ANGLOGOLD ASHANTI LTD
Form 6-K
May 11, 2012

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 May 10, 2012
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 2011 MINERAL RESOURCE AND ORE RESERVE STATEMENT PREPARED IN ACCORDANCE WITH JORC AND SAMREC

PURE GOLD

AngloGold Ashanti's Mineral Resource and Ore Reserve are reported in accordance with the minimum standards described by the
Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2004 Edition), and
also conform to the standards set out in the South African Code for the Reporting of Exploration Results, Mineral Resources and
Mineral Reserves (the SAMREC Code, 2007 edition).
The Mineral Resource is inclusive of the Ore Reserve component unless otherwise stated. Note also that all Mineral Resources and
Ore Reserves listed in this document are attributable unless otherwise stated.
Information is presented either by operating region, country, mine or project. The following tables and graphs are used to illustrate
developments across AngloGold Ashanti's operations during 2011:
Mineral Resource and Ore Reserve comparison by region, country, mine and project; development sampling results; details of
average drill-hole spacing and type; Exclusive Mineral Resource; Mineral Resource below infrastructure; Mineral Resource and Ore
Reserve by-products; year-on-year reconciliation of the Mineral Resource and Ore Reserve; Inferred Mineral Resource in business
plan; Ore Reserve modifying factors; grade tonnage information on the Mineral Resource and lists of appointed Competent Persons.
Topics for brief discussion include regional overview; country overview; Mineral Resource estimation; Ore Reserve estimation;
location; geology; exploration and projects.
This document, the Mineral Resource and Ore Reserve Report 2011, is a key component of the AngloGold Ashanti suite of 2011
annual reports produced to record the company's performance regarding its finances, operations and sustainability activities for the
12 months ended 31 December 2011. Other major documents in this suite of reports are the Annual Integrated Report 2011, the
Annual Financial Statements 2011 and the Sustainability Report 2011, all of which are available on the corporate website,
www.anglogoldashanti.com.
The Annual Financial Statements 2011 contains a summary extract of AngloGold Ashanti's Mineral Resource and Ore Reserve.
Note: Rounding of numbers in this document may result in minor computational discrepancies. Throughout this report, dollar or
$ represents US dollar unless otherwise stated. All grade tonnage graphs in this document are for Mineral Resources.
Scope of report

Forward-looking statements

Certain statements contained in this document, including, without limitation, those concerning AngloGold Ashanti Limited's (AngloGold Ashanti) strategy to reduce
its gold hedging position, including the extent and effect of the hedge reduction, the economic outlook for the gold mining industry, expectations regarding gold
prices, production, cash costs and other operating results, growth prospects and outlook of AngloGold Ashanti's operations, individually or in the aggregate,
including the completion and commencement of commercial operations of certain of AngloGold Ashanti's exploration and production projects and completion of
acquisitions and dispositions, AngloGold Ashanti's liquidity and capital resources and capital expenditure, and the outcome and consequence of any pending

litigation proceedings, contain certain forward-looking statements regarding AngloGold Ashanti's operations, economic performance and financial condition.

Although AngloGold Ashanti believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, amongst other factors, changes in economic and market conditions, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in gold prices and exchange rates, and business and operational risk managements. For a discussion of such risk factors, refer to the section titled "Risk management and risk factors" in the annual financial statements. AngloGold Ashanti undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of the annual financial statements or to reflect the occurrence of unanticipated events. All subsequent written or oral forward-looking statements attributable to AngloGold Ashanti or any person acting on its behalf are qualified by the cautionary statements herein.

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A TRULY
COMPANY

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Group overview
The AngloGold Ashanti Mineral Resource and Ore Reserve are reported in accordance with the minimum standards described by the
Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserve (the JORC Code, 2004 Edition), and also
conform to the standards set out in the South African Code for the Reporting of Exploration Results, Mineral Resource and
Mineral Reserve (the SAMREC Code, 2007 edition). The Mineral Resource is inclusive of the Ore Reserve component unless
otherwise stated.
AngloGold Ashanti strives to create value by growing its major asset – the Mineral Resource and Ore Reserve. This drive is based on
an active, well-defined brownfields exploration programme, innovation in both geological modelling and mine planning, and continual
optimisation of the asset portfolio.

Mineral Resource

The total Mineral Resource increased from 220.0 million ounces (Moz) in December 2010 to 230.9Moz in December 2011. A gross
annual increase of 16.8Moz occurred before depletion and while the net increase after allowing for depletion was 10.9Moz, changes
in economic assumptions from December 2010 to December 2011 resulted in an 11.2Moz increase to the Mineral Resource, while
exploration and modelling resulted in an increase of 7.9Moz. The remaining decrease of 2.2Moz resulted from various other factors.
Depletion from the Mineral Resource for the year totalled 6.0Moz. The Mineral Resource has been estimated at a gold price of
$1,600/oz (2010: $1,100/oz).
Mineral Resource
Moz
Mineral Resource as at 31 December 2010
220.0
Reductions
Great Noligwa
Mineral Resource reduced due to increased costs
(0.6)
Other
Total of non-significant changes
(1.8)
Additions
Tropicana
Exploration success in the underground project
0.8
Gramalote
Exploration success at Trinidad
0.9
Kopanang
Grade increased as a result of exploration
1.1
Geita
Combined effect of price and estimation

1.3
Iduapriem
Improved Mineral Resource price
1.3
Obuasi
Improved Mineral Resource price
2.3
La Colosa
Exploration success
3.8
Other
Total of non-significant changes
1.7
Mineral Resource as at 31 December 2011
230.9
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Group overview
Ore Reserve
The AngloGold Ashanti Ore Reserve increased from 71.2Moz in December 2010 to 75.6Moz in December 2011. A gross annual
increase of 9.6Moz occurred before depletion of 5.2Moz. The increase net of depletion was therefore 4.4Moz. Changes in economic
assumptions from 2010 to 2011 resulted in an increase of 4.4Moz to the Ore Reserve, while exploration and modelling resulted in a
further increase of 5.0Moz. The remaining increase of 0.2Moz resulted from various other factors. The Ore Reserve has been
calculated using a gold price of $1,100/oz (2010: $850/oz).
Ore Reserve
Moz
Ore Reserve as at 31 December 2010
71.2
Reductions
Moab Khotsong
Depletion and minor model revision
(0.5)
Other
Total of non-significant changes
(1.1)
Additions
Geita
Improved Ore Reserve price
0.5
CC&V
Mine life extension added to Ore Reserve
0.5
Vaal River Surface
Technical studies showed that the economic extraction
of gold and uranium from the tailings is economic
3.2
Other
Total of non-significant changes
1.7
Ore Reserve as at 31 December 2011
75.6
By-products
Several by-products are recovered as a result of the processing of the gold Ore Reserve. In 2011, these included 57,299 tonnes
of uranium oxide from the South African operations, 408,348t of sulphur from Brazil and 46.9Moz of silver from Argentina.
Competent Persons
The information in this report relating to exploration results, the Mineral Resource and the Ore Reserve is based on information
compiled by the Competent Persons. The Competent Persons consent to the inclusion of exploration results, Mineral Resource and
Ore Reserve information in this report, in the form and context in which it appears.

During the past decade, the company has developed and implemented a rigorous system of internal and external reviews of exploration results, the Mineral Resource and the Ore Reserve. A documented chain of responsibility exists from the Competent Persons at the operations to the company's Mineral Resource and Ore Reserve Steering Committee. Accordingly, the chairman of the Mineral Resource and Ore Reserve Steering Committee, VA Chamberlain, MSc (Mining Engineering), BSc (Hons) (Geology), MGSSA, FAusIMM, assumes responsibility for the Mineral Resource and Ore Reserve processes for AngloGold Ashanti and is satisfied that the Competent Persons have fulfilled their responsibilities.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011

Group overview

Mineral Resource by country – attributable

as at 31 December 2011	Category	Tonnes	Grade	Contained gold	
		million	g/t	Tonnes	Moz
South Africa	Measured	25.98	15.76	409.39	13.16
	Indicated	799.63	2.57	2,056.44	66.12
	Inferred	38.30	14.91	570.81	18.35
	Total	863.91	3.52	3,036.65	97.63
Democratic Republic of the Congo	Measured	–	–	–	–
	Indicated	62.41	3.66	228.64	7.35
	Inferred	33.16	2.90	96.07	3.09
	Total				

95.57
3.40
324.71
10.44
Ghana
Measured
89.38
4.64
414.35
13.32
Indicated
97.81
3.42
334.74
10.76
Inferred
136.86
3.26
446.65
14.36
Total
324.04
3.69
1,195.74
38.44
Guinea
Measured
37.19
0.62
22.96
0.74
Indicated
116.48
0.73
85.09
2.74
Inferred
67.18
0.79
53.17
1.71
Total
220.85
0.73
161.22
5.18
Mali
Measured
12.65
1.31
16.57

0.53
Indicated
62.66
1.57
98.24
3.16
Inferred
36.58
1.04
37.96
1.22
Total
111.89
1.37
152.77
4.91
Namibia
Measured
18.35
0.71
13.10
0.42
Indicated
99.78
1.22
122.04
3.92
Inferred
16.41
1.15
18.88
0.61
Total
134.54
1.14
154.01
4.95
Tanzania
Measured
–
–
–
–
Indicated
106.42
2.74
291.44
9.37
Inferred
33.55
2.97

99.50
3.20
Total
139.96
2.79
390.94
12.57
Australia
Measured
35.13
1.71
60.01
1.93
Indicated
50.11
2.56
128.48
4.13
Inferred
11.05
3.92
43.28
1.39
Total
96.29
2.41
231.77
7.45
Argentina
Measured
11.98
1.61
19.30
0.62
Indicated
26.09
3.40
88.76
2.85
Inferred
9.14
3.17
29.01
0.93
Total
47.22
2.90
137.08
4.41
Brazil
Measured

10.53
6.31
66.44
2.14
Indicated
16.41
5.74
94.23
3.03
Inferred
36.93
6.30
232.73
7.48
Total
63.88
6.16
393.40
12.65
Colombia
Measured
15.56
0.85
13.24
0.43
Indicated
33.97
0.79
26.98
0.87
Inferred
564.78
0.93
527.63
16.96
Total
614.31
0.92
567.85
18.26
United States
Measured
280.58
0.78
217.65
7.00
Indicated
227.03
0.68
155.09
4.99

Inferred
96.04
0.65
62.16
2.00
Total
603.65
0.72
434.90
13.98
Total
Measured
537.33
2.33
1,253.01
40.29
Indicated
1,698.79
2.18
3,710.18
119.29
Inferred
1,079.98
2.05
2,217.85
71.31
Total
3,316.10
2.17
7,181.04
230.88
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Group overview

Exclusive Mineral Resource by country – attributable

as at 31 December 2011	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
South Africa	Measured	15.36	16.99	261.03	8.39
	Indicated	230.15	4.01	923.55	29.69
	Inferred	16.98	21.15	358.97	11.54
	Total	262.49	5.88	1,543.56	49.63
Democratic Republic	Measured	–	–	–	–
of the Congo	Indicated	28.97	3.04	87.97	2.83
	Inferred	33.16	2.90	96.07	3.09

Total
62.13
2.96
184.03
5.92
Ghana
Measured
20.74
5.15
106.80
3.43
Indicated
64.26
3.63
233.54
7.51
Inferred
136.67
3.27
446.64
14.36
Total
221.66
3.55
786.98
25.30
Guinea
Measured
0.83
0.54
0.45
0.01
Indicated
41.37
0.74
30.64
0.99
Inferred
67.18
0.79
53.17
1.71
Total
109.39
0.77
84.26
2.71
Mali
Measured
4.73
0.86

4.09
0.13
Indicated
31.26
1.26
39.43
1.27
Inferred
36.58
1.04
37.96
1.22
Total
72.57
1.12
81.48
2.62
Namibia
Measured
7.57
0.53
4.01
0.13
Indicated
53.86
1.06
56.88
1.83
Inferred
16.41
1.15
18.88
0.61
Total
77.85
1.02
79.77
2.56
Tanzania
Measured –
–
–
–
Indicated
50.59
2.84
143.72
4.62
Inferred
33.55
2.97

99.50
3.20
Total
84.14
2.89
243.22
7.82
Australia
Measured
2.27
0.58
1.32
0.04
Indicated
18.02
2.78
50.18
1.61
Inferred
10.72
3.99
42.78
1.38
Total
31.02
3.04
94.28
3.03
Argentina
Measured
2.80
2.08
5.81
0.19
Indicated
22.22
2.13
47.28
1.52
Inferred
9.14
3.17
29.01
0.93
Total
34.16
2.40
82.11
2.64
Brazil
Measured

2.86
7.39
21.13
0.68
Indicated
7.02
6.53
45.82
1.47
Inferred
35.80
6.37
228.05
7.33
Total
45.67
6.46
295.00
9.48
Colombia
Measured
15.56
0.85
13.24
0.43
Indicated
33.97
0.79
26.98
0.87
Inferred 564.78
0.93
527.63
16.96
Total
614.31
0.92
567.85
18.26
United States
Measured
119.80
0.71
85.17
2.74
Indicated
140.43
0.66
93.03
2.99
Inferred

82.15
0.66
54.08
1.74
Total
342.39
0.68
232.28
7.47
Total
Measured
192.52
2.61
503.06
16.17
Indicated
722.13
2.46
1,779.02
57.20
Inferred
1,043.12
1.91
1,992.74
64.07
Total
1,957.76
2.18
4,274.82
137.44

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Group overview

Ore Reserve by country – attributable

as at 31 December 2011	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
South Africa	Proved	11.89	8.85	105.17	3.38
	Probable	573.65	1.57	903.41	29.05
	Total	585.54	1.72	1,008.58	32.43
Democratic Republic of the Congo	Proved	–	–	–	–
	Probable	33.44	4.21	140.69	4.52
	Total	33.44	4.21	140.69	4.52
Ghana	Proved	42.73	3.08	131.77	4.24

Probable
53.94
4.43
239.06
7.69
Total
96.67
3.84
370.83
11.92
Guinea
Proved
35.72
0.61
21.90
0.70
Probable
72.18
0.69
49.97
1.61
Total
107.90
0.67
71.87
2.31
Mali
Proved
5.20
1.91
9.93
0.32
Probable
43.13
1.56
67.20
2.16
Total
48.33
1.60
77.13
2.48
Namibia
Proved
6.31
1.09
6.88
0.22
Probable
44.18
1.29

56.88
1.83
Total
50.49
1.26
63.76
2.05
Tanzania
Proved –
–
–
–
Probable
55.81
2.64
147.11
4.73
Total
55.81
2.64
147.11
4.73
Australia
Proved
32.86
1.79
58.69
1.89
Probable
28.98
2.55
73.95
2.38
Total
61.84
2.14
132.64
4.26
Argentina
Proved
10.56
1.35
14.30
0.46
Probable
12.85
4.25
54.64
1.76
Total
23.41

2.95
68.94
2.22
Brazil
Proved
7.01
5.51
38.65
1.24
Probable
7.84
4.68
36.65
1.18
Total
14.85
5.07
75.30
2.42
United States
Proved
160.78
0.82
132.48
4.26
Probable
86.60
0.72
62.06
2.00
Total
247.38
0.79
194.54
6.25
Total
Proved
313.07
1.66
519.78
16.71
Probable
1,012.60
1.81
1,831.63
58.89
Total
1,325.67
1.77
2,351.40
75.60

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Reconciliation of Mineral Resource (Au content Moz)
Previous
Gold
Metho-
Current
as at 31 December 2011
year
Depletion
price
Cost Exploration
dology
Other
year
South Africa Region
Great Noligwa
4.508
-0.179
–
-0.571
0.102
–
–
3.860
Kopanang
9.128
-0.606
0.140
–
1.606
–
–
10.269
Moab Khotsong
20.312
-0.353
1.157
-0.231
-0.912
–
-0.027
19.946
Vaal River Surface
4.886
-0.205
–
–
0.126
0.096
–

4.902
Mponeng
49.549
-0.634
0.108
–
0.173
–
0.322
49.519
Savuka
3.090
-0.083
–
0.186
-0.172
–
–
3.021
TauTona
4.883
-0.293
–
-0.003
-0.040
0.121
-0.120
4.547
West Wits Surface
1.543
-0.013
–
–
0.014
0.022
–
1.565
Total
97.897
-2.364
1.405
-0.618
0.898
0.239
0.175
97.631
Continental Africa Region
Kibali 8.299
-0.139
0.214
-0.106

0.105
0.010
0.001
8.382
Mongbwalu
1.904
–
–
–
0.286
–
-0.132
2.057
Iduapriem
5.273
-0.247
1.559
–
–
–
–
6.585
Obuasi
29.525
-0.358
2.679
–
0.049
–
-0.036
31.858
Siguiri
5.548
-0.291
1.519
-0.908
0.187
-0.676
-0.196
5.183
Morila
0.244
-0.095
0.246
–
–
–
–
0.395
Sadiola
4.472

-0.115
0.424
–
-0.195
-0.190
–
4.397
Yatela
0.178
-0.039
0.012
-0.015
–
-0.009
-0.007
0.120
Navachab
4.478
-0.106
0.499
-0.599
0.085
1.086
-0.491
4.952
Geita
11.267
-0.648
2.298
-0.210
0.195
-0.292
-0.042
12.569
Total
71.189
-2.038
9.448
-1.838
0.711
-0.071
-0.903
76.499
Australasia Region
Sunrise Dam
3.356
-0.304
0.212
–
-0.120
-0.028

-0.150
2.966
Tropicana
3.695
–
0.130
-0.014
0.642
0.032
–
4.486
Total
7.051
-0.304
0.342
-0.014
0.522
0.004
-0.150
7.451
Americas Region
Cerro Vanguardia
4.143
-0.210
–
–
0.474
–
–
4.407
AGA Mineração
11.165
-0.521
-0.003
–
0.912
0.031
-0.123
11.463
Serra Grande
0.933
-0.077
–
–
0.190
0.141
-0.002
1.186
Gramalote
1.086
–

–
–
0.786
0.117
–
1.989
La Colosa
12.443
–
0.679
–
3.146
–
–
16.268
CC&V
14.101
-0.454
1.753
-0.003
-0.065
-0.124
-1.226
13.982
Total
43.872
-1.261
2.429
-0.003
5.442
0.166
-1.351
49.295
Grand total
220.009
-5.968
13.625
-2.473
7.574
0.338
-2.228
230.876
Group overview

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Group overview
Net
diff
%
Comments
-0.64
-14
Mineral Resource reduced due to increased costs.
1.14
13
Increase due to changes in grade, geological structure, stoping widths and cut-offs.
-0.36
-2
Increase due to higher gold price was offset by new data received from Middle mine.
0.01
–
Depletion was offset by additions from aerial surveys and grade adjustments.
-0.03
–
Depletion was offset by small year-on-year increases.
-0.06
-2
Changes were mainly due to depletions.
-0.33
-7
Changes were mainly due to depletions. Gains from higher values were offset by transfers to inventory.
0.02
1
Depletion was offset by additions from aerial surveys and grade adjustments.
-0.26
–
0.08
1
Increase mainly due to exploration.
0.15
8
Increase mainly due to exploration.
1.31
25
Increase mainly due to higher gold price.
2.33
8
Increase mainly due to higher gold price plus some additional Mineral Resource from exploration drilling.
-0.36
-7
Additions from higher gold price and exploration have been offset by revised Mineral Resource models.
0.15
62
Re-handling stockpiles only.
-0.07

-2
Depletion was offset by higher gold price.
-0.05
-32
KW18 and Alamoutala have reached their end of life.
0.47
11
The higher gold price and improved methodology helped to offset depletion and higher costs.
1.30
12
Increase due to higher gold price and exploration successes.
5.31
7
-0.39
-12
SDGM is in the process of converting from open pit to underground operations.
0.79
21
Increase due to exploration proving up additional underground Mineral Resource.
0.40
6
0.26
6
Exploration successes have offset depletion.
0.29
3
Increase due to higher gold price and exploration successes.
0.25
27
Increase mainly due to changes in methodology.
0.90
83
Increase was mainly due to the inclusion of the Trinidad area.
3.82
31
Increase mainly due to exploration successes.
-0.11
-1
Increase from higher gold price was offset by depletion and other factors.
5.42
12
10.80
5
P
9

P
10
Reconciliation of Ore Reserve (Au content Moz)
Previous
Model
Change in
New ounces
Scope
as at 31 December 2011
year
Depletion
Other
change
economics
from projects
change
South Africa Region
Great Noligwa
1.415
-0.087
–
-0.019
–
–
-0.185
Kopanang
3.106
-0.348
0.083
0.254
–
–
-0.299
Moab Khotsong
7.490
-0.297
–
-0.194
–
–
–
Vaal River Surface
1.539
-0.205
0.025
0.009
-0.029
3.466
-0.028
Mponeng
13.904

-0.504
–
0.394
–
–
0.230
Savuka
0.666
-0.048
–
–
–
–
-0.017
TauTona
2.056
-0.234
–
0.210
–
–
-0.113
West Wits Surface
0.200
-0.013
0.001
0.008
-0.004
–
-0.004
Total
30.376
-1.736
0.109
0.661
-0.034
3.466
-0.416
Continental Africa Region
Kibali
4.523
–
–
–
–
–
–
Iduapriem
2.494
-0.241
–

–
0.300
–
–
Obuasi
8.923
-0.395
–
–
0.715
–
0.125
Siguiri
2.382
-0.274
0.014
0.018
0.220
0.039
-0.088
Morila
0.224
-0.095
–
–
–
–
–
Sadiola
2.298
-0.211
-0.061
0.012
0.052
0.043
0.165
Yatela
0.078
-0.040
–
0.015
–
–
–
Navachab
1.848
-0.090
–
-0.097
0.412
–

-0.023
Geita
4.214
-0.656
-0.012
0.168
1.604
–
-0.588
Total
26.984
-2.002
-0.060
0.116
3.303
0.082
-0.408
Australasia Region
Sunrise Dam
1.377
-0.324
–
0.004
0.355
0.030
0.083
Tropicana
2.361
–
–
0.026
0.002
–
0.350
Total
3.739
-0.324
–
0.030
0.357
0.030
0.433
Americas Region
Cerro Vanguardia
1.841
-0.236
–
0.185
0.235
–
0.192

AGA Mineração
2.146
-0.376
0.166
0.056
0.053
–
0.001
Serra Grande
0.392
-0.074
–
0.057
–
–
–
CC&V
5.727
-0.451
–
-0.136
0.469
–
0.645
Total
10.106
-1.136
0.166
0.162
0.758
–
0.838
Grand total
71.205
-5.198
0.215
0.969
4.384
3.578
0.447
Group overview

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Group overview
Current
Net
year
diff
%
Comments
1.124
-0.29
-21
Decrease mainly due to depletion and scope change.
2.796
-0.30
-10
Decrease mainly due to depletion. Gains from model change were offset by losses from scope change.
6.999
-0.49
-7
Decrease due to depletion and model change.
4.777
3.23
210
Increase is due to the inclusion of the Tailings Storage Facilities from the Vaal River area.
14.024
0.12
1
Depletion has been offset by higher grade estimates on the western side of the mine.
0.600
-0.06
-10
Savuka Ore Reserve to be mined via Mponeng or TauTona.
1.918
-0.13
-7
Decrease due to depletion and scope change.
0.188
-0.01
-6
Decrease mainly due to depletion. Gains from model change were offset by change in economics and scope change.
32.427
2.05
7
4.523
–
–
No change from published December 2010 numbers. An overall increase in the project ounces is expected when project approval is given in 2012.
2.554
0.05

2
Decrease due to depletion.
9.368
0.44
5
Depletion was offset by changes in economics.
2.311
-0.07
-3
Depletion was largely offset by gains from other factors.
0.129
-0.09
-42
Re-handling stockpiles only. New pushback is being considered.
2.298
2.50
–
Depletion was offset by gains from higher gold price, new ounces and scope changes.
0.053
-0.02
-32
KW18 and Alamoutala have reached their end of life.
2.050
0.20
11
Increased due to a higher gold price, resulting in an expanded pit design.
4.730
0.51
12
Overall economic changes had a significant positive effect, along with the model changes for the Nyankanga and Geita Hill pits.
28.016 1.03
4
1.525
0.14
11
Depletion was offset by a change to the cut-off and design changes.
2.739
0.37
16
Increase due to change in the cut-off at Boston Shaker stage 1 and model changes.
4.265
0.52
14
2.217
0.37
20
Depletion was offset by a higher gold price.
2.046
-0.10
-5

Depletion was offset by gains due to geological changes to the Carruagem orebody.
0.375
-0.01
-4
Depletion was partially offset by model changes.
6.255
0.52
9
Increase due to higher gold price and scope changes.
10.892
0.78
8
75.599
4.39
6
P
11

09
South Africa – gold production
(000oz)
10
11
1,797
1,785
1,624
09
South Africa – capital expenditure
($m)
10
11
385
424
532
P
12
South Africa
South Africa
Vaal River
Great Noligwa
94,000oz
Kopanang
307,000oz
Moab Khotsong
266,000oz
Surface operations
164,000oz
West Wits
Mponeng 500,000oz
Savuka 49,000oz
TauTona 244,000oz
1
1
SUSTAINING
FROM OUR ASSETS
South Africa – contribution
to production by mine
(%)
Mponeng
31%
Kopanang 19%
Moab Khotsong
16%
TauTona 15%
Surface operations
10%
Great Noligwa
6%
Savuka

3%
South Africa: contribution to
group production
(%)
South Africa region
37%
Rest of
AngloGold Ashanti
63%

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa

Regional overview

AngloGold Ashanti's operations in South Africa have a total attributable Mineral Resource of 97.63Moz and an attributable Ore Reserve of 32.43Moz. The South African operations produced 1.62Moz of gold in 2011, or 37% of group production, and 1.38 million pounds of uranium as a by-product.

All Mineral Resources and Ore Reserves listed are attributable unless otherwise stated.

Mineral Resource by region

		Tonnes	Grade	Contained gold	
as at 31 December 2011	Category	million	g/t	Tonnes	Moz
South Africa Region	Measured	25.98	15.76	409.39	13.16
	Indicated	799.63	2.57	2,056.44	66.12
	Inferred	38.30	14.91	570.81	18.35
	Total	863.91	3.52	3,036.65	97.63

Ore Reserve by region

		Tonnes	Grade	Contained gold	
as at 31 December 2011	Category	million	g/t	Tonnes	Moz
South Africa Region					

Proved
11.89
8.85
105.17
3.38
Probable
573.65
1.57
903.41
29.05
Total
585.54
1.72
1,008.58
32.43
Isometric view of the Witwatersrand Basin
P
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P
14
South Africa
Country overview
AngloGold Ashanti's South Africa operations comprise six deep-level underground mines and two surface processing operations.
These operations are all located within the so-called Witwatersrand Basin and are centred around two mining districts, the Vaal River
and West Wits areas.
•
The Vaal River operations consist of the Great Noligwa, Kopanang and Moab Khotsong mines and the Vaal River Surface
processing operation.
•
The West Wits operations consist of the Mponeng, Savuka and TauTona mines and the West Wits Surface processing operation.
The Vaal River operations are situated near the town of Klerksdorp. The primary reefs mined by these operations are the Vaal Reef (VR),
the Ventersdorp Contact Reef (VCR) and the secondary Crystalkop Reef (C Reef).
The West Wits operations are situated near the town of Carletonville. The primary reefs mined by these operations are the Carbon
Leader Reef (CLR) and the VCR.
All six operations are 100% owned by AngloGold Ashanti. In addition, the Vaal River Surface and West Wits Surface operations
re-work the waste rock dumps and tailings dams which resulted from the mining and processing of the primary and secondary
reef horizons.
Mineral Resource estimation
A multi-disciplinary approach is adopted in 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 ranging from 30m x 30m (micro blocks) to 420m x 420m (macro blocks).
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 grade
of the area ahead of current mining. The geological model forms the basis for this estimation and all surface borehole information
from the mine lease plays 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 value.
The Mineral Resource is initially reported as inclusive of the Ore Reserve as it forms the basis for the Ore Reserve conversion process.
Mineral Resource cut-offs are computed for each operation, by reef horizon. These cut-offs incorporate a profit margin that is
relevant to the business plan. Grade tonnage curves are produced for each operation, which show the potential of the orebody at
different cut-offs.

Ore Reserve estimation

All mine designs are generated with the Cadsmine
®
software package. These designs delineate the mining areas and supporting
development for each mining level and section, usually by extrapolating the existing mining design. The in-situ Mineral Resource
is scheduled monthly for the full Life-Of-Mine (LOM) plan. The value estimates for these schedules are derived directly from the
MRIS system.

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 Mine Call Factor (MCF).

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa
Development sampling results – January to December 2011
Development values represent actual results of sampling, no allowances having been made for adjustments necessary in estimating
the Ore Reserve.
Statistics are shown
Advanced
Sampled
Sampled
in metric units
metres
Sampled Ave. channel
gold
uranium
South Africa
(total)*
metres
width (cm)
Ave. g/t
Ave. cm.g/t
Ave. kg/t Ave. cm.kg/t
Vaal River
Great Noligwa
VR
2,227
62
41.8
100.10
4,184
3.90
162.92
Kopanang
VR
24,122
2,936
25.2
49.52
1,248
3.01
76.72
Moab Khotsong
VR
20,686
1,770
112.7
32.25
3,635
1.37
154.81
West Wits

Mponeng
VCR
16,158
1,530
50.5
33.25
1,679
–
–
Savuka
CLR
16
94
59.4
24.76
1,471
0.34
20.84
TauTona
CLR
10,558
600
16.5
201.45
3,324
1.55
25.77
** This includes both on-reef and off-reef development.*
0
3km
CL erosion channels

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
Geological facies plan of the Carbon Leader Reef
P
15
Areas of facies dominance
No. 1 CLR
Overlap of No. 1 CLR over No. 2 CL facies
No. 2 CL facie
No. 3 CL facie
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
Legend

P
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Location

Great Noligwa is located about 15km southeast of the town of Orkney, in the southern part of the Klerksdorp Goldfield. The Great Noligwa mining lease area is about 49km
2
and is constrained to the north by Aurora mine, to the east by Buffelsfontein mine, to the south by Moab Khotsong and the Jersey and Die Hoek faults (downward displacement of 1,000m and 900m respectively), and to the west by Kopanang mine.

The economic horizons are exploited between 1,500m and 2,600m below surface through a mining method that gains access to the gold-bearing reefs with footwall haulages and return airway development. Cross-cuts are developed every 180m from the haulages to the reef horizon. Raises are then developed on-reef to the level above and the reef is mined out on strike.

South Africa

Great Noligwa

Stoping and development on the Vaal Reef

Borehole
Development and stoping Vaal Reef
Measured Mineral Resource
Indicated Mineral Resource
Inferred Mineral Resource
Mining rights area boundary
Inter-mine boundaries
Provincial boundaries
Fault zones
Dyke
REFERENCE

P
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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Great Noligwa

Geology

The Vaal Reef (VR) is the principal economic horizon at Great Noligwa and the Crystalkop Reef (C Reef) is the secondary economic horizon. Both reefs are part of the Witwatersrand Supergroup and are stratigraphically located near the middle of the Central Rand Group. The C Reef forms the top of the Johannesburg Subgroup, while the VR is about 265m below the C Reef.

The VR unit can reach a maximum thickness of 2m and consists of a thin basal conglomerate (the C facies) and a thicker sequence of upper conglomerates (the A facies). These two sedimentary facies are separated by the B facies, which is a layer of barren orthoquartzites. The A facies is the principal economic horizon within the VR, but remnants of the C facies are sporadically preserved below the A facies. High gold values in the VR are often located at the base of this unit and are associated with high uranium values as well as the presence of carbon. Uranium is a very important by-product of Great Noligwa.

The C Reef has been mined on a limited scale in the central part of Great Noligwa, where a high-grade, north-south orientated sedimentary channel, containing two economic horizons, has been exposed. To the east and the west of this channel the C Reef is poorly developed with relatively small areas of economic interest. As in the case of VR, high uranium values are also often associated with high gold values and the presence of a 5mm to 2cm thick carbon seam at the base of the conglomerate. To the north of the mine the C Reef sub-crops up against the Gold Estates Conglomerate Formation and in the extreme south of the mine the C Reef has been eliminated by a deep Kimberley Erosion Channel and the Jersey fault.

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Projects

Drilling is ongoing in a fault zone containing remnant blocks of VR. This ground is situated in the eastern part of the mining lease area and is referred to as the Fish Block. The reef blocks are situated in a high-grade geozone within the Zuiping A fault loss area. During the year a total of six boreholes were drilled from which three reef intersections were achieved. A total of 1,400m of diamond drilling (DD) is planned for 2012 to increase the geological confidence in the proposed mining area and to test for upside potential.

A further four holes (800m) are planned to be drilled in the Zuiping A fault loss area once the reef block drilling has been completed.

A second drilling project was undertaken further east of the Fish Block project from 68 level. Drilling was done on some Inferred VR blocks of ground that had been modelled within the Zuiping A fault structure. Drilling confirmed that the Inferred blocks are located within the lower grade 500 geozone. A total of six boreholes were drilled, from which two new reef intersections were achieved. Four more holes are planned to be drilled in this area during 2012.

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

			Type of drilling				
Mine/Project	Category	Spacing m (-x-)	Diamond	RC	Blast-hole	Other	Comments
Great Noligwa	Measured	5 x 5	–	–	–	X	Chip sampling
	Indicated	100 x 100	X	–	–	–	Underground drilling
	Inferred	1,000 x 1,000	X				

–
–
–
Surface drilling
Grade control
–
–
–
–
X
See Measured category
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Great Noligwa
Category
million
g/t
Tonnes
Moz
C Reef
Measured
1.69
6.86
11.57
0.37
Indicated
2.14
9.78
20.91
0.67
Inferred
0.61
9.06
5.57
0.18
Total
4.44
8.57
38.05
1.22
VR
Measured
4.00
16.30
65.26
2.10
Indicated
0.80

16.83
13.53
0.44
Inferred
0.26
12.52
3.23
0.10
Total
5.07
16.19
82.02
2.64
Great Noligwa
Total
9.51
12.63
120.07
3.86
Exclusive Mineral Resource
The Exclusive Mineral Resource for the Measured VR is 1.42 million tonnes (Mt) at a grade of 18.62g/t. The Indicated Mineral
Resource is 0.22Mt at a grade of 28.77g/t and the Inferred Mineral Resource is 0.14Mt at a grade of 13.03 g/t. Most of the Exclusive
Mineral Resource is located at the extremities of the mine.
The Exclusive Mineral Resource for the Measured C Reef is 1.15Mt at a grade of 5.30g/t. The Indicated Mineral Resource is 1.43Mt
at a grade of 9.20g/t.
South Africa
Great Noligwa

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Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Great Noligwa Category	million	g/t	Tonnes	Moz
Measured	2.58	12.66	32.64	1.05
Indicated	1.65	11.84	19.58	0.63
Inferred	0.14	13.03	1.78	0.06
Great Noligwa Total	4.37	12.36	54.00	1.74

Inferred Mineral Resource in business plan

The Inferred Mineral Resource was used in the optimisation process. The Inferred Mineral Resource for the VR is estimated at 0.26Mt at a grade of 12.52g/t. For C Reef it is estimated at 0.61Mt at a grade of 9.06g/t. This Mineral Resource is scattered throughout the mine in the form of pillars left by previous mining extraction as well as pillars within the major fault loss areas.

