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
P
2

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
P
3
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

P
4
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
P
5
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
P
6

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
P
7
Mineral Resource by country (attributable)

Contained Tonnes	Grade gold	Contained 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
P
8
Exclusive Mineral Resource* by country (attributable)
Contained
Contained
Tonnes
Grade
gold
gold
as at 31 December 2009
Category
million
g/t
tonnes
Moz
South Africa
Measured
22.89
14.34
328.17
10.55
Indicated
100.15
11.48
1,149.86
36.97
Inferred
21.11
15.73
332.07
10.68
Total
144.15
12.56
1,810.10
58.20
Namibia
Measured
7.39
0.59
4.34
0.14
Indicated
34.43
1.19
40.99
1.32
Inferred
18.53

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

Measured
3.75
0.78
2.93
0.09
Indicated
45.56
0.86
39.30
1.26
Inferred
78.22
0.89
69.85
2.25
Total
127.52
0.88
112.07
3.60
Mali
Measured
4.86
0.79
3.85
0.12
Indicated
20.27
1.58
32.05
1.03
Inferred
20.89
1.77
36.94
1.19
Total
46.02
1.58
72.84
2.34
Tanzania
Measured
–
–
–
–
Indicated
43.22
3.21
138.72

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

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

15.16
0.93
14.18
0.46
Inferred
402.51
1.00
401.40
12.91
Total
417.67
0.99
415.57
13.36
Total
Measured
255.24
2.55
651.88
20.96
Indicated
509.64
3.62
1,843.61
59.27
Inferred
759.32
2.09
1,586.84
51.02
Total
1,524.20
2.68
4,082.34
131.25

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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
9

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
P
10
Reconciliation of Mineral Resource and Ore Reserve
as at 31 December 2009
Au Content (attributable) Moz

Gold	Mine	Category	2008	Deple-tion (1)	Explo-ration	Metho-dology	Model change	Other change (2)	Scope change (3)
Southern Africa region									
Great Noligwa		Resource	7.65	-0.23	–	-0.49	0.02	–	–
		Reserve	2.63	-0.15	–	-0.07	-0.80		
Kopanang		Resource	9.49	-0.63	0.08	–	1.10	–	–

Reserve
4.00
-0.35
0.08
-0.30
-0.08
Moab Khotsong
Resource
18.24
-0.33
0.61
-0.01
2.23
-0.08
-0.22
Reserve
7.32
-0.25
–
0.09
-0.02
Tau Lekoa
Resource
5.31
-0.19
0.90
-0.04
0.17
0.05
–
Reserve 0.92 -0.19
–
–
0.07
Vaal River
Resource
5.02
-0.17
–
-3.13
0.14
–
–
Surface (VRGO)
Reserve
1.91
-0.18
–
0.01
–
Mponeng

Resource
49.43
-0.67
-0.14
0.09
0.93
–
0.19
Reserve
12.99
-0.56
–
-0.47
0.75
Savuka
Resource
4.37
-0.06
–
-0.26
-0.21
–
–
Reserve
0.76
-0.03
–
0.02
-0.07
TauTona
Resource
7.14
-0.23
–
0.01
-0.54
–
-0.19
Reserve
3.08
-0.21
–
-0.11
-0.03
West Wits
Resource
1.37
-0.01
–
-1.17
0.01

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

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

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

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

1. Depletion: reduction in Ore Reserve based on ore delivered to the plant and corresponding in situ reduction in the Mineral Resource.

2. Model change: difference between the Ore Reserve based on the start of year and end of year Mineral Resource models.

3. Scope change: difference resulting from change in cut-off grade, mine call factor, new project studies and any other factors influencing the Ore Reserve estimations.

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

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

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

Decrease due to a more constrained geological model and a higher cut-off grade for underground mining
8.89
8.89
New acquisition plus reduction due to constraining Mineral Resource in pit shells
4.14
4.14
New acquisition plus increased underground Ore Reserve
67.38
-0.10
0%
26.14
4.52
21%

Group overview
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
12
Reconciliation of Mineral Resource and Ore Reserve cont.
as at 31 December 2009
Au Content (attributable) Moz

		2008	Deple-tion (1)	Gold price	Explo-ration	Metho-dology	Model change	Other (2)	Scope change (3)
Australasia region									
Boddington	Resource	11.91	–	–	–	–	–	–	-11.91
	Reserve	6.69	–						-6.69
Sunrise Dam	Resource	3.85	-0.48	0.06	–	0.27	–	-0.08	
	Reserve	1.90							

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

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

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

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

1. Depletion: reduction in Ore Reserve based on ore delivered to the plant and corresponding in situ reduction in the Mineral Resource.

2. Model change: difference between the Ore Reserve based on the start of year and end of year Mineral Resource models.

3. Scope change: difference resulting from change in cut-off grade, mine call factor, new project studies and any other factors influencing the Ore Reserve estimations.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
13
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
P
14
Southern Africa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Southern Africa

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
15
Regional overview
AngloGold Ashanti's Southern Africa region includes the group operations in South Africa and Namibia.
In 2009, the Southern Africa region produced 1.862Moz (57,922kg) of gold, equivalent to 40% of group production, at a total
cash cost of $472/oz.
The Mineral Resource in Southern Africa, attributable to AngloGold Ashanti, totalled 109.27Moz at year-end and the attributable Ore Reserve, 32.57Moz.
Mineral Resource by region (attributable)
Contained
Contained
Tonnes
Grade
gold
gold
as at 31 December 2009
Category
million
g/t
tonnes
Moz
Southern Africa
Measured
47.61
9.33
444.23
14.28
Indicated
367.39
6.44
2,364.20
76.01
Inferred
60.77
9.72
590.37
18.98
Total
475.76
6.97
3,398.80
109.27
Ore Reserve by region (attributable)
Contained
Contained
Tonnes
Grade
gold
gold

as at 31 December 2009
Category
million
g/t
tonnes
Moz
Southern Africa
Proved
18.65
4.33
80.73
2.60
Probable
246.36
3.78
932.22
29.97
Total
265.01
3.82
1,012.95
32.57

Southern Africa – South Africa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
16
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.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
17
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

Southern Africa – South Africa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
18

- 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

Mine/ Project	Category	Spacing m (- x -) hole	Diamond	RC	Blast- hole	Other	Comments
Great	Measured	5 x 5	–	–	–	Chip sampling of stope faces	
Noligwa	Indicated	100 x 100	–	–	–	Diamond drilling from development ends	
	Inferred	200 x 200	–	–	–	Diamond drilling from development ends	
Grade control							

–
–
–
–
See Measured category
Kopanang
Measured
5 x 5
–
–
–
Chip sampling of stope faces
Indicated
200 x 200
–
–
–
Diamond drilling from development ends
Inferred
1,000 x 1,000
–
–
–
Surface drillholes
Grade control
–
–
–
–
See Measured category

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
19
Details of average drillhole spacing and type in relation to Mineral Resource classification cont.

