

ANGLOGOLD ASHANTI LTD

Form 6-K

March 30, 2010





**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 March 30, 2010

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: Press release

**ANGLOGOLD ASHANTI MINERAL RESOURCE AND ORE RESERVE  
REPORT FOR THE YEAR ENDED DECEMBER 31, 2009,**

09

**Mineral Resource and Ore Reserve Report 2009**

## **Scope of report**

### **AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

#### Scope of 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 (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.

Information is presented either by operating region, country, operation or exploration project. The regional or country overviews include the following tables: Mineral Resource and Ore Reserve gold price and exchange rates, details of average drill-hole spacing and type, Ore Reserve modifying factors, development sampling results, Mineral Resource and Ore Reserve comparison by operation and Mineral Resource and Ore Reserve by-products. Topics for discussion include Geology, Mineral Resource estimation, exclusive Mineral Resource, Ore Reserve estimation and Inferred Mineral Resource in business plan. All Mineral Resources and Ore Reserves listed in this document are attributable unless otherwise stated.

The operational reviews include the following: Geology, Mineral Resource, exclusive Mineral Resource, Mineral Resource and Ore Reserve reconciliation, Mineral Resource and Ore Reserve by-products, Ore Reserve, grade tonnage information and competent persons.

This document, the Mineral Resource and Ore Reserve Report 2009, is a key component of the AngloGold Ashanti suite of 2009 annual reports produced to record the company's performance regarding its finances, operations and sustainability activities for the 12 months ended 31 December 2009. Other major documents in this suite of reports are the Annual Financial Statements 2009 and the Sustainability Review 2009, both of which are available on the corporate website, [www.anglogoldashanti.com](http://www.anglogoldashanti.com).

The Annual Financial Statements 2009 contains a summary extract of AngloGold Ashanti's Mineral Resource and Ore Reserve.

*Note: Rounding of figures in this document may result in minor computational discrepancies. Throughout this report, dollar or \$ represents US dollar unless otherwise stated.*

The suite of 2009 annual reports produced by AngloGold Ashanti Limited includes:

*Annual Financial*

*Statements 2009*

*Mineral Resource and Ore*

*Reserve Report 2009*

*Sustainability Review 2009*

*Abridged Report 2009*

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Disclaimer

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by the listed Competent Persons, who are, unless otherwise specified, full-time employees of AngloGold Ashanti Limited. The membership details for each of the Competent Persons of approved professional organisation are included in this report. The Competent Persons have sufficient experience relative to the type and style of mineral deposit under consideration and to the activity which has been undertaken, to qualify as a Competent Person (or Recognised Mining Professional) as defined in the 2004 Edition of the JORC Code and the SAMREC code (2007 Edition). The Competent Persons consent to the release of the Exploration Results, Mineral Resources and Ore Reserves in the form and context in which it appears.



## **Corporate profile**

### **AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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Corporate profile

AngloGold Ashanti Limited is a leading global gold mining company, headquartered in Johannesburg, with a portfolio of

21 operations spanning 10 countries on four continents. For reporting purposes, operations are divided into five regions – Southern

Africa, Continental Africa, Australasia, North America and South America. In the company's management structure, the African and

American operations fall under the executive vice presidents for Africa and the Americas respectively. The Australasian region is

similarly represented at executive level by a regional executive vice president.

As at 31 December 2009, AngloGold Ashanti had 362,240,669 ordinary shares in issue and a market capitalisation of \$14.6 billion (31 December 2008: \$9.8 billion). AngloGold Ashanti's primary listing is on the JSE Limited in Johannesburg.

It is also listed on exchanges in New York, London, Paris, Brussels, Australia and Ghana.

At the end of 2009, the government of Ghana held approximately 3% of AngloGold Ashanti's shares. The balance of the

identifiable free float was held in the Americas (49%), South Africa (26%), the United Kingdom (12%), Europe (4%) and Asia

Pacific/the Middle East (3%).

In 2009, approximately 40% of AngloGold Ashanti's production came from Southern Africa, including Namibia.

Production

from the rest of Africa (Ghana, Tanzania, Guinea and Mali) made up a further 33%, South America (Brazil and Argentina) 13%,

North America (USA) 5% and Australasia (Australia) 9%.

The bulk of AngloGold Ashanti's operations are under its own management. Typically contractors are used for mining activity

as a means of leveraging industry expertise, particularly at open-pit operations. In 2009 AngloGold Ashanti employed 63,364

people around the world, comprising 49,908 employees and 13,456 contractors.

#### **Mali**

Morila

137,000oz

Sadiola

135,000oz

Yatela

89,000oz

#### **Guinea**

Siguiri

316,000oz

#### **Ghana**

Iduapriem 190,000oz

Obuasi

381,000oz

#### **South Africa**

Great Noligwa

158,000oz

Kopanang 336,000oz  
Maob Khotsong  
247,000oz  
Tau Lekoa  
124,000oz  
Surface Operations 164,000oz

**West Wits**

Mponeng 520,000oz

Savuka

30,000oz

TauTona

218,000oz

**Australia**

Sunrise Dam 401,000oz

Tropicana

**Namibia**

**USA**

Cripple Creek and

Victor 218,000oz

**Argentina**

Cerro Vanguardia

192,000oz

**Tanzania**

Geita 272,000oz

**China**

Yili Yunglong

Jinchanggou

**DRC**

Mongbwalu

Kibali

Operations

New exploration

**Colombia**

La Colosa

Quebradona

Gramalote

**Philippines**

Mapawa Area

Navachab 65,000oz

**Vaal River**

**Russia**

Veduga

**Brazil**

Serra Grande

77,000oz

Brasil Mineração 329,000oz

**Canada**

**Gabon**

Exploration

**Egypt**

**Saudi Arabia**  
**Eritrea**  
**Solomon**  
**Islands**  
**New Zealand**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Key production statistics**

Production (000 oz)

Gold sales (\$ million)\*

Total cash costs (\$/oz)

2009

2008

2009

2008

2009

2008

Southern Africa

1,862

2,167

1,723

1,505

472

367

Continental Africa

1,520

1,562

1,019

1,148

608

544

Australasia

401

433

221

280

662

552

North America

218

258

171

240

385

334

South America

598

562

634

446

353

402

Group

4,599

4,982

3,768  
 3,619  
 514  
 444

**Products and markets**

In 2009 AngloGold Ashanti produced 4.599Moz (143,049kg) of gold, making the company one of the world's leading gold producers. To put this figure in perspective, total gold production in 2009 was estimated to be some 82.1Moz (2,533t). AngloGold Ashanti's own customers are typically banks acting as intermediaries in the supply chain. Sales take place either

directly to these customers or to Rand Refinery Limited, a South African-based refining company which buys gold from

AngloGold Ashanti either on its own account or acts as an agent for the company.

The geographical distribution of sales shown below reflects these arrangements and is based on the domicile of our immediate customers. It does not necessarily reflect the location of the end-user of the product. The largest end-use markets

for gold are India, the Middle East, China and the USA.

Although the bulk of AngloGold Ashanti's revenue (96%) comes from gold, the company also produces uranium from its

operations in South Africa, silver from its operations in Argentina and sulphuric acid from its operations in Brazil.

**Exploration for future growth**

The company is well positioned for future growth through substantial greenfields and brownfields exploration project pipelines.

AngloGold Ashanti's track record of exploration discoveries compares favourably with its peer group: it has recorded five major

finds since 2003, including in Colombia, Brazil, Australia and the Democratic Republic of the Congo (DRC).

Currently, the

company's largest greenfields exploration projects are based in Western Australia, Colombia and the DRC. At 31 December 2009,

the group's Proved and Probable Ore Reserves amounted to 71.4Moz of gold (2008: 74.9Moz).

Country

% sales

Asia

9%

Europe

11%

North America

17%

Africa

44%

United Kingdom

17%

Australia

2%

Geographical distribution of gold sales

for the year ended 31 December 2009

4,592,000

Total oz gold sold in 2009

\$3,768m

Revenue from gold sales in 2009

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**Group overview**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

Group overview

**Ore Reserves and Mineral Resources 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 Resources are inclusive of the Ore Reserve component unless otherwise stated.**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource**

When the 2008 Mineral Resource is restated to exclude the sale of Boddington (11.9Moz) and the purchase of Kibali (10.1Moz)

the Mineral Resource is reduced from 241.0Moz to 239.2Moz. The total Mineral Resource decreased from 239.2Moz in 2008

to 226.7Moz in December 2009. A year-on-year decrease of 6.3Moz (-3%) occurred before the subtraction of depletion and

a decrease of 12.5Moz (-5%) after the subtraction of depletion.

It should be noted that the changes in economic assumptions from 2008 to 2009 resulted in the Mineral Resource decreasing

by 2.8Moz whilst exploration and modelling resulted in an increase of 3.5Moz. The remaining loss of 6.9Moz resulted from

various other reasons. Depletions from the Mineral Resource for 2009 totalled 6.2Moz.

Mineral Resource

Moz

Mineral Resource as at

31 December 2008

241.0

Sale of Boddington

-11.9

Acquisition of Kibali

10.1

Restated 2008

Mineral Resource

239.2

Reductions

Obuasi

Predominantly due to changes in the underground Mineral Resource model and a re-assessment of the surface Mineral Resource. This reduction does not impact on the Ore Reserve.

-7.8

Vaal River Surface (VRGO)

Reductions due to lower uranium price

-3.2

Geita

Predominantly due to depletion, model updates and increase in costs

-1.4

Kibali

Conversion of Inferred to Indicated Mineral Resource resulted in losses

-1.2

West Wits Surface

Reductions due to lower uranium price

-1.2

Other

Total of non-significant changes

-4.0

Additions

Moab Khotsong

Gains due to exploration resulting in increase in confidence and grades

2.2

Other

Total of non-significant changes

4.1

Mineral Resource as at

31 December 2009

226.7

**Ore Reserve**

When the 2008 Ore Reserve is restated to exclude the sale of Boddington (6.7Moz) and the purchase of Kibali (2.5Moz), the

2008 Ore Reserve is reduced from 74.9Moz to 70.7Moz. Using the restated figure, the total AngloGold Ashanti Ore Reserve

increased from 70.7Moz in 2008 to 71.4Moz in December 2009. A year-on-year increase of 6.0Moz (8%) occurred before the

subtraction of 5.2Moz for depletion, resulting in an increase of 0.8Moz (1%) after the subtraction of depletion.

It should be noted that the changes in the economic assumptions from 2008 to 2009 resulted in the Ore Reserve increasing

3.2Moz while exploration and modelling resulted in a further increase of 2.7Moz.



**Group overview**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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Ore Reserve

Moz

Ore Reserve as at

31 December 2008

74.9

Sale of Boddington

-6.7

Acquisition of Kibali

2.5

Restated 2008 Ore Reserve

70.7

Reductions

Great Noligwa

Northern portion of mine was removed from plan to ensure profitability

-1.0

Kopanang

Reduction due to mine design changes plus slightly lower MCF, also changes in geological structure, facies and evaluation model

-0.7

Cripple Creek & Victor

Adjustment due to heap leach reconciliation issues

-0.6

Other

Total of non-significant changes

-2.3

Additions

Tropicana

First Ore Reserve reported for Tropicana – based on enhanced pre-feasibility study and owner mining

2.3

Kibali

Underground Ore Reserve additions (1.7Moz)

1.7

Sadiola

Deep Sulphides Ore Reserve included and ownership increased from 38% to 41%

1.0

Other

Total of non-significant changes

0.4

Ore Reserve as at

31 December 2009

71.4

**By-products**

Several by-products are recovered as a result of the processing of the gold Ore Reserves. These include 17,000t of uranium

oxide from the South African operations, 409,000t of sulphur from Brazil and 34.9Moz of silver from Argentina.

Details of

the by-product Mineral Resource and Ore Reserve are given later in this report.

**External audit of Mineral Resource and Ore Reserve statement**

During the course of the year and as part of the rolling audit program, AngloGold Ashanti's 2009 Mineral Resource at the following operations was submitted for external audit by the Australian-based company Quantitative Group (QG):

- Carbon Leader at Mponeng, TauTona and Savuka mines

- Siguiri – Project Area 1

- Navachab – Main Pit

- Sadiola – Deep Sulphides

- Geita – Nyankanga

- Sunrise Dam – Underground

- Obuasi – KMS Deep

- Brasil Mineração – Cuiabá

The company has been informed that the audit identified no material shortcomings in the process by which AngloGold Ashanti's Mineral Resource was evaluated. It is the company's intention to continue this process so that each of its operations will be audited every three years on average.

**Competent persons**

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information

compiled by the competent persons. These individuals are identified in the report. The competent persons consent to the

inclusion of Exploration Results, Mineral Resources and Ore Reserves 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 or Ore Reserves. 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, MAusIMM, assumes responsibility for the Mineral Resource and Ore Reserve processes for

AngloGold Ashanti and is satisfied that the competent persons have fulfilled their responsibilities.

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource by country (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

South Africa

Measured

30.37

14.18

430.77

13.85

Indicated

300.55

7.59

2,281.63

73.36

Inferred

42.24

13.51

570.45

18.34

Total

373.16

8.80

3,282.85

105.55

Namibia

Measured

17.24

0.78

13.46

0.43

Indicated

66.84

1.24

82.57

2.65

Inferred

18.53

1.07

19.92

0.64

Total

102.60

1.13

115.95

3.73

Democratic Republic of the Congo

Measured

—

-	
-	
-	
Indicated	
59.17	3.29
194.93	6.27
Inferred	
31.82	4.61
146.79	4.72
Total	90.99
3.76	
341.72	
10.99	
Ghana Measured	
80.21	
4.98	
399.77	
12.85	
Indicated	72.39
3.86	
279.66	
8.99	
Inferred	98.44
3.88	
382.02	
12.28	
Total	251.04
4.23	
1,061.45	
34.13	
Guinea	
Measured	
36.58	0.68
24.73	0.80
Indicated	
130.15	0.85
110.34	3.55
Inferred	
78.22	0.89
69.85	2.25
Total	
244.95	0.84
204.92	6.59
Mali	
Measured	
18.34	1.46
26.86	0.86
Indicated	
37.23	1.82
67.80	2.18
Inferred	

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20.89	1.77		
36.94	1.19		
Total		76.46	
1.72			
131.59			
4.23			
Tanzania Measured			
—			
—			
—			
—			
Indicated			
87.70	3.46		
303.46	9.76		
Inferred			
13.03	4.04		
52.63	1.69		
Total		100.73	
3.54			
356.10			
11.45			
Australia			
Measured			
34.10	1.87		
63.60	2.04		
Indicated			
38.83	2.88		
111.97	3.60		
Inferred			
15.34	3.01		
46.13	1.48		
Total			
88.26	2.51		
221.69	7.13		
United			
States			
Measured		280.80	0.82
231.03	7.43		
Indicated			
194.55	0.73		
142.71	4.59		
Inferred			
73.12	0.73		
53.58	1.72		
Total		548.46	
0.78			
427.31			
13.74			
Argentina			
Measured			
12.00	1.78		

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21.37	0.69	
Indicated		
22.70	3.38	
76.62	2.46	
Inferred		
6.16	3.71	
22.82	0.73	
Total		
40.85	2.96	
120.81	3.88	
Brazil		
Measured		
11.24	6.49	
72.93	2.34	
Indicated		
15.16	6.02	
91.28	2.93	
Inferred		
30.53	6.76	
206.35	6.63	
Total		56.93
6.51		
370.56		
11.91		
Colombia Measured		
—		
—		
—		
—		
Indicated		
15.16	0.93	
14.18	0.46	
Inferred		402.51
1.00		
401.40		
12.91		
Total		417.67
0.99		
415.57		
13.36		
Total Measured		
520.88		
2.47		
1,284.51		
41.30		
Indicated	1,040.43	3.61
3,757.14		
120.79		
Inferred	830.81	
2.42		
2,008.87		

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64.59

Total

2,392.12

2.95

7,050.53

226.68

**Group overview**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Exclusive Mineral Resource\* by country (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

South Africa

Measured

22.89

14.34

328.17

10.55

Indicated

100.15

11.48

1,149.86

36.97

Inferred

21.11

15.73

332.07

10.68

Total

144.15

12.56

1,810.10

58.20

Namibia

Measured

7.39

0.59

4.34

0.14

Indicated

34.43

1.19

40.99

1.32

Inferred

18.53



1.07  
19.92  
0.64  
Total  
60.35  
1.08  
65.24  
2.10  
Democratic Republic of the Congo  
Measured  
—  
—  
—  
—  
Indicated  
30.46  
2.18  
66.28  
2.13  
Inferred  
31.82  
4.61  
146.79  
4.72  
Total  
62.28  
3.42  
213.07  
6.85  
Ghana  
Measured  
27.08  
5.05  
136.86  
4.40  
Indicated  
34.89  
3.99  
139.29  
4.48  
Inferred  
53.62  
3.86  
206.88  
6.65  
Total  
115.58  
4.18  
483.02  
15.53  
Guinea

Measured

3.75

0.78

2.93

0.09

Indicated

45.56

0.86

39.30

1.26

Inferred

78.22

0.89

69.85

2.25

Total

127.52

0.88

112.07

3.60

Mali

Measured

4.86

0.79

3.85

0.12

Indicated

20.27

1.58

32.05

1.03

Inferred

20.89

1.77

36.94

1.19

Total

46.02

1.58

72.84

2.34

Tanzania

Measured

—

—

—

—

Indicated

43.22

3.21

138.72

4.46  
Inferred  
13.03  
4.04  
52.63  
1.69  
Total  
56.24  
3.40  
191.35  
6.15  
Australia  
Measured  
1.70  
1.36  
2.32  
0.07  
Indicated  
13.11  
3.00  
39.34  
1.26  
Inferred  
15.34  
3.01  
46.13  
1.48  
Total  
30.15  
2.91  
87.79  
2.82  
United States  
Measured  
180.98  
0.77  
138.73  
4.46  
Indicated  
148.15  
0.69  
101.53  
3.26  
Inferred  
68.65  
0.74  
50.77  
1.63  
Total  
397.78  
0.73

291.04  
9.36  
Argentina  
Measured  
2.29  
3.08  
7.06  
0.23  
Indicated  
16.04  
2.17  
34.80  
1.12  
Inferred  
6.16  
3.71  
22.82  
0.73  
Total  
24.49  
2.64  
64.68  
2.08  
Brazil  
Measured  
4.31  
6.41  
27.63  
0.89  
Indicated  
8.20  
5.77  
47.29  
1.52  
Inferred  
29.45  
6.81  
200.66  
6.45  
Total  
41.96  
6.57  
275.57  
8.86  
Colombia  
Measured  
—  
—  
—  
—  
Indicated

15.16

0.93

14.18

0.46

Inferred

402.51

1.00

401.40

12.91

Total

417.67

0.99

415.57

13.36

Total

Measured

255.24

2.55

651.88

20.96

Indicated

509.64

3.62

1,843.61

59.27

Inferred

759.32

2.09

1,586.84

51.02

Total

1,524.20

2.68

4,082.34

131.25

*\* The Exclusive Mineral Resource excludes the Ore Reserve component*

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**P**

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**Ore Reserve by country (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

South

Africa

Proved

8.80                      8.13

71.60                    2.30

Probable                              213.96

4.16

890.80

28.64

Total                                      222.76

4.32

962.40

30.94

Namibia

Proved

9.85                      0.93

9.12                      0.29

Probable

32.40                    1.28

41.42                    1.33

Total

42.25                    1.20

50.55                    1.63

Democratic Republic of the Congo

Proved

—

—

—

—

Probable                                      28.71

4.48

128.65

4.14

Total

28.71                    4.48

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128.65	4.14	
Ghana		
Proved		
40.29	3.36	
135.34	4.35	
Probable		
51.31	4.66	
239.31	7.69	
Total		91.60
4.09		
374.65		
12.05		
Guinea		
Proved		
30.83	0.64	
19.59	0.63	
Probable		
87.85	0.86	
75.99	2.44	
Total		
118.67	0.81	
95.58	3.07	
Mali		
Proved		
9.24	1.99	
18.35	0.59	
Probable		
18.96	2.02	
38.32	1.23	
Total		28.21
2.01		
56.67		
1.82		
Tanzania		Proved
–		
–		
–		
–		
Probable		
47.36	3.33	
157.57	5.07	
Total		47.36
3.33		
157.57		
5.07		
Australia		
Proved		
23.63	2.24	
53.00	1.70	
Probable		
25.72	2.82	

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72.63	2.34	
Total		
49.35	2.55	
125.63	4.04	
United States		
Proved		
99.82	0.92	
92.29	2.97	
Probable		
46.40	0.89	
41.17	1.32	
Total		
146.22	0.91	
133.47	4.29	
Argentina		
Proved		
10.76	1.37	
14.78	0.48	
Probable		
9.64	4.53	
43.66	1.40	
Total		
20.40	2.86	
58.44	1.88	
Brazil		
Proved		
6.67	5.90	
39.37	1.27	
Probable		
7.30	5.37	
39.21	1.26	
Total		
13.97	5.63	
78.58	2.53	
Total		Proved
239.89		
1.89		
453.45		
14.58		
Probable	569.61	
3.11		
1,768.73		
56.87		
Total	809.50	
2.75		
2,222.19		
71.44		



**Group overview**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**P**

**10**

**Reconciliation of Mineral Resource and Ore Reserve**

as at 31 December 2009

Au Content (attributable) Moz

Deple-

Gold

Explo-

Metho-

Model

Scope

Mine

Category

2008

tion

(1)

price

Cost

ration

dology

Other change

(2)

change

(3)

Southern Africa region

Great Noligwa

Resource

7.65

-0.23

-

-0.49

0.02

-

-

Reserve

2.63

-0.15

-

-0.07

-0.80

Kopanang

Resource

9.49

-0.63

0.08

-

1.10

-

-

Reserve

4.00

-0.35

0.08

-0.30

-0.08

Moab Khotsong

Resource

18.24

-0.33

0.61

-0.01

2.23

-0.08

-0.22

Reserve

7.32

-0.25

-

0.09

-0.02

Tau Lekoa

Resource

5.31

-0.19

0.90

-0.04

0.17

0.05

-

Reserve      0.92      -0.19

-

-

0.07

Vaal River

Resource

5.02

-0.17

-

-3.13

0.14

-

-

Surface (VRGO)

Reserve

1.91

-0.18

-

0.01

-

Mponeng

Resource

49.43

-0.67

-0.14

0.09

0.93

-

0.19

Reserve

12.99

-0.56

-

-0.47

0.75

Savuka

Resource

4.37

-0.06

-

-0.26

-0.21

-

-

Reserve

0.76

-0.03

-

0.02

-0.07

TauTona

Resource

7.14

-0.23

-

0.01

-0.54

-

-0.19

Reserve

3.08

-0.21

-

-0.11

-0.03

West Wits

Resource

1.37

-0.01

-

-1.17

0.01

-  
 -  
 Surface  
 Reserve  
 0.04  
 -0.01  
 -  
 0.15  
 -  
 Navachab  
 Resource  
 4.33  
 -0.25  
 0.09  
 -0.40  
 0.34  
 0.01  
 -0.38  
 Reserve  
 1.34  
 -0.08  
 -  
 0.21  
 0.16  
 Total  
 Resource 112.33  
 -2.77  
 1.54  
 -5.39  
 4.18  
 -0.01  
 -0.60  
 -  
 -  
 Reserve  
 35.00  
 -2.02  
 -  
 -  
 -  
 -  
 0.08  
 -0.46  
 -0.03  
 Continental Africa region  
 Iduapriem  
 Resource  
 4.87  
 -0.24  
 0.24  
 -0.28

-  
-  
-  
Reserve  
2.55  
-0.18  
0.01  
-  
0.02  
Obuasi  
Resource  
37.35  
-0.51  
-  
-0.13  
0.01  
-1.72  
-5.47  
Reserve  
9.66  
-0.65  
-  
-2.75  
3.38  
Siguiri  
Resource  
5.94  
-0.29  
0.09  
-0.43  
0.46  
0.90  
-0.08  
Reserve  
3.25  
-0.26  
-0.30  
0.18  
0.20  
Morila  
Resource  
0.46  
-0.14  
0.01 -  
-0.01  
0.01  
0.01  
Reserve  
0.46  
-0.16  
0.01

-0.01  
 0.02  
 Sadiola  
 Resource  
 3.13  
 -0.15  
 0.08  
 0.29  
 -  
 0.57  
 -0.18  
 Reserve  
 0.42  
 -0.15  
 0.26  
 0.93  
 -  
 Yatela  
 Resource  
 0.35  
 -0.13  
 0.01 -  
 -  
 -0.02  
 -0.06  
 Reserve  
 0.16  
 -0.13  
 0.01 -  
 -  
 Geita  
 Resource  
 12.86  
 -0.56  
 0.03  
 -0.32  
 0.17  
 -0.72  
 -0.02  
 Reserve  
 5.11  
 -0.31  
 -0.02  
 0.53  
 -0.25  
 Mongbwalu  
 Resource  
 2.53  
 -  
 -  
 -0.21 -

-0.21	—
Reserve –	
–	
Kibali	
Resource	
–	
–	
–	
–	
–	
-1.24	
10.13	
Reserve –	
2.48	
1.66	—
Total	
Resource	
67.49	
-2.01	
0.46	
-1.08	
0.62	
-2.43	
4.33	
–	
–	
Reserve	
21.62	
-1.82	
–	
–	
–	
–	
2.44	
0.55	
3.37	

1. Depletion: reduction in Ore Reserve based on ore delivered to the plant and corresponding in situ reduction in the Mineral Resource.
2. Model change: difference between the Ore Reserve based on the start of year and end of year Mineral Resource models.
3. Scope change: difference resulting from change in cut-off grade, mine call factor, new project studies and any other factors influencing the Ore Reserve estimations.

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

<b>P</b>	
<b>11</b>	Au Content (attributable) Moz
	Net
	2009
	diff
	%
	Comment
	6.94
	-0.71
	-9%
	Removal of safety pillars from the Mineral Resource
	1.60
	-1.02
	-39%
	Northern portion of mine was removed from plan to ensure profitability
	10.04
	0.55
	6%
	Reclassification of the Mineral Resource, changes in structure and re-evaluation of macro estimates resulted in an increase in ounces
	3.35
	-0.65
	-16%
	Due to mine design changes plus slightly lower MCF, also changes in geological structure, facies and evaluation models
	20.45
	2.21
	12%
	Gains due to areas being upgraded and also increase in confidence and value
	7.14
	-0.19
	-3%
	6.20
	0.89
	17%
	Area south-east of Jonkerskraal was re-instated due to economics, net change in value, stope width, dip and structure
	0.80
	-0.12
	-13%
	Only depletions were subtracted for 2009
	1.86
	-3.16
	-63%
	3.13Moz was removed from the Mineral Resource due to economics
	1.74
	-0.17
	-9%
	49.83



0.40  
 1%  
 Depletion was offset by gains from exploration and inter-shaft transfers  
 12.72  
 -0.28  
 -2%  
 3.84  
 -0.53  
 -12%  
 Net change in value and structure  
 0.69  
 -0.07  
 -10%  
 Extraction will return to normal levels from mid 2010  
 6.20  
 -0.95  
 -13%  
 Geological structure changes as well as a drop in grade, combined with transfers to and from Mponeng  
 2.73  
 -0.35  
 -11%  
 Mine was temporarily closed for refurbishing of shaft steelwork  
 0.20  
 -1.17  
 -86%  
 1.16Moz was removed from the Mineral Resource due to economics  
 0.18  
 0.14  
 326%  
 Gains due to the addition of the Mponeng waste rock dump  
 3.73  
 -0.60  
 -14%  
 Increase in operating costs and adjustment for various factors  
 1.63  
 0.29  
 22%  
 Remodelling added ounces to the North Pit plus re-design of the Western Pushback and Gecko  
 109.27  
 -3.06  
 -3%  
 32.57  
 -2.43  
 -7%  
 4.60  
 -0.27  
 -6%  
 Gains from gold price were offset by increase in costs  
 2.40  
 -0.16

-6%  
 29.53  
 -7.83  
 -21%  
 Changes predominantly due to clean out and modelling changes  
 9.65  
 -0.01  
 0%  
 6.59  
 0.65  
 11%  
 Gains due to change in modelling method  
 3.07  
 -0.18  
 -5%  
 0.33  
 -0.13  
 -29%  
 Changes predominantly due to depletion  
 0.32  
 -0.14  
 -30%  
 Changes predominantly due to depletion  
 3.76  
 0.62  
 20%  
 Increase in attributable portion from 38% to 41%  
 1.46  
 1.04  
 248%  
 Deep Sulphides included (929koz) and attributable portion increased from 38% to 41%  
 0.15  
 -0.20  
 -58%  
 Decrease due to stockpile and Mineral Resource shell adjustments, depletion and exclusion  
 of hard material  
 0.04  
 -0.12  
 -73%  
 Changes predominantly due to depletion  
 11.45  
 -1.41  
 -11%  
 Changes predominantly due to depletion, model updates and increase in costs  
 5.07  
 -0.05  
 -1%  
 2.10  
 -0.43  
 -17%

Decrease due to a more constrained geological model and a higher cut-off grade for underground mining

8.89

8.89

New acquisition plus reduction due to constraining Mineral Resource in pit shells

4.14

4.14

New acquisition plus increased underground Ore Reserve

67.38

-0.10

0%

26.14

4.52

21%

**Group overview**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Reconciliation of Mineral Resource and Ore Reserve cont.**

as at 31 December 2009

Au Content (attributable) Moz

Deple-

Gold

Explo-

Metho-

Model

Scope

Mine

Category

2008

tion

(1)

price

Cost

ration

dology

Other change

(2)

change

(3)

Australasia region

Boddington

Resource

11.91

-

-

-

-

-

-11.91

Reserve

6.69

-

-6.69

Sunrise Dam

Resource

3.85

-0.48

0.06

-

0.27

-

-0.08

Reserve

1.90

-0.45  
-  
0.13  
0.15  
Tropicana  
Resource  
3.51  
-  
-  
-  
-  
-  
-  
Reserve  
-  
-  
-  
2.31  
-  
Total  
Resource  
19.27  
-0.48  
0.06  
-  
0.27  
-  
-11.99  
-  
-  
Reserve  
8.59  
-0.45  
-  
-  
-  
-6.69  
2.44  
0.15  
North America region  
CC&V  
Resource  
13.31  
-0.31  
2.07  
-0.49  
0.60  
-1.44  
-  
Reserve

4.93  
-0.30  
-  
-0.02  
-0.32  
Total  
Resource  
13.31  
-0.31  
2.07  
-0.49  
0.60  
-1.44  
-  
-  
-  
Reserve  
4.93  
-0.30  
-  
-  
-  
-  
-0.02  
-0.32  
South America region  
Cerro Vanguardia  
Resource  
3.73  
-0.18  
-  
-  
0.27  
0.07  
-  
Reserve  
1.84  
-0.20  
0.01  
0.11  
0.12  
Brasil Mineração  
Resource  
10.53  
-0.39  
-  
-  
0.29  
0.46  
-

Reserve  
2.56  
-0.35  
0.08  
-0.04  
-0.08  
Serra Grande  
Resource  
0.98  
-0.10  
-  
-  
0.11  
0.05  
-  
Reserve  
0.36  
-0.09  
-  
0.08  
-  
Gramalote  
Resource  
1.04  
-  
-  
-  
0.46  
-  
-0.45  
Reserve  
0.00  
La Colosa  
Resource  
12.32  
-  
-  
-  
-  
-  
-  
Reserve  
0.00  
Total  
Resource  
28.59  
-0.67  
-  
-  
1.12  
0.57

-0.45  
 -  
 -  
 Reserve  
 4.76  
 -0.64  
 -  
 -  
 -  
 -  
 0.09  
 0.15  
 0.04  
 Grand total  
 Resource  
 240.98  
 -6.24  
 4.13  
 -6.96  
 6.79  
 -3.31  
 -8.71  
 -  
 -  
 Reserve  
 74.89  
 -5.24  
 -  
 -  
 -  
 -  
 -4.08  
 2.65  
 3.22

1. Depletion: reduction in Ore Reserve based on ore delivered to the plant and corresponding in situ reduction in the Mineral Resource.
2. Model change: difference between the Ore Reserve based on the start of year and end of year Mineral Resource models.
3. Scope change: difference resulting from change in cut-off grade, mine call factor, new project studies and any other factors influencing the Ore Reserve estimations.



**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

<b>P</b>	
<b>13</b>	
	Au Content (attributable) Moz
	Net
	2009
	diff
	%
	Comment
	–
	-11.91
	-100%
	Sold
	–
	-6.69
	-100%
	Sold
	3.62
	-0.24
	-6%
	1.73
	-0.17
	-9%
	Gains due to additional drilling, design change and economic factors were offset by depletion
	3.51
	–
	0%
	No change
	2.31
	2.31
	0%
	First Ore Reserve reported for Tropicana, based on enhanced pre-feasibility study and owner mining
	7.13
	-12.14
	-63%
	4.04
	-4.55
	-53%
	13.74
	0.43
	3%
	Depletion was offset by the addition of the Cresson pushback
	4.29
	-0.63
	-13%
	Decrease is due to recovery curve changes based on updated data and cut-off grade changes facilitated by equipment constraints
	13.74
	0.43
	3%
	4.29

-0.63  
 -13%  
 3.88  
 0.16  
 4%  
 Gains due to exploration  
 1.88  
 0.04  
 2%  
 Slight gain due to change in design and operative costs  
 10.88  
 0.36  
 3%  
 Additions at CdS II, model changes at Cuiabá, Lamego and CdS I  
 2.18  
 -0.38  
 -15%  
 1.03  
 0.05  
 5%  
 Change in mining method, reclassification and model  
 0.35  
 -0.01  
 -4%  
 1.04  
 -  
 0%  
 Additional drilling resulted in upgrading of the Inferred Mineral Resource to Indicated Mineral Resource  
 12.32  
 -  
 0%  
 No change  
 29.16  
 0.57  
 2%  
 4.41  
 -0.36  
 -7%  
 226.68  
 -14.30  
 -6%  
 71.44  
 -3.45  
 -5%

N

**West Wits**

**Mponeng**

Mineral Resource

49.83Moz

Ore Reserve

12.72Moz

**Savuka**

Mineral Resource

3.84Moz

Ore Reserve

0.69Moz

**TauTona**

Mineral Resource

6.20Moz

Ore Reserve

2.73Moz

**Surface operations**

Mineral Resource

0.20Moz

Ore Reserve

0.18Moz

**Namibia**

**Navachab**

Mineral Resource

3.73Moz

Ore Reserve

1.63Moz

Operations

**South Africa**

**Vaal River**

**Great Noligwa**

Mineral Resource

6.94Moz

Ore Reserve

1.60Moz

**Kopanang**

Mineral Resource

10.04Moz

Ore Reserve

3.35Moz

**Moab Khotsong**

Mineral Resource

20.45Moz

Ore Reserve

7.14Moz

**Tau Lekoa**

Mineral Resource

6.20Moz

Ore Reserve

0.80Moz

**Surface operations**

Mineral Resource

1.86Moz

Ore Reserve

1.74Moz

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**Southern Africa**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

Southern Africa

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Regional overview**

AngloGold Ashanti's Southern Africa region includes the group operations in South Africa and Namibia.

In 2009, the Southern Africa region produced 1.862Moz (57,922kg) of gold, equivalent to 40% of group production, at a total cash cost of \$472/oz.

The Mineral Resource in Southern Africa, attributable to AngloGold Ashanti, totalled 109.27Moz at year-end and the attributable Ore Reserve, 32.57Moz.

**Mineral Resource by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

Southern Africa

Measured

47.61

9.33

444.23

14.28

Indicated

367.39

6.44

2,364.20

76.01

Inferred

60.77

9.72

590.37

18.98

Total

475.76

6.97

3,398.80

109.27

**Ore Reserve by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

Southern Africa

Proved

18.65

4.33

80.73

2.60

Probable

246.36

3.78

932.22

29.97

Total

265.01

3.82

1,012.95

32.57

## **Southern Africa – South Africa**

### **AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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#### **South Africa**

##### **Regional overview**

The South African operations comprise seven underground mines located in two geographical regions on the Witwatersrand

Basin called the Vaal River and West Wits operations.

The Vaal River operations consist of the Great Noligwa, Kopanang, Moab Khotsong and Tau Lekoa mines. The primary reefs

mined in this region are the Vaal Reef (VR) and the Ventersdorp Contact Reef (VCR) and the secondary Crystalkop Reef

(C Reef).

The West Wits operations are made up of Mponeng, Savuka and TauTona, which are situated near the town of Carletonville.

The primary reefs mined are the Carbon Leader Reef (CLR) and the VCR.

All seven operations are 100% owned by AngloGold Ashanti. In addition, the Vaal River Surface and West Wits Surface

operations mine the waste rock dumps and tailings dams which result from the mining and processing of the primary and

secondary reef horizons.

The South African operations are all located in the rocks of the famous Witwatersrand Basin, which is regarded as the greatest

gold-bearing repository on Earth.

##### **Geology of the Witwatersrand Basin**

The Witwatersrand Supergroup (deposited in area often described as the Witwatersrand Basin) comprises a 6km-thick sequence of predominantly argillaceous and arenaceous sediments that extend laterally for some 300km

north-east/south-

west and 100km north-west/south-east on the Kaapvaal Craton. The upper portion of the sequence contains the

laterally

extensive, gold-bearing quartz pebble conglomerate horizons (commonly referred to as “reefs”).