Inferred Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold		
Great Noligwa	million	g/t	Tonnes	Moz	Comments

VR
0.13
7.03
0.90
0.03
Included in business plan but not published as
part of the Ore Reserve
Total
0.13
7.03
0.90
0.03
Mineral Resource below infrastructure
The numbers reported for Great Noligwa mine do not include any Mineral Resource below infrastructure.
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Great Noligwa
4.51
2010
-0.18
Depletion
0.00
Gold
price
-0.57
Cost
0.10
Explo-
ration
0.00
Metho-
dology
0.00
Other
3.86
2011
Great Noligwa
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
4.6
4.5
4.4
4.3
4.2
4.1
4.0
3.9
3.8
3.7
1.41
2010

-0.09
Depletion
-0.02
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
-0.19
Scope
change
0.00
Other
1.12
2011
Great Noligwa
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10

P
20
Ore Reserve modifying factors
Gold
Cut-off
Cut-off
Stoping
as at 31 December 2011
price
Exchange
value
value
width
Dilution
Great Noligwa
$/oz
rate
g/t Au cmg/t Au
cm
%
MCF%
MetRF%
C Reef
1,100
7.63
12.36
1,600
129.4
55.0
59.9
95.8
VR
1,100
7.63
8.95
1,600
178.7
52.9
58.8
95.8
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Great Noligwa
Category
million
g/t
Tonnes
Moz

C Reef
Proved
0.59
5.49
3.25
0.10
Probable
0.80
5.81
4.66
0.15
Total
1.39
5.67
7.91
0.25
VR
Proved
2.73
8.36
22.81
0.73
Probable
0.62
6.86
4.24
0.14
Total
3.35
8.08
27.05
0.87
Great Noligwa
Total
4.74
7.37
34.96
1.12
Ore Reserve below infrastructure
The numbers reported for Great Noligwa mine do not include any Ore Reserve below infrastructure.
South Africa
Great Noligwa
5
0
10
15
20
Great Noligwa
– underground (metric)
Tonnes above cut-
off (millions)

Average grade
above cut -off
(g/t)
10
9
8
7
6
5
4
3
2
1
0
30
28
26
24
22
20
18
16
14
12
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

P
21
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Great Noligwa
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Geo Steyn
GSSA
967292
11 years
Ore Reserve
Andre Kruger
PLATO
PMS0114
34 years

P
22
South Africa
Kopanang
Location
Kopanang is one of three AngloGold Ashanti mines located in the Vaal River district, the other two being Great Noligwa and Moab
Khotsong. Kopanang is located in the Free State province, approximately 170km southwest of Johannesburg and 10km southeast
of the town of Orkney. The current mining lease encompasses an area of 35km
2
and is bound by Great Noligwa to the east, Pamodzi
Gold's Number Three Shaft to the north and the Jersey fault (1,000m displacement) to the south. The natural extension of the mine
is to the southwest.
Geology
Kopanang is situated in a structurally complex area of the Witwatersrand Basin, which has been subjected to numerous tectonic
events. Two tabular gold and uranium mineralised reef horizons, the Vaal Reef (VR) and Crystalkop Reef (C Reef), are currently being
mined with the VR being the main reef horizon that is being mined. Kopanang almost exclusively mines the VR, although minor amounts
of gold are also extracted from the C Reef, which is stratigraphically about 250m above the VR. These conglomerate units are dipping
at an average of 21° towards the south and occur in a 2,100m thick sedimentary sequence comprising the Central Rand Group.
Geological facies plan of the Vaal Reef
Borehole
370 Facies
500 Facies (500M and 500L)
470 Facies
440 Facies
502 Facies
460 Facies (East and West)
430 Facies
Mining rights area boundary
Inter-mine boundaries
Provincial boundaries
REFERENCE

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The gold-bearing reef horizons are accessed via a twin shaft system which descends to a maximum depth of 2,342m, while the main
working levels are situated between 1,300 and 2,300m below surface. Mining is challenged by the presence of an assortment of
steep (85°- 50°) north dipping and younger low angle (50°-15°) south dipping faults. The interplay of these main fault regimes, along
with abundant pre- and post-dating dykes, makes for a complex and geologically challenging orebody.
A geozone model is employed to delineate variations (either lateral or vertical) in characteristics of the VR. The current geozone model
thus subdivides the VR at Kopanang into geozones based on sedimentological and grade parameters. Currently a study is underway
to help improve the identification of the various geozones by incorporating alteration mineralogy.
Exploration
An exploration budget of R48 million has been approved for 2012. The targets are located within the current mining lease and the
adjacent areas, which form a natural extension to the current mining front. A surface drilling programme was designed to explore for
VR on Gencor 1E and adjacent leases (De Pont Landing, Witkop and Pilgrims Estate). A prospecting right application has been
lodged for Witkop and the mining right application for Altona has been submitted to the Department of Mineral Resources. Drilling
started during September 2011 on Gencor 1E and De Pont Landing and will provide information for the structural, facies and
alteration models.
Exploration will continue on the VR in the shaft fault area. This area has shown good potential in the past, with 0.2Moz delivered
during 2011. The target blocks within this fault zone are close to current infrastructure, thereby making them even more lucrative.
Another area being explored is the area below 68 level that falls beneath current mine infrastructure. Theses target blocks consist of
VR Inferred Mineral Resource and projected blocks towards the Jersey fault. Exploration began during 2011 and intersected the main
Jersey fault, thereby allowing for more accurate delineation of structural blocks.
An underground drilling programme was also initiated to explore the VR Mineral Resource above current infrastructure. A series of
long inclined boreholes (LIBs) are currently being drilled. During 2011, LIB3 intersected the VR and returned a favourable value of
1,700cmg/t in ground where values below 650cmg/t had been expected. LIB4 was the next hole that intersected the VR, consisting
of Grootdraai and Stilfontein facies in the far northwest corner of the mine. Sampling will begin once all the deflections have been
completed. Additional new information from mapping and pneumatic drilling accounted for an increase of more than 0.436Moz in this
area due to structural re-modelling. Sampling results from underground chip sampling and the inclusion of LIB3 increased the Mineral
Resource by a further 0.844Moz.
Exploration on the Ventersdorp Contact Reef (VCR) started during 2011 through surface drilling operations. This reef is situated

approximately 850m stratigraphically above the VR and potentially adds economic value when it is considered in conjunction with the
infrastructure that has already been put in place to mine the VR.
The major portion of the C Reef exploration was completed during 2011. Extensive drilling has taken place since 2009, targeting
projected C Reef blocks.

Projects

The Kopanang potential expansion projects are all linked to the exploration strategy and are all still at a conceptual phase.

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South Africa
Kopanang
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Kopanang
Measured
5 x 5
–
–
–
X
Chip sampling
Indicated
100 x 100
X
–
–
–
Underground drilling
Inferred
1,000 x 1,000
X
–
–
–
Surface drilling
Grade control
–
–
–
–
X
See Measured category
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold

Kopanang
Category
million
g/t
Tonnes
Moz
C Reef
Measured
0.07
11.92
0.86
0.03
Indicated
0.41
12.66
5.25
0.17
Inferred
0.39
13.03
5.12
0.16
Total
0.88
12.77
11.23
0.36
VR EDOM
Measured
0.19
8.79
1.67
0.05
Indicated
0.98
11.85
11.55
0.37
Inferred
0.45
13.57
6.04
0.19
Total
1.61
11.96
19.27
0.62
VR base
Measured
3.89

15.11
58.73
1.89
Indicated
16.75
12.64
211.78
6.81
Inferred
1.46
12.62
18.39
0.59
Total
22.09
13.08
288.89
9.29
Kopanang
Total
24.58
12.99
319.39
10.27
Exclusive Mineral Resource
Approximately 55% of the published Exclusive Mineral Resource is expected to be taken up in the Exclusive Mineral Resource in
safety and remnant pillars, areas beyond the window of opportunity and areas beyond infrastructure.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Kopanang
Category
million
g/t
Tonnes
Moz
Measured
2.76
14.96
41.34
1.33
Indicated
9.49
11.62
110.30
3.55
Inferred
1.98

13.13
26.06
0.84
Kopanang
Total
14.24
12.48
177.69
5.71

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25

Mineral Resource below infrastructure

as at 31 December 2011

Kopanang	Tonnes	Grade	Contained gold	
Category	million	g/t	Tonnes	Moz
Measured	0.01	3.69	0.02	0.00
Indicated	0.19	12.89	2.42	0.08
Inferred	0.36	16.49	5.91	0.19
Kopanang Total	0.55	15.14	8.35	0.27

Inferred Mineral Resource in business plan

Some Inferred Mineral Resource was included in the business plan during the optimisation process. The VR Inferred Mineral Resource consists mainly of ground below infrastructure and areas within the highly faulted shaft fault system. These areas are currently being upgraded through exploration drilling.

Inferred Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold		
Kopanang	million	g/t	Tonnes	Moz	Comments

C Reef
0.14
13.35
1.86
0.06
–
VR EDOM
0.07
7.84
0.57
0.02
–
VR base
0.10
10.77
1.06
0.03
–
Total
0.31
11.25
3.49
0.11
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Kopanang
9.13
2010
-0.61
Depletion
0.14
Gold
price
0.00
Cost
1.61
Explo-
ration
0.00
Metho-
dology
0.00
Other
10.27
2011
Kopanang
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
10.4
10.2
10.0

9.8
9.6
9.4
9.2
9.0
8.8
8.6
8.4
3.11
2010
-0.35
Depletion
0.25
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
-0.30
Scope
change
0.08
Other
2.80
2011
Kopanang
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
3.15
3.10
3.05
3.00
2.95
2.90
2.85
2.80
2.75
2.70

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Ore Reserve modifying factors
Gold
Cut-off
Cut-off
Stoping
as at 31 December 2011
price
Exchange
value
value
width
Dilution
Kopanang
$/oz
rate
g/t Au cmg/t Au
cm
%
MCF%
MetRF%
C Reef
1,100
7.46
4.81
500
104.0
56.0
63.0
96.5
VR base
1,100
7.46
4.81
500
104.0
53.0
63.0
96.5
VR EDOM
1,100
7.46
4.81
500
104.0
52.0
63.0
96.5
Ore Reserve
as at 31 December 2011

Tonnes
Grade
Contained gold
Kopanang
Category
million
g/t
Tonnes
Moz
C Reef
Proved
0.02
5.16
0.08
0.00
Probable
0.31
5.41
1.67
0.05
Total
0.32
5.40
1.75
0.06
VR EDOM
Proved
0.07
4.49
0.33
0.01
Probable
1.23
4.95
6.09
0.20
Total
1.30
4.93
6.42
0.21
VR base
Proved
1.77
6.86
12.13
0.39
Probable
10.06
6.63
66.68

2.14
Total
11.82
6.67
78.81
2.53
Kopanang
Total
13.45
6.47
86.97
2.80
South Africa
Kopanang
5
0
10
15
20
Kopanang
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off
(g/t)
26
24
22
20
18
16
14
12
10
8
6
4
26
24
22
20
18
16
14
12
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

P
27

Ore Reserve below infrastructure

There was no Ore Reserve reported below infrastructure.

Competent Persons

Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Brenda Freese
GSSA
966602
14 years
Ore Reserve
Andre Johnson
SACNASP
400011/06
21 years
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Kopanang
Borehole
Mineral rights area boundary
Inter-mine boundaries
Provincial boundaries
CR1 – High Grade
CR2 – Low Grade
CR3 – Intermediate Grade
Kimberley Channel
REFERENCE

Geological facies plan of the Crystalkop Reef

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Location

Moab Khotsong is situated near the towns of Orkney and Klerksdorp, about 180km southwest of Johannesburg. The mining lease area lies to the south of Great Noligwa and Kopanang mines. Moab Khotsong is a relatively new mine and the first gold was produced in 2003. The mine is expected to reach full production in 2013.

The original plan was to exploit two distinct portions of the Moab Khotsong lease area, namely the Middle mine (85 to 101 level) and the Lower mine (101 to 118 level). The Middle mine exploits the Vaal Reef (VR) to depths between 2,600m and 3,054m below surface on the down-thrown side of the Die Hoek and Jersey fault complex. In 2008 the SV4 section of the Great Noligwa Mine was incorporated into Moab Khotsong and this section is now termed the Top mine.

The extension of Moab Khotsong is very strategic for AngloGold Ashanti, as the life of the Vaal River operations could be increased significantly. A feasibility study of the Lower mine (Project Zaaiplaats) is therefore in progress and it is proposed that this project will exploit the gold-bearing VR to depths of 3,455m below collar. Mining is based on a scattered mining method with an integrated backfill support system combined with bracket pillars

Geology

The VR is the only economic horizon that is exploited at Moab Khotsong mine (refer to the description of the VR under the Great Noligwa mine section). The Crystalkop Reef (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 to date.

The geology at Moab Khotsong is structurally complex with large fault-loss areas, but the main block at Zaaiplaats appears to be comparatively undeformed and only faults of less than 30m displacement are expected. The geological setting is one of crustal extension, bounded in the northwest and southeast by major south-dipping fault systems with north-dipping Zuiping faults sandwiched between them. The Die Hoek and Buffels East faults structurally bound the reef blocks of the Moab Khotsong Middle mine to the northwest and southeast respectively and the northern boundary is a Zuiping-type fault. The southern boundary fault of the Moab Khotsong Middle mine is currently not defined. Drilling is currently taking place in the Middle mine area to obtain structural information below 101 level.

Due to the magnitude of the displacement across the 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. It is only once the development is through the Die Hoek fault that geological mappings have any bearing on the reef blocks, and a considerable amount of exploration drilling is required to accurately delineate these blocks in this structurally complex area.

South Africa

Moab Khotsong

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Exploration

Brownfields exploration is currently focused on improving confidence in the geological model. Three surface drilling machines,
targeting the Zaaiplaats Mineral Resource, were in operation during 2011. The areas targeted are on the periphery of the proposed
Zaaiplaats mining area, where multiple structures define the ore block margins.

In the northwest of the main Zaaiplaats block, borehole MMB5 successfully intersected the VR target and deflection drilling was
completed. The MMB5 rig was moved to drill a new hole, MHH2, on the Hormah Prospecting Rights area adjacent to the current
Zaaiplaats Area C. The aim of the hole is to intersect high-grade VR that will increase the Zaaiplaats Mineral Resource base and
increase confidence in the peripheral reef block. Drilling is expected to continue through 2012.

The deflection drilling programme at borehole MGR8 was delayed by technical issues and is now scheduled for completion in early
2012. Thereafter, the rig will be moved to deepen the pilot-drilled borehole MCY6, a hole that will test the geological structure north
of the Middle mine. The long deflection of MGR6 is in progress to increase the structural confidence along the southern margin of
Zaaiplaats and intersections of the VR are expected in late 2012.

A total of seventeen underground drilling machines are currently deployed to carry out capital drilling on the Top, Middle and Lower
mines. These drilling machines are powered by either diesel, hydraulics or compressed air and are used underground to obtain
structural and grade information. Four drilling machines are currently deployed in the Middle mine to obtain structural information on
the level 3 VR blocks below 101 level whilst another three machines are located in the Middle mine to obtain structural information
on both the level 1 VR and C Reef horizons in the northern area of the mine. Five drilling machines are currently deployed in the Top
mine to obtain structural information on the VR blocks below 76 level.

Three drilling machines are currently deployed to carry out capital drilling associated with the Zaaiplaats project. The primary purpose
of the phase 1 early gold drilling programme is to firm up on the confidence level of the early gold options as well as to explore other
opportunities for gold that might be located in the fault loss. The phase 2 and 3 drilling programmes are designed to firm up on both
the structural and grade confidence levels of the whole orebody.

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South Africa – Moab Khotsong

Shaft bottom -4,026.8mBD

Reef

Old MM shaft

Main shaft

Backfill shaft

Sub RV Shaft

115L

114L

111L

108L
105L
103L
99L
98 Inner L
92 Inner L
82 Inner L
106L
103L
Shaft bottom -3,649.3mBD
102L
101L
100L
95L
85L
80L
79L
78L
77L
76L
73L
70L
64L
1200L
Top mine
Middle mine
Lower mine
Project
Zaaiplaats 2
below 101L
Moab Khotsong schematic diagram

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Projects
The initial development of Moab Khotsong was taken with a view that the new mine would be well positioned to exploit additional surrounding ore blocks. The most important of these blocks will be the Zaaiplaats block, positioned to the southwest of the current Moab Khotsong infrastructure and extending some 400m deeper than the existing mine. The Moab Khotsong business plan, without growth projects, is expected to produce some 2.7Moz of gold with a LOM up to 2025. The Zaaiplaats project will provide an additional 5.4Moz, extending Moab Khotsong's LOM to approximately 2037 as well serving as a gateway for further opportunities beyond the initial target block.
Project study work exploiting the Zaaiplaats block began in 2003, and in 2006 the study was successfully taken through the scoping and prefeasibility phases. In 2007 strategic intent to proceed with the project was obtained and the Ore Reserve was published on the back of a comprehensive prefeasibility study. The subsequent feasibility study was completed by the end of 2008 and showed competitive returns. The renewed success of the study was largely as a result of a much improved gold price and several technical changes, including flatter declines that will be excavated by means of trackless machinery.
Phase 1 of Project Zaaiplaats was approved in July 2010 and is currently in implementation. No gold will be produced during this phase as it is dedicated to establishing infrastructure required for phase 2, which in turn will create a drilling platform to further increase the geological confidence of a bigger portion of the Zaaiplaats orebody, as well as exploit early gold opportunities. The early gold opportunity presented by phase 2 is of great importance in the Moab Khotsong LOM as it provides the mine with a possible extension of its level 1 business plan, whilst simultaneously creating an opportunity to impact positively on the gold gap that lies between this potential level 1 plan and the greater Project Zaaiplaats orebody.
An important issue was encountered whilst developing the Middle mine at Moab Khotsong, namely the intersection of complex geological structures that had a significant impact on the location of infrastructure, safety, production and cost performance of the mine. Accordingly, work on the project was slowed until a higher level of confidence in the geological structural setting for Moab Khotsong and Zaaiplaats was in place.
As operations at Moab Khotsong stabilised, it was considered appropriate to start the process of developing the Zaaiplaats opportunity with a modified approach of pre-development that will facilitate drilling platforms for the gathering of orebody and structural information, together with the possibility of earlier gold production. This pre-development also retains the option to fundamentally change the orebody extraction approach through innovative technology.
South Africa
Moab Khotsong

Moab Khotsong – The Zaaiplaats orebody

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Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Moab Khotsong
Measured
5 x 5
–
–
–
X
Chip sampling
Indicated
100 x 100
X
–
–
–
Underground drilling
Inferred
1,000 x 1,000
X
–
–
–
Surface drilling
Grade control
–
–
–
–
X
See Measured category
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Moab Khotsong
Category

million
g/t
Tonnes
Moz
Lower mine – Area A
Measured
–
–
–
–
Indicated
0.15
25.21
3.78
0.12
Inferred
0.99
20.09
19.92
0.64
Total
1.14
20.76
23.70
0.76
Lower mine – Area B
Measured
–
–
–
–
Indicated
3.67
11.96
43.84
1.41
Inferred
1.09
12.97
14.14
0.45
Total
4.76
12.19
57.98
1.86
Lower mine – Area C
Measured
–
–
–

–
Indicated
1.03
20.59
21.30
0.68
Inferred
2.00
17.24
34.40
1.11
Total
3.03
18.38
55.71
1.79
Lower mine – Area PZ 2
Measured
–
–
–
–
Indicated
9.34
19.01
177.59
5.71
Inferred
2.95
23.14
68.30
2.20
Total
12.30
20.00
245.89
7.91
C Reef – Middle mine area
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
1.00
9.77

9.75
0.31
Total
1.00
9.77
9.75
0.31
VR – Middle mine
Measured
1.12
18.77
21.03
0.68
Indicated 4.36
25.22
109.95
3.54
Inferred
1.86
20.78
38.61
1.24
Total
7.34
23.11
169.59
5.45
VR – Top mine
Measured
0.56
29.59
16.44
0.53
Indicated 0.75
20.48
15.32
0.49
Inferred
0.00
13.91
0.05
0.00
Total
1.31
24.33
31.80
1.02
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
Moab Khotsong
Total
32.47
19.11
620.40
19.95
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Moab Khotsong

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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 of this Exclusive Mineral Resource is located in the Lower mine area, with minor amounts in the Top and Middle mine, C Reef and shaft pillar areas. The bracket pillars are designed for safety reasons and will therefore not be mined, whereas the shaft pillar can only be safely extracted at the end of the mine life.

Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Moab Khotsong Category	million	g/t	Tonnes	Moz
Measured	0.90	24.18	21.73	0.70
Indicated	8.97	16.09	144.32	4.64
Inferred	9.89	18.72	185.17	5.95
Moab Khotsong Total	19.75	17.78	351.21	11.29

Mineral Resource below infrastructure

as at 31 December 2011

Tonnes
Grade
Contained gold
Moab Khotsong
Category
million
g/t

Tonnes
Moz
Measured
– –
–
–
Indicated
14.41
17.45
251.49
8.09
Inferred
8.59
20.06
172.27
5.54
Moab Khotsong
Total
23.00
18.42
423.76
13.62
Inferred Mineral Resource in business plan
The Inferred Mineral Resource was used for optimisation purposes as it forms part of the business plan, but it was not included in
the published Ore Reserve.
South Africa
Moab Khotsong

P
33
Ore Reserve modifying factors
Gold
Cut-off
Cut-off
Stoping
as at 31 December 2011
price
Exchange
value
value
width
Dilution
Moab Khotsong
$/oz
rate
g/t Au cmg/t Au
cm
%
MCF%
MetRF%
Lower mine – Area PZ 2
1,100
7.63
5.51
700
127.0
51.2
81.0
96.5
Middle mine
1,100
7.63
4.21
700
166.4
46.8
80.7
96.5
Top mine
1,100
7.63
4.07
700
171.8
47.2
80.6
96.5
Ore Reserve
as at 31 December 2011

Tonnes
Grade
Contained gold
Moab Khotsong
Category
million
g/t
Tonnes
Moz
Lower mine – Area PZ 2
Proved
–
–
–
–
Probable
12.62
10.70
134.95
4.34
Total
12.62
10.70
134.95
4.34
VR – Middle mine
Proved
0.67
9.90
6.61
0.21
Probable
5.58
10.67
59.54
1.91
Total
6.25
10.59
66.15
2.13
VR – Top mine
Proved
0.69
10.89
7.55
0.24
Probable
0.95
9.54
9.03

0.29
Total
1.64
10.11
16.58
0.53
Moab Khotsong
Total
20.50
10.62
217.68
7.00
Ore Reserve below infrastructure
as at 31 December 2011
Tonnes
Grade
Contained gold
Moab Khotsong
Category
million
g/t
Tonnes
Moz
Proved
– –
–
–
Probable
12.62
10.70
134.95
4.34
Moab Khotsong
Total
12.62
10.70
134.95
4.34
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Moab Khotsong
20.31
2010
-0.35
Depletion
1.16
Gold
price
-0.23
Cost
-0.91
Explo-

ration
0.00
Metho-
dology
-0.03
Other
19.95
2011
Moab Khotsong
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
21.2
21.0
20.8
20.6
20.4
20.2
20.0
19.8
7.49
2010
-0.30
Depletion
-0.19
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
0.00
Other
7.00
2011
Moab Khotsong
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
7.55
7.45
7.35
7.25
7.15

7.05
6.95

P
34
South Africa
Moab Khotsong
5
0
10
15
20
Moab Khotsong
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off
(g/t)
35
30
25
20
15
10
5
32
30
28
26
24
22
20
18
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Francis Rebaone Gaelejwe
GSSA
965326
11 years
Ore Reserve
Johan Wall
PLATO

PMS0164
27 years

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Location
Mponeng is situated in the West Wits district, close to the town of Carletonville in the province of Gauteng. The mine is about 65km southwest of Johannesburg and forms part of AngloGold Ashanti's West Wits operations. Mining at Mponeng is conducted at depths of between 2,800m 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. To the south of the Mponeng lease area is the Western Ultra Deep Levels (WUDLS) area which has the potential to increase the Mineral Resource of the mine once it has effectively been explored.
Geology
The Ventersdorp Contact Reef (VCR) is the only reef currently being mined at Mponeng. The VCR consists of a quartz pebble conglomerate (up to 3m thick) capping the uppermost 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 consists of a series of argillaceous to siliceous protoquartzites, 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 different Witwatersrand footwalls that increase in age from west to east.
Most of the VCR mined at Mponeng lies on footwall strata of the Kimberley Formation, which is a relatively argillaceous protoquartzite.
The VCR is dominated by a series of channel terraces at different elevations, separated by slopes where the reef 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 by shales and siltstones of the Booysens Formation.
The hardness of the footwall units is thought to have influenced the development of the terraces.
The other gold-bearing reef that occurs at Mponeng is the Carbon Leader Reef (CLR). This reef has been mined at the adjacent Savuka and TauTona mines, and Mponeng is planning to mine the CLR in the future. The CLR at Mponeng consists of (on average) a 20cm thick, tabular, auriferous quartz pebble conglomerate formed near the base of the Central Rand Group. The CLR is approximately 900m deeper than the VCR. Major exploration drilling is improving Mineral Resource confidence and is confirming the positions of geological structures that occur at the deep levels at which mining would extract the CLR. Of the three economic units that exist within the CLR, the Mponeng CLR target area is dominated by the centrally located 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 the VCR and the CLR orebodies are subjected to faulting and are intruded by a series of igneous dykes and sills of various ages

that cross-cut the reefs. There is an inherent risk in mining through these faults and intrusives and a key function of the Geosciences
Department is to identify these geological features ahead of the working face to assist with deciding on the best practice when
approaching or mining through these structures.
Exploration
Both the VCR and CLR at Mponeng can be accessed down to 120 level (3,645m below datum) and further infrastructure is currently
being developed to service stoping operations below 120 level. The below 120 level VCR project will intersect the VCR in 2012 and
mining is planned to then extract the VCR down to 126 level.
The drilling planned to explore the ground below and adjacent to current infrastructure has been designed to generate maximum
confidence in the Indicated portion of the Mineral Resource as well as converting currently Inferred Mineral Resource from WUDLS.
In order to improve the success of the LIBs and the long vertical boreholes, two different drilling companies have been contracted to
drill these long exploration holes. It is intended that the new machinery and better expertise obtained from both local and international
sources will assist Mponeng to achieve the desired results.
The planned extension of Mponeng, through phased projects to deepen the sub and decline shafts, will provide greater mining
access to the CLR and the VCR. This has necessitated an increase in exploration drilling in order to meet the demands for the project
start-up dates. Exploration drilling on both the CLR and the VCR will continue through 2012 until the results have provided sufficient
confidence in the geological models.
South Africa
Mponeng
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Mponeng

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Projects

A fundamental geological research project has produced a better understanding of the CLR deposition and mineralisation model.
This study is critical in optimising the exploration planning and Mineral Resource estimation and will be completed in 2012.
A database of the geochemistry of igneous intrusives is currently being updated through microscope and XRF classification
techniques. This data will hopefully provide a tool to better understand and piece together the structural evolution of the fringe areas
of the Mineral Resource and help to identify additional areas of gold mineralisation through fluid and alteration geochemistry.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Mponeng
Measured
5 x 5
–
–
–
X
Chip sampling
Indicated
100 x 100
X
–
–
–
Underground drilling
Inferred
1,000 x 1,000
X
–
–
–
Surface drilling
Grade control
–
–

–
–
X
See Measured category
South Africa
Mponeng
Stoping and development on the Ventersdorp Contact Reef
Borehole
Development and Stoping
Ventersdorp Contract Reef
Measured Mineral Resource
Indicated Mineral Resource
Inferred Mineral Resource
Mining rights area boundary
Inter-mine boundaries
Dykes
Sub outcrop
Fault loss
REFERENCE

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Mineral Resource
as at 31 December 2011

Mponeng	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
TauTona VCR shaft pillar	Measured	0.49	17.40	8.47	0.27
	Indicated	1.25	20.21	25.22	0.81
	Inferred	–	–	–	–
	Total	1.73	19.42	33.69	1.08
VCR above 109 level	Measured	6.46	11.09	71.60	2.30
	Indicated	11.10	5.70	63.30	2.04
	Inferred	0.28	1.45	0.41	0.01
	Total	17.84	7.58	135.31	4.35

VCR 109 to 120 level
Measured
3.39
19.67
66.76
2.15
Indicated 7.26
11.55
83.83
2.70
Inferred
0.63
3.98
2.51
0.08
Total 11.28
13.57
153.11
4.92
VCR below 120 level
Measured
0.71
13.66
9.75
0.31
Indicated 10.02
15.87
159.05
5.11
Inferred
0.10
4.55
0.44
0.01
Total 10.83
15.63
169.24
5.44
Mponeng WUDLS
Measured
–
–
–
–
Indicated 2.43
15.24
36.98
1.19
Inferred
11.55
15.26

176.25
5.67
Total 13.98
15.26
213.23
6.86
VCR Block 1
Measured
0.01
14.75
0.09
0.00
Indicated
3.06
3.89
11.87
0.38
Inferred
–
–
–
–
Total 3.06
3.91
11.96
0.38
VCR Block 3
Measured
–
–
–
–
Indicated 4.87
4.58
22.31
0.72
Inferred
–
–
–
–
Total 4.87
4.58
22.31
0.72
VCR Block 5
Measured
–
–
–
–

Indicated 4.30
4.77
20.51
0.66
Inferred
–
–
–
–
Total 4.30
4.77
20.51
0.66
VCR outside project areas
Measured
0.06
4.76
0.30
0.01
Indicated 8.27
3.45
28.56
0.92
Inferred
–
–
–
–
Total 8.33
3.46
28.85
0.93
TauTona CLR shaft pillar
Measured
0.30
42.28
12.76
0.41
Indicated 1.29
45.91
59.17
1.90
Inferred
–
–
–
–
Total 1.59
45.22
71.92
2.31

CL below 120 level
Measured
–
–
–
–
Indicated 23.75
21.72
515.85
16.58
Inferred
7.62
21.56
164.23
5.28
Total 31.37
21.68
680.08
21.86
Mponeng
Total 109.18
14.11
1,540.20
49.52
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Mponeng

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Exclusive Mineral Resource

It is normal mining practice to leave behind 35% to 50% of the Exclusive Mineral Resource as safety and remnant pillars. These pillars are designed to provide additional stability to the stope faces during mining operations.

Exclusive Mineral Resource

as at 31 December 2011

Mponeng	Tonnes	Grade	Contained gold	
Category	million	g/t	Tonnes	Moz
Measured	6.80	17.23	117.21	3.77
Indicated	32.05	15.99	512.41	16.47
Inferred	4.97	29.40	145.96	4.69
Mponeng Total	43.82	17.70	775.59	24.94

Mineral Resource below infrastructure

as at 31 December 2011

Mponeng	Tonnes	Grade	Contained gold	
Category	million	g/t	Tonnes	Moz
Measured	0.71	13.66	9.75	

0.31
Indicated
36.20
19.67
711.87
22.89
Inferred
19.27
17.70
340.92
10.96
Mponeng
Total 56.18
18.91
1,062.54
34.16

Inferred Mineral Resource in business plan

No planning or scheduling took place in areas classified as Inferred Mineral Resource during the planning process.