Type of drilling	Mine/	Spacing	Diamond	RC Blast- Other	Comments
Project	Category	m (- x -)	hole		
Moab	Measured	5 x 5	–	–	–
Chip sampling of stope faces					
Khotsong	Indicated	2 x 200	–	–	–
Diamond drilling from development ends					
	Inferred	1,000 x 1,000	–	–	–
Surface drillholes					
Grade control			–	–	–
See Measured category					
Mponeng	Measured	5 x 5	–	–	–
Chip sampling of stope faces					
	Indicated	100 x 100	–	–	

–
Diamond drilling from development ends
Inferred
1,000 x 1,000
–
–
–
Surface drillholes
Grade control
–
–
–
–
See Measured category
Savuka
Measured
5 x 5
–
–
–
Chip sampling of stope faces
Indicated
100 x 100
–
–
–
Diamond drilling from development ends
Inferred
1,000 x 1,000
–
–
–
Surface drillholes
Grade control
–
–
–
–
See Measured category
Tau Lekoa
Measured
5 x 5
–
–
–
Chip sampling of stope faces
Indicated
50 x 200
–
–
–

Diamond drilling from development ends
Inferred
1,000 x 1,000
–
–
–
Surface drillholes
Grade control
–
–
–
–
See Measured category
TauTona
Measured
5 x 5
–
–
–
Chip sampling of stope faces
Indicated
2 x 200
–
–
–
Diamond drilling from development ends
Inferred
1,000 x 1,000
–
–
–
Surface drillholes
Grade control
–
–
–
–
See Measured category
Vaal River
Measured
–
–
–
–
Run of mine sampling
Surface
Indicated
–
–
–
–

Run of mine sampling
Inferred
–
–
–
–
Run of mine sampling
Grade control
–
–
–
–
Run of mine sampling
West Wits
Measured
–
–
–
–
Run of mine sampling
Surface
Indicated
–
–
–
–
Run of mine sampling
Inferred
–
–
–
–
Run of mine sampling
Grade control
–
–
–
–
Run of mine sampling

Ore Reserve estimation

All mine designs are undertaken using the Cadsmine ® software package and include the delineation of mining or stoping areas for each mining level and section, usually leading from an extension to the existing mining sequence, and the definition of the necessary development layouts. The in situ Mineral Resource is scheduled monthly for the full Life-Of-Mine (LOM) plan. The value estimates for these schedules are derived directly from the MRIS.

Modifying factors are applied to the in situ Mineral Resource to arrive at an Ore Reserve. These factors comprise a dilution factor to accommodate the difference between the mill width and the stoping width as well as the MCF.

Inferred Mineral Resource in business plan
The LOM plans include a minimal Inferred Mineral Resource.

Southern Africa – South Africa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
20
Ore Reserve modifying factors
as at 31 December 2009

Mine call factor	Metal-lurgical recovery	Cut-off grade	Cut-off weighted width	Stoping Dilution (MCF)
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
–
–
–
–
–
–

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
21

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 metric units (total) metres	Average width (cm)	Average g/t	Average cm g/t	Average kg/t	Average 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
Southern Africa – South Africa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
22

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
23
Mineral Resource – Uranium (U3O8) cont.

Contained Resource Tonnes	Grade uranium oxide	Pounds	Mine/Project category
million	kg/t	tonnes	million
Savuka			
Measured			
–			
–			
–			
–			
Indicated			
6.59	0.26	1,700	3.75
Inferred			
–			
–			
–			
–			
Total			
6.59	0.26	1,700	3.75
TauTona			
Measured			
–			
–			
–			
–			
Indicated			
8.26	0.28	2,317	5.11
Inferred			
–			
–			

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

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

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

Southern Africa – South Africa – Great Noligwa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
24
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
25
Ore Reserve
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Great Noligwa
Category
million
g/t
tonnes
Moz
Crystalkop Reef
Proved
0.47
6.11
2.85
0.09
Probable
1.37
6.10
8.33
0.27
Total
1.83
6.10
11.18
0.36
Vaal Reef
Proved
3.19
7.98
25.48
0.82
Probable
1.67
7.85 13.13
0.42
Total
4.86
7.94
38.61
1.24
Great Noligwa
Total
6.70

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

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

Southern Africa – South Africa – Great Noligwa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
26
Competent persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Frans Putter
SACNASP
400052/95
25 years
Ore Reserve
Andre Kruger
PLATO
PMS0114
31 years
Great Noligwa – underground (metric)
Tonnes above
cut-off (millions)
0.00
Cut-off grade (g/t)
25.00
Average grade
above cut-off (g/t)
Tonnes above cut-off
Ave grade above cut-off
15.00
5.00
10.00
10.0
15.0
20.0
25.0
30.0
0.0
20.0
16.0
8.0
4.0
12.0
20.00

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Southern Africa – South Africa – Kopanang
P
27
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.

Southern Africa – South Africa – Kopanang
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
28
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Kopanang
Category
million
g/t
tonnes
Moz
Crystalkop
Reef
Measured
0.07
12.23 0.86 0.03
Indicated
0.35
12.81 4.43 0.14
Inferred 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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
29
Ore Reserve
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Kopanang
Category
million
g/t
tonnes
Moz
Crystalkop Reef
Proved
0.00
5.70
0.01
0.00
Probable
0.00
5.70
0.02
0.00
Total
0.01
5.70
0.04
0.00
Vaal Reef Base
Proved
0.87
6.96
6.02
0.19
Probable
15.23
5.61
85.50
2.75
Total
16.10
5.69
91.52
2.94
Vaal Reef EDOM
Proved

0.13
6.27
0.83
0.03
Probable
2.02
5.86
11.81
0.38
Total
2.15
5.88
12.64
0.41
Kopanang
Total
18.25
5.71
104.20
3.35

Competent persons

Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Leanne Brenda Freese
GSSA
966602
13 years
Ore Reserve
Andre Johnson
SACNASP
400011/06
20 years

Kopanang: Mineral Resource reconciliation
2008 vs 2009
Ounces (millions)
9.49
2008
-0.63
Depletion
0.08
Gold
price
1.10
Exploration

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

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

Southern Africa – South Africa – Moab Khotsong
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
30
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.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
31

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
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
32
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
33
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
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
34
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.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
35
Exclusive Mineral Resource
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Tau Lekoa
Category
million
g/t
tonnes
Moz
Measured
3.04
6.36
19.33
0.62
Indicated
40.04
3.85
154.19
4.96
Inferred
3.17
6.05
19.15
0.62
Tau Lekoa
Total
46.25
4.17
192.68
6.19
Tau Lekoa: Ore Reserve reconciliation
2008 vs 2009
Ounces (millions)
0.92
2008
-0.19
Depletion
0.00
Model
Change
0.00
New
ounces