Further west, south and east the basin is overlain by up to 4km of Archaean, Proterozoic and Mesozoic volcanic and sedimentary

rocks. The Witwatersrand Basin is late Archaean in age and is considered to be around 2.7 to 2.8 billion years old.

The reefs, which are generally less than 2m thick, are widely considered to represent laterally extensive braided fluvial deposits.

Separate fan systems were developed at different entry points and these are preserved as distinct goldfields with local geological variations. AngloGold Ashanti operates in two of these goldfields, known as the Carletonville (West Wits) and

and

Klerksdorp (Vaal River) goldfields.

There is still debate about the origin of the gold mineralisation in the Witwatersrand Basin. Gold was generally considered to

have been deposited syngenetically with the conglomerates, but increasingly an epigenetic theory of origin is being supported.

Nonetheless, the most fundamental determinant of gold distribution in the basin remains the sedimentary features, such as

facies variations and channel directions. Gold generally occurs in native form often associated with pyrite and carbon, with

quartz being the main gangue mineral.

##### **West Wits operations**

Two reef horizons are exploited at the West Wits operations: the VCR, located at the top of the Central Rand Group, and the CLR near the base. The separation between the two reefs increases from north to south, from 400 to 900m, owing to non-conformity of the VCR horizon. TauTona and Savuka exploit both reefs, while Mponeng currently only mines the VCR. The structure is relatively simple, with rare instances of faults greater than 70m. The CLR consists of one or more conglomerate units and varies from several centimetres to more than 3m in thickness. Regionally, the VCR dips at approximately 21°, but may vary between 5° and 50°, accompanied by changes in thickness of the conglomerate units. Where the conglomerate has the attitude of the regional dip, it tends to be thick, well-developed and accompanied by higher gold accumulations. Where the attitude departs significantly from the regional dip, the reef is thin and gold grades tend to be erratic.



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**Vaal River operation**

In order of importance, the reefs mined at the Vaal River operations are the VR, the VCR and the C Reef:

•

The VR contains approximately 85% of the Ore Reserve tonnage with mining grades of between 10 and 20g/t gold and

comprises a series of oligomictic conglomerates and quartzite packages developed on successive non-conformities. Several distinct facies have been identified, each with its own unique gold distribution and grade characteristic.

Johannesburg

Ventersdorp

Carletonville

Potchesfroom

0

40km

**Legend**

TauTona

Savuka

Mponeng

Towns

Other mines

N

Fochville

Johannesburg

Ventersdorp

Carletonville

Parys

Potchefstroom

Klerksdorp

Orkney

N

0

40km

**Legend**

Great Nologwa

Moab Khotsong

Kopanag

Tau Lekoa

Towns

Other mines

Fochville

Vaal River

**Vaal River operations**

**West Wits operations**

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•  
The VCR has a lower gold grade than the VR, and contains approximately 15% of the estimated Ore Reserve. The economic portion is concentrated in the western part of the lease area and can take the form of a massive conglomerate,

a pyritic sand unit with intermittent pebble layers, or a thin conglomerate horizon. The reef is located at the contact between

the overlying Kliprivierberg Lavas of the Ventersdorp Super Group and the underlying sediments of the Witwatersrand Super

Group, which creates a distinctive seismic reflector. The VCR is located up to 1km above the VR.

•  
The C Reef is a thin, small-pebble conglomerate with a carbon-rich basal contact, located approximately 270m above the

VR. It has less than 1% of the estimated Ore Reserve with gold grades similar to those of the VR, but less continuity.

The most significant structural features are the north-east striking normal faults which dip to the north-west and south-east, resulting in zones of fault loss.

**Mineral Resource and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800

720

Exchange rate – South Africa

ZAR/US\$

8.85

8.67

**Mineral Resource estimation**

A multi-disciplinary approach is adapted to Mineral Resource estimation whereby inputs are required from the geoscience,

survey and mine planning departments. A computerised system called the Mineral Resource Inventory System (MRIS)

integrates all the input information to produce the final Mineral Resource per operation. Mineral Resource estimates are computed from a composite grid of value estimates, comprising various block sizes. The macro block sizes vary from

210m x 210m to 420m x 420m with micro blocks of 30m x 30m.

Compound lognormal macro co-kriging estimation techniques are used to produce estimates for the larger block sizes.

This technique uses the Bayesian approach whereby the assayed (observed) data in the mined-out areas are used to infer the population characteristics of the area ahead of current mining. The geological model forms the basis for this estimation and all

surface borehole information from the peripheral areas of the mine lease play a crucial role in determining the

geological model

boundaries. Simple kriging is used for the 30m block sizes and these estimates are constrained by the weight of the mean.

The Mineral Resource is initially reported as inclusive of the Ore Reserve as they form the basis for the Ore Reserve conversion

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

margin that is relevant to the business plan. Mineral Resource grade tonnage curves are produced for the individual operations, which show the potential of the orebody at different cut-offs. These curves are produced for dimensions equivalent

to a practical mining unit for underground operations.

**Exclusive Mineral Resource**

The Exclusive Mineral Resource is defined as the inclusive Mineral Resource minus the in-situ Ore Reserve before stoping

width, dilution and mine call factors (MCF) are applied. Scoping studies are conducted on this Exclusive Mineral Resource,

where capital requirements and current costs are used to test economic potential. If these studies show no reasonable economic potential at the Mineral Resource gold price then the material is excluded from the Mineral Resource. All planned

pillars (ahead of current mining) form part of the Exclusive Mineral Resource.

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC Blast- Other

Comments

Project

Category

m (- x -)

hole

Great Measured

5 x 5

-

-

-

Chip sampling of stope faces

Noligwa

Indicated

100 x 100

-

-

-

Diamond drilling from development ends

Inferred

200 x 200

-

-

-

Diamond drilling from development ends

Grade control

—  
—  
—  
—

See Measured category

Kopanang

Measured

5 x 5

—  
—  
—

Chip sampling of stope faces

Indicated

200 x 200

—  
—  
—

Diamond drilling from development ends

Inferred

1,000 x 1,000

—  
—  
—

Surface drillholes

Grade control

—  
—  
—  
—

See Measured category

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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19  
Details of average drillhole spacing and type in relation to Mineral Resource classification cont.**

Type of drilling

Mine/

Spacing

Diamond

RC Blast- Other

Comments

Project

Category

m (- x -)

hole

Moab

Measured

5 x 5

-

-

-

Chip sampling of stope faces

Khotsong

Indicated

2 x 200

-

-

-

Diamond drilling from development ends

Inferred

1,000 x 1,000

-

-

-

Surface drillholes

Grade control

-

-

-

-

See Measured category

Mponeng

Measured

5 x 5

-

-

-

Chip sampling of stope faces

Indicated

100 x 100

-

-

–  
Diamond drilling from development ends  
Inferred  
1,000 x 1,000

–  
–  
–  
–  
Surface drillholes  
Grade control

–  
–  
–  
–  
See Measured category  
Savuka  
Measured  
5 x 5

–  
–  
–  
–  
Chip sampling of stope faces  
Indicated  
100 x 100

–  
–  
–  
–  
Diamond drilling from development ends  
Inferred  
1,000 x 1,000

–  
–  
–  
–  
Surface drillholes  
Grade control

–  
–  
–  
–  
See Measured category  
Tau Lekoa  
Measured  
5 x 5

–  
–  
–  
–  
Chip sampling of stope faces  
Indicated  
50 x 200

–  
–  
–

Diamond drilling from development ends

Inferred

1,000 x 1,000

—

—

—

Surface drillholes

Grade control

—

—

—

—

See Measured category

TauTona

Measured

5 x 5

—

—

—

Chip sampling of stope faces

Indicated

2 x 200

—

—

—

Diamond drilling from development ends

Inferred

1,000 x 1,000

—

—

—

Surface drillholes

Grade control

—

—

—

—

See Measured category

Vaal River

Measured

—

—

—

—

Run of mine sampling

Surface

Indicated

—

—

—

—

Run of mine sampling  
Inferred

—  
—  
—  
—

Run of mine sampling  
Grade control

—  
—  
—  
—

Run of mine sampling  
West Wits  
Measured

—  
—  
—  
—

Run of mine sampling  
Surface  
Indicated

—  
—  
—  
—

Run of mine sampling  
Inferred

—  
—  
—  
—

Run of mine sampling  
Grade control

—  
—  
—  
—

Run of mine sampling  
**Ore Reserve estimation**

All mine designs are undertaken using the Cadsmine

®

software package and include the delineation of mining or stoping areas

for each mining level and section, usually leading from an extension to the existing mining sequence, and the definition of the

necessary development layouts. The in situ Mineral Resource is scheduled monthly for the full Life-Of-Mine (LOM) plan. The

value estimates for these schedules are derived directly from the MRIS.

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 mill width and the stoping width as well as the MCF.



**Inferred Mineral Resource in business plan**

The LOM plans include a minimal Inferred Mineral Resource.

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**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

Cut-off

Stoping

factor

lurgical

weighted

grade

width

Dilution

(MCF)            recovery

Mine

g/t

cmg/t

cm

%

%

%

Great Noligwa

Crystalkop Reef

9.20

1,200

129.9

1

63.20

96.34

Vaal Reef

7.10

1,200

169.1

33

63.20

96.34

Kopanang

Crystalkop Reef

4.90

500

102.0

55

68.44

97.54

Vaal Reef Base

4.90

500

102.0

55

68.44

97.54

Vaal Reef EDOM

4.90

500

102.0

47

68.44

97.54

Moab Khotsong

C Reef – Middle Mine area

4.57

750

164.0

24

62.90

94.57

Lower Mine – area PZ2

5.90

750

127.2

28

78.00

96.88

VR – Middle Mine area

5.06

750

148.2

43

80.05

97.13

VR – Top Mine area

4.57

750

164.0

44

68.82

96.95

Tau Lekoa

Jonkerskraal

2.78

400

144.0

29

84.32

97.35

VCR Base

2.78

400

144.0  
 29  
 84.32  
 97.35  
 Vaal River Surface  
 SA Met – rock dump  
 0.38  
 –  
 –  
 –  
 100.00  
 91.00  
 SA Met – tailings dump  
 0.28  
 –  
 –  
 –  
 100.00  
 48.00  
 Mponeng  
 CLR below 120 level  
 6.41  
 750  
 117.0  
 20  
 81.00  
 98.45  
 TauTona CLR Eastern Block  
 7.89  
 750  
 95.0  
 76  
 81.00  
 98.45  
 VCR 109 to 120 level  
 5.36  
 750  
 140.0  
 40  
 86.27  
 98.00  
 VCR above 109 level  
 5.36  
 750  
 140.0  
 39  
 87.04  
 97.95  
 VCR below 120 level  
 5.36  
 750

140.0  
32  
91.96  
98.24  
Savuka  
Carbon Leader Reef  
7.96  
900  
113.0  
63  
63.46  
97.31  
Ventersdorp Contact Reef  
7.96  
900  
113.0  
75  
63.46  
97.31  
TauTona  
CLR – 1C11  
7.89  
947  
120.0  
57  
81.51  
97.78  
CLR Base  
9.97  
947  
95.0  
149  
81.51  
97.78  
CLR below 120  
9.97  
947  
95.0  
61  
81.51  
97.78  
EOB between 100 & 112 levels  
9.97  
947  
95.0  
32  
81.51  
97.78  
VCR shaft pillar  
5.26  
947

180.0

42

85.00

97.78

West Wits Surface

WWGO – rock dump

0.51

–

–

–

100.00

91.00

WWGO – tailings dump

–

–

–

–

–

–

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**Development sampling results – January to December 2009**

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

Advanced

Average

Sampled gold

Uranium

Statistics are shown in

metres

Sampled

channel

Average

Average

Average

Average

metric units

(total)

metres

width (cm)

g/t

cm g/t

kg/t

cm kg/t

Vaal River

Great Noligwa

Vaal Reef

2,842

196

108.5

8.93

969

0.62

67.41

Kopanang

Vaal Reef

25,653

2,606

25.2

67.66

1,705

3.55

93.00

Moab Khotsong

Vaal Reef

17,644

1,488

130.8

22.13  
2,895  
1.12  
146.69  
Tau Lekoa  
Ventersdorp Contact Reef  
8,084  
1,116  
91.5  
8.30  
759  
0.02  
2.17  
West Wits  
TauTona  
Ventersdorp Contact Reef  
720  
64  
147.7  
14.43  
2,132  
0.11  
15.69  
Carbon Leader Reef  
8,412  
174  
12.8  
211.80  
2,711  
2.48  
31.70  
Savuka  
Ventersdorp Contact Reef  
—  
34  
100.8  
24.05  
2,424  
—  
—  
Carbon Leader Reef  
1,350  
36  
100.3  
53.18  
5,334  
—  
—  
Mponeng  
Ventersdorp Contact Reef  
17,465



2,446

58.0

34.95

2,027

—

—

**Uranium**

AngloGold Ashanti produces a uranium oxide concentrate (U

3

O

8

) as a by-product from its South African gold mining operations. AngloGold Ashanti currently produces between 500 and 600t of U

3

O

8

annually. Although mined as a by-product of gold for many years, U

3

O

8

was not considered a Mineral Resource until 2005. Due to the rapid increase in the U

3

O

8

price

over the last few years, renewed focus has been placed on the U

3

O

8

content within the Witwatersrand reefs.

The AngloGold Ashanti mines in the Vaal River region that currently produce uranium oxide as a by-product are Great Noligwa,

Kopanang, and Moab Khotsonq. The uranium oxide is extracted from the VR, although Great Noligwa mine also produces

some uranium oxide from the C Reef. The mines in the West Wits region that have uranium Mineral Resources are Mponeng,

Savuka and TauTona and in this mining region the uranium is only present in the CLR and is currently not being extracted.

The mineralised ore from Moab Khotsonq, Great Noligwa and Kopanang is milled in the Noligwa gold plant and treated in the

South uranium plant for uranium extraction by the reverse leach process. The ammonium diuranate is transported to Nufcor

where the material is calcined and packed for shipment to the converters.

The surface tailings storage facilities that have been classified as uranium Mineral Resources are the Kopanang Paydam and

the tailings storage facilities in the West Wits region. Uraninite and brannerite are the most common uranium-bearing minerals,

although uraniferous leucoxene and coffinite are also present. Uraninite was the original primary uranium-bearing mineral and

was possibly introduced as detrital material during the deposition of the Witwatersrand sediments.

**Mineral Resource – Uranium (U**

3

O

8

)

Contained

Resource  
 Tonnes  
 Grade  
 uranium oxide  
 Pounds  
 Mine/Project  
 category  
 million  
 kg/t  
 tonnes  
 million  
 Great Noligwa  
 Measured  
 –  
 –  
 –  
 –  
 Indicated  
 15.46  
 0.42  
 6,525  
 14.39  
 Inferred  
 2.60  
 0.43  
 1,120  
 2.47  
 Total  
 18.06  
 0.42  
 7,645  
 16.85  
 Kopanang  
 Measured  
 –  
 –  
 –  
 –  
 Indicated  
 22.30  
 0.74  
 16,459  
 36.29  
 Inferred  
 2.17  
 0.60  
 1,307  
 2.88  
 Total  
 24.47  
 0.73

17,766  
39.17  
Moab Khotsong  
Measured  
2.27  
0.77  
1,755  
3.87  
Indicated  
17.34  
0.97  
16,825  
37.09  
Inferred  
9.99  
0.88  
8,764  
19.32  
Total  
29.61  
0.92  
27,344  
60.28  
Vaal River Surface  
Measured  
—  
—  
—  
—  
Indicated  
48.72  
0.09  
4,434  
9.77  
Inferred  
—  
—  
—  
—  
Total  
48.72  
0.09  
4,434  
9.77  
Mponeng  
Measured  
—  
—  
—  
—  
Indicated

31.16

0.17

5,439

11.99

Inferred

14.87

0.17

2,533

5.58

Total

46.02

0.17

7,972

17.58

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**Mineral Resource – Uranium (U3O8) cont.**

Contained

Resource

Tonnes

Grade

uranium oxide

Pounds

Mine/Project

category

million

kg/t

tonnes

million

Savuka

Measured

–

–

–

–

Indicated

6.59

0.26

1,700

3.75

Inferred

–

–

–

–

Total

6.59

0.26

1,700

3.75

TauTona

Measured

–

–

–

–

Indicated

8.26

0.28

2,317

5.11

Inferred

–

–

–  
 –  
 Total  
 8.26  
 0.28  
 2,317  
 5.11  
 Total Measured  
 2.27  
 0.77  
 1,755  
 3.87  
 Indicated  
 149.83  
 0.36  
 53,700  
 118.39  
 Inferred  
 29.63  
 0.46  
 13,724  
 30.26  
 Total  
 181.74  
 0.38  
 69,179  
 152.51  
**Ore Reserve – Uranium (U3O8)**  
 Contained  
 Resource  
 Tonnes  
 Grade  
 uranium oxide  
 Pounds  
 Mine/Project  
 category  
 million  
 kg/t  
 tonnes  
 million  
 Great Noligwa  
 Proved  
 3.66  
 0.24  
 886  
 1.95  
 Probable  
 3.04  
 0.28  
 849  
 1.87

Total  
 6.70  
 0.26  
 1,735  
 3.82  
 Kopanang  
 Proved  
 1.00  
 0.19  
 187  
 0.41  
 Probable  
 17.25  
 0.15  
 2,646  
 5.83  
 Total  
 18.25  
 0.16  
 2,833  
 6.25  
 Moab Khotsong  
 Proved  
 1.17  
 0.36  
 421  
 0.93  
 Probable  
 18.77  
 0.63  
 11,794  
 26.00  
 Total  
 19.93  
 0.61  
 12,215  
 26.93  
 Vaal River Surface  
 Proved  
 –  
 –  
 –  
 –  
 Probable  
 0.10  
 1.30  
 130  
 0.29  
 Total  
 0.10  
 1.30



130  
0.29  
Total  
Proved  
5.83  
0.26  
1,493  
3.29  
Probable  
39.16  
0.39  
15,419  
33.99  
Total  
44.98  
0.38  
16,912  
37.29

**Southern Africa – South Africa – Great Noligwa**

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**South Africa – Great Noligwa**

**Location**

Great Noligwa is located about 15km south-east of the town of Orkney, in the southern part of the Klerksdorp goldfield. The mine exploits the VR at depths varying between 1,500 and 2,600m below surface. Scattered mining methods are employed where access to the reef is from the footwall haulage and return airway development, with cross-cuts developed every 180m to the reef horizon. Raises are then developed on-reef to the level above, and the reef is stoped out on-strike. The Great Noligwa lease area is constrained to the north by Pamodzi gold mine, to the east by Buffelsfontein gold mine, to the south by the Jersey and Die Hoek faults, (which displace the reef down by approximately 1,000 and 900m respectively), and to the west by Kopanang.

**Geology**

The VR is the principal economic horizon at Great Noligwa, accounting for over 90% of the gold produced at the mine. The VR is part of the Witwatersrand Supergroup and is stratigraphically located near the middle of the Central Rand Group in the Johannesburg Subgroup on an unconformity below the Krugersdorp Formation. The VR unit can reach a maximum thickness of more than 2m and consists of a thin basal conglomerate (the C Facies) and a thicker sequence of upper conglomerates (the A Facies), separated by internal quartzite (the B Facies). Across most of the Great Noligwa lease area, the A Facies is the principal economic horizon within the VR, although sporadic remnants of C Facies may be preserved below the A Facies. The high gold values in the VR are often associated with high uranium values. Uranium is a very important by-product of Great Noligwa. The C Reef has been mined on a limited scale in the central part of Great Noligwa, where a high-grade, north-south orientated channel containing two economic horizons has been exposed. To the east and west of this channel the C Reef is poorly developed with relatively small areas of economic interest. High uranium values in the C Reef are also often associated with high gold values. To the north, the C Reef sub-crops against the Gold Estates Conglomerates and in the extreme south of the mine the C Reef has been eliminated by a deeply eroded Kimberley Channel and the Jersey fault.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Great Noligwa				
Category				
million				
g/t				
tonnes				
Moz				
Crystalkop				
Reef				
Measured				
0.91	7.15	6.53	0.21	
Indicated				
4.98	9.53			
47.45	1.53			
Inferred				
1.47	8.52			
12.50	0.40			
Total				
7.36	9.03			
66.48	2.14			
Vaal Reef				
Measured				
7.03				
14.23				
100.06				
3.22				
Indicated				
2.54	14.06	35.66	1.15	
Inferred				
1.13	12.09	13.69	0.44	
Total		10.70		
13.96				
149.41				
4.80				
Great Noligwa				
Total				
18.06				
11.95				
215.89				
6.94				

**Exclusive Mineral Resource**

as at 31 December 2009

Contained  
 Contained  
 Tonnes  
 Grade  
 gold  
 gold  
 Great Noligwa  
 Category  
 million  
 g/t

tonnes  
Moz  
Measured  
4.99  
12.38  
61.76  
1.99  
Indicated  
4.99  
9.86  
49.14  
1.58  
Inferred  
2.20  
9.33  
20.49  
0.66  
Great Noligwa  
Total  
12.17  
10.79  
131.39  
4.22

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Great Noligwa

Category

million

g/t

tonnes

Moz

Crystalkop Reef

Proved

0.47

6.11

2.85

0.09

Probable

1.37

6.10

8.33

0.27

Total

1.83

6.10

11.18

0.36

Vaal Reef

Proved

3.19

7.98

25.48

0.82

Probable

1.67

7.85                      13.13

0.42

Total

4.86

7.94

38.61

1.24

Great Noligwa

Total

6.70

7.44  
 49.80  
 1.60  
 Great Noligwa: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 2.63  
 2008  
 -0.15  
 Depletion  
 -0.07  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 -0.80  
 Scope  
 Change  
 1.60  
 2009  
 0.00  
 Change in  
 Economics  
 1.0  
 0.00  
 Other  
 3.0  
 2.0  
 Great Noligwa: Mineral Resource reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 7.65  
 2008  
 -0.23  
 Depletion  
 0.00  
 Gold  
 price  
 0.02  
 Exploration  
 0.00  
 Metho-  
 dology  
 6.94  
 2009  
 -0.50  
 Cost  
 6.5

6.0  
0.00  
Other  
8.0  
7.5  
7.0  
Change  
Change  
64 level  
70 level  
76 level  
Datum - 2000m  
Datum - 500m  
Datum - 500m  
MM shaft  
Shaft  
bottom  
JERSEY  
FAULT  
GREAT NOLIGWA MINE  
VENT MAIN-SUB  
GREAT NOLIGWA MINE  
MAIN-SUB VENT  
-522m  
Below datum  
KERVAL ROAD  
DYKE  
MOAB KHOTSONG MINE MAIN  
**Section through Great Noligwa and Moab Khotsong mines**

**Southern Africa – South Africa – Great Noligwa**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Frans Putter

SACNASP

400052/95

25 years

Ore Reserve

Andre Kruger

PLATO

PMS0114

31 years

Great Noligwa – underground (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

25.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

15.00

5.00

10.00

10.0

15.0

20.0

25.0

30.0

0.0

20.0

16.0

8.0

4.0

12.0

20.00



**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**Southern Africa – South Africa – Kopanang**

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**South Africa – Kopanang**

**Location**

Kopanang mine is located in the Free State province; roughly 170km south-west of Johannesburg and approximately 10km

south-east of the town of Orkney on the farms Pretoriuskraal 53 and Grootdraai 468. The mine has been in production since

1984 and was originally known as Vaal Reef's 9 Shaft. Kopanang's current mine lease incorporates an area of 35km<sup>2</sup>

, directly

west of neighbouring Great Nologwa mine and bound to the south by the Jersey Fault. Dolomites of the Transvaal Supergroup

outcrop on surface resulting in a very subdued topography with very few rock exposures.

**Geology**

Gold- and uranium-bearing conglomerates of the Central Rand Group are exploited, the most important of which is the VR.

Gold is the primary commodity being extracted, with uranium oxide as a by-product. The economic VR and Crystalkop

conglomerates are exposed via a twin-shaft system that reaches a depth of 2,340m. The VR is exploited at depths of between

1,300 and 2,600m below surface. Kopanang almost exclusively exploits the VR, although minor amounts of gold are also

extracted from the C Reef, which is stratigraphically located about 250m above the VR.

The VR is a medium- to high-grade reef consisting of a basal conglomerate called the Stilfontein Reef, occasionally overlying

remnant Grootdraai conglomerate units, with an overlying Upper Vaal unit. Current terminology separates the reef into A, B

and C Facies, where the C Facies is the basal Stilfontein and/or Grootdraai conglomerates.

The overlying Upper Vaal or "A Facies" is split into three distinct sub facies; the VR A Bottom, Middle and Top, which consist

of a series of small pebble conglomerates and grits containing very little gold. Further to the east at Great Nologwa, the A Facies becomes more robust and better developed and attains high gold values.

The B Facies is simply a fine-grained, cross bedded, light grey, black speckled orthoquartzite that separates the A and C Facies.

The basal C Facies conglomerate of the VR is the main gold carrier on Kopanang. It varies very little in thickness, with a

thickness of 7 to 10cm being typical. The conglomerate comprises mostly quartz (92-98%) and chert (2-8%), with occasional

porphyry clasts (<2%). The matrix is generally very pyritic and the base is non-channelised, often containing a well-developed

carbon seam.

The C Reef contains two economic conglomerates, although the lower-most conglomerate is only preserved as small remnants. Gold concentrations are typically associated with a basal carbon seam. The C Reef sub-crops in the north against

the Gold Estates Conglomerates Formation. To the south of this unconformity, the reef can be eliminated by either the Kimberley erosion channels or bedding parallel faulting.

The VR and C Reef generally dip towards the south-east at between 10° and 30°.

Kopanang is situated in a structurally complicated area of the Witwatersrand Basin, which has been subjected to numerous tectonic events. The complexity of the faulting at Kopanang became evident during initial surface diamond borehole drilling.

Prior to 1970, 12 surface boreholes had been drilled on the farm Pretoriuskraal 53 and only five of these intersected the VR, the rest had been faulted out. Approximately 20% of the ground in the mine lease area has been eliminated due to the presence of faulting. At least nine structural events, of differing ages, are thought to effect the reef at Kopanang. The interaction of these structures can be very complicated as the relationship of different aged structures is made more difficult by many of these faults having been reactivated at latter stages, or been active over long periods of time. This tectonic time frame ranges from late Archaean to Cretaceous and therefore involves some 2.7 billion years of structural deformation.

**Exploration**

The exploration at Kopanang is focused around target blocks that will be explored from underground drilling. The VR target blocks are situated in the shaft fault area and the ground below 68 level. Additional to this ground, the western portion of the mine lease (Gencor 1E area) forms a potential mineable area and will be explored by a combination of exploration drilling and development. An extensive C Reef exploration programme started during 2009 and will continue in 2010.

**Southern Africa – South Africa – Kopanang****AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009****P****28****Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Kopanang

Category

million

g/t

tonnes

Moz

Crystalkop

Reef

Measured

0.07

12.23

0.86

0.03

Indicated

0.35

12.81

4.43

0.14

Inferred

14.89

0.98

14.60

0.47

Total

1.40

14.24

19.89

0.64

Vaal Reef Base

Measured

3.59

16.39

58.83

1.89

Indicated

11.71

16.74

196.04

6.30

Inferred

0.90

12.54

11.34

0.36

Total

12.54

21.23

266.21

8.56

Vaal Reef EDOM

Measured

0.19

15.96

3.08

0.10

Indicated

1.36

14.16

19.23

0.62

Inferred

0.29

13.03

3.75

0.12

Total

1.84

14.18

26.06

0.84

Kopanang

Total

24.47

12.76

312.16

10.04

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Kopanang

Category

million

g/t

tonnes

Moz

Measured

3.15

16.80

52.97

1.70

Indicated

6.43

12.09

77.76

2.50

Inferred

1.90

14.05

26.65

0.86

Kopanang

Total

11.48

13.71

157.38

5.06

**Exclusive Mineral Resource**

Approximately 46% of the exclusive Mineral Resource is expected to be taken up in safety and remnant pillars, areas beyond

window of opportunity, areas beyond infrastructure and due to design and schedule losses.

**Legend**

0

Chuniespoort

Ventersdorp

Klerksdorp/Mondeor

G.E.C Kimberley channels

MBA

MB1

MB2/3

Vaal Reef

MB5/6

MB7/10

44 level

47 level

50 level

53 level

56 level

59 level

62 level

64 level

68 level

70 level

73 level

75 level

V9

PK1

PK2

PK6 PK9

PK4 MZ2

MA1

Popeye II

Shaft flat fault

Shaft steep fault

Shaft flat fault

Popeye III

BW fault

Pillar fault

Pillar fault

PK17 Zuiping

Diagonal dyke

Zuiping A fault

Jersey fault

PK17

fault

Shaft flat fault

Buf

fer dyke

MZ2 fault

0

800

**Geological section of Kopanang mine**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Kopanang

Category

million

g/t

tonnes

Moz

Crystalkop Reef

Proved

0.00

5.70

0.01

0.00

Probable

0.00

5.70

0.02

0.00

Total

0.01

5.70

0.04

0.00

Vaal Reef Base

Proved

0.87

6.96

6.02

0.19

Probable

15.23

5.61

85.50

2.75

Total

16.10

5.69

91.52

2.94

Vaal Reef EDOM

Proved

0.13  
 6.27  
 0.83  
 0.03  
 Probable  
 2.02  
 5.86  
 11.81  
 0.38  
 Total  
 2.15  
 5.88  
 12.64  
 0.41

Kopanang

Total

18.25

5.71

104.20

3.35

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Leanne Brenda Freese

GSSA

966602

13 years

Ore Reserve

Andre Johnson

SACNASP

400011/06

20 years

Kopanang: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

9.49

2008

-0.63

Depletion

0.08

Gold

price

1.10

Exploration



0.00  
Metho-  
dology  
10.04  
2009  
0.00  
Cost  
8.0  
0.00  
Other  
10.0  
9.0  
Kopanang: Ore Reserve reconciliation  
2008 vs 2009  
Ounces (millions)  
4.00  
2008  
-0.35  
Depletion  
-0.30  
Model  
Change  
0.00  
New  
ounces  
from  
projects  
-0.08  
Scope  
Change  
3.35  
2009  
0.00  
Change in  
Economics  
2.0  
0.08  
Other  
4.0  
3.5  
3.0  
2.5  
Change  
Change  
Kopanang – underground (metric)  
Tonnes above  
cut-off (millions)  
0.00  
Cut-off grade (g/t)  
25.00

Average grade  
above cut-off (g/t)  
Tonnes above cut-off  
Ave grade above cut-off  
15.00  
5.00  
10.00  
0.0  
25.0  
20.0  
10.0  
5.0  
15.0  
20.00  
10.0  
15.0  
20.0  
25.0  
30.0  
35.0  
40.0

**Southern Africa – South Africa – Moab Khotsong  
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**South Africa – Moab Khotsong**

**Location**

The Moab Project was approved in 1997 to exploit two distinct portions of the Moab lease area, namely the Middle Mine

(85 to 101 level) and the Lower Mine (101 to 118 level). During 2008, the SV4 section of Great Nologwa was incorporated into

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

**Geology**

The Mineral Resource at Moab Khotsong is structurally complex and highly faulted, with large fault-loss areas.

Mining is based

on a scattered mining method with an integrated backfill support system combined with bracket pillars. The raise lines are

spaced 200m apart on the dip of the reef, with 25m-long panels. Backfill is carried to within 4m of the advancing stope faces

and 75% of the total area extracted is likely to be backfilled.

The geological setting of Moab Khotsong is one of crustal extension, bounded in the north-west and south-east by major

south-dipping fault systems with north-dipping Zuiping faults sandwiched between them. The Die Hoek and Buffels East faults

structurally bound the reef blocks of the Moab Middle Mine to the north-west and south-east respectively. The northern

boundary is a Zuiping-type fault. The southern boundary fault of the Moab Middle Mine is currently not defined.

Due to the magnitude of throw across the Die Hoek fault, more than 700m down to the south, geological structures encountered on the up-thrown side of the fault cannot be projected to the down-thrown side and vice versa. No

information

pertaining to the reef blocks being accessed can be gleaned from the mapping of the access development. Only once the

development is through the Die Hoek fault does mapping have any bearing on the reef blocks, and even then a great amount

of exploration drilling is required to accurately delineate these blocks.

The C Reef is preserved in the northern part of the mine where the reef has been intersected by a number of boreholes.

No development or stoping has taken place on the C Reef at Moab Khotsong.

**Project Zaaiplaats 2**

Project Zaaiplaats 2 (PZ2) is situated at Moab Khotsong in the Vaal River region of AngloGold Ashanti's South African

operations. Moab Khotsong is the newest mine in the region and the PZ2 project is aimed at optimally extracting the deeper

portion (lower mine) of the VR at Moab Khotsong. The PZ2 project is planned to extend the life of Moab Khotsong another

27 years until the mid-2030s. The project also allows other opportunities (mining and metallurgical) to come to the fore that

would otherwise have been uneconomic.

The Lower Mine orebody will be accessed via twin double-declines angled at 8°, the upper and lower declines, from which

five production levels will originate. These will allow two attacking points into the orebody, as well as providing sufficient

ventilation capacity. One of the lower declines will be a dedicated ore-handling system via a conveyor belt; each of the decline sets will have a dedicated men and material decline (using chairlifts and a monorail) and the remaining upper decline will carry the majority of the services into the orebody. Shaft bottom will be 4,027m below datum (3,509m below collar).

**Brownfields exploration**

Brownfields exploration is currently focused on improving geological confidence and four surface drilling machines, targeting

the Project Zaaiplaats Mineral Resource, were in operation during the year.

Surface drilling continued in the Project Zaaiplaats area (Moab Lower Mine), where the target is the prospective VR. Progress

is behind schedule due to in-hole problems.

Progress in the MZA9 long deflection to the east, intended to raise the confidence of an Inferred block in the north-east portion

of the Zaaiplaats project area and also to confirm the structure between the Middle and Lower mines, was delayed due to

caving problems. MHH2 is scheduled to commence on completion of MZA9.

In the north-west of the main Zaaiplaats block, MMB5 is drilling to test a proposed target block along the Jersey Fault cut-off. Progress in Deflection 5, currently at a depth of 3,362m, was delayed by caving in the Kimberley Channel.

The first

VR intersection is now expected during the first quarter of 2010.

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Progress in MGR8, currently at a depth of 3,070m, was delayed by caving. The first VR intersection is now expected during the first quarter of 2010.

The long deflection of MGR6 was advanced to a depth of 2,152m in Ventersdorp lavas. The programme is currently ahead of

schedule and the first VR intersection is now expected in the first quarter of 2010.

Currently four LIB (long inclined boreholes) drilling machines are deployed at Moab Khotsong. The Moab Khotsong LIB drilling

programme can be subdivided into five primary categories:

- upgrading the confidence in the level 1 structure to optimise the placement of the primary haulage systems;
- proving up postulated reef blocks;
- upgrading the confidence of the MKF1 Inferred Mineral Resource blocks of the Middle Mine below 101;
- confirming the presence of the Project Zaaiplaats early gold block; and
- 

confirming the presence of Inferred C Reef Mineral Resource in the Moab Khotsong area and upgrading the postulated

C Reef blue sky blocks to an Inferred Mineral Resource.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Moab Khotsong

Category

million

g/t

tonnes

Moz

C Reef – Middle Mine area

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

0.91

9.47  
8.63  
0.28  
Total  
0.91  
9.47  
8.63  
0.28  
Lower Mine – area A  
Measured  
–  
–  
–  
–  
Indicated  
0.15  
25.09  
3.83  
0.12  
Inferred  
1.00  
23.73  
23.71  
0.76  
Total  
1.15  
23.91  
27.54  
0.89  
Lower Mine – area B  
Measured  
–  
–  
–  
–  
Indicated  
2.15  
11.86  
25.48  
0.82  
Inferred  
0.92  
11.95  
11.05  
0.36  
Total  
3.07  
11.89  
36.53  
1.17  
Lower Mine – area C

Measured

—  
—  
—  
—

Indicated

0.04  
12.38  
0.44  
0.01

Inferred

2.33  
13.38  
31.14  
1.00

Total

2.36  
13.36  
31.58  
1.02

Lower Mine – area PZ2

Measured

—  
—  
—  
—

Indicated

7.96  
24.18  
192.52  
6.19

Inferred

2.75  
27.47  
75.56  
2.43

Total

10.71  
25.03  
268.08  
8.62

VR – GNM shaft pillar

Measured

0.11  
16.95  
1.83  
0.06

Indicated

1.50  
16.15  
24.16

0.78  
Inferred  
—  
—  
—  
—  
Total  
1.60  
16.20  
25.98  
0.84  
VR – Middle Mine  
Measured  
1.46  
15.10  
22.05  
0.71  
Indicated  
4.76  
27.09  
128.98  
4.15  
Inferred  
1.75  
25.79  
45.06  
1.45  
Total  
7.97  
24.61  
196.09  
6.30  
VR – Top Mine  
Measured  
0.71  
24.88  
17.58  
0.57  
Indicated  
0.79  
25.68  
20.24  
0.65  
Inferred  
0.33  
11.62  
3.88  
0.12  
Total  
1.83  
22.80



41.69

1.34

Moab Khotsong

Total

29.61

21.48

636.12

20.45

**Southern Africa – South Africa – Moab Khotsong**

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**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Moab Khotsong

Category

million

g/t

tonnes

Moz

Measured

1.11

22.70

25.10

0.81

Indicated

3.83

33.33

127.74

4.11

Inferred

9.99

19.91

199.03

6.40

Moab Khotsong

Total

14.93

23.56

351.88

11.31

**Exclusive Mineral Resource**

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 (59%) of this Exclusive Mineral Resource is situated in the Lower Mine area,

with minor amounts in the Top Mine (7%), Middle Mine (29%), C Reef (2%) and shaft pillar (4%) areas. The bracket pillars are

designed for safety reasons and will therefore not be mined, whereas the shaft pillars can only be safely extracted at the end

of the mine life.

