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*.

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

Contents

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009

Contents

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

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

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

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
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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

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

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
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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.

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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
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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.

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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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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)

as at 31 December 2009	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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
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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
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
Potchesftroom
0
40km
Legend
TauTona
Savuka
Mponeng
Towns
Other mines
N
Fochville
Johannesburg
Ventersdorp
Carletonville
Parys
Potchefstroom
Klerksdorp
Orkney
N
0
40km
Legend
Great Noligwa
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

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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_3O_8) as a by-product from its South African gold mining operations. AngloGold Ashanti currently produces between 500 and 600t of U_3O_8 annually. Although mined as a by-product of gold for many years, U_3O_8 was not considered a Mineral Resource until 2005. Due to the rapid increase in the U_3O_8 price over the last few years, renewed focus has been placed on the U_3O_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 Khotsong. 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 Khotsong, 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_3O_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

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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

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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

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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 $35km^2$, directly west of neighbouring Great Noligwa 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 Noligwa, 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.

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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 0.98
14.89
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 16.74
11.71
196.04
6.30
Inferred
0.90 12.54 11.34 0.36
Total 21.23
12.54
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.CKimberley 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
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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 Noligwa 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 8º, 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
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

Tau Lekoa	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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 siltsones of the Booysens 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

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41
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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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
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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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45
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

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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

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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

Mine/Project	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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 ìndicator 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)

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 (±60%) and a replacement skarn (±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_2Bi). 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
Chuos 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

Navachab Category	Tonnes million	Grade g/t	gold tonnes	gold 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
Siguiri (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)

as at 31 December 2009	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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
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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		Cut-off weighted	Stoping width	Dilution	Dilution	RRF	MRF	Mine call factor (MCF)	Metal-lurgical recovery
		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

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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^2 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
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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

		Tonnes	Grade	Contained gold	Contained 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
Acquisi-
tion
0.00
Depletion
0.00
Gold
price
0.00
Exploration
-1.24
Metho-
dology
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

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

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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, artisinal 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

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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
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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

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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.

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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

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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

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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

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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
Insintsiam 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

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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

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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
Ore Reserve 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
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

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Guinea
Regional overview

The Siguiri 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 Siguiri
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 Siguiri 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
Siguiri
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)

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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.

Siguiri: 3D model of the P1 area

Siguiri: drillholes within the P1 area

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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
Seguélén
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

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Exclusive Mineral Resource

as at 31 December 2009

Siguiri	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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
Seguélén
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

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Ore Reserve cont.

as at 31 December 2009

Siguiri	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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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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			Blast-		
Project	Category	m (- x -)	Diamond	RC	hole	Other	Comments
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
®
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

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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
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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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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
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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

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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

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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
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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

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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

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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

Yatela	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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.

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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
onnes above cut-of
f (millions)
0.00
Cut-off grade (g/t)
5.00
A
verage grade above cut-of
f (g/t)
Tonnes above cut-off
Ave 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
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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 x10
–
–
–
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
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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.

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

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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

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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
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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^2 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
conglomarate
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
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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 (>– 3g/t) lenses within a lower grade (>– 0.3g/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%, <0.2mm) 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°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 (>60km from
Tropicana), near resource targets (<60km), 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

Ore Reserve

as at 31 December 2009

Tropicana	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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

Category	Name	Professional organisation	Registration number	Relevant 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

P
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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

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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)

as at 31 December 2009	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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
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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
–
–
–

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

United States	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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
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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.

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

CC&V	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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

		Tonnes	Grade	Contained gold	Contained 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
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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

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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

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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)

as at 31 December 2009	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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
®
software was used and Datamine
®
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
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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
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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

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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
Taquaraáu 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 20º to 30º. 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.

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 Metassediments
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

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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 use 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

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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

Brasil Mineração	Category	Tonnes million	Grade g/t	Contained gold tonnes	Contained gold 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

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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

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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 Antes 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
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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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0

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
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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.

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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
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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
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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.

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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
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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
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Euronext Brussels:
ANG
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AngloGold Ashanti posts information that is important to investors on the main page of its website at www.anglogoldashanti.com and under the “Investors” tab on the main page. This information is updated regularly. Investors should visit this website to obtain important information about AngloGold Ashanti.

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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