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

Southern Africa – South Africa – Tau Lekoa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
36
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Southern Africa – South Africa – Mponeng
P
37
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
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
38

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.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
39
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Mponeng
Category
million
g/t
tonnes
Moz
CLR below 120 level
Measured
–
–
–
–
Indicated
29.57
16.27
480.98
15.46
Inferred
14.87
16.05
238.67
7.67
Total
44.43
16.20
719.66
23.14
Mponeng WUDLS
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
4.38

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

Measured
3.01
20.08
60.40
1.94
Indicated
7.37
15.51
114.38
3.68
Inferred
–
–
–
–
Total
10.38
16.84
174.78
5.62
VCR above 109 level
Measured
7.26
10.90
79.20
2.55
Indicated
7.30
8.21
59.90
1.93
Inferred
–
–
–
–
Total
14.56
9.55
139.10
4.47
VCR below 120 level
Measured
0.09
22.65
2.02
0.07
Indicated
8.92
16.84
150.13

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

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

Exclusive Mineral Resource
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Mponeng
Category
million
g/t
tonnes
Moz
Measured
8.77
15.70
137.73
4.43
Indicated
40.89
15.59
637.50
20.50
Inferred
3.85
17.33
66.74
2.15
Mponeng
Total
53.51
15.73
841.97
27.07

Exclusive Mineral Resource

It is customary with the current mine design to leave 35 to 50% of the Exclusive Mineral Resource as safety and remnant pillars ahead of current mining. These pillars and remnants are designed to provide additional stability to the mining faces during operations. A portion of the TauTona shaft pillar and remaining ore will be mined by Mponeng from the VCR and CLR.

Mineral Resource below infrastructure
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Mponeng

Category
million
g/t
tonnes
Moz
VCR below 120 level
Total
9.01
16.90
152.15
4.89
CLR below 120 level
Total
44.43
16.20
719.66
23.14
WUDLS
Total
4.38
12.39
54.22
1.74
Mponeng
Total
57.81
16.02
926.03
29.77

Southern Africa – South Africa – Mponeng
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
40

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
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
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
42
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Southern Africa – South Africa – Savuka
P
43
South Africa – Savuka
Location
The Savuka mine is located about 18km south of the town of Carletonville, and forms part of AngloGold Ashanti's West Wits operations. The mine exploits the CLR at depths varying between 2,600 and 3,500m below surface as well as the VCR in smaller proportions. The VCR, which is on average about 700m above the CLR has nearly been mined out. Currently operations are attempting to extract remnant pillars that are above the current pay limit.
Savuka has converted into a sequential grid mine. CLR and VCR panels are mined accordingly.
Geology
The CLR is a thin, on average 20cm thick, tabular, auriferous quartz pebble conglomerate formed near the base of the Central Rand Group. The CLR has been divided into three stratigraphic units. Economically the most important is unit 1 which is present as a sheet-like deposit over the whole mine. Unit 2 is a complex channel deposit that is presently only being mined along the south and west at Savuka. The reef may be over 2m thick where unit 2 is developed. Unit 3 is preserved below unit 1 in the southern parts of Savuka and is the oldest of the CLR conglomerates. The CLR has not been mined since 22 May 2009 due to a seismic event that left the lower levels inaccessible through the main shaft system. Production has since been focused on extracting pillars of VCR.
The VCR comprises a quartz pebble conglomerate (up to 5m thick) capping the topmost angular unconformity of the Witwatersrand Supergroup. The topography of the VCR depositional area is uneven, and consists of a series of slopes and horizontal terraces at different elevations. The base of the Ventersdorp Lava strikes in a direction across the north-western part of the lease area.
The orebody is cross cut by geological features that displace the reef horizon. The faulting, in conjunction with the numerous intrusives that also intersect the orebody on the various levels, is responsible for most of the risk inherent with this type of deep-level gold mining. There is also a high level of seismicity associated with these features.
Exploration
The Middelvlei Reef is another Witwatersrand auriferous placer mined in the West Wits. It is located approximately 90m above the CLR stratigraphically. This reef comprises interbeds of quartz-pebble conglomerates, quartz wackes and thin siltstones.
The channel thickness varies up to a thickness of 1.6m, and the Middelvlei Reef is highly channelled with gold pay chutes most likely occurring at the base of the channels. These trends are similar in direction to the palaeo-current directions of the underlying footwall sequence. Middelvlei Reef has been mined at Blyvooruitzicht mine to the north of Savuka as well as at Gold Fields' Driefontein gold mine, but not at Savuka.
Exploration for these channels will be done by drilling from diamond drilling platforms developed at the end of each cross cut

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

Southern Africa – South Africa – Savuka
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
44
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

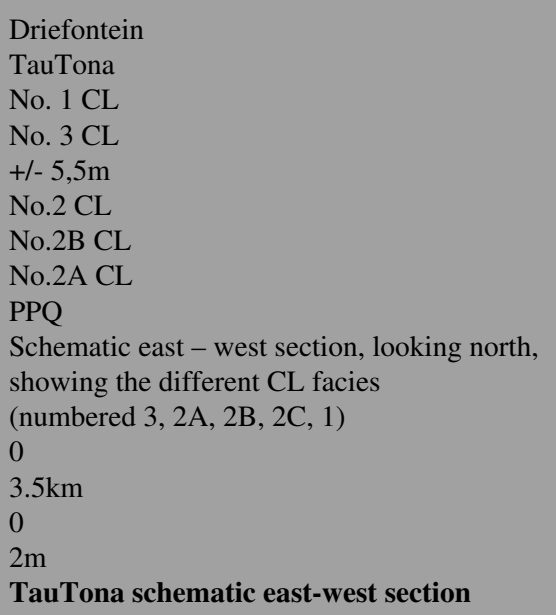
Savuka: Ore Reserve reconciliation
2008 vs 2009
Ounces (millions)
0.76
2008
-0.03
Depletion
0.02
Model
Change
0.00
New
ounces
from
projects
-0.07
Scope
Change
0.69
2009
0.00
Change in
Economics
0.00
0.00
Other
0.50
0.75
0.25
Savuka: Mineral Resource reconciliation
2008 vs 2009
Ounces (millions)
4.37
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
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

Southern Africa – South Africa – TauTona
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
46
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)



TauTona schematic east-west section

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
47
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
TauTona
Category
million
g/t
tonnes
Moz
CLR – 1C11
Measured
0.06
28.05
1.78
0.06
Indicated
0.49
30.58
14.91
0.48
Inferred
–
–
–
–
Total
0.55
30.29
16.69
0.54
CLR base
Measured
0.81
23.41
18.96
0.61
Indicated
4.37
20.96
91.66
2.95
Inferred
–