South Africa
Mponeng
49.55
2010
-0.63
Depletion
0.11
Gold
price
0.00
Cost
0.17
Explo-
ration
0.00
Metho-
dology
0.32
Other
49.52
2011
Mponeng
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
49.6
49.5
49.4
49.3
49.2
49.1
49.0
48.9

13.90
2010
-0.50
Depletion
0.39
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
0.23
Scope
change
0.00
Other
14.02
2011
Mponeng
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
14.1
14.0
13.9
13.8
13.7
13.6
13.5
13.4
13.3

South Africa – Mponeng

Ore Reserve modifying factors

as at 31 December 2011	Gold price	Exchange rate	Cut-off value	Cut-off value	Stoping width	Dilution		
Mponeng	$/oz		g/t Au	cmg/t Au	cm	%	MCF%	MetRF%
CL below 120 level	1,100	7.63	7.78	750	96.4	14.1	81.0	98.2
CLR Eastern Block	1,100	7.63	5.78	750	129.8	54.9	81.9	98.2
VCR 109 to 120 level	1,100	7.63	5.17	750	145.0	43.6	83.1	98.2

VCR above 109 level
1,100
7.63
5.17
750
145.0
44.1
82.5
98.2
VCR below 120 level
1,100
7.63
5.17
750
145.0
37.3
84.5
98.2
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Mponeng
Category
million
g/t
Tonnes
Moz
VCR above 109 level
Proved
1.20
6.25
7.47
0.24
Probable
0.49
6.49
3.17
0.10
Total 1.68
6.32
10.64
0.34
VCR 109 to 120 level
Proved
2.71
10.35
28.02
0.90
Probable

5.45
5.72
31.14
1.00
Total 8.15
7.26
59.16
1.90
VCR below 120 level
Proved
0.71
11.54
8.24
0.26
Probable
9.83
8.83
86.80
2.79
Total 10.55
9.01
95.04
3.06
TauTona CLR Eastern Block
Proved
–
–
–
–
Probable
0.94
10.75
10.09
0.32
Total 0.94
10.75
10.09
0.32
CL below 120 level
Proved
–
–
–
–
Probable
21.39
12.22
261.27
8.40
Total 21.39
12.22

261.27
8.40
Mponeng
Total
42.71
10.21
436.20
14.02

Ore Reserve below infrastructure

as at 31 December 2011
Tonnes
Grade
Contained gold
Mponeng
Category
million
g/t
Tonnes
Moz
Proved
0.71
11.54
8.24
0.26
Probable
31.22
11.15
348.06
11.19
Mponeng
Total 31.93
11.16
356.30
11.46

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Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Gareth Flitton
GSSA
9647581
8 years
Ore Reserve
Pieter Enslin
PLATO
PMS0183
29 years
South Africa
Mponeng
5
0
10
15
20
Mponeng
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
110
100
90
80
70
60
50
40
30
20
10
30
28
26
24
22

20
18
16
14
12
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
REFERENCE
Less than 8m
+2 to +4m
+4 to +8m
+8 to +12m
+12 to +16m
> +16m
Slope
Erosional contact
Fretted terrace
Mining rights area boundary
Inter-mine boundaries
Boreholes

Geological facies plan of the Ventersdorp Contact Reef at Mponeng mine

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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Savuka
Location
Savuka mine is located about 18km south of the town of Carletonville and forms part of AngloGold Ashanti's West Wits operations.
The mine exploits the Carbon Leader Reef (CLR) at depths varying from 2,600m to 3,500m below surface. The Ventersdorp Contact
Reef (VCR), which is about 700m above the CLR, has largely been mined out and mining operations on the VCR horizon ceased
in 2010.
Savuka has converted from a longwall configuration to a sequential grid mine and most of the mine's current production is derived
from the CLR. The Ore Reserve at the mine is largely exhausted and minimum mining operations are currently taking place.
Geology
The CLR is a thin, tabular, auriferous quartz pebble conglomerate formed near the base of the Central Rand Group. The CLR is on
average 20cm thick and has been divided into three stratigraphic units. Economically the most important is Unit 1 which is present
as a sheet-like deposit over the whole mine. Unit 2 is a complex channel deposit that is presently only being mined in the south and
west areas of Savuka. The reef may be over 2m thick where Unit 2 is developed. Unit 3 is preserved below Unit 1 in the southern
parts of Savuka and is the oldest of the three CLR stratigraphic units.
The VCR comprises a quartz pebble conglomerate (up to 5m thick) capping the 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 reefs at Savuka are cross-cut by faults and intrusive dykes that displace the reef horizons. The faulting, in conjunction with the
numerous intrusives that also intersect the orebody, is responsible for most of the risk inherent with deep-level gold mining, since
seismicity is associated with these geological features.
Exploration
Savuka is a mature mine that is approaching the end of its productive life. No exploration is currently taking place at this operation
and any unmined ground will be re-allocated to surrounding mines.
Projects
No projects are currently being undertaken at Savuka since this operation is in closure mode.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond

RC
hole
Other
Comments
Savuka
Measured
5 x 5
–
–
–
X
Chip sampling
Indicated
100 x 100
X
–
–
–
Underground drilling
Inferred
1,000 x 1,000
X
–
–
–
Surface drilling
Grade control
–
–
–
–
X
See Measured category
South Africa
Savuka

Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Savuka
Category
million
g/t
Tonnes
Moz
VCR
Measured
0.16
12.87
2.02
0.06
Indicated
0.34
13.53
4.64
0.15
Inferred
0.00
8.55
0.01
0.00
Total
0.50
13.32
6.67
0.21
CLR Measured
1.41
17.09
24.03
0.77
Indicated
3.36
18.86
63.28
2.03
Inferred
–
–
–
Total
4.76
18.33
87.30
2.81

Savuka
Total
5.26
17.86
93.97
3.02

Exclusive Mineral Resource

As Savuka is in closure mode, almost all of the published Mineral Resource is classified as Exclusive Mineral Resource. Only a small
percentage of the published Mineral Resource is not part of the Exclusive Mineral Resource.

Exclusive Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold
Savuka
Category
million
g/t
Tonnes
Moz
Measured
1.51
16.67
25.25
0.81
Indicated
2.53
17.82
45.11
1.45
Inferred
0.00
8.55
0.01
0.00
Savuka
Total
4.05
17.39
70.37
2.26

Inferred Mineral Resource in business plan

No planning or scheduling took place in areas classified as Inferred Mineral Resource during the planning process.
South Africa
Savuka
P
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3.09
2010
-0.08

Depletion
0.00
Gold
price
0.19
Cost
-0.17
Explo-
ration
0.00
Metho-
dology
0.00
Other
3.02
2011
Savuka
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
3.20
3.18
3.16
3.14
3.12
3.10
3.08
3.06
3.04
3.02
3.00
0.67
2010
-0.05
Depletion
0.00
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
-0.02
Scope
change
0.00
Other

0.60
2011
Savuka
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
0.67
0.66
0.65
0.64
0.63
0.62
0.61
0.60
0.59

Ore Reserve modifying factors
Gold
Cut-off
Cut-off
Stoping
as at 31 December 2011
price
Exchange
value
value
width
Dilution
Savuka
$/oz
rate
g/t Au cmg/t Au
cm
%
MCF%
MetRF%
CLR
1,100
7.63
7.50
750
100.0
56.0
60.0
97.4

Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Savuka
Category
million
g/t
Tonnes
Moz
CLR
Proved
–
–
–
–
Probable
2.36
7.90
18.67
0.60

Total
2.36
7.90
18.67
0.60
Savuka
Total
2.36
7.90
18.67
0.60
5
0
10
15
20
Savuka
– underground (metric)
Tonnes above cut
off (millions)
Average grade
above cut - of f
(g/t)
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
30
28
26
24
22
20
18
16
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
Competent Persons
Professional
Registration
Relevant
Category
Name

organisation
number
experience
Mineral Resource
Katarien Deysel
SACNASP
400093/05
10 years
Ore Reserve
Joey Modise
PLATO
MS 0113
24 years
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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Savuka

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Location

TauTona lies on the so-called West Wits Line, just south of Carletonville in the North West Province, about 70km southwest of Johannesburg. Mining at TauTona takes place at depths ranging from 2,000m to 3,640m. The mine has a three-shaft system and is in the process of converting from longwall mining to scattered grid mining.

Geology

The Carbon Leader Reef (CLR) is the principal economic horizon at TauTona and the Ventersdorp Contact Reef (VCR) is the secondary economic horizon. The CLR is located near the base of the Johannesburg Subgroup, which forms part of the Central Rand Group. The Central Rand Group sediments are unconformably overlain by the Klipriviersberg lavas and the VCR is developed at the interface between the Central Rand Group sediment and these overlying lavas. The CLR and the VCR at TauTona are vertically separated by about 800m of shales and quartzites.

The CLR is a thin, on average 20cm thick, tabular, auriferous quartz pebble conglomerate and consist of three sedimentary facies or units. Economically the most important is Unit 1, which is present as a sheet-like deposit over the whole mine, although reef development and grades tend to drop off very rapidly where Unit 1 overlies Unit 2. Unit 2 is a complex channel deposit that is only present along the eastern-most limit of current mining at TauTona. The Unit 2 CLR may be over 2m thick. Unit 3 is preserved below Unit 1 in the southern parts of TauTona and is the oldest of the CLR conglomerates.

Production on the VCR at TauTona ceased in 2011, but some isolated blocks that are above cut-off may still be mined in 2012.

The VCR is comprised of a quartz pebble conglomerate (up to 2m thick) capping the top-most angular unconformity of the Witwatersrand Supergroup. The topography of the VCR depositional area is uneven and the reef is draped over a series of slopes and forms horizontal terraces at different elevations.

Exploration

Two exploration programmes were initiated in 2011 and will continue in 2012. Drilling of LIBs from 107 level into the 1C2 block has begun and will continue into 2012. The 1C2 block falls within Driefontein Mine’s ground but may be mined from TauTona, provided that the grades are payable and that TauTona manages to come to an agreement with Driefontein.

Drilling is also taking place from 112 level at TauTona into Mponeng’s ground to assist with information for the below 120 Carbon Leader project. The information obtained from these drillholes is needed to confirm the geological structure of this area and to refine the facies model. A total of 3,740m of exploration drilling has been planned for 2012.

Projects

A project has been initiated to drill a series of holes from 112 level to explore the ground south of the Pretorius Fault Zone.

This programme was initiated in 2011 and will continue to investigate the lateral movement of this geological structure and the

implications thereof. Information on the different intrusions, age relationships and characteristics of geological features are required
to determine the geotechnical properties of this area.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
TauTona
Measured
5 x 5
–
–
–
X
Chip sampling
Indicated
100 x 100
X
–
–
–
Underground drilling
Inferred
1,000 x 1,000
X
–
–
–
Surface drilling
Grade control
–
–
–
–
X
See Measured category
South Africa
TauTona

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Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
TauTona
Category
million
g/t
Tonnes
Moz
EOB between 100 & 112 levels
Measured
0.42
28.06
11.80
0.38
Indicated
2.52
19.42
48.85
1.57
Inferred
–
–
–
–
Total
2.94
20.66
60.66
1.95
CLR – 1C11
Measured
0.10
20.13
2.04
0.07
Indicated
0.31
25.84
8.03
0.26
Inferred
–
–
–
–
Total

0.41
24.44
10.07
0.32
CLR base
Measured
0.85
26.35
22.39
0.72
Indicated
1.84
26.32
48.32
1.55
Inferred
–
–
–
–
Total
2.69
26.33
70.71
2.27
TauTona
Total
6.03
23.44
141.44
4.55
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – TauTona
Stoping and development on the Carbon Leader Reef
Borehole
Development and stoping
Carbon Leader Reef
Measured Mineral Resource
Indicated Mineral Resource
Inferred Mineral Resource
Mining rights area boundary
Inter-mine boundaries
Dykes
Fault loss
REFERENCE

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Exclusive Mineral Resource
The Exclusive Mineral Resource is dependent on mining strategy, but approximately 1.91Moz of the Exclusive Mineral Resource is
expected to be taken up in safety, boundary and remnant pillars ahead of current mining.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
TauTona
Category
million
g/t
Tonnes
Moz
Measured
0.80
28.52
22.87
0.74
Indicated
2.12
23.20
49.13
1.58
Inferred
–
–
–
–
TauTona
Total
2.92
24.66
72.00
2.31
Inferred Mineral Resource in business plan
No planning or scheduling took place in areas classified as Inferred Mineral Resource during the planning process.
South Africa
TauTona
4.88
2010
-0.29
Depletion
0.00
Gold
price
-0.00
Cost

-0.04
Explo-
ration
0.12
Metho-
dology
-0.12
Other
4.55
2011
TauTona
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
4.90
4.85
4.80
4.75
4.70
4.65
4.60
4.55
4.50
2.06
2010
-0.23
Depletion
0.21
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
-0.11
Scope
change
0.00
Other
1.92
2011
TauTona
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
2.10
2.05

2.00
1.40
1.95
1.90
1.85
1.80
Seismic image of the Ventersdorp Contact Reef, showing depth contours

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Ore Reserve modifying factors
Cut-off
Cut-off
Stoping
as at 31 December 2011
Gold
Exchange
value
value
width
Dilution
TauTona
price
rate
g/t Au cmg/t Au
cm
%
MCF%
MetRF%
CLR – 1C11
1,100
7.63
7.89
947
120.0
50.5
81.7
97.4
CLR Base
1,100
7.63
9.97
947
95.0
60.8
81.7
97.4
EOB between 100 & 112 levels
1,100
7.63
9.97
947
95.0
60.8
81.7
97.4
Ore Reserve
as at 31 December 2011
Tonnes

Grade
Contained gold
TauTona
Category
million
g/t
Tonnes
Moz
EOB between 100 & 112 levels
Proved
0.27
10.91
2.96
0.10
Probable
3.04
7.75
23.51
0.76
Total
3.31
8.01
26.47
0.85
CLR – 1C11
Proved
0.05
6.78
0.33
0.01
Probable
0.25
10.46
2.62
0.08
Total
0.30
9.86
2.96
0.10
CLR base
Proved
0.41
13.08
5.39
0.17
Probable
2.33
10.68
24.85
0.80

Total
2.74
11.04
30.24
0.97
TauTona
Total
6.34
9.40
59.67
1.92
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – TauTona
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Katarien Deysel
SACNASP
400093/05
10 years
Ore Reserve
Joey Modise
PLATO
MS 0113
24 years
5
0
10
15
20
TauTona
– underground (metric)
Tonnes above cut-
off (millions)
Average grade
above cut - of f
(g/t)
6.5
6.0
5.5
5.0
4.5
4.0
3.5

3.0
2.5
32
31
30
29
28
27
26
25
24
23
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

Major unconformities in the West Wits district

Overview

Surface operations in the South Africa Region produce gold by treating lower-grade surface material such as marginal ore dumps
(MODs) and tailings storage facilities (TSFs). The strategy is to maximise the use of the treatment gap. Uranium oxide is also produced
as a by-product from the gold-bearing reef material that is mined at Great Noligwa, Moab Khotsong and Kopanang. The surface
operations comprise the Vaal River Surface and West Wits Surface 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
in the North West Province of South Africa. These operations rework the MODs and TSFs resulting from the mining and
processing of the Vaal Reef (VR) and Ventersdorp Contact Reef (VCR) that are mined at the Vaal River underground mines in the
Klerksdorp area. Gold is mainly produced by the reclamation of MODs and a tailings dam called the Sulphur Paydam (SPD).

The West Wits Surface operations are located on the West Wits Line, near the town of Carletonville, straddling the border between
the North West and Gauteng Provinces in South Africa. These operations comprise MODs and TSFs sourced from the mining and
processing of the Carbon Leader Reef (CLR) and the VCR that are mined at the West Wits underground mines in the
Carletonville/Fochville area.

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South Africa

Surface operations

Plan showing the West Wits Surface operations

Plant (resources)

Pump station

Tailing pipelines

Railways

Mine boundary

Indicated Mineral Resources

Inferred Mineral Resources

Env. clean up (inventory & depleted)

Shaft areas

REFERENCE

Ore dumps and tailings

The MODs 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 MODs was sourced from three areas:

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

The TSF stores the residue produced by the gold plants. These tailings were pumped in a slurry form onto tailings dams and have been built up over a period of many years.

The Vaal River Ore Reserve consists of 485Mt containing 4.78Moz of gold and the West Wits Ore Reserve consists of 11Mt containing 0.19Moz of gold. During 2011, 10.5Mt were depleted and 0.16Moz of gold were produced from surface sources material.

The Number 3 MOD at Vaal River remains an Inferred Mineral Resource while all the TSFs remain part of the Mineral Resource as new technology for recovering gold and uranium continues to be evaluated.

An opportunity to upgrade marginal ore material was initiated in the West Wits area at the Savuka gold plant and the exercise has proven to be successful. The Savuka MOD is currently being screened and oversize material of greater than 65mm is being stockpiled and will be made available to external parties once permission has been granted to do so by the Department of Mineral Resources.

Reclamation methodology

Bulldozers are used to create furrows through the waste rock dumps in order to mix rock from different parts of the waste MODs that were deposited over different time periods. This is done in order to create a degree of homogenisation. The material is then loaded onto rail hoppers by means of a front-end loader and transported to the metallurgical plants.

The SPD is being reclaimed by means of remote-controlled, high-pressure water pumps. 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 plant for processing.

Environmental clean-up

Rehabilitation work is on-going and gold is produced from clean-up operations at Vaal River where material is treated through the archive mill. In 2011 a total of 3,081oz was produced from clean-up operations.

Growth

The Uranium TSF project was initiated in 2011 to recover uranium oxide and gold from existing TSFs, utilising new technology which

has been developed by SAR Metallurgy. This will allow for the profitable exploitation of all the TSFs at Vaal River. This project has
resulted in an increase in both the gold and uranium Ore Reserve.

4.89
2010
-0.21
Depletion
0.00
Gold
price
0.00
Cost
0.13
Explo-
ration
0.10
Metho-
dology
0.00
Other
4.90
2011
Vaal River Surface
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
4.95
4.90
4.85
4.80
4.75
4.70
4.65
1.54
2010
-0.21
Depletion
0.01
Model
change
-0.03
Change in
Economics
3.47
New
ounces
from
projects
-0.03
Scope
change
0.03
Other
4.78

2011
Vaal River Surface
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0

Mineral Resource
as at 31 December 2011

Vaal River Surface	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
SA Met – Tailings dump	Measured	–	–	–	–
	Indicated	438.26	0.28	122.70	3.94
	Inferred	–	–	–	–
	Total	438.26	0.28	122.70	3.94
SA Met – Rock dump	Measured	–	–	–	–
	Indicated	47.84			

0.55
26.33
0.85
Inferred
5.06
0.68
3.45
0.11
Total 52.90
0.56
29.79
0.96
Vaal River Surface
Total
491.16
0.31
152.48
4.90
West Wits Surface
WWGO – Tailings dump
Measured
–
–
–
–
Indicated
173.34
0.25
42.70
1.37
Inferred
–
–
–
–
Total
173.34
0.25
42.70
1.37
WWGO – Rock dump
Measured
–
–
–
–
Indicated
12.37
0.48
5.99
0.19

Inferred
–
–
–
–
Total
12.37
0.48
5.99
0.19
West Wits Surface
Total
185.71
0.26
48.69
1.57
Inferred Mineral Resource in business plan
Inferred Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Vaal River Surface
million
g/t
Tonnes
Moz
Comments
SA Met – Rock dump
5.06
0.68
3.45
0.11
No. 3 marginal ore dump
Total
5.06
0.68
3.45
0.11
P
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South Africa
Surface operations

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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Surface operations
1.54
2010
-0.01
Depletion
0.00
Gold
price
0.00
Cost
0.01
Explo-
ration
0.02
Metho-
dology
0.00
Other
1.57
2011
West Wits Surface
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
1.570
1.565
1.560
1.555
1.550
1.545
1.540
1.535
1.530
1.525
0.20
2010
-0.01
Depletion
0.01
Model
change
-0.00
Change in
Economics
0.00
New
ounces
from

projects
-0.00
Scope
change
0.00
Other
0.19
2011
West Wits Surface
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
0.202
0.200
1.198
0.196
0.192
0.190
0.188
0.188
0.186
Ore Reserve modifying factors
Gold
Cut-off
Cut-off
Stoping
as at 31 December 2011
price
Exchange
value
value
width
Dilution
Vaal River Surface
$/oz
rate
g/t Au cmg/t Au
cm
%
MCF%
MetRF%
Rock dump
1,100
7.63
0.45
–
–
–
98.0
88.0

Tailings dump
1,100
7.63
0.22
–
–
–
72.0
76.0
West Wits Surface
Rock dump
1,100
7.63
0.22
–
–
–
98.0
88.0
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Vaal River Surface
Category
million
g/t
Tonnes
Moz
SA Met – Tailings dump
Proved
–
–
–
–
Probable
438.26
0.28
122.70
3.94
Total 438.26
0.28
122.70
3.94
SA Met – Rock dump
Proved
–
–
–
–

Probable
46.54
0.56 25.88 0.83
Total 46.54
0.56
25.88
0.83
Vaal River Surface
Total
484.80
0.31
148.58
4.78
West Wits Surface
WWGO – Tailings dump
Proved
–
–
–
–
Probable
–
–
–
–
Total
–
–
–
–
WWGO – Rock dump
Proved
–
–
–
–
Probable
10.63
0.55
5.85
0.19
Total
10.63
0.55
5.85
0.19
West Wits Surface
Total
10.63
0.55
5.85

0.19
Competent Persons – Vaal River Surface and West Wits Surface
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Raymond Orton
PLATO
MS 0096
25 years
Ore Reserve
Obie Oberholzer
PLATO
PMS 0216
30 years

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Moab Khotsong, Great Noligwa and Kopanang material is milled at the Noligwa gold plant and treated in the South uranium plant for uranium oxide extraction by the reverse leach process. The resulting ammonium diuranate is transported to the Nufcor plant where the material is calcined and packed for shipment to the converters.

1.38 Million pounds of uranium oxide was produced in 2011. The expansion project at the South uranium plant was initiated in 2010 and will be commissioned in 2012. This expansion project will allow for an increased amount of Kopanang material to be processed for uranium oxide extraction.

Mineral Resource – Uranium (U3O8)

			Contained uranium oxide	
	Tonnes	Grade		Pounds
as at 31 December 2011				
Category	Mt	kg/t	Tonnes	million
Great Noligwa				
Measured	–	–	–	–
Indicated	8.63	0.44	3,764	8.30
Inferred	0.87	0.41	357	0.79
Total	9.51	0.43	4,121	9.08
Kopanang				
Measured	–	–	–	–
Indicated				

22.29
0.70
15,500
34.17
Inferred
2.29
0.66
1,511
3.33
Total
24.58
0.69
17,011
37.50
Moab Khotsong
Measured
–
–
–
–
Indicated
22.58
0.90
20,246
44.63
Inferred
9.89
0.82
8,145
17.96
Total
32.47
0.87
28,390
62.59
Vaal River Surface
Measured
–
–
–
–
Indicated
438.26
0.10
41,889
92.35
Inferred
–
–
–
–

Total
438.26
0.10
41,889
92.35
Mponeng
Measured
–
–
–
–
Indicated
25.34
0.26
6,669
14.70
Inferred
7.62
0.26
2,005
4.42
Total
32.96
0.26
8,673
19.12
Savuka
Measured
–
–
–
–
Indicated
4.76
0.34
1,605
3.54
Inferred
–
–
–
–
Total
4.76
0.34
1,605
3.54
South Africa
Uranium

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Mineral Resource – Uranium (U3O8) continued
Contained uranium oxide
Tonnes
Grade
Pounds
as at 31 December 2011
Category
Mt
kg/t
Tonnes
million
TauTona
Measured
–
–
–
–
Indicated
6.03
0.30
1,785
3.94
Inferred
–
–
–
–
Total
6.03
0.30
1,785
3.94
West Wits Surface
Measured
–
–
–
–
Indicated
173.34
0.07
12,436
27.42
Inferred
–
–
–
–
Total

173.34
0.07
12,436
27.42
Total
Total
721.92
0.16
115,910
255.54
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
South Africa – Uranium
Ore Reserve – Uranium (U3O8)
Contained uranium oxide
Tonnes
Grade
Pounds
as at 31 December 2011
Category
million
kg/t
Tonnes
million
Great Noligwa
Proved
1.44
0.28
400
0.88
Probable
0.62
0.22
137
0.30
Total
2.06
0.26
536
1.18
Kopanang
Proved
1.84
0.28
514
1.13
Probable
11.61
0.34
3,925
8.65
Total

13.45
0.33
4,438
9.79
Moab Khotsong
Proved
1.36
0.54
739
1.63
Probable
19.14
0.51
9,696
21.38
Total
20.50
0.51
10,436
23.01
Vaal River Surface
Proved
–
–
–
–
Probable
438.26
0.10
41,889
92.35
Total
438.26
0.10
41,889
92.35
Total
Total
474.28
0.12
57,299
126.32

Continental Africa – contribution
to production by mine
(%)

Geita	31%
Obuasi	20%
Siguiri	16%
Iduapriem	13%
Sadiola	8%
Morila	6%
Navachab	4%
Yatela	2%

Continental Africa – contribution
to group production
(%)

Continental Africa	36%
Rest of AngloGold Ashanti	64%

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Continental Africa
INITIATIVES PRODUCING
RESULTS

Mali	
Morila	99,000oz
Sadiola	121,000oz
Yatela	29,000oz
Ghana	
Iduapriem	199,000oz
Obuasi	313,000oz
Guinea	
Siguiri	249,000oz
Namibia	
Navachab	66,000oz
Tanzania	
Geita	494,000oz

1
1
2
2
3
3
4
4
5
5
09
Continental Africa – gold production

(000oz)
10
11
1,585
1,492
1,570
09
Continental Africa – capital
expenditure
($m)
10
11
198
234
420

P
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Regional overview

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

- Iduapriem and Obuasi in Ghana;
- Siguiri in Guinea;
- Morila, Sadiola and Yatela in Mali;
- Navachab in Namibia; and
- Geita in Tanzania.

It also has two advanced projects in the Democratic Republic of the Congo (DRC), namely Kibali and Mongbwalu.
Combined production from these operations declined by 6% to 1.49Moz of gold in 2010, equivalent to 33.0% of group production.
The Mineral Resource in Continental Africa, attributable to AngloGold Ashanti, totalled 71.19Moz at year-end, including an attributable
Ore Reserve of 26.98Moz.
All Mineral Resources and Ore Reserves listed are attributable unless otherwise stated.

Mineral Resource by region

		Tonnes	Grade	Contained gold	
as at 31 December 2011	Category	million	g/t	Tonnes	Moz
Continental Africa Region	Measured	157.56	2.96	466.98	15.01
	Indicated	545.55	2.13	1,160.19	37.30
	Inferred	323.73	2.32	752.22	24.18
	Total	1,026.84	2.32	2,379.38	

76.50
Ore Reserve by region
Tonnes
Grade
Contained gold
as at 31 December 2011
Category
million
g/t
Tonnes
Moz
Continental Africa Region
Proved
89.97
1.89
170.48
5.48
Probable
302.69
2.32
700.90
22.53
Total
392.66
2.22
871.39
28.02
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa

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Country overview

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

Kibali

On 15 October 2009 AngloGold Ashanti acquired a 50% indirect interest in Moto Goldmines Ltd through a joint venture with Randgold. On 21 December 2009, Randgold and AngloGold Ashanti increased their joint venture interest in the Kibali gold project to 90%, whilst Société L'Office des Mines d'Or de Kilo-Moto (SOKIMO) retained a 10% holding.

The project is a joint development between three separate groups:

- AngloGold Ashanti;
- Randgold 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
- SOKIMO, the state-owned gold mining company.

The consolidated lease is made up of 10 mining concessions.

Mongbwalu

The Mongbwalu Project is one of AngloGold Ashanti's most important exploration projects and is situated within the 5,487km^2 permit covered by Concession 40 in the Ituri Province of north-eastern DRC. Concession 40 has a rich history of gold occurrences and covers the entire Kilo Archaean granite-greenstone belt that extends approximately 850km west-northwest of Lake Albert. The concession is held in a joint venture between AngloGold Ashanti Kilo (AGAK) and SOKIMO, 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 estimation

Mineral Resource estimation is undertaken by either in-house Competent Persons or by approved external consultants. The results of both diamond drilling (DD) and reverse circulation (RC) drilling are used in the estimation process. 3D mineralised envelopes are established using both grade and geology and these are then statistically verified to confirm their validity for use in grade estimation.

Volumes are then filled with block model cells and these are then interpreted for density, rock type and grade, the latter using ordinary kriging. The use of borehole grade top cuts is applied to prevent the spread of high grades during the estimation process. Drill-hole spacing is used to guide the Mineral Resource classification according to requirements of the relevant reporting codes. Open pit Mineral Resources are quoted within a limiting shell and underground Mineral Resources are quoted above a specified cut off.

Ore Reserve estimation

The Ore Reserve for Kibali has been based on the Karagba, Chauffeur and the Sessenge Deeps high-grade domains. High-grade domains (1.0-4.0g/t) within the ordinary kriged resource model are commonly surrounded by a low-grade (+0.3g/t) halo. 3D models of each of these domains are created as the most prospective zones to be considered for mining.

The open pit Ore Reserve was completed on the 3D ordinary kriged resource model using Whittle® pit shell optimisations. This incorporated the mining layout, operating factors, stripping ratio and relevant cut-off grade for the mineral reserve. An open pit/underground interface was determined as optimal at 5,685mRL between the KCD open pit and underground mine.

A cut-off grade analysis at $800/oz was used to determine a cut-off grade of 2.1g/t for the underground mine. Longitudinal and transverse stoping methods with hydraulic and waste rock fill were chosen as the preferred mining method. Underground stope designs were updated from the previously reported Ore Reserve, using the 3D ordinary kriged resource model. Datamine® software was used to compile the Ore Reserve through an automated stope creation process. Modifying factors for planned and unplanned rock dilution, backfill dilution and ore loss were used to amend the reported Ore Reserve. Metallurgical, environmental, social, legal, marketing and economic factors are perceived to be adequately considered in the Kibali feasibility study for the Ore Reserve to remain viable.

DRC

Location

The Kibali project is located in the north-eastern part of the DRC near the international borders with Uganda and Sudan. The local office of Kibali Goldmines is located in the village of Doko, which is centrally located within the project area and approximately 210km by road from Arua on the Ugandan border and immediately north of the district capital of Watsa, which falls within the administrative district of Haut Uélé in Province Orientale. The town of Bunia, which is the United Nations controlled entry point to north-eastern DRC, lies about 200km to the south of the project.

Geology

The Kibali project is located within the Moto Greenstone Belt, which consists of 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, northeast and northwest 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 flow 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 lithology of the rock is unrecognisable.

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

The Kibali-Durba-Karagba Trend and the Gorumbwa-Kombokolo Splay are anomalous with respect to gold endowment, and together define a mineralised, northeast-striking ‘mineralised corridor’, 1.5km wide and 8km long. These corridors host the orebodies of Kibali, Sessenge, Gorumbwa, Karagba, Chauffeur and Durba and Pakaka.

The main deposit, which comprises the combination of Karagba, Chauffeur and Durba, is colloquially termed the KCD deposit and hosts 65% of the grant’s Mineral Resource and 81% of the Ore Reserve (for both open pit and underground mining options).

The next biggest deposit is Pakaka, which hosts some 6% of the Mineral Resource and 7% of the Ore Reserve. Currently only the KCD deposit hosts an underground Ore Reserve and this constitutes 67% of the total KCD Ore Reserve.

Gold mineralisation is generally associated with structural features, resulting in tightly constrained zones which often host pods or lenses of plunging orebodies. Alteration is closely associated with the mineralisation and is typically carbonate-silica-albite with minor sulphide.

Exploration

A large amount of exploration was undertaken by the previous owners of the Kibali project, Moto Goldmines Ltd, and this was focused primarily on the KCD deposit. Since the acquisition of the concession area by AngloGold Ashanti and Randgold Resources, the dominant exploration targets have been the KCD underground area and upgrading the confidence in the proposed KCD open

pit. Exploration will continue to focus on confidence upgrades and ore extensions around the KCD deposit.
DRC
Kibali
P
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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Kibali

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Projects
A feasibility study was completed by Rangold Resources in 2011 and is currently being reviewed by AngloGold Ashanti.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Kibali
Measured
–
–
–
–
–
Indicated
40 x 40
X
X
–
–
–
Inferred
80 x 80
X
X
–
–
–
Grade control
–
–
–
–
–
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Kibali

Category	million	g/t	Tonnes	Moz
Open pit				
Measured	–	–	–	–
Indicated	35.21	2.03	71.43	2.30
Inferred	19.86	1.82	36.06	1.16
Total	55.07	1.95	107.49	3.46
Underground				
Measured	–	–	–	–
Indicated	23.00	5.44	125.12	4.02
Inferred	8.90	3.16	28.12	0.90
Total	31.90	4.80	153.23	4.93
Kibali				
Total	86.96	3.00	260.72	

8.38
DRC
Kibali

Exclusive Mineral Resource

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

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

The Exclusive Mineral Resource makes up 46% of the total Mineral Resource at KCD.

Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Kibali Category	million	g/t	Tonnes	Moz
Measured	–	–	–	–
Indicated	24.77	2.26	55.87	1.80
Inferred	28.76	2.23	64.17	2.06
Kibali Total	53.52	2.24	120.04	3.86

Mineral Resource below infrastructure

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Kibali Category	million	g/t	Tonnes	Moz
Measured	–			

–
–
–
Indicated
23.00
5.44
125.12
4.02
Inferred
8.90
3.16
28.12
0.90
Kibali
Total
31.90
4.80
153.23
4.93
Inferred Mineral Resource in business plan
Some Inferred Mineral Resource was included in the optimisation process. Only the KCD deposit had more than 5% and much
of this is covered by a line of old drilling that was done during Belgian colonial times and which confirmed the presence of the
KCD deposit. This drilling information has not been used in the estimation or classification and is not included in the Ore Reserve.
8.30
2010
-0.14
Depletion
0.21
Gold
price
-0.11
Cost
0.10
Explo-
ration
0.01
Metho-
dology
0.00
Other
8.38
2011
Kibali
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
8.40
8.35

8.30
8.25
8.20
8.15
4.52
2010
0.00
Depletion
0.00
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
0.00
Other
4.52
2011
Kibali
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
4.55
4.50
4.45
4.40
4.35
4.30
4.25
4.20
4.15
4.10
4.05
P

Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Tom Gell
FAusIMM
211795
18 years
Ore Reserve
Andrew McDougall
MAusIMM
204117
14 years
P
60
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Kibali
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Open pit
800
1.08
10.0
–
–

–
–
–
84.5
Underground
800
2.10
8.0
–
–
–
–
–
91.3
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Kibali
Category
million
g/t
Tonnes
Moz
Open pit
Proved
–
–
–
–
Probable
16.82
2.67
44.94
1.44
Total
16.82
2.67
44.94
1.44
Underground
Proved
–
– –
–
Probable
16.62
5.76
95.75
3.08

Total
16.62
5.76
95.75
3.08
Kibali
Total
33.44
4.21
140.69
4.52
DRC
Kibali
2
0
4
6
8
10
Kibali
– surface (metric)
Tonnes above
cut -
off (millions)
Average grade
above cut - of f
(g/t)
70
60
50
40
30
20
10
0
18
16
14
12
10
8
6
4
2
0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
2
4

6
8
10
Kibali
– underground (metric)
Tonnes above cut -
off (millions)
Average grade above
cut - of f
(g/t)
90
80
70
60
50
40
30
20
10
0
14
12
10
8
6
4
2
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

Location

The Mongbwalu project is an area of 396km
2
located in the Permis d'Exploitation No. 5105. This area forms part of the larger Ashanti
Goldfields Kilo (AGK) concession of exploitation licences, totalling 5,487km
2
in the Ituri province of the north-eastern DRC. The district
capital of Bunia lies to the southwest of the concession area, some three hours by road from the project site. Bunia is approximately
one hour's flight from the nearest international airport at Kampala in Uganda.

Geology

The Kilo Archaean granite-greenstone belt, in which the Mongbwalu project is located, is approximately 3,000km
2
in area and is
situated 850km west-northwest of Lake Albert. The Kibalian rocks have been divided into an upper and lower unit. The lower unit is
dominated by magnesium-rich tholeiitic basalts whilst the upper unit is dominated by schists, quartzites and banded iron formations.
The relationship between the upper and lower units appears to be conformable.
The oldest known rocks at Mongbwalu are basement gneisses which have been dated at more than 3,400Ma. Granitoid rocks
comprise more than 80% of the area, which includes rafts of Kibalian rocks that have been intruded by 2,651Ma old diorites of
variable mineralogy.
The Kilo Archaean granite-greenstone belt was part of the Tanzania shield but was separated by Late Proterozoic crustal
mobilisation and then by later rifting along the Eastern Rift Valley system. The rocks have undergone regional metamorphism,
ranging from upper green schist to lower amphibolite facies. During the formation of the East African rift system over the past
100-200Ma, north-south faults formed along which dolerite-lamprophyre dykes were intruded. There is also evidence of some
younger faulting in the region. The area has undergone weak lateritic weathering to shallow depths. Cover sequences are thin and
are generally no greater than 1m thick.
The mineralisation at Mongbwalu is hosted in anatomising mylonite bodies of around 10-15m in width. These mylonite bodies have
been subdivided into three main blocks separated by two late north-south trending Nzebi and Adidi faults, offsetting mineralisation
by up to 200m. The fault blocks are termed the western, central and eastern blocks – hosting the Nzebi, Adidi and Kanga
mylonites respectively.