**Mineral Resource below infrastructure**

as at 31 December 2009

Contained  
 Contained  
 Tonnes  
 Grade  
 gold  
 gold  
 Moab Khotsong  
 Category  
 million  
 g/t  
 tonnes  
 Moz  
 C Reef – Middle Mine  
 Total  
 0.91  
 9.47  
 8.63  
 0.28  
 VR – Top Mine  
 Total  
 0.20  
 14.92  
 2.97  
 0.10  
 VR – Middle Mine  
 Total  
 1.37  
 27.63  
 37.86  
 1.22  
 VR – Bottom Mine  
 Total  
 17.30  
 21.03  
 363.72  
 11.69  
 Moab Khotsong  
 Total  
 19.78  
 20.89  
 413.19  
 13.28  
 Moab Khotsong: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 7.32  
 2008  
 -0.25  
 Depletion  
 0.09  
 Model

Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 -0.02  
 Scope  
 Change  
 7.14  
 2009  
 0.00  
 Change in  
 Economics  
 6.0  
 0.00  
 Other  
 7.0  
 6.5  
 Moab Khotsong: Mineral Resource reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 18.24  
 2008  
 -0.33  
 Depletion  
 0.61  
 Gold  
 price  
 2.23  
 Exploration  
 -0.08  
 Metho-  
 dology  
 20.45  
 2009  
 -0.01  
 Cost  
 16.0  
 -0.22  
 Other  
 22.0  
 19.0  
 20.5  
 17.5  
 Change  
 Change

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Moab Khotsong

Category

million

g/t

tonnes

Moz

C Reef – Middle Mine

Proved

–

–

–

–

Probable

0.16                      1.50

0.23

0.01

Total

0.16

1.50

0.23

0.01

VR – Bottom Mine

Proved

–

–

–

–

Probable

11.84

10.35

122.56

3.94

Total

11.84

10.35

122.56

3.94

VR – Middle Mine

Proved

0.67

10.18

6.77

0.22

Probable

5.86

13.09

76.78

2.47

Total

6.53

12.80

83.55

2.69

VR – Top Mine

Proved

0.50

10.79

5.43

0.17

Probable

0.91

11.22

10.22

0.33

Total

1.41

11.07

15.65

0.50

Moab Khotsong

Total

19.93

11.14

221.99

7.14

**Ore Reserve below infrastructure**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Moab Khotsong

Category

million

g/t

tonnes

Moz

VR – Bottom Mine

Total

11.84  
10.35  
122.56  
3.94

**Competent persons**

Professional  
Registration  
Relevant

Category  
Name  
organisation  
number

experience  
Mineral Resource

Terry Adam

GSSA

5532

32 years

Ore Reserve

Johan Wall

PLATO

PMS0164

26 years

Moab Khotsong – underground (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

20.0

22.0

24.0

26.0

28.0

30.0

15.0

29.0

27.0

21.0

19.0

25.0

23.0

17.0

0.00

20.00

4.00

8.00

16.00

12.00

**Southern Africa – South Africa – Tau Lekoa**

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**South Africa – Tau Lekoa\***

**Location**

Tau Lekoa is located about 8km west of the town of Orkney, at the western extreme of the Klerksdorp goldfields. The mine exploits the VCR at depths varying between 900 and 1,700m below surface. The VCR, the only reef exploited at Tau Lekoa, dips towards the west at an average angle of 28°. Tau Lekoa has a twin shaft system and mines to a depth of 1,650m. Tau Lekoa uses hydropower and has a centralised electro-hydraulic system as its primary source of energy production. Hydropower has been instrumental in improving labour productivity, which has played a vital role in assisting the mine to achieve its business objectives.

**Geology**

The VCR is a gold-bearing quartz pebble conglomerate (up to 5m thick) capping the uppermost 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 VCR is deposited over a number of terraces that are separated by slope material. Typically the terrace reef is a thicker, more robust conglomerate unit than the slope material, where hangingwall-footwall conditions may occur. The deepest terraces are the youngest, whereas the oldest terrace occupies a topographical horizon 28m above the youngest terrace. Generally the younger the terrace, the more mature the channel fill. The main channel is the youngest, most mature VCR facies at Tau Lekoa, and extends from the north-east into Tau Lekoa, before turning sharply towards the west. The older middle and upper terraces contain more immature conglomerates with more erratic gold grades. The Tau Lekoa orebody is disrupted by a number of dykes and faults. The major faults present tend to be normal, trending northeast, and are of post-Ventersdorp age. Flats dipping normal and reverse faults of minor throw are also common. The majority of major faults strike in a north-north-east to south-south-west direction and these include the Schoonspruit and Nooitgedacht faults, both of which have displacements of over 100m. Low angle flat faulting affects the reef in the northern and southern parts of the mine. In addition to this, there are also a number of intrusives present, which vary in age from pre-Ventersdorp through to Karoo in age. These include the east-west striking Pickavance Dyke, which is associated with lateral movement and the north-north-west to south-south-east striking incompetent running dykes.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold



gold  
Tau Lekoa  
Category  
million  
g/t  
tonnes  
Moz  
Jonkerskraal  
Measured  
0.21  
13.44  
2.86  
0.09  
Indicated  
14.95  
3.81  
57.00  
1.83  
Inferred  
0.01  
1.89  
0.02  
0.00  
Total  
15.17  
3.95  
59.87  
1.92  
VCR Base  
Measured  
2.83  
5.83  
16.48  
0.53  
Indicated  
4.50  
5.06  
22.76  
0.73  
Inferred  
3.13  
6.07  
18.97  
0.61  
Total  
10.46  
5.57  
58.21  
1.87  
Weltevreden  
Measured

—  
—  
—  
—  
Indicated  
20.59  
3.62  
74.43  
2.39  
Inferred  
0.03  
5.10  
0.17  
0.01  
Total  
20.62  
3.62  
74.60  
2.40  
Tau Lekoa  
Total  
46.25  
4.17  
192.68  
6.19

*\* Tau Lekoa is currently held for sale, and once all conditions for a sale have been met, the asset will be transferred to the buyer. This is expected to take place during 2010, whereafter AngloGold Ashanti will restate its South African Mineral Resource and Ore Reserve.*

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**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Tau Lekoa

Category

million

g/t

tonnes

Moz

Measured

3.04

6.36

19.33

0.62

Indicated

40.04

3.85

154.19

4.96

Inferred

3.17

6.05

19.15

0.62

Tau Lekoa

Total

46.25

4.17

192.68

6.19

Tau Lekoa: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

0.92

2008

-0.19

Depletion

0.00

Model

Change

0.00

New

ounces

from  
projects  
0.07  
Scope  
Change  
0.80  
2009  
0.00  
Change in  
Economics  
0.01  
Other  
Tau Lekoa: Mineral Resource reconciliation  
2008 vs 2009  
Ounces (millions)  
5.21  
2008  
-0.19  
Depletion  
0.90  
Gold  
price  
0.17  
Exploration  
0.05  
Metho-  
dology  
6.19  
2009  
-0.04  
Cost  
4.00  
0.00  
Other  
6.00  
5.00  
Change  
Change  
0.00  
0.20  
0.40  
0.60  
0.80  
1.00

**Southern Africa – South Africa – Tau Lekoa**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Tau Lekoa

Category

million

g/t

tonnes

Moz

Jonkerskraal Proved

0.06

5.26

0.30

0.01

Probable

3.64

3.67

13.35

0.43

Total

3.70

3.70

13.66

0.44

VCR Base

Proved

0.23

3.66

0.86

0.03

Probable

2.42

4.24

10.29

0.33

Total

2.66

4.19

11.15

0.36

Tau Lekoa

Total

6.36  
3.90  
24.81  
0.80

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Geo Steyn

SACNASP

400312/05

10 years

Ore Reserve

JC Oberholzer

PLATO

PMS0216

25 years

Tau Lekoa – underground (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

14.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

2.00

6.00

10.00

8.00

0.0

10.0

20.0

50.0

30.0

40.0

4.00

12.00

4.0

6.0

8.0

10.0

18.0

12.0

14.0

16.0

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**Southern Africa – South Africa – Mponeng**

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**South Africa – Mponeng**

**Location**

Mponeng lies on the West Wits Line, close to Carletonville in the province of Gauteng, about 65km south-west of Johannesburg and forms part of AngloGold Ashanti's West Wits operations. Mining at Mponeng is conducted at an average

depth between 2,800 to 3,400m below surface. The mine operates two vertical hoisting shafts, a sub-shaft and two service

shafts. The Mponeng lease area is constrained to the north by the TauTona and Savuka mines, and to the south only by the depth of the orebody, which is open-ended. In 2008, permission was granted to explore the Western Ultra Deep Levels (WUDLS) portion to the south of the mine, increasing the potential Mineral Resource.

**Geology**

The VCR is the only reef currently being mined at Mponeng. The VCR comprises of a quartz pebble conglomerate (up to

3m thick) capping the topmost angular unconformity of the Witwatersrand Supergroup. The VCR is overlain by the Ventersdorp Lavas which dramatically halted further reef development at that time. The footwall stratigraphy partially controls

the reef facies type and comprises of a series of argillaceous to proto-quartzites, shales and siltstones from the Central Rand

Group of the Witwatersrand Supergroup. The erosional nature of the deposition of the VCR means that the VCR is deposited

on these different Witwatersrand footwalls. The age of the footwall Witwatersrand rocks increases from west to east. Most of

the VCR mined lies on footwall strata of the Kimberley Formation, which is relatively argillaceous proto quartzite.

The VCR is

dominated by a series of channel terraces at different elevations, separated by slopes where the reef channel widths are lower

and the angular unconformity between the footwall is larger than on reef terrace planes. More durable quartzites of the Elsburg

Formation lie to the west, while the eastern side of the mine is dominated shales and siltstones of the Booyens Formation.

The hardness of the footwall units influences the development of the terraces.



**Southern Africa – South Africa – Mponeng  
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Mponeng is also planning to mine the CLR. The CLR at Mponeng is on average a 20cm thick, tabular, auriferous quartz pebble conglomerate formed near the base of the Central Rand Group. The CLR is on average 900m deeper than the VCR. Major exploration drilling started in early 2008 in order to improve Mineral Resource confidence and confirm the geological structures that occur at the deep levels at which mining is planned. Of the three economic units that exist within the CLR, the Mponeng CLR target 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 sitting at the base of the package. Both orebodies are influenced by faulting as well as a series of intrusives of various ages that cross-cut the reefs. At these depths there is a large amount of inherent risk in mining through these structural features. The Geoscience department's primary role is to identify these features ahead of the face so that the correct mining approach can be applied to minimise the risk.

**CLR Project**

Two economically viable reefs are mined in the West Wits area, the shallower VCR and the deeper CLR. Both have been extensively mined at AngloGold Ashanti's TauTona and Savuka operations, while Mponeng has only mined the VCR. Both reefs can be accessed down to 120 level (3,645m below datum), but there is currently no infrastructure in place that can service stoping operations below 120 level.

The high-grade CLR below 120 level has remained inaccessible and this represents a significant opportunity for Mponeng and for AngloGold Ashanti. A series of exploration holes collared underground have drilled sub-vertical holes from current VCR development towards the CLR to improve the confidence in the orebody. Information gained has been used to confirm the geological structures at depth that may affect a proposed new shaft system as well as generate more confidence in the current mineralisation and estimation models.

A project team has been set up to design a "new mine" to access the CLR via tertiary shafts from Mponeng, enabling the mine to extend its life, while maintaining production at current levels. The mine has been designed according to the sequential grid mining method, a technique developed at Elandsrand and Mponeng in the 1990s. This method involves pre-developing stoping grids and extracting the reef between the dip-stabilising pillars. This method has proved successful in the management of seismicity, both in reducing seismic energy and increasing mining flexibility. The shafts and infrastructure have been designed to fit the existing shaft system at Mponeng, and have the capacity to sustain high levels of production. The extension of Mponeng via the CLR project provides a strong base from which several regional benefits can be realised, as well as enabling other smaller projects to be brought in to match the extended life of the asset and region. The approval

of a CLR project will compliment further exploration and development of the WUDLS mine plan. The CLR in the deeper portion of the orebody (below 126 level) and the VCR in the north of the mine lease are also potentially mineable areas.

During the year, surface drilling commenced in the WUDLS extension to the Mponeng mining rights area. Drillhole UD51 was re-opened for deepening to test the VCR. By year end the drillhole had reached a depth of 2,692m.

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mponeng

Category

million

g/t

tonnes

Moz

CLR below 120 level

Measured

–

–

–

–

Indicated

29.57

16.27

480.98

15.46

Inferred

14.87

16.05

238.67

7.67

Total

44.43

16.20

719.66

23.14

Mponeng WUDLS

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

4.38

12.39  
 54.22  
 1.74  
 Total  
 4.38  
 12.39  
 54.22  
 1.74  
 TauTona VCR shaft pillar  
 Measured  
 0.23  
 17.41  
 3.98  
 0.13  
 Indicated  
 1.19  
 18.35  
 21.88  
 0.70  
 Inferred  
 -  
 -  
 -  
 -  
 Total  
 1.42  
 18.20  
 25.86  
 0.83  
 TauTona CLR shaft pillar  
 Measured  
 0.28  
 42.94  
 12.03  
 0.39  
 Indicated  
 1.31  
 46.24  
 60.58  
 1.95  
 Inferred  
 -  
 -  
 -  
 -  
 Total  
 1.59  
 45.66  
 72.61  
 2.33  
 VCR 109 to 120 level

Measured

3.01  
20.08  
60.40  
1.94

Indicated

7.37  
15.51  
114.38  
3.68

Inferred

—  
—  
—  
—

Total

10.38  
16.84  
174.78  
5.62

VCR above 109 level

Measured

7.26  
10.90  
79.20  
2.55

Indicated

7.30  
8.21  
59.90  
1.93

Inferred

—  
—  
—  
—

Total

14.56  
9.55  
139.10  
4.47

VCR below 120 level

Measured

0.09  
22.65  
2.02  
0.07

Indicated

8.92  
16.84  
150.13

4.83  
Inferred  
—  
—  
—  
—  
Total  
9.01  
16.90  
152.15  
4.89  
VCR block 1  
Measured  
—  
—  
—  
—  
Indicated  
2.99  
5.20  
15.56  
0.50  
Inferred  
—  
—  
—  
—  
Total  
2.99  
5.20  
15.56  
0.50  
VCR block 3  
Measured  
0.08  
15.46  
1.16  
0.04  
Indicated  
7.70  
10.95  
84.37  
2.71  
Inferred  
—  
—  
—  
—  
Total  
7.78  
10.99

85.53  
2.75  
VCR block 5  
Measured  
0.01  
2.59  
0.03  
0.00  
Indicated  
5.99  
6.03  
36.14  
1.16  
Inferred  
—  
—  
—  
—  
Total  
6.00  
6.02  
36.16  
1.16  
VCR outside project areas  
Measured  
0.04  
4.01  
0.16  
0.01  
Indicated  
9.85  
7.52  
74.02  
2.38  
Inferred  
—  
—  
—  
—  
Total  
9.89  
7.50  
74.18  
2.38  
Mponeng  
Total  
112.44  
13.78  
1,549.82  
49.83

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mponeng

Category

million

g/t

tonnes

Moz

Measured

8.77

15.70

137.73

4.43

Indicated

40.89

15.59

637.50

20.50

Inferred

3.85

17.33

66.74

2.15

Mponeng

Total

53.51

15.73

841.97

27.07

**Exclusive Mineral Resource**

It is customary with the current mine design to leave 35 to 50% of the Exclusive Mineral Resource as safety and remnant

pillars ahead of current mining. These pillars and remnants are designed to provide additional stability to the mining faces

during operations. A portion of the TauTona shaft pillar and remaining ore will be mined by Mponeng from the VCR and CLR.

**Mineral Resource below infrastructure**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mponeng



Category

million

g/t

tonnes

Moz

VCR below 120 level

Total

9.01

16.90

152.15

4.89

CLR below 120 level

Total

44.43

16.20

719.66

23.14

WUDLS

Total

4.38

12.39

54.22

1.74

Mponeng

Total

57.81

16.02

926.03

29.77

**Southern Africa – South Africa – Mponeng**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mponeng

Category

million

g/t

tonnes

Moz

CLR below 120 level

Proved

–

–

–

–

Probable

17.59

12.37

217.63

7.00

Total

17.59

12.37

217.63

7.00

TauTona CLR eastern block

Proved

–

–

–

–

Probable

0.50

8.34

4.14

0.13

Total

0.50

8.34

4.14

0.13

VCR 109 to 120 level

Proved

1.20  
10.91  
13.13  
0.42  
Probable  
7.11  
8.85  
62.89  
2.02  
Total  
8.31  
9.15  
76.01  
2.44  
VCR above 109 level  
Proved  
1.00  
5.07  
5.07  
0.16  
Probable  
3.19  
4.38  
13.98  
0.45  
Total  
4.19  
4.54  
19.05  
0.61  
VCR below 120 level  
Proved  
0.02  
9.88  
0.20  
0.01  
Probable  
7.41  
10.59  
78.47  
2.52  
Total  
7.43  
10.59  
78.67  
2.53  
Mponeng  
Total  
38.02  
10.40  
395.51

12.72

**Ore Reserve below infrastructure**

as at 31 December 2009

Contained

contained

Tonnes

Grade

gold

gold

Mponeng

Category

million

g/t

tonnes

Moz

VCR below 120 level

Total

7.43

10.59

78.67

2.53

CLR below 120 level

Total

17.59

12.37

217.63

7.00

Mponeng

Total

25.02

11.84

296.30

9.53

Mponeng: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

12.99

2008

-0.56

Depletion

-0.47

Model

Change

0.00

New

ounces

from

projects

0.75

Scope

Change

12.72

2009

0.00

Change in

Economics

11.0

0.00

Other

12.0

13.0

Mponeng: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

49.43

2008

-0.68

Depletion

0.00

Gold

price

0.18

Exploration

0.00

Metho-

dology

49.83

2009

0.00

Cost

48.0

0.90

Other

50.0

49.0

Change

Change

**Southern Africa – South Africa – Mponeng**

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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Gareth Flitton

GSSA

9647581

7 years

Ore Reserve

Piet Enslin

PLATO

PMS0183

26 years

Mponeng – underground (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

25.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

5.00

10.00

20.00

10.0

110.0

50.0

90.0

70.0

30.0

15.00

12.0

14.0

16.0

18.0

20.0

34.0

22.0

24.0

26.0  
28.0  
30.0  
32.0

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**Southern Africa – South Africa – Savuka**

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**South Africa – Savuka**

**Location**

The 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 CLR at depths varying between 2,600 and 3,500m below surface as well as the VCR in smaller proportions. The VCR, which is on average about 700m above the CLR has nearly been mined out. Currently operations are attempting to extract remnant pillars that are above the current pay limit. Savuka has converted into a sequential grid mine. CLR and VCR panels are mined accordingly.

**Geology**

The CLR is a thin, on average 20cm thick, tabular, auriferous quartz pebble conglomerate formed near the base of the Central

Rand Group. The CLR 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

along the south and west at 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 CLR conglomerates. The CLR has not been mined since 22 May 2009

due to a seismic event that left the lower levels inaccessible through the main shaft system. Production has since been focused on extracting pillars of VCR.

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 base of the Ventersdorp Lava strikes in a direction across the north-western

part of the lease area.

The orebody is cross cut by geological features that displace the reef horizon. The faulting, in conjunction with the numerous

intrusives that also intersect the orebody on the various levels, is responsible for most of the risk inherent with this type of

deep-level gold mining. There is also a high level of seismicity associated with these features.

**Exploration**

The Middelvlei Reef is another Witwatersrand auriferous placer mined in the West Wits. It is located approximately 90m above

the CLR stratigraphically. This reef comprises interbeds of quartz-pebble conglomerates, quartz wackes and thin siltstones.

The channel thickness varies up to a thickness of 1.6m, and the Middelvlei Reef is highly channelled with gold pay chutes

most likely occurring at the base of the channels. These trends are similar in direction to the palaeo-current directions of the

underlying footwall sequence. Middelvlei Reef has been mined at Blyvooruitzicht mine to the north of Savuka as well as at

Gold Fields' Driefontein gold mine, but not at Savuka.

Exploration for these channels will be done by drilling from diamond drilling platforms developed at the end of each cross cut



at the CLR intersection. The series of exploration holes hopes to delineate the existence of a high-grade channel. Three exploration LIB holes are planned to be drilled from 113 level towards the west. The targets will gain much needed geological information on CLR to improve the geological confidence in the mine plan in that area. The holes will also be extended to Middelvlei Reef.

**Southern Africa – South Africa – Savuka**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Savuka

Category

million

g/t

tonnes

Moz

Carbon Leader Reef

Measured

0.58

14.40

8.42

0.27

Indicated

6.01

17.16

103.10

3.31

Inferred

–

–

–

–

Total

6.59

16.92

111.52

3.59

Ventersdorp Contact Reef

Measured

0.39

6.24

2.41

0.08

Indicated

0.35

15.99

5.60

0.18

Inferred

—  
—  
—  
—

Total

0.74

10.88

8.00

0.26

Savuka

Total

7.33

16.31

119.52

3.84

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Savuka

Category

million

g/t

tonnes

Moz

Measured

0.88

10.81

9.52

0.31

Indicated

0.48

74.88

36.18

1.16

Inferred

—

—

—

—

Savuka

Total

1.36

33.50

45.70

1.47

**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Savuka

Category

million

g/t

tonnes

Moz

Carbon Leader Reef

Proved

0.07

6.50

0.47

0.01

Probable

3.14

6.30

19.78

0.64

Total

3.21

6.30

20.25

0.65

Ventersdorp Contact Reef

Proved

0.05

3.73

0.19

0.01

Probable

0.21

4.70

0.97

0.03

Total

0.26

4.51

1.16

0.04

Savuka

Total

3.47

6.17

21.40

0.69

Savuka: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

0.76

2008

-0.03

Depletion

0.02

Model

Change

0.00

New

ounces

from

projects

-0.07

Scope

Change

0.69

2009

0.00

Change in

Economics

0.00

0.00

Other

0.50

0.75

0.25

Savuka: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

4.37

2008

-0.06

Depletion

0.00

Gold

price

-0.21

Exploration

0.00

Metho-

dology

3.84

2009

-0.26

Cost

3.00

0.00

Other

4.50  
3.50  
4.00  
Change  
Change

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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Gareth Flitton

GSSA

9647581

7 years

Ore Reserve

Piet Enslin

PLATO

PMS0183

26 years

Savuka – underground (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

25.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

5.00

10.00

16.0

18.0

20.0

20.00

22.0

32.0

15.00

24.0

26.0

28.0

1.0

7.0

3.0

6.0

5.0

2.0

8.0

4.0  
30.0



**Southern Africa – South Africa – TauTona**

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**South Africa – TauTona**

**Location**

TauTona lies on the West Wits Line, just south of Carletonville in the North West Province, about 70km south-west of Johannesburg. Mining at TauTona takes place at depths ranging from 2,000 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 CLR is a thin, on average 20cm thick, tabular, auriferous quartz pebble conglomerate formed near the base of the Central

Rand Group. The CLR has been divided into three facies 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 levels on the VCR at TauTona are currently limited, contributing an average of 10% of total production volumes.

The VCR comprises 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 consists of a series of slopes and

horizontal terraces at different elevations.

The Exclusive Mineral Resource is dependant on mining strategy, but approximately 3.0Moz or 92% of the Exclusive Mineral

Resource is expected to be taken up in safety and remnant pillars ahead of current mining.

**Exploration**

Three projects will continue at TauTona during 2010; the CLR below 120 area, the area east of the Bank Dyke and the area

east of the mine. The aim is to increase the structural confidence and updating the facies model within these areas.

West

East

No. 1 CL

Green Bar

Laminated Base

No. 3 CL

FW

spc ma

ker

North Leader

No.1 Unconformity

Square Pebble

Rice Pebble

Typical maximum thickness: 2,4m

Scale (except

for CL – NL)

Driefontein

TauTona

No. 1 CL

No. 3 CL

+/- 5,5m

No.2 CL

No.2B CL

No.2A CL

PPQ

Schematic east – west section, looking north,

showing the different CL facies

(numbered 3, 2A, 2B, 2C, 1)

0

3.5km

0

2m

**TauTona schematic east-west section**

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

TauTona

Category

million

g/t

tonnes

Moz

CLR – 1C11

Measured

0.06

28.05

1.78

0.06

Indicated

0.49

30.58

14.91

0.48

Inferred

–

–

–

–

Total

0.55

30.29

16.69

0.54

CLR base

Measured

0.81

23.41

18.96

0.61

Indicated

4.37

20.96

91.66

2.95

Inferred

–

—  
 —  
 —  
 Total  
 5.18  
 21.34  
 110.62  
 3.56  
 CLR below 120  
 Measured  
 0.02  
 28.99  
 0.52  
 0.02  
 Indicated  
 0.53  
 28.15  
 15.00  
 0.48  
 Inferred

—  
 —  
 —  
 —  
 Total  
 0.55  
 28.18  
 15.53  
 0.50  
 0  
 3km

**Legend**

Areas of facies dominance  
 No. 1 CLR  
 Overlap of No. 1 CLR over No. 2 CL facies  
 No. 2 CL facies  
 No. 3 CL facies  
 CL erosion channels  
 Shafts  
 Suboutcrops  
 Suboutcrop of NL vs No.1 CL uncomformity  
 Suboutcrop of F/W Spc Mkr vs No.1 CL uncomformity  
 Suboutcrop No.2 CL vs No.1 CL uncomformity  
 Driefontein  
 Blyvooruitzicht  
 Doornfontein  
 Deelkraal  
 Elandsrand  
 Western Ultra  
 Deep Levels  
 TauTona

Savuka

Mponeng

5E

9W

3

1A Subvertical

*CL eliminated by*

*Master Bedding Fault*

*Doornfontein*

*erosion channel*

*Western Driefontein*

*erosion channel*

2

1

N

**CLR facies map**

**Southern Africa – South Africa – TauTona**

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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

TauTona

Category

million

g/t

tonnes

Moz

EOB between 100 & 112 levels

Measured

0.19

26.06

4.98

0.16

Indicated

1.78

20.64

36.75

1.18

Inferred

–

–

–

–

Total

1.97

21.16

41.74

1.34

VCR shaft pillar

Measured

0.21

21.63

4.58

0.15

Indicated

0.19

19.18

3.57

0.11

Inferred

—  
—  
—  
—

Total

0.40

20.48

8.15

0.26

TauTona

Total

8.65

22.27

192.72

6.20

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

TauTona

Category

million

g/t

tonnes

Moz

Measured

0.95

22.95

21.75

0.70

Indicated

3.20

20.91

66.96

2.15

Inferred

—

—

—

—

TauTona Total

4.15

21.38

88.71

2.85

**Mineral Resource below infrastructure**

as at 31 December 2009

Contained  
 Contained  
 Tonnes  
 Grade  
 gold  
 gold  
 TauTona  
 Category  
 million  
 g/t  
 tonnes  
 Moz  
 CLR below 120  
 Total  
 0.40  
 28.88  
 11.51  
 0.37  
 TauTona: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 3.08  
 2008  
 -0.21  
 Depletion  
 -0.11  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 -0.03  
 Scope  
 Change  
 2.73  
 2009  
 0.00  
 Change in  
 Economics  
 2.00  
 0.00  
 Other  
 2.50  
 3.00  
 TauTona: Mineral Resource reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 7.14  
 2008



-0.23  
Depletion  
0.00  
Gold  
price  
-0.69  
Exploration  
0.00  
Metho-  
dology  
6.20  
2009  
-0.01  
Cost  
5.00  
-0.04  
Other  
7.50  
5.50  
7.00  
6.00  
6.50  
Change  
Change

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

TauTona

Category

million

g/t

tonnes

Moz

CLR – 1C11

Proved

–

13.61

0.06

–

Probable

0.68

10.67

7.21

0.23

Total

0.68

10.68

7.26

0.23

CLR base

Proved

0.17

6.89

1.15

0.04

Probable

5.44

7.53

41.00

1.32

Total

5.61

7.51

42.15

1.36

CLR below 120

Proved

0.01  
11.55  
0.15  
—  
Probable  
0.47  
14.00  
6.55  
0.21  
Total  
0.48  
13.93  
6.70  
0.22  
EOB between 100 & 112 levels  
Proved  
0.11  
21.10  
2.31  
0.07  
Probable  
1.68  
12.90  
21.68  
0.70  
Total  
1.79  
13.40  
23.99  
0.77  
VCR shaft pillar  
Proved  
0.04  
7.42  
0.33  
0.01  
Probable  
0.42  
10.76  
4.54  
0.15  
Total  
0.47  
10.44  
4.87  
0.16  
TauTona  
Total  
9.03  
9.41  
84.98

2.73

**Ore Reserve below infrastructure**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

TauTona

Category

million

g/t

tonnes

Moz

CLR below 120

Total

0.48

13.93

6.70

0.22

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Katarien Deysel

SACNASP

400093/05

9 years

Ore Reserve

Michael Wayne Armstrong

PLATO

MS0054

25 years

TauTona – underground (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

25.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

5.00

10.00  
15.00  
22.0  
24.0  
26.0  
32.0  
28.0  
30.0  
2.0  
8.0  
5.0  
3.0  
9.0  
4.0  
6.0  
7.0  
20.00

**Southern Africa – South Africa – Surface operations**  
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**South Africa – Surface operations**

The Metallurgy Department, as a business unit, produces gold in addition to that derived from the primary reef sources by treating lower-grade surface sources of gold-bearing material. The strategy is the maximum utilisation of the treatment gap.

The surface source operations comprise the Vaal River and West Wits Surface sources operations.

**Location**

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

Orkney, North West Province, South Africa. These operations comprise waste rock dumps and tailings dams resulting from

the mining and processing of the VR and VCR which were mined at the Vaal River underground mines in the Klerksdorp area.

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

between the North West Province and Gauteng. These operations comprise waste rock dumps and tailings dams sourced

from the mining and processing of CLR and VCR which were mined at the West Wits underground mines in the Carletonville/Fochville area.

Gold is mainly produced by the reclamation of waste rock dumps and the Sulphur Paydam (SPD).

The waste rock dumps have been built from waste rock mined from underground access development workings and hoisted,

transported and deposited via conveyor belt. The gold contained within these rock dumps was sourced from three areas:

- minor reefs that were developed in order to access the primary reef;
- reefs that were contained within small fault blocks that were exposed by off-reef development; and
- cross-tramming of reef to the waste tips.

The tailings storage facilities store the residue product from the gold plants. These tailings were pumped in a slurry form onto

tailings dams and have been built up over a period of years.

**Reclamation methodology**

Bulldozers are used to create furrows through the waste rock dumps in order to mix rock from different parts of the waste

rock dumps that were deposited over different time periods. This is done to create a degree of homogenisation. The material

is then loaded onto rail hoppers and transported to the metallurgical plants.

The SPD is being reclaimed by means of remote controlled high-pressure hydraulic monitors. 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 SPD pump station, where oversized material is screened out and then pumped to the East Gold and Acid Flotation

(EGAF) plant for processing.

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mine/Project

Category

million

g/t

tonnes

Moz

**Vaal River Surface**

SA Met – rock dump

Measured

–

–

–

–

Indicated

59.53

0.60

35.73

1.15

Inferred

5.06

0.69

3.48

0.11

Total

64.60

0.61

39.22

1.26

SA Met – tailings dump

Measured

–

–

–

–

Indicated

48.72

0.38

18.64

0.60

Inferred



—  
—  
—  
—  
Total  
48.72  
0.38  
18.64  
0.60  
Vaal River Surface  
Total  
113.32  
0.51  
57.86  
1.86  
**West Wits Surface**  
WWGO – rock dump  
Measured  
—  
—  
—  
—  
Indicated  
13.04  
0.47  
6.08  
0.20  
Inferred  
—  
—  
—  
—  
Total  
13.04  
0.47  
6.08  
0.20  
West Wits Surface  
Total  
13.04  
0.47  
6.08  
0.20  
Surface operations  
Total  
126.36  
0.51  
63.94  
2.06  
**Exclusive Mineral Resource**  
as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mine/Project

Category

million

g/t

tonnes

Moz

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

–

–

–

–

Vaal River Surface

Total

–

–

–

–

Measured

–

–

–

–

Indicated

0.29

1.30

0.38

0.01

Inferred

–

–

–

–

West Wits Surface

Total

0.29

1.30  
 0.38  
 0.01  
 Surface operations  
 Total  
 0.29  
 1.30  
 0.38  
 0.01  
 Vaal River: Surface Mineral Resource reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 5.02  
 2008  
 -0.17  
 Depletion  
 0.00  
 Gold  
 price  
 0.14  
 Exploration  
 0.00  
 Metho-  
 dology  
 1.86  
 2009  
 -3.13  
 Cost  
 0.00  
 0.00  
 Other  
 6.00  
 2.00  
 4.00  
 Vaal River: Surface Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 1.91  
 2008  
 -0.18  
 Depletion  
 0.01  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 -0.00  
 Scope

Change  
1.74  
2009  
0.00  
Change in  
Economics  
1.00  
0.00  
Other  
1.50  
2.00  
Change  
Change

**Southern Africa – South Africa – Surface operations**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Vaal River Surface

Category

million

g/t

tonnes

Moz

**Vaal River Surface**

SA Met – rock dump

Proved

–

–

–

–

Probable

59.53

0.59

35.37

1.14

Total

59.53

0.59

35.37

1.14

SA Met – tailings dump

Proved

–

–

–

–

Probable

48.72

0.38                      18.64

0.60

Total

48.72

0.38

18.64

0.60

Vaal River Surface

Total  
108.26  
0.50  
54.02  
1.74

**West Wits Surface**

WWGO – rock dump

Proved

–  
–  
–  
–

Probable

12.75  
0.45  
5.70  
0.18

Total

12.75  
0.45  
5.70  
0.18

WWGO – rock dump

Total

12.75  
0.45  
5.70  
0.18

Surface operations

Total

121.01  
0.49  
59.72  
1.92

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

**Vaal River Surface**

Mineral Resource

Raymond Orton

PLATO

MS0096

23 years

Ore Reserve

Richard Brokken

PLATO

MS0171

28 years

**West Wits Surface**

Mineral Resource

Raymond Orton

PLATO

MS0096

23 years

Ore Reserve

Richard Brokken

PLATO

MS0171

28 years

West Wits: Surface Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

0.04

2008

-0.01

Depletion

0.15

Model

Change

0.00

New

ounces

from

projects

-0.00

Scope

Change

0.18

2009

0.00

Change in

Economics

0.00

0.00

Other

0.10

0.20

Change

Change

West Wits: Surface Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

1.37

2008

-0.01

Depletion

0.00  
Gold  
price  
0.01  
Exploration  
0.00  
Metho-  
dology  
0.20  
2009  
-1.17  
Cost  
0.00  
0.00  
Other  
1.00



**Namibia**

**Regional overview**

Navachab gold mine, AngloGold Ashanti's sole operation in Namibia, is wholly owned by the Company.

**Mineral Resource estimation**

Mineral Resource estimation is performed using Datamine

®

software. Block dimensions of 25m x 25m x 5m are used as the

prototype model. Grade interpolation is done into these blocks using ordinary and indicator kriging methods. A geostatistical

technique called uniform conditioning is then used to estimate the proportion of economic ore that occur above the Mineral

Resource cut-off and this is reported according to the selective mining unit (SMU).

**Mineral Resource and Ore Reserve gold prices and exchange rate**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800

720

Exchange rate – South Africa

ZAR/US\$

8.85

8.67

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Navachab

Measured

10 x 10

–

–

–

Indicated

25 x 25

–

–

Inferred

50 x 50

–

–

Grade control 5 x 10 and

–

–

–

10 x 10

–

–

–

**Ore Reserve estimation**

MineSight

®

optimisation software is used to generate optimised pit shells using economic parameters. The final pits are then designed based on the optimised pit shell, recommended slope geometry and ramp access requirements.

**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

factor

lurgical

weighted

RRF

MRF

(MCF) recovery

Mine

g/t

%

%

%

%

Comments

Navachab

Anomaly 16

0.50

100

100

100

88.01

CIP metallurgical recovery – average for the mine. DMS recovery average 73.33%.

Gecko

0.50

100

100

100

88.01

As above

Grid A

0.50

100

100

100

88.01

As above

Main Pit (Anomaly 13)

0.40

100

100

100

88.01

As above

Stockpile

0.40

100

100

100

88.01

As above

(full grade ore)

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**Southern Africa – Namibia – Navachab**

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**Namibia – Navachab**

**Location**

Navachab gold mine is located 10km south-west of Karibib and 170km west-north-west of Windhoek, the capital of Namibia.