–
–
–
Total
5.18
21.34
110.62
3.56
CLR below 120
Measured
0.02
28.99
0.52
0.02
Indicated
0.53
28.15
15.00
0.48
Inferred
–
–
–
–
Total
0.55
28.18
15.53
0.50
0
3km
Legend
Areas of facies dominance
No. 1 CLR
Overlap of No. 1 CLR over No. 2 CL facies
No. 2 CL facies
No. 3 CL facies
CL erosion channels
Shafts
Suboutcrops
Suboutcrop of NL vs No.1 CL uncomformity
Suboutcrop of F/W Spc Mkr vs No.1 CL uncomformity
Suboutcrop No.2 CL vs No.1 CL uncomformity
Driefontein
Blyvooruitzicht
Doornfontein
Deelkraal
Elandsrand
Western Ultra
Deep Levels
TauTona

Savuka
Mponeng
5E
9W
3
1A Subvertical
CL eliminated by
Master Bedding Fault
Doornfontein
erosion channel
Western Driefontein
erosion channel
2
1
N
CLR facies map

Southern Africa – South Africa – TauTona
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
48
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
49
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
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
50
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.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
51
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Mine/Project
Category
million
g/t
tonnes
Moz
Vaal River Surface
SA Met – rock dump
Measured
–
–
–
–
Indicated
59.53
0.60
35.73
1.15
Inferred
5.06
0.69
3.48
0.11
Total
64.60
0.61
39.22
1.26
SA Met – tailings dump
Measured
–
–
–
–
Indicated
48.72
0.38
18.64
0.60
Inferred

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

Contained
Contained
Tonnes
Grade
gold
gold
Mine/Project
Category
million
g/t
tonnes
Moz
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
–
–
–
–
Vaal River Surface
Total
–
–
–
–
Measured
–
–
–
–
Indicated
0.29
1.30
0.38
0.01
Inferred
–
–
–
–
West Wits Surface
Total
0.29

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

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

Southern Africa – South Africa – Surface operations
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
52
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 factor (MCF)	Metallurgical recovery	Metal-lurgical recovery	Cut-off weighted RRF	Cut-off MRF	Comments
Mine	g/t	%	%	%	
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)
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Southern Africa – Namibia
P
53

Southern Africa – Namibia – Navachab
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
54
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
55
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Navachab
Category
million
g/t
tonnes
Moz
Anomaly 16
Measured
–
–
–
–
Indicated
1.96
1.20
2.36
0.08
Inferred
1.52
1.21
1.84
0.06
Total
3.48
1.21
4.20
0.14
Gecko
Measured
–
–
–
–
Indicated
0.57
1.60
0.90
0.03
Inferred
0.32

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

Measured
6.87
0.77
5.28
0.17
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
6.87
0.77
5.28
0.17
Stockpile (marginal ore)
Measured
6.41
0.53
3.41
0.11
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
6.41
0.53
3.41
0.11
Navachab
Total
102.60
1.13
115.95
3.73
Exclusive Mineral Resource
as at 31 December 2009
Contained
Contained

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

Exclusive Mineral Resource

The main pit contains the largest portion (1.88Moz) of the Exclusive Mineral Resource. Of this, approximate 0.75Moz are in a
conceptual pit plan and further optimisation is continuing to bring this Exclusive Mineral Resource to account. Approximately
0.11Moz of the Exclusive Mineral Resource are hosted in the marginal ore stockpiles at a grade of 0.53g/t and the intention
is to test this for economic viability through pre-concentration during 2010.

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

Southern Africa – Namibia – Navachab
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
56
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
57
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
P
58
Continental Africa
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
59

Regional overview

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

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

Combined production from these operations declined by 3% to 1.52Moz of gold in 2009, equivalent to 33% of group production. In addition, AngloGold Ashanti has an active greenfields exploration programme in the Democratic Republic of the Congo (DRC), with Mongbwalu currently undergoing a pre-feasibility study, whilst the Kibali joint venture with Randgold Resources and the DRC government is in the process of optimising the feasibility study. This is in addition to the brownfields exploration being conducted in and around its existing operations.

The Mineral Resource in Continental Africa, attributable to AngloGold Ashanti, totalled 67.38Moz at year-end, including an attributable Ore Reserve of 26.14Moz.

Mineral Resource by region (attributable)

Contained	Contained	Tonnes	Grade	gold	gold
as at 31 December 2009					
Category	million	g/t	tonnes	Moz	
Continental Africa					
Measured	135.14	3.34	451.36	14.51	
Indicated	386.64	2.47	956.19	30.74	
Inferred	242.39	2.84			

688.23
22.13
Total
764.17
2.74
2,095.78
67.38
Ore Reserve by region (attributable)
Contained
Contained
Tonnes
Grade
gold
gold
as at 31 December 2009
Category
million
g/t
tonnes
Moz
Continental Africa
Proved
80.36
2.16
173.28
5.57
Probable
234.20
2.73
639.84
20.57
Total
314.56
2.58
813.12
26.14

Continental Africa – DRC
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
60
Democratic Republic of the Congo (DRC)
Regional overview
AngloGold Ashanti has two advanced projects in the DRC, Kibali and Mongbwalu.
Kibali
On 15 October 2009 Randgold acquired a 50% indirect interest in Moto Goldmines Ltd through a joint venture with AngloGold
Ashanti. On 21 December 2009, Randgold and AngloGold increased their joint venture interest to 90%, whilst OKIMO retained
a 10% holding.
The project is a joint development between three separate groups:
•
AngloGold Ashanti;
•
Randgold Resources Limited, who is the operator, an African-focused gold mining and exploration business with primary
listings on the London Stock Exchange and Nasdaq; and
•
L'Office des Mines d'Or de Kilo-Moto (OKIMO), the state-owned company.
The consolidated lease is made up of 10 mining concessions.
Mongbwalu
The Mongbwalu Project is one of AngloGold Ashanti's most important exploration projects and is situated within the 10,000km
2
covered by Concession 40 in the Ituri Province of north-eastern DRC. Concession 40 has a rich history of gold occurrences and cover the entire Kilo Archaean granite-greenstone belt that extends approximately 850km west-northwest
of Lake Albert. The concession is held in a joint venture between AngloGold Ashanti Kilo (AGAK) and OKIMO, a governmental
body which currently holds a 13.8% non-contributory share. AGAK is 86.2% owned by AngloGold Ashanti Limited.
The area around the old Adidi mine will undergo a feasibility study as part of the agreement with the DRC government.
Mineral Resource and Ore Reserve gold prices and exchange rates