DRC

Mongbwalu

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The mylonites are composed of quartz, dolomite, calcite, chlorite, sericite and albite. The main mineralisation is hosted in the central and eastern blocks. The gold is not distributed evenly throughout the mylonite and it primarily occurs in 'boudinaged zones' associated with quartz veining and silicification. The gold mainly occurs as free gold, and is often visible in greyish quartz veins and veinlets or disseminated through silicified zones within the mylonite. Sulphides present in the mylonite include pyrite, pyrrhotite, chalcopyrite, sphalerite and galena.

Granitoids dominated by diorite, quartz diorite and tonalite form the footwall and hangingwall to the mineralisation in the potential Mineral Resource area. However, at Nzebi Mine, east-west striking talc carbonate schists of mafic to ultramafic composition and massive para-amphibolite dominate.

Exploration

From the 2008 conceptual study and the 2009 Mineral Resource estimate, it was decided to advance the Mongbwalu project with a 50m by 25m infill drilling campaign to upgrade the Mineral Resource estimate from an Inferred to Indicated Mineral Resource.

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

Based on the information from the 2009 Mineral Resource model and grade estimate, a programme was designed to upgrade approximately 1.0Moz of the Inferred to Indicated Mineral Resource, which has successfully been achieved. Since 2009, 1.2Moz have been upgraded to the Indicated Category.

Geo-metallurgical and geo-technical information requirements from the Mineral Resource area were identified and separate programmes to meet these requirements were compiled. These programmes included geotechnical drilling for civil engineering purposes, limited sterilisation and condemnation drilling and water drilling. In 2011 a total of 6,400m of diamond drilling (DD) and 2,750m of reverse circulation (RC) drilling were completed.

Projects

Major changes have been made to the previous Mineral Resource model completed in April 2011. This includes changes to the interpretation of the high grade mineralisation based on a geological re-logging exercise that identified three continuous quartz reefs within the mylonite. The updated Mineral Resource shows lower tonnes at higher grade. At a cut-off grade of 2.8g/t, the global Indicated mean grade increased by about 9% with a drop in tonnes of between 16%-19%. Three quartz reefs were modelled in the updated model, resulting in a thinner, more laterally continuous mineralised horizon.

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

Type of drilling
Mine/
Spacing
Blast-
Project

Category
m (-x-)
Diamond
RC
hole
Other
Comments
Mongbwalu
Measured
–
–
–
–
–
–
Indicated
25 x 50
X
X
–
–
–
Inferred
100 x 100
X
X
–
–
–
Grade control
–
–
–
–
–
–
DRC
Mongbwalu

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Mineral Resource as at 31 December 2011		Tonnes	Grade	Contained gold	
Mongbwalu	Category	million	g/t	Tonnes	Moz
Underground	Measured	–	–	–	–
	Indicated	4.20	7.63	32.10	1.03
	Inferred	4.40	7.25	31.89	1.03
	Total	8.60	7.44	63.99	2.06
Mongbwalu	Total	8.60	7.44	63.99	2.06

Exclusive Mineral Resource

The Mongbwalu Mineral Resource is reported at a cut-off grade of 2.8g/t Au. The mineralisation has been classified into Inferred and Indicated Mineral Resource categories and represents a drill-hole spacing of 100m x 100m and 25m x 50m respectively.

The Exclusive and Inclusive Mineral Resource numbers are currently identical due to the absence of an Ore Reserve.

Exclusive Mineral Resource

as at 31 December 2011

Tonnes

Grade

Contained gold

Mongbwalu
Category
million
g/t
Tonnes
Moz
Measured
–
–
–
–
Indicated
4.20
7.63
32.10
1.03
Inferred
4.40
7.25
31.89
1.03
Mongbwalu
Total
8.60
7.44
63.99
2.06
Inclusive Mineral Resource in business plan
This project is still in the prefeasibility stage and no business plan has yet been drawn up.
Competent Person
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Tom Gell
FAusIMM
211795
18 years
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Mongbwalu
2
0
4
6
8
10

12
Mongbwalu
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
25
20
15
10
5
0
16
14
12
10
8
6
4
2
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
1.90
2010
0.00
Depletion
0.00
Gold
price
0.00
Cost
0.29
Explo-
ration
0.00
Metho-
dology
-0.13
Other
2.06
2011
Mongbwalu
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
2.20
2.15
2.10

2.05
2.00
1.95
1.90
1.85

P
64
Country overview
AngloGold Ashanti has two mines in Ghana: Obuasi, which has both surface and underground operations and Iduapriem, an open pit mine. Obuasi and Iduapriem are both wholly owned by AngloGold Ashanti. Obuasi is located in the Ashanti region of southern Ghana, approximately 80km south of Kumasi. It is primarily an underground mine operating at depths of up to 1,500m with a continuous history of mining dating back to the 1890s. Iduapriem is located in western Ghana, some 85km from the coast and is currently an open pit operation, although a change to underground operations will be considered in the future.
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 selective mining unit (SMU) 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 both Obuasi and Iduapriem was estimated using Datamine
®
software to generate 3D wireframe models of the mineralisation. These models are based on geological information and cut-off boundaries defined by sampling results. Geological interpretation is based on trench and RC and/or DD drilling 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
®
's Mineral Resource Optimizer is used to generate the ore envelope. An appropriate mining layout is designed that incorporates mining extraction losses and dilution factors.
Ghana

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Location

Iduapriem is located in the western region of Ghana, some 85km north of the coastal city of Takoradi and approximately 8km southwest of the town of Tarkwa. Iduapriem is an open pit mine which commenced mining operations in 1992. Its processing facilities include a 4.2 million tonnes per annum (Mtpa) carbon-in-pulp (CIP) plant with a gravity circuit. The gravity feed recovers about 30% of the gold and the CIP plant recovers the remainder.

Iduapriem is bordered to the north by Gold Fields (Ghana) Ltd's Tarkwa Mine and to the east by Ghana Manganese Company (GMC) – a manganese mine which has existed since the 1920s.

Geology

Iduapriem is located within the Tarkwaian Group of rocks that form part of the West Africa Craton which is covered to a large extent by metavolcanics and metasediments of the Birimian Supergroup. In Ghana, the Birimian terrane consists of northeast/southwest trending volcanic belts separated by basins. The Tarkwaian Group was deposited in these basins as shallow water deltaic sediments.

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

The Banket Reef Zone (BRZ) comprises a sequence of individual beds of quartz pebble conglomerates, breccia conglomerates, quartzites and grits. The outcropping Banket Series in the mine lease area forms prominent curved ridges that extend southwards from Tarkwa, westwards through Iduapriem and northwards towards Teberebie.

All known gold mineralisation within the Banket Series is associated with the conglomerates and is found within the matrix that binds the pebbles together. The gold content is a function of the size and amount of packing of the quartz pebbles within the conglomeratic units. At Iduapriem, the gold mineralisation is unrelated to metamorphic or hydrothermal alteration events and the gold is coarse grained, particulate and free milling. Mineralogical studies indicate that the grain size of native gold particles ranges between 2 and 500μ and averages 130μ. Sulphide mineralisation is present only at trace levels and is not associated with the gold.

Exploration

Iduapriem is a mature operation and there is little prospect of adding to its surface Mineral Resource. The main potential for expansion is therefore dependent on the economic viability of future underground operations. The geological data over the area of the proposed underground operations is limited and a five-year phased drilling programme was initiated to collect more geological information.

This programme was delayed due to the difficulty in securing drilling contracts during the current 'gold boom', but is expected to begin in 2012. The purpose of the first phase of this drilling programme is two-fold:

- to test the validity of the conceptual geological model; and
- to increase the geological confidence of the targeted payshoots to the Inferred Mineral Resource category.

Ghana

Iduapriem

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Continental Africa – Iduapriem

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Projects

There are currently no projects being undertaken at Iduapriem.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Iduapriem
Measured
50 x 50,
X
X
–
–
–
50 x 75, and
X
X
–
–
–
100 x 50
X
X
–
–
–
Indicated
50 x 75,
X
X
–
–
–
50 x 100, and
X
X
–
–
–
100 x 75

X
X
–
–
–
Inferred
40 x 40, and
X
X
–
–
Old leach pads – portions drilled
100 x 100
X
X
–
–
approximately 40 x 40m
Grade control
10 x 12, and
–
–
X
–
–
10 x 15
–
–
X
–
–
Ghana
Iduapriem

P
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Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Iduapriem
Category
million
g/t
Tonnes
Moz
Ajopa
Measured
8.98
1.87
16.83
0.54
Indicated
0.87
0.91
0.79
0.03
Inferred
2.89
1.14
3.29
0.11
Total
12.73
1.64
20.91
0.67
Block 3W
Measured
–
–
–
–
Indicated
2.41
1.33
3.19
0.10
Inferred
2.01
1.09
2.19
0.07
Total

4.42
1.22
5.38
0.17
Block 5
Measured
6.95
1.18
8.20
0.26
Indicated
2.09
1.21
2.53
0.08
Inferred
2.77
1.25
3.46
0.11
Total
11.80
1.20
14.19
0.46
Blocks 7 and 8
Measured
12.40
1.35
16.69
0.54
Indicated
50.87
1.66
84.44
2.71
Inferred
29.08
1.67
48.57
1.56
Total
92.35
1.62
149.70
4.81
Stockpile (full grade ore)
Measured
5.70
0.93
5.32

0.17
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
5.70
0.93
5.32
0.17
Stockpile (other)
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
16.50
0.56
9.32
0.30
Total
16.50
0.56
9.32
0.30
Iduapriem
Total
143.50
1.43
204.83
6.59

Exclusive Mineral Resource

The Exclusive Mineral Resource listed below is derived mainly from the following:

- Inferred Mineral Resource located within the optimised Ore Reserve pit shell; and
- Mineral Resource located outside the Ore Reserve shell but within the optimised Mineral Resource shell. This consists mainly of down-dip extensions of the ore zones, most of which may be mineable at a higher gold price.

Exclusive Mineral Resource

as at 31 December 2011

Iduapriem	Tonnes	Grade	Contained gold	
Category	million	g/t	Tonnes	Moz
Measured	5.43	1.34	7.28	0.23
Indicated	29.38	1.58	46.54	1.50
Inferred	53.25	1.26	66.84	2.15
Iduapriem Total	88.06	1.37	120.65	3.88

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Continental Africa – Iduapriem

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Inferred Mineral Resource in business plan
The Inferred Mineral Resource within the Ore Reserve design is 8% of the total ore scheduled (60.32Mt) and exists as pockets of
Inferred material located within the models of all the deposits.
Inferred Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Iduapriem
million
g/t
Tonnes
Moz
Comments
Ajopa
0.96
1.49
1.43
0.05
–
Block 3W
1.30
1.09
1.41
0.05
–
Block 5
0.86
1.28
1.09
0.04
–
Blocks 7 and 8
1.77
1.43
2.52
0.08
–
Total
4.88
1.32
6.46
0.21
Ghana
Iduapriem
5.27
2010
-0.25

Depletion
1.56
Gold
price
0.00
Cost
0.00
Explo-
ration
0.00
Metho-
dology
0.00
Other
6.59
2011
Iduapriem
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
2.49
2010
-0.24
Depletion
0.00
Model
change
0.30
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
0.00
Other
2.55
2011

Iduapriem
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
2.60
2.55
2.50
2.45
2.40
2.35
2.30
2.25
2.20
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
as at 31 December 2011
price
value
(based on
(based
(based
MetRF
Iduapriem
$/oz
g/t Au
tonnes)
on g/t)
on g/t)
MCF %
%
Ajopa
1,100
0.82
–
–
–
100.0
95.0
Block 3W
1,300
0.70
–
–
–
100.0
95.0

Block 5
1,100
0.70
–
–
–
100.0
95.0
Blocks 7 and 8
1,100
0.70
–
–
–
100.0
95.0

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Ore Reserve
as at 31 December 2011

Iduapriem	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
Ajopa	Proved	5.70	1.94	11.05	0.36
	Probable	0.39	1.13	0.44	0.01
	Total	6.09	1.89	11.50	0.37
Block 3W	Proved	–	–	–	–
	Probable	1.76	1.38	2.43	0.08
	Total	1.76	1.38	2.43	0.08
Block 5	Proved	6.04	1.17	7.04	0.23

Probable
1.80
1.19
2.15
0.07
Total
7.84
1.17
9.18
0.30
Blocks 7 and 8
Proved
11.16
1.28
14.28
0.46
Probable
22.89
1.60
36.73
1.18
Total
34.05
1.50
51.01
1.64
Stockpile (full grade ore)
Proved
5.70
0.93
5.32
0.17
Probable
–
–
–
–
Total
5.70
0.93
5.32
0.17
Iduapriem
Total
55.44
1.43
79.44
2.55

P
70
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Kwasi Osei
MAusIMM
112723
17 years
Ore Reserve
Stephen Asante Yamoah
MAusIMM
304095
7 years
Ghana
Iduapriem
0.5
0.0
1.0
1.5
2.0
2.5
3.0
Iduapriem
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
140
120
100
80
60
40
20
0
3.4
3.2
3.0
2.8
2.6
2.4

2.2
2.0
1.8
1.6
1.4
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

Location

Obuasi is located in the Ashanti Region of Ghana, some 320km northwest of the capital Accra. The mine is situated in a largely
forested region at an elevation of 280m above sea level and the mining concession covers an area of 47,500ha. The surrounding land
is occupied by subsistence farming and eighty communities are located within a 30km radius of the mine. The Edikan mine (Perseus
Mining Ltd.) is situated 45km south of the Obuasi mine.

Geology

The mine is located within the Obuasi concession area in south-western Ghana along the northeast striking Ashanti volcanic belt.
The deposit is in one of the most significant Proterozoic gold belts discovered to date. The Ashanti belt consists predominantly of
sedimentary and mafic volcanic rocks and is the most prominent of the five Birimian gold belts found in Ghana. The belt is a 300km
wrench fault system that extends from Dixcove in the southwest to beyond Konongo in the northeast.
The Birimian was deformed, metamorphosed and intruded by syn- and post-tectonic granitoids during the Eburnean tectonothermal
event around 2,000Ma years ago. Folding trends are dominantly north-northeast to northeast. Elongate syn-Birimian basins
developed between the ridges of the Birimian system and these were filled with the Tarkwaian molasse sediments made up primarily
of conglomerates, quartzose and arkosic sandstones and minor shale units. Major faulting has taken place along the same trends as
the folding.
Gold mineralisation is associated with pervasive silica, carbonate and sulphide hydrothermal alteration and occurs in tightly folded
Lower Birimian schists, phyllites meta greywackes and tuffs along the eastern limb of the Kumasi anticlinorium. The shear zones are
found in close proximity to the contact between these rocks and the metamorphosed and metasomatically altered intermediate to
basic Upper Birimian volcanics. The contact between the harder metavolcanic rocks to the east and the more argillaceous rocks to
the west is thought to have formed a plane of weakness due to the competency contrast between the lithological units. During crustal
movement, this plane became a zone of shearing and thrusting coeval with the compressional phases.
Adjacent to the shear zones, the metasediments are replaced by sericitic, chloritic and carbonaceous schists, which may be graphitic
in places. The gold mineralisation at Obuasi occurs within the fault zones and multiple lodes of mineralisation are a common feature.

Exploration

Surface exploration has resumed in the Obuasi concession area in order to evaluate the potential at Anyankyerim. This deposit is
currently being upgraded by infill drilling and the programme involves 4,868m of RC drillholes that will be completed with DD drilling.
It is estimated that this programme has the potential to add another 0.24Moz to the Mineral Resource.

The underground drilling to explore the Obuasi Deeps below 50 level and southern extensions of the current mining areas above
50 level continued during the year.

Ghana

Obuasi

Projects

Mining method: Obuasi is converting from the current transverse and longitudinal open stoping mining method to the longitudinal
retreat mining method. This conversion will take place in the mining blocks where it is suitable to do so. The major advantage of
this method is that there should be up to 50% reduction in waste development; reduced capital expenditure and additional reef
drive exposure.

Pompora reclamation project: This project will consist of a reclamation station and pipeline that will enable the Kokoteasua and
Pompora TSFs to be reclaimed. The reclaimed material will then be pumped to the tailings sulphide plant (TSP) to extract the residual
gold. This project is planned to be commissioned in 2013.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Obuasi: surface
Measured
20 x 20,
–
Auger drilling, historical information.
50 x 50
–
No current exploration or production.
Indicated
30 x 30,
–
Auger drilling, historical information.
50 x 50 and
–
No current exploration or production.
60 x 60
–
–
Inferred
90 x 90
–
Auger drilling, historical information.
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
Ghana
Obuasi
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Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained 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
0.00
Inferred 0.12
3.74
0.44
0.01
Total 0.16
3.59

0.58
0.02
Gyabunsu-Sibi
Measured
–
–
–
–
Indicated
0.16
4.82
0.78
0.03
Inferred 0.21
4.76
0.98
0.03
Total 0.37
4.78
1.76
0.06
Tailings (Kokoteasua)
Measured
3.22
1.97
6.33
0.20
Indicated
1.65
1.96
3.24
0.10
Inferred –
–
–
–
Total 4.87
1.96
9.57
0.31
Tailings (Pompora)
Measured
–
–
–
–
Indicated
–
–
–
–

Inferred
33.61
1.57
52.89
1.70
Total 33.61
1.57
52.89
1.70
Other surface resources
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred 0.79
2.40
1.90
0.06
Total 0.79
2.40
1.90
0.06
Upper mine
Measured
3.79
9.41
35.67
1.15
Indicated
2.01
7.56
15.18 0.49
Inferred 2.00
9.11
18.21
0.59
Total 7.80
8.85
69.06
2.22
Above 50 base
Measured
43.58
6.85
298.62

9.60
Indicated
30.39
5.43
164.88
5.30
Inferred
32.28
5.64
182.03
5.85
Total 1 06.26
6.08
645.53
20.75
Adansi 50-60
Measured
2.16
5.28
11.38
0.37
Indicated
1.83
4.46
8.15
0.26
Inferred 6.54
5.03
32.89
1.06
Total 10.52
4.98
52.42
1.69
Stockpile (heap leach)
Measured
1.12
0.58
0.65
0.02
Indicated
–
–
–
–
Inferred –
–
–
–
Total 1.12
0.58

0.65
0.02

Mineral Resource continued
as at 31 December 2011

	Tonnes	Grade	Contained gold	
Obuasi Category	million	g/t	Tonnes	Moz
Stockpile (surface oxides)				
Measured	0.03	1.72	0.05	–
Indicated	–	–	–	–
Inferred	–	–	–	–
Total	0.03	1.72	0.05	–
KMS 50-60				
Measured	0.76	16.87	12.86	0.41
Indicated	2.63	16.72	43.97	1.41
Inferred	7.28	12.16	88.53	2.85
Total	10.67	13.62	145.36	4.67
Stockpile (surface sulphides)				
Measured				

0.30
2.64
0.78
0.03
Indicated
–
–
–
–
Inferred –
–
–
–
Total 0.30
2.64
0.78
0.03
Obuasi
Total 180.54
5.49
990.91
31.86

Exclusive Mineral Resource

The Exclusive Mineral Resource is made up of material from underground, open pit and tailings. The bulk of the Exclusive Mineral Resource (71%) is from underground and of this, approximately 52% is locked up in Mineral Resource blocks and remnants of historically mined out areas in the northern section of the mine. 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 changes. Further drilling will increase the confidence in the Inferred Mineral Resource to bring this material into the Ore Reserve in the near future.

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 new TSP. None of the open pits are currently included in the Ore Reserve, to bring the open pits into the Ore Reserve will require more geotechnical investigation, optimisation and mine design.

Exclusive Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold
Obuasi
Category
million
g/t
Tonnes
Moz
Measured
15.31

6.50
99.52
3.20
Indicated
34.88
5.36
187.00
6.01
Inferred 83.42
4.55
379.80
12.21
Obuasi
Total 133.61
4.99
666.33
21.42
Mineral Resource below infrastructure
as at 31 December 2011
Tonnes
Grade
Contained gold
Obuasi
Category
million
g/t
Tonnes
Moz
Measured
2.92
8.31
24.24
0.78
Indicated
4.46
11.69
52.12
1.68
Inferred 13.82
8.79
121.42
3.90
Obuasi
Total 21.20
9.33
197.79
6.36
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Ghana
Obuasi

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Inferred Mineral Resource in business plan

The Inferred Mineral Resource that was included in the business plan is listed in the table below.

Inferred Mineral Resource
as at 31 December 2011

Obuasi	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz	Comments
Above 50 base	2.32	7.32	17.00	0.55	–
KMS 50-60	0.19	13.08	2.45	0.08	–
Total	2.51	7.75	19.45	0.63	

29.52
2010
-0.36
Depletion
2.68
Gold
price
0.00
Cost
0.05
Explo-
ration
0.00
Metho-
dology
-0.04
Other

31.86
2011
Obuasi
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
32.0
31.5
31.0
30.5
30.0
29.5
29.0
8.92
2010
-0.40
Depletion
-0.00
Model
change
0.72
Change in
Economics
0.00
New
ounces
from
projects
0.13
Scope
change
0.00
Other
9.37
2011
Obuasi
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
9.4
9.3
9.2
9.1
9.0
8.9
8.8
8.7
8.6
8.5

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Ghana
Obuasi
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Obuasi
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Above 50 base
1,243
4.00
12.00
–
–
–
–
88.0
85.0
KMS 50-60
1,243
4.00
12.00
–
–
–
–
88.0
85.0
Ore Reserve
as at 31 December 2011
Tonnes

Grade
Contained gold
Obuasi
Category
million
g/t
Tonnes
Moz
Tailings (Kokoteasua)
Proved
1.75
1.96
3.45
0.11
Probable
3.12
1.96
6.12
0.20
Total 4.87
1.96
9.57
0.31
Above 50 base
Proved
12.38
7.32
90.63
2.91
Probable 21.27
7.32
155.69
5.01
Total 33.65
7.32
246.32
7.92
KMS 50-60
Proved
–
–
–
–
Probable 2.71
13.08
35.49
1.14
Total 2.71
13.08
35.49
1.14

Obuasi
Total
41.23
7.07
291.39
9.37
Ore Reserve below infrastructure
as at 31 December 2011
Tonnes
Grade
Contained gold
Obuasi
Category
million
g/t
Tonnes
Moz
Proved
–
–
–
–
Probable
2.71
13.08
35.49
1.14
Obuasi
Total
2.71
13.08
35.49
1.14
2
0
4
6
8
10
12
14
16
18
Obuasi
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f(g/t)
5.0
4.5

4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
20
18
16
14
12
10
8
6
4
2
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
5
10
15
20
Obuasi
– underground (metric)
Tonnes above
cut - off (millions)
Average grade above
cut - of f
(g/t)
140
120
100
80
60
40
20
0
35
30
25
20
15
10
5
Cut-off grade (g/t)
Tonnes above cut-off

Ave grade above cut-off

Competent Persons

Category	Name	Professional organisation	Registration number	Relevant experience
Mineral Resource	Clement Asamoah-Owusu	MAusIMM	210145	27 years
Ore Reserve	Francis Owusu-Mensah	MAusIMM	305571	25 years

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Country 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 northeast of Guinea. It lies about 850km from the capital city of Conakry and 109km from the border with Mali. Gold-bearing ore is mined from several pits and sent to a CIP plant.

Mineral Resource estimation

Mineral Resource definition drilling is done with air core (AC), RC and DD drilling. All available geological drill-hole information is validated for usage in the models and the local geology of the orebody is used to classify the drill-hole information into appropriate geostatistical domains. Detailed statistical analyses are conducted on each of these domains and this allows for the identification of high-grade outlier values. If these values are anomalous to the general population characteristics they are then reduced back to the appropriate upper limit of the population.

The Mineral Resource model is estimated as blocks in a 3D block model using Datamine
®
software. Geological interpretation is based on geological borehole data. The dimensions of these Mineral Resource blocks range from 10m x 10m x 2.5m to 50m x 25m x 6m block sizes, guided by the shape of the orebody and the drilling density. Ordinary kriging is the estimation method that is applied to project the gold grades into unmined areas. The Mineral Resource is declared within an optimised limiting resource pit shell using an appropriate gold price, for example $1,600/oz in 2011.

Ore Reserve estimation

The Mineral Resource models for each pit are depleted to the current mined out surface. Costs are assigned on a pit-by-pit basis, reflecting the existing cost structure of the operation. The relevant dilution and ore loss factors are applied and the optimisation is then done with Whittle
®
software. The relevant modifying factors such as metallurgical recoveries, geotechnical parameters, cut-off grades and economics are applied to generate the final Ore Reserve.

Guinea

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Location

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

The Société Ashanti Goldfields de Guinée (SAG) mining concession consists of four blocks totalling 1,495km^2. Siguiri is a multi-pit oxide gold mining operation. All ore and waste is mined by a mining contractor in a conventional open pit mining operation.

Processing of the ore is done by a CIP plant.

Geology

The gold mineralisation at Siguiri occurs in Paleoproterozoic Birimian rocks consisting of turbidites and lesser volcaniclastic sequences. It is situated in an arcuate zone of a larger, anastomosing shear zone system of second and third order shearing.

These zones form part of the northerly trending, continental scale shear zone system that transects the West African Craton and bordering areas.

There are two types of oxide mineralisation in the Siguiri basin: eluvial or alluvial hosted laterite mineralisation and primary quartz vein and associated shear hosted mineralisation. The laterite mineralisation occurs as alluvial lateritic gravel adjacent to and immediately above the in-situ vein related mineralisation. The primary vein related mineralisation is hosted in metasediments and areas of economic gold mineralisation are formed where these veins are spaced closely together.

The main vein related mineralisation at Siguiri is structurally controlled and associated with a major, east-northeast trending and steep south dipping sheeted quartz vein sets that generally occur in the coarser, brittle siltstones and sandstones lithologies. The regional development and consistent orientation of this main vein set, irrespective of the nature of wall rocks or wall-rock structures, indicates the control of these veins by regional strains.

A deep oxidation (weathering) profile is developed in the region, varying between 50m to 150m. The mineralised saprolite provides the primary oxide feedstock for the CIP 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, a CIP plant was brought on stream during 2005 to treat predominantly saprolite oxide ore. With continued exploration into deeper fresh rock extensions of the ore deposit, new treatment options are again under consideration.

Exploration

Exploration at Siguiri is focused on finding and upgrading oxide mineralisation in the saprolite, using geophysics, soil geochemistry and drillhole sampling in the context of the regional and pit-scale geological models. There is a secondary focus to investigate and evaluate the potential mineralisation in fresh rock so that all opportunities are explored. In 2011 a total of $19.5m was spent on 44,500m of reconnaissance drilling (AC) to test soil sampling and geophysical targets, 9,700m of RC and DD drilling was done on fresh rock exploration, while infill RC drilling amounted to 93,800m.

The main focus of drilling in 2011 was to continue exploring for potential extensions of the mineralisation around the current pit areas,
as well as to investigate new reconnaissance targets. The principle targets that were explored include Sintroko, Sokunu, Kozan,
Balato, Komatiguiya and Silakoro. Infill drilling programmes focused mainly on the Sokunu and Kozan areas where drilling aimed to
upgrade the current resource from the Inferred to Indicated Mineral Resource categories. Reconnaissance drilling programmes
focused on soil geochem and geophysics targets in the Sintroko-Sokunu, Balato, Komatiguiya and Silakoro areas.

Guinea

Siguiri

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Projects
The fresh rock potential below a number of pits is being investigated, with particular emphasis on the Sintroko, Toubani and
Kozan pits. Soil/regolith sampling of Block 1 continued through the year with approximately 90% of Block 1 being covered by the
200m x 50m grid by year end. The emphasis on refining the current geological and structural model for the Siguiri complex continues,
with deep drilling results and new academic studies forming the basis of this project.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Siguiri
Measured
–
–
–
–
–
–
Indicated
20 x 40,
–
X
–
–
–
25 x 25, and
–
X
–
–
–
50 x 25
–
X
–
–
–
Inferred

20 x 40,
X
X
–
–
–
50 x 25, and
X
X
–
–
–
50 x 50
X
X
–
–
–
Grade control
5 x 10,
–
X
–
–
–
5 x 12,
–
X
–
–
–
10 x 5, and
–
X
–
–
–
10 x 10
–
X
–
–
–
Guinea
Siguiri
Geological modelling of the central Siguiri orebodies

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Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Siguiri
Category
million
g/t
Tonnes
Moz
Bidini
Measured
–
–
–
–
Indicated
11.09
0.81
8.97
0.29
Inferred
6.55
0.96
6.28
0.20
Total 17.64
0.86
15.24
0.49
Eureka East
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
1.65
0.87
1.43
0.05
Total 1.65
0.87

1.43
0.05
Eureka North
Measured
–
–
–
–
Indicated
0.94
0.85
0.80
0.03
Inferred
0.28
0.84
0.24
0.01
Total 1.23
0.85
1.04
0.03
Foulata
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
3.67
1.40
5.16
0.17
Total 3.67
1.40
5.16
0.17
Kalamagna
Measured
–
–
–
–
Indicated
10.13
0.75

7.63
0.25
Inferred
2.41
0.75
1.80
0.06
Total 12.54
0.75
9.43
0.30
Kami
Measured
–
–
–
–
Indicated
6.68
0.64
4.29
0.14
Inferred
5.31
0.70
3.69
0.12
Total 11.98
0.67
7.98
0.26
Kosise
Measured
–
–
–
–
Indicated
8.77
0.77
6.74
0.22
Inferred
5.12
0.76
3.88
0.12
Total 13.88
0.76
10.62
0.34

Kozan North
Measured
–
–
–
–
Indicated
8.76
0.71
6.24
0.20
Inferred
4.43
0.65
2.89
0.09
Total 13.19
0.69
9.13
0.29
Kozan South
Measured
–
–
–
–
Indicated
4.79
0.68
3.27
0.11
Inferred
5.89
0.75
4.41
0.14
Total 10.68
0.72
7.68
0.25
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Mineral Resource continued
as at 31 December 2011

Tonnes
Grade
Contained gold
Siguiri
Category
million
g/t
Tonnes
Moz
Seguélén
Measured
8.74
0.72
6.31
0.20
Indicated
15.70
0.93
14.66
0.47
Inferred
6.57
1.04
6.86
0.22
Total 31.01
0.90
27.83
0.89
Sintroko South
Measured
–
–
–
–
Indicated
3.50
1.08
3.79
0.12
Inferred
0.18
1.60
0.30
0.01
Total 3.68
1.11

4.09
0.13
Sokunu
Measured
–
–
–
–
Indicated
3.37
0.81
2.72
0.09
Inferred
4.82
0.70
3.38
0.11
Total 8.19
0.74
6.10
0.20
Soloni
Measured
–
–
–
–
Indicated
6.71
0.77
5.19
0.17
Inferred
4.63
0.73
3.38
0.11
Total 11.34
0.76
8.58
0.28
Sorofe
Measured
–
–
–
–
Indicated
4.08
0.86

3.49
0.11
Inferred
2.27
0.83
1.88
0.06
Total 6.35
0.85
5.37
0.17
Stockpile (marginal ore)
Measured
21.82
0.49
10.77
0.35
Indicated
–
–
–
–
Inferred
–
–
–
–
Total 21.82
0.49
10.77
0.35
Stockpile (full grade ore)
Measured
6.64
0.89
5.88
0.19
Indicated
–
–
–
–
Inferred
–
–
–
–
Total 6.64
0.89
5.88
0.19

Stockpile (spent heap leach)
Measured
–
–
–
–
Indicated
31.95
0.54
17.29
0.56
Inferred
13.40
0.57
7.61
0.24
Total 45.35
0.55
24.90
0.80
Siguiri
Total 220.85
0.73
161.22
5.18
Guinea
Siguiri

P
83

Exclusive Mineral Resource

The Exclusive Mineral Resource at Siguiri comprises approximately 2.71Moz of gold and includes:

- Indicated material that is economic at the Mineral Resource gold price of $1,600/oz, but not at the Ore Reserve price. The Indicated material forms 41% of the Exclusive Mineral Resource.
- Inferred classified material not included in the current pit designs. Selected parts of these areas will be included in infill drilling programmes during 2012. The Inferred material forms 49% of the Exclusive Mineral Resource.
- Inferred material located within the Ore Reserve optimised pit shell. This material forms 10% of the Exclusive Mineral Resource.

There are portions of Indicated material associated with all the major pits as a result of the material being sub-economic under current Ore Reserve optimisation conditions. The Inferred material associated with the Exclusive Mineral Resource is not currently supported with sufficient geological information to be classified at higher Indicated or Measured Resource categories and is therefore not incorporated in the published Ore Reserve.

Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Siguiri Category	million	g/t	Tonnes	Moz
Measured	0.83	0.54	0.45	0.01
Indicated	41.37	0.74	30.64	0.99
Inferred	67.18	0.79	53.17	1.71
Siguiri Total	109.39	0.77	84.26	

2.71

Inferred Mineral Resource in business plan

There are instances where Mineral Resource material classified as Inferred is included in the business plan. This material totals
0.23Moz, which is not significant and only represents 8% of the ounces in the business plan. The major contributor of Inferred material
within the Mineral Reserve pit design is Seguélén and Kalamagna at 0.08Moz and 0.05Moz respectively.