Navachab is mined as an open-pit mine. The current carbon-in-pulp (CIP) plant, with a production capacity of 120,000 tonnes per month, includes mills, CIP and electro-winning facilities. In future, it is planned that a portion of the CIP feed will come from a pre-concentration plant (DMS plant) with a 200t/h capacity.

**Geology**

The Navachab gold deposit is located in the Pan-African Damara Orogen and is 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 main mineralisation forms a sheet-like body which plunges at an angle of approximately 20° to the north-west.

The mineralisation is predominantly hosted in a sheeted quartz vein set ( $\pm 60\%$ ) and a replacement skarn ( $\pm 40\%$ ). The mineralisation in the main pit is hosted by a north-east to south-west 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 (Au

2

Bi). Silver is also present with a gold to silver ratio of approximately 15 to 1.

**Exploration**

The exploration strategy at Navachab is to evaluate the shallow north pit 2 mineralisation (located near the main pit) down

plunge to 250m below surface. Drilling during the year has confirmed the down plunge extension of this ore shoot with

intersection ranging from 1.5 to 2.5g/t over 15 to 20m. This near surface mineralisation assists in unlocking deeper hangingwall and footwall mineralisation for further exploitation to 350m below surface. Drilling during the next five years will

focus on growing the Mineral Resource base by 2Moz and increasing the confidence level of the mineralisation at Navachab.

Exploration of the satellite deposits will continue to identify near-surface, high-grade “Grid A” type mineralisation to displace

low-grade ounces during stripping of the main orebody 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 of 0.05Moz. This mineralisation can be

used to supplement the low production years. Exploration of Anomaly 16 target, which is approximately 7km from the plant,

has produced a lower-grade Mineral Resource of approximately 0.135Moz with the potential to grow significantly.

West

East

Karibib FM

Oberwasser FM

Oxide

(MDMV)

Okawayo FM

MC

Zone

SC

LS

LSC

LS

Etusis FM

Chuosi FM

Oxide

Calcrete

Spes Bona FM

35m

**An east-west section through the Navachab Main Pit**

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Navachab

Category

million

g/t

tonnes

Moz

Anomaly 16

Measured

–

–

–

–

Indicated

1.96

1.20

2.36

0.08

Inferred

1.52

1.21

1.84

0.06

Total

3.48

1.21

4.20

0.14

Gecko

Measured

–

–

–

–

Indicated

0.57

1.60

0.90

0.03

Inferred

0.32

1.42  
0.45  
0.01  
Total  
0.88  
1.53  
1.35  
0.04  
Grid A  
Measured  
0.08  
2.16  
0.18  
0.01  
Indicated  
0.16  
1.65  
0.26  
0.01  
Inferred  
0.01  
1.01  
0.01  
0.00  
Total  
0.25  
1.78  
0.45  
0.01  
Main pit (anomaly 13)  
Measured  
3.87  
1.19  
4.60  
0.15  
Indicated  
64.15  
1.23  
79.04  
2.54  
Inferred  
16.68  
1.06  
17.61  
0.57  
Total  
84.70  
1.20  
101.25  
3.26  
Stockpile (full grade ore)

Measured

6.87

0.77

5.28

0.17

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

6.87

0.77

5.28

0.17

Stockpile (marginal ore)

Measured

6.41

0.53

3.41

0.11

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

6.41

0.53

3.41

0.11

Navachab

Total

102.60

1.13

115.95

3.73

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained



Tonnes  
 Grade  
 gold  
 gold  
 Navachab  
 Category  
 million  
 g/t  
 tonnes  
 Moz  
 Measured  
 7.39  
 0.59  
 4.34  
 0.14  
 Indicated  
 34.43  
 1.19  
 40.99  
 1.32  
 Inferred  
 18.53  
 1.07  
 19.92  
 0.64  
 Navachab  
 Total 60.35  
 1.08  
 65.24  
 2.10

**Exclusive Mineral Resource**

The main pit contains the largest portion (1.88Moz) of the Exclusive Mineral Resource. Of this, approximate 0.75Moz are in a

conceptual pit plan and further optimisation is continuing to bring this Exclusive Mineral Resource to account.

Approximately

0.11Moz of the Exclusive Mineral Resource are hosted in the marginal ore stockpiles at a grade of 0.53g/t and the intention

is to test this for economic viability through pre-concentration during 2010.

The remainder of the Exclusive Mineral Resource is from Anomaly 16 (0.079Moz), Gecko (0.03Moz) and Grid A (0.002Moz).

**Southern Africa – Namibia – Navachab**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Navachab

Category

million

g/t

tonnes

Moz

Anomaly 16

Proved

–

–

–

–

Probable

1.13

1.55

1.75

0.06

Total

1.13

1.55

1.75

0.06

Gecko

Proved

–

–

–

–

Probable

0.22

1.76

0.39

0.01

Total

0.22

1.76

0.39

0.01

Grid A

Proved

0.08

2.08

0.16

0.01

Probable

0.14

1.71

0.24

0.01

Total

0.22

1.84

0.40

0.01

Main pit (anomaly 13)

Proved

2.90

1.27

3.68

0.12

Probable

30.92

1.26

39.05

1.26

Total

33.82

1.26

42.73

1.37

Stockpile (full grade ore)

Proved

6.87

0.77

5.28

0.17

Probable

—

—

—

—

Total

6.87

0.77

5.28

0.17

Navachab

Total

42.25

1.20

50.55

1.63

**Inferred Mineral Resource in business plan**

The Inferred Mineral Resource was used in the pit optimisation process and 0.10Moz are present in the designed pits and a

further 0.16Moz are included in future conceptual designed pits.

Navachab: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

1.34

2008

-0.08

Depletion

0.21

Model

Change

0.00

New

ounces

from

projects

0.16

Scope

Change

1.63

2009

0.00

Change in

Economics

1.00

0.00

Other

1.50

Navachab: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

4.33

2008

-0.25

Depletion

0.09

Gold

price

0.34

Exploration

0.01

Metho-  
dology

3.73

2009

-0.40

Cost  
3.00  
-0.38  
Other  
3.50  
4.50  
4.00  
Change  
Change

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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Frederik Badenhorst

AusIMM

211026

18 years

Ore Reserve

George Botshiwe

AusIMM

229475

9 years

Navachab – surface (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

5.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

1.00

2.00

4.00

3.00

0.0

1.0

2.0

3.0

7.0

4.0

5.0

6.0

0.0

250.0

100.0

200.0

150.0

50.0

300.0

Operations

Advanced projects

New exploration

**Ghana**

**Iduapriem**

Mineral Resource

4.60Moz

Ore Reserve

2.40Moz

**Obuasi**

Mineral Resource

29.53Moz

Ore Reserve

9.65Moz

N

**Tanzania**

**Geita**

Mineral Resource

11.45Moz

Ore Reserve

5.07Moz

**Saudi**

**Arabia**

**Egypt**

**Gabon**

**Guinea**

**Signiri (85%)**

Mineral Resource

6.59Moz

Ore Reserve

3.07Moz

**Mali**

**Morila (40%)**

Mineral Resource

0.33Moz

Ore Reserve

0.32Moz

**Sadiola (41%)**

Mineral Resource

3.76Moz

Ore Reserve

1.46Moz

**Yatela (40%)**

Mineral Resource

0.14Moz

Ore Reserve

0.04Moz

**DRC**

**Kibali (effective 45%)**

Mineral Resource

8.89Moz

Ore Reserve

4.14Moz

**Mongbwalu (86.2%)**

Mineral Resource

2.10Moz

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**Continental Africa**

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Continental Africa



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**Regional overview**

AngloGold Ashanti has seven mining operations in its Continental Africa region:

- Iduapriem and Obuasi in Ghana
- Siguiri in Guinea
- Morila, Sadiola and Yatela in Mali
- Geita in Tanzania

Combined production from these operations declined by 3% to 1.52Moz of gold in 2009, equivalent to 33% of group production. In addition, AngloGold Ashanti has an active greenfields exploration programme in the Democratic Republic of the

Congo (DRC), with Mongbwalu currently undergoing a pre-feasibility study, whilst the Kibali joint venture with Randgold

Resources and the DRC government is in the process of optimising the feasibility study. This is in addition to the brownfields

exploration being conducted in and around its existing operations.

The Mineral Resource in Continental Africa, attributable to AngloGold Ashanti, totalled 67.38Moz at year-end, including an

attributable Ore Reserve of 26.14Moz.

**Mineral Resource by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

Continental Africa

Measured

135.14

3.34

451.36

14.51

Indicated

386.64

2.47

956.19

30.74

Inferred

242.39

2.84

688.23

22.13

Total

764.17

2.74

2,095.78

67.38

**Ore Reserve by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

Continental Africa

Proved

80.36

2.16

173.28

5.57

Probable

234.20

2.73

639.84

20.57

Total

314.56

2.58

813.12

26.14

**Continental Africa – DRC**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Democratic Republic of the Congo (DRC)**

**Regional overview**

AngloGold Ashanti has two advanced projects in the DRC, Kibali and Mongbwalu.

**Kibali**

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

Ashanti. On 21 December 2009, Randgold and AngloGold increased their joint venture interest to 90%, whilst OKIMO retained

a 10% holding.

The project is a joint development between three separate groups:

- AngloGold Ashanti;
- Randgold Resources Limited, who is the operator, an African-focused gold mining and exploration business with primary listings on the London Stock Exchange and Nasdaq; and
- 

L'Office des Mines d'Or de Kilo-Moto (OKIMO), the state-owned 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 10,000km

2

covered by Concession 40 in the Ituri Province of north-eastern DRC. Concession 40 has a rich history of gold occurrences and cover 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 Ashanti Kilo (AGAK) and OKIMO, a governmental

body which currently holds a 13.8% non-contributory share. AGAK is 86.2% owned by AngloGold Ashanti Limited.

The area around the old Adidi mine will undergo a feasibility study as part of the agreement with the DRC government.

**Mineral Resource and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,000/1,025\*

1,000

Gold price – Ore Reserve

US\$/oz

700

720

\* Kibali uses \$1,000/oz and Mongbwalu uses \$1,025/oz

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing  
Diamond  
RC  
Blast-  
Other  
Comments  
Project  
Category  
m (- x -)  
hole  
Kibali  
Measured

-  
-  
-  
-  
-

Indicated  
40 x 40

-  
-

Inferred  
40 x 80, 80 x 80

-  
-

Grade control -

-  
-  
-  
-

Mongbwalu  
Measured

-  
-  
-  
-  
-

Indicated

-  
-  
-  
-  
-

Inferred  
50 x 50

-  
-

Grade control -

-  
-  
-

–

**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

Stoping

factor

lurgical

weighted

width

Dilution

Dilution

RRF

MRF

(MCF) recovery

Mine

g/t

cm

%

g/t

%

%

%

%

Kibali

Surface

0.89

n/a

n/a

n/a

n/a

n/a

n/a

84.5

Underground

2.30

1,700

7.7

2.50

74.1

99.9

n/a

91.3

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**Continental Africa – DRC – Kibali**

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**DRC – Kibali**

**Location**

The Kibali gold project is located in the north-eastern part of the DRC near the international borders with Uganda and Sudan.

The 1,841km

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project area is centrally located around the village of Doko, approximately 180km by road from Arua on the Ugandan border and immediately north of the town of Watsa. The district capital of Watsa lies about 9km to the south of the

project, which is situated just north of the Kibali River on the road to Faradje and the Sudan. 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 project is located within the Moto greenstone belt, which is comprised of the Archaean Kibalian volcano-sedimentary

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

east, north-east and north-west trending faults and is bounded to the north by the Middle Archaean West Nile granite-gneiss

complex and cut to the south by the Upper Zaire granitic complex.

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

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

dykes and sills). The sequence is variably altered from slight to intense such that in some cases the original rock is unrecognisable.

**Exploration**

Exploration focused on the delineation drilling of the Mineral Resource at the main KCD deposit. The structural and lithological

controls of the KCD deposit were reviewed as well as a possible lateral link with the Gorungwa deposit.

A robust structural-alteration model is in place:

1.

Mineralisation is controlled by zones of texturally destructive albite-carbonate-silica alteration (syn D1) along faults with a

similar orientation as S1. S1 is a regional shear fabric and in general strike north-west with a low dip to the north-east. D1 is interpreted as shortening from the north-east, West Nile block over the basalt-volcanoclastic sequences, causing south-west verging folds and thrusts.

2.

Gold mineralisation was introduced late D1 to D2 due to preferential fracturing of the albite-carbonate-silica alteration zones. S2 is an axial plane cleavage and in general strikes north-east with a moderate to steep dip north-west, explaining

the north-east trending mineralised corridors. D2 also causes the folding of S1, creating double plunging folds, as observed

in KCD mineralised zones. A prominent stretch lineation, L1, was also observed. It has in general a shallow plunge towards

north-east.

3.

Post-mineralisation D3 produced a pervasive crenulation cleavage that in general strikes south-east with a low dip south-west.

**Mineral Resource and Ore Reserve update**

Cube Consulting completed an updated Mineral Resource estimation on KCD based on all drilling completed to August 2009.

New Mineral Resource numbers were generated and are reflected overleaf.

**Continental Africa – DRC – Kibali**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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Main changes in the Mineral Resource from the previous declaration include:

- The open-pit Mineral Resource has been constrained within the US\$1,000/oz Whittle pit shell at a 0.5g/t gold cut-off.
- In the case of the KCD deposit, the underground Mineral Resource is reported as that material between the base of the pit to underground interface (5,685m RL), at a 2g/t gold cutoff.

The net result is a slightly lower total Mineral Resource than previously reported but a significant increase in the Indicated Mineral Resource, with 70% of the total Mineral Resource now being classified as an Indicated Mineral Resource.

Main changes in the Ore Reserve from the previous declaration include:

- Cube Consulting completed the open-pit Ore Reserve estimation from the updated Mineral Resource numbers, while SRK Consulting completed an update of the underground Ore Reserve based on a \$700 gold price. New Ore Reserve numbers are presented below and reflect a significant increase in the underground Ore Reserve to almost 6Moz, bringing the total Ore Reserve number to 9.2Moz, a 67% increase from the previous declaration.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Kibali

Category

million

g/t

tonnes

Moz

Surface

Measured

–

–

–

–

Indicated

41.51

2.11

87.53

2.81

Inferred

14.77



3.09  
45.57  
1.47  
Total  
56.27  
2.37  
133.10  
4.28  
Underground  
Measured

—  
—  
—  
—

Indicated

17.67  
6.08  
107.40  
3.45

Inferred

8.21  
4.38  
35.96  
1.16

Total  
25.88

5.54  
143.36  
4.61

Kibali

Total  
82.15

3.37  
276.46  
8.89

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Kibali

Category

million

g/t

tonnes

Moz

Measured

—

-  
 -  
 -  
 Indicated  
 30.46  
 2.18  
 66.28  
 2.13  
 Inferred  
 22.98  
 3.55  
 81.53  
 2.62  
 Kibali  
 Total  
 53.44  
 2.77  
 147.81  
 4.75  
 Kibali: Ore Reserve reconciliation  
 2009  
 Ounces (millions)  
 2.48  
 Acquisi-  
 tion  
 0.00  
 Depletion  
 1.66  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 0.00  
 Scope  
 Change  
 4.14  
 2009  
 0.00  
 Change in  
 Economics  
 0.00  
 0.00  
 Other  
 2.00  
 4.00  
 Kibali: Mineral Resource reconciliation  
 2009  
 Ounces (millions)

10.13  
Acquisition  
0.00  
Depletion  
0.00  
Gold  
price  
0.00  
Exploration  
-1.24  
Methodology  
8.89  
2009  
0.00  
Cost  
0.00  
0.00  
Other  
8.00  
Change  
Change  
12.00  
10.00  
6.00  
4.00  
2.00

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Kibali

Category

million

g/t

tonnes

Moz

Surface

Proved

–

–

–

–

Probable

15.10

3.02

45.66

1.47

Total

15.10

3.02

45.66

1.47

Underground

Proved

–

–

–

–

Probable

13.61

6.10

82.99

2.67

Total

13.61

6.10

82.99

2.67

Kibali

Total

28.71

4.48

128.65

4.14

**Competent persons**

Professional

Registration

Relevant

Category

Type

Name

organisation

number

experience

Surface

Mineral Resource

Patrick Adams

AusIMM

112739

25 years

Ore Reserve

Quinton de Klerk

AusIMM

210114

15 years

Underground

Mineral Resource

Patrick Adams

AusIMM

112739

25 years

Ore Reserve

Paul Kerr

AusIMM

230539

13 years

Kibali – surface (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

0.00

4.00

3.00

2.00

1.00

1.0

10.0

12.0  
14.0  
8.0  
2.0  
6.0  
4.0  
0.0  
90.0  
80.0  
70.0  
60.0  
40.0  
50.0  
30.0  
20.0  
10.0  
Kibali – underground (metric)  
Tonnes above  
cut-off (millions)  
Cut-off grade (g/t)  
Average grade  
above cut-off (g/t)  
Tonnes above cut-off  
Ave grade above cut-off  
1.0  
15.0  
20.0  
25.0  
5.0  
10.0  
0.0  
350.0  
300.0  
250.0  
200.0  
100.0  
150.0  
50.0  
0.00  
20.00  
16.00  
12.00  
8.00  
4.00

**Continental Africa – DRC – Mongbwalu**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**DRC – Mongbwalu**

**Location**

The Mongbwalu project is located in Concession 40 (C40) in the north-east of the DRC. It is situated next to the village of

Mongbwalu which is 84km north-west of the regional town of Bunia and 320km north-west of Kampala in neighbouring

Uganda. An area of 7,443km

2

within C40 is held in a joint venture under an ammodiation agreement between AngloGold

Ashanti and OKIMO, which currently holds a 13.8% non-contributory share. The joint venture company is called Ashanti

Goldfields Kilo Ltd (AGK). The DRC Minerals Review Commission and negotiations with the Government led to an agreement

to transfer the mining rights of an area of 6,007km

2

in C40 from OKIMO to the joint venture. The area to be transferred contains

approximately 19 permits. The process of transferring the mining rights from OKIMO to AGK is expected to be concluded

early in 2010. As one of the conditions of the title transfer, AGK will be required to complete a feasibility study within

12 months.

**Geology**

Granitoids are the predominant rock type within the Kilo granite-greenstone belt. The granitoids contain rafts of Kibalian

amphibolites and talc carbonate schists that have been intruded by diorite-tonalite-granodiorite assemblages. The Mongbwalu mineralisation is hosted in multiple, shallow dipping mylonite bodies that average 25m in width. Within the

mylonite zones, the gold is primarily concentrated in boudinaged quartz veins that appear to be orientated sub-parallel to the

mylonite zones and their immediate wall-rock. The alteration assemblage consists of chlorite-biotite-quartz-sericite and

mineralisation occurs in a pyrite-pyrrhotite assemblage (<2%) and in pyrite-pyrrhotite (<2%) and as free gold.

The easterly dipping mylonite zones are continuous throughout the area drilled, with the most prospective zone located close

to the old Adidi underground mine. Two north-south trending faults have offset the mineralisation and kept the mineralisation

within 300m of the surface. The mylonite can be traced along a strike length of approximately 8km through historical mining,

artisinial mining and recent geological mapping.

**Exploration**

All field-based exploration activities over the licence area were suspended in November 2008 following the deteriorating

security situation which led to the precautionary withdrawal of most non-essential staff from the concession.

Interpretation

work of existing data continued through 2009, and field activities recommenced in November 2009, including drilling in the

Mongbwalu area.

The majority of AGK's exploration activities in C40 have focused on the delineation of the Mineral Resource in the vicinity of the abandoned underground Adidi-Kanga and Nzebi gold mines.

The most prospective parts of the greenstone belt have been covered by a total of 5,575km

2

of airborne magnetic and radiometric surveys and a detailed geological interpretation map has been completed of the same area. The numerous gold

occurrences throughout the concession occur in geologically distinct belts and can efficiently be explored with soil sampling

programs. The stripped regolith profile makes soil sampling a very effective sampling strategy. Three fly camps have been

established as bases for the regional field work.

**Mongbwalu 3D mineralisation model**



## AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009

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### Project

At the conclusion of the joint venture agreement negotiations, a detailed feasibility study will commence on the Mongbwalu Mineral Resource. This 12-month study is aimed at developing a financially viable mine that has the potential to generate rapid cash flows with a payback period of less than seven years. The mining operations are planned to feed a plant with approximately 60,000tpm. A high level conceptual study of the various mining options shows an underground mining method will generate the highest cash flow. The feasibility study will be focused on developing an underground mine centred around the old Adidi underground workings that will potentially use some of the existing development to access ore as soon as possible.

### Mineral Resource Estimation

AGK began drill testing of the Mineral Resource potential of the Mongbwalu area in mid-2005 and by the end of 2006, the broader Mongbwalu area (Nzebi-Adidi-Kanga-Pluto) had been diamond drilled on a 200m x 200m grid. The programme covered an area 2.2 by 2.7km centred over the southern part of the old Adidi mine. From this drilling, distinct zones with potentially economic grades of gold in quartz-veins and mylonite were delineated. Infill RC and DD on 50m x 50m centres was undertaken during 2007 to cover the areas of maximum potential hosting near-surface open pit or shallow underground extractable mineralisation. The aim was to define an initial Inferred Mineral Resource by the end of 2007. Data obtained from a total of 87,933m of drilling was used for Mineral Resource modelling and estimation which was completed in late 2007. Resource drilling continued into 2008 with a single diamond rig and 8,824m of additional drilling was completed. In September 2009 a second Mineral Resource estimation was completed. The principal Mongbwalu mylonite horizons and other important geological units defined by drillhole logging and interpretation were modelled using conventional 3D wireframing techniques. To define the Inferred Mineral Resource, ore envelopes were created using a combination of grades greater than 3.0g/t and the presence of quartz veining. Following geostatistical evaluation of the drillhole assay database, gold grades were interpolated into a 3D block-model incorporating the principal geological units and ore envelopes using ordinary kriging to define the Inferred Mineral Resource. Initial scoping level mining, metallurgical, geotechnical, hydrogeological, environmental, socio-political and infrastructural engineering studies were undertaken in parallel with the drilling to support the Mineral Resource estimate.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mongbwalu

Category

million

g/t

tonnes

Moz

Underground

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

8.84

7.38

65.26

2.10

Mongbwalu

Total

8.84

7.38

65.26

2.10

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Mongbwalu

Category

million

g/t

tonnes

Moz

Measured

–  
–  
–  
–  
Indicated

–  
–  
–  
–  
Inferred

8.84

7.38

65.26

2.10

Mongbwalu

Total

8.84

7.38

65.26

2.10

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Mike O`Brien

AusIMM

206669

29 years

**Continental Africa – DRC – Mongbwalu**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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Mongbwalu – underground (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

1.00

19.00

5.00

3.00

0.0

20.0  
15.0  
10.0  
5.0  
7.00  
9.00  
11.00  
13.00  
15.00  
17.00  
0.0  
20.0  
24.0  
12.0  
16.0  
8.0  
4.0

Mongbwalu: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

2.53

2008

0.00

Depletion

0.00

Gold

price

0.00

Exploration

-0.21

Metho-  
dology

2.10

2009

-0.21

Cost

1.00

0.00

Other

2.50

2.00

1.50

Change

## AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009

### Continental Africa – Ghana

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#### Ghana

##### Regional 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. The orebody consists of two main ore types, firstly, quartz veining with non-refractory free gold and secondly, a sulphide-hosted mineralisation style generally associated with arsenopyrite which is refractory. Three main structural trends control the gold mineralisation within a 9km long continuous zone which remains open at depth. The Obuasi orebody is considered one of the classic Birimian hosted orebodies.

At Iduapriem, situated in the western region of Ghana, some 70km north of the coastal city of Takoradi and 10km south-west of Tarkwa, the gold mineralisation is hosted by the Proterozoic Banket Series, a conglomerate sequence of the Tarkwaian System.

##### Mineral Resource estimation

Mineral Resource estimates are derived from interpretations of information about the location, shape, continuity and grade of the individual orebodies.

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

The geological interpretation is based on diamond drill and cross-cut sampling information. A prototype block model of

20m x 5m x 15m representing the minimum mining unit was used and estimates are based on ordinary kriging.

Although no open-pit mining has taken place at Obuasi since 2005, three pits still contain a Mineral Resource. The open pit

Mineral Resource at Obuasi and Iduapriem was estimated using 3D computer block models constructed using the Datamine

®

software. Geological interpretation was based on trench and RC and/or DD data. A prototype block model of 30m x 30m x 10m

was used by the geological model and ordinary kriging as the primary estimation methodology.

Surface stockpiles volumes are based on surveyed figures 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.

Datamine

®

software called Mineral Resource Optimizer is used to generate the ore envelope. An appropriate mining layout is designed that incorporates mining extraction losses, dilution factors and MCF.

**Continental Africa – Ghana**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

850

720

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Iduapriem

Measured

50 x 50 and

–

–

50 x 100

–

–

Indicated

50 x 75 and

–

–

75 x 100

–

–

Inferred

50 x 100, and

–

–

100 x 100

–

–

Grade control 10 x 15

—  
—  
—

Obuasi:

Measured

20 x 20,

—

Auger drilling, historical information.  
surface

50 x 50

—

No current exploration or production.

Indicated

30 x 0,

—

Auger drilling, historical information.

30 x 30,

—

No current exploration or production.

50 x 50,

—

60 x 0, and

—

60 x 60

—

Inferred

90 x 0,

—

Auger drilling, historical information.

90 x 90,

—

No current exploration or production.

Grade control 10 x 10

—

—

—

Obuasi:

Measured

20 x 20

—

—

—

underground

Indicated

60 x 60

—

—

—

Inferred

120 x 120



-  
 -  
 -  
 Grade control 1.5 x 25  
 -  
 -  
 -  
 Chip sampling of development ends  
**Ore Reserve modifying factors**  
 as at 31 December 2009  
 Cut-off  
 Mine call factor  
 Metallurgical  
 weighted  
 RRF  
 MRF  
 (MCF) recovery  
 Mine  
 g/t  
 %  
 %  
 %  
 %  
 Iduapriem  
 Ajopa  
 1.00  
 -  
 93  
 100  
 95  
 Block 3W  
 1.00  
 -  
 93  
 100  
 95  
 Block 5  
 1.00  
 -  
 93  
 100  
 95  
 Blocks 7 and 8  
 1.00  
 -  
 93  
 100  
 95  
 Stockpile (full grade ore)  
 1.00  
 -

93  
100  
95  
Stockpile (marginal ore)  
—  
—  
93  
100  
95  
Stockpile (other)  
—  
—  
93  
100  
95  
Obuasi  
Above 50 Base  
5.00  
—  
—  
88  
83  
KMS 50-60  
5.00  
—  
—  
88  
83  
Stockpile (surface sulphides)  
—  
—  
—  
—  
70  
Tailings (Kokoteasua)  
—  
—  
—  
—  
42  
Tailings (Pompora)  
—  
—  
—  
—  
33

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**Continental Africa – Ghana – Iduapriem**

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**Ghana – Iduapriem**

**Location**

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

south-west of Tarkwa. Iduapriem is an open-pit mine which began mining operations in 1992. Its processing facilities include

a 4.4Mt per annum CIP plant with a gravity circuit that recovers about 30% total gold.

**Geology**

Iduapriem is located within the Tarkwaian Group and forms 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 north-east to

south-west trending volcanic belts separated by basins and the Tarkwa Group was deposited in these basins as shallow water

deltaic sedimentation. The gold mineralisation is contained in the Proterozoic Banket Series conglomerates.

The Banket Reef Zone comprises a sequence of individual beds of quartz pebble conglomerates (Banket beds), breccia conglomerates, meta-sandstones (also called quartzites) and grits. The outcropping Banket Series in the mine area form prominent arcuate ridges extending 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. Gold content is a function of the size and amount (packing) of quartz pebbles present within

a conglomeratic unit. At Iduapriem, the gold mineralisation is unrelated to metamorphic or hydrothermal alteration events and

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

2 and 500 microns (0.002 to 0.5mm) and averages 130 microns (0.13mm). Sulphide mineralisation is present only at trace

levels and is not associated with the gold.

**Exploration**

The leases of the mine have been extensively explored for their near surface Mineral Resource. However, limited work has

been done to assess the underground potential of these lease holdings. Hence, the opportunity to increase the Mineral Resource of the mine lies predominantly in the under-explored underground area. Studies are currently underway to determine

if an economic Mineral Resource to support an underground mining proposition could be defined.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Iduapriem

Category

million  
g/t  
tonnes  
Moz  
Ajopa  
Measured  
3.37  
2.29  
7.71  
0.25  
Indicated  
1.56  
2.21  
3.45  
0.11  
Inferred  
1.36  
2.22  
3.02  
0.10  
Total  
6.29  
2.26  
14.18  
0.46  
Block 3W  
Measured  
—  
—  
—  
—  
Indicated  
2.76  
1.44  
3.98  
0.13  
Inferred  
1.03  
1.31  
1.36  
0.04  
Total  
3.80  
1.40  
5.33  
0.17  
Block 5  
Measured  
6.41  
1.24  
7.95

0.26  
Indicated  
1.91  
1.28  
2.44  
0.08  
Inferred  
2.44  
1.33  
3.24  
0.10  
Total  
10.75  
1.27  
13.63  
0.44

**Continental Africa – Ghana – Iduapriem**

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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Iduapriem

Category

million

g/t

tonnes

Moz

Blocks 7 and 8

Measured

17.35

1.36

23.60

0.76

Indicated

37.97

1.76

66.76

2.15

Inferred

4.24

1.72

7.30

0.23

Total

59.56

1.64

97.65

3.14

Stockpile (full grade ore)

Measured

2.77

1.08

2.99

0.10

Indicated

–

–

–

–

Inferred

—  
—  
—  
—  
Total  
2.77  
1.08  
2.99  
0.10  
Stockpile (other)  
Measured  
—  
—  
—  
—  
Indicated  
—  
—  
—  
—  
Inferred  
16.50  
0.56  
9.32  
0.30  
Total  
16.50  
0.56  
9.32  
0.30  
Iduapriem  
Total  
99.68  
1.44  
143.11  
4.60  
**Exclusive Mineral Resource**  
as at 31 December 2009  
Contained  
Contained  
Tonnes  
Grade  
gold  
gold  
Iduapriem  
Category  
million  
g/t  
tonnes  
Moz  
Measured

3.54  
 1.05  
 3.72  
 0.12  
 Indicated  
 20.98  
 1.68  
 35.21  
 1.13  
 Inferred  
 25.57  
 0.95  
 24.23  
 0.78  
 Iduapriem  
 Total  
 50.09  
 1.26  
 63.17  
 2.03

**Exclusive Mineral Resource**

Most of the Exclusive Mineral Resource quoted is in the down-dip extensions of the ore zones beyond the optimised pit shells and the Inferred Resource within the pits. Thus, most of this Mineral Resource would be mineable at an upside gold price.

Iduapriem: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

2.55  
 2008  
 -0.82  
 Depletion  
 0.00  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 0.02  
 Scope  
 Change  
 2.40  
 2009  
 0.00  
 Change in  
 Economics  
 2.00  
 0.01  
 Other



2.50

Iduapriem: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

4.87

2008

-0.24

Depletion

0.24

Gold

price

0.00

Exploration

0.00

Metho-

dology

4.60

2009

-0.28

Cost

4.00

0.00

Other

5.00

4.50

Change

Change

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Iduapriem

Category

million

g/t

tonnes

Moz

Ajopa

Proved

3.07

2.13

6.54

0.21

Probable

1.03

2.03

2.09

0.07

Total

4.09

2.11

8.62

0.28

Block 3W

Proved

–

–

–

–

Probable

1.63

1.50

2.44

0.08

Total

1.63

1.50

2.44

0.08

Block 5

Proved

6.09  
 1.17  
 7.15  
 0.23  
 Probable  
 1.82  
 1.20  
 2.18  
 0.07  
 Total  
 7.91  
 1.18  
 9.33  
 0.30  
 Blocks 7 and 8  
 Proved  
 14.43  
 1.34  
 19.35  
 0.62  
 Probable  
 18.75  
 1.70  
 31.81  
 1.02  
 Total  
 33.18  
 1.54  
 51.17  
 1.65  
 Stockpile (full grade ore)  
 Proved  
 2.77  
 1.08  
 2.99  
 0.10  
 Probable  
 -  
 -  
 -  
 -  
 Total  
 2.77  
 1.08  
 2.99  
 0.10  
 Iduapriem  
 Total  
 49.58  
 1.50  
 74.56

2.40

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Kwasi Osei

AusIMM

112723

15 years

Ore Reserve

Emmanuel Baffour Boakye

AusIMM

222459

22 years

Iduapriem – surface (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

1.00

2.00

3.00

Average

grade

above

cut-off

(g/t)

Tonnes above cut-off

Ave grade above cut-off

0.50

1.50

2.50

0.0

200.0

40.0

80.0

100.0

120.0

160.0

180.0

140.0

60.0

20.0

1.5

3.5

4.0  
3.0  
2.5  
2.0

**Continental Africa – Ghana – Obuasi**

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**Ghana – Obuasi**

**Location**

The Obuasi mine is located in the Ashanti region of Ghana, some 80km south of Kumasi. It is an underground mine extending over 9km on strike and mining to a depth of 1,500m below surface. Large-scale open-pit mining took place between the years 1990 and 2000 and the contribution from open-pit mining is currently less than 1% of annual production. There are two active treatment plants: the sulphide treatment plant to process underground ore and the tailings treatment plant to handle tailings reclamation operations.

**Geology**

The gold deposits at Obuasi are part of a prominent gold belt of Proterozoic (Birimian) volcano-sedimentary and igneous formations. These deposits extend for a distance of approximately 300km, in a north-east/south-west trend, in south-western

Ghana. Obuasi gold mineralisation is shear-zone-related and there are three main structural trends within the Obuasi concession; namely the Main trend, the Gyabunsu trend and the Binsere trend. The underground mine is situated on the Main

trend which is a graphite-chlorite-sericite fault zone associated with silica, carbonate and sulphide hydrothermal alteration.

Deformation of the main shear resulted in an anastomosing structural pattern of secondary mineralised shears with pinch and

swell structures. This is more evident where more resistant metavolcanics occur as lenses within the system.

Two main ore types are mined, namely quartz veins and sulphide ore. The quartz vein type consists mainly of quartz with free

gold in association with lesser amounts of various metal sulphides containing iron, zinc, lead and copper. This ore type is

generally non-refractory.

Sulphide ore is characterised by the inclusion of gold in the crystal structure of sulphide minerals. Higher gold grades tend to

be associated with finer grained arsenopyrite crystals. Other prominent minerals include quartz, chlorite and sericite.

Sulphide

ore is generally refractory.

26 Level

12 Level

8 Level

20 Level

32 Level

38 Level

41 Level

-1000m

-500m

Zero

250m

Main Fissure

Obuasi  
Fissure  
Footwall  
Quartz  
0

150m  
SECTION THROUGH KWESI MENSAH SHAFT

K - Fissure  
N - Fissure  
12/74  
Fissure  
Cote D'Or  
Fissure  
Cote D'Or Spur  
Cowsu  
Spur  
Big Blow  
4 & 5 Lodes  
3 West

**Legend**

Auriferous Quartz Vein  
Carbonaceous/Graphitic Fissure  
Barren Metavolcanic (Dyke)  
Mineral - Auriferous - Metavolcanic (Dyke)  
Phyllites, Greywackes and Shists

N  
OXIDISED  
ZONE

50  
41  
38  
30  
26  
20  
16  
12  
8  
100m  
0  
-100m  
-200m  
-300m  
-400m  
-500m  
-600m  
-700m

S.V.S  
OREBODY folded  
phyllite  
and  
sitstone

granulated  
phyllite  
folded phyllites  
siltstones and  
greywackers  
Ashanti  
fissure  
schist  
greywacker  
phyllite  
Insintiam reef

ADANSI

SHAFT

Obuasi

Fissure

Cote d'or

fissure

0

120m

**Legend**

Auriferous Quartz Vein

Carbonaceous/Graphitic Fissure

Barren Metavolcanic (Dyke)

Phyllites, Greywackes and Shists

N

**Section through Kwesi Mensah shaft**

**Section through Adansi shaft 5**



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**Exploration**

Exploration on the Obuasi concession is currently limited to underground drilling to explore the Obuasi Deeps below 50 level and southern extensions of the current mining areas above 50 level. Drilling from 50 level was suspended in July 2009 as a result of torrential rain which flooded the level. Exploration activities will re-commence in early 2010. Exploration drilling above 50 level recommenced in August 2009 and the first ore zone intersection is expected early in 2010.

**Projects**

**Mining method**

Obuasi has embarked on a conversion of mining method over the next two years from current transverse and longitudinal open stoping, to a full longitudinal retreat method (LRM). The conversion will take place in mining blocks where it is suitable to do so. In 2008, 20% of the mine was designed for LRM; in 2009 up to 70% above 50 level and 100% below 50 level had been designed with the new method and 100% below 50 level. Stope production is scheduled to start in mid 2010. The major advantage of this method is the up to 50% reduction in waste development; reducing capital expenditure along with additional reef drive exposure. The change in mining method has been coupled with the introduction of fully mechanised development from the second quarter of 2010 with up to 65% of all development being mechanised by 2012.

**Pompora reclamation project**

The objective of the project is to construct a reclamation station and pipeline to enable the reclamation of Kokoteasua and Pompora tailing storage facilities and pump the reclaimed material to the tailings treatment plant (TSP) to extract the gold. The feasibility study is based on the utilisation of the TSP float circuit and redundant capacity in the Biox and Biox CIL circuit at the sulphide treatment plant.