Units	2009	2008
Gold price – Mineral Resource		
US$/oz	1,000/1,025*	1,000
Gold price – Ore Reserve		
US$/oz	700	720

* Kibali uses $1,000/oz and Mongbwalu uses $1,025/oz
Details of average drillhole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/

Spacing
Diamond
RC
Blast-
Other
Comments
Project
Category
m (- x -)
hole
Kibali
Measured
–
–
–
–
–
Indicated
40 x 40
–
–
Inferred
40 x 80, 80 x 80
–
–
Grade control –
–
–
–
–
Mongbwalu
Measured
–
–
–
–
–
Indicated
–
–
–
–
–
Inferred
50 x 50
–
–
Grade control –
–
–
–

_

Ore Reserve modifying factors

as at 31 December 2009

Mine call	Metal-	Cut-off	Stoping								
factor	lurgical	weighted	width	Dilution	Dilution	RRF	MRF				
(MCF)	recovery	Mine	g/t	cm	%	g/t	%	%	%	%	
Kibali											
Surface	0.89	n/a	n/a	n/a	n/a	n/a	n/a	84.5			
Underground	2.30	1,700	7.7	2.50	74.1	99.9	n/a	91.3			

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa – DRC – Kibali
P
61
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
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
62

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

Kibali	Category	Tonnes million tonnes	Grade gold g/t	Contained gold Moz
Surface	Measured	–	–	–
	Indicated	41.51	2.11	87.53
	Inferred	14.77	2.81	

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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
63
Ore Reserve
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Kibali
Category
million
g/t
tonnes
Moz
Surface
Proved
–
–
–
–
Probable
15.10
3.02
45.66
1.47
Total
15.10
3.02
45.66
1.47
Underground
Proved
–
–
–
–
Probable
13.61
6.10
82.99
2.67
Total
13.61
6.10
82.99
2.67
Kibali
Total

28.71
4.48
128.65
4.14
Competent persons
Professional
Registration
Relevant
Category
Type
Name
organisation
number
experience
Surface
Mineral Resource
Patrick Adams
AusIMM
112739
25 years
Ore Reserve
Quinton de Klerk
AusIMM
210114
15 years
Underground
Mineral Resource
Patrick Adams
AusIMM
112739
25 years
Ore Reserve
Paul Kerr
AusIMM
230539
13 years
Kibali – surface (metric)
Tonnes above
cut-off (millions)
Cut-off grade (g/t)
Average grade
above cut-off (g/t)
Tonnes above cut-off
Ave grade above cut-off
0.00
4.00
3.00
2.00
1.00
1.0
10.0

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

Continental Africa – DRC – Mongbwalu
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
64
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
65
Project
At the conclusion of the joint venture agreement negotiations, a detailed feasibility study will commence on the Mongbwalu
Mineral Resource. This 12-month study is aimed at developing a financially viable mine that has the potential to generate rapid
cash flows with a payback period of less than seven years. The mining operations are planned to feed a plant with approximately 60,000tpm. A high level conceptual study of the various mining options shows an underground mining method
will generate the highest cash flow.
The feasibility study will be focused on developing an underground mine centred around the old Adidi underground workings
that will potentially use some of the existing development to access ore as soon as possible.
Mineral Resource Estimation
AGK began drill testing of the Mineral Resource potential of the Mongbwalu area in mid-2005 and by the end of 2006, the
broader Mongbwalu area (Nzebi-Adidi-Kanga-Pluto) had been diamond drilled on a 200m x 200m grid. The programme
covered an area 2.2 by 2.7km centred over the southern part of the old Adidi mine.
From this drilling, distinct zones with potentially economic grades of gold in quartz-veins and mylonite were delineated. Infill
RC and DD on 50m x 50m centres was undertaken during 2007 to cover the areas of maximum potential hosting near-surface
open pit or shallow underground extractable mineralisation. The aim was to define an initial Inferred Mineral Resource by the
end of 2007. Data obtained from a total of 87,933m of drilling was used for Mineral Resource modelling and estimation which
was completed in late 2007. Resource drilling continued into 2008 with a single diamond rig and 8,824m of additional drilling
was completed.
In September 2009 a second Mineral Resource estimation was completed. The principal Mongbwalu mylonite horizons and
other important geological units defined by drillhole logging and interpretation were modelled using conventional 3D wireframing techniques. To define the Inferred Mineral Resource, ore envelopes were created using a combination of grades
greater than 3.0g/t and the presence of quartz veining. Following geostatistical evaluation of the drillhole assay database, gold
grades were interpolated into a 3D block-model incorporating the principal geological units and ore envelopes using ordinary
kriging to define the Inferred Mineral Resource.
Initial scoping level mining, metallurgical, geotechnical, hydrogeological, environmental, socio-political and infrastructural
engineering studies were undertaken in parallel with the drilling to support the Mineral Resource estimate.

Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Mongbwalu
Category
million
g/t
tonnes
Moz
Underground
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
8.84
7.38
65.26
2.10
Mongbwalu
Total
8.84
7.38
65.26
2.10
Exclusive Mineral Resource
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Mongbwalu
Category
million
g/t
tonnes
Moz
Measured

–
–
–
–
Indicated
–
–
–
–
Inferred
8.84
7.38
65.26
2.10
Mongbwalu
Total
8.84
7.38
65.26
2.10
Competent persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Mike O`Brien
AusIMM
206669
29 years
Continental Africa – DRC – Mongbwalu
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
66
Mongbwalu – underground (metric)
Tonnes above
cut-off (millions)
Cut-off grade (g/t)
Average grade
above cut-off (g/t)
Tonnes above cut-off
Ave grade above cut-off
1.00
19.00
5.00
3.00
0.0

20.0
15.0
10.0
5.0
7.00
9.00
11.00
13.00
15.00
17.00
0.0
20.0
24.0
12.0
16.0
8.0
4.0
Mongbwalu: Mineral Resource reconciliation
2008 vs 2009
Ounces (millions)
2.53
2008
0.00
Depletion
0.00
Gold
price
0.00
Exploration
-0.21
Metho-
dology
2.10
2009
-0.21
Cost
1.00
0.00
Other
2.50
2.00
1.50
Change