Inferred Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold		
Siguiri	million	g/t	Tonnes	Moz	Comments
Bidini	0.43	0.50	0.21	0.01	–
Kalamagna	3.35	0.46	1.56	0.05	–
Kosise	0.41	0.75	0.31	0.01	–
Kozan North	1.96	0.33	0.66	0.02	–
Kozan South	0.68	0.43	0.29	0.01	–
Seguélén	2.88	0.90			

2.60
0.08
–
Sokunu
0.33
0.61
0.20
0.01
–
Soloni
0.88
0.89
0.79
0.03
–
Sorofe
0.93
0.70
0.65
0.02
–
Total
11.86
0.61
7.27
0.23
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Siguiri

P
84
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Siguiri
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Bidini
1,300
0.31
–
–
–
–
–
100.0
92.0
Eureka East
1,100
0.31
–
–
–
–
–
100.0
92.0
Eureka North
1,100
0.31
–
–

–
–
–
100.0
92.0
Foulata
1,100
0.81
–
–
–
–
–
100.0
92.0
Kalamagna
1,300
0.31
–
–
–
–
–
100.0
92.0
Kami
1,300
0.31
–
–
–
–
–
100.0
92.0
Kosise
1,300
0.31
–
–
–
–
–
100.0
92.0
Kozan North
1,150
0.31
–
–
–

–
–
100.0
92.0
Kozan South
1,150
0.31
–
–
–
–
–
100.0
92.0
Seguélén
1,300
0.34
–
–
–
–
–
100.0
92.0
Sintroko South
1,300
0.40
–
–
–
–
–
100.0
92.0
Sokunu
1,150
0.36
–
–
–
–
–
100.0
92.0
Soloni
1,150
0.31
–
–
–
–

–
100.0
92.0
Sorofe
1,300
0.31
–
–
–
–
–
100.0
92.0
Guinea
Siguiri
5.55
2010
-0.29
Depletion
1.52
Gold
price
-0.91
Cost
0.19
Explo-
ration
-0.68
Metho-
dology
-0.20
Other
5.18
2011
Siguiri
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
2.38
2010
-0.27

Depletion
0.02
Model
change
0.22
Change in
Economics
0.04
New
ounces
from
projects
-0.09
Scope
change
0.01
Other
2.31
2011
Siguiri
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
2.40
2.35
2.30
2.25
2.20
2.15
2.10
Grade modelling of the central Siguiri orebodies

P
85
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Siguiri
Category
million
g/t
Tonnes
Moz
Bidini
Proved
–
–
–
–
Probable
0.77
0.70
0.54
0.02
Total 0.77
0.70
0.54
0.02
Kalamagna
Proved
–
–
–
–
Probable
11.35
0.69
7.79
0.25
Total 11.35
0.69
7.79
0.25
Kosise
Proved
–
–
–
–
Probable
4.95

0.78
3.87
0.12
Total 4.95
0.78
3.87
0.12
Kozan North
Proved
–
–
–
–
Probable
4.38
0.74
3.23
0.10
Total 4.38
0.74
3.23
0.10
Kozan South
Proved
–
–
–
–
Probable
1.97
0.71
1.40
0.05
Total 1.97
0.71
1.40
0.05
Seguélén
Proved
7.27
0.72
5.25
0.17
Probable
10.08
1.02
10.26
0.33
Total 17.34
0.89
15.51

0.50
Sokunu
Proved
–
–
–
–
Probable
2.21
0.79
1.75
0.06
Total 2.21
0.79
1.75
0.06
Soloni
Proved
–
–
–
–
Probable
2.44
0.96
2.34
0.08
Total 2.44
0.96
2.34
0.08
Sorofe
Proved
–
–
–
–
Probable
2.06
0.73
1.50
0.05
Total 2.06
0.73
1.50
0.05
Stockpile (marginal ore)
Proved
21.82
0.49
10.77

0.35
Probable
–
–
–
–
Total 21.82
0.49
10.77
0.35
Stockpile (full grade ore)
Proved
6.64
0.89
5.88
0.19
Probable
–
–
–
–
Total 6.64
0.89
5.88
0.19
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
107.90
0.67
71.87
2.31
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Siguiri

P
86
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Craig Duvel
SACNASP
400007/98
16 years
Ore Reserve
Tebogo Mushi
SAIMM
702438
10 years
Guinea
Siguiri
1
0
2
3
4
5
Siguiri
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
300
250
200
150
100
50
0
7
6
5
4
3
2
1
0

Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

P
87
Country overview
AngloGold Ashanti has interests in three operations in the west African country of Mali – Sadiola (41%), Yatela (40%) and Morila (40%).
The Sadiola and Yatela operations are managed by AngloGold Ashanti, while Randgold Resources Limited manages Morila.
Mineral Resource estimation
The Mineral Resource is taken as the material that falls within the $1,100/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.
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 the Measured and Indicated Mineral Resource
and the Measured, Indicated and Inferred Mineral Resource. All appropriate costs, metallurgical recovery factors and geotechnical
parameters are applied to generate the final Ore Reserve.
Mali
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Mali

P
88
Location
The Morila mine is situated some 280km southeast of Bamako, the capital city of Mali. The mine is operated by Morila SA, a joint venture company incorporating Randgold Resources (40%), AngloGold Ashanti (40%) and the Government of Mali (20%). Randgold Resources took over the operation of Morila mine from AngloGold Ashanti in February 2008.
Mining of the Morila open pits was successfully completed in April 2009. Consequently the main mining activity for the rest of the mine's life will consist of re-handling the existing stockpiles at a rate of 4.2Mtpa, using a fleet consisting of two hydraulic excavators, two CAT 990 front-end loaders and seven Caterpillar 777 dump trucks.
Geology
The Morila deposit occurs within a sequence of amphibolites facies metamorphosed Birimian metasediments. The orebody is located in these metasediments within a broad north-northwest trending corridor of shearing. This shear zone has both near vertical and flat lying components and is interpreted as being a second order shear off the main Banafin shear, approximately 25km to the east.
The Doubalakoro granite pluton borders the metasediments to the west and the Massigui granites lie to the east. Gold mineralisation is associated with silica feldspar alteration and the sulphide minerals arsenopyrite, pyrrhotite, and pyrite (with minor chalcopyrite).
Processing
Ore is processed at a rate of 4.2Mtpa via a conventional carbon-in-leach (CIL) plant, after passing through primary and secondary crushing processes followed by further comminution via a semi-autogenous grinding (SAG) mill and ball mill. After milling and classification, the slurried ore passes through the cyanide leach circuit for gold extraction, after which the leached ore is pumped and deposited into the TSF. Supernatant water from the TSF is reclaimed and collected in the return water dam before being returned to the mill for re-use.
Mali
Morila

P
89
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Morila
Category
million
g/t
Tonnes
Moz
Stockpile (marginal ore)
Measured
2.67
1.14
3.04
0.10
Indicated –
–
–
–
Inferred
–
–
–
–
Total
2.67
1.14
3.04
0.10
Stockpile (full grade ore)
Measured
0.57
1.71
0.98
0.03
Indicated –
–
–
–
Inferred
–
–
–
–
Total
0.57
1.71

0.98
0.03
Stockpile (mineralised waste)
Measured
–
–
–
–
Indicated –
–
–
–
Inferred
0.82
0.79
0.65
0.02
Total
0.82
0.79
0.65
0.02
Tailings storage facilities
Measured
–
–
–
–
Indicated –
–
–
–
Inferred
16.97
0.45
7.61
0.24
Total
16.97
0.45
7.61
0.24
Morila
Total
21.04
0.58
12.27
0.39
Exclusive Mineral Resource
The Exclusive Mineral Resource is comprised of stockpiles below the current processing cut-off and stockpiles with diluted

boundary limits.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Morila
Category
million
g/t
Tonnes
Moz
Measured
–
–
–
–
Indicated –
–
–
–
Inferred
17.79
0.46
8.25
0.27
Morila
Total
17.79
0.46
8.25
0.27
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Morila

P
90
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Morila
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Stockpile (full grade ore)
1,200
0.76
–
100.0
100.0
–
–
100.0
89.0
Stockpile (marginal ore)
1,200
0.76
–
100.0
100.0
–
–
100.0
88.8
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold

Morila
Category
million
g/t
Tonnes
Moz
Stockpile (marginal ore)
Proved
–
–
–
–
Probable
2.67
1.14
3.04
0.10
Total
2.67
1.14
3.04
0.10
Stockpile (full grade ore)
Proved
0.57
1.71
0.98
0.03
Probable
–
–
–
–
Total
0.57
1.71
0.98
0.03
Morila
Total
3.25
1.24
4.02
0.13

Competent Persons

Professional
Registration
Relevant
Category
Name
organisation

number
experience
Mineral Resource
Adama Kone
MAusIMM
222568
20 years
Ore Reserve
Stephen Ndede
MAusIMM
201772
24 years
Mali
Morila
0.24
2010
-0.10
Depletion
0.25
Gold
price
0.00
Cost
0.00
Explo-
ration
0.00
Metho-
dology
0.00
Other
0.40
2011
Morila
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.22
2010
-0.10
Depletion
0.00
Model
change

0.00
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
0.00
Other
0.13
2011
Morila
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
0.23
0.22
0.21
0.20
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12

P
91
Mali
Sadiola
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Sadiola
Location
Sadiola is situated in the northwest of Mali, some 77km to the south of the regional capital of Kayes. Mining from the Sadiola Main pit has been discontinued, but production is still continuing from five satellite pits, namely FE3 pits 1, 2 and 3; FE4 and Timbabougani.
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. These hard-oxide nodes can be treated after first stage crushing.
A project to mine the down-dip extension of the mineralisation in the Sadiola Main pit has been named the Sadiola Sulphides Project (SSP). The gold mineralisation in the Main pit extends into the underlying fresh rock and a full feasibility study of the SSP was completed in 2011. This project will extend the life of Sadiola and leverage exploration for further discoveries of hard-rock gold deposits in the surrounding area.
Geology
The Sadiola gold deposits are located within the Malian portion of the Keniéba-Kedougou Inlier, a major early Paleoproterozoic-Birimian window along the northeast margin of the Kenema-Man shield. The deposits are in the north of the inlier and positioned in the Kofi Formation, just east of the Senegalo-Malian Shear Zone (SMS) terrane boundary. Regional metamorphism is greenschist facies with amphibolites facies metamorphism observed in the contact aureoles around major intrusions.
The gold mineralisation in the Sadiola Main pit is related to the interaction of the north-striking Sadiola Fracture Zone (SFZ) and a north-northeast striking fault array. The SFZ follows the competency contrast between the brittle hangingwall greywacke and the ductile footwall marbles and is mineralised over a drilled strike length of approximately 2,500m. The stratigraphy is intruded by discontinuous diorite and quartz-feldspar porphyry dykes. Mineralisation occurs in all four rock types although most of the mineralisation is hosted in the footwall adjacent to the SFZ. The deposit has been intensely weathered to a maximum depth of 200m.
The oxide Ore Reserve of the Sadiola Main pit is now fully depleted with the remaining ore below the current pit being part of the SSP.
The primary source of the oxide ore currently comes from five satellite pits located approximately 6km southeast of the Sadiola mine and processing plant. Mineralisation at the FE3 pits 1, 2 and 3 is hosted in marbles adjacent to the upper contact with carbon-rich pelites. Gold is associated with northeast-east striking faults and lens-shaped breccia zones that are broadly parallel to the northwest-trending stratigraphy.

The FE4 deposit is located in a bedded sandstone and pelite sequence with mineralisation predominantly hosted in breccia along a NE-striking regional shear and several subsidiary north-northeast-trending faults. Timbabugani is positioned higher in the metapelite stratigraphy near the contact with greywacke. At this stage all the gold is recovered from mostly soft, oxidised ore from the satellite pits.

Exploration

A two-year exploration strategy was developed for Sadiola with the aim to build a definitive understanding of the oxide and sulphide ore potential within the concession area. To this end, 53,300m of RC and 3,600m of DD drilling were completed in the Sadiola concession area during 2011.

Regional exploration work has focused on various targets and follow up drilling will be done at Neteko, Sadiola Far NE, Greater Tambali and Manndakoto. During 2011 the oxide targets of Sadiola NW, Dogofile, Borokone and Satifara were drilled but returned disappointing results and have been reclassified as low priority targets.

Mapping and drilling around the FE3 and FE4 pit areas and drilling around FN2 and FN3 satellite resources has indicated potential for further oxide mineralisation which will be followed up with Mineral Resource drilling in 2012.

Geophysics programmes continued concurrently with the drilling programmes to aid in mapping and further target generation.
Gradient array survey, dipole-dipole and down-hole induced polarisation (IP) was completed over Tambali and the FE complex. A
ground gravity survey that was started in 2009 was concluded during 2011, with the entire Sadiola area having now been covered.
Numerous gravity targets have been drill tested to date.
A detailed 200m x 50m termite mound sampling programme was initiated across the concession area and a comprehensive outcrop
mapping exercise is also underway. Results from this work will be followed up with more ground IP work and target generation in
2012. Additional 2011 work involved the sterilisation around the SSP for planned infrastructure and long hole drilling to increase the
confidence in the SSP Mineral Resource.

Projects

The SSP is the only major AngolGold Ashanti project in Mali and remains the focus for long-term growth. The feasibility study has
been completed and the detailed design phase has started. The project has been scheduled for board approval in early 2012.
The environmental and social impact assessment (ESIA) has been approved and work is currently underway to acquire ESIA permits
for the associated powerline. Building of the construction camp and other infrastructure should begin in 2012 with plant construction
to start in May 2012.
Advanced project work has focused on detailed structural and geological mapping to further the understanding of controls on gold
mineralisation and maximise project potential. From this exercise, the Tambali target was drilled in 2010 and more than 90% of the
Inferred Mineral Resource was converted within the pit design to Indicated status and added to the LOM plan. A new pit design was
completed in 2011. Additional scope exists to increase the Ore Reserve from the high grade zone in the fresh rock underlying the pit.
Preliminary results from multi element analysis revealed potential for economic molybdenum and work is ongoing to assist with a
desktop study to investigate the financial benefit from extracting molybdenum as a by-product.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Sadiola
Measured
25 x 25

X
X
–
–
–
Indicated
25 x 25, and
X
X
–
–
–
50 x 25
X
X
–
–
–
Inferred
25 x 50,
X
X
–
–
–
50 x 25, and
X
X
–
–
–
50 x 50
X
X
–
–
–
Grade control
5 x 10
–
X
–
–
–
P
92
Mali
Sadiola

P
93
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Sadiola
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Sadiola
Category
million
g/t
Tonnes
Moz
FE2
Measured –
–
–
–
Indicated
–
–
–
–
Inferred
0.83
1.54
1.29
0.04
Total
0.83
1.54
1.29
0.04
FE3
Measured –
–
–
–
Indicated
2.99
1.48
4.44
0.14
Inferred
2.61
2.07
5.40
0.17
Total

5.60	
1.75	
9.83	
0.32	
FE4	
Measured	–
–	
–	
–	
Indicated	
2.13	
1.84	
3.92	
0.13	
Inferred	
0.53	
1.94	
1.03	
0.03	
Total	
2.66	
1.86	
4.95	
0.16	
FN2	
Measured	–
–	
–	
–	
Indicated	
0.67	
1.26	
0.85	
0.03	
Inferred	
0.05	
1.19	
0.06	
0.00	
Total	
0.73	
1.26	
0.91	
0.03	
FN3	
Measured	–
–	
–	
–	
Indicated	
0.52	

1.53
0.79
0.03
Inferred
0.72
1.08
0.77
0.02
Total
1.23
1.27
1.56
0.05
Total stockpiles
Measured
8.97
1.36
12.20
0.39
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
8.97
1.36
12.20
0.39
Sekokoto
Measured –
–
–
–
Indicated
–
–
–
–
Inferred
0.64
1.40
0.90
0.03
Total
0.64

1.40
0.90
0.03
Tambali South
Measured
–
–
–
–
Indicated
6.81
1.05
7.15
0.23
Inferred
1.64
1.51
2.46
0.08
Total
8.45
1.14
9.61
0.31
SSP (oxides)
Measured
0.00
1.90
0.01
0.00
Indicated
0.55
1.35
0.74
0.02
Inferred
0.10
1.26
0.12
0.00
Total
0.65
1.34
0.87
0.03
SSP (transitional)
Measured
–
–
–
–

Indicated
0.26
1.39
0.37
0.01
Inferred
0.34
1.41
0.47
0.02
Total
0.60
1.40
0.84
0.03
SSP (sulphides)
Measured
0.00
4.78
0.02
0.00
Indicated
47.61
1.63
77.49
2.49
Inferred
11.01
1.48
16.29
0.52
Total
58.62
1.60
93.80
3.02
Sadiola
Total
88.99
1.54
136.76
4.40

Exclusive Mineral Resource

The Exclusive Mineral Resource is defined as the part of the Mineral Resource that was not converted to Ore Reserve. For the Sadiola pits the Exclusive Mineral Resource is defined as follows:

- the Mineral Resource that is outside the current Ore Reserve designs but inside the Mineral Resource shells;
- the Inferred Mineral Resource; and
- material below the Ore Reserve cut-off grade and above the Mineral Resource cut-off grade.

The Exclusive Mineral Resource gives an indication of the deposit's future potential. This material could be converted to Ore Reserve with an increase in the gold price and favourable costs. The Inferred Mineral Resource portion of the Mineral Resource within the Ore Reserve pit design will be converted to the Ore Reserve through grade control drilling. The low-grade 'mineralised waste' stockpiles that are currently below the marginal ore cut-off grade are also declared as Exclusive Mineral Resource as these stockpiles are currently not in the mining plan.

Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Sadiola Category	million	g/t	Tonnes	Moz
Measured	4.72	0.86	4.07	0.13
Indicated	31.06	1.26	39.18	1.26
Inferred	18.47	1.56	28.80	0.93
Sadiola Total	54.25	1.33	72.05	2.32

P

94
Mali
Sadiola

P
95
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Inferred Mineral Resource in business plan

The plant feed of the final LOM pit designs includes Inferred Mineral Resource which has been included in the final schedule,
amounting to 0.47Moz.

Inferred Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold		
Sadiola	million	g/t	Tonnes	Moz	Comments
FE3	1.42	1.87	2.66	0.09	26.5% of total
FE4	0.42	1.71	0.72	0.02	9.8% of total
FN2	0.07	1.42	0.10	0.00	6.4% of total
FN3	0.34	1.37	0.47	0.02	21.1% of total
Tambali South	0.23	0.84	0.19	0.01	1.3% of total
Deep Sulphides (sulphides)	6.95				

1.53
10.62
0.34
7.9% of total
Total
9.44
1.56
14.76
0.47
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Sadiola
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Deep Sulphides (sulphides)
1,100
0.70
–
100.0
100.0
–
–
–
78.0
FE3
1,100
0.65
–
85.0
105.0
100.0
100.0

100.0
97.0
FE4
1,100
0.65
–
85.0
105.0
100.0
100.0
100.0
97.0
FN2
1,100
0.70
–
90.0
100.0
–
–
–
97.0
FN3
1,100
0.65
–
90.0
100.0
–
–
–
97.0
Tambali South
1,100
0.60
–
90.0
100.0
–
–
–
97.0
4.47
2010
-0.12
Depletion
0.42
Gold
price
0.00
Cost

-0.20
Explo-
ration
-0.19
Metho-
dology
0.00
Other
4.40
2011
Sadiola
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
4.80
4.75
4.70
4.65
4.60
4.55
4.50
4.45
4.40
4.35
2.30
2010
-0.21
Depletion
0.01
Model
change
0.05
Change in
Economics
0.04
New
ounces
from
projects
0.17
Scope
change
-0.06
Other
2.30
2011
Sadiola
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
2.40

2.35
2.30
2.25
2.20
2.15
2.10
2.05

Ore Reserve
as at 31 December 2011

Sadiola	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
FE3	Proved	–	–	–	–
	Probable	2.31	1.31	3.02	0.10
	Total	2.31	1.31	3.02	0.10
FE4	Proved	–	–	–	–
	Probable	1.71	1.58	2.70	0.09
	Total	1.71	1.58	2.70	0.09
FN2	Proved	–	–	–	–
	Probable	0.47	1.34	0.62	0.02

Total
0.47
1.34
0.62
0.02
FN3
Proved –
–
–
–
Probable
0.44
1.65
0.72
0.02
Total
0.44
1.65
0.72
0.02
Total stockpiles
Proved
4.26
2.05
8.71
0.28
Probable
–
–
–
–
Total
4.26
2.05
8.71
0.28
Tambali South
Proved
–
–
–
–
Probable
3.86
1.23
4.75
0.15
Total
3.86
1.23
4.75

0.15
Deep sulphides (sulphides)
Proved
–
–
–
–
Probable
30.87
1.65
50.94
1.64
Total
30.87
1.65
50.94
1.64
Sadiola
Total
43.91
1.63
71.48
2.30
P
96
Mali
Sadiola
0.5
0.0
1.0
1.5
2.0
Sadiola
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
350
300
250
200
150
100
50
0
4.0
3.5
3.0
2.5

2.0
1.5
1.0
0.5
0.0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

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Continental Africa – Sadiola

Competent Persons

Category	Name	Professional organisation	Registration number	Relevant experience
Mineral Resource	Geoffrey H. Gushee	MAusIMM	207957	23 years
Ore Reserve	Karol Bartsch	MAusIMM	107390	31 years

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Mali
Yatela
Location
Yatela mine is situated some 25km north of Sadiola and approximately 50km southwest of Kayes. Yatela is a mature operation and in closure mode. The Yatela operation is currently mining from two open pits, the Yatela Main pit and the Yatela North pit. Mining at the Alamoutala satellite pits, KW18 and northwest extension pits has now been completed.
Ore is processed through a 3.0Mtpa heap leach plant that was commissioned in 2000. The pregnant liquor pond for gold recovery uses the carbon-in-solution process. Loaded carbon is then sent to Sadiola for elution, regeneration, electro-winning and smelting.
Geology
The Yatela and Alamoutala deposits are located in northwest Mali within the Keniéba-Kedougou Inlier, a major Paleaproterozoic-Birimian inlier along the northeast margin of the Kenema-Man shield.
The Yatela deposit is located in the north of the window and is hosted in sediments of the Kofi Formation, which have been intruded by numerous felsic intrusives. The sediments consist of fine-grained greywackes, pelites and impure limestones with minor tuffs and acid volcanics. The primary gold mineralisation is hosted along a sheared contact between predominantly dolomitic carbonate rocks of the Kofi Formation to the west and a large, weakly mineralised dioritic intrusion to the east. The primary mineralisation was concentrated to economic grades through dissolution of the carbonate and subsequent concentration of the gold by eluvial processes and supergene enrichment.
Karst development at Yatela has formed deep pot-holes, collectively named the Yatela Basin, which were gradually filled by sandstones and conglomerates during peneplanation of the Proterozoic rocks. Chaotic collapse during karstification, coupled with the infill sediments resulted in the orebody being hosted in a melange-type of rocks made up of sedimentary rocks and dissolution residues. Gold is disseminated in the unconsolidated ferruginous, sandy-clayed layer that lines the bottom and walls of a deep trough with steep margins. The ore zone dips steeply on the west wall and more gently to the west on the east wall, following a keel-like geometry with tight closure towards the south. The supergene enrichment of low-grade primary gold mineralisation associated with the karstification is the most important geological feature to the economics of the Yatela deposit.
The geology of the Alamoutala deposits comprises north-trending clastic metasediments and calcitic marbles which were intruded by a coarse-grained granodiorite. In the Alamoutala pits, the gold mineralisation is hosted in saprolitised marbles and karstic rocks in the south, and in weathered clastic metasedimentary rocks to the north. The mineralisation occurs proximal to the intermittently sheared and fractured contact, named the Alamoutala Fracture Zone, between the clastic and carbonate units.
Exploration

An aggressive exploration programme over the Yatela concession area during 2011 focused on defining high-grade oxide ore to extend the LOM and 17,400m of RC and 1,800m of DD drilling was completed during the year.

Field work focused on comprehensive termite mound sampling of the total concession area, regional field mapping, ground gravity and IP surveys. In particular, the termite mound sampling programme was very successful and has highlighted several areas of interest that were not apparent in the surface soil geochemistry.

Detailed mapping of the Alamoutala and the KW18 pits has provided a better understanding of the structural controls of the mineralisation and assisted the exploration targeting in the area. Recent significant intercepts north of Alamoutala and west of KW18 have indicated potential for further oxide mineralisation which will be followed up in 2012.

A targeting workshop was held in June 2011 to integrate the new mapping, geophysics and geochemistry data. The workshop resulted in the delineation of four high priority and eight medium priority targets and a change in exploration strategy.

Off-lease exploration work has focused predominantly on areas with potential oxide mineralisation which can be brought in the Yatela
mine and extend the life of the operation. Two concessions have been identified as possible joint ventures.
Ground gravity surveys have been completed over most of the Yatela concession to identify the gravity lows typical of Yatela-type
deposits. Several similar gravity lows have been identified and are being assessed by termite mound sampling and drill testing. Drilling
of IP targets adjacent to the Yatela Main pit is in progress. Follow up of the mineralised Yatela structures that extend to the north,
under the Souroukoto Sandstone cover, are also planned.

Projects

The exploration programme will continue in 2012 to target the high-grade oxide potential within the mining lease area. The company
is also looking at possible partnerships with nearby lease holders which may result in an additional Ore Reserve that could extend
the life of the Yatela operation.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Yatela
Measured
5 x 10,
X
X
–
–
–
25 x 25
X
X
–
–
–
Indicated
25 x 25, and
X
X

–
–
–
35 x 45
X
X
–
–
–
Inferred
50 x 50
X
X
–
–
–
Grade control
5 x 10, and
–
X
–
–
–
10 x 5
–
X
–
–
–

P
100
Mali
Yatela
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Yatela
Category
million
g/t
Tonnes
Moz
Main pit
Measured
0.05
1.93
0.09
0.00
Indicated
0.76
2.64
2.02
0.06
Inferred
0.32
2.82
0.91
0.03
Total
1.13
2.66
3.02
0.10
Yatela North
Measured
–
–
–
–
Indicated
0.35
1.39
0.48
0.02
Inferred
–
–
–

–
Total
0.35
1.39
0.48
0.02
Total stockpiles
Measured
0.37
0.64
0.24
0.01
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
0.37
0.64
0.24
0.01
Yatela
Total
1.85
2.02
3.74
0.12

Exclusive Mineral Resource

The Exclusive Mineral Resource is defined as the part of the Mineral Resource that was not converted to Ore Reserve. As the Yatela pits are being mined out, the Ore Reserve shells are optimised to ensure that all recoverable material is mined before closure. This means that the pits were optimised at a higher gold price than the long-term equilibrium price used on the other deposits in the group. As a result, the Mineral Resource and Ore Reserve are declared in the same shell. Therefore the Exclusive Mineral Resource consists of Inferred material within these pit designs and the material below the Ore Reserve cut-off grade and above the Mineral Resource cut-off grade.

Exclusive Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold
Yatela

Category
million
g/t
Tonnes
Moz
Measured
0.01
1.46
0.02
0.00
Indicated
0.19
1.27
0.25
0.01
Inferred
0.32
2.82
0.91
0.03
Yatela
Total
0.53
2.22
1.17
0.04

0.18
2010
-0.04
Depletion
0.01
Gold
price
-0.02
Cost
0.00
Explo-
ration
-0.01
Metho-
dology
-0.01
Other
0.12
2011
Yatela
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.08
2010
-0.04
Depletion
0.02
Model
change
-0.00
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
-0.00
Other

0.05
2011
Yatela
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
P
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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Yatela

Inferred Mineral Resource in business plan

The plant feed of the final LOM pit designs includes 56% Inferred Mineral Resource, which has been included in the final schedule
amounting to 74,000oz of produced gold.

Inferred Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold
Yatela
million
g/t
Tonnes
Moz
Comments
Main pit
1.19
1.93
2.30
0.07
Remaining in Pushback 8 as per P2V scenario
Total
1.19
1.93
2.30
0.07

Ore Reserve modifying factors

Gold
Cut-off
% RRF
% RRF

% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Yatela
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Main pit
1,300
0.55
–
–
–
100.0
–
100.0
84.8

Ore Reserve

as at 31 December 2011
Tonnes
Grade
Contained gold
Yatela
Category
million
g/t
Tonnes
Moz
Main pit
Proved
–
–
–
–
Probable
0.80
1.75
1.40
0.05
Total
0.80
1.75
1.40
0.05
Total stockpiles
Proved
0.37
0.64
0.24
0.01
Probable
–
–
–
–
Total
0.37
0.64
0.24
0.01
Yatela
Total
1.17
1.40
1.64
0.05
0.6
0.4

0.8
1.0
1.2
1.4
1.6
1.8
Yatela
– surface (metric)
Tonnes above
cut -
off (millions)
Average grade
above cut - of f
(g/t)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
P
102
Mali
Yatela
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Geoffrey H. Gushee
MAusIMM
207957
23 years

Ore Reserve
Karol Bartsch
MAusIMM
107390
31 years

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Namibia
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Continental Africa – Namibia

Country overview

Navachab gold mine, AngloGold Ashanti's sole operation in Namibia, is wholly owned by the company. It is currently the only significant gold mining operation in Namibia.

Mineral Resource estimation

Mineral Resource estimation is performed using Datamine® software. Block dimensions of 25m x 25m x 5m are used as the prototype model. Grade interpolation is done into these blocks using ordinary and indicator kriging methods. A geostatistical technique called uniform conditioning is then used to estimate the proportion of economic ore that occur above the Mineral Resource cut-off and this is reported according to the SMU.

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.

Location

Navachab is located 10km southwest of Karibib and 170km west-northwest of Windhoek, the capital of Namibia. Navachab is mined as an open-pit mine with a CIP plant that has a production capacity of 120,000tpm. The plant includes mills, CIP and electro-winning facilities. A dense media separation (DMS) plant with a 200 tonnes per hour (tph) capacity was commissioned during 2010 and a portion of the CIP feed comes from this pre-concentration plant.

Geology

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

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 northeast to southwest striking metamorphosed sequence of calc-silicates, marbles and volcanoclastic rocks that dip at 70° to the west. The gold is very fine-grained and associated with pyrrhotite and minor amounts of pyrite, chalcopyrite, arsenopyrite, sphalerite, maldonite and bismuthinite. An estimated 90% of the gold occurs as free gold and the remainder is present in minerals such as maldonite (Au_2Bi). Silver is also present with a gold to silver ratio of approximately 15 to 1.

Exploration

The exploration strategy at Navachab's main deposit is to evaluate the shallow mineralisation in the NP2 pit (located adjacent to the Main pit) where a second vein swarm plunges down to 250m below surface. Drilling during the year has confirmed the down-plunge extension of this oreshoot and this near surface mineralisation will assist in unlocking deeper footwall and hangingwall mineralisation for further exploitation down to 350m below surface. Drilling during the year has confirmed the footwall and hangingwall down-plunge extension.

Drilling during the next four years will focus on growing the Mineral Resource base by 0.3 to 0.4Moz per year and increasing the confidence level in the mineralisation. Exploration of the satellite deposits will continue to focus on near-surface, high-grade 'Grid A' type mineralisation to displace low-grade plant feed during stripping of the main orebody extensions. Current satellite target areas are Anomaly 16, Gecko, Steenbok, Starling and Klipspringer.

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Continental Africa – Navachab

Projects

Exploration of the Gecko target has produced a shallow, high-grade Mineral Resource of 0.04Moz. This mineralisation can be used to supplement the low production years. Exploration of the Anomaly 16 target, which is approximately 7km from the plant, has produced a lower-grade Mineral Resource of approximately 0.14Moz with the potential to grow significantly. The identified Mineral Resource for Anomaly 16 is currently situated in the Valley target area, whilst the Central and Beacon target areas are yet to be explored.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Navachab
Measured
5 x 10, and
–
X
–
–
–
10 x 10
–
X
–
–
–
Indicated
25 x 25
X
X
–
–
–
Inferred
50 x 50
X

X
–
–
–
Grade control
5 x 10
–
X
–
–
–
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Navachab
Category
million
g/t
Tonnes
Moz
Anomaly 16
Measured
–
–
–
–
Indicated
2.22
1.14
2.53
0.08
Inferred
1.71
1.07
1.82
0.06
Total 3.92
1.11
4.35
0.14
Gecko
Measured
–
–
–
–
Indicated
0.53
1.55

0.83
0.03
Inferred
0.32
1.41
0.45
0.01
Total 0.85
1.50
1.27
0.04
Main pit (Anomaly 13)
Measured
2.65
1.17
3.09
0.10
Indicated
97.03
1.22
118.68
3.82
Inferred
14.39
1.15
16.61
0.53
Total 114.06
1.21
138.38
4.45
Stockpile (marginal ore)
Measured
7.18
0.53
3.78
0.12
Indicated
–
–
–
–
Inferred
–
–
–
–
Total 7.18
0.53
3.78
0.12

Stockpile (full grade ore)
Measured
8.52
0.73
6.23
0.20
Indicated
–
–
–
–
Inferred
–
–
–
–
Total 8.52
0.73
6.23
0.20
Navachab
Total 134.54
1.14
154.01
4.95

Exclusive Mineral Resource

The Main pit contains the largest portion (2.33Moz) of the Exclusive Mineral Resource. Approximately 0.12Moz of the Exclusive Mineral Resource is hosted in the marginal ore stockpiles at a grade of 0.53g/t and the intention is to bring the gold to account through pre-concentration (using the DMS plant) in the future. The remainder of the Exclusive Mineral Resource is from Anomaly 16 (0.08Moz) and Gecko (0.04Moz).

Exclusive Mineral Resource

as at 31 December 2011

Navachab	Category	Tonnes	Grade	Contained gold	
		million	g/t	Tonnes	Moz
	Measured	7.57	0.53	4.01	0.13
	Indicated	53.86	1.06	56.88	1.83
	Inferred	16.41	1.15	18.88	0.61
Navachab	Total	77.85	1.02	79.77	2.56

Inferred Mineral Resource in business plan

The Inferred Mineral Resource was used in the pit optimisation process and 0.07Moz, or 3%, is present in the designed pits and in the LOM schedule.