**KMS 50-60 level mining block 11**

The intention is to complete the feasibility for this project late in 2010. Initial development is scheduled for the first quarter of 2011. The project is designed to be fully LRM with 100% mechanised development. First gold from the project is scheduled for 2013.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Obuasi  
Category  
million  
g/t  
tonnes  
Moz  
Above 50 base  
Measured  
36.52  
7.58  
276.84  
8.90  
Indicated  
15.59  
7.52  
117.29  
3.77  
Inferred  
24.17  
6.81  
164.52  
5.29  
Total  
76.28  
7.32  
558.65  
17.96  
Adansi 50-60  
Measured  
1.69  
5.66  
9.59  
0.31  
Indicated  
1.27  
4.68  
5.94  
0.19  
Inferred  
2.82  
5.55  
15.63  
0.50  
Total  
5.78  
5.39  
31.16  
1.00  
Adansi 60-70  
Measured  
0.26

5.21  
1.34  
0.04  
Indicated  
0.31  
5.31  
1.63  
0.05  
Inferred  
1.68  
7.14  
11.97  
0.38  
Total  
2.24  
6.67  
14.93  
0.48

**Continental Africa – Ghana – Obuasi**

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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Obuasi

Category

million

g/t

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

–

Inferred

0.12

3.74

0.44  
0.01  
Total  
0.16  
2.59  
0.58  
0.02  
Gyabunsu-Sibi  
Measured  
—  
3.50  
0.01  
—  
Indicated  
0.24  
4.79  
1.14  
0.04  
Inferred  
0.21  
4.76  
0.98  
0.03  
Total  
0.45  
4.77  
2.13  
0.07  
KMS 50-60  
Measured  
0.70  
18.22  
12.67  
0.41  
Indicated  
2.20  
18.52  
40.79  
1.31  
Inferred  
3.07  
10.91  
33.55  
1.08  
Total  
5.97  
14.57  
87.01  
2.80  
KMS 60-70  
Measured

-  
 12.48  
 -  
 -  
 Indicated  
 0.18  
 14.16  
 2.62  
 0.08  
 Inferred  
 2.76  
 17.62  
 48.70  
 1.57  
 Total  
 2.95  
 17.40  
 51.32  
 1.65  
 Other surface resources  
 Measured  
 -  
 -  
 -  
 -  
 Indicated  
 -  
 -  
 -  
 -  
 Inferred  
 0.07  
 2.98  
 0.21  
 0.01  
 Total  
 0.07  
 2.98  
 0.21  
 0.01  
 Sansu (low grade sulphides)  
 Measured  
 3.26  
 4.61  
 15.02  
 0.48  
 Indicated  
 2.19  
 4.12  
 9.03  
 0.29

Inferred

3.05

4.52

13.80

0.44

Total

8.51

4.45

37.85

1.22

Stockpile (heap leach)

Measured

0.47

0.50

0.23

0.01

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

0.47

0.50

0.23

0.01

Stockpile (surface oxides)

Measured

0.03

1.72

0.05

—

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

0.03

1.72

0.05

—  
Stockpile (surface sulphides)

Measured

0.30

2.63

0.80

0.03

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

0.30

2.63

0.80

0.03

Tailings (Kokoteasua)

Measured

3.36

1.96

6.58

0.21

Indicated

1.65

1.96

3.24

0.10

Inferred

—

—

—

—

Total

5.01

1.96

9.83

0.32



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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Obuasi

Category

million

g/t

tonnes

Moz

Tailings (Pompora)

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

32.78

1.58

51.79

1.67

Total

32.78

1.58

51.79

1.67

Upper Mine

Measured

3.32

10.06

33.42

1.07

Indicated

1.64

8.39

13.76

0.44

Inferred

1.36

10.48

14.26

0.46

Total

6.32

9.71

61.44

1.98

Obuasi

Total

151.36

6.07

918.34

29.53

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Obuasi

Category

million

g/t

tonnes

Moz

Measured

23.54

5.66

133.13

4.28

Indicated

13.91

7.48

104.08

3.35

Inferred

28.04

6.51

182.64

5.87

Obuasi

Total

65.49

6.41

419.86

13.50

**Exclusive Mineral Resource**

The Obuasi Exclusive Mineral Resource is made up of Mineral Resource from underground, open pit and tailings. The bulk of

the Exclusive Mineral Resource (71%) is from underground and of this Mineral Resource, 52% is locked up in Mineral

Resource blocks and remnants in historical mined out areas in the north of the mine. This Mineral Resource cannot be accessed due to old infrastructure. The remainder of the underground Exclusive Mineral Resource is mineable between

Mineral Resource and Ore Reserve cut-offs (11%), below 50 level (18%) and in areas where more investigation is required (6%).

Some of the Exclusive Mineral Resource will be brought into the Ore Reserve as mining development is put into place to

access these areas, and also as the economic criteria change.

Approximately 10% of the Exclusive Mineral Resource is from tailings and will be brought into the Ore Reserve as infrastructure

is developed and capacity is increased in the tailings treatment plant. Two of the tailings dams are also active and an Exclusive

Mineral Resource margin will be maintained.

None of the three open pits in the Mineral Resource is currently included in the Ore Reserve. This represents 4% of the

Exclusive Mineral Resource. To bring open pits into the Ore Reserve will require more geotechnical investigation, optimisation

and mine design.

#### **Mineral Resource below infrastructure**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Obuasi

Category

million

g/t

tonnes

Moz

KMS 50 – 60 level

Total

5.97

14.57

87.01

2.80

KMS 60 – 70 level

Total

2.95

17.40

51.32

1.65

Adansi 50 – 60 level

Total

5.78

5.39  
31.16  
1.00  
Adansi 60 – 70 level  
Total  
2.24  
6.67  
14.93  
0.48  
Obuasi  
Total  
16.94  
10.89  
184.43  
5.93

**Continental Africa – Ghana – Obuasi**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Obuasi

Category

million

g/t

tonnes

Moz

Above 50 base

Proved

11.09

7.33

81.33

2.61

Probable

22.52

7.33

165.12

5.31

Total

33.62

7.33

246.45

7.92

KMS 50-60

Proved

1.09

13.14

14.33

0.46

Probable

2.21

13.14

29.09

0.94

Total

3.30

13.14

43.41

1.40

Stockpile (surface sulphides)

Proved	
0.09	
4.50	
0.41	
0.01	
Probable	
–	
–	
–	
–	
Total	
0.09	
4.50	
0.41	
0.01	
Tailings (Kokoteasua)	
Proved	
1.65	
1.96	
3.24	
0.10	
Probable	
3.36	
1.96	
6.58	
0.21	
Total	5.01
1.96	
9.83	
0.32	
Obuasi	
Total	
42.02	
7.14	
300.10	
9.65	
<b>Ore Reserve below infrastructure</b>	
as at 31 December 2009	
Contained	
Contained	
Tonnes	
Grade	
gold	
gold	
Obuasi	
Category	
million	
g/t	
tonnes	
Moz	
KMS 50 – 60 level	

Total  
 3.30  
 13.14  
 43.41  
 1.40  
 Obuasi: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 9.66  
 2008  
 -0.65  
 Depletion  
 -2.75  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 3.38  
 Scope  
 Change  
 9.65  
 2009  
 0.00  
 Change in  
 Economics  
 0.00  
 Other  
 Obuasi: Mineral Resource reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 37.35  
 2008  
 -0.51  
 Depletion  
 0.00  
 Gold  
 price  
 0.01  
 Exploration  
 -1.72  
 Metho-  
 dology  
 29.53  
 2009  
 -0.13  
 Cost  
 -5.47  
 Other

Change  
Change  
4.00  
8.00  
10.00  
6.00  
25.00  
41.00  
37.00  
33.00  
29.00



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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Heinrich Eybers

AusIMM

229471

23 years

Ore Reserve

Richard Downing

AusIMM

229889

23 years

Obuasi – surface (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade

above

cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

0.00

10.00

2.00

1.00

2.0

8.0

10.0

12.0

6.0

4.0

0.0

5.0

4.0

3.0

2.0

3.00

4.00

5.00

6.00

7.00

8.00  
1.0  
9.00  
Obuasi – underground (metric)  
Tonnes above  
cut-off (millions)  
0.00  
Cut-off grade (g/t)  
20.00  
Average grade above cut-off (g/t)  
Tonnes above cut-off  
Ave grade above cut-off  
2.00  
8.00  
12.00  
5.0  
45.0  
25.0  
105.0  
65.0  
85.0  
16.00  
5.0  
10.0  
15.0  
35.0  
20.0  
25.0  
30.0  
4.00  
6.00  
10.00  
14.00  
18.00  
**Obuasi – Block 9 3D**

**Continental Africa – Guinea**

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**Guinea**

**Regional overview**

The Siguiiri mine is AngloGold Ashanti's only operation in the Republic of Guinea in West Africa. 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 Siguiiri

district in the north-east of the Republic of Guinea, West Africa. It lies about 850km from the capital city of Conakry. Gold-

bearing ore is mined from several pits and sent to a CIP plant.

The Siguiiri orebody is hosted in Birimian aged rocks and characterised by wide zones of multiple narrow quartz veins hosting

gold mineralisation. The deposits have been influenced by a deep weathering profile, typically 50-80m below surface, resulting

in broad zones of low grade mineralisation easily amenable to bulk mining methods. Mining is presently focused on block 1,

which hosts the processing plant and mining operations, with ongoing exploration of blocks 2-4 expected to increase significantly in line with the operations' long term development plans so as to maximise the Mineral Resource potential.

**Mineral Resource estimation**

Mineral Resource definition drilling consists of air core (AC), reverse circulation (RC) and diamond drilling (DD) boreholes.

All available geological drillhole information is validated for usage in the models and the local geology of the orebody is used

to classify the drillhole information into appropriate geostatistical 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 then they are cut back to the appropriate upper limit of the population.

The Mineral Resource is estimated using 3D computer block models constructed in Datamine

®

software. Geological

interpretation is based on geological borehole data. A prototype block model ranging from 10m x 10m x 2.5m to 50m x 25m

x 6m block sizes, depending on the shape of the orebody and drilling density, is used within the geological model outlines.

Ordinary and indicator kriging are used to estimate gold grades and a limiting pit shell at \$1,025/oz is used to quantify the

total Mineral Resource.

**Mineral Resource and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800

720

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Signifi-

Measured

5 x 10, 10 x 5

-

-

Indicated

20 x 40,

-

-

Mainly RC, but AC is used in the

25 x 25, and

-

-

early stages and some DD holes

25 x 50

-

-

are drilled for geology

Inferred

20 x 40,

-

-

Mainly RC, but AC is used in the

25 x 50, and

-

-

early stages and some DD holes

50 x 50

-

-

are drilled for geology

Grade control 5 x 10, and

-

-

-

5 x 12.5

-

-

-

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**Ore Reserve estimation**

The Mineral Resource models for each pit are depleted to the mining surfaces. Costs are assigned on a pit-by-pit basis reflecting the current existing cost structure of the operation. The relevant dilution and ore loss factors are applied and the

optimisation is done in Whittle

® software. The relevant metallurgical recoveries, geotechnical parameters, cut-off grades and economics are applied to generate the final Ore Reserve.

**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

factor

lurgical

weighted

RRF

MRF

(MCF) recovery

Mine

g/t

%

%

%

%

Comments

Siguiri

Bidini

0.35

100

100

100

93

Average recovery (96% oxides,  
55% transitional, 88% marginal ore)

Eureka East

0.35

100

100

100

92

As above

Eureka North

0.35

100

100

100

93

As above

Foulata

0.35

100

100

100

94

As above

Kalamagna

0.35

100

100

100

93

As above

Kami

0.35

100

100

100

92

As above

Kosise

0.35

100

100

100

93

As above

Kozan North

0.35

100

100

100

92

As above

Kozan South

0.35

100

100

100

93

As above

Seguelen

0.35

100

100

100

93

As above

Sintroko South

0.35  
100  
100  
100  
94  
As above  
Sokunu  
0.35  
100  
100  
100  
92  
As above  
Soloni  
0.35  
100  
100  
100  
93  
As above  
Sorofe  
0.35  
100  
100  
100  
94  
As above  
Stockpile 0.35  
100  
100  
100  
94  
As  
above  
(full grade ore)  
Stockpile 0.35  
100  
100  
100  
88  
As  
above  
(marginal ore)  
Stockpile 0.35  
100  
100  
100  
88  
As  
above  
(spent heap leach)



**Continental Africa – Guinea – Siguiri**

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**Guinea – Siguiri**

**Location**

**Société Ashanti Goldfields De Guinée**

Siguiri gold mine is situated in the Siguiri district in the north-east of the Republic of Guinea, West Africa, about 850km from

the capital city of Conakry. The mining concession consists of four blocks totalling 1,494.58km

2

. It is a multi open-pit oxide

gold mining operation. The current LOM plan entails the mining of eleven individual pits, several of which are multi-stage. All

ore and waste is mined by a mining contractor in a conventional open-pit mining operation. Processing is done via a CIP plant.

**Geology**

This concession is dominated by Neoproterozoic Birimian rocks which consist of turbidite facies sequences and lesser volcanoclastic sequences. The mineralisation is structurally controlled and occurs either as sheeted veins or within shear

zones. There are two main types of oxide mineralisation in the Siguiri basin: elluvial- or alluvial-hosted laterite mineralisation

and primary quartz-vein-related or shear hosted mineralisation. The laterite mineralisation occurs as aprons of colluvial or as

palaeo-channels of alluvial lateritic gravel adjacent to, and immediately above, the in situ vein-related or shear zone mineralisation. The in-situ mineralisation can occur as either sheeted veins or associated with shear zones, with the best

mineralisation often occurring at the intersection of the two.

The shear hosted style appears to be a slightly older event related to the development of a number of north-south striking

shear zones that may cut different lithologies. This phase of mineralisation is usually associated with silicification, brecciation

and quartz-albite-pyrite veining, with magnetite being present at some localities. The vein-related mineralisation occurs as

north-east to south-east to east-west striking, discontinuous sheeted veins. The better mineralised areas are associated with

vein stockworks that occur preferentially in the coarser, brittle siltstones and sandstones. The sheeted veins appear to be

related to a younger folding event and appear to be developed on fold axial planes. Mineralisation is associated with white

quartz veins, with grey selvages and scattered large arsenopyrite crystals proximal to these veins. Mineralisation at Siguiri has

been deeply weathered to an average vertical depth of 100m, and the mineralised saprolite provides the primary oxide feedstock for the CIP plant. Fresh hard mineralisation is not processed in the current plant. The 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, however, a CIP plant was brought on stream during 2005 to treat predominantly saprolite oxide ore.

The Siguiri mineralisation is characterised by coarse gold with low average grade and highly skewed distributions.

This is the

main geological feature taken into account during data collection and estimation.

## **Exploration**

The primary objective of the exploration initiative at Siguiri is to discover or upgrade prospective areas, enhancing the value

of the concession. Exploration is focused on finding and upgrading oxide style mineralisation in the saprolite, using drillhole

sampling, geophysics, and soil geochemistry in the context of the regional and pit-scale geological models. Almost 190,000m

were drilled during the year, and consisted of 156,700m brownfield exploration, 21,195m sterilisation, 7,032m Sintroko test

work and 5,071m for metallurgical testing.

The areas around the current pits were the focus of this year's drilling, investigating potential extensions to the current pits.

The principal targets that were explored include Sintroko South and West, Kosise South, Kami South, Kami Saddle, Kozan

Northwest, Toubani Extension, Eureka East and Komatiguia. Extension drilling was undertaken at Sintroko South and to the

north-west of Seguélén pits. The Seguélén north-west extension drilling (Komatiguia project) was done after completion of a

detailed gravity survey and the identification of a geochemical soil anomaly. The fresh rock potential below a number of pits

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was also investigated, with particular emphasis on the Kami, Sintroko and Bidini pits. Metallurgical drilling was completed

under these pits with the aim of obtaining samples to be used for gold deportment and extraction studies. One gravity survey

was completed in the Kintinian area and geochemical sampling of block 1 continued through the year with approximately 70%

of block 1 being sampled on a 200m x 50m grid by year end.

**Signiri: 3D model of the P1 area**

**Signiri: drillholes within the P1 area**

**Continental Africa – Guinea – Siguiri**

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**Mineral Resource**

Mineral Resource growth during the year was mainly due to exploration infill drilling and updated Mineral Resource modelling

in which the main mining area, consisting of 12 deposits, was modelled in an integrated approach. Previously the deposits

were modelled, optimised, designed and scheduled independently. The impact of the integrated approach is that some of the

individual pits have merged, highlighting opportunities between the current pits.

**Seguélén**

The Mineral Resource as published for Seguélén does not reflect the full potential of the deposit. An additional 10Mt grading

at 1.2g/t (380,000oz) have been delineated by a 50m x 50m drill pattern. This mineralisation is currently not accessible due

to its proximity to the Kintinian village and hence cannot be considered, at this stage, to have a reasonable and realistic

prospect for eventual economic extraction. Based on mineralised trends there may be further untested potential beneath the

Kintinian village. Negotiations with the local authorities are underway in an effort to secure access.

**Sintroko**

A bulk sampling project was initiated during the year at the Sintroko Pit after discrepancies were noted in the initial reconciliations between grade control and the Mineral Resource model. The project involved drilling a volume of ground with

both exploration and grade control drill rigs and sampling protocols. The material was then mined and processed. The preliminary results show good correlation between the new exploration and grade control drilling. The project is still in progress

with results expected during the first quarter of 2010. The project is expected to provide valuable insight into maximising the

overall value of Siguiri.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Siguiri

Category

million

g/t

tonnes

Moz

Bidini

Measured

–

–

–

-	
Indicated	
6.31	
1.12	
7.09	
0.23	
Inferred	
12.29	
0.96	11.76
0.38	
Total	
18.60	
1.01	
18.85	
0.61	
Eureka East	
Measured	
-	
-	
-	
-	
Indicated	
0.63	
0.76	
0.48	
0.02	
Inferred	
0.12	
0.70	
0.08	
0.00	
Total	
0.74	
0.75	
0.56	
0.02	
Eureka North	
Measured	
-	
-	
-	
-	
Indicated	
1.48	
0.79	
1.16	
0.04	
Inferred	
0.45	
0.80	
0.36	

0.01  
Total  
1.93  
0.79  
1.52  
0.05  
Foulata Measured  
—  
—  
—  
—  
Indicated  
—  
—  
—  
—  
Inferred  
2.77  
1.46  
4.04  
0.13  
Total  
2.77  
1.46  
4.04  
0.13  
Kalamagna  
Measured  
—  
—  
—  
—  
Indicated  
6.42  
0.72  
4.63  
0.15  
Inferred  
7.04  
0.86  
6.06  
0.19  
Total  
13.46  
0.79  
10.69  
0.34  
Kami  
Measured  
9.70  
0.95

9.19  
0.30  
Indicated  
4.62  
0.90  
4.16  
0.13  
Inferred  
6.41  
0.93  
5.97  
0.19  
Total  
20.72  
0.93  
19.32  
0.62

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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Siguiri

Category

million

g/t

tonnes

Moz

Kosise

Measured

–

–

–

–

Indicated

13.30

0.74

9.89

0.32

Inferred

7.85

0.84

6.58

0.21

Total

21.15

0.78

16.48

0.53

Kozan North

Measured

–

–

–

–

Indicated

7.87

0.69

5.44

0.17

Inferred

5.54



0.85  
4.69  
0.15  
Total  
13.41  
0.76  
10.13  
0.33  
Kozan South  
Measured  
—  
—  
—  
—  
Indicated  
1.78  
0.78  
1.39  
0.04  
Inferred  
1.69  
0.79  
1.33  
0.04  
Total  
3.47  
0.78  
2.72  
0.09  
Seguélen  
Measured  
—  
—  
—  
—  
Indicated  
15.08  
1.08  
16.34  
0.53  
Inferred  
10.18  
1.18  
11.97  
0.38  
Total  
25.26  
1.12  
28.31  
0.91  
Sintroko South

Measured

—  
—  
—  
—

Indicated

20.35  
1.21  
24.60  
0.79

Inferred

0.66  
2.35  
1.55  
0.05

Total

21.01  
1.24  
26.14  
0.84

Sokunu

Measured

—  
—  
—  
—

Indicated

2.43  
0.82  
1.99  
0.06

Inferred

0.60  
0.84  
0.50  
0.02

Total

3.03  
0.82  
2.50  
0.08

Soloni

Measured

—  
—  
—  
—

Indicated

6.04  
0.95  
5.71

0.18  
Inferred  
5.25  
0.80  
4.21  
0.14  
Total  
11.29  
0.88  
9.92  
0.32  
Sorofe  
Measured  
—  
—  
—  
—  
Indicated  
11.89  
0.86  
10.18  
0.33  
Inferred  
3.97  
0.79  
3.13  
0.10  
Total  
15.86  
0.84  
13.31  
0.43  
Stockpile (full grade ore)  
Measured  
8.33  
0.84  
7.00  
0.23  
Indicated  
—  
—  
—  
—  
Inferred  
—  
—  
—  
—  
Total  
8.33  
0.84

7.00  
 0.23  
 Stockpile (marginal ore)  
 Measured  
 18.55  
 0.46  
 8.53  
 0.27  
 Indicated  
 –  
 –  
 –  
 –  
 Inferred  
 –  
 –  
 –  
 –  
 Total  
 18.55  
 0.46  
 8.53  
 0.27  
 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  
 244.95  
 0.84  
 204.92  
 6.59

**Continental Africa – Guinea – Siguiri**

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**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Siguiri

Category

million

g/t

tonnes

Moz

Measured

3.75

0.78

2.93

0.09

Indicated

45.56

0.86

39.30

1.26

Inferred

78.22

0.89

69.85

2.25

Siguiri

Total

127.52

0.88

112.07

3.60

**Exclusive Mineral Resource**

The Exclusive Mineral Resource represents the future potential at Siguiri and comes from three areas:

- material that is economic at the Mineral Resource gold price of US\$1,025 per ounce, but not at the Ore Reserve price of US\$800 per ounce (67% of the Exclusive Mineral Resource);
- new deposits that are currently at the Inferred level of confidence. These areas will be in-fill drilled in the future (26% of the Exclusive Mineral Resource); and
- the Inferred Mineral Resource within the current pit designs (7% of the Exclusive Mineral Resource).

**Inferred Mineral Resource in business plan**

The Inferred Mineral Resource is used in the pit optimisation process if its total percentage amounts to 10% or less of the total

Ore Reserve. If the Inferred Mineral Resource was greater than 15%, the optimisation was redone excluding the Inferred

resultant ounces. The Inferred Mineral Resource within an optimised shell and subsequent design was used for scheduling.

The final schedule included 283,364oz of Inferred Mineral Resource in the final designs, which represents 7% of the scheduled

ounces.

Siguiri: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

3.25

2008

-0.26

Depletion

0.18

Model

Change

0.00

New

ounces

from

projects

0.11

Scope

Change

3.07

2009

0.10

Change in

Economics

2.00

-0.30

Other

3.00

3.50

2.50

Siguiri: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

5.94

2008

-0.29

Depletion

0.09

Gold

price

0.46

Exploration

0.90  
Metho-  
dology  
6.59  
2009  
-0.43  
Cost  
4.00  
-0.08  
Other  
7.00  
5.00  
6.00  
Change  
Change

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Siguiri

Category

million

g/t

tonnes

Moz

Bidini Proved

–

–

–

–

Probable

0.84

1.92

1.62

0.05

Total

0.84

1.92

1.62

0.05

Eureka East

Proved

–

–

–

–

Probable

0.35

0.69

0.24

0.01

Total

0.35

0.69

0.24

0.01

Kalamagna

Proved

–



—  
—  
—  
Probable  
3.70  
0.76  
2.80  
0.09  
Total  
3.70  
0.76  
2.80  
0.09  
Kami  
Proved  
3.94  
1.03  
4.06  
0.13  
Probable  
1.28  
0.84  
1.08  
0.03  
Total  
5.22  
0.98  
5.13  
0.16  
Kosise  
Proved  
—  
—  
—  
—  
Probable  
5.28  
0.79  
4.18  
0.13  
Total  
5.28  
0.79  
4.18  
0.13  
Kozan North  
Proved  
—  
—  
—  
—

Probable

2.56

0.76

1.95

0.06

Total 2.56

0.76

1.95

0.06

Kozan South

Proved

—

—

—

—

Probable

0.71

1.05

0.75

0.02

Total

0.71

1.05

0.75

0.02

Seguélién

Proved

—

—

—

—

Probable

12.84

1.15

14.80

0.48

Total

12.84

1.15

14.80

0.48

Sintroko South

Proved

—

—

—

—

Probable

14.74

1.26

18.53

0.60  
Total  
14.74  
1.26  
18.53  
0.60  
Sokunu  
Proved  
—  
—  
—  
—  
Probable  
2.01  
0.84  
1.69  
0.05  
Total  
2.01  
0.84  
1.69  
0.05  
Soloni Proved  
—  
—  
—  
—  
Probable  
3.67  
1.10  
4.04  
0.13  
Total  
3.67  
1.10  
4.04  
0.13  
Sorofe Proved  
—  
—  
—  
—  
Probable  
7.91  
0.89  
7.02  
0.23  
Total  
7.91  
0.89  
7.02

0.23
Stockpile (full grade ore)
Proved
8.33
0.84
7.00
0.23
Probable
—
—
—
—
Total
8.33
0.84
7.00
0.23

**Continental Africa – Guinea – Siguiri**

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**Ore Reserve cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Siguiri

Category

million

g/t

tonnes

Moz

Stockpile (marginal ore)

Proved

18.55

0.46

8.53

0.27

Probable

–

–

–

–

Total

18.55

0.46

8.53

0.27

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  
 118.67  
 0.81  
 95.58  
 3.07

**Competent persons**

Professional  
 Registration  
 Relevant  
 Category  
 Name

organisation  
 number  
 experience

Mineral Resource

Peter Winkler

AusIMM

220329

25 years

Ore Reserve

Tebogo Mushi

SAIMM

702438

9 years

Siguiri – surface (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

3.00

Average grade above

cut-off (g/t)

1.50

2.00

2.50

0.50

0.5

3.5

4.5

2.5

1.5

0.0

350.0

150.0

250.0

300.0

200.0

100.0

50.0

1.00

Tonnes above cut-off

Ave grade above cut-off

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**Continental Africa – Mali**

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**Mali**

**Regional 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

manages Morila.

**Mineral Resource and Ore Reserve gold price**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

700-880

720-870

**Mineral Resource estimation**

The Mineral Resource is taken as the material that falls within the \$1,025/oz economic shell optimised for each individual

deposit. A 3D surface is generated to create the outline of the geological model. This model is then used as a prototype model

to estimate grades. Block sizes are between 25m x 25m x 10m and 30m x 30m x 10m (X Y Z) and where appropriate, selective sub-celling is used for definition on the geological and mineralisation boundaries. All the deposits have

kriged block

models and where appropriate, a geostatistical technique called uniform conditioning is used to estimate the proportion of

economic ore that occurs above the cut-off and this is reported according to the dimensions of the practical mining unit.

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Morila

Measured

–



—  
—  
—  
—

Processing stockpiles – grades  
Indicated

—  
—  
—  
—  
—

are based on historic drilling  
Inferred

—  
—  
—  
—  
—

Grade control —

—  
—  
—  
—

Sadiola  
Measured  
25 x 25

—  
—

Indicated  
25 x 25,

—  
—

30 x 30,

—  
—

35 x 35, and

—  
—

25 x 50

—  
—

Inferred  
25 x 50,

—  
—

25 x 50, and

—  
—

50 x 50

—  
—

Grade control 5 x 10

-

-

-

Yatela

Measured

10 x 10, and

-

-

25 x 25

-

-

Indicated

25 x 25, and

-

-

35 x 45

-

-

Inferred

50 x 50

-

-

Grade control 5 x 10, and

-

-

-

10 x 10

-

-

-

**Ore Reserve estimation**

The Mineral Resource models are used as the basis for the Ore Reserve. Pit optimisation is done using Whittle<sup>®</sup> software.

The typical Whittle approach for a mill-constrained operation is followed. Optimisations are run on Measured and Indicated Mineral Resource and Measured, Indicated and Inferred Mineral Resource. All appropriate costs, metallurgical recovery factors and geotechnical parameters are applied to generate the final Ore Reserve.

**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

factor

lurgical

weighted

RRF

MRF

(MCF) recovery

Mine

g/t

%

%

%

%

Comments

Morila

Stockpile

1.40

–

–

100

89.0

Cut-off grades based on cut-off grade

(full grade ore)

used for stockpiling

Stockpile

1.00

–

–

100

88.8

Cut-off grades based on cut-off grade

(marginal ore)

used for stockpiling

Sadiola

Deep Sulphides

0.72

100

100

100  
93.0  
Hard oxide COG 0.82g/t Saprolite oxide  
(oxides)  
COG 0.63g/t  
Deep Sulphides  
0.98  
100  
100  
100  
80.0  
Hard sulphide COG 1.02g/t Saprolite  
(sulphides)  
sulphide COG 0.95g/t  
FE3  
1.00  
99  
99  
101.5  
95.0  
Metal factors shown here  
FE4  
1.00  
99  
99  
101.5  
95.0  
Metal factors shown here  
Main Pit (oxide)  
1.00  
100  
100  
95  
100.0  
Small remnants remain to be mined in  
early 2010  
Total stockpiles  
-  
100  
100  
102  
88.3  
Metal factors shown here  
Yatela  
Alamoutala Pit  
0.75  
100  
100  
100  
84.8  
Factors were not applied to Alamoutala

Main Pit

0.60

93

100

100

84.8

Factors applicable to the metal

Total stockpiles

0.65

–

–

–

84.8

Factors are not applied to the stockpile  
material

**Continental Africa – Mali**

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**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**Continental Africa – Mali – Morila**

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**Mali – Morila**

**Location**

The Morila mine is situated some 280km by road south-east of Bamako, the capital city of Mali. The mine is operated by Morila SA, a joint venture company incorporating Randgold Resources Ltd (40%), AngloGold Ashanti Ltd (40%), and the Government of Mali (20%). Randgold Resources took over the operation of Morila mine from AngloGold Ashanti Ltd in February 2008.

**Mining**

The Morila open-pit activities were successfully completed in April 2009. Consequently the main mining activity for the rest of the mine life will be rehandling already mined stockpiles at a rate of 4.2Mtpa using a core and backup fleet comprising two hydraulic excavators, two CAT 990 front-end loaders and seven Caterpillar 777 dump trucks.

**Geology**

The Morila orebody is located predominantly in metasediments within a broad north-north-west-trending corridor of shearing. This shear zone has both near vertical and flat lying components. It is interpreted as being a second order shear off the main Banafin shear, approximately 25km to the east. The Doubalakoro granite pluton bounds the sediments to the west and the Massigui granite to the east. The deposit occurs within a sequence of amphibolites facies metamorphosed Birimian meta-sediments. Gold mineralisation is associated with silica feldspar alteration and the sulphide minerals arsenopyrite, pyrrhotite, and pyrite (with minor chalcopyrite).

**Processing**

Ore is processed at a rate of 4.2Mtpa via a conventional 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 (TSF). Supernatant water from the TSF is reclaimed and collected in the return water dam before being returned to the mill for re-use.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Morila

Category

million

g/t

tonnes

Moz

Stockpile (full grade ore)

Measured

3.94

1.74

6.85

0.22

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

3.94

1.74

6.85

0.22

Stockpile (marginal ore)

Measured

2.76

1.14

3.14

0.10

Indicated

—

—

—

—

Inferred

0.38

0.81

0.31

0.01

Total

3.14

1.10

3.44

0.11

Morila

Total

7.08

1.45

10.29

0.33

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Morila

Category

million

g/t

tonnes

Moz

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

0.38

0.81

0.31

0.01

Morila

Total

0.38

0.81

0.31

0.01



**Exclusive Mineral Resource**

The Exclusive Mineral Resource is comprised of stockpiles below the current processing cut-off and stockpiles with diluted boundary limits.

**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Morila

Category

million

g/t

tonnes

Moz

Stockpile (full grade ore)

Proved

3.94

1.74

6.85

0.22

Probable

–

–

–

–

Total

3.94

1.74

6.85

0.22

Stockpile (marginal ore)

Proved

–

–

–

–

Probable

2.76

1.14

3.14

0.10

Total

2.76

1.14

3.14

0.10

Morila

Total  
6.70  
1.49  
9.99  
0.32

**Competent persons**

Professional  
Registration  
Relevant  
Category  
Name  
organisation  
number  
experience  
Mineral Resource

A Kone  
AusIMM  
222568  
17 years  
Ore Reserve  
S Ndede  
AusIMM  
201772  
20 years

**Continental Africa – Mali – Morila**

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Morila: Mineral Resource reconciliation  
2008 vs 2009

Ounces (millions)  
0.46  
2008  
-0.14

Depletion  
0.01  
Gold  
price  
-0.01

Exploration  
0.01  
Metho-  
dology  
0.33

2009  
0.00  
Cost  
0.00  
0.01

Other  
0.50

0.10  
0.40  
0.20  
0.30  
Morila: Ore Reserve reconciliation  
2008 vs 2009  
Ounces (millions)  
0.46  
2008  
-0.16  
Depletion  
-0.01  
Model  
Change  
0.00  
New  
ounces  
from  
projects  
0.02  
Scope  
Change  
0.32  
2009  
0.00  
Change in  
Economics  
0.00  
0.01  
Other  
0.40  
0.50  
0.20  
0.30  
0.10  
Change  
Change

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**Continental Africa – Mali – Sadiola**

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**Mali – Sadiola**

**Location**

Sadiola is situated in the north-west of Mali, 77km to the south of the regional capital of Kayes. The mining operations take

place in five open pits, the Sadiola main pit and four satellite pits, namely FE3 pits 1 to 3 and pit FE4.

Ore is treated in a 4.8Mtpa CIP processing plant. The plant was originally designed to treat soft oxide ore, but has been

progressively adapted to receive soft sulphide ores and even some types of hard oxide ores.

The down dip extension of the mineralisation mined in the Sadiola main pit has been named the Deep Sulphides Project (DSP),

in which the gold ore occurs in the underlying fresh rock. A full feasibility study of the DSP is scheduled for completion in 2010.

The project may substantially extend the life of Sadiola's operations and leverage exploration efforts and further discoveries of

hard-rock gold deposits in the district.

**Geology**

The Sadiola deposits are located within the Malian portion of the Keniéba-Kedougou window, a major early Proterozoic-

Birimian outlier along the north-east margin of the Kenema-Man shield. The deposits are confined to the north portion of

the window.

The Sadiola Hill deposit is underlain by the north-trending Sadiola Fracture Zone (SFZ), over a drilled strike length of approximately 2,500m, running along the contact of marbles and greywackes and intruded by bodies of diorite and quart-feldspar porphyries. North-east trending structures, often intruded by quartz-feldspar porphyries, extending to the east

of the SFZ, also carry gold. The mineralised zones have been intensely weathered to a maximum depth of 200m.

The Sadiola Hill deposit originally consisted of two zones, an upper oxidised cap and an underlying sulphide zone.

From 1996

until 2002, shallow saprolite oxide ore was the primary ore source. Since 2002, the deeper saprolitic sulphide ore has been

mined, progressively replacing the depleted oxide Ore Reserve.

The satellite pits are located to south-east of the Sadiola Hill mine and are underlain by different lithologies. The mineralised

zones straddle the contact between marbles to the west and carbon-rich pelites to the east, following a north-north-west-

trend in the FE3 pits 1 and 2, north-north-east at pit 3, and a north-east-strike in FE4 pit, due to regional folding. Gold mineralisation is mostly associated with lens-shaped breccia zones running broadly parallel to the enclosing metasediments

and folded accordingly.