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa – Ghana
P
67
Ghana
Regional overview
AngloGold Ashanti has two mines in Ghana: Obuasi, which has both surface and underground operations and Iduapriem, an
open-pit mine. Obuasi and Iduapriem are both wholly owned by AngloGold Ashanti. Obuasi is located in the Ashanti region
of southern Ghana, approximately 80km south of Kumasi. It is primarily an underground mine operating at depths of up to
1,500m with a continuous history of mining dating back to the 1890s.
The orebody consists of two main ore types, firstly, quartz veining with non-refractory free gold and secondly, a sulphide-
hosted mineralisation style generally associated with arsenopyrite which is refractory. Three main structural trends control the
gold mineralisation within a 9km long continuous zone which remains open at depth. The Obuasi orebody is considered one
of the classic Birimian hosted orebodies.
At Iduapriem, situated in the western region of Ghana, some 70km north of the coastal city of Takoradi and 10km south-west of Tarkwa, the gold mineralisation is hosted by the Proterozoic Banket Series, a conglomerate sequence of the
Tarkwaian System.
Mineral Resource estimation
Mineral Resource estimates are derived from interpretations of information about the location, shape, continuity and grade of
the individual orebodies.
The underground Mineral Resource at Obuasi is estimated using block models within the delineated mineralised ore zones.
The geological interpretation is based on diamond drill and cross-cut sampling information. A prototype block model of
20m x 5m x 15m representing the minimum mining unit was used and estimates are based on ordinary kriging.
Although no open-pit mining has taken place at Obuasi since 2005, three pits still contain a Mineral Resource. The open pit
Mineral Resource at Obuasi and Iduapriem was estimated using 3D computer block models constructed using the Datamine
®
software. Geological interpretation was based on trench and RC and/or DD data. A prototype block model of 30m x 30m x 10m
was used by the geological model and ordinary kriging as the primary estimation methodology.
Surface stockpiles volumes are based on surveyed figures and grades based on historical sampling. Tailings are part of the
Mineral Resource with tonnes and grades based on combinations of 3D block models of some dams and historical metallurgical discharge data.
Ore Reserve estimation
The 3D Mineral Resource models are used as the basis for the Ore Reserve. An ore envelope is developed using the Mineral
Resource block model, geological information and the relevant cut-off grade, which is then used for mine design. Datamine
®

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

Continental Africa – Ghana
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
68
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/ Project	Spacing Category	Diamond m (- x -) hole	RC	Blast- Other	Comments
	Iduapriem	Measured	50 x 50 and 50 x 100	–	–	
		Indicated	50 x 75 and 75 x 100	–	–	
		Inferred	50 x 100, and 100 x 100	–	–	

Grade control 10 x 15
–
–
–
Obuasi:
Measured
20 x 20,
–
Auger drilling, historical information.
surface
50 x 50
–
No current exploration or production.
Indicated
30 x 0,
–
Auger drilling, historical information.
30 x 30,
–
No current exploration or production.
50 x 50,
–
60 x 0, and
–
60 x 60
–
Inferred
90 x 0,
–
Auger drilling, historical information.
90 x 90,
–
No current exploration or production.
Grade control 10 x 10
–
–
–
Obuasi:
Measured
20 x 20
–
–
–
underground
Indicated
60 x 60
–
–
–
Inferred
120 x 120

–
–
–
Grade control 1.5 x 25
–
–
–
Chip sampling of development ends

Ore Reserve modifying factors

as at 31 December 2009

Cut-off	Mine call factor	Metallurgical weighted RRF	MRF	
(MCF)		recovery		
Mine				
g/t	%	%	%	%
Iduapriem				
Ajopa				
1.00	–	93	100	95
Block 3W				
1.00	–	93	100	95
Block 5				
1.00	–	93	100	95
Blocks 7 and 8				
1.00	–	93	100	95
Stockpile (full grade ore)				
1.00	–			

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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa – Ghana – Iduapriem
P
69
Ghana – Iduapriem
Location
Iduapriem is located in the western region of Ghana, some 85km north of the coastal city of Takoradi, and approximately 8km
south-west of Tarkwa. Iduapriem is an open-pit mine which began mining operations in 1992. Its processing facilities include
a 4.4Mt per annum CIP plant with a gravity circuit that recovers about 30% total gold.
Geology
Iduapriem is located within the Tarkwaian Group and forms part of the West Africa Craton which is covered to a large extent
by metavolcanics and metasediments of the Birimian Supergroup. In Ghana, the Birimian terrane consists of north-east to
south-west trending volcanic belts separated by basins and the Tarkwa Group was deposited in these basins as shallow water
deltaic sedimentation. The gold mineralisation is contained in the Proterozoic Banket Series conglomerates.
The Banket Reef Zone comprises a sequence of individual beds of quartz pebble conglomerates (Banket beds), breccia conglomerates, meta-sandstones (also called quartzites) and grits.The outcropping Banket Series in the mine area form prominent arcuate ridges extending southwards from Tarkwa, westwards through Iduapriem and northwards towards Teberebie.
All known gold mineralisation within the Banket Series is associated with the conglomerates and is found within the matrix
that binds the pebbles together. Gold content is a function of the size and amount (packing) of quartz pebbles present within
a conglomeratic unit. At Iduapriem, the gold mineralisation is unrelated to metamorphic or hydrothermal alteration events and
the gold is particulate and free milling. Mineralogical studies indicate that the grain size of native gold particles ranges between
2 and 500 microns (0.002 to 0.5mm) and averages 130 microns (0.13mm). Sulphide mineralisation is present only at trace
levels and is not associated with the gold.
Exploration
The leases of the mine have been extensively explored for their near surface Mineral Resource. However, limited work has
been done to assess the underground potential of these lease holdings. Hence, the opportunity to increase the Mineral Resource of the mine lies predominantly in the under-explored underground area. Studies are currently underway to determine
if an economic Mineral Resource to support an underground mining proposition could be defined.
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Iduapriem
Category

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

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

Continental Africa – Ghana – Iduapriem
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
70
Mineral Resource (attributable) cont.
as at 31 December 2009

Contained Tonnes	Grade gold	Contained 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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
71
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)
Cut-off grade (g/t)
Average
grade
above
cut-off
(g/t)
Tonnes above cut-off
Ave grade above cut-off
0.00
1.00
0.50
0.0
2.00
1.50
200.0
3.00
2.50
40.0
80.0
100.0
120.0
160.0
180.0
140.0
60.0
20.0
1.5
3.5