Inferred Mineral Resource

as at 31 December 2011

Navachab	Tonnes	Grade	Contained gold
	million	g/t	Tonnes

Moz
Comments
Main pit (Anomaly 13)
1.78
1.14
2.04
0.07
Inferred in Main pit at level 1
Total
1.78
1.14
2.04
0.07
P
106
Namibia
Navachab
4.48
2010
-0.11
Depletion
0.50
Gold
price
-0.60
Cost
0.09
Explo-
ration
1.09
Metho-
dology
-0.49
Other
4.95
2011
Navachab
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
1.85
2010
-0.09

Depletion
-0.10
Model
change
0.41
Change in
Economics
0.00
New
ounces
from
projects
-0.02
Scope
change
0.00
Other
2.05
2011
Navachab
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65

P
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Continental Africa – Navachab
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Navachab
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Main pit (Anomaly 13)
1,100
0.53
–
–
–
–
–
90.0
69.48;
86.70*
** DMS = 69.48%, CIP = 86.70%*
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Navachab
Category
million
g/t
Tonnes
Moz

Main pit (Anomaly 13)
Proved
2.26
1.14
2.57
0.08
Probable
44.18
1.29
56.88
1.83
Total 46.43
1.28
59.45
1.91
Stockpile (full grade ore)
Proved
4.06
1.06
4.31
0.14
Probable
–
–
–
–
Total 4.06
1.06
4.31
0.14
Navachab
Total
50.49
1.26
63.76
2.05
1
0
2
3
4
5
Navachab
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
500
450

400
350
300
250
200
150
100
50
0
7
6
5
4
3
2
1
0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Graham Bell
MAusIMM
306709
12 years
Ore Reserve
George Botshiwe
MAusIMM
229475
11 years

Country overview

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

Mineral Resource estimation

The geological model is a critical input to the Mineral Resource estimation process. The orebody boundaries for the individual deposits are defined from the detailed logging of all geological boreholes. This information is validated and then used to create a 3D model of the orebodies. The geological model is subsequently populated with an appropriately dimensioned block model. The size of this block model is determined by analysing different block sizes in relation to the variance of the blocks. A block size which gives an optimal variance is then chosen. Ordinary kriging is used to interpolate values into the blocks. A geostatistical technique called uniform conditioning is used to estimate the proportion of economic ore that occurs above the Mineral Resource cut-off and this is then reported according to the SMU. The Mineral Resource is reported within a $1,600/oz optimised pit shell and above the calculated mineralised waste cut-off grade per pit. Stockpiled material above mineralised waste cut-off grade is included in the Mineral Resource.

Ore Reserve estimation

The Mineral Resource models produced by the Geology Department are used as the basis for the Ore Reserve. Appropriate mining dilution is used as a modifying factor in the Ore Reserve conversion process. Appropriate Ore Reserve cut-off grades are applied and optimised pit shells are generated, taking into cognisance the economic parameters. The final pits are then designed, taking into consideration the optimised pit shell (at $1,100/oz) and recommended slope geometry.

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Tanzania
Geita
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Geita
Location
The Geita gold mine is located approximately 910km from Dar es Salaam in the Lake Zone of northern Tanzania. The tenements are
situated within the Sukumaland Greenstone Belt of the Lake Victoria goldfields, which hosts other gold mines including Golden Pride,
Bulyanhulu, Tulawaka and North Mara. This geological terrain is considered to be one of the most productive Archaean Greenstone
Belts in East Africa. Mining at Geita is currently undertaken by standard open-pit mining methods, but underground mining of the
down-dip extension of the mineralisation is being considered.
Geology
The Geita Greenstone trend is a component of the Sukumaland Greenstone Belt. This zone of Archaean rocks strikes east-west, is
60km long and up to 15km wide. The terrain is made up of upper to mid-Nyanzian greenstone facies rocks that consist mainly of
clastic sediments, intermediate to felsic volcaniclastics and banded iron formations (BIFs). These rocks form a sedimentary sequence
that is up to 1,000m thick.
Northwest trending deformation corridors separate the Geita Greenstone trend into three distinct sub-terrains. These three
subterrains are Nyamulilima in the west (hosting the Star and Comet, Ridge 8 and Roberts deposits), Geita in the central part (hosting
the Nyankanga, Geita Hill, Lone Cone and Chipaka deposits) and Kukuluma to the northeast (hosting the Matandani, Kukuluma and
Area 3 West deposits). Approximately 78% of the Mineral Resource is situated in the Geita sub-terrain, with 16% in the Nuyamulilima
sub-terrain and 6% in the Kukuluma sub-terrain.
Late dextral faults have utilised the deformation corridors at Geita and have re-activated the pre-existing fault systems. Gold mineralisation
and hydrothermal alteration of the host lithologies, on all scales, is associated with late stage ductile to brittle-ductile deformation.
Exploration
From 2009 and 2011 the exploration focus revolved around risk mitigation of the Mineral Resource that will be mined from 2012 to
2013. The exploration programmes therefore largely consisted of infill drilling, with subsequent updating and refinement of the Mineral
Resource model. During the next two years additional infill drilling programmes are planned to focus on the Nyankanga underground
project areas and the planned open pit production areas.
The mine’s regional exploration programme will ramp up during the next two years. The base consolidation work, involving mostly
ground geophysics, structural analysis, data consolidation and geological interpretation, was done according to ranked target areas
that had been identified by the 2008 airborne geophysical survey. Preliminary follow up drilling on the targets identified during the

2008 survey will continue into 2012 and the drilling results will be used to guide future drill targets after 2012.

Projects

Three prospective projects have been identified which collectively have the potential to increase the Mineral Resource and Ore Reserve at Geita.

The refractory ore project is focused on the Kukuluma sub-terrain where 58% of the ore is refractory and currently not economically treatable at the Geita metallurgical plant. A project has been initiated to determine a suitable treatment process for this material and exploration holes were drilled in 2011 to assess the metallurgical characteristics of this ore. Success in this regard could increase the potential of the underground Mineral Resource, which has a significant upside below the Kukuluma and Matandani open pits.

The underground project will initially focus on the down-dip extension of the Nyankanga orebody because this currently shows the greatest potential for economic viability. The Nyankanka orebody, together with down-dip extensions to the Geita Hill and Ridge 8 orebodies, shows that potentially 3.2Moz of Mineral Resource could be exploited by underground mining methods. The strategy for the Nyankanga underground project has been to evaluate the eastern (near surface) portion of the project area to assess whether it would support a pilot underground mining plan aimed at paying for additional underground exploration development. The additional

exploration development drive would then prove up the predominantly Inferred Mineral Resource and provide further insight regarding
the eventual mining method to be employed. This project, known as 'Block 1', was drilled in 2010 and 2011 to firm up on Mineral
Resource confidence. The 2011 exploration drilling plan focused on extensional drilling to the current underground Mineral Resource.
A 3D geological model of the Geita trend will amalgamate structural mapping and mineralogical characteristics and will be used to
guide this extension drilling.
The third project involves potential satellite pits. Extensions to the current Mineral Resource in the vicinity of the Nyankanga and Star
and Comet pits have been given a higher priority. This will be followed by exploration work in the areas to the west and east of the
Geita Central area. This project is still in the early exploration stage and is expected to gather momentum over the next three years.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Geita
Measured
–   –
–
–
–
–
Indicated
20 x 20, and
X
X
–
–
20 x 20 determined as optimal spacing
40 x 40
for Indicated material after 2011
classification study, 40 x 40 is the lower
limit of Indicated.
Inferred
40 x 40,
X
X
–

–
–
50 x 50, and
X
X
–
–
–
80 x 50
X
X
–
–
–
Grade control
5 x 10, and
–
X
–
–
Depths vary from 10m to 30m for
10 x 5
–
X
–
–
routine GC
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Tanzania
Geita
Section through the Nyankanga pit

Mineral Resource

as at 31 December 2011

Geita		Tonnes	Grade	Contained gold	
	Category	million	g/t	Tonnes	Moz
Area 3 West (oxide)	Measured	–	–	–	–
	Indicated	1.46	1.97	2.87	0.09
	Inferred	0.02	3.07	0.05	0.00
	Total	1.47	1.98	2.92	0.09
Area 3 West (refractory ore)	Measured	–	–	–	–
	Indicated	0.70	2.26	1.58	0.05
	Inferred	0.00	2.98	0.01	0.00

Total
0.70
2.26
1.59
0.05
Chipaka
Measured –
–
–
–
Indicated
2.02
1.60
3.23
0.10
Inferred
3.59
1.82
6.56
0.21
Total
5.61
1.74
9.79
0.31
Geita Hill (open pit)
Measured
–
–
–
–
Indicated
20.09
2.89
58.01
1.86
Inferred
0.65
2.52
1.63
0.05
Total
20.73
2.88
59.64
1.92
Geita Hill (underground)
Measured
–
–
–

–
Indicated
3.85
4.10
15.77
0.51
Inferred
4.18
4.43
18.50
0.59
Total
8.03
4.27
34.27
1.10
Kalondwa Hill
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
1.15
3.19
3.67
0.12
Total
1.15
3.19
3.67
0.12
Kukuluma (non-refractory ore)
Measured
–
–
–
–
Indicated
0.21
2.12
0.44
0.01
Inferred
–
–

–
–
Total
0.21
2.12
0.44
0.01
Kukuluma (refractory ore)
Measured
–
–
–
–
Indicated
1.87
3.49
6.54
0.21
Inferred
0.02
3.19
0.07
0.00
Total
1.90
3.48
6.60
0.21
Lone Cone
Measured
–
–
–
–
Indicated
2.93
2.23
6.54
0.21
Inferred
2.31
2.17
5.00
0.16
Total
5.24
2.20
11.54
0.37
Matandani (non-refractory ore)
Measured

–
–
–
–
Indicated
2.28
1.78
4.07
0.13
Inferred
0.01
4.02
0.04
0.00
Total
2.29
1.79
4.11
0.13

Mineral Resource continued
as at 31 December 2011
Tonnes
Grade
Contained gold
Geita
Category
million
g/t
Tonnes
Moz
Matandani (refractory ore)
Measured –
–
–
–
Indicated
3.50
3.23
11.32
0.36
Inferred
0.21
3.76
0.79
0.03
Total
3.71
3.26
12.11
0.39
Nyankanga (open pit)
Measured
–
–
–
–
Indicated
21.76
3.96
86.10
2.77
Inferred
8.64
2.14
18.53
0.60
Total
30.41
3.44
104.63

3.36
Nyankanga (underground)
Measured
–
–
–
–
Indicated
6.68
3.91
26.08
0.84
Inferred
5.79
3.47
20.11
0.65
Total
12.46
3.71
46.19
1.48
Ridge 8 (open pit)
Measured
–
–
–
–
Indicated
2.74
2.07
5.65
0.18
Inferred
0.28
3.14
0.87
0.03
Total
3.01
2.16
6.52
0.21
Ridge 8 (underground)
Measured
–
–
–
–
Indicated
1.74

3.87
6.73
0.22
Inferred
2.45
4.48
10.97
0.35
Total
4.19
4.23
17.70
0.57
Roberts
Measured –
–
–
–
Indicated
18.10
1.31
23.76
0.76
Inferred
0.43
3.26
1.41
0.05
Total
18.54
1.36
25.17
0.81
Star and Comet
Measured
–
–
–
–
Indicated
4.13
3.86
15.91
0.51
Inferred
3.82
2.96
11.30
0.36
Total
7.95

3.42
27.20
0.87
Stockpile (full grade ore)
Measured
–
–
–
–
Indicated
4.07
2.04
8.32
0.27
Inferred
–
–
–
–
Total
4.07
2.04
8.32
0.27
Stockpile (marginal ore)
Measured
–
–
–
–
Indicated
7.03
0.88
6.20
0.20
Inferred
–
–
–
–
Total
7.03
0.88
6.20
0.20
Stockpile (refractory ore)
Measured
–
–
–
–

Indicated
1.26
1.85
2.33
0.08
Inferred
–
–
–
–
Total
1.26
1.85
2.33
0.08
Geita
Total
139.96
2.79
390.94
12.57
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Tanzania
Geita

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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Continental Africa – Geita
Exclusive Mineral Resource
The Exclusive Mineral Resource at Geita totals 7.82Moz and includes the underground Mineral Resource plus additional material that
occurs between the Ore Reserve pit shell (at a gold price of $1,100/oz) and the Mineral Resource pit shell (at a gold price of
$1,600/oz). This material is sub economic to mine at the current Ore Reserve gold price and forms potential extensions to the current
LOM in an elevated gold price environment. A significant portion of this material is in the Inferred Mineral Resource category and infill
drilling programmes are planned to upgrade potentially economic areas to Indicated Mineral Resource.
Cut 9 contains approximately 0.2Moz of Exclusive Mineral Resource and lies immediately southwest of the Nyankanga open pit.
It could support an additional pushback and drilling will resume once access has been established. Further programmes to upgrade
confidence in the Star, Comet and Geita Hill East pits are planned for 2012.
The Exclusive Mineral Resource forming part of the mine's business plan comprises approximately 1.10Moz from underground
extensions to the Nyankanga open pit and a total of 0.40Moz from Inferred Mineral Resource material located within all the
design pits.
While the economic viability of the in-pit material is known, scoping and prefeasibility studies are currently in progress to determine
the economic viability of the underground material. As part of these studies, exploration drives and infill drilling are planned to upgrade
the confidence in the Mineral Resource.
In instances where the orebody extends down-dip, below the current LOM design pit shell and where it could potentially be
exploited by underground mining methods, a 35m crown pillar forms part of the Exclusive Mineral Resource below the open pit limits.
This material is not planned to be mined.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Geita
Category
million
g/t
Tonnes
Moz
Measured –
–
–
–
Indicated
50.59

2.84
143.72
4.62
Inferred
33.55
2.97
99.50
3.20
Geita
Total
84.14
2.89
243.22
7.82
Mineral Resource below infrastructure
as at 31 December 2011
Tonnes
Grade
Contained gold
Geita
Category
million
g/t
Tonnes
Moz
Measured –
–
–
–
Indicated
12.26
3.96
48.58
1.56
Inferred
12.41
3.99
49.58
1.59
Geita
Total
24.68
3.98
98.16
3.16

Inferred Mineral Resource in business plan

No Inferred Mineral Resource is included in the pit optimisation exercise. Although it does not contribute to the economic assessment of the optimised pit (it is deactivated during the optimisation runs), it is present within the final pit shell as Exclusive Resource.

The magnitude of this Inferred Mineral Resource is quantified in the table below.

Inferred Mineral Resource

as at 31 December 2011	Tonnes	Grade	Contained gold		
Geita	million	g/t	Tonnes	Moz	Comments
Area 3 West (oxide)	0.00	1.21	0.00	0.00	–
Geita Hill (open pit)	2.03	2.74	5.55	0.18	Major Inferred ore is FGO from Geita Hill East
Ridge 8 (open pit)	0.01	0.90	0.01	0.00	–
Star and Comet	0.03	2.15	0.05	0.00	–
Nyankanga (open pit)	4.15	1.63	6.77	0.22	Major Inferred ore is FGO from Cut 7 and Cut 8
Total	6.22	1.99	12.40		

0.40
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Tanzania
Geita
11.27
2010
-0.65
Depletion
2.30
Gold
price
-0.21
Cost
0.20
Explo-
ration
-0.29
Metho-
dology
-0.04
Other
12.57
2011
Geita
Mineral Resource reconciliation: 2010 to 2011
Tonnes (millions)
Change
13.0
12.5
12.0
11.5
11.0
10.5
4.21
2010
-0.66
Depletion
0.17
Model
change
1.60
Change in
Economics
0.00
New
ounces
from
projects
-0.59
Scope

change
-0.01
Other
4.73
2011
Geita
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
5.4
5.2
5.0
4.6
4.4
4.2
4.0
3.8
3.6
3.4
Section through the Geita Hill West pit

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Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based (based on
(based
MetRF
Geita
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t)
MCF %
%
Area 3 West
(refractory ore)
1,100
1.43
–
–
–
105.0
95.0
95.0
59.0
Area 3 West Oxide
1,100
1.01
–
–
–
105.0
95.0
95.0
81.0
Chipaka
1,100

0.97
–
–
–
105.0
95.0
95.0
84.0
Kukuluma
(non-refractory ore)
1,100
1.11
–
–
–
105.0
95.0
95.0
75.0
Kukuluma (refractory ore)
1,100
1.84
–
–
–
105.0
95.0
95.0
46.0
Lone Cone
1,100
0.93
–
–
–
105.0
95.0
95.0
88.0
Matandani
(non-refractory ore)
1,100
0.97
–
–
–
105.0
95.0
95.0
84.0
Matandani (refractory ore)

1,100
1.67
–
–
–
105.0
95.0
95.0
51.0
Nyankanga (open pit)
1,100
0.89
–
–
–
105.0
95.0
95.0
91.0
Ridge 8 (open pit)
1,100
1.00
–
–
–
105.0
95.0
95.0
82.0
Roberts
1,100
0.92
–
–
–
105.0
95.0
95.0
89.0
Star and Comet
1,100
0.94
–
–
–
105.0
95.0
95.0
88.0
Geita Hill (open pit)
1,100

0.94
–
–
–
105.0
95.0
95.0
87.0

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Tanzania
Geita
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Geita
Category
million
g/t
Tonnes
Moz
Area 3 West (oxide)
Proved –
–
–
–
Probable
0.89
1.95
1.73
0.06
Total
0.89
1.95
1.73
0.06
Geita Hill (open pit)
Proved
–
–
–
–
Probable
13.86
2.81
38.95
1.25
Total
13.86
2.81
38.95
1.25
Nyankanga (open pit)
Proved
–
–
–

–
Probable
18.26
3.74
68.36
2.20
Total
18.26
3.74
68.36
2.20
Ridge 8 (open pit)
Proved
–
–
–
–
Probable
1.59
2.05
3.26
0.10
Total
1.59
2.05
3.26
0.10
Roberts
Proved –
–
–
–
Probable
7.98
1.33
10.61
0.34
Total
7.98
1.33
10.61
0.34
Star and Comet
Proved
–
–
–
–
Probable
2.72
4.08

11.10
0.36
Total
2.72
4.08
11.10
0.36
Stockpile (full grade ore)
Proved
–
–
–
–
Probable
4.07
1.90
7.74
0.25
Total
4.07
1.90
7.74
0.25
Stockpile (marginal ore)
Proved
–
–
–
–
Probable
6.43
0.83
5.36
0.17
Total
6.43
0.83
5.36 0.17
Geita
Total
55.81
2.64
147.11
4.73
2
0
4
6
8
10
Geita

– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f (g/t)
120
100
80
60
40
20
0
14
12
10
8
6
4
2
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
4
2
6
8
10
Geita
– underground (metric)
Tonnes above
cut - off (millions)
Average grade above
cut - of f (g/t)
50
45
40
35
30
25
20
15
10
5
0
14
12
10
8
6
4

2
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

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Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Steven Robins
MAusIMM
222533
16 years
Ore Reserve
Jasper Musadaidzwa
MAusIMM
991333
14 years
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Australasia
Western Australia
Sunrise Dam
246,000oz
1
1
FOR GROWTH
Australasia – contribution to
group production
(%)
Australasia 6%
Rest of
AngloGold Ashanti
94%
09
Australasia – gold production
(000oz)
10
11
401
396
246
09
Australasia – capital expenditure
($m)
10
11
177
40
102

Regional overview

AngloGold Ashanti's sole operating mine in Australasia is Sunrise Dam. The Company is also developing the new Tropicana gold mine
in Western Australia, along with joint venture partner Independence Group Ltd., who holds a 30% stake. Tropicana, a greenfields
discovery made by AngloGold Ashanti, is expected to deliver its first production in 2013. AngloGold Ashanti is managing that project
along with a large exploration programme in the area that covers some 13,500km^2
of tenements along a 600km strike length,
considered one of the most prospective regions for new gold discoveries in Australia.

Production from Australasia declined by 38% to 246,000oz in 2011, equivalent to 6% of group production. This was primarily due to
the scaling down of open-pit operations at Sunrise Dam, but this trend is expected to reverse as production from underground
operations at Sunrise Dam ramp up and Tropicana comes into production.

The Mineral Resource for Australasia, attributable to AngloGold Ashanti, totalled 7.45Moz at year-end, including an attributable
Ore Reserve of 4.26Moz.

Mineral Resource by region

as at 31 December 2011	Tonnes	Grade	Contained gold	
Category	million	g/t	Tonnes	Moz
Australasia Region				
Measured	35.13	1.71	60.01	1.93
Indicated	50.11	2.56	128.48	4.13
Inferred	11.05	3.92	43.28	1.39
Total	96.29	2.41	231.77	

7.45

Ore Reserve by region

Tonnes
Grade
Contained gold
as at 31 December 2011
Category
million
g/t
Tonnes
Moz
Australasia Region
Proved
32.86
1.79
58.69
1.89
Probable
28.98
2.55
73.95
2.38
Total
61.84
2.14
132.64
4.26
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Australasia – Australia

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Country overview
The Australian assets were acquired by AngloGold Ashanti at the end of 1999 and currently comprise the Sunrise Dam gold mine
and the Tropicana project.
AngloGold Ashanti owns 100% of Sunrise Dam gold mine. The Tropicana project is a joint venture with Independence Group NL in
which AngloGold Ashanti Australia Limited holds 70%.
The Tropicana deposit represents a discovery in a new gold province in which the joint venture partners have a dominant land position
and a competitive advantage in understanding the mineralised system. Exploration potential in the district is high and a number of
large targets have been identified.
Mineral Resource Estimation
Sunrise Dam
Mineral Resource estimates for the open pits are generated using a geostatistical method called multiple indicator kriging. All available
geological drill-hole information is validated for use in the models and the local geology of the orebody is used to classify the drill-hole
information into appropriate geostatistical domains. Detailed statistical analyses are conducted on each of these domains and this
allows for the identification of high-grade outliers. If these values are anomalous to the general population characteristics they are
then cut back to the appropriate upper limit of the population.
Estimation of the underground Mineral Resource uses the geological model boundaries to subdivide all drill-hole data into appropriate
domains. Statistical analyses are performed on these domains and, in a similar manner to that of open-pit estimation, high-grade
outliers are identified and appropriately cut back to the upper limit of the population. A geostatistical method called ordinary kriging
is used to produce estimates of a pre-determined block size. The block sizes that are used at Sunrise Dam are 10m x 10m and
20m x 20m. The geostatistical technique of conditional simulation has been used to estimate the Cosmo ore zone.
Tropicana
The geostatistical method of uniform conditioning is used to estimate the Mineral Resource. All available geological drill-hole
information is validated for use in the models and the local geology of the orebody is used to classify the drill-hole information into
appropriate geostatistical domains. Detailed statistical analyses are conducted on each of these domains and this allows for the
identification of high-grade outliers. If these values are anomalous to the general population characteristics, they are then cut back to
the appropriate upper limit of the population.
Ore Reserve estimation
The Ore Reserve is estimated within the current pit design using the relevant Mineral Resource models and updated geotechnical
and metallurgical parameters and appropriate operating costs. The recoverable gold Mineral Resource model has been estimated
either by a geostatistical technique called multiple indicator kriging or uniform conditioning (non-linear geostatistical methods) and

reflects the selectivity or SMU of the mining equipment that is intended to be used to recover the Mineral Resource within the Ore
Reserve pit design.
Australia

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Location
Sunrise Dam lies some 220km north-northeast of Kalgoorlie and 55km south of Laverton in western Australia. The mine, 100% owned
by AngloGold Ashanti, comprises an open-pit operation and an underground operation. Mining is carried out by contractors and ore
is treated in a conventional gravity and leach process plant. The mining of the open pit has reached its final depth and only a small
north wall cutback is now in operation which will be completed by the third quarter 2012.
Geology
At Sunrise Dam, gold mineralisation is structurally controlled and vein hosted. The style of mineralisation can be differentiated
depending on the structure or environment in which it is hosted. There are three dominant domains, namely:

- shear-related and high strain – e.g. Sunrise Shear Zone;
- stock work development in planar faults with brittle characteristics (these occur in all rock types and are commonly concentrated at lithofacies contacts within the volcanic stratigraphy or the porphyry margin and within hinge domains within the magnetite shales) – e.g. Western Shear Zone, Watu, Cosmo, Summercloud; and
- placer-style mineralisation hosted within the fluvial sediments.

The vein and shear styles of gold mineralisation are introduced primarily during the third and fourth deformation stages and variations
in structural style, ore and gangue mineralogy and alteration intensity are observed locally. Secondary (supergene) gold mineralisation
is also an important part of the Cleo-Sunrise ore system and is highlighted by extremely high gold grades developed near the base
of Tertiary paleochannels and horizontal blankets of mineralisation related to iron redox fronts and associated water tables.
Exploration
Near-mine exploration at Sunrise Dam is specifically focused on a two-stage strategy of developing and advancing proximal
opportunities to the open pit and underground operations, whilst determining long term opportunities that exist up to 1.5km below
the mine.
The focus for 2012 continues to extend the known Mineral Resource in the underground section of the mine whilst specific deep
drilling programmes, to vertical depths up to 2km, will be undertaken. These will determine the extent of the main mineralised shoots
of Dolly, Midway Shear and the newly delineated Vogue shoot. The Vogue mineralisation may prove to be an extensive mineralised
system that further exploration will delineate and develop into a Mineral Resource in 2012-2013.
In 2012, approximately $25m is allocated to near-mine exploration to support a strategy of growing the Mineral Resource base so
that 20Mt is defined by December 2013, whilst ensuring that Sunrise Dam can deliver on its business promises. This work forms part
of a Mine Life Extension (MLE) study that will determine the full extent of prospectivity of the Sunrise Dam mine area.

Projects

The underground LOM project seeks to delineate deep resources below the mine area and forms part of the MLE study.

The extensions of the current orebodies can be traced to vertical depths in excess of 1.2km and they extend over a strike length of
2.5km. A skilled and dedicated exploration team, based at the mine, is well prepared to undertake this challenge that will establish
Sunrise Dam as a continued sound investment and world-class gold producer.

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Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Sunrise Dam
Measured
25 x 25
X
X
–
–
North Wall Cutback
Indicated
40 x 40
X
X
–
–
Golden Delicious and
North Wall Cutback
Inferred
50 x 100, and
X
X
–
–
Golden Delicious and
100 x 100
X
X
–
–
North Wall Cutback
Grade control
6 x 8
–
X
–
–

Grade control spacing, stockpiles
defined by RC grade control spacing
Australia
Sunrise Dam

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Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Sunrise Dam
Category
million
g/t
Tonnes
Moz
Golden Delicious
Measured
–
–
–
–
Indicated
3.11
1.40
4.35
0.14
Inferred
0.32
1.53
0.50
0.02
Total
3.43
1.41
4.85
0.16
North Wall Cutback
Measured
0.43
1.95
0.84
0.03
Indicated
0.73
2.33
1.71
0.06
Inferred
–
–
–
–
Total

1.16
2.19
2.55
0.08
Stockpile (open pit)
Measured
14.88
1.11
16.57
0.53
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
14.88
1.11
16.57
0.53
Underground
Measured
–
–
–
–
Indicated
11.66
4.44
51.70
1.66
Inferred
3.30
4.96
16.34
0.53
Total
14.95
4.55
68.05
2.19
Stockpile (underground)
Measured
0.04
5.59
0.24

0.01
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
0.04
5.59
0.24
0.01
Sunrise Dam
Total
34.47
2.68
92.25
2.97
Exclusive Mineral Resource
The Exclusive Mineral Resource includes Inferred Mineral Resource and low-grade stockpiles that do not currently meet the
Ore Reserve cut-off grade requirements. The majority of this Inferred material is located in the underground mine where the drill
density is not yet adequate for the Mineral Resource to be considered in the Ore Reserve definition process.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Sunrise Dam
Category
million
g/t
Tonnes
Moz
Measured
0.52
0.79
0.41
0.01
Indicated
4.83
4.80
23.21
0.75
Inferred
3.30

4.96
16.34
0.53
Sunrise Dam
Total
8.65
4.62
39.97
1.28
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Australasia – Sunrise Dam

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Inferred Mineral Resource in business plan
Inferred material located in the GQ South and Cosmo HW orebodies have been included in the 2012 business plan.
The material in GQ South has subsequently been converted to the Indicated Mineral Resource category and further grade control
drilling is planned in Cosmo HW.
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based
(based on
(based
MetRF
Sunrise Dam
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
Sunrise Dam –
North Wall Cutback
1,300
0.80
–
–
–
–
–
90.0
86.0
Sunrise Dam – Underground
1,100
2.20
47.00
–
–
–
–
100.0

84.8
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Sunrise Dam
Category
million
g/t
Tonnes
Moz
North Wall Cutback
Proved
0.39
2.06
0.81
0.03
Probable
0.66
2.51
1.66
0.05
Total
1.05
2.34
2.47
0.08
Stockpile (open pit)
Proved
14.40
1.12
16.19
0.52
Probable
–
–
–
–
Total
14.40
1.12
16.19
0.52
Underground
Proved
–
–
–
–
Probable

6.90
4.14
28.54
0.92
Total
6.90
4.14
28.54
0.92
Stockpile (underground)
Proved
0.04
5.59
0.24
0.01
Probable
–
–
–
–
Total
0.04
5.59
0.24
0.01
Sunrise Dam
Total
22.39
2.12
47.44
1.53
Australia
Sunrise Dam
3.36
2010
-0.30
Depletion
0.21
Gold
price
0.00
Cost
-0.12
Explo-
ration
-0.03
Metho-
dology
-0.15
Other
2.97

2011
Sunrise Dam
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
3.40
3.35
3.30
3.25
3.20
3.15
3.10
3.05
3.00
2.95
1.38
2010
-0.32
Depletion
0.00
Model
change
0.36
Change in
Economics
0.03
New
ounces
from
projects
0.08
Scope
change
0.00
Other
1.53
2011
Sunrise Dam
Ore Reserve reconciliation: 2010 to 2011
Ounces (millions)
Change
2.00
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10

1.05
1.00

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Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Surface
Mineral Resource
John Carswell
FAusIMM
106181
18 years
Ore Reserve
Salih Ramazan
MAusIMM
222870
9 years
Underground
Mineral Resource
John Carswell
FAusIMM
106181
18 years
Ore Reserve
Peter Merry
MAusIMM
306163
30 years
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Australasia – Sunrise Dam
0.5
0.0
1.0
1.5
2.0
2.5
3.0
Sunrise Dam
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f(g/t)
25
20
15

10
5
0
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
2
4
6
8
10
Sunrise Dam
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f (g/t)
18
16
14
12
10
8
6
4
2
0
18
16
14
12
10
8
6
4
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

Location

The Tropicana gold project is located 330km east-northeast of Kalgoorlie, Western Australia. The mineral deposit is hosted in the eastern margin of the Yilgarn Craton. Tropicana is the first deposit discovered in this remote portion of the Great Victoria Desert and is widely regarded as defining an emerging greenfields gold province.

Together, the Tropicana, Havana and Boston Shaker deposits define a northeast trending mineralised corridor, approximately 1.2km wide and 5km long, that has been tested to vertical depth of over 1,000m. The Mineral Resource remains open down-dip for the Tropicana, Havana and Boston Shaker deposits and to the south of the Havana deposit. Neither the immediate metamorphic host rocks nor the mineralised zones are exposed at surface due to the presence of widespread cover sequences, which tend to be between 0.5m and 15m thick.

Geology

The Tropicana deposit comprises a main ore zone up to 50m thick, dominantly hosted in quartzo-feldspathic gneiss, with subordinate thin (3m to 5m), discontinuous mineralised lenses that typically return intercepts of >0.5g/t gold, hosted within the garnet-gneiss dominated hangingwall package. The Havana deposit comprises a lower, laterally continuous higher-grade lode up to 50m thick that is overlain, in central and southern parts of the proposed pit, by stacked, typically lower-grade and thinner (up to 25m thick) ore zones dominantly hosted in quartzo-feldspathic gneiss.

Mineralisation within the ore zones is accompanied by 2% to 8% pyrite with accessory pyrrhotite, chalcopyrite, electrum and minor other sulphides and tellurides. The gold mineralisation is related to shear planes that postdate the main gneissic fabric developed during peak granulite-facies metamorphism.

Exploration
The Tropicana joint venture has assembled a dominant landholding within an emerging greenfields belt hosting the Tropicana gold project. Maximising the value of the known Mineral Resource and capitalising on the strategic ground holding is dependent on the timely application of exploration expenditure. The progressive focusing of expenditure in tenure shown to be more prospective will increase the probability of new discoveries. This approach is being applied by the joint venture and will be achieved through sustained investment in a systematic exploration programme.
Capitalising on the joint venture 'first mover' advantage is dependent on systematic exploration of regional targets (further than 60km from Tropicana), near resource targets (closer than 60km), and extensions of the known Mineral Resource that form part of the underground Mineral Resource. The exploration strategy aims to balance short to longer term value creation through sustained deployment of expenditure within the portfolio of early, mid and later stage prospects and targets.
The key objectives for 2011 can be summarised as follows:

- defining additional higher value ounces to maximise the value of the Tropicana gold project;
- identifying the potential scale of underground Mineral Resource at Havana Deeps that can complement planned open-pit mining and extend the mine life; and
- progressing exploration in the wider Tropicana Belt to leverage the value that may be unlocked at a province scale with the objective of making further greenfields discoveries.

