition). This report has been prepared and reviewed with consent by the Competent Persons as defined in terms of these codes.

Our Operational Profiles, which provide detailed financial and non-financial information on each of our operations and projects. These are available online at www.aga-reports.com,

and are downloadable in a pdf format.

A Notice of Meeting to shareholders together with the relevant voting instruction forms for the stock exchanges at which the company is listed. These provide details of the forthcoming annual general meeting and of the resolutions on which shareholders are to vote.

Additional supporting material including the document entitled "Risk Factors related to AngloGold Ashanti's suite of 2012 reports", which was previously in the Annual Financial Statements, is available on AngloGold Ashanti's online corporate report website www.aga-reports.com.

In compliance with the rules governing its listing on the NYSE and in accordance with the accounting principles generally accepted in the United States, AngloGold Ashanti prepares an annual report on Form 20-F which is filed each year. The full suite of 2012 reports will be furnished to the United States Securities and Exchange Commission (SEC) on a Form 6-K.

Briefly, this suite of AngloGold Ashanti annual reports to stakeholders 2012 comprises the following:

**GUIDE TO USING OUR REPORTS** 

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**Our primary platform** for reporting is our online report at www.aga-reports.com

## SHARE REGISTRARS

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Telephone: +1 800 522 6645 (Toll free in USA) or +1 201 680 6578 (outside USA) E-mail: shrrelations@mellon.com Website: www.bnymellon.com.com\shareowner **Global BuyDIRECTSM** BoNY maintains a direct share purchase and dividend reinvestment plan for AngloGold Ashanti. Telephone: +1-888-BNY-ADRS 2012 **ANNUAL FINANCIAL STATEMENTS ANNUAL FINANCIAL STATEMENTS** Assurance statement Remuneration report Corporate governance Financial results Non-GAAP disclosure FS **ANNUAL INTEGRATED REPORT** Regional review of operations Non-GAAP summary Approach to risk Letter from Chairman and CEO 2012 **ONLINE SUSTAINABILITY REPORT ONLINE SUSTAINABILITY REPORT** (only available online)

Assurance statement GRI compliance Sustainability performance **UNGC** compliance ICMM compliance Case studies OS 2012 **SUSTAINABILITY REPORT SUSTAINABILITY REPORT** Letter from CEO Material sustainability issues Approach to risk Sustainability performance Panel feedback SR 2012 **ANNUAL INTEGRATED REPORT** 2012 MINERAL RESOURCE AND ORE RESERVE **REPORT** MINERAL RESOURCE AND ORE RESERVE **REPORT** Proved and Probable Ore Reserve Measured, Indicated and Inferred Mineral Resource **IR** RR

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## **SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized. AngloGold Ashanti Limited

Date: April 11, 2013

By:

/s/ M E SANZ PEREZ Name: M E Sanz Perez

Title: Group General Counsel and Company

Secretary