4.0
3.0
2.5
2.0

Continental Africa – Ghana – Obuasi
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
72
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
73
Exploration
Exploration on the Obuasi concession is currently limited to underground drilling to explore the Obuasi Deeps below 50 level
and southern extensions of the current mining areas above 50 level. Drilling from 50 level was suspended in July 2009 as a
result of torrential rain which flooded the level. Exploration activities will re-commence in early 2010.
Exploration drilling above 50 level recommenced in August 2009 and the first ore zone intersection is expected early in 2010.
Projects
Mining method
Obuasi has embarked on a conversion of mining method over the next two years from current transverse and longitudinal
open stoping, to a full longitudinal retreat method (LRM). The conversion will take place in mining blocks where it is suitable
to do so. In 2008, 20% of the mine was designed for LRM; in 2009 up to 70% above 50 level and 100% below 50 level had
been designed with the new method and 100% below 50 level. Stope production is scheduled to start in mid 2010.
The major advantage of this method is the up to 50% reduction in waste development; reducing capital expenditure along
with additional reef drive exposure.
The change in mining method has been coupled with the introduction of fully mechanised development from the second
quarter of 2010 with up to 65% of all development being mechanised by 2012.
Pompora reclamation project
The objective of the project is to construct a reclamation station and pipeline to enable the reclamation of Kokoteasua and
Pompora tailing storage facilities and pump the reclaimed material to the tailings treatment plant (TSP) to extract the gold. The
feasibility study is based on the utilisation of the TSP float circuit and redundant capacity in the Biox
©
and Biox
©
CIL circuit at
the sulphide treatment plant.
KMS 50-60 level mining block 11
The intention is to complete the feasibility for this project late in 2010. Initial development is scheduled for the first quarter of
2011. The project is designed to be fully LRM with 100% mechanised development. First gold from the project is scheduled
for 2013.
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold

Obuasi
Category
million
g/t
tonnes
Moz
Above 50 base
Measured
36.52
7.58
276.84
8.90
Indicated
15.59
7.52
117.29
3.77
Inferred
24.17
6.81
164.52
5.29
Total
76.28
7,32
558.65
17.96
Adansi 50-60
Measured
1.69
5.66
9.59
0.31
Indicated
1.27
4.68
5.94
0.19
Inferred
2.82
5.55
15.63
0.50
Total
5.78
5.39
31.16
1.00
Adansi 60-70
Measured
0.26

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

Continental Africa – Ghana – Obuasi
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
74
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
75
Mineral Resource (attributable) cont.
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Obuasi
Category
million
g/t
tonnes
Moz
Tailings (Pompora)
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
32.78
1.58
51.79
1.67
Total
32.78
1.58
51.79
1.67
Upper Mine
Measured
3.32
10.06
33.42
1.07
Indicated
1.64
8.39
13.76
0.44
Inferred
1.36

10.48
14.26
0.46
Total
6.32
9.71
61.44
1.98
Obuasi
Total
151.36
6.07
918.34
29.53
Exclusive Mineral Resource
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Obuasi
Category
million
g/t
tonnes
Moz
Measured
23.54
5.66
133.13
4.28
Indicated
13.91
7.48
104.08
3.35
Inferred
28.04
6.51
182.64
5.87
Obuasi
Total
65.49
6.41
419.86
13.50
Exclusive Mineral Resource

The Obuasi Exclusive Mineral Resource is made up of Mineral Resource from underground, open pit and tailings. The bulk of
the Exclusive Mineral Resource (71%) is from underground and of this Mineral Resource, 52% is locked up in Mineral
Resource blocks and remnants in historical mined out areas in the north of the mine. This Mineral Resource cannot be accessed due to old infrastructure. The remainder of the underground Exclusive Mineral Resource is mineable between
Mineral Resource and Ore Reserve cut-offs (11%), below 50 level (18%) and in areas where more investigation is required (6%).
Some of the Exclusive Mineral Resource will be brought into the Ore Reserve as mining development is put into place to
access these areas, and also as the economic criteria change.
Approximately 10% of the Exclusive Mineral Resource is from tailings and will be brought into the Ore Reserve as infrastructure
is developed and capacity is increased in the tailings treatment plant. Two of the tailings dams are also active and an Exclusive
Mineral Resource margin will be maintained.
None of the three open pits in the Mineral Resource is currently included in the Ore Reserve. This represents 4% of the
Exclusive Mineral Resource. To bring open pits into the Ore Reserve will require more geotechnical investigation, optimisation
and mine design.

Mineral Resource below infrastructure

as at 31 December 2009

Contained	Contained	Tonnes	Grade	gold	gold
Obuasi	Category	million	g/t	tonnes	Moz
KMS 50 – 60 level					
	Total	5.97	14.57	87.01	2.80
KMS 60 – 70 level					
	Total	2.95	17.40	51.32	1.65
Adansi 50 – 60 level					
	Total	5.78			

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

Continental Africa – Ghana – Obuasi
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
76
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
77
Competent persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Heinrich Eybers
AusIMM
229471
23 years
Ore Reserve
Richard Downing
AusIMM
229889
23 years
Obuasi – surface (metric)
Tonnes above
cut-off (millions)
Cut-off grade (g/t)
Average grade
above
cut-off (g/t)
Tonnes above cut-off
Ave grade above cut-off
0.00
10.00
2.00
1.00
2.0
8.0
10.0
12.0
6.0
4.0
0.0
5.0
4.0
3.0
2.0
3.00
4.00
5.00
6.00
7.00

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

Continental Africa – Guinea
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
78
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
–
–
–

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
79

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 factor	Metal-lurgical weighted RRF	Cut-off MRF (MCF)	Mine recovery	
g/t	%	%	%	%
Comments				
Siguiri				
Bidini	0.35	100	100	100
93				
Average recovery (96% oxides, 55% transitional, 88% marginal ore)				
Eureka East	0.35	100	100	100
92				
As above				
Eureka North	0.35	100	100	100
93				

As above
Foulata
0.35
100
100
100
94
As above
Kalamagna
0.35
100
100
100
93
As above
Kami
0.35
100
100
100
92
As above
Kosise
0.35
100
100
100
93
As above
Kozan North
0.35
100
100
100
92
As above
Kozan South
0.35
100
100
100
93
As above
Seguelen
0.35
100
100
100
93
As above
Sintroko South

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

Continental Africa – Guinea – Siguiri
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
80
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

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

Continental Africa – Guinea – Siguiri
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
82

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

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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
83
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

Continental Africa – Guinea – Siguiri
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
84
Exclusive Mineral Resource
as at 31 December 2009

Contained Tonnes	Contained Grade	Contained gold	Contained gold
Siguiri Category	million	g/t	tonnes	Moz
Measured	3.75	0.78	2.93	0.09
Indicated	45.56	0.86	39.30	1.26
Inferred	78.22	0.89	69.85	2.25
Siguiri Total	127.52	0.88	112.07	3.60

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

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

Inferred Mineral Resource in business plan

The Inferred Mineral Resource is used in the pit optimisation process if its total percentage amounts to 10% or less of the total
Ore Reserve. If the Inferred Mineral Resource was greater than 15%, the optimisation was redone excluding the Inferred
resultant ounces. The Inferred Mineral Resource within an optimised shell and subsequent design was used for scheduling.