Projects
The Boston Shaker zone is currently the focus of a feasibility study, due for completion in early 2012, which will define material amenable to open-pit mining in the early phase of Tropicana's mine life.
The Havana Deeps prefeasibility study, which is due for completion in late 2012, will examine the trade-off between open pit and underground mining of the Havana Deeps orebody. Potential exists for a portion of the current Havana Deeps underground Mineral Resource to be mined via a large open pit cutback on the Havana pit. If this strategy is demonstrated to be economically viable and the preferred option, then there is potential for the Mineral Resource to increase further.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)

Diamond
RC
hole
Other
Comments
Tropicana
Measured
25 x 25
X
X
–
–
–
Indicated
50 x 50
X
X
–
–
–
Inferred
100 x 100
X
X
–
–
–
Grade control
–
–
–
–
–
–

Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Tropicana
Category
million
g/t
Tonnes
Moz
Surface
Measured
19.77
2.14
42.36
1.36
Indicated
31.13
1.87
58.28
1.87
Inferred
1.25
2.70
3.37
0.11
Total
52.15
1.99
104.02
3.34
Underground
Measured
–
–
–
–
Indicated
3.49
3.57
12.43
0.40
Inferred
6.18
3.73
23.07
0.74
Total
9.67
3.67

35.50
1.14
Tropicana
Total
61.82
2.26
139.52
4.49
Exclusive Mineral Resource
The Exclusive Mineral Resource includes Inferred material at depth in the designed pits, as well as the deeper portions of the Havana
Deeps underground Mineral Resource, which are not yet drilled to a level of confidence to establish an Ore Reserve.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Tropicana
Category
million
g/t
Tonnes
Moz
Measured
1.75
0.52
0.91
0.03
Indicated
13.19
2.04
26.96
0.87
Inferred
7.43
3.56
26.44
0.85
Tropicana
Total
22.37
2.43
54.31
1.75
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Australia
Tropicana
3.69
2010
0.00

Depletion
0.13
Gold
price
-0.01
Cost
0.64
Explo-
ration
0.03
Metho-
dology
0.00
Other
4.49
2011
Tropicana
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
4.5
4.4
4.3
4.2
4.1
4.0
3.9
3.8
3.7
3.6
2.36
2010
0.00
Depletion
0.03
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
0.35
Scope
change
0.00
Other
2.74

2011

Tropicana

Ore Reserve reconciliation: 2010 to 2011

Ounces

(millions)

Change

2.75

2.70

2.65

2.60

2.55

2.50

2.45

2.40

2.35

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Australasia – Tropicana
0.5
0.0
1.0
1.5
2.0
Tropicana
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f (g/t)
450
400
350
300
250
200
150
100
50
0
4
3
2
1
0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
Contoured grade plan of the Tropicana deposits
Mineral Resource below infrastructure
as at 31 December 2011
Tonnes
Grade
Contained gold
Tropicana
Category
million
g/t
Tonnes
Moz
Measured
–
–
–
–
Indicated

3.49
3.57
12.43
0.40
Inferred
6.18
3.73
23.07
0.74
Tropicana
Total
9.67
3.67
35.50
1.14
Inferred Mineral Resource in business plan
Inferred Mineral Resource within the open pit design is included in the business plan, but makes up only a small proportion (<1%) of
the total mining inventory.
0
1
2
3
4
5
Tropicana
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - of f
(g/t)
10
9
8
7
6
5
4
3
2
1
6.5
6.0
5.5
5.0
4.5
4.0
3.5
Cut-off grade (g/t)
Tonnes above cut-off

Ave grade above cut-off

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Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based
(based on
(based
MetRF
Tropicana
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
Surface
1,100
0.70
–
–
–
–
–
–
90.3
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Tropicana
Category
million
g/t
Tonnes
Moz
Surface
Proved
18.03
2.30

41.45
1.33
Probable
21.42
2.04
43.75
1.41
Total
39.45
2.16
85.21
2.74
Tropicana
Total
39.45
2.16
85.21
2.74
Australia
Tropicana
Section through the Havana orebody

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Competent Persons

Category	Name	Professional organisation	Registration number	Relevant experience
Mineral Resource	Mark Kent	MAusIMM	203631	14 years
Ore Reserve	Salih Ramazan	MAusIMM	222870	9 years

Geological map of the Tropicana deposits

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Americas
Argentina
Cerro Vanguardia
196,000oz
Brazil
Serra Grande
67,000oz
AGA Mineração
361,000oz
United States
Cripple Creek & Victor 267,000oz
1
1
2
2
3
3
PLANS IN PLACE
TO REALISE
Americas – contribution to
group production
(%)
Americas 21%
Rest of
AngloGold Ashanti
79%
09
Americas – capital expenditure
($m)
10
11
258
311
456
Americas – contribution to
production by operation
(%)
AGA Mineração 40%
Cripple Creek & Victor
30%
Cerro Vanguardia
22%
Serra Grande
8%
Americas – gold production
(000oz)
09
10
11

816
842
891

Regional overview

AngloGold Ashanti has the Cripple Creek & Victor (CC&V) mine in the USA, the Cerro Vanguardia mine in Argentina and also the AngloGold Ashanti Córrego do Sítio Mineração operation and the Serra Grande joint venture, both in Brazil. The Americas represents one of the most important growth regions for AngloGold Ashanti.

Combined production from these operations increased by 6% to 892,000oz of gold in 2011, equivalent to 21% of group production.

The total Mineral Resource across the Americas, attributable to AngloGold Ashanti, was 49.29Moz at the end of 2011 and the attributable Ore Reserve was 10.89Moz. AngloGold Ashanti also conducts an extensive greenfield exploration programme across the Americas, most notably in Colombia, where it holds a significant land position and has made two greenfield exploration discoveries – Gramalote and La Colosa – which together account for 18.26Moz of the Americas' Mineral Resource.

Mineral Resource

as at 31 December 2011	Category	Tonnes million	Grade g/t	Contained gold Tonnes	Contained gold Moz
Americas Region	Measured	318.65	0.99	316.63	10.18
	Indicated	303.51	1.20	365.07	11.74
	Inferred	706.90	1.20	851.54	27.38
	Total	1,329.06	1.15	1,533.24	49.29

Ore Reserve

Tonnes
Grade
Contained gold
as at 31 December 2011
Category
million
g/t
Tonnes
Moz
Americas Region
Proved
178.35
1.04
185.43
5.96
Probable
107.28
1.43
153.36
4.93
Total
285.64
1.19
338.79
10.89

Country overview

AngloGold Ashanti has a single operation in Argentina, the Cerro Vanguardia mine, which is a joint venture with Formicruz
(the province of Santa Cruz). The province of Santa Cruz holds 7.5% and the remaining 92.5% belongs to AngloGold Ashanti.

Mineral Resource estimation

The Mineral Resource estimates are computed using the relevant modules of the Datamine
®
software package. The geological model
is a critical part of the Mineral Resource estimation process. The orebody boundaries for each geological entity (veins, stock work,
wall rock) are defined from the detailed logging of all geological drillholes. This data is validated and the information is then used to
create a three dimensional model. This model is subsequently overlain with a 5m x 25m x 5m (X by Y by Z) block model. The block
sizes used are chosen to represent the dimensions in which the deposit is intended to be mined.
Volumetric measurements of the orebody are subsequently computed in the system using the relevant block dimensions. Ordinary
kriging is used to perform the grade interpolation and field tests are conducted to determine appropriate in-situ densities.
Stochastic simulations are performed in the main orebodies for uncertainty assessment and the Mineral Resource is then classified
into the Measured, Indicated and Inferred Mineral Resource categories according to stringent rules.

Ore Reserve estimation

The appropriate Mineral Resource models are used as the basis for the Ore Reserve. All relevant modifying factors such as mining
dilution and costs are used in the Ore Reserve conversion process. This is based on the original block grades and tonnage and
includes waste material (both internal and external). Appropriate Ore Reserve cut-off grades are applied and all blocks above this cut-
off are reported. For the reserve optimisation, Whittle
®
software was used and Datamine
®
software was utilised to design the pits.
It is important to emphasise the importance of the silver during the optimisation of the pits, since silver is a significant by-product at
Cerro Vanguardia. The ratio of silver to gold commonly ranges from 10 to 15g/t of silver per 1g/t of gold.
Cerro Vanguardia uses conventional open-pit mining with a doubled bench height of 20m. Mining is distributed between multiple
operating pits, typically three to five at any one time, depending on the plant feed requirements. Waste dumps and heap-leach
stockpiles are located adjacent to each pit. Plant grade ore feed is trucked to either the long-range or short-range stockpiles in order
to smooth out the head grades and avoid recovery losses due to higher than planned silver grades. The average stripping ratio for
the remaining 10 years of mine life is 26:1.

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Argentina
Cerro Vanguardia
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Americas – Cerro Vanguardia
Location
Cerro Vanguardia is located in the Santa Cruz Province, Southern Argentina, approximately 130km north-northwest of the coastal
town of San Julián. The mining lease encompasses an area of approximately 520km
2
. Access to the area is by plane from Buenos
Aires to Comodoro Rivadavia or Rio Gallegos and subsequently by road to the mine site.
Geology
Cerro Vanguardia is located in the central portion of the 60,000km
2
Deseado Massif, the most extensive stratigraphic and structural
unit in Southern Argentina. The Deseado Massif consists of Palaeozoic low-grade metamorphic basement rocks, unconformably
overlain by a thick sequence of Lower to Upper Jurassic volcanic and volcanoclastic rocks of intermediary and acidic composition.
These older rocks are exposed in erosional windows through overlying Cretaceous sediments and Tertiary to Quaternary basalts.
The Chon Aike Formation hosts a low sulphidation epithermal type gold and silver deposit. The true thickness of the ignimbrite
sequence is estimated to have exceeded 1,000m but some lateral thickness variations have been identified across the district.
Epithermal Au-Ag bearing structures cut across all units in the stratigraphy. The two main ignimbrite units, Masiva-Lajosa and
Granosa, host the majority of mineralised veins. The Masiva-Lajosa ignimbrite occurs at the top of the sequence whilst the Granosa
ignimbrite occurs towards the base. These two ignimbrites are separated by two thinner, polymictic ignimbrite units (Brechosa and
Brechosa Base) and a sequence of stratified crystal to ash rich tuffs. The base of the sequence is a mixed unit of stratified ignimbrite
interspersed with fine-grained tuffs.
The mineralisation is concentrated in steeply dipping quartz veins that cut the flat lying ignimbrites and volcaniclastic rocks. The Cerro
Vanguardia district contains around 100 gold and silver-bearing epithermal veins for a cumulative exposed vein strike extension of
240km. Of these veins, 57 are currently known to contain economic gold and silver mineralisation.
All veins at Cerro Vanguardia consist mainly of quartz, adularia and minor native gold, silver, silver sulphides and electrum as
fine-grained disseminations. Vein textures are mainly characterised by pseudomorphic quartz-lattice textures, colloform to crustiform
banding, massive to vuggy quartz and breccia.
Exploration
The exploration programme in 2011 included 34,200m of DD drilling, 19,150m of RC drilling and 2,400m of channel sampling. This
allowed the current Mineral Resource to be increased to 423,00oz of gold and 9.1Moz of silver for the vein deposits, and 89,000oz

gold and 3.0Moz silver for the heap leach material. The objectives of the 2011 drilling programme were as follows:

- incorporate additional ounces of 300,000oz in the Mineral Resource;
- define new targets for the next year; and
- convert 350,000oz of gold from the Mineral Resource into Ore Reserve.

The main veins that were drilled during 2011 were the Liliana, the Loma del Muerto and the Lucy veins. The Liliana vein is located in the southwest of the central area and mineralisation is associated with a single quartz vein where the highest grades are located between 30m and 100m from surface. The Loma del Muerto vein is in the centre of the central area and is one of the largest in Cerro Vanguardia, with mineralisation extending from 20m down to 300m. The Lucy vein is located in the south of the central area and the mineralisation is associated with three quartz veins that have mineralisation extending from 30m down to 150m. The additional Mineral Resource that was generated was separated into full-grade vein material and low-grade heap leach material.

Projects

Cerro Vanguardia currently mines from multiple open pits that are up to 200m deep. The highest grade and thickest veins were mined first to maximise the net present value. Mining costs and strip ratios have increased as grades have decreased over the years. Higher gold prices have extended the life of Cerro Vanguardia, but at higher stripping ratios and operating costs.

A feasibility study is currently being undertaken at Cerro Vanguardia that is intended to optimise the LOM through reduced stripping ratios (from 26:1 to 16:1), thereby reducing mining costs per tonne of ore mined. Plans have also been implemented to convert to underground mining in selected pits in order to maintain current production levels. The benefits of this optimisation are that, apart from reduced cash costs and waste material generation, additional ounces may be mined due to increased access and selectivity.
It will also enable the mining of veins that are currently not mineable from open pits.
The underground mining at Cerro Vanguardia will complement the current open-pit production. The tonnage from the open pits will decrease to an average of 700,000tpa as the highest stripping ratio open pits are replaced with underground operations.
The underground mines are expected to increase their production to 300,000tpa. The only vein that is currently being mined from underground is Mangas, but underground development is taking place at Osvaldo Cb4 and Osvaldo Cb9 and there are several more projects in the pipeline, such as Cuncuna, Liliana, Zorro, Osvaldo Cb10 and Osvaldo Cb12.

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

			Type of drilling				
Mine/ Project	Category	Spacing m (-x-)	Diamond	RC	Blast-hole	Other	Comments
Cerro Vanguardia	Measured	12.5 x 12.5	X	X	–	–	–
	Indicated	40 x 40	X	X	–	–	–
	Inferred	80 x 80	X	X	–	–	–

Grade control
5 x 10
X
X
–
–
–
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Cerro Vanguardia
Category
million
g/t
Tonnes
Moz
Vein Resources (open pit)
Measured
1.57
6.06
9.52
0.31
Indicated
9.91
5.64
55.89
1.80
Inferred
3.39
5.00
16.97
0.55
Total
14.87
5.54
82.38
2.65
CVSA – Heap leach
Measured
10.15
0.73
7.41
0.24
Indicated
13.42
0.54
7.25
0.23
Inferred

4.70
0.58
2.72
0.09
Total
28.27
0.61
17.38
0.56
Vein Resources (underground)
Measured
0.26
9.01
2.38
0.08
Indicated
2.76
9.28
25.62
0.82
Inferred
1.05
8.87
9.32
0.30
Total
4.08
9.16
37.32
1.20
Cerro Vanguardia
Total
47.22
2.90
137.08
4.41
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Argentina
Cerro Vanguardia

Exclusive Mineral Resource

The Exclusive Mineral Resource is primarily located in the space generated between the pit design and the Mineral Resource shell and is due to the difference in the economic parameters that have been used. In very marginal deposits, where the grade of Au and Ag are above the Mineral Resource cut-off but below the Ore Reserve cut-off, significant zones of Exclusive Mineral Resource will be generated. Very deep Mineral Resource will also not be converted to Ore Reserve and is therefore listed as Exclusive Mineral Resource.

Exclusive Mineral Resource

as at 31 December 2011

Cerro Vanguardia	Tonnes	Grade	Contained gold	
Category	million	g/t	Tonnes	Moz
Measured	2.80	2.08	5.81	0.19
Indicated	22.22	2.13	47.28	1.52
Inferred	9.14	3.17	29.01	0.93
Cerro Vanguardia Total	34.16	2.40	82.11	2.64

Inferred Mineral Resource in business plan

The Inferred Mineral Resource that has been included in the pit design is not included in the Ore Reserve statement. These resources are normally located in the deep and lateral zones of the Mineral Resource models. In order for ore from the Inferred Mineral Resource

to be included in the production plan, it must be upgraded by infill drilling.
Inferred Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Cerro Vanguardia
million
g/t
Tonnes
Moz
Comments
Vein Resources (open pit)
1.65
3.67
6.05
0.19
Represents 11% of open-pit schedule
CVSA – Heap leach
0.82
0.45
0.37
0.01
Represents 4% of heap leach schedule
Vein Resources (underground)
0.65
7.12
4.60
0.15
Represents 16% of underground schedule
Total
3.12
3.54
11.02
0.35
Mineral Resource by-product: Silver (Ag)
as at 31 December 2011
Tonnes
Grade
Contained silver
Cerro Vanguardia
Category
Mt
g/t
Tonnes
Moz
Measured
11.98
31.17
373.42
12.01

Indicated
26.09
71.81
1,873.90
60.25
Inferred
9.14
83.87
766.81
24.65
Cerro Vanguardia
Total
47.22
63.84
3,014.14
96.91

Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based
(based on
(based
MetRF
Cerro Vanguardia
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
Heap Leach
1,100
0.35
–
–
–
–
–
–
–
Vein Resources (open pit)
1,100
2.01
45.0
–
–
97.0
96.0
93.0
95.0
Vein Resources (underground)
1,000
4.00
25.0
–
–
97.0

96.0
93.0
95.0
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Cerro Vanguardia
Category
million
g/t
Tonnes
Moz
Vein Resources (open pit)
Proved
1.11
6.01
6.66
0.21
Probable
7.38
5.20
38.39 1.23
Total
8.49
5.31
45.05
1.45
Heap leach
Proved
9.30
0.70
6.48
0.21
Probable
3.61
0.50
1.81
0.06
Total
12.91
0.64
8.28
0.27
Vein Resources (underground)
Proved
0.15
7.71
1.16
0.04

Probable
1.86
7.77
14.44
0.46
Total
2.01
7.77
15.60
0.50
Cerro Vanguardia
Total
23.41
2.95
68.94
2.22
Ore Reserve by-product: Silver (Ag)
as at 31 December 2011
Tonnes
Grade
Contained silver
Cerro Vanguardia
Category
million
g/t
Tonnes
Moz
Proved
10.56
29.25
308.87
9.93
Probable
12.85
89.55
1,150.76
37.00
Cerro Vanguardia
Total
23.41
62.35
1,459.63
46.93
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Argentina
Cerro Vanguardia
4.14
2010
-0.21
Depletion

0.00
Gold
price
0.00
Cost
0.47
Explo-
ration
-0.00
Metho-
dology
0.00
Other
4.41
2011
Cerro Vanguardia
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
4.45
4.40
4.35
4.30
4.25
4.20
4.15
4.10
4.05
4.00
3.95
3.90
1.83
2010
-0.24
Depletion
0.19
Model
change
0.24
Change in
Economics
0.00
New
ounces
from
projects
0.21
Scope
change
0.00
Other

2.22
2011
Cerro Vanguardia
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5

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Americas – Cerro Vanguardia
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Alessandro Henrique Medeiros Silva
MAusIMM
224831
9 years
Ore Reserve
Daniel Stevermer
SME
3095300RM
25 years
2
0
4
6
8
10
Cerro Vanguardia
– surface (metric)
Tonnes above
cut - off (millions)
Average grade above
cut - off (g/t)
16
14
12
10
8
6
4
2
0
18
16
14
12
10
8
6

4
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
5
10
15
20
Cerro Vanguardia
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off (g/t)
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
30
28
26
24
22
20
18
16
14
12
10
8
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

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Brazil

Country overview

AngloGold Ashanti's operations in Brazil comprise the wholly-owned AngloGold Ashanti Brazil Mineração (formerly Morro Velho assets) and a 50% interest in Mineração Serra Grande. AGA Brazil Mineração consists of several operations, namely Córrego do Sítio, Cuiabá, Lamego and Nova Lima Sul.

Mineral Resource estimation

The Mineral Resource estimation is updated as part of the annual evaluation process. The geostatistical method used for estimation is ordinary kriging.

At Cuiabá mine the dataset consists of channel samples and drillhole samples. The 3D modelling and estimation is done with two domains, namely the thick orebodies, consisting of the Fonte Grande Sul and Serrotinho orebodies, and the narrow vein domain of the Balancão, Galinheiro and Canta Galo orebodies. All channel and drillhole samples are used in the 3D geological models and the lithological maps of the orebodies are used to identify the rock types. A simulation technique is next used to determine the uncertainty in the orebody block models. Sequential Gaussian Simulation (SGS) and Sequential Indicator Simulation (SIS) methods are used to simulate the grade (SGS) and the rock types (SIS) and the results are then combined into an uncertainty analysis.

Raposos and Morro da Glória are estimated as the polygonal estimates (considering a weighted average of the samples over two drilled or open panels and an average is then applied for the lower panels where no drilling information is available). Both Raposos and Morro da Glória have the information captured into datasets and preliminary estimation exercises confirm the current numbers in the statement (Raposos by uniform conditioning method and Morro da Glória by ordinary kriging). Luzia da Motta estimates come from ordinary kriging estimates for each target based on the available surface drilling which has a minimum pattern of 100m x 100m.

Ore Reserve estimation

The gold price and operational costs are taken into consideration in determining the Ore Reserve. The Ore Reserve is scheduled and designed using Mine2-4D
®
computer software. Mining parameters such as the mining method, minimum mining width, MCF, dilution and recovery are all applied in the process.

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The wholly-owned AGA Mineração mining complex is located in south-eastern Brazil, in the state of Minas Gerais. It lies south and east of the city of Belo Horizonte and has operations in the municipalities of Nova Lima, Sabará and Santa Bárbara. It is located within the mining district referred to as the Iron Quadrangle (Quadrilátero Ferrífero) and this area hosts numerous historic and current gold mining operations, as well as a number of open-pit limestone and iron ore operations.

Reorganisation of AGA Mineração was completed during the first half of 2010 and the new company is called AngloGold Ashanti Córrego do Sítio Mineração (commonly referred to as AGA Mineração). The aim was to capture the operating and financial synergies of the numerous mining operations in this historical mining district. The company now encompasses the mining operations at Cuiabá, Lamego, Queiroz, Córrego do Sítio and São Bento.

AGA Mineração has mining rights over 61,864ha and ore is sourced from the Cuiabá and Lamego underground mines and processed at the Cuiabá and Queiroz plants, while the Córrego do Sítio open pit mine has a heap-leaching facility. A conceptual study on the Nova Lima Sul project, which involves the re-opening of the mothballed Raposos mine, is in progress. All these operations are primarily gold mines, but sulphur (for the production of sulphuric acid) is a by-product of the Cuiabá mining operation.

Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
AGA Mineração Category	million	g/t	Tonnes	Moz
Measured	7.70	7.16	55.12	1.77
Indicated	14.32	5.90	84.57	2.72
Inferred	33.53	6.47	216.83	6.97

AGA Mineração

Total
55.55
6.42
356.52
11.46
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
AGA Mineração
Category
million
g/t
Tonnes
Moz
Measured
2.62
7.62
19.97
0.64
Indicated
6.74
6.65
44.77
1.44
Inferred
32.39
6.55
212.15
6.82
AGA Mineração
Total
41.75
6.63
276.89
8.90
Mineral Resource below infrastructure
as at 31 December 2011
Tonnes
Grade
Contained gold
AGA Mineração
Category
million
g/t
Tonnes
Moz
Measured
1.46
4.79

6.99
0.22
Indicated
9.15
5.37
49.16
1.58
Inferred
31.73
6.55
207.85
6.68
AGA Mineração
Total
42.34
6.23
263.99
8.49
Brazil
AGA Mineração
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Americas – AGA Mineração

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Mineral Resource by-product: Sulphur (S)
Sulphur
as at 31 December 2011
Tonnes
Grade
Pounds
AGA Mineração
Category
Mt
%S
Mt
million
Measured
5.84
6.6
0.38
848
Indicated
5.29
6.0
0.32
701
Inferred
14.54
7.0
1.01
2,229
AGA Mineração
Total
25.67
6.7
1.71
3,779
Ore Reserve modifying factors
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
as at 31 December 2011
price
value
Dilution (based on
(based
(based on
(based
MetRF
AGA Mineração

$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
CdS I (Oxides)
1,100
0.76
28.0
–
–
–
–
92.0
88.0
CdS I (Cachorro Bravo)
1,100
3.60
29.0
–
–
–
–
95.0
89.0
CdS I (Laranjeiras)
1,100
3.60
29.0
–
–
–
–
95.0
89.0
Cuiabá (Main orebodies)
1,100
4.90
6.5
–
–
–
–
94.5
93.0
Cuiabá (Narrow veins)
1,100
3.75

5.3
–
–
–
–
94.5
93.0
Lamego (Arco da Velha)
1,100
2.87
5.0
–
–
–
–
94.5
93.0
Lamego (Cabeca de Pedra)
1,100
2.87
5.0
–
–
–
–
94.5
93.0
Lamego (Carruagem)
1,100
2.87
5.0
–
–
–
–
94.5
93.0
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
AGA Mineração
Category
million
g/t
Tonnes
Moz
Proved
5.16
6.29

32.41
1.04
Probable
6.38
4.90
31.23
1.00
AGA Mineração
Total
11.53
5.52
63.64
2.05
Brazil
AGA Mineração
11.17
2010
-0.52
Depletion
-0.00
Gold
price
0.00
Cost
0.91
Explo-
ration
0.03
Metho-
dology
-0.12
Other
11.46
2011
AGA Mineração
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
11.6
11.5
11.4
11.3
11.2
11.1
11.0
10.9
10.8
10.7
10.6
2.15
2010

-0.38
Depletion
0.06
Model
change
0.05
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
0.17
Other
2.05
2011
AGA Mineração
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
2.15
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75

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Ore Reserve by-product: Sulphur (S)
Sulphur
as at 31 December 2011
Tonnes
Grade
Pounds
AGA Mineração
Category
Mt
%S
Mt
million
Proved
4.14
5.4
0.23
496
Probable
3.71
4.9
0.18
404
AGA Mineração
Total
7.84
5.2
0.41
900
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Americas – AGA Mineração
0.5
0
1.0
1.5
2.0
2.5
10
AGA Mineração
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off (g/t)
7.0
6.5
6.0
5.5
5.0

4.5
4.0
3.5
3.0
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
1
2
3
4
5
AGA Mineração
– underground (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off
(g/t)
54
52
50
48
46
44
42
40
38
36
34
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4

Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
Laser scanner image of underground development

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Location

Córrego do Sítio is located 60km east of the city of Belo Horizonte, which is in the Minas Gerais State of Brazil. The southern portion of this mining complex is referred to as Córrego do Sítio I whilst the northern portion (formerly known as São Bento) has been renamed Córrego do Sítio II.

Geology

Córrego do Sítio is located in the eastern part of the lower to middle greenschist facies Archaean Rio das Velhas greenstone belt.

The Córrego do Sítio I and Córrego do Sítio II gold deposits and targets are located in a gold trend that extends for about 11km in a north-easterly direction, from Grota Funda (CdS I areas) in the south to Jambeiro (São Bento/CdS II areas) in the north. The main gold targets and deposits are distributed over three trends, namely the Córrego do Sítio trend, the Donana Trend and the Cristina Trend.

The Córrego do Sítio orebodies consist of narrow northeast/southwest elongated lenses of mineralisation dipping at 20° to 30°.

Córrego do Sítio is an orogenic type deposit and comprises many hydrothermal lodes with quartz veins and low sulphide content disseminated in the wall rocks. The mineralised orebodies are narrow, elongated and folded. In general, the mineralised orebodies are sericitic zones and quartz veinlets. The gold occurs as microscopic or sub microscopic inclusions in aresenopyrite and sometime berthierite. Other typical sulphide minerals in the orebodies are pyrrhotite, pyrite and chalcopyrite.

Brazil

AGA Mineração – Córrego do Sítio

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Exploration
Exploration started in the 1980s and focused mainly on the oxides. The sulphide potential was only fully appreciated when the
underground exploration ramp was developed in 2002. An extensive drilling campaign has since been conducted, aiming to add and
convert Mineral Resources from three sets of orebodies known as Cachorro Bravo, Laranjeiras, and Carvoaria. To date, over 21km
of underground development has provided access and a better understanding of these orebodies.
Exploration of further targets is continuous and in 2011 a total of 37,600m of drilling was done on the Serra Redonda, Rosalino, Shaft,
Barra Feliz, Anomalia I and Anomalia II target areas. A further 5,000m of drilling from Level 23 of the São Bento Mine was planned
for 2011, but due to rehabilitation work on the infrastructure the drilling programme was postponed to June and only 2,500m of this
drilling programme was completed by year end.
Projects
The main projects at Córrego do Sítio are geared towards Mineral Resource conversion. Córrego do Sítio currently has 411,000oz of
Probable and Proved Ore Reserve. This represents around 38% of the 1.1Moz of Mineral Resource declared in 2009, and around
19% of the 2.1Moz of the current Mineral Resource. In 2010 a total of 60,000oz of additional Mineral Resource was added, mainly
from the Laranjeiras and Carvoaria orebodies. The strategy to convert the additional 664,000oz of Inferred Mineral Resource to
Indicated Mineral Resource is based on a large drilling programme of around 69,000m, to be drilled from 2010 to 2014 at Cachorro
Bravo, Laranjeiras and Carvoaria Velha orebodies. For 2011, the immediate strategy is to add the Ore Reserve from panel 4 of the
Cachorro Bravo orebody system.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
AGA Mineração
Measured
25 x 25
X
X
–
–

–
– Córrego do Sítio
Indicated
30 x 25,
X
X
–
–
–
50 x 30, and
X
X
–
–
–
50 x 50
X
X
–
–
–
Inferred
30 x 25,
X
X
–
–
–
40 x 25,
X
X
–
–
–
50 x 30,
X
X
–
–
–
50 x 50,
X
X
–
–
–
50 x 100,
X
X
–
–

–
100 x 40, and
X
X
–
–
–
100 x 100
X
X
–
–
–
Grade control –
–
–
–
–
–
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Americas – AGA Mineração – Córrego do Sítio

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Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Córrego do Sítio
Category
million
g/t
Tonnes
Moz
CdS I (Cachorro Bravo)
Measured
0.55
8.17
4.53
0.15
Indicated
1.35
7.56
10.21
0.33
Inferred
0.66
7.80
5.14
0.17
Total
2.56
7.75
19.88
0.64
CdS I (Carvoaria)
Measured
–
–
–
–
Indicated
0.56
10.62
5.99
0.19
Inferred
0.63
8.83
5.60
0.18
Total

1.20
9.67
11.59
0.37
CdS I (secondary orebodies)
Measured
0.03
3.80
0.11
0.00
Indicated
1.09
5.13
5.59
0.18
Inferred
3.41
4.44
15.16
0.49
Total
4.53
4.61
20.86
0.67
CdS I (Laranjeiras)
Measured
–
–
–
–
Indicated
1.85
6.36
11.78
0.38
Inferred
2.35
7.91
18.60
0.60
Total
4.20
7.23
30.38
0.98
CdS I (transitional)
Measured
0.03
5.47
0.19

0.01
Indicated
0.92
4.92
4.54
0.15
Inferred
0.89
5.55
4.93
0.16
Total
1.85
5.23
9.67
0.31
CdS I (oxides)
Measured
0.70
4.23
2.97
0.10
Indicated
1.99
4.09
8.13
0.26
Inferred
2.31
3.94
9.09
0.29
Total
5.00
4.04
20.19
0.65
CdS II (Pinta Bem)
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
0.16
4.88

0.77
0.02
Total
0.16
4.88
0.77
0.02
CdS II (Sangue de Boi)
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
1.70
6.06
10.28
0.33
Total
1.70
6.06
10.28
0.33
CdS II (Sao Bento
Measured
–
–
–
–
mine resources)
Indicated
–
–
–
–
Inferred
2.04
8.00
16.32
0.52
Total
2.04
8.00
16.32
0.52
CdS II (secondary orebodies)

Measured
–
–
–
–
Indicated
0.05
3.25
0.17
0.01
Inferred
0.22
5.10
1.15
0.04
Total
0.28
4.75
1.32
0.04
CdS II (transitional)
Measured
–
–
–
–
Indicated
0.03
4.17
0.14
–
Inferred
0.09
3.23
0.29
0.01
Total
0.13
3.49
0.44
0.01
CdS II (oxides)
Measured
–
–
–
–
Indicated
0.21
3.53
0.75

0.02
Inferred
0.40
4.80
1.90
0.06
Total
0.61
4.35
2.65
0.09
Córrego do Sítio
Total
24.24
5.95
144.34
4.64
Brazil
AGA Mineração – Córrego do Sítio

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Exclusive Mineral Resource

The Exclusive Mineral Resource includes all of the Córrego do Sítio II areas. It also includes the Cachorro Bravo, Laranjeiras and Carvoaria underground orebodies, where there is no accessible underground development. The Inferred Mineral Resource that has been included in the pit shells of the oxidised orebodies is also part of the Exclusive Mineral Resource.

Exclusive Mineral Resource

as at 31 December 2011

		Tonnes	Grade	Contained gold	
Córrego do Sítio	Category	million	g/t	Tonnes	Moz
	Measured	0.37	11.42	4.26	0.14
	Indicated	4.32	7.08	30.59	0.98
	Inferred	14.41	6.10	87.85	2.82
Córrego do Sítio	Total	19.10	6.42	122.70	3.94

Inferred Mineral Resource in business plan

The Inferred Mineral Resource that has been included in the mine design is the mining panels in the lower areas of some sulphide orebodies such as Cachorro Bravo, Laranjeiras and Carvoaria.

Inferred Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold

Córrego do Sítio
million
g/t
Tonnes
Moz
Comments
CdS I (oxides)
0.44
3.12
1.38
0.04
Inferred Mineral Resource in BUP
CdS I (Cachorro Bravo)
1.49
6.33
9.45
0.30
Carvoaria Inferred Mineral Resource is included
CdS I (Laranjeiras)
2.12
5.52
11.70
0.38
–
Total
4.05
5.56
22.52
0.72
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Córrego do Sítio
Category
million
g/t
Tonnes
Moz
CdS I (Cachorro Bravo)
Proved
0.34
5.62
1.91
0.06
Probable
1.14
5.41
6.15
0.20

Total
1.48
5.46
8.06
0.26
CdS I (Laranjeiras)
Proved
0.10
4.89
0.51
0.02
Probable
0.68
4.67
3.17
0.10
Total
0.78
4.70
3.68
0.12
CdS I (oxides)
Proved
0.58
2.82
1.62
0.05
Probable
0.86
2.13
1.83
0.06
Total
1.43
2.41
3.45
0.11
Córrego do Sítio
Total
3.69
4.11
15.19
0.49

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Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Paulo de Tarso Ferreira
MAusIMM
224828
26 years
Ore Reserve
Marcos Geraldo Simoni
MAusIMM
224826
19 years
Brazil
AGA Mineração – Córrego do Sítio

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Brazil
AGA Mineração – Cuiabá
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Americas – AGA Mineração – Cuiabá
Location
Cuiabá is located near Sabará, southeast of the city of Belo Horizonte and within the mining district referred to as the Iron Quadrilateral. This region is the second largest producer of iron, gold and manganese in Brazil.
Geology
Cuiabá mine has gold mineralisation associated with sulphides and quartz veins in banded iron formation (BIF) and volcanic sequences. The ore appears strongly stratiform due to the selective sulphidation of the iron-rich layers. Steeply plunging shear zones tend to control the ore shoots, which commonly plunge parallel to intersections between the shears and other structures.
The controlling mineralisation structures are the apparent intersection of thrust faults with tight isoclinal folds in a ductile environment.
The host rocks are primarily BIF and secondarily mafic volcanics (mainly basaltic). Mineralisation is believed to be due to the interaction of low salinity, carbon dioxide rich gold-bearing fluids with the high-iron BIF, basalts and carbonaceous graphitic schists.
Sulphide mineralisation consists of pyrite and pyrrhotite with subordinate arsenopyrite and chalcopyrite; the latter tends to occur as a late-stage fracture fill and is not associated with gold mineralisation. Wallrock alteration is typically carbonate, potassic and silicic, showing clear zonation in the underground environment. The ore is mainly concentrated in the silicic and sulphidation zones, inside the BIF or in potassic (and sericitic) zones near the basalts. The main orebodies at Cuiabá are as follows:

- normal limb: Fonte Grande Sul and Serrotinho; and
- overturned limb: Balancão, Galinheiro and Canta Galo.

Exploration
The Cuiabá mine has four satellites orebodies: Surucucu, Dom Domingos, Galinheiro-FW and Viana. The first two orebodies are located in the BIF and the other two in schists in the footwall and hangingwall respectively. During 2011 exploration drilling was undertaken at the Surucucu orebody. Results showed that the mineralisation of the Serrotinho orebody is extending towards the Surucucu orebody on levels 16 and 17. Further drilling was done on the Dom Domingos orebody on levels 15 and 16 to identify extensions to the mineralisation.
Projects
A conceptual study of the Cuiabá future mine began in 2009. The strategy is to optimise future production from Cuiabá, without abandoning the narrow vein orebodies at the end of the mine life. During the past year the study was focused on geological and geotechnical studies. The conceptual study will be concluded in 2012.