At this stage all the gold is recovered from mostly soft, oxidised ore from the satellite pits. Some gold-rich, hard oxide nodes

have been also treated in the Sadiola plant, after first stage crushing.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade  
gold  
gold  
Sadiola  
Category  
million  
g/t  
tonnes  
Moz  
Deep Sulphides  
Measured  
0.03  
2.26  
0.06  
0.00  
Indicated  
24.48  
1.89  
46.15  
1.48  
Inferred  
14.96  
1.80  
26.97  
0.87  
Total  
39.46  
1.85  
73.19  
2.35  
FE2  
Measured  
—  
—  
—  
—  
Indicated  
—  
—  
—  
—  
Inferred  
0.83  
1.36  
1.13  
0.04  
Total  
0.83  
1.36  
1.13  
0.04

**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Sadiola

Category

million

g/t

tonnes

Moz

FE3

Measured

–

–

–

–

Indicated

2.90

1.99

5.76

0.19

Inferred

0.18

2.88

0.52

0.02

Total

3.08

2.04

6.28

0.20

FE4

Measured

–

–

–

–

Indicated

1.16

2.18

2.53

0.08

Inferred

0.64

2.09

1.34

0.04

Total

1.80

2.14

3.87

0.12

FN2

Measured

—

—

—

—

Indicated

0.23

1.51

0.34

0.01

Inferred

0.28

4.01

1.12

0.04

Total

0.50

2.89

1.46

0.05

FN3

Measured

—

—

—

—

Indicated

0.04

1.71

0.07

0.00

Inferred

0.64

1.30

0.84

0.03

Total

0.69

1.32

0.91

0.03

Main pit (oxide)

Measured

0.03

1.97

0.06  
 0.00  
 Indicated  
 3.89  
 1.31  
 5.10  
 0.16  
 Inferred  
 0.38  
 1.21  
 0.46  
 0.01  
 Total  
 4.30  
 1.30  
 5.61  
 0.18  
 Main pit (transitional)  
 Measured  
 0.01  
 3.28  
 0.02  
 0.00  
 Indicated  
 1.34  
 1.92  
 2.59  
 0.08  
 Inferred  
 0.09  
 1.71  
 0.15  
 0.00  
 Total  
 1.44  
 1.92  
 2.76  
 0.09  
 Sadiola – total stockpiles  
 Measured  
 10.15  
 1.47  
 14.97  
 0.48  
 Indicated  
 –  
 –  
 –  
 –  
 Inferred  
 –



—  
—  
—  
Total  
10.15  
1.47  
14.97  
0.48  
Sekokoto  
Measured  
—  
—  
—  
—  
Indicated  
—  
—  
—  
—  
Inferred  
0.59  
1.50  
0.89  
0.03  
Total  
0.59  
1.50  
0.89  
0.03  
Tambali South  
Measured  
—  
—  
—  
—  
Indicated  
2.38  
1.30  
3.09  
0.10  
Inferred  
1.73  
1.53  
2.64  
0.08  
Total  
4.11  
1.39  
5.73  
0.18  
Sadiola

Total

66.97

1.74

116.80

3.76

**Continental Africa – Mali – Sadiola**

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**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Sadiola

Category

million

g/t

tonnes

Moz

Measured

4.64

0.75

3.46

0.11

Indicated

19.47

1.53

29.88

0.96

Inferred

20.32

1.77

36.06

1.16

Sadiola

Total

44.44

1.56

69.40

2.23

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**Sadiola – total mag intensity 2009 data**

**Continental Africa – Mali – Sadiola**

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**Exclusive Mineral Resource**

The Exclusive Mineral Resource for the Sadiola pits is the Mineral Resource that is outside the current Ore Reserve designs but inside the Mineral Resource shells. Any Inferred Mineral Resource within the design shells is also reported in the Exclusive Mineral Resource. Unless the gold price increases and the costs are favourable, only the Inferred Mineral Resource portion of the Mineral Resource within the LOM shell will be converted to the Ore Reserve through grade control drilling. FE3 has Inferred Mineral Resource in the published Mineral Resource and therefore the only possibility for converting the Exclusive Mineral Resource to the Proved Ore Reserve is through favourable gold price and cost changes. The FE3 pit has 27% of Inferred Mineral Resource within the design shell and FE4 has 86%. The FE3 Inferred Mineral Resource can be upgraded into Ore Reserve by normal grade control drilling. For FE4, infill drilling has been completed and the FE4 Mineral Resource model will be revised in the first quarter of 2010. Updating the models for FE4 may lead to an increase in Ore Reserve. For the Main Pit, the feasibility study of the DSP will be completed in the 4th quarter of 2010.

Sadiola: Ore Reserve reconciliation  
2008 vs 2009

Ounces (millions)

0.45  
2008  
-0.15  
Depletion  
0.00  
Model  
Change  
0.93  
New  
ounces  
from  
projects  
0.01  
Scope  
Change  
1.46  
2009  
-0.00  
Change in  
Economics  
0.22  
Other  
Sadiola: Mineral Resource reconciliation  
2008 vs 2009

Ounces (millions)

3.38

2008

-0.15

Depletion

0.08

Gold

price

0.00

Exploration

0.57

Metho-

dology

3.76

2009

0.29

Cost

-0.42

Other

Change

Change

0.00

1.00

2.00

2.00

4.50

4.00

3.50

2.50

3.00

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Sadiola

Category

million

g/t

tonnes

Moz

Deep sulphides (oxides)

Proved

–

–

–

–

Probable

1.51

1.45

2.20

0.07

Total

1.51

1.45

2.20

0.07

Deep sulphides (sulphides)

Proved

–

–

–

–

Probable

12.14

2.20

26.69

0.86

Total

12.14

2.20

26.69

0.86

FE3 Proved

–

-	
-	
-	
Probable	
1.73	
2.47	
4.27	
0.14	
Total	
1.73	
2.47	4.27
0.14	
FE4	
Proved	
-	
-	
-	
-	
Probable	
0.80	
2.46	
1.98	
0.06	
Total	
0.80	
2.46	
1.98	
0.06	
Main pit (oxide)	
Proved	
-	
-	
-	
-	
Probable	
0.01	
2.67	
0.04	
0.00	
Total	
0.01	
2.67	
0.04	
0.00	
Total stockpiles	
Proved	
4.10	
2.47	
10.14	
0.33	
Probable	

–  
 –  
 –  
 –  
 Total  
 4.10  
 2.47  
 10.14  
 0.33  
 Sadiola  
 Total  
 20.30  
 2.23  
 45.32  
 1.46

**Inferred Mineral Resource in pit optimisation**

The Inferred Mineral Resource was used in the pit optimisation process and 0.95Moz are present in the optimised pit, of which

0.23Moz are included in the final production schedule. This includes the DSP and satellite pits.

**Exploration**

The philosophy underpinning the future programme is that at mine closure, the full potential of the two leases will have been exploited.

The exploration strategy is twofold:

- there was a narrow window of opportunity of 18 months for a focused exploration programme on oxide material from March 2009 to July 2010 to fit into the current LOM estimate; and

- testing sulphide targets as a complementary strategy, aimed at adding soft sulphide ounces to the Sadiola plant and hard sulphide Mineral Resource to the DSP.

**Projects:**

There are currently two projects under consideration:

- The DSP is the most advanced, with a board-approved feasibility study due for completion in September 2010.

- Low-grade project: if costs can be decreased by up to 20%, it will allow the Sadiola plant to treat lower grade ore, with the result that the ore can be mined at a lower cut-off with a higher throughput.



**Continental Africa – Mali – Sadiola**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Mark Kenwright

AusIMM

302344

14 years

Ore Reserve

Karol Bartsch

AusIMM

107390

21 years

Sadiola – surface (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

5.00

Average grade

above cut-off (g/t)

2.00

3.00

4.00

0.0

150.0

50.0

100.0

125.0

75.0

25.0

1.00

0.5

7.5

5.5

3.5

6.5

4.5

2.5

1.5

Tonnes above cut-off

Ave grade above cut-off

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**Continental Africa – Mali – Yatela**

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**Mali – Yatela**

**Location**

Yatela mine is situated some 25km north of Sadiola and approximately 50km south-west of Kayes. The Yatela operation is

currently mining from two open pits, the Yatela main pit and the satellite Alamoutala pits. The Yatela main pit is currently mining

Pushback 7, toward the western end of the pit and the mine is approaching the end of its life.

Ore is processed through a 3.0Mtpa heap leach plant, commissioned in 2000. The pregnant liquor pond for gold recovery

uses the carbon in solution process. Loaded carbon is sent to Sadiola for elution, regeneration, electro-winning and smelting.

**Geology**

The Yatela deposit is located within the Malian portion of the Keniéba-Kedougou window, a major Early Proterozoic-Birimian

outlier along the north-east margin of the Kenema-Man shield.

The Yatela deposit is located in the north of the window and is hosted by sediments of the Kofi Formation, which have

been intruded by numerous felsic intrusives. The sediments consist of fine-grained greywacke, pelites that are locally carbon-rich,

and impure limestones with minor tuffs and acid volcanics.

The primary gold mineralisation at Yatela is associated with a sheared contact between predominantly dolomitic rocks of the

Kofi Formation to the west and a large, weakly mineralised, dioritic intrusion to the east. This primary mineralisation was

concentrated to economic grades through dissolution of carbonate-rich rocks by supergene processes. Karsting of carbonate

rocks has resulted in the development of deep, coalescent pot holes, collectively named the Yatela Basin, which were gradually filled by sandstones and conglomerates during peneplanation of the Proterozoic rocks. The chaotic collapse during

karsting, coupled with the infill sediments resulted in the orebody being hosted in a melange-type of rocks made up of sedimentary rocks and dissolution residues. Gold is disseminated in the unconsolidated ferruginous, sandy-clayed layer that

lines the bottom and walls of a deep trough with steep margins. The ore 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 karst forming process, is the most important geological feature

to the economics of the Yatela deposit.

In the Alamoutala pits, the gold mineralisation is mined from the saprolitised marbles and karstic rocks in the south, and from

weathered Birimian rocks to the north. The Alamoutala area is underlain by north-trending Birimian clastic metasediments and

calcitic marbles, which are intruded by a coarse grained granodiorite body. Gold mineralisation is found along an intermittently

sheared and fractured contact, named the Alamoutala Fracture Zone, between the metaclastics and the carbonate units.

These rocks have locally been strongly biotite- and feldspar-altered. High-grade gold mineralisation is also hosted in

magnetite-bearing, skarn-like calc-silicate rocks along the contact with the granodiorite intrusive.

**Exploration**

The key philosophy underpinning the programme is one of ‘no regrets’; at mine closure the full potential of the lease will have

had an opportunity to have been exploited. The exploration strategy has a narrow window of opportunity due to the limited

life of mine. An 18-month focused exploration programme, which started in March 2009, is currently underway, with the aim of:

- focusing on oxide targets;
- drill testing the gravity lows on top of marbles for Yatela-type deposits; and
- testing sulphide targets as a complementary strategy, aimed at adding soft sulphide ounces to the Sadiola plant and hard sulphide resources to the DSP.

**Continental Africa – Mali – Yatela**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Projects**

The ongoing exploration programme as well as possible partnerships with nearby lease holders may result in additional

Ore Reserves.

In August 2009, mining in the Yatela pit was suspended for a month due to geotechnical issues. In light of the mining suspension, the economics of reopening the Alamoutala pit were reviewed. The Alamoutala \$880/oz pit shell showed a

profitable return, and mining began during August. Additional drilling within and adjacent to the Alamoutala pit highlighted a

likely area south of the existing pit to continue mining to January 2010.

Additional drilling both within and south-east of the existing Yatela pit shows similar promise. Both areas were evaluated during

December and final decisions will be made in 2010.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Yatela

Category

million

g/t

tonnes

Moz

Alamoutala pit

Measured

0.04

1.03

0.04

0.00

Indicated

0.00

1.65

0.00

0.00

Inferred

0.00

1.00

0.00

0.00

Total

0.04

1.05

0.05

0.00  
 Main pit  
 Measured  
 0.18  
 1.97  
 0.35  
 0.01  
 Indicated  
 0.80  
 2.71  
 2.16  
 0.07  
 Inferred  
 0.19  
 3.10  
 0.57  
 0.02  
 Total  
 1.16  
 2.66  
 3.09  
 0.10  
 Total stockpiles  
 Measured  
 1.20  
 1.14  
 1.37  
 0.04  
 Indicated  
 –  
 –  
 –  
 –  
 Inferred  
 –  
 –  
 –  
 –  
 Total  
 1.20  
 1.14  
 1.37  
 0.04  
 Yatela  
 Total  
 2.41  
 1.85  
 4.50  
 0.14  
**Exclusive Mineral Resource**  
 as at 31 December 2009

Contained  
 Contained  
 Tonnes  
 Grade  
 gold  
 gold  
 Yatela  
 Category  
 million  
 g/t  
 tonnes  
 Moz  
 Measured  
 0.22  
 1.79  
 0.39  
 0.01  
 Indicated  
 0.80  
 2.71  
 2.17  
 0.07  
 Inferred  
 0.19  
 3.10  
 0.57  
 0.02  
 Yatela  
 Total  
 1.20  
 2.60  
 3.13  
 0.10

**Exclusive Mineral Resource**

The Exclusive Mineral Resource for Yatela is that Mineral Resource that falls outside the current LOM but inside the Mineral

Resource shells for the Yatela main and Alamoutala pits. Any Inferred Mineral Resource within the LOM shell is also considered

Exclusive. Currently, only the Inferred Mineral Resource within the LOM shell at the Yatela main pit is convertible to Ore Reserve

and this will be done through grade control drilling. In addition, the Yatela main pit will also be optimised in order to ensure

that all recoverable material is mined before the envisaged closure.

The Alamoutala Mineral Resource was depleted to the LOM shell in 2005. However, considering the increase in the gold price

since then, there is a realistic possibility that additional mining will be conducted here in 2010.

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Yatela

Category

million

g/t

tonnes

Moz

Total stockpiles

Proved

1.20

1.14

1.37

0.04

Probable

–

–

–

–

Yatela

Total

1.20

1.14

1.37

0.04

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Mark Kenwright

AusIMM

302344

14 years

Ore Reserve

Karol Bartsch

AusIMM



107390

21 years

Yatela: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

0.35

2008

-0.08

Depletion

0.01

Gold

price

0.00

Exploration

-0.02

Metho-  
dology

0.14

2009

0.00

Cost

0.00

-0.10

Other

0.15

0.30

Yatela: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

0.16

2008

-0.13

Depletion

0.00

Model

Change

0.00

New

ounces

from

projects

-0.02

Scope

Change

0.04

2009

0.02

Change in

Economics

0.00

0.01

Other  
0.20  
0.10  
Change  
Change  
Yatela – surface (metric)  
T  
Tonnes above cut-off  
of (millions)  
0.00  
Cut-off grade (g/t)  
5.00  
A  
Average grade above cut-off  
of (g/t)  
Tonnes above cut-off  
Average grade above cut-off  
2.0  
3.0  
4.0  
1.00  
0.0  
14.0  
6.0  
4.0  
2.0  
8.0  
10.0  
12.0  
0.0  
10.0  
4.0  
6.0  
8.0  
2.0

**Continental Africa – Tanzania**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Tanzania**

Geita is the largest of AngloGold Ashanti's seven open-pit mines in Africa. Prior to April 2004, Geita was managed under the joint venture agreement between Ashanti and AngloGold. Since the merger of the two companies, Geita is now a wholly-owned subsidiary.

**Mineral Resource estimation**

As with any estimation techniques the results are very dependent upon the data quality and availability. The geological model is a critical input to the Mineral Resource estimation process. The orebody boundaries for the individual deposits are defined from the detailed logging of all geological boreholes and after validation this information is used to create a three dimensional model. This model is subsequently populated with an appropriately dimensioned block model. The size of this block model is determined by analysing different block sizes in relation to the variance of the blocks. A block size which gives an optimal variance is then chosen. Ordinary kriging is used to interpolate values into the blocks. A geostatistical technique called uniform conditioning is then used to estimate the proportion of economic ore that occur above the Mineral Resource cut-off and this is reported according to the SMU.

**Mineral Resource and Ore Reserve gold price**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800

720

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Geita

Measured

—

—

—

—

Indicated

20 x 20, and

—

—

40 X 40m is the lower limit of the

40 x 40

—

—

Indicated category. Infill drilling at

20 X 20m is done to increase the

confidence in the Mineral Resource.

Inferred

50 x 50, and

—

—

50 x 80

—

—

Grade control 5 x 10

—

—

—

10 x 10

—

—

—

**Ore Reserve estimation**

The Mineral Resource models as produced by the geology department are used as the basis for the Ore Reserve.

Appropriate

mining dilution is used as a modifying factor in the Ore Reserve conversion process. Appropriate Ore Reserve cut-off

grades

are applied and optimised pit shells are generated taking into cognisance the economic parameters. The final pits are

then

designed taking into consideration the optimised pit shell and recommended slope geometry.

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**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

factor

lurgical

weighted

RRF

MRF

(MCF) recovery

Mine

g/t

%

%

%

%

Comments

Geita

Area 3 West

1.67

96

96

95

80.6

RRF and MRF grade factors shown;

(non-refractory ore)

tonnage factors – MRF 102%, RRF 102%

Area 3 West

2.33

96

96

95

58.7

As above

(refractory ore)

Chipaka

1.85

96

96

95

78.1

As above

Geita Hill (open pit)

1.39

100

90

95

81.1

RRF and MRF grade factors shown;  
tonnage factors – MRF 100%, RRF 110%

Kukuluma

1.76

96

96

95

75.2

RRF and MRF grade factors shown;  
(non-refractory ore)

tonnage factors – MRF 102%, RRF 102%

Kukuluma 3.09

96

96

95

46.2

As

above

(refractory ore)

Lone Cone

1.32

96

96

95

86.1

As above

Matandani 1.58

96

96

95

82.5

As

above

(non-refractory ore)

Matandani 2.44

96

96

95

57.8

As

above

(refractory ore)

Nyankanga

1.29

93

95

95

89.3

RRF and MRF grade factors shown;  
(open pit)

tonnage factors – MRF 101%, RRF 105%

Ridge 8 (open pit)

1.53

96

96

95

85.1

As above

Roberts

1.53

96

96

95

89.0

As above

Star and Comet

1.54

95

90

95

84.4

RRF and MRF grade factors shown;

tonnage factors – MRF 105%, RRF 110%

Stockpile

1.50

100

100

95

85.0

RRF and MRF grade factors shown;

tonnage factors – MRF 102%, RRF 102%

Stockpile (marginal ore)

0.80

100

100

95

85.0

Stockpile (refractory ore)

2.40

100

100

95

52.0

0

5km

**Geita – aeromagnetics 2009 total field**

**Continental Africa – Tanzania – Geita**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Tanzania – Geita**

**Location**

The Geita gold mine is located approximately 910km west of Dar es Salaam in the Lake Zone of northern Tanzania.

The

tenement is situated within the Sukumaland Greenstone Belt of the Lake Victoria goldfields which hosts other gold mines

including Golden Pride, Bulyanhulu, Tulawaka and North Mara. This geological terrain is considered to be one of the most

productive Archaean Greenstone Belts in East Africa. Mining at Geita is undertaken by standard open-pit mining methods.

**Geology**

The Geita Greenstone trend is a component of the Sukumaland Greenstone Belt; it strikes east-west, is 60km long and up to

15km wide. The terrain is made up of upper to mid-Nyanzian greenstone facies rocks, mainly clastic sediments, intermediate

to felsic volcanoclastics and Banded Iron Formation (BIF) that forms a sedimentary sequence up to 1,000m thick.

In the mine lease area, north-west trending deformation corridors separate the Geita Greenstone trend into three distinct

sub-terrains. Namely, Nyamulilima in the west (hosting the Star and Comet, Ridge 8, and Roberts deposits), Geita in the

central part (hosting the Nyankanga, Geita Hill, Lone Cone, and Chipaka deposits) and Kukuluma to the north-east (hosting

the Matandani, Kukuluma, and Area 3 West deposits). Approximately 83% of this Mineral Resource is situated in the Geita

Sub-Terrain, with 13% in the Nuyamulilima Sub-Terrain, and 4% in the Kukuluma Sub-Terrain.

Late dextral faults have utilised these corridors, reactivating the pre-existing fault systems. Gold mineralisation and hydrothermal alteration of the host lithologies, on all scales, is associated with late stage ductile to brittle-ductile deformation.

**Exploration**

As part of the risk mitigation strategy, securing Mineral Resource ounces for the period 2011 to 2013 is the primary focus of

Geita's exploration drilling programmes. To this end, infill drilling, leading to Mineral Resource model revisions in 2009, has

occurred at Star and Comet and Nyankanga Cuts 5 and 6. Infill drilling began at Nyankanga Cut 7 and Geita Hill Cut 1 in the

fourth quarter of 2009 and the Mineral Resource models for these deposits will be revised in the first quarter of 2010.



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The focus of the mine's regional exploration program in 2009 and 2010 is relatively low level work involving mostly ground geophysics, structural analysis, and preliminary drilling to follow up on the targets identified during the 2008 airborne geophysics surveys. The result of these surveys will be the development of drill targets for 2011 onward.

**Projects**

With approximately 58% of the Kukuluma Sub-Terrain Mineral Resource comprising refractory ore, currently not economically

treatable in the Geita treatment plant, a metallurgical project has been initiated to determine a treatment method for this

material. Success in this regard could significantly increase the potential of the Mineral Resource extension below the Kukuluma and Matandani open pits.

With 3.6Moz of Mineral Resource potentially exploitable by underground mining methods, Geita has begun an underground

mining project to convert this Mineral Resource to Ore Reserve. In 2009, the focus of this project has been the Nyankanga

underground area, which is the most economically viable. The strategy has been to evaluate the eastern, "near surface" portion

of the project area and investigate whether it would support a pilot underground mining implementation aimed at paying for

additional underground exploration development, proving up the predominantly Inferred underground Mineral Resource and

firming up on the eventual mining method to be employed. This project, known as "Block 1", has been shown to be economically viable and will be infilled in the first quarter of 2010 to increase the confidence in the current Mineral Resource

prior to implementation of the pilot study.

To facilitate the underground mining project, the mine has generated a 3D geological model of the Geita Trend that will

amalgamate structure and mineralogy so as to optimise the definition of underground Mineral Resource extensions. The

diamond drill core from the Nyankanga Cut 7 and Block 1 infill programmes will be used to enhance this model, which is

expected to be completed by the end of 2010.

0

150m

East section +50085.18

Plunge +05, Azimuth 112

**Nyankanga – east section**

**Continental Africa – Tanzania – Geita**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Geita

Category

million

g/t

tonnes

Moz

Area 3 West (oxide)

Measured

–

–

–

–

Indicated

0.86

2.45

2.10

0.07

Inferred

0.00

2.02

0.01

0.00

Total

0.86

2.45

2.10

0.07

Area 3 West (sulphide)

Measured

–

–

–

–

Indicated

0.08

3.22

0.27

0.01

Inferred

—  
—  
—  
—  
Total  
0.08  
3.22  
0.27  
0.01  
Chipaka  
Measured  
—  
—  
—  
—  
Indicated  
1.71  
2.69  
4.60  
0.15  
Inferred  
—  
—  
—  
—  
Total  
1.71  
2.69  
4.60  
0.15  
Geita Hill (open pit)  
Measured  
—  
—  
—  
—  
Indicated  
17.64  
2.88  
50.79  
1.63  
Inferred  
0.14  
2.64  
0.37  
0.01  
Total  
17.78  
2.88  
51.15  
1.64

Geita Hill (underground)

Measured

—  
—  
—  
—

Indicated

6.36  
4.90  
31.17  
1.00

Inferred

3.27  
5.19  
16.96  
0.55

Total

9.63  
5.00  
48.13  
1.55

Kalondwa hill

Measured

—  
—  
—  
—

Indicated

—  
—  
—  
—

Inferred

1.08  
3.69  
4.00  
0.13

Total

1.08  
3.69  
4.00  
0.13

Lone Cone

Measured

—  
—  
—  
—

Indicated

0.71  
2.59

1.84  
0.06  
Inferred  
0.24  
2.24  
0.54  
0.02  
Total  
0.95  
2.50  
2.38  
0.08  
Matandani (non-refractory ore)  
Measured  
—  
—  
—  
—  
Indicated  
1.23  
2.26  
2.77  
0.09  
Inferred  
0.00  
9.12  
0.03  
0.00  
Total  
1.23  
2.28  
2.80  
0.09  
Matandani (refractory ore)  
Measured  
—  
—  
—  
—  
Indicated  
1.69  
4.64  
7.85  
0.25  
Inferred  
0.05  
5.46  
0.27  
0.01  
Total  
1.74

4.66  
8.12  
0.26

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Geita

Category

million

g/t

tonnes

Moz

Nyankanga (open pit)

Measured

–

–

–

–

Indicated

30.35

4.05

122.93

3.95

Inferred

2.54

1.68

4.25

0.14

Total

32.89

3.87

127.18

4.09

Nyankanga (underground)

Measured

–

–

–

–

Indicated

6.62

5.28

34.96

1.12

Inferred

1.37

5.15  
7.05  
0.23  
Total  
7.99  
5.26  
42.01  
1.35  
Ridge 8 (open pit)  
Measured  
—  
—  
—  
—  
Indicated  
1.59  
2.12  
3.38  
0.11  
Inferred  
0.01  
1.23  
0.01  
0.00  
Total  
1.61  
2.11  
3.40  
0.11  
Ridge 8 (underground)  
Measured  
—  
—  
—  
—  
Indicated  
0.98  
4.97  
4.84  
0.16  
Inferred  
1.82  
6.04  
10.98  
0.35  
Total  
2.79  
5.67  
15.83  
0.51  
Roberts



Measured

—  
—  
—  
—

Indicated

6.62  
1.64  
10.84  
0.35

Inferred

0.30  
4.19  
1.27  
0.04

Total

6.93  
1.75  
12.11  
0.39

Star and Comet

Measured

—  
—  
—  
—

Indicated

3.72  
4.16  
15.47  
0.50

Inferred

2.19  
3.14  
6.88  
0.22

Total

5.92  
3.78  
22.35  
0.72

Stockpile (full grade ore)

Measured

—  
—  
—  
—

Indicated

1.67  
2.03  
3.38

0.11	
Inferred	
—	
—	
—	
—	
Total	
1.67	
2.03	
3.38	
0.11	
Stockpile (marginal ore)	
Measured	
—	
—	
—	
—	
Indicated	
4.62	
0.85	
3.94	
0.13	
Inferred	
—	
—	
—	
—	
Total	
4.62	
0.85	
3.94	
0.13	
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  
100.73  
3.54  
356.10  
11.45

**Continental Africa – Tanzania – Geita**

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**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Geita

Category

million

g/t

tonnes

Moz

Measured

–

–

–

–

Indicated

43.22

3.21

138.72

4.46

Inferred

13.03

4.04

52.63

1.69

Geita

Total

56.24

3.40

191.35

6.15

**Exclusive Mineral Resource**

The Exclusive Mineral Resource at Geita totals 6.15Moz and comprises predominantly Mineral Resource that occurs between

the Ore Reserve pit shell and the Mineral Resource pit shell. This material is sub economic to mine at the current Ore Reserve

gold price and forms potential extensions to the LOM in an elevated gold price environment. A significant portion of this

material is in the Inferred Mineral Resource category and infill drilling programs are planned to upgrade potentially economic

areas to Indicated Mineral Resource.

The Exclusive Mineral Resource forming part of the mine's business plan comprises approximately 0.5Moz from underground

extensions to the Nyankanga open pit and 0.067Moz from Inferred material located within 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 category of the Mineral Resource.

In instances where the orebody extends down dip, below the current LOM design pit shell and could potentially be 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.

**Inferred Mineral Resource in pit optimisation**

No Inferred Mineral Resource is included in the pit optimisation exercise. Although it does not contribute to the economic assessment of the optimised pit, because it is “switched-off” during the optimisation runs, it is present within the final pit shell as Exclusive Resource. The magnitude of this Inferred material is quantified below:

**Inferred material in \$800 pitshell**

Deposit

Gold (Moz)

Nyankanga

0.059

Geita Hill

0.005

Star and Comet

0.002

Area 3 West

0.000

Total

0.066

Geita: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

12.86

2008

-0.56

Depletion

0.03

Gold

price

0.17

Exploration

-0.72

Metho-

dology

11.45

2009

-0.32

Cost

10.00

-0.02  
Other  
11.00  
13.00  
12.00  
Geita: Ore Reserve reconciliation  
2008 vs 2009  
Ounces (millions)  
5.11  
2008  
-0.31  
Depletion  
0.53  
Model  
Change  
0.00  
New  
ounces  
from  
projects  
0.20  
Scope  
Change  
5.07  
2009  
-0.46  
Change in  
Economics  
4.00  
-0.02  
Other  
4.50  
5.50  
5.00  
Change  
Change

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Geita

Category

million

g/t

tonnes

Moz

Area 3 West (non-refractory ore)

Proved

–

–

–

–

Probable

0.48

2.40

1.15

0.04

Total

0.48

2.40

1.15

0.04

Geita Hill (open pit)

Proved

–

–

–

–

Probable

15.24

2.65

40.39

1.30

Total

15.24

2.65

40.39                      1.30

Nyankanga (open pit)

Proved

–

—  
—  
—  
Probable  
23.49  
4.07  
95.54  
3.07  
Total  
23.49  
4.07  
95.54  
3.07  
Ridge 8 (open pit)  
Proved

—  
—  
—  
—

Probable  
0.71  
2.55  
1.82  
0.06  
Total  
0.71  
2.55  
1.82  
0.06

Roberts  
Proved

—  
—  
—  
—

Probable  
2.26  
1.71  
3.88  
0.12  
Total  
2.26  
1.71  
3.88  
0.12

Star and Comet  
Proved

—  
—  
—  
—



Probable

2.50

4.17

10.44

0.34

Total

2.50

4.17

10.44

0.34

Stockpile (full grade ore)

Proved

—

—

—

—

Probable

1.67

2.03

3.38

0.11

Total

1.67

2.03

3.38

0.11

Stockpile (marginal ore)

Proved

—

—

—

—

Probable

1.00

0.96

0.97

0.03

Total

1.00

0.96

0.97

0.03

Geita

Total

47.36

3.33

157.57

5.07

**Competent persons**

Professional

Registration

Relevant  
 Category  
 Name  
 organisation  
 number  
 experience  
 Mineral Resource  
 Steven Robins  
 AusIMM  
 222533  
 14 years  
 Ore Reserve  
 Jasper Musadaidzwa  
 AusIMM  
 991333  
 12 years  
 Geita – surface (metric)  
 Tonnes above  
 cut-off (millions)  
 0.00  
 Cut-off grade (g/t)  
 3.00  
 Average grade  
 above cut-off (g/t)  
 Tonnes above cut-off  
 Ave grade above cut-off  
 1.50  
 2.00  
 2.50  
 0.50  
 0.0  
 80.0  
 60.0  
 40.0  
 20.0  
 1.00  
 2.0  
 16.0  
 4.0  
 6.0  
 8.0  
 10.0  
 12.0  
 14.0  
 Geita – underground (metric)  
 Tonnes above  
 cut-off (millions)  
 0.00  
 Cut-off grade (g/t)  
 9.00  
 Average grade above cut-off (g/t)

Tonnes above cut-off  
Ave grade above cut-off  
2.00  
1.00  
2.0  
14.0  
4.0  
6.0  
8.0  
10.0  
12.0  
3.00  
4.00  
5.00  
6.00  
7.00  
8.00  
0.0  
70.0  
60.0  
40.0  
20.0  
50.0  
30.0  
10.0

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**Australasia**

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Australasia

Darwin

Adelaide

Perth

Canberra

Sydney

Brisbane

Laverton

Kalgoorlie

Australia

**Sunrise Dam**

Mineral Resource 3.62Moz

Ore Reserve

1.73Moz

Melbourne

N

Operations

Advanced projects

**Tropicana**

Mineral Resource 3.51Moz

Ore Reserve

2.31Moz

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**Regional overview**

AngloGold Ashanti's sole operating asset in Australasia is Sunrise Dam. The group also has an extensive exploration programme under way in Australasia, the most advanced of which is Tropicana, the focus of the group's exploration activities

in Australasia. The Australasian operation produced 401,000oz of gold in 2009, equivalent to 9% of total group production.

The Mineral Resource in Australasia, attributable to AngloGold Ashanti, totalled 7.13Moz at year-end, including an attributable

Ore Reserve of 4.04Moz.

**Mineral Resources by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

Australasia

Measured

34.10

1.87

63.60

2.04

Indicated

38.83

2.88

111.97

3.60

Inferred

15.34

3.01

46.13

1.48

Total

88.26

2.51

221.69

7.13

**Ore Reserves by region (attributable)**

Contained

Contained

Tonnes

Grade

gold  
gold  
as at 31 December 2009  
Category  
million  
g/t  
tonnes  
Moz  
Australasia  
Proved  
23.63  
2.24  
53.00  
1.70  
Probable  
25.72  
2.82  
72.63  
2.34  
Total  
49.35  
2.55  
125.63  
4.04

**Australasia – Australia**

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**Australia**

The Australian assets were acquired at the end of 1999 and comprise Sunrise Dam gold mine and the Tropicana project.

AngloGold Ashanti owns 100% of Sunrise Dam gold mine. The Tropicana project is a joint venture with Independence

Group NL in which AngloGold Ashanti Australia Limited (AGAA) holds 70%. AngloGold Ashanti sold its 33.33% interest in

Boddington gold mine to joint venture partner Newmont Mining Corporation, with the sale completed in June 2009.

The Tropicana deposit represents a discovery in a new gold province in which the joint venture partners have a dominant land

position and 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 and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800/900\*

720

Exchange rate

US\$/A\$

0.80/0.85\*

0.80

\* *Tropicana*

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Tropicana

Measured

25 x 25

–

–  
Indicated  
50 x 50

–  
–  
Inferred  
100 x 100

–  
–  
Grade control –

–  
–  
–  
–

**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) and reflects the selectivity or SMU of the mining equipment that is intended to be used to recover the

Mineral Resource within the Ore Reserve pit design.

**Modifying factors**

The Ore Reserve cut-off grade for the Sunrise Dam open pit is based on a US\$800/oz gold price at an US\$/A\$ exchange rate

of 0.8, with an average metallurgical recovery of 85.5%.

The Ore Reserve cut-off grade for Sunrise Dam underground is based on a US\$800/oz gold price at an US\$/A\$ exchange

rate of 0.8, with an average metallurgical recovery of 85.5%.

The Ore Reserve cut-off grade for Tropicana is based on a US\$900/oz gold price at an US\$/A\$ exchange rate of 0.85, with

an average metallurgical recovery of 91.2%. The economic parameters used for Tropicana ore reserve estimation are sourced

from the Tropicana joint venture enhanced pre-feasibility study.



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**Ore Reserve modifying factors**

as at 31 December 2009

Metal-

Cut-off

Stoping

lurgical

weighted

width

Dilution

RRF

MRF recovery

Mine

g/t

cm

%

%

%

%

Comments

Sunrise Dam

Surface – North Wall

0.90

–

–

–

–

85.5

0.90g/t cut-off is used. Operationally

Cutback

1.2g/t is used. Therefore, 0.9 – 1.2g/t

ore is mixed with marginal ore to

ensure maximum plant throughput.

Surface – stockpile

0.90

–

–

–

–

85.5

0.9g/t cut-off grade is used, except

(open pit)

the LG10, which is excluded due

to negative cash flow

Underground

3.50

3,500

45

55

95

85.5

Several  
different  
stoping  
methods used

Tropicana

Surface

0.7

–

–

–

–

91.2

0.7g/t cut-off for oxide material  
and 0.8g/t cut-off for fresh  
material. Cut-offs are based on the  
economic parameters used in the  
Tropicana joint venture enhanced  
pre-feasibility study.

**Australasia – Australia – Sunrise Dam**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Australia – Sunrise Dam**

**Location**

Sunrise Dam lies some 220km north-north-east of Kalgoorlie and 55km south of Laverton in Western Australia. The mine, 100% owned by AngloGold Ashanti, comprises an open-pit operation and an underground mine. Mining is carried out by contractors and ore is treated in a conventional gravity and leach process plant. The mining of the open pit has reached its final depth and only a small north wall cutback is still in operation.

**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;
  - Stock work 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 palaeo-channels 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. In 2010, \$10 million will be spent on the initial stage of near-mine exploration with a strategy of growing the Mineral Resource base to 20Mt by December 2011, whilst ensuring that Sunrise Dam can always deliver on its business promises. This is achievable with a secure tenement holding, comprising in excess of 200km<sup>2</sup> within the central Laverton Greenstone Belt and high-quality targets immediately proximal to and below the mine area. In addition to projects within the AGAA-owned tenure, strategic joint ventures continue to be developed. These opportunities,

coupled with world-class, cutting-edge geological research and development initiatives, support a well-developed strategy that will provide the best opportunity to successfully develop a strong and diverse project portfolio.

50,050m

50,300m

50,550m

50,800m

2,400m

2,300m

2,200m

2,100m

2,000m

1,900m

1,800m

1,700m

Sunrise Dam Gold Mine - section 100,500m N

Non-stratified monomictic

Breccia hyaloclastite

Stratified monomictic breccia

(resedimented hyaloclastite)

Polymictic-monomictic

conglomerate

Sandstone - siltstone

Siltstone

Magnetite shale (BIF)

Schist

Shear

Fault

Pit

**Legend**

Lake clay

Saprolite

Undifferentiated

Quartz-feldspar rhyolite

Coarsely

quartz-phyric rhyolite

Quartz diorite

Diorite / Dolerite

Basalt

Basaltic andesite

Andesite

**Sunrise Dam gold mine – section 100,500m N**

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**Projects**

The underground project seeks to delineate the deep Mineral Resource below the mine area. The extensions of the current orebodies can be traced to depths in excess of 1.2km vertical and extend over a strike length of 2.5km. This, in addition to the satellite underground and open pit opportunities, forms the framework for the LOM at Sunrise Dam.