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

Siguiri: Ore Reserve reconciliation
2008 vs 2009
Ounces (millions)
3.25
2008
-0.26
Depletion
0.18
Model
Change
0.00
New
ounces
from
projects
0.11
Scope
Change
3.07
2009
0.10
Change in
Economics
2.00
-0.30
Other
3.00
3.50
2.50

Siguiri: Mineral Resource reconciliation
2008 vs 2009
Ounces (millions)
5.94
2008
-0.29
Depletion
0.09
Gold
price
0.46
Exploration

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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
85
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

Continental Africa – Guinea – Siguiri
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
86
Ore Reserve cont.
as at 31 December 2009

Siguiri	Category	Contained Tonnes million	Grade gold 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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa – Mali
P
87
Mali
Regional overview
AngloGold Ashanti has interests in three operations in the west African country of Mali – Sadiola (41%), Yatela (40%) and
Morila (40%). The Sadiola and Yatela operations are managed by AngloGold Ashanti, while Randgold Resources Limited
manages Morila.
Mineral Resource and Ore Reserve gold price
Units
2009
2008
Gold price – Mineral Resource
US$/oz
1,025
1,000
Gold price – Ore Reserve
US$/oz
700-880
720-870
Mineral Resource estimation
The Mineral Resource is taken as the material that falls within the $1,025/oz economic shell optimised for each individual
deposit. A 3D surface is generated to create the outline of the geological model. This model is then used as a prototype model
to estimate grades. Block sizes are between 25m x 25m x 10m and 30m x 30m x 10m (X Y Z) and where appropriate, selective sub-celling is used for definition on the geological and mineralisation boundaries. All the deposits have kriged block
models and where appropriate, a geostatistical technique called uniform conditioning is used to estimate the proportion of
economic ore that occurs above the cut-off and this is reported according to the dimensions of the practical mining unit.
Details of average drillhole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Diamond
RC
Blast-
Other
Comments
Project
Category
m (- x -)
hole
Morila
Measured
–

–
–
–
–
Processing stockpiles – grades
Indicated
–
–
–
–
–
are based on historic drilling
Inferred
–
–
–
–
–
Grade control –
–
–
–
–
Sadiola
Measured
25 x 25
–
–
Indicated
25 x 25,
–
–
30 x 30,
–
–
35 x 35, and
–
–
25 x 50
–
–
Inferred
25 x 50,
–
–
25 x 50, and
–
–
50 x 50
–
–

Grade control 5 x 10
–
–
–
Yatela
Measured
10 x 10, and
–
–
25 x 25
–
–
Indicated
25 x 25, and
–
–
35 x 45
–
–
Inferred
50 x 50
–
–
Grade control 5 x 10, and
–
–
–
10 x 10
–
–
–

Ore Reserve estimation

The Mineral Resource models are used as the basis for the Ore Reserve. Pit optimisation is done using Whittle ®
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	Mine call factor (MCF)	Cut-off grade	Metallurgical recovery	Metal-lurgical recovery	RRF	MRF	weighted average	Comments
		g/t	%	%	%	%		
Morila	Stockpile	1.40	–	–	100	89.0		Cut-off grades based on cut-off grade (full grade ore) used for stockpiling
	Stockpile	1.00	–	–	100	88.8		Cut-off grades based on cut-off grade (marginal ore) used for stockpiling
Sadiola	Deep Sulphides	0.72	100	100				

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

Main Pit
0.60
93
100
100
84.8
Factors applicable to the metal
Total stockpiles
0.65
–
–
–
84.8
Factors are not applied to the stockpile
material
Continental Africa – Mali
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
88

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa – Mali – Morila
P
89
Mali – Morila
Location
The Morila mine is situated some 280km by road south-east of Bamako, the capital city of Mali. The mine is operated by
Morila SA, a joint venture company incorporating Randgold Resources Ltd (40%), Anglogold Ashanti Ltd (40%), and the
Government of Mali (20%). Randgold Resources took over the operation of Morila mine from Anglogold Ashanti Ltd in
February 2008.
Mining
The Morila open-pit activities were successfully completed in April 2009. Consequently the main mining activity for the rest of
the mine life will be rehandling already mined stockpiles at a rate of 4.2Mtpa using a core and backup fleet comprising two
hydraulic excavators, two CAT 990 front-end loaders and seven Caterpillar 777 dump trucks.
Geology
The Morila orebody is located predominantly in metasediments within a broad north-north-west-trending corridor of shearing.
This shear zone has both near vertical and flat lying components. It is interpreted as being a second order shear off the main
Banafin shear, approximately 25km to the east. The Doubalakoro granite pluton bounds the sediments to the west and the
Massigui granite to the east. The deposit occurs within a sequence of amphibolites facies metamorphosed Birimian meta-
sediments. Gold mineralisation is associated with silica feldspar alteration and the sulphide minerals arsenopyrite, pyrrhotite,
and pyrite (with minor chalcopyrite).
Processing
Ore is processed at a rate of 4.2Mtpa via a conventional CIL plant after passing through primary and secondary crushing
processes followed by further comminution via a semi-autogenous grinding (SAG) mill and ball mill. After milling and
classification, the slurried ore passes through the cyanide leach circuit for gold extraction after which the leached ore is
pumped and deposited into the tailings storage facility (TSF). Supernatant water from the TSF is reclaimed and collected in
the return water dam before being returned to the mill for re-use.
Mineral Resource (attributable)
as at 31 December 2009
Contained
Contained
Tonnes
Grade
gold
gold
Morila
Category

million
g/t
tonnes
Moz
Stockpile (full grade ore)
Measured
3.94
1.74
6.85
0.22
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
3.94
1.74
6.85
0.22
Stockpile (marginal ore)
Measured
2.76
1.14
3.14
0.10
Indicated
–
–
–
–
Inferred
0.38
0.81
0.31
0.01
Total
3.14
1.10
3.44
0.11
Morila
Total
7.08
1.45
10.29

0.33

Exclusive Mineral Resource

as at 31 December 2009

Contained

Contained

Tonnes

Grade

gold

gold

Morila

Category

million

g/t

tonnes

Moz

Measured

–

–

–

–

Indicated

–

–

–

–

Inferred

0.38

0.81

0.31

0.01

Morila

Total

0.38

0.81

0.31

0.01

Exclusive Mineral Resource

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

Ore Reserve

as at 31 December 2009

Contained
Contained
Tonnes
Grade
gold
gold
Morila
Category
million
g/t
tonnes
Moz
Stockpile (full grade ore)
Proved
3.94
1.74
6.85
0.22
Probable
–
–
–
–
Total
3.94
1.74
6.85
0.22
Stockpile (marginal ore)
Proved
–
–
–
–
Probable
2.76
1.14
3.14
0.10
Total
2.76
1.14
3.14
0.10
Morila

Total
6.70
1.49
9.99
0.32
Competent persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
A Kone
AusIMM
222568
17 years
Ore Reserve
S Ndede
AusIMM
201772
20 years
Continental Africa – Mali – Morila
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
P
90
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

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2009
Continental Africa – Mali – Sadiola
P
91
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