**Mineral Resource Estimation**

Open-pit estimates are generated using a geostatistical method called multiple indicator kriging. All available geological drillhole information is validated for use in the models and the local geology of the orebody is used to classify the drillhole information into appropriate geostatistical 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 then they are cut back to the appropriate upper limit of the population. Estimation of the underground Mineral Resource uses the geological model boundaries to subdivide all drillhole 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 the upper limit of the population. A geostatistical method called ordinary kriging is used to produce estimates of a pre-determined block size. These block sizes are 10m x 10m and 20m x 20m. The geostatistical technique of conditional simulation has been used to estimate the Cosmo ore zone.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Sunrise Dam

Category

million

g/t

tonnes

Moz

Golden Delicious

Measured

–

–

–

–

Indicated

1.04

1.84

1.91

0.06  
Inferred  
2.64  
1.64  
4.33  
0.14  
Total  
3.68  
1.70  
6.24  
0.20  
North Wall Cutback  
Measured  
1.68  
3.44  
5.77  
0.19  
Indicated  
1.22  
2.66  
3.25  
0.10  
Inferred  
—  
—  
—  
—  
Total  
2.90  
3.11  
9.02  
0.29  
Stockpile (open pit)  
Measured  
15.46  
1.20  
18.60  
0.60  
Indicated  
—  
—  
—  
—  
Inferred  
—  
—  
—  
—  
Total  
15.46  
1.20

18.60

0.60

Stockpile (underground)

Measured

0.04

4.03

0.16

0.01

Indicated

—

—

—

—

Inferred

—

—

—

—

Total

0.04

4.03

0.16

0.01

Underground

Measured

—

—

—

—

Indicated

8.71

5.82

50.68

1.63

Inferred

4.78

5.82

27.85

0.90

Total

13.50

5.82

78.52

2.52

Sunrise Dam

Total

35.58

3.16

112.53

3.62

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Sunrise Dam

Category

million

g/t

tonnes

Moz

Measured

0.10

0.82

0.09

0.00

Indicated

1.68

10.86

18.24

0.59

Inferred

7.43

4.33

32.18

1.03

Sunrise Dam

Total

9.21

5.48

50.51

1.62

**Exclusive Mineral Resource**

The Exclusive Mineral Resource includes Inferred Mineral Resource and low-grade stockpiles that do not currently meet the

Ore Reserve cut-off grade requirements.

**Ore Reserve**

Contained

Contained

Tonnes

Grade

gold

gold

Sunrise Dam

Category

million

g/t

tonnes



Moz  
 North Wall Cutback  
 Proved  
 1.58  
 3.61  
 5.68  
 0.18  
 Probable  
 1.10  
 2.76  
 3.03  
 0.10  
 Total  
 2.68  
 3.26  
 8.72  
 0.28  
 Stockpile (open pit)  
 Proved  
 6.70  
 1.54  
 10.32  
 0.33  
 Probable  
 –  
 –  
 –  
 –  
 Total  
 6.70  
 1.54  
 10.32  
 0.33  
 Stockpile (underground)  
 Proved  
 0.04  
 4.03  
 0.16  
 0.01  
 Probable  
 –  
 –  
 –  
 –  
 Total  
 0.04  
 4.03  
 0.16  
 0.01  
 Underground  
 Proved

–  
 –  
 –  
 –  
 Probable  
 8.19  
 4.22  
 34.55  
 1.11  
 Total 8.19  
 4.22  
 34.55  
 1.11  
 Sunrise Dam  
 Total  
 17.60  
 3.05  
 53.75  
 1.73

**Inferred Mineral Resource in pit optimisation**

Inferred material is included in the pit optimisation, but makes up only a small proportion (~13%) of the total Mineral Resource

ounces. Further drilling will increase the confidence in the estimation of this material with a view to bring the material into the

Ore Reserve in the near future.

**Australasia – Australia – Sunrise Dam**

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Sunrise Dam: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

1.90

2008

-0.45

Depletion

0.13

Model

Change

0.00

New

ounces

from

projects

0.15

Scope

Change

1.73

2009

0.01

Change in

Economics

1.00

0.00

Other

1.50

2.00

Sunrise Dam: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

3.85

2008

-0.48

Depletion

0.06

Gold

price

0.27

Exploration

-0.00

Metho-

dology

3.62

2009

0.00

Cost

3.00

-0.08

Other

4.00

3.50

Change

Change

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**Competent persons**

Professional

Registration

Relevant

Category

Type

Name

organisation

number

experience

Surface

Mineral Resource

James Biggam

AusIMM

112082

16 years

Ore Reserve

Salih Ramazan

AusIMM

22870

8 years

Underground

Mineral Resource

James Biggam

AusIMM

112082

16 years

Ore Reserve

Andrew Gasmier

AusIMM

211557

14 years

Sunrise Dam – surface (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

0.00

5.00

2.00

1.00

3.00

4.00

0.0

14.0

12.0  
8.0  
6.0  
10.0  
4.0  
2.0  
0.0  
8.0  
10.0  
6.0  
2.0  
4.0  
Sunrise Dam – underground (metric)  
Tonnes above  
cut-off (millions)  
0.00  
Cut-off grade (g/t)  
16.00  
Average grade above cut-off (g/t)  
Tonnes above cut-off  
Ave grade above cut-off  
8.00  
10.00  
12.00  
6.00  
14.00  
5.0  
10.0  
25.0  
15.0  
20.0  
4.00  
2.00  
0.0  
4.0  
2.0  
14.0  
6.0  
10.0  
12.0  
8.0

**Australasia – Australia – Tropicana**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Australia – Tropicana**

**Location**

The Tropicana gold project is located 330km east north-east of Kalgoorlie, Western Australia. The mineral deposit is hosted

in tectonically-reworked Archaean rocks that form 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 and Havana deposits define a north-east trending mineralised corridor ~1.2km wide and ~5km long

that has been tested to vertical depth of 400m. The Mineral Resource remains open down-dip for both the Tropicana and

Havana deposits, and along strike to the north of the Tropicana deposit and south of the Havana deposit. Neither the immediate metamorphic host rocks nor mineralised zones are exposed at surface due to the presence of widespread cover

sequences (0.5–15m thick).

**Geology**

The Tropicana deposit comprises one main ore zone (2-50m thick) and subordinate thin (3-5m), discontinuous mineralised

lenses that typically return intercepts <0.5g/t gold. The Havana deposit comprises a lower, laterally continuous higher-grade

lode (2-50m thick) that is overlain, in central and southern parts of the proposed pit, by stacked, typically lower-grade and

thinner (5-25m) ore zones dominantly hosted in quartzo-feldspathic gneiss.

Models of the mineralised envelope (>

– 0.3g/t) define a wavy, asymmetric foliation that is broadly sub-parallel to dominantly east

to south-east dipping gneissic banding and local stratigraphic divisions. The foliation is deflected approaching discrete high-

strain sericite-biotite-chlorite±graphite shears that are anomalous in gold. Three distinct structural domains can be identified:

Tropicana, Havana North and Havana South. The northern margin of the Tropicana domain is defined by the east-northeast-

striking and southerly-dipping Boston Shaker Shear Zone. The Tropicana and Havana domains are separated by north-east

to east-striking, variably-dipping structural discontinuities defined by the Muddler, Swizzler and Cobbler Shears. At Havana,

the boundary between the northern and southern structural domains is coincident with an east-west-striking steep fault (Don

Lino Shear).

N

0

100km

**Australia**

Rawlinna

Tropicana JV granted tenure

and tenement applications

Tropicana gold project

Road

Track

Railway line

NB: Tenements Current as at 16/01/2009

Menzies

Pinjin

Leonora

Laverton

Kalgoorlie-Boulder

Kalgoorlie

Tropicana JV

Perth

Western

Australia

0

500km

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In detail, single lodes comprise multiple stacked higher-grade ( $> 3\text{g/t}$ ) lenses within a lower grade ( $> 0.3\text{g/t}$ ) envelope. Single high-grade lenses and their medium grade halos locally converge to form thicker, composite mineralised zones. The geometry is interpreted as a linked shear system that in drill core manifests as discontinuous biotite-pyrite shears which are developed on a mm to cm scale. Sulphides within the ore zones are dominated by pyrite (2-8%,  $< 0.2\text{mm}$ ) with accessory pyrrhotite, chalcopyrite, electrum and telluride minerals, and trace minerals including, but not limited to, sphalerite, galena and bornite. Free gold occurs as fine-grained (typically 10-30 microns) inclusions within pyrite and less commonly along biotite-sericite fractures cutting silicate minerals. Mineralisation was strongly influenced by the character of precursor metamorphic facies at scales ranging from single grains and crystal-clusters (mm to cm scale) to preferential concentration of gold in rheologically and/or chemically favourable K-feldspar-rich facies of the quartzo-feldspathic gneiss association (deposit scale). Gold mineralisation is temporally related to shear planes that post-date the main gneissic fabric developed during peak (granulite facies) metamorphism. Permeability created during brittle fragmentation was accompanied by synchronous partitioning of strain into pervasively biotite-sericite-pyrite-altered dissolution and shear planes that envelop more competent lithons. Sulphide and gold mineralisation formed from higher temperature ( $> 350^\circ\text{C}$ ) silica-undersaturated fluids that were buffered by the wall rock at variable oxidation states.

### Exploration

The Tropicana joint venture has assembled a dominant land-holding within an emerging greenfields belt. Maximising the value of the known Mineral Resource and capitalising on the strategic ground holding is dependent on timely application of exploration expenditure. Progressive focusing of expenditure in tenure shown to be more prospective and relinquishment of less prospective parts of the portfolio will heighten the probability of discovery. This approach will best be achieved through sustained investment in systematic exploration. Capitalising on the joint venture first mover advantage is dependent on systematic exploration of regional targets ( $> 60\text{km}$  from Tropicana), near resource targets ( $< 60\text{km}$ ), and extensions of the known Mineral Resource that may form part of an 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 2010 can be summarised as:

- defining additional higher value ounces to maximise the value of the Tropicana gold project;
- identifying the potential scale of the underground Mineral Resource at Tropicana and Havana that can complement conceptual open-pit mining and extend the conceptual mine life; and
-



progressing exploration in the wider Tropicana Belt to leverage the value that may be unlocked at a province scale with the objective of making further greenfield discoveries.

**Projects**

The Tropicana gold project is currently the focus of a bankable feasibility study into the viability of open-pit mining. The study is due for completion in the second half of 2010.

**Mineral Resource estimation**

The geostatistical method of uniform conditioning is used to estimate the Mineral Resource. All available geological drillhole information is validated for use in the models and the local geology of the orebody is used to classify the drillhole information into appropriate geostatistical 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, then they are cut back to the appropriate upper limit of the population. Mineral Resource has been reported above a marginal (break-even) cut-off grade of 0.6g/t for oxide and transitional material and 0.7g/t for fresh material, within a US\$1,000 optimisation at an US\$/A\$ exchange rate of 0.8.

**Australasia – Australia – Tropicana**

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Tropicana

Category

million

g/t

tonnes

Moz

Surface

Measured

16.91

2.31

39.07

1.26

Indicated

27.86

2.02

56.14

1.80

Inferred

7.91

1.76

13.95

0.45

Total

52.68

2.07

109.16

3.51

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Tropicana

Category

million

g/t

tonnes  
Moz  
Measured  
1.60  
1.40  
2.24  
0.07  
Indicated  
11.43  
1.85  
21.10  
0.68  
Inferred  
7.91  
1.76  
13.95  
0.45  
Tropicana  
Total  
20.94  
1.78  
37.28  
1.20

**Exclusive Mineral Resource**

The Exclusive Resource consists of a small amount of Inferred material within the Tropicana joint venture. Enhanced pre-feasibility study pit designs have been generated at depth in the Havana pit and in Havana South. Further drilling will increase

the confidence in the estimation of this material with a view to bring the material into the Ore Reserve in the near future.

SAPRK

A

B

I

SW (local)

TFRC100

TFRC807

NE (local)

Gamet

Gneiss

Boston Shaker

Shear

Longitudinal section of Tropicana

Surface

0

70m

**Legend**

3gt

1gt

0.5gt

Schist

Gamet gnessis

**Longitudinal section of Tropicana**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Tropicana

Category

million

g/t

tonnes

Moz

Surface

Proved

15.31

2.41

36.84

1.18

Probable

16.43

2.13

35.04

1.13

Total

31.74

2.26

71.88

2.31

**Inferred Mineral Resource in pit optimisation**

Inferred material is included in the pit optimisation, but makes up only a small proportion (~15%) of the total Mineral Resource

ounces. Further drilling will increase the confidence in the estimation of this material with a view to bring the material into the

Ore Reserve in the near future.

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Mark Kent

AusIMM

203631  
 12 years  
 Ore Reserve  
 Marek Janas  
 AusIMM  
 210148  
 18 years  
 Tropicana – surface (metric)  
 Tonnes above  
 cut-off (millions)  
 Cut-off grade (g/t)  
 Average grade  
 above cut-off (g/t)  
 Tonnes above cut-off  
 Ave grade above cut-off  
 15.0  
 65.0  
 55.0  
 35.0  
 25.0  
 45.0  
 1.5  
 3.5  
 4.0  
 3.0  
 2.0  
 2.5  
 0.00  
 2.00  
 0.75  
 0.50  
 1.00  
 1.75  
 1.25  
 Tropicana: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 0.00  
 2008  
 0.00  
 Depletion  
 0.00  
 Model  
 Change  
 2.31  
 New  
 ounces  
 from  
 projects  
 0.00  
 Scope

Change

2.31

2009

0.00

Change in

Economics

0.00

0.00

Other

1.50

3.00

Tropicana: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

3.51

2008

0.00

Depletion

0.00

Gold

price

0.00

Exploration

0.00

Metho-

dology

3.51

2009

0.00

Cost

2.00

0.00

Other

3.50

2.50

3.00

Change

Change

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**North America**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

North America

N

N

Philadelphia

Chicago

Los Angeles

San Francisco

Washington DC

United States

CC&V

Mineral Resource

13.74Moz

Ore Reserve

4.29Moz

New York

Operations

Denver



**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Regional overview**

AngloGold Ashanti has one mining operation in North America, Cripple Creek & Victor (CC&V) in the state of Colorado in the

United States. In 2009, CC&V produced 218,000oz of gold, equivalent to 5% of group production.

The Mineral Resource in North America attributable to AngloGold Ashanti totalled 13.74Moz at year-end, and attributable Ore

Reserve, 4.29Moz.

**Mineral Resource by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

North America

Measured

280.80

0.82

231.03

7.43

Indicated

194.55

0.73

142.71

4.59

Inferred

73.12

0.73

53.58

1.72

Total

548.46

0.78

427.31

13.74

**Ore Reserve by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

North America

Proved

99.82

0.92

92.29

2.97

Probable

46.40

0.89

41.17

1.32

Total

146.22

0.91

133.47

4.29

**North America – United States**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**United States**

**Regional overview**

In March 1999 AngloGold Ashanti acquired the Pikes Peak Mining Company, and interests in the Cripple Creek & Victor Gold

Mining Company (CC&V) and the Jerritt Canyon joint ventures. Due to the merger of Golden Cycle Gold Corporation into a

wholly-owned subsidiary of AngloGold Ashanti effective July 1, 2008, CC&V became an indirect, wholly-owned joint venture

of AngloGold Ashanti Limited.

CC&V currently controls over 85% of the patented claims within the district and 100% of the land within the 2009 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. Modelling software is MineSight

®

and updated drillhole information is used throughout. The drillhole

database is thoroughly reviewed before each Mineral Resource estimation and the estimation domains are based on lithology

and structural domains for each deposit.

**Mineral Resource and Ore Reserve gold price**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800

720

**Mineral Resources (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold  
 gold  
 United States  
 Category  
 million  
 g/t  
 tonnes  
 Moz  
 CC&V  
 Measured  
 280.80  
 0.82  
 231.03  
 7.43  
 Indicated  
 194.55  
 0.73  
 142.71  
 4.59  
 Inferred  
 73.12  
 0.73  
 53.58  
 1.72  
 Total  
 548.46  
 1.78  
 427.31  
 13.74

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling  
 Mine/  
 Spacing  
 Diamond  
 RC  
 Blast-  
 Other  
 Comments  
 Project  
 Category  
 m (- x -)  
 hole  
 CC&V  
 Measured  
 30 x 30  
 -  
 -  
 Indicated  
 45 x 45  
 -  
 -

Inferred

75 x 75

—

—

Grade control 5 x 6

—

—

—

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**Ore Reserve estimation**

The Ore Reserve pit designs were based on 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 10.7m (35 feet) bench height except the South Cresson which utilises 6.1m (20 feet).

**Inferred Mineral Resource in business plan**

Inferred Mineral Resource is not used in the pit optimisation.

**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

United States

Category

million

g/t

tonnes

Moz

CC&V

Proved

99.82

0.92

92.29

2.97

Probable

46.40

0.89

41.17

1.32

Total

146.22

0.91

133.47

4.29

**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

Stoping

factor  
lurgical  
weighted  
width  
Dilution  
RRF  
MRF  
(MCF) recovery

Mine

g/t

cm

%

%

%

%

%

CC&V

Cresson

0.16

-

-

-

-

-

-

Globe Hill

0.16

-

-

-

-

-

South Cresson

0.16

-

-

-

-

-

Wild Horse Extension

0.16

-

-

-

-

-

-

**North America – United States – CC&V**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**United States – CC&V**

**Background**

CC&V is located south-west of Colorado Springs in the state of Colorado in the United States. Large-scale surface mining began in 1991 and grew with the start of production at the CC&V Cresson project in 1994. Today, CC&V is a low-grade, open-pit operation. The ore is treated using a valley leach facility (VLF) with activated carbon used to recover the gold. The resulting doré buttons are shipped to a refinery for final processing.

**Geology**

The mining district is located between the towns of Cripple Creek and Victor. The dominant geological feature is a Tertiary-aged, diatreme intrusive complex 6.4km long and 3.2km wide. The diatreme-intrusive complex is hosted in Precambrian age rocks including biotite gneiss, granodiorite, quartz monzonite and granite. The diatreme is primarily composed of highly variable breccias and volcanoclastics that have been intruded by stocks, dykes, sills and discordant breccias. These rocks, primarily phonolitic in composition, were followed by late lamprophyre dikes and breccia pipes. The host rocks have undergone a complex history of structural deformation and hydrothermal activity and alteration. Gold mineralisation post-dates volcanic activity, and is hosted in all rock types as veins and disseminated and/or structurally-controlled orebodies. The gold mineralisation has been dated between 27.8 and 26.6Ma. District structures are generally near vertical and strike north-north-west to north-east. These structures commonly controlled the intrusions and acted as primary conduits for late-stage, gold mineralising solutions. Higher grade pods of mineralisation occur at structural intersections and/or as sheeted veins along zones of strike deflection. High-grade gold mineralisation is also associated with K-feldspar + pyrite +/- carbonate alteration and occurs adjacent to the major structural and intrusive dyke zones. The broader zones of disseminated mineralisation occur primarily as micro-fracture halos around the stronger alteration zones in the more permeable Cripple Creek breccia wall rocks. The average depth of oxidation is 120m and is also developed along major structural zones to even greater depths. Individual orebodies can be tabular, pipe-like, irregular or massive. Individual gold particles are generally less than 20 microns in size. Gold occurs as native gold with pyrite, native gold and gold-silver tellurides. In the oxide zone, gold occurs with hydrous iron and manganese oxides. Silver is present but is economically unimportant. Iron and manganese oxides, pyrite, K-feldspar alteration and quartz can encapsulate gold mineralisation locally.



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**Mine life extension project**

CC&V has implemented a mine life extension (MLE) project that extends the LOM. The MLE mining area utilises a lower cut-off grade from four of the design pits (Cresson, South Cresson, Wild Horse Extension and Globe Hill) to generate the ore tonnage needed. Processing and recovery of the additional gold will be completed through a phase 5 extension of the existing VLF. Overburden resulting from mining in these extension areas will be placed into portions of the existing main Cresson mine, east Cresson mine, and north Cresson mine as mine backfill or placed for storage in the existing Squaw Gulch Overburden storage area. Approximately 113Mt of additional ore and 231Mt of additional overburden will be mined within the proposed MLE areas for a total of 344Mt over the additional five years of mining in the MLE area. The ore will be crushed and processed using the existing crushing and conveying facilities. Ore will be processed on the existing VLF and the phase 5 extension, and recovered in the existing process facility.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

CC&V

Category

million

g/t

tonnes

Moz

Cresson

Measured

280.80

0.82

231.03

7.43

Indicated

194.55

0.73

142.71

4.59

Inferred

73.12

0.73

53.58

1.72

CC&V

Total

548.46

0.78

427.31

13.74

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

CC&V

Category

million

g/t

tonnes

Moz

Measured

180.98

0.77

138.73

4.46

Indicated

148.15

0.69

101.53

3.26

Inferred

68.65

0.74

50.77

1.63

CC&V

Total

397.78

0.73

291.04

9.36

**North America – United States – CC&V**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Exclusive Mineral Resource**

The Exclusive Mineral Resource at CC&V lies peripheral to, and along, mineralised strike extensions in the current pit designs.

None of this material was brought into the Ore Reserve during 2009 as CC&V is currently engaged in a MLE pre-feasibility

study. The study will be completed during 2010 and a portion of the material is then expected to be brought into the Ore

Reserve in 2010.

**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

CC&V

Category

million

g/t

tonnes

Moz

Cresson

Proved

62.36

0.88

55.16

1.77

Probable

29.55

0.88

26.04

0.84

Total

91.91

0.88

81.20

2.61

Globe Hill

Proved

7.40

0.47

3.45

0.11

Probable

4.46

0.45

2.02  
 0.06  
 Total  
 11.86  
 0.46  
 5.47  
 0.18  
 South Cresson  
 Proved  
 12.28  
 0.85  
 10.40  
 0.33  
 Probable  
 2.48  
 0.89  
 2.21  
 0.07  
 Total  
 14.77  
 0.85  
 12.62  
 0.41  
 Wild Horse Extension  
 Proved  
 17.77  
 1.31  
 23.28  
 0.75  
 Probable  
 9.91  
 1.10  
 10.91  
 0.35  
 Total  
 27.68  
 1.23  
 34.18  
 1.10  
 CC&V  
 Total  
 146.22  
 0.91  
 133.47  
 4.29  
 CC&V: Mineral Resource reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 13.31  
 2008  
 -0.31

Depletion  
 2.07  
 Gold  
 price  
 0.60  
 Exploration  
 -1.44  
 Metho-  
 dology  
 13.74  
 2009  
 -0.49  
 Cost  
 11.00  
 0.00  
 Other  
 12.50  
 15.50  
 14.00  
 CC&V: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 4.93  
 2008  
 -0.30  
 Depletion  
 -0.02  
 Model  
 Change  
 0.00  
 New  
 ounces  
 from  
 projects  
 -0.32  
 Scope  
 Change  
 4.29  
 2009  
 0.00  
 Change in  
 Economics  
 3.00  
 0.00  
 Other  
 4.50  
 5.00  
 4.00  
 3.50  
 Change  
 Change

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Tim Brown

AusIMM

226857

24 years

Ore Reserve

Jesse Gage

SME

1094700

23 years

CC&V – surface (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

A

verage grade above cut-of

f (g/t)

Tonnes above cut-off

Ave grade above cut-off

0.0

300.0

250.0

200.0

150.0

100.0

50.0

0.25

1.75

1.25

1.00

0.75

0.50

1.50

1.0

4.0

5.0

6.0

3.0

2.0

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**South America**

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South America

**Colombia**

La Colosa

Mineral Resource

12.32Moz

Quebradona

Gramalote

Mineral Resource

1.04Moz

Operations

Exploration

New exploration

**Brazil**

Serra Grande (50%)

Mineral Resource

1.03Moz

Ore Reserve

0.35Moz

Brasil Mineração

Mineral Resource

10.88Moz

Ore Reserve

2.18Moz

**Argentina**

Cerro Vanguardia (92.5%)

Mineral Resource

3.88Moz

Ore Reserve

1.88Moz

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Regional overview**

AngloGold Ashanti has three operations in South America – Cerro Vanguardia in Argentina, and AngloGold Ashanti Brasil

Mineração (Brasil Mineração) and Serra Grande in Brazil. Combined, these operations produced 598,000oz of gold in 2009,

equivalent to 13% of group production and 6% more than in 2008. In addition, AngloGold Ashanti has had an active exploration programme in Colombia for some years, with the most favourable of the prospects being in the La Colosa district.

The exploration programmes in Argentina and Brazil were recently expanded.

The Mineral Resource in South America attributable to AngloGold Ashanti, including the Colombia Mineral Resource, totalled

29.16Moz at year-end, and the attributable Ore Reserve, 4.41Moz.

**Mineral Resource estimation**

The Mineral Resource estimates are computed using the relevant computer modules of Datamine

®

software package. The

geological model is a critical part of the Mineral Resource estimation process. The orebody boundaries for each geological

entity (veins, stock work, wall rock) are defined from the detailed logging of all geological boreholes and after validation this

information is used to create a three dimensional model. This model is subsequently overlain with a 5 x 25 x 5m (X by Y by Z)

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 orebody are subsequently computed in the system using the relevant block dimensions.

Ordinary kriging is used to perform the grade interpolation. Field tests are conducted to determine appropriate in-situ densities.

Stochastic simulations are performed in the main orebodies for uncertainty assessment and the Mineral Resource is then

classified into the Measured, Inferred and Indicated categories according to stringent rules.

**Mineral Resource by region (attributable)**

Contained

Contained

Tonnes

Grade

gold

gold

as at 31 December 2009

Category

million

g/t

tonnes

Moz

South America

Measured

23.24

4.06



94.30  
 3.03  
 Indicated  
 53.02  
 3.43  
 182.08  
 5.85  
 Inferred  
 439.19  
 1.44  
 630.56  
 20.27  
 Total  
 515.46  
 1.76  
 906.94  
 29.16

**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. For the reserve optimisation, Whittle<sup>®</sup> software was used and Datamine<sup>®</sup> software was utilised to design the pits.

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. Mining is distributed between multiple operating pits, typically three to five at any one time; depending on the plant feed requirements. 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. The average stripping ratio for the remaining 10 years of mine life is 23:1.

**Ore Reserve by region (attributable)**

Contained  
 Contained  
 Tonnes  
 Grade  
 gold  
 gold  
 as at 31 December 2009  
 Category  
 million

g/t  
tonnes  
Moz  
South America  
Proved  
17.43  
3.11  
54.15  
1.74  
Probable  
16.94  
4.89  
82.87  
2.66  
Total  
34.37  
3.99  
137.02  
4.41

**South America – Argentina**

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**Argentina**

**Regional 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 and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

750

720

Exchange rate

ARS/US\$

3.80

3.10

**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Cerro

Measured

12.5 x 12.5

–

–

Vanguardia

Indicated

40 x 40

–

–

Inferred

80 x 80

—  
—  
Grade control 5 x 10

—  
—  
**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

factor

lurgical

weighted

Dilution

MRF

(MCF) recovery

Mine

g/t

%

%

%

%

Comments

Cerro Vanguardia

Heap Leach

0.35

—

—

100

—

Stockpile

(full grade ore)

—

—

—

—

—

Vein Mineral Resource

2.35

49

100

93

94.99

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**South America – Argentina – Cerro Vanguardia**

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**Argentina – Cerro Vanguardia**

**Location**

The Cerro Vanguardia property is located in the Santa Cruz Province, southern Argentina, approximately 120km north-north-

west of San Julián, and 195km west-south-west of Puerto Deseado. Access to the area is by plane from Buenos Aires to

Comodoro Rivadavia (Chubut), or Río Gallegos (Santa Cruz), and subsequently by road to the mine site. The mine is approximately 650km from Comodoro Rivadavia and 540km from Río Gallegos.

..

/

4644000

2550000

2520000

2540000

2560000

2580000

CVSA Geological Map

2550000

2520000

2540000

2560000

2580000

4642000

4640000

4638000

4636000

4634000

4632000

4644000

4642000

4640000

4638000

4636000

4634000

4632000

Cerro Vanguardia

Planta

0

2km

Scale

0.5

1

1:50,000

**Legend**

Plant

Veins

Cerro Vanguardia

Main road

Road

Tips

Pits

**Geology**

0

Angelita Basalt

La Avenida FM

Monte Leon FM

MLG4

MLF3

MLG3

MLF2

MLG2

MLF1

MLG1

Breccia / Estratificada Superior

Granite

**Cerro Vanguardia geological map**

**South America – Argentina – Cerro Vanguardia**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Geology**

Cerro Vanguardia is located in the central portion of the 60,000km

2

Deseado Massif, the most extensive morphological and

stratigraphical unit in southern Argentina. The Deseado Massif consists of Palaeozoic low-grade metamorphic basement

rocks, unconformably overlain by a thick sequence of Lower to Upper Jurassic volcanic and volcanoclastic rocks of intermediary and acidic composition. These older rocks are exposed in erosional windows through overlying

Cretaceous

sediments and Tertiary to Quaternary basalts.

The oldest rocks in this part of Patagonia are of Precambrian-Cambrian age which are overlain by Permian and Triassic

continental clastic rocks which have been faulted into a series of horst and graben structures, and are associated with both

limited basaltic sills and dykes and with calc-alkaline granite and granodiorite intrusions.

Gold and silver mineralisation at Cerro Vanguardia occurs within a vertical range of about 150 to 200m, in a series of narrow,

banded quartz veins that occupy structures within the Chon Aike ignimbrites. These veins form a typical structural pattern

related to major north-south (Concepcion) and east-west (Vanguardia) shears. Two sets of veins have formed in response to

this shearing: one set strikes about N40W and generally dips 65° to 90° to the east while the other set strikes about N75W

and the veins dip 60° to 80° to the south.

The veins are typical of epithermal, low-temperature, adularia-sericite character and consist primarily of quartz in several forms

such as massive quartz, banded chalcedonic quartz and quartz-cemented breccias. Dark bands in the quartz are due to finely

disseminated pyrite, now oxidised to limonite. The veins show sharp contacts with the surrounding ignimbrite, which hosts

narrow stockwork zones that are weakly mineralised, and appear to have been cut by a sequence of north-east trending faults

that have southerly movement with no appreciable lateral displacement.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Cerro Vanguardia

Category

million

g/t

tonnes

Moz

Heap leach

Measured

10.22

0.77

7.87

0.25

Indicated

12.57

0.62

7.79

0.25

Inferred

2.86

0.63

1.81

0.06

Total

25.66

0.68

17.48

0.56

Vein Mineral Resources

Measured

1.78

7.59

13.50

0.43

Indicated

10.12

6.80

68.83

2.21

Inferred

3.29

6.38

21.01

0.68

Total

15.19

6.80

103.34

3.32

Cerro Vanguardia

Total

40.85

2.96

120.81

3.88

**Exclusive Mineral Resource**

as at 31 December 2009

Contained



Contained  
Tonnes  
Grade  
gold  
gold  
Cerro Vanguardia  
Category  
million  
g/t  
tonnes  
Moz  
Measured  
2.29  
3.08  
7.06  
0.23  
Indicated  
16.04  
2.17  
34.80  
1.12  
Inferred  
6.16  
3.71  
22.82  
0.73  
Cerro Vanguardia  
Total  
24.49  
2.64  
64.68  
2.08

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**Mineral Resource by-product: Silver (Ag)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

silver

silver

Cerro Vanguardia

Category

Mt

Kg/t

tonnes

Moz

Measured

12.00

28.60

343.16

11.03

Indicated

22.70

66.94

1,519.31

48.85

Inferred

6.16

82.75

509.40

16.38

Cerro Vanguardia

Total

40.85

58.06

2,371.87

76.26

**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Cerro Vanguardia

Category

million

g/t

tonnes

Moz  
 Heap leach  
 Proved  
 9.60  
 0.69  
 6.59  
 0.21  
 Probable  
 3.50  
 0.44  
 1.55  
 0.05  
 Total  
 13.11  
 0.62  
 8.14  
 0.26  
 Vein Mineral Resources  
 Proved  
 1.16  
 7.08  
 8.19  
 0.26  
 Probable  
 6.14  
 6.86  
 42.11  
 1.35  
 Total  
 7.30  
 6.89  
 50.30  
 1.62  
 Cerro Vanguardia  
 Total  
 20.40  
 2.86  
 58.44  
 1.88  
 Cerro Vanguardia: Ore Reserve reconciliation  
 2008 vs 2009  
 Ounces (millions)  
 1.84  
 2008  
 -0.20  
 Depletion  
 0.11  
 Model  
 Change  
 0.00  
 New

ounces  
from  
projects  
0.12  
Scope  
Change  
1.88  
2009  
0.00  
Change in  
Economics  
0.01  
Other  
Cerro Vanguardia: Mineral Resource reconciliation  
2008 vs 2009  
Ounces (millions)  
3.73  
2008  
-0.18  
Depletion  
0.00  
Gold  
price  
0.27  
Exploration  
0.07  
Metho-  
dology  
3.88  
2009  
0.00  
Cost  
3.00  
0.00  
Other  
4.00  
3.50  
Change  
Change  
1.00  
1.50  
2.00

**South America – Argentina – Cerro Vanguardia**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Ore Reserve by-product: Silver (Ag)**

as at 31 December 2009

Contained

Tonnes

Grade

silver

Silver

Cerro Vanguardia

Category

Mt

Kg/t

tonnes

Moz

Proved

10.76

22.59

243.10

7.82

Probable

9.64

87.50

843.60

27.12

Cerro Vanguardia

Total

20.40

53.27

1,086.71

34.94

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

AHM Silva

AusIMM

224831

11 years

Ore Reserve

Miguel Fuentealba

AusIMM

226663

15 years

Cerro Vanguardia – surface (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

10.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

8.00

6.00

4.00

2.00

6.0

18.0

8.0

10.0

12.0

14.0

16.0

2.0

16.0

14.0

12.0

10.0

8.0

6.0

4.0

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**South America – Brazil**

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**Brazil**

**Regional overview**

AngloGold Ashanti's operations in Brasil comprise the wholly-owned AngloGold Ashanti Brazil Mineração (formerly Morro

Velho assets) and a 50% interest in the Mineração Serra Grande mine.

**Mineral Resource and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

Gold price – Ore Reserve

US\$/oz

800

720

Exchange rate – Brazil

BRL/US\$

2.00

1.94

.  
. .  
. .

Pedro Leopoldo

Confins

São José da Lapa

Ribeirão das Neves

Contagem

Betim

Ibirité

Brumadinho

Bonfim

Moeda

Itabirito

Rio Acima

Ouro Preto

Catas Altas

Alvin Upolis

Rio Piracicaba

Barão de Cocais

Caeté

Bom Jesus

do Amparo

Nova União

Taquaraáú de Minas

Santa Luzia  
Lagoa Santa  
Vespasiano  
Sarzedo  
João Monlevade  
Itabira  
Santa Bárbara  
Corrego  
do Sitio II  
Corrego  
do Sitio  
Lamego mine  
Cuiabá mine  
Queiroz  
plant  
**Head  
office**  
Morro Velho  
mine  
Raposos mine  
Raposos  
Gold  
plant  
Sabara  
Colombia  
Venezuela  
Guyana  
Suriname Fr Guiana

Uruguay  
Argentina  
Chile  
Paraguay  
Bolivia  
Peru

**Brazil**  
Nova Lima  
Belo Horizonte

**Legend**  
Mine  
Cities  
Metalurgical plant  
Aerial ropeway from Cuibá  
mine to Queiroz plant – 15km

Brasil  
Mineração  
Serra  
Grande

**Brazil mine locations**



**South America – Brazil**

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Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Serra Grande

Measured

10 x 10, and

-

-

-

10 x 20

-

-

-

Indicated

10 x 20, and

-

-

-

20 x 50

-

-

-

Inferred

50 x 100, and

-

-

-

50 x 200

-

-

-

Grade control 2 x 2

-

-

-

Channel sampling

0

100m

NW

SE

**Legend**

DDH/AU Hist.

Orebody

DB1 Intrusive

DB2 Intrusive

DB3 Intrusive

Metagraywacke

Metapelites

S2 – Foliation

F2T – Foliation

Transposition

F2 – Folds

**Section across the 'Cachorro Bravo orebody at Córrego do Sítio**

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**Ore Reserve modifying factors**

as at 31 December 2009

Mine call

Metal-

Cut-off

Stoping

factor

lurgical

weighted

width

Dilution

RRF

MRF

(MCF) recovery

Mine

g/t

cm

%

%

%

%

%

Brasil Mineração

Cuiabá (main area)

3.53

800

5

—

—

94.5

93.0

Lamego (sulphides)

3.38

3,500

5

—

—

95.0

93.0

Córrego do Sítio

CdS oxides (south area)

1.18

—

28

—

—

92.0

88.0

CdS sulphides (south area)  
 3.60  
 200  
 31  
 –  
 –  
 95.0  
 88.0  
 Serra Grande  
 Mina 3  
 2.37  
 –  
 5  
 94  
 95  
 95.0  
 94.6  
 Mina Nova  
 1.87  
 –  
 5  
 94  
 95  
 95.0  
 90.9  
 Open pit  
 1.00  
 –  
 5  
 94  
 95  
 95.0  
 92.9  
 Palmeiras  
 2.37  
 –  
 5  
 94  
 95  
 95.0  
 95.9  
 Pequizao  
 2.37  
 –  
 5  
 94  
 95  
 95.0  
 94.7  
 Total stockpiles  
 3.20

-  
-  
-  
-  
-  
-

## **Brazil – Brasil Mineração**

### **Brasil Mineração**

Brasil Mineração has mining rights over 61,864ha in the state of Minas Gerais in south-eastern Brazil. The Brasil Mineração complex is located in the municipalities of Nova Lima, Sabará and Santa Bárbara, south and east of the city of Belo Horizonte and within the mining district referred to as the Iron Quadrangle (Quadrilátero Ferrífero). This area hosts numerous historic and current gold mining operations, as well as a number of open-pit limestone and iron ore operations. Currently AngloGold Ashanti mines gold-bearing ore at the Cuiabá underground mine and from the Córrego do Sítio heap-leach mine.

### **Cuiabá**

The gold mineralisation at Cuiabá mine is associated with sulphides and quartz veins in BIF and volcanic sequences. Where the BIF is mineralised, the ore appears strongly stratiform due to the selective sulphidation of the iron-rich layers. Steeply plunging shear zones tend to control the ore shoots, which commonly trend parallel to intersections between the shears and other structures. The controlling mineralisation structures are the intersection of thrust faults with tight isoclinal folds in a ductile environment. Mineralisation is due to the interaction of low salinity carbon dioxide rich 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.

### **Córrego do Sítio**

The Córrego do Sítio orebodies are situated about 30km to the south-east of Cuiabá mine and consist of narrow north-east/south-west elongated lenses dipping at 20° to 30°. Córrego do Sítio is an orogenic type deposit and comprises many hydrothermal lodes with quartz veins and low sulphide content disseminated in the wall rocks. The mineralised orebodies are narrow, elongated and folded. In general, the mineralised orebodies are sericitic zones and quartz veinlets. The gold occurs as microscopic or sub-microscopic inclusions in arsenopyrite and sometimes in berthierite. Other typical sulphide minerals in the orebodies are pyrrhotite, pyrite and chalcopyrite.

## **South America – Brazil – Brasil Mineração**

### **AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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### **Legend orebodies**

Fonte Grande Sul

Serrotinho

Balancao

Galinheiro

Canta Galo

Level 08

Level 11

Level 14

Level 21

**Cuiabá mine – orebodies**

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**Lamego**

The Lamego mine is located in the northwestern part of the Iron Quadrangle metallogenetic province, close to the Cuiabá gold mine. Mineralisation in Lamego's deposit is characterised by orebodies associated with shear zones in both BIF and metacherts. The proportion of these lithotypes varies substantially from one orebody to another. In the BIF, sulphide mineralisation occurs, while in the metachert and the quartz veins the gold occurs either as native gold or in sulphides. The orebodies are characterised by sulphidation in the form of disseminated sulphide bands or as fracture filling. The plunge of the orebodies coincides both with the fold axis of the first two structural events and with stretches in the same direction as the local mineral lineation.

0

100m

**Legend**

DB3/DB1 Metabasic

intrusives.

RPP/RP

Metasediments

Mineralized Zone

Quartz Veins with

Arsenopyrite, Berthierite

and Pyrrhotite.

BIF Banded Iron

Formation

DDH/Au Hist.

**NW**

**SE**

4,98m @ 6,84g/t

1.85m @ 6,38g/t

15,90m @ 9,48g/t

**Section across the Sangue de Boi orebody at Córrego do Sítio**



**South America – Brazil – Brasil Mineração**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**MMV Other**

The MMV Other Mineral Resource comprises the Mineral Resource from the currently closed underground mines of Raposos and Morro da Gloria, together with the Luzia da Motta open pit. All of these operations are located within a radius of 4km to the Queiroz plant and Nova Lima city. The Raposos sequence is interpreted as a ductile thrust event and the main mineralised area is associated with an anticlinal (isoclinal) fold of the same structural event. The stratigraphy sequence is repeated by folds and consists of ultramafics, komatiitic basalts, basalts and andesites with layers of BIF. Pelites and metavolcanoclastic occur at the top of the sequence. The mineralisation is located in folds and shear zones and occurs essentially in the BIF layers. The orebodies are characteristically surrounded by concentric zones of hydrothermal alteration consisting of sericitisation, carbonatisation and chloritisation. In the oxidised ore the gold tends to be finer (10 to 30 microns) and occurs in limonite.

**Exploration**

The Raposos mine is currently being explored with underground drilling, whilst Morro da Gloria Mine and Luzia da Motta are targeted with surface drillholes. A dewatering program at Morro da Gloria is also in progress in order to access the orebodies.

The programme is intended to confirm and convert an Inferred Mineral Resource to the Indicated Mineral Resource category by drilling patterns of drillholes at 60m along the plunge and 30m along the strike of the orebodies.

**Projects**

A conceptual study on the Cuiabá future mine was started in 2009. The strategy is to optimise Cuiabá future mine production, without abandoning the narrow vein orebodies at the end of the mine life.

The project which comprises the MMV Other Mineral Resource at Brasil Mineração is named Nova Lima Sul (Nova Lima

South). The objective of this project is to set up a system of production that will generate sufficient ore to feed the current

spare capacity at the Queiroz plant.

Main zone: Banded iron formations and quartz veins

Upper zone: Banded iron formations and quartz veins

Metabasic Intrusive

-100

+100

0

-200

+200

-300

+300

-400

-500

-600

0

300

**São Bento Mine**

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**Mineral Resource estimation**

The Mineral Resource Estimation is updated as part of the annual evaluation process. The geostatistical method used for estimation is ordinary kriging using the lithology as the indicator. The Cuiabá mine dataset consists of channel samples and

drillhole samples. The 3D modelling and estimation is done with two domains: the thick orebodies, comprised by the Fonte Grande Sul and Serrotinho orebodies and the narrow vein domain of the Balancão, Galinheiro and Canta Galo orebodies.

All channel and drillhole samples are used in the 3D geological models and the lithological maps of the orebodies are used to identify the rock types. A simulation technique is used to determine the uncertainty in the orebody block-models. SGS (Sequential Gaussian Simulation) and SIS (Sequential Indicator Simulation) methods are used to simulate the rock types (SIS) and the grade (SGS) combining the results in an uncertainty analysis.

Raposos and Morro da Glória are estimated as the polygonal estimates (considering a weighted average of the samples over two drilled or open panels and an average is applied for the lower panels where no drilling information is available).

Both Raposos and Morro da Glória have the information captured into datasets and preliminary estimation exercises confirm the current numbers in the statement (Raposos by uniform conditioning method and Morro da Glória by ordinary kriging). Luzia da Motta estimates come from ordinary kriging estimates for each target based on the available surface drilling which has a minimum pattern of 100 x 100m.

**Mineral Resource (attributable)**

as at 31 December 2009

Contained  
Contained  
Tonnes

Grade  
gold  
gold

Brasil Mineração  
Category  
million

g/t  
tonnes  
Moz

CdS oxides  
Measured

–  
–  
–  
–

(north area/Sao Bento)

Indicated

—  
—  
—  
—  
Inferred  
0.68  
3.19  
2.17  
0.07  
Total  
0.68  
3.19  
2.17  
0.07  
CdS oxides (south area)  
Measured  
1.12  
4.58  
5.12  
0.16  
Indicated  
0.86  
3.88  
3.32  
0.11  
Inferred  
1.02  
4.03  
4.11  
0.13  
Total  
3.00  
4.19  
12.56  
0.40  
CdS sulphides  
Measured  
—  
—  
—  
—  
(north area/Sao Bento)  
Indicated  
—  
—  
—  
—  
Inferred  
3.43  
7.14  
24.50

0.79  
 Total  
 3.43  
 7.14  
 24.50  
 0.79  
 CdS sulphides (south area)  
 Measured  
 1.14  
 8.24  
 9.38  
 0.30  
 Indicated  
 4.10  
 6.71  
 27.53  
 0.89  
 Inferred  
 4.57  
 7.07  
 32.31  
 1.04  
 Total  
 9.81  
 7.05  
 69.21  
 2.23  
 CdS transition  
 Measured  
 –  
 –  
 –  
 –  
 (north area/Sao Bento)  
 Indicated  
 –  
 –  
 –  
 –  
 Inferred  
 0.04  
 2.31  
 0.10  
 0.00  
 Total  
 0.04  
 2.31  
 0.10  
 0.00  
 CdS transition (south area)  
 Measured

0.08  
8.69  
0.71  
0.02  
Indicated  
0.39  
7.60  
2.94  
0.09  
Inferred  
0.30  
6.03  
1.79  
0.06  
Total  
0.76  
7.11  
5.44  
0.17  
Cuiabá (main area)  
Measured  
4.50  
8.16  
36.72  
1.18  
Indicated  
3.91  
6.42  
25.10  
0.81  
Inferred  
10.71  
8.05  
86.22  
2.77  
Total  
19.12  
7.74  
148.04  
4.76  
Cuiabá (secondary area)  
Measured  
0.84  
6.11  
5.12  
0.16  
Indicated  
0.17  
6.78  
1.15  
0.04

Inferred

0.32

6.08

1.92

0.06

Total

1.32

6.19

8.19

0.26

**South America – Brazil – Brasil Mineração**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Mineral Resource (attributable) cont.**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Brasil Mineração

Category

million

g/t

tonnes

Moz

Lamego (sulphides)

Measured

0.44

5.68

2.47

0.08

Indicated

3.17

5.92

18.78

0.60

Inferred

3.02

4.92

14.88

0.48

Total

6.63

5.45

36.14

1.16

Luzia Da Motta oxides

Measured

0.19

3.23

0.63

0.02

Indicated

0.50

3.00

1.51

0.05

Inferred



0.23  
2.97  
0.70  
0.02  
Total  
0.93  
3.04  
2.83  
0.09  
Morro Da Gloria sulphides  
Measured  
0.06  
7.21  
0.46  
0.01  
Indicated  
0.05  
5.92  
0.29  
0.01  
Inferred  
0.74  
6.71  
4.95  
0.16  
Total  
0.85  
6.70  
5.70  
0.18  
Raposos sulphides  
Measured  
0.35  
6.77  
2.37  
0.08  
Indicated  
0.86  
6.65  
5.74  
0.18  
Inferred  
2.18  
7.13  
15.55  
0.50  
Total  
3.39  
6.97  
23.66  
0.76

Brasil Mineração

Total

49.97

6.77

338.54

10.88

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Brasil Mineração

Category

million

g/t

tonnes

Moz

Measured

4.21

6.49

27.30

0.88

Indicated

8.00

5.82

46.58

1.50

Inferred

26.17

7.01

183.50

5.90

Brasil Mineração

Total

38.38

6.71

257.39

8.28

**Exclusive Mineral Resource**

The Exclusive Mineral Resource is defined as the inclusive Mineral Resource less the Ore Reserve before dilution and other

factors are applied. At Cuiabá the main Exclusive Mineral Resource (0.30Moz) comes from the main area (current production

orebodies). This Exclusive Mineral Resource is basically an Inferred Mineral Resource that will be drilled according to the

conversion plan and is located below level L15 (FGS-SER) and L13 (BAL-GAL-CGA). The secondary area comprises old

panels and satellite orebodies and is considered an Exclusive Mineral Resource (0.026Moz) until the satellites orebodies are drilled out.

**Mineral Resource below infrastructure**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Brasil Mineração

Category

million

g/t

tonnes

Moz

Cuiabá

Total

12.80

7.76

99.34

3.19

Córrego do Sítio

Total

8.33

6.99

58.22

1.87

Lamego

Total

3.49

5.30

18.50

0.59

Brasil Mineração

Total

24.63

7.15

176.05

5.66

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**Mineral Resource by-products: Sulphur (S)**

as at 31 December 2009

Tonnes

Grade

Sulphur

Pounds

Brasil Mineração

Category

million

(%S)

(Mt)

million

Measured

5.77

6.0

0.35

768

Indicated 7.25

5.8

0.42

934

Inferred 14.05

6.7

0.94

2,081

Brasil Mineração

Total

27.07

6.3

1.72

3,783

**Ore Reserve estimation**

The gold price and operational costs are taken into consideration in determining the Ore Reserve. The Ore Reserve is scheduled and designed using Mine2-4D

®

computer software. Mining parameters such as the mining method, minimum mining width, MCF, dilution and recovery are all applied in the process.

**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Brasil Mineração

Category

million

g/t  
tonnes  
Moz  
CdS oxides (south area)  
Proved  
0.17  
5.66  
0.95  
0.03  
Probable  
0.08  
4.10  
0.33  
0.01  
Total  
0.25  
5.15  
1.29  
0.04  
CdS sulphides (south area)  
Proved  
0.33  
6.47  
2.13  
0.07  
Probable  
1.90  
5.61  
10.66  
0.34  
Total  
2.23  
5.74  
12.79  
0.41  
Cuiabá (main area)  
Proved  
3.95  
7.12  
28.16  
0.91  
Probable  
3.46  
5.73  
19.83  
0.64  
Total  
7.42  
6.47  
47.99  
1.54

Lamego (sulphides)

Proved

0.16

4.73

0.75

0.02

Probable

0.99

4.98

4.95

0.16

Total

1.15

4.95

5.70

0.18

Brasil Mineração

Total

11.05

6.14

67.77

2.18

Brasil Mineração: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

10.53

2008

-0.39

Depletion

0.00

Gold

price

0.29

Exploration

0.46

Metho-

dology

10.89

2009

0.00

Cost

9.00

0.00

Other

11.00

10.00

10.50

9.50

Change

Brasil Mineração: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

2.56

2008

-0.35

Depletion

-0.05

Model

Change

0.01

New

ounces

from

projects

-0.08

Scope

Change

2.18

2009

0.01

Change in

Economics

1.00

0.08

Other

2.00

2.50

1.50

Change

**South America – Brazil – Brasil Mineração**

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**Ore Reserve by-products: Sulphur (S)**

as at 31 December 2009

Tonnes

Grade

Contained

Pounds

Brasil Mineração

Category

million

(%S)

sulphur (Mt)

million

Proved

4.11

4.9

0.20

440

Inferred 4.46

4.7

0.21

462

Brasil Mineração

Total

8.57

4.8

0.41

902

**Ore Reserve below infrastructure**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Brasil Mineração

Category

million

g/t

tonnes

Moz

Cuiabá

Total

1.83

5.83

10.66

0.34



Córrego do Sítio

Total

1.90

5.61

10.66

0.34

Lamego

Total

0.46

4.71

2.17

0.07

Brasil Mineração

Total

4.19

5.60

23.49

0.76

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Córrego do Sítio

Mineral Resource

P de Tarso Ferreira

AusIMM

224828

24 years

Ore Reserve

MG Simoni

AusIMM

224826

17 years

Cuiabá

Mineral Resource

P de Tarso Ferreira

AusIMM

224828

24 years

Ore Reserve

S Botelho

AusIMM

224833

23 years

Lamego

Mineral Resource

P de Tarso Ferreira

AusIMM

224828

24 years

Ore Reserve

L Nunes Coelho

AusIMM

222679

8 years

MMV Other

Mineral Resource

P de Tarso Ferreira

AusIMM

224828

24

years

Brasil Mineração – surface (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

20.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

16.00

12.00

8.00

4.00

2.0

22.0

6.0

10.0

14.0

18.0

0.0

2.5

2.0

1.5

1.0

0.5

Brasil Mineração – underground (metric)

Tonnes above

cut-off (millions)

0.00

Cut-off grade (g/t)

20.00

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

16.00

12.00

8.00

4.00

6.0

26.0

10.0

14.0

18.0

22.0

0.0

25.0

20.0

15.0

10.0

5.5

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

**South America – Brazil – Serra Grande**

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**Brazil – Serra Grande**

**Location**

Serra Grande is situated approximately 3km south of the city of Crixás in the Goiás State of Central Brazil. This location is approximately 260km northwest of Brasilia, the country's capital.

**History**

The area was first exploited by garimpeiros as open-pit workings. In 1973, Inco Limited (Inco) began reconnaissance work including mapping, magnetic surveys, and diamond drilling. In 1976, Inco discovered gold mineralisation in the mine area. In

April 1983, Kennecott Corporation signed an option agreement to gain a 50% interest in the project. In 1986, Kennecott

Corporation sold its participation in the project to an affiliate of Anglo American plc, which continued underground development and exploration and completed a feasibility study in 1987.

Mining started in 1987, with ore being stockpiled. The first gold bullion was produced on November 14, 1989. TVX Gold Inc.

(TVX Gold) acquired its interest in the property on January 7, 1991, through a merger with Inco. TVX Gold was acquired by

Kinross in early 2003, giving Kinross 50% ownership of the property.

Currently, Serra Grande is equally owned by AngloGold Ashanti Limited and Kinross. AngloGold Ashanti is the mine operator.

**Geology**

The deposits occur within the Crixás Greenstone Belt, Rio Vermelho and Ribeirão das Antas formations, of the Upper Archaean Pilar de Goia's Group (~2.7Ga). The stratigraphy of the belt is dominated by basic and ultrabasic rocks in the lower

sequences, with volcano-sedimentary units forming the upper successions. The gold deposits are hosted by a sequence of

schist, volcanic, and carbonate rocks, which occur in a greenstone belt structural setting. Gold is mostly associated with

quartz veins and locally with more massive sulphides. The ore shoots plunge to the northwest at between 6° and 35°.

The current understanding of the regional geology indicates that the stratigraphy in the area of the mine has been overturned and thrust to the east.

-100

100

0

-200

200

-300

-400

300

-500

-600

F-144

F-129

F-127

F-32  
F-495  
F-72  
F-69  
F-66  
F-44  
F-65  
K-1  
K-5  
K-49  
K-21  
F-113  
F-115  
F-347  
F-383  
F-350  
F-441  
F-445  
F-462  
F-472  
K-85  
K-72  
F-159

**Legend**

Basalt  
Carbonate schist  
Dolomitic marble  
Quartz-chorite schist  
Graywacke  
Mineralisation

**Longitudinal section Mina 3**

Serra Grande: Ore Reserve reconciliation

2008 vs 2009

Ounces (millions)

0.36

2008

-0.09

Depletion

0.08

Model

Change

0.00

New

ounces

from

projects

0.00

Scope

Change

0.35

2009

0.00

Change in

Economics

0.00

Other

Serra Grande: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

0.98

2008

-0.10

Depletion

0.00

Gold

price

0.11

Exploration

0.05

Metho-

dology

1.03

2009

0.00

Cost

0.00

Other

Change

Change

0.00

1.00

0.50

0.00  
0.30  
0.40  
0.20  
0.10

**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Serra Grande

Category

million

g/t

tonnes

Moz

Mina 3

Measured

0.43

4.91

2.09

0.07

Indicated

0.45

5.47

2.48

0.08

Inferred

0.78

4.87

3.77

0.12

Total

1.65

5.04

8.35

0.27

Mina Nova

Measured

1.24

3.55

4.41

0.14

Indicated

0.21

2.94

0.60

0.02

Inferred

0.34

3.67

1.25

0.04

Total

1.79

3.50

6.27

0.20

Open pit

Measured

0.70

3.83

2.68

0.09

Indicated

0.38

2.99

1.12

0.04

Inferred

—

—

—

—

Total

1.08

3.54

3.80

0.12

Palmeiras

Measured

0.12

5.40

0.63

0.02

Indicated

0.12

5.90

0.70

0.02

Inferred

0.59

5.82

3.42

0.11

Total

0.82

5.77

4.75



0.15  
Pequizao  
Measured

—  
—  
—  
—

Indicated

—  
—  
—  
—

Inferred

1.58  
5.52  
8.71  
0.28

Total

1.58  
5.52  
8.71  
0.28

Total stockpiles

Measured

0.04  
3.20  
0.14  
0.00

Indicated

—  
—  
—  
—

Inferred

—  
—  
—  
—

Total

0.04  
3.20  
0.14  
0.00

Serra Grande

Total

6.96  
4.60  
32.01  
1.03

**Exclusive Mineral Resource**

as at 31 December 2009

Contained  
Contained  
Tonnes  
Grade  
gold  
gold  
Serra Grande  
Category  
million  
g/t  
tonnes  
Moz  
Measured  
0.10  
3.13  
0.32  
0.01  
Indicated  
0.20  
3.53  
0.71  
0.02  
Inferred  
3.28  
5.23  
17.15  
0.55  
Serra Grande  
Total  
3.58  
5.07  
18.18  
0.58

**South America – Brazil – Serra Grande**

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**Ore Reserve**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Serra Grande

Category

million

g/t

tonnes

Moz

Mina 3

Proved

0.34

4.55

1.56

0.05

Probable

0.30

5.45

1.64

0.05

Total

0.64

4.97

3.20

0.10

Mina Nova

Proved

0.86

3.19

2.75

0.09

Probable

0.12

3.12

0.38

0.01

Total

0.98

3.18

3.13

0.10

Open pit

Proved

0.69  
3.52  
2.43  
0.08  
Probable  
0.29  
2.66  
0.77  
0.02  
Total  
0.98  
3.27  
3.20  
0.10  
Palmeiras  
Proved  
0.12  
4.07  
0.51  
0.02  
Probable  
0.15  
4.33  
0.64  
0.02  
Total  
0.27  
4.21  
1.15  
0.04  
Total stockpiles  
Proved  
0.04  
3.20  
0.14  
0.00  
Probable  
—  
—  
—  
—  
Total  
0.04  
3.20  
0.14  
0.00  
Serra Grande  
Total  
2.92  
3.70  
10.81

0.35

**Competent persons**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Edijarbas Martins Araujo

AusIMM

224825

20 years

Ore Reserve

Edijarbas Martins Araujo

AusIMM

224825

20 years

Serra Grande – surface (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade

above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

0.00

9.00

2.00

1.00

0.0

1.0

0.8

0.5

0.3

3.00

4.00

5.00

6.00

7.00

8.00

2.0

8.0

10.0

14.0

6.0

4.0

12.0

Serra Grande – underground (metric)

Tonnes above  
cut-off (millions)

1.00

Cut-off grade (g/t)

25.00

Average grade above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

5.00

7.00

9.00

3.00

11.00

4.0

6.0

8.0

20.0

12.0

14.0

18.0

10.0

16.0

0.0

2.0

1.0

6.0

3.0

4.0

5.0

## **Colombia**

### **Regional overview**

In 2003, AngloGold Ashanti was the first company to start a systematic grassroots exploration program in Colombia. Since the start of exploration, AngloGold Ashanti has staked a total of 13.9 million hectares of exploration claims countrywide. Of these, 11.2 million hectares have been explored with systematic stream sediment sampling, prospecting and in some areas, airborne geophysics. As a result of this work, 423 mineral contracts covering 825,025 ha are active with follow-up work from drill target definition through pre-feasibility studies either operated 100% by AngloGold Ashanti or in joint ventures with partners B2Gold Corp. (B2Gold), Mineros S.A, Mega Uranium and Glencore. AngloGold Ashanti has thus far relinquished 10.4 million hectares and plans to complete first stage exploration on the remaining 2.7 million hectares. To date the programme has generated 42 drill targets of which 24 have been drilled with two resulting in significant discoveries, Gramalote and La Colosa.

### **Mineral Resource and Ore Reserve gold prices and exchange rates**

Units

2009

2008

Gold price – Mineral Resource

US\$/oz

1,025

1,000

### **South America – Colombia**

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500km

N

### **Colombia**

Gramalote

Quebradona

Rio Dulce

La Colosa

Cartagena

### **Bogotá**

Prospect

Town

### **JV areas**

B2Gold

Glencore

Mineros SA

AngloGold Ashanti

### **Tenure**

Application area

Area granted

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**Details of average drillhole spacing and type in relation to Mineral Resource classification**

Type of drilling

Mine/

Spacing

Diamond

RC

Blast-

Other

Comments

Project

Category

m (- x -)

hole

Gramalote

Measured

-

-

-

-

-

Indicated

30 x 30

-

-

-

2 different drill directions: W-E, SW-NE

Inferred

50 x 50

-

-

-

2 different drill directions: W-E, SW-NE

Grade control -

-

-

-

-

Not applicable

La Colosa

Measured

-

-

-

-

-

Indicated

-

-



-  
-  
-

Inferred  
100 x 100

-  
-  
-

Additional geological drillholes  
(HQ, NQ) were drilled at different  
spacings and different angles

Grade control -

-  
-  
-  
-

Not applicable

## Colombia – Gramalote

### Location

The Gramalote prospect is located on the eastern side of the Central Cordillera some 80km northeast of Medellin and 230km northwest of Bogota.

The Gramalote project is a joint venture with Vancouver-based B2Gold who is the operator of the project. B2Gold holds 49%

and is required to take the project to feasibility to obtain an additional 2%.

### Geology

Mineralisation is hosted in the Antioquia batholith and bears a strong relationship to Cretaceous-Palaeocene magmatic-

hydrothermal pulses. Hornblende granodiorites and porphyritic dykes constitute the older sub-regional host. Biotitic tonalites

and granodiorites are intimately associated with Gramalote-style mineralisation.

The sub-regional control of targets is defined by dextral extensional shear zones orientated north-west/south-east to north-north-west/south-east-east. The four principal controls on a local scale are:

1.  
Extensional Steps and Tension Gashes

2.  
Main Damage and Transfer Zones

3.  
. Extensive tectonic syntaxes

4.  
Deflections of sub-regional shear zones

Hydrothermal alteration is restricted to structurally controlled veins and veinlets. The four principal alteration styles are:

Potassic K-Feldspar, Quartz-Sericite, Sericite-Carbonate and Carbonate-Epidote-Chlorite.

### Mineral Resource estimation

At Gramalote, some 12,551m of diamond drilling (43 holes) have been used to support the calculation of an Inferred and

Indicated Mineral Resource.

The Mineral Resource estimate was generated using an indicator kriging method. All available geological drillhole, surface and

underground mapping information has been validated for use in the modelling process.

### Mineral Resource (attributable)

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Gramalote

Category

million

g/t

tonnes

Moz

Main zone

Measured

–

—  
—  
—  
Indicated

15.16

0.93

14.18

0.46

Inferred

21.09

0.87

18.28

0.59

Gramalote

Total

36.25

0.90

32.46

1.04

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Gramalote

Category

million

g/t

tonnes

Moz

Measured

—

—

—

—

Indicated

15.16

0.93

14.18

0.46

Inferred

21.09

0.87

18.28

0.59

Gramalote

Total

36.25

0.90

32.46

1.04

**South America – Colombia – Gramalote**

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**Competent person**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Rudolf Jahoda

AusIMM

990544

20 years

Gramalote: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

1.04

2008

0.00

Depletion

0.00

Gold

price

0.46

Exploration

0.00

Metho-

dology

1.04

2009

0.00

Cost

0.00

-0.45

Other

1.50

1.00

0.50

Change

Gramalote – surface (metric)

Tonnes above

cut-off (millions)

Cut-off grade (g/t)

Average grade above cut-off (g/t)

Tonnes above cut-off

Ave grade above cut-off

0.4

2.6  
1.6  
1.8  
2.0  
2.2  
2.4  
1.2  
1.4  
0.8  
1.0  
0.6  
0.00  
1.75  
1.25  
1.00  
0.75  
0.50  
1.50  
0.25  
0.0  
90.0  
80.0  
70.0  
60.0  
50.0  
40.0  
30.0  
20.0  
10.0

### **Colombia – La Colosa**

La Colosa is a significant “in-house” greenfields project discovered by AngloGold Ashanti’s Colombia greenfields exploration team during 2006. The project is 100% owned by AngloGold Ashanti and located 150km west of Colombia’s capital city, Bogota and 30km west of the major town, Ibague, in the department of Tolima.

#### **Geology**

The La Colosa copper-poor porphyry gold system is genetically associated with Miocene porphyritic intrusive centres intruded

into Paleozoic schists. The highest grade gold mineralisation is closely associated with a suite of early porphyry intrusions/breccias with potassic and sodic-calcic alteration, 5% pyrite and traces of chalcopyrite and molybdenite.

The coherent body suffered little dilution by intermineral/postmineral phases or fault propagation. The early porphyry stage is divided into three phases. The earliest is a crowded diorite porphyry and the late-mineral dacite

porphyry is typified by rounded quartz phenocrysts, locally up to 1cm across.

Contacts between porphyry phases are commonly characterised by broad zones of intrusion breccias. The texture of the

breccias is commonly diffuse implying varied degrees of assimilations of the earlier by later phases.

#### **Alteration and mineralisation**

The paragenesis of the main alteration/mineralisation mineral assemblage observed at Colosa starts with pervasive sodic-calcic

alteration overprinted by potassic alteration and in turn cut by a sodic-calcic event. The two dominant alteration types are the

potassic and second sodic-calcic.

The three early porphyries, and their associated intrusion breccias appear to have been altered and mineralised at the same

time. There is scant evidence for veinlet introduction between the three intrusive events. The gold content of the three early

porphyry phases is similar.

The main control of gold grade in the diorite/dacite intrusive stock is the intrusive phase where the mineralisation is hosted.

Early intrusive phases present the highest 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 >300ppb gold grades close to the contact with

early diorite phases. Within the gold grade variation that characterises each intrusive phase, gold grades present a second

order correlation with the alteration assemblage. The Ca-Na and K alteration with or without chloritic alteration have the best

gold grades. Areas with intense illite alteration generally have average gold grades less than 0.3g/t. The contact breccias and

hornfels developed at the contact between porphyritic rock and schist present a mineralised haloe of at least 60m with an

average gold grade of >1g/t.

#### **Gold deportment**

Gold grains vary from almost pure gold to a much lesser amount of gold-silver telluride. The chemical composition of Au-Ag-

Te grains is variable. The gold grains are generally fine grained around 15 microns. Coarse grained gold (116 microns) was

found in samples from metamorphic rocks. Gold grains occur both liberated and “locked” in sulphides and silicates. The

percentage is not clearly established, but a significant amount of gold is associated with silicates such as K-feldspar and plagioclase. Sulphide minerals associated with gold are dominantly pyrite and in a much lesser amount pyrrhotite and arsenopyrite.

**Mineral Resource estimation**

At La Colosa, some 17,039m of diamond drilling (59 holes) have been used to support the calculation of an Inferred Mineral Resource.

Gold grades were estimated using ordinary block kriging methodology. Kriging was performed into a parent block size of 50m by 50m by 10m for lithological domains (wireframes) in the mineralised envelope and for the waste surrounding mineralisation. All available geological drill-hole, surface sampling and mapping information has been validated for use in the modelling process.

**South America – Colombia – La Colosa**

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**Mineral Resource (attributable)**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

La Colosa

Category

million

g/t

tonnes

Moz

Surface

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

381.42

1.00

383.12

12.32

La Colosa

Total

381.42

1.00

383.12

12.32

**Exclusive Mineral Resource**

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

La Colosa

Category

million

g/t

tonnes  
Moz  
Measured

—  
—  
—  
—

Indicated

—  
—  
—  
—

Inferred

381.42

1.00

383.12

12.32

La Colosa

Total

381.42

1.00

383.12

12.32

**Competent person**

Professional

Registration

Relevant

Category

Name

organisation

number

experience

Mineral Resource

Rudolf Jahoda

AusIMM

990544

20 years

La Colosa: Mineral Resource reconciliation

2008 vs 2009

Ounces (millions)

12.32

2008

0.00

Depletion

0.00

Gold

price

0.00

Exploration

0.00

Metho-

dology  
12.32  
2009  
0.00  
Cost  
10.00  
0.00  
Other  
12.00  
11.00  
Change  
La Colosa – surface (metric)  
Tonnes above  
cut-off (millions)  
Cut-off grade (g/t)  
Average grade above cut-off (g/t)  
Tonnes above cut-off  
Ave grade above cut-off  
0.5  
2.0  
2.3  
2.5  
1.8  
1.0  
1.5  
1.3  
0.0  
600.0  
500.0  
400.0  
300.0  
100.0  
200.0  
0.00  
2.00  
0.40  
0.80  
1.20  
1.60

## Definitions

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Definitions

#### Mineral Resource

The JORC 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. The Mineral Resource is subdivided, 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 deposit.

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 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 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%.

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The process and methodology of classification are at the discretion of the competent person and involves expressing the '15%

Rule' as a required level of information, in tangible terms the spacing of the drillhole 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.

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 (LOM) 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 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. The Ore Reserve is sub-divided, in order of increasing confidence, into the*

*Probable Ore Reserve and the Proved Ore Reserve.*

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.

**Glossary of terms**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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Glossary of terms

**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 (tons 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 an orebody through shafts and/or tunnelling in underground mining operations.

**Discontinued operation**

A component of an entity that, pursuant to a single plan, has been disposed of or abandoned or is classified as held-for-sale

until conditions precedent to the sale have been fulfilled.



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Doré

Impure alloy of gold and silver produced at a mine to be refined to a higher purity, usually consisting of 85% gold on average.

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).

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.

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.

## Glossary of terms

### AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009

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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).

Precipitate

The solid product of chemical reaction by fluids such as the zinc precipitation referred to below.

Price received (\$/oz and R/kg)

Attributable gold income including realised non-hedge derivatives divided by attributable ounces or kilograms sold.

Productivity

An expression of labour productivity based on the ratio of grams of gold produced per month to the total number of employees

in underground mining operations.

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, Argentina, Australia, Brazil,

Ghana, Guinea, Mali, Namibia, Tanzania and United States of America.

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 Minerals and Energy, 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 reconciliation factor (RRF)

This is the variance between the resource model and the ore perimeters.

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**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.

**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 orebody 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.

**Ton**

Used in imperial statistics. Equal to 2,000 pounds. Referred to as a short ton.

**Tonnage**

Quantity of material measured in tonnes or tons.

**Waste**

Material that contains insufficient mineralisation for consideration for future treatment and, as such, is discarded.

**Glossary of terms – Abbreviations**

**AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009**

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**Abbreviations**

°

Degrees

\$

United States dollars

ARS

Argentinean peso

A\$ or AUD

Australian dollars

ADS

American Depositary Share

ADR

American Depositary Receipt

ASX

Australian Securities Exchange

Au

Contained gold

BRL

Brazilian real

capex

Capital expenditure

CLR

Carbon Leader Reef

DRC

Democratic Republic of the Congo

g

Grams

g/t

Grams per tonne

g/TEC

Grams per total employee costed

JORC

Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves

JSE

JSE Limited

kg

Kilograms

km

Kilometres

LOM

Life of mine

M or m

Metre or million, depending on the context

Moz

Million ounces

Mt

Million tonnes or tons

Mtpa

Million tonnes/tons per annum

oz

Ounces (troy)

oz/t

Ounces per ton

R or ZAR

South African rands

SAMREC

The South African Mineral Resource Committee

t

Tons (short) or tonnes (metric)

tpm

Tonnes/tons per month

tpa

Tonnes/tons per annum

tpd

Tonnes/tons per day

VCR

Ventersdorp Contact Reef

VR

Vaal Reef

Administrative  
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

Euronext Paris:

VA

Euronext Brussels:

ANG

JSE Sponsor:

UBS

Auditors:

Ernst & Young Inc.

**Offices**

**Registered and corporate**

76 Jeppe Street

Newtown 2001

(PO Box 62117, Marshalltown 2107)

South Africa

Telephone: +27 11 637 6000

Fax: +27 11 637 6624

**Australia**

Level 13, St Martins Tower

44 St George's Terrace

Perth, WA 6000

(PO Box Z5046, Perth WA 6831)

Australia

Telephone: +61 8 9425 4602

Fax: +61 8 9425 4662

**Ghana**

Gold House

Patrice Lumumba Road

(PO Box 2665)

Accra

Ghana

Telephone: +233 21 772190

Fax: +233 21 778155

**United Kingdom Secretaries**

St James's Corporate Services Limited

6 St James's Place

London SW1A 1NP  
England  
Telephone: +44 20 7499 3916  
Fax: +44 20 7491 1989  
E-mail: jane.kirton@corpserv.co.uk

**Directors**

**Executive**

M Cutifani\*\* (Chief Executive Officer)  
S Venkatakrishnan\* (Chief Financial Officer)

**Non-Executive**

R P Edey\* (Chairman)  
Dr T J Motlatsi† (Deputy Chairman)  
F B Arisman#  
W A Nairn†

Prof W L Nkuhlu†

S M Pityana†

\* British

# American

\*\* Australian

† South African

**Officers**

Company Secretary: Ms L Eatwell

**Investor Relations**

**South Africa**

Sicelo Ntuli

Telephone: +27 11 637 6339

Fax: +27 11 637 6400

E-mail: sntuli@AngloGoldAshanti.com

**United States**

Stewart Bailey

Telephone: +1-212-836-4303

Mobile: +1 646 717-3978

E-mail: sbailey@AngloGoldAshanti.com

General e-mail enquiries

investors@AngloGoldAshanti.com

AngloGold Ashanti website

<http://www.AngloGoldAshanti.com>

Company secretarial E-mail

Companysecretary@AngoGoldAshanti.com

AngloGold Ashanti posts information that is important to investors on the main page of its website at [www.anglogoldashanti.com](http://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.

**Share Registrars**

**South Africa**

Computershare Investor Services

(Pty) Limited

Ground Floor, 70 Marshall Street

Johannesburg 2001  
(PO Box 61051, Marshalltown 2107)  
South Africa  
Telephone: 0861 100 950 (in SA)  
Fax: +27 11 688 5218  
web.queries@computershare.co.za

**United Kingdom**

Computershare Investor Services PLC  
The Pavilions  
Bridgwater Road  
Bristol BS99 7NH  
England  
Telephone: +44 870 702 0000  
Fax: +44 870 703 6119

**Australia**

Computershare Investor Services Pty Limited  
Level 2, 45 St George's Terrace  
Perth, WA 6000  
(GPO Box D182 Perth, WA 6840)  
Australia  
Telephone: +61 8 9323 2000  
Telephone: 1300 55 2949 (in Australia)  
Fax: +61 8 9323 2033

**Ghana**

NTHC Limited  
Martco House  
Off Kwame Nkrumah Avenue  
PO Box K1A 9563 Airport  
Accra  
Ghana  
Telephone: +233 21 229664  
Fax: +233 21 229975

**ADR Depository**

The Bank of New York Mellon (BoNY)  
BNY Shareowner Services  
PO Box 358016  
Pittsburgh, PA 15252-8016  
United States of America  
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



[www.anglogoldashanti.com](http://www.anglogoldashanti.com)





**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: March 30, 2010

By: /s/ L Eatwell

Name: L EATWELL

Title: Company Secretary