During 2011, Cuiabá began trial mining with a new mining method, using sub-level benches. The first results were on target and it is expected that production from sub-level benches will represent 20% of total production by 2012.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
AGA Mineração
Measured
30 x 60
X
–
–
–
–
– Cuiabá
Indicated
30 x 60
X
–
–
–
–
Inferred
80 x 80
X
–
–
–
–
Grade control
5 x 5
X
–
–
–
–

Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Cuiabá
Category
million

g/t
Tonnes
Moz
Main orebodies
Measured
2.58
9.46
24.45
0.79
Indicated
0.56
10.61
5.91
0.19
Inferred
5.46
9.86
53.79
1.73
Total
8.60
9.79
84.15
2.71
Narrow veins
Measured
1.95
6.01
11.72
0.38
Indicated
2.94
5.37
15.82
0.51
Inferred
4.95
5.96
29.49
0.95
Total
9.84
5.80
57.02
1.83
Secondary areas
Measured
0.74
6.44
4.77
0.15

Indicated
0.17
6.78
1.15
0.04
Inferred
0.32
6.08
1.92
0.06
Total
1.23
6.39
7.83
0.25
Cuiabá
Total
19.66
7.58
149.00
4.79

Exclusive Mineral Resource

At Cuiabá the main Exclusive Mineral Resource (2.99Moz) comes from the Main and Narrow Vein orebodies. This Exclusive Mineral
Resource is Inferred Mineral Resource that is in the process of being upgraded with conversion drilling. The Exclusive Mineral
Resource is located below infrastructure, starting on level 16 (at Fonte Grande Sul and Serrotinho) and level 14 (at Balancão,
Galinheiro and Canta Galo). In addition, secondary areas consisting of old stoping panels and satellite orebodies are also considered
Exclusive Mineral Resource (0.03Moz).

Exclusive Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold
Cuiabá
Category
million
g/t
Tonnes
Moz
Measured
1.41
7.79
10.97
0.33
Indicated
0.55
7.64
4.23

0.14
Inferred
10.72
7.95
85.19
2.74
Cuiabá
Total
12.68
7.92
100.39
3.23
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Brazil
AGA Mineração – Cuiabá

Inferred Mineral Resource in business plan

There is no Inferred Mineral Resource in the Ore Reserve. In level 1 of the business plan, there are some areas of Inferred Mineral Resource that have been included. These areas form part of the following orebodies:

- Fonte Grande Sul (levels 15 and 16);
- Serrotinho (levels 14, 15 and 16);
- Balancão; and
- Galinheiro (levels 12 and 13)

The Inferred Mineral Resource represents 9% of the total level 1 business plan.

Inferred Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold		
Cuiabá	million	g/t	Tonnes	Moz	Comments
Main orebodies	0.29	8.31	2.45	0.08	Part of orebody FGS levels 15/16 and orebody SER levels 14/15/16
Narrow veins	0.31	5.91	1.81	0.06	Part of orebodies BAL and GAL levels 12/13
Total	0.60	7.09	4.25	0.14	

Ore Reserve modifying factors

as at 31 December 2011

Gold
Cut-off
% RRF

% RRF
% MRF
% MRF
price
value
Dilution (based on
(based
(based on
(based
MetRF
Cuiabá
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
Main orebodies
1,100
4.90
6.50
92.00
86.00
84.0
114.0
94.5
93.0
Narrow veins
1,100
3.75
5.30
86.00
85.00
84.0
114.0
94.5
93.0
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Cuiabá
Category
million
g/t
Tonnes
Moz
Main orebodies

Proved
2.34
8.23
19.24
0.62
Probable
0.45
9.70
4.35
0.14
Total
2.79
8.47
23.59
0.76
Narrow veins
Proved
1.52
5.04
7.66
0.25
Probable
2.50
4.70
11.75
0.38
Total
4.02
4.83
19.41
0.62
Cuiabá
Total
6.80
6.32
42.99
1.38
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Paulo de Tarso Ferreira
MAusIMM
224828
26 years

Ore Reserve
Ruy Lacourt
SME
4172669
24 years

Location

Lamego is located in the north-western part of the Iron Quadrangle metallogenetic province, close to Cuiabá gold mine. The mine is
located to the east of the city of Belo Horizonte City, which is in the Minas Gerais State in the south-eastern region of Brazil.

Geology

The gold mineralisation at Lamego is characterised by orebodies associated with two horizons of chemical rocks, such as BIF and
metachert (MCH), and also with shear zones containing abundant quartz veinlets. The proportions of these lithotypes vary
substantially from one orebody to another. In the BIF, sulphide mineralisation is associated with the gold, whilst in the MCH and quartz
veins the gold occurs either as native gold or in sulphides. The orebodies are characterised by sulphidation in the form of
disseminated sulphide bands or as fracture filling, and rarely as compact sulphide, hosted in BIF/MCH. Sulphide bands are rare
in MCH. The plunge of the orebodies coincides both with the fold axis of the first two structural events and with the mineral
stretching lineation.

The Arco da Velha orebody is located on the eastern side of a large fold and extends for 250m along the strike. In the north-eastern
portion of the orebody the mineralisation is concentrated in the MCH, whilst in the south-western portion it is concentrated in the BIF.

Carbonaceous phillite and clorite/sericite schists occur in the hangingwall contact, while the hydrothermal alteration zone marked by
the meta-andesite occurs in the footwall.

The Cabeça de Pedra orebody is located in the hinge region of the large Lamego structure. The area which has shown the best
economic potential contains BIF and MCH (80% of the area consists of BIF and the remaining 20% is MCH). The presence of faulting
makes the stratigraphy complex in some areas. The carbonaceous phillite and clorite/sericite schists normally occur in the hanging
wall and meta-andesites in the footwall.

Carruagemis is the main orebody that opened the way for the resumption of the Lamego project. Structurally, it is located at the
junction or in close proximity to two fold limbs in the northeast portion of the major structure. It is a boudinaged orebody with two
large disruptions in the structure (pinch and swell), followed by eastward displacement. The gold mineralisation is mainly associated
with hydrothermal zones within the BIF.

Projects

The Lamego mine project was approved in September 2009 and work to date has mainly involved the implementation and ramping
up required to start mining. This phase is expected to be completed by December 2011.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
AGA Mineração
Measured
20 x 10
X
–
–
–
–
– Lamego
Indicated
125 x 25
X
–
–
–
–
Inferred
300 x 50
X
–
–
–
–
Grade control
–
–
–
–
–
–

Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Lamego
Category
million
g/t
Tonnes
Moz
Arco da Velha
Measured
0.15
5.34
0.79
0.03
Indicated
0.12
4.79
0.58
0.02
Inferred
0.49
3.64
1.77
0.06
Total
0.76
4.15
3.14
0.10
Cabeca de Pedra
Measured
0.11
6.25
0.70
0.02
Indicated
0.46
4.57
2.09
0.07
Inferred
1.16
4.36
5.05
0.16
Total
1.73
4.54

7.84
0.25
Carruagem
Measured
0.24
8.72
2.13
0.07
Indicated
0.99
7.05
6.98
0.22
Inferred
1.35
6.18
8.35
0.27
Total
2.58
6.76
17.45
0.56
Secondary areas
Measured
0.07
7.86
0.52
0.02
Indicated
0.05
8.26
0.40
0.01
Inferred
0.82
3.18
2.62
0.08
Total
0.94
3.77
3.54
0.11
Lamego
Total
6.01
5.32
31.97
1.03

Exclusive Mineral Resource

The following orebodies were excluded from the Ore Reserve estimation exercise:

- Carruagem below L05;
- Cabeça de Pedra below L03;
- Arco da Velha below L03.

The Queimada and Arco da Velha NE orebodies were not included in the business plan.

Exclusive Mineral Resource

as at 31 December 2011

		Tonnes	Grade	Contained gold	
Lamego	Category	million	g/t	Tonnes	Moz
	Measured	0.30	8.27	2.49	0.08
	Indicated	0.89	6.28	5.61	0.18
	Interred	3.12	4.64	14.49	0.47
Lamego	Total	4.32	5.23	22.59	0.73

Inferred Mineral Resource in business plan

According to the standard adopted by AngloGold Ashanti, the Inferred Mineral Resource is not transformed into an Ore Reserve, but may be included for the purpose of defining the business plan. Modifying factors are applied and the resultant Mineral Resource is then specified as a Mineable Resource. The modifying factors that have been applied are:

- planned dilution: Intrinsic to the minimum operating width in accordance with the size of equipment used, creating an actual width in the mine faces of at least 3.5m;

- operating dilution of 5%;
- mining recovery of 95%; and
- Mine Call Factor of 94.5%.

At Lamego the Inferred Mineral Resource that was transformed into a Mineable Resource is located at the Carruagem (L06 down to L09) and Cabeça de Pedra orebodies (L04 down to L07).

Inferred Mineral Resource as at 31 December 2011	Tonnes	Grade	Contained gold		
Lamego	million	g/t	Tonnes	Moz	Comments
Cabeca de Pedra	0.36	3.52	1.26	0.04	N06 and N07
Carruagem	0.37	4.61	1.71	0.06	From levels N06 to N09
Total	0.73	4.07	2.97	0.10	

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Americas – AGA Mineração – Lamego

Ore Reserve

as at 31 December 2011

		Tonnes	Grade	Contained gold	
Lamego	Category	million	g/t	Tonnes	Moz
Arco da Velha	Proved	0.10	3.50	0.35	0.01
	Probable	0.06	3.78	0.23	0.01
	Total	0.16	3.60	0.58	0.02
Cabeca de Pedra	Proved	0.05	3.32	0.16	0.01
	Probable	0.02	3.37	0.06	0.00
	Total	0.07	3.33	0.23	0.01
Carruagem	Proved	0.13	7.30		

0.96
0.03
Probable
0.68
5.45
3.69
0.12
Total
0.81
5.75
4.65
0.15
Lamego
Total
1.04
5.26
5.46
0.18
Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Paulo de Tarso Ferreira
MAusIMM
224828
26 years
Ore Reserve
Ruy Lacourt
SME
4172669
24 years
Plan showing projection of orebodies to depth

Location

The Nova Lima Sul project is located in the western portion of the Rio das Velhas greenstone belt, and all the targets are within a 16km radius of the Queiroz metallurgical plant. The project comprises mothballed operations (Raposos underground mine), old mines (Mina Grande, Morro da Glória, Bicalho, Faria, Bela Fama), as well as old prospects (Luzia da Mota, Limoeiro) and several old surface workings (Saboeiro Rasgão, Urubu and Luzia's Mina Grande). The main project goal is to add and convert the Mineral Resource in order to fill the current Queiroz plant's spare capacity.

Geology

The Nova Lima Sul projects are situated in the south-western portion of the Iron Quadrangle in the Minas Gerais State of Brazil.

The area is located in the volcanic sedimentary sequence of the Nova Lima Group (Rio das Velhas Supergroup), that belongs to the Rio das Velhas greenstone belt.

The Nova Lima Group hosts the main gold mines and mineral occurrences in the Iron Quadrangle and consists of a basal tholeiitic–komatiitic volcanic unit with abundant chemical sedimentary rocks, which is overlain by a volcaniclastic unit with associated felsic volcanic rocks. This is in turn overlain by an upper clastic unit. The mineralised orebodies in the Rio das Velhas greenstone belt are structurally controlled and are associated with hydrothermal alterations along D2 thrust shear zones, on a regional scale. The mineralisation is epigenetic and the most common orebodies at Nova Lima Sul are massive, banded and disseminated sulphides hosted in banded iron formations (BIF) and lapa seca (albite hydrothermal rocks).

Mapped orebody dimensions are around 0.5m to 20m in thickness and can be more than 5,000m in length (along plunge direction).

The orebody's plunge is defined by the stretching lineation and it is parallel to the fold axis of the first two regional deformation events.

Geology of Raposos

The Raposos sequence is interpreted as a ductile thrust that occurred during the first deformation event. The main mineralised area is associated with an anticline of the same event, in the position of the lateral thrust ramp. The stratigraphic sequence, repeated by folds, has ultramafics at the base, overlain by komatiitic basalts, basalts and andesites with layers of BIF. Pelites and metavolcaniclastic occur at the top of the sequence. The BIF is oxide facies (magnetite and quartz), with carbonatisation in the mineralised areas.

The mineralisation is primarily located in the BIF. The orebodies are surrounding by concentric hydrothermal alteration zones consisting of sericitisation, carbonatisation and chloritisation that extend from the orebody outwards.

Geology of Morro da Glória

In the Morro da Glória area the rocks consist of komatiitic ultramafics, graphite phyllite, felsic metavolcaniclastic associated with metapelites and several layers of BIF.

The macro structures at Raposos and Morro da Glória are anticlines and the mineralisation is associated with folds and shear zones, surrounding by concentric hydrothermal alteration zones consisting of sericitisation, carbonatisation and chloritisation. BIF is oxide facies (magnetite and quartz), with carbonatisation in the mineralised areas. The gold is associated with sulphides and quartz veins in the BIF and the altered schists.

Geology of Luzia da Mota

The Luzia da Motta targets are mainly associated with two types of mineralisation, namely hydrothermal alteration zones (mainly quartz, carbonate and sericite) and sulphides hosted in metavolcanoclastic schists (Luzia Belt). The sequence is also associated with metabasic/meta-ultrabasic rocks from komatiitic compositions with sulphides in a context very similar to Raposos Mine (Santana Belt). The mineralisation occurs over 12 targets in a north-south orientation and the most important Mineral Resource delineated in the zone is at the Santana Sul and Santana 0, 1 and 2 deposits.

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Brazil

AGA Mineração – Nova Lima Sul

Geology of Urubu
The Urubu targets occur within a shear zone and tectonic lineaments that occur between the towns of Ouro Preto and Nova Lima.
This geotectonic trend extends for more than 40km, with several old mines and excavations associated with this lineament.
In this region the rocks of the Nova Lima Group follow the regional northwest-southeast trend and are stratigraphically represented
by carbonaceous metasediments and graphitic phyllites at the base, interbedded metatuffs, acid intermediates and iron formations,
grading to detrital rocks at the top. The target is positioned in an oblique thrust ramp and the orebodies are surrounded by zones of
hydrothermal alteration. The mineralisation is associated with zones of sulphidation in the lapa seca (hydrothermal rock) and the iron
formations.
Exploration
The exploration strategy at Nova Lima Sul is to focus first on Mineral Resource additions from Raposos and Urubu mines for the
coming years through a drilling campaign initiated in 2011. Depending on the drilling results, a conceptual study update will be carried
out at the beginning of 2013, and this would then be upgraded to a prefeasibility study.
Raposos
The deep drillholes at Raposos intersected BIFs, with some well mineralised and others weakly mineralised, and also several
different packages of schist. The information obtained from these drillholes suggests that there is a good prospect that the
mineralisation is continuous at depth. A total of 3,000m of underground drilling is planned for 2012 to verify the down-plunge
extension of this mineralisation. Three underground drill sites have already been equipped and this exploration programme will
commence in early 2010.
Urubu
The exploration work that was done at Urubu consisted of reconnaissance field mapping that found several old excavations plus a
well-developed banded iron formation. This was followed up by channel sampling that was used to guide a drilling programme.
The drilling programme was started in August and consists of a 100m x 200m grid in two sections, after which a further grid of holes
will be drilled to test the down-plunge extension of the mineralisation.
Raposos orebodies showing proposed 2012 drilling programme
SC Orebody
EW Orebody
ES Orebody

Projects

The entire set of orebodies and abandoned mines in the southern region of Nova Lima are part of the Nova Lima Sul project.

The main driving force of this project is to take advantage of the current infrastructure (like the Raposos operating shaft and mining infrastructure) and current spare capacity in the Queiroz plant (Raposos circuit for non-refractory ore) to improve the production of the region by between 0.06Moz and 0.1Moz per annum.

The Nova Lima Sul project comprises the exploration and mine re-opening in areas such as Raposos and Morro da Glória and new enterprises such as Luzia da Motta (open pit for oxide ore and sulphide mineralisation potential down to a depth of 300m). For the last three years AngloGold Ashanti has been busy with conceptual and prefeasibility studies for the project and exploration and in-fill drilling was completed at Luzia da Motta to increase the confidence in the Mineral Resource. In 2012 exploration work will continue at Luzia da Motta plus drilling on other targets such as Cabaças, Casa Velha and Morro das Cinzas. Underground chip sampling and drilling at Raposos will begin, depending on the progress of the dewatering and refurbishment of the old mine workings.

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

Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
AGA Mineração
Measured
15 x 15, and
X
–
–
X
Channel sampling and diamond
– Nova Lima Sul
30 x 30
X
–
–
X
drilling
Indicated
30 x 30, and
X

–
–
X
Channel sampling and diamond
60 x 60
X
–
–
X
drilling
Inferred
60 x 60, and
X
–
–
X
Channel sampling and diamond
100 x 100
X
–
–
X
drilling
Grade control
–
–
–
–
–
–
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Nova Lima Sul
Category
million
g/t
Tonnes
Moz
Morro da Glória
Measured
–
–
–
–
Indicated
–
–
–

–
Inferred
1.26
6.52
8.21
0.26
Total
1.26
6.52
8.21
0.26
Raposos
Measured
0.18
7.01
1.29
0.04
Indicated
0.41
6.85
2.80
0.09
Inferred
2.25
6.44
14.50
0.47
Total
2.84
6.53
18.59
0.60
Luzia da Mota
Measured
0.35
2.72
0.96
0.03
Indicated
0.56
2.75
1.54
0.05
Inferred
0.63
3.03
1.90
0.06
Total
1.54
2.86

4.41
0.14
Nova Lima Sul
Total
5.65
5.53
31.21
1.00
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Brazil
AGA Mineração – Nova Lima Sul

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AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Americas – AGA Mineração – Nova Lima Sul
Exclusive Mineral Resource
The Nova Lima Sul project currently does not have any declared Ore Reserve and the Exclusive and Inclusive Mineral Resource
numbers are therefore identical.
Exclusive Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Nova Lima Sul
Category
million
g/t
Tonnes
Moz
Measured
0.54
4.19
2.25
0.07
Indicated
0.97
4.48
4.34
0.14
Inferred
4.14
5.95
24.64
0.79
Nova Lima Sul
Total
5.65
5.53
31.21
1.00
Competent Person
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Paulo de Tarso Ferreira

MAusIMM
224828
26 years

Location

The Serra Grande joint venture (50% attributable to AngloGold Ashanti) is co-owned with Kinross Gold Corporation. Serra Grande controls, or has an interest or agreements in, approximately 55,000ha in and around the Crixás mining district in the northwestern area of the Goiás State in central Brazil. Serra Grande is located 5km from the city of Crixás and 420km from the capital city of Brasilia.

The Serra Grande operation comprises three underground mines, namely Mina III, Mina Nova and Mina Palmeiras, and one open pit mine on the outcrop of the Mina III mineralised zone (between surface and level 50). The processing circuit is equipped with grinding, leaching, filtration, precipitation and smelting facilities.

Geology

The Serra Grande gold deposits are hosted in a typical greenstone belt sequence. The host rocks belong to the Crixás Group of the Upper Archaean rocks in the Crixás greenstone belt. Gold mineralisation is associated with metasediments and metavolcanics from the Ribeirão das Antas and Rio Vermelho formations respectively. The Crixás greenstone belt is surrounded by granitic gneiss terrains from the Anta and Caiamar complexes and metasedimentary rocks from the Santa Terezinha Group.

Two main deformational events have been identified in the region. The first event is a thrusting event (D1 from west to east) developed with irregular thrust ramp geometry. This event was responsible for stacking and inverting the stratigraphic sequences. The second event (D2) was the thrusting of the Santa Terezinha sequence over the Crixás greenstone belt, folding the rocks (F2) and generating the structural controls of the gold mineralisation.

The mineralised zones at Serra Grande have been separated into three main domains called Structure III, IV and Palmeiras.

In Structure III the mineralisation is located in quartz veins that are hosted in graphitic schists. It is also associated with massive and disseminated sulphides (mainly pyrrhotite and arsenopyrite) that occur in a sequence of hydrothermally altered schists.

The mineralisation of Structure IV comprises quartz veinlets and disseminated sulphide (pyrrhotite) hosted in graphite schists.

The mineralised zones in the Palmeiras structure are hosted in sericite and chlorite schists with massive and disseminated sulphide concentrated in folded zones. The oreshoots plunge downwards to the northwest and the dips vary between 6° and 35°.

Exploration

In the past five years Serra Grande has invested heavily in exploration to identify new orebodies and to improve the level of information around the mining site. During this period 200,000m of drilling was completed along the main geological structures in the area.

The main result of this exploration programme was the discovery of the Pequizão orebody, located between Mina III and Mina Nova.

To date Pequizão has added 0.75Moz to the Inferred Mineral Resource and is open ended down-plunge and along strike. Recent drilling intersections have shown that the mineralisation extends below a depth of 500m and follow up drilling will continue.

A fast-track exploration programme, planned for 2011 and 2012, aims to define and evaluate the full potential of the known orebodies such as Pequizão, Palmeiras, Orebody IV and Mina Nova. It is also intended to generate new targets in the northwest structure and the region. This exploration programme will include 130,000m of DD drilling and also involve new geochemical and geophysical surveys over the main geological structures within the 60,000ha mining lease area.

Projects

No projects are currently being undertaken at Serra Grande.

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Americas – Serra Grande

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Brazil
Serra Grande
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
Serra Grande
Measured
10 x 10, and
X
–
–
–
–
20 x 10
X
–
–
–
–
Indicated
10 x 20,
X
–
–
–
–
20 x 50, and
X
–
–
–
–
100 x 25
X
–
–
–
–
Inferred

50 x 50, and
X
–
–
–
–
100 x 50
X
–
–
–
–
Grade control
–
–
–
–
–
–
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Serra Grande
Category
million
g/t
Tonnes
Moz
Mina Nova
Measured
1.58
3.46
5.47
0.18
Indicated
0.64
3.23
2.05
0.07
Inferred
0.54
3.45
1.87
0.06
Total
2.76
3.41
9.40
0.30

Mina III
Measured
0.70
4.73
3.33
0.11
Indicated
0.57
4.67
2.65
0.09
Inferred
0.57
5.27
3.03
0.10
Total
1.85
4.88
9.00
0.29
Palmeiras
Measured
0.11
7.63
0.84
0.03
Indicated
0.24
6.21
1.47
0.05
Inferred
0.40
6.45
2.61
0.08
Total
0.75
6.55
4.92
0.16
Pequizao
Measured
0.04
9.55
0.35
0.01
Indicated
0.52
5.88

3.09
0.10
Inferred
1.88
4.46
8.40
0.27
Total
2.44
4.84
11.83
0.38
Open pit
Measured
0.37
3.44
1.28
0.04
Indicated
0.13
3.17
0.40
0.01
Inferred
–
–
–
–
Total
0.50
3.37
1.68
0.05
Total stockpiles
Measured
0.03
1.89
0.05
0.00
Indicated
–
–
–
–
Inferred
–
–
–
–
Total
0.03

1.89
0.05
0.00
Serra Grande
Total
8.33
4.43
36.88
1.19

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Exclusive Mineral Resource

The Exclusive Mineral Resource is located below the infra-structure and mine development level.

Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Serra Grande Category	million	g/t	Tonnes	Moz
Measured	0.24	4.87	1.16	0.04
Indicated	0.28	3.71	1.05	0.03
Inferred	3.40	4.67	15.90	0.51
Serra Grande Total	3.93	4.61	18.11	0.58

Mineral Resource below infrastructure

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Serra Grande Category	million	g/t	Tonnes	Moz
Measured	–	–	–	

–
Indicated
–
–
–
–
Inferred
3.40
4.67
15.90
0.51
Serra Grande
Total
3.40
4.67
15.90
0.51
Inferred Mineral Resource in business plan
The Inferred Mineral Resource was used in the optimisation process with LOM level 3, but there is no Inferred Mineral Resource
in levels 1 and 2a.
AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011
Americas – Serra Grande
0.93
2010
-0.08
Depletion
0.00
Gold
price
0.00
Cost
0.19
Explo-
ration
0.14
Metho-
dology
-0.00
Other
1.19
2011
Serra Grande
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
1.20
1.15
1.10
1.05
1.00

0.95
0.90
0.85
0.39
2010
-0.07
Depletion
0.06
Model
change
0.00
Change in
Economics
0.00
New
ounces
from
projects
0.00
Scope
change
0.00
Other
0.38
2011
Serra Grande
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
0.40
0.39
0.38
0.37
0.36
0.35
0.34
0.33
0.32
0.31

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Brazil
Serra Grande
2
0
4
6
8
10
12
Serra Grande
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off (g/t)
1.0
0.8
0.6
0.4
0.2
0.0
13
11
9
7
5
3
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
0
5
10
15
20
Serra Grande
– underground (metric)
Tonnes above
cut - off (millions)
Average grade above
cut - off (g/t)
8
7
6
5
4
3
2
1

0
30
25
20
15
10
5
0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
Ore Reserve modifying factors
as at 31 December 2011
Gold
Cut-off
% RRF
% RRF
% MRF
% MRF
price
value
Dilution (based on
(based
(based on
(based
MetRF
Serra Grande
$/oz
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
Mina III
1,100
2.03
15.0
–
–
–
–
95.0
93.9
Mina Nova
1,100
2.03
7.0
–
–

–
–
95.0
93.9
Palmeiras
1,100
1.91
12.0
–
–
–
–
95.0
93.9
Pequizao
1,100
1.91
12.0
–
–
–
–
95.0
93.9
Open pit
1,100
1.00
7.0
–
–
–
–
95.0
93.9
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
Serra Grande
Category
million
g/t
Tonnes
Moz
Mina Nova
Proved
0.87
3.19
2.77
0.09

Probable
0.27
2.97
0.80
0.03
Total
1.14
3.14
3.57
0.11
Mina III
Proved
0.52
3.35
1.74
0.06
Probable
0.43
3.49
1.49
0.05
Total
0.95
3.41
3.23
0.10
Palmeiras
Proved
0.06
5.00
0.32
0.01
Probable
0.21
4.05
0.84
0.03
Total
0.27
4.27
1.16
0.04
Pequizao
Proved
0.03
5.67
0.17
0.01
Probable
0.46
4.41

2.01
0.06
Total
0.49
4.49
2.19
0.07
Open pit
Proved
0.35
3.38
1.18
0.04
Probable
0.10
2.93
0.28
0.01
Total
0.44
3.28
1.46
0.05
Total stockpiles
Proved
0.03
1.89
0.05
0.00
Probable
–
–
–
–
Total
0.03
1.89
0.05
0.00
Serra Grande
Total
3.32
3.52
11.66
0.37

Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Edijarbas Martins Araujo
MAusIMM
224825
30 years
Ore Reserve
Ruy Lacourt
SME
4172669
24 years
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Country overview

Systematic regional greenfields exploration has been undertaken by AngloGold Ashanti and its joint venture partners (B2Gold,
Glencore International and Mineros S.A.) in Colombia since 2004. AngloGold Ashanti has consolidated the tenement position from
roughly 100,000km in 2009 to 15,815km
2
at the end of 2011 through a variety of structures, including joint ventures and the
relinquishment of non-prospective areas.

At the wholly-owned La Colosa project, brownfields exploration drilling and prefeasibility development has resumed after delays due
to water-related issues. AngloGold Ashanti secured regional opportunities surrounding La Colosa and exploration of the greater
La Colosa area is continuing with the objective of discovering and quantifying similar gold-rich porphyry mineralisation styles.

At Gramalote (51% AngloGold Ashanti, 49% B2Gold), the joint venture partners renegotiated their agreement, resulting in AngloGold
Ashanti assuming management of the project via a project-feasibility study team. Feasibility drilling began during the last quarter of
2010, after a hiatus of more than 12 months. B2Gold is required to take the project to feasibility to obtain an additional 2%.

In November 2010 AngloGold Ashanti realised net proceeds of C$70 million from the sale of its 10.17% shareholding in B2Gold.
Proceeds from the sale will be used to fund AngloGold Ashanti's exploration activities in Colombia, including the Gramalote project.

Mineral Resource estimation

Gramalote

At Gramalote, about 51,280m of drilling (44,300m at the Gramalote Central and 7,000m at the Trinidad area) was used to support
the calculation of Inferred, Indicated and Measured Mineral Resource. The Mineral Resource estimate was generated using ordinary
kriging methodology whereby the orebody was separated into different geozones according to the grades and lithology. All available
geological drillholes and mapping information, both surface and underground has been validated for use in the modelling process.

La Colosa

At La Colosa, some 17,000m of drilling was used to support the calculation of an Inferred Mineral Resource. Gold grades were
estimated using ordinary block kriging methodology. Kriging was performed into a parent block size of 50m x 50m x 10m for
lithological domains (wireframes) in the mineralised envelope and for the waste surrounding the mineralisation. All available geological
drillhole, surface sampling and mapping information has been validated for use in the modelling process.

Colombia

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Location

The Gramalote project is located in Colombia on the eastern side of the Central Cordillera, some 124km northeast of Medellin and 230km northwest of Bogota. The property is near the town of Providencia and San Jose del Nus, belonging to the municipality of San Roque, in the northwest of the Department of Antioquia. The municipalities of San Roque and Maceo are within 20km of the project site.

Geology

Gold and silver mineralisation in the Gramalote project area occurs within a structurally controlled quartz stockwork system within the Cretaceous Antioquia Batholith in Central Colombia.

The Antioquia Batholith covers an area of 7,221km^2 and makes up the core of the Central Cordillera in the Antioquia Department.

The Antioquia Batholith is composed of 92% tonalite and granodiorite, and the remainder consists of subordinate rock types. Dykes of alaskitic, felsitic and andesitic composition occur throughout the batholith. U-Pb zircon analyses conducted on selected drill cores and surface samples from the Gramalote Ridge area have yielded ages of 60Ma. This means that the host rocks of the Gramalote deposit are part of the youngest facies of the Antioquia Batholith and that the mineralisation at Gramalote is associated with the last phases of crystallisation of the Antioquia Batholith. This is supported by the presence of aplites and pegmatites that are also related to a late crystallisation phase, with a high content of volatiles.

The sinistral shear zones trending east-northeast and dipping sub-vertically are believed to be an important control on the mineralisation at Gramalote Ridge. Gold mineralisation at Gramalote is associated with stockwork veining and in particular quartz with fine-pyrite veins, quartz-carbonate veins, and quartz with coarse pyrite veins. The integration of borehole results with mapped hydrothermal alteration domains confirms the strong relationship between the K-feldspar alteration, gold grades and preferred structural orientation. In the Gramalote Ridge area, mineralisation has been defined by surface sampling and drilling over a strike length of 1,100m and vertically down to 450m below the topographic surface.

Exploration

The exploration strategy during 2011 in Gramalote area was focused on infill-drilling at the Gramalote Central area, with some exploration drilling in external areas, with the aim to add a new Inferred Mineral Resource to the project from the Monjas Oeste, Monjas Este, El Limon, El Topacio and Trinidad targets. In addition, six new geotechnical drillholes were drilled around the proposed pit limit and 10 drillholes were drilled to sterilise the Palestina area, where the waste dump and tailing dump facilities will be placed.

In 2012 the exploration programme will concentrate on external targets such as La Plata, La Maria and Guadalejo. Some addition

drilling will also be done at the Gramalote Central and Monjas Oeste areas. Geotechnical drilling will continue in 2012 at Gramalote
and sterilisation drilling at the Palestina area.

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

			Type of drilling				
Mine/ Project	Category	Spacing m (-x-)	Diamond	RC	Blast-hole	Other	Comments
Gramalote	Measured	25 x 25	X	–	–	–	–
	Indicated	50 x 50	X	–	–	–	–
	Inferred	100 x 100	X	–	–	–	–
	Grade control	–	–	–	–	–	

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Colombia
Gramalote
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
Gramalote
Category
million
g/t
Tonnes
Moz
Main zone
Measured
15.56
0.85
13.24
0.43
Indicated
33.97
0.79
26.98
0.87
Inferred
26.60
0.35
9.43
0.30
Total
76.13
0.65
49.65
1.60
Trinidad
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
22.20
0.55
12.21

0.39
Total
22.20
0.55
12.21
0.39
Gramalote
Total
98.33
0.63
61.86
1.99

Exclusive Mineral Resource

The Exclusive Mineral Resource is from the Gramalote Central area (referred to as the Main zone) and from Trinidad to the northwest of the Gramalote Central area. The difference, as compared with the 2010 statement, is the inclusion of the new Inferred Resource from the Trinidad satellite orebody.

Exclusive Mineral Resource

as at 31 December 2011

	Tonnes	Grade	Contained gold	
Gramalote Category	million	g/t	Tonnes	Moz
Measured	15.56	0.85	13.24	0.43
Indicated	33.97	0.79	26.98	0.87
Inferred	48.80	0.44	21.64	0.70
Gramalote Total	98.33	0.63	61.86	1.99

Competent Person

Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Alessandro Henrique Medeiros Silva
MAusIMM
224831
9 years
0.5
0.0
1.0
1.5
2.0
Gramalote
– surface (metric)
Tonnes above
cut - off (millions)
Average grade above
cut - off (g/t)
300
250
200
150
100
50
0
2.5
2.0
1.5
1.0
0.5
0.0
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
1.09
2010
0.00
Depletion
0.00
Gold
price
0.00
Cost
0.79
Explo-

ration
0.12
Metho-
dology
0.00
Other
1.99
2011
Gramalote
Mineral Resource reconciliation: 2010 to 2011
Ounces (millions)
Change
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0

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Location
La Colosa was discovered by AngloGold Ashanti's Colombian greenfields exploration team in 2006. The project is 100% owned by
AngloGold Ashanti and is located 150km west of Colombia's capital city, Bogota, and 30km west of the major town of Ibague, which
falls within the department of Tolima.
Geology
The La Colosa project is on a porphyry gold (copper-poor) system that is genetically associated with Miocene (8Ma) porphyritic
intrusive centres that have intruded into Palaeozoic schists. The highest grade gold mineralisation is closely associated with a suite
of early porphyry intrusions/breccias with potassic and sodic-calcic alteration, 5% pyrite and traces of chalcopyrite and molybdenite.
The early porphyry stage can be divided into three phases and is elliptical in shape with a known maximum axis of at least 1,200m
and a minimum east-west axis of 400m.
A late phase of dacite porphyry intrusions occurs as a series of dykes that are all less than 40m in thickness but showing continuity
over at least 600 vertical metres. These dykes are assumed to be lateral offshoots of a ~1km^2 mapped body of dacite porphyry
occurring in the north-eastern corner of the project area.
Alteration and mineralisation
The paragenesis of the main alteration or mineralisation mineral assemblage starts with pervasive sodic-calcic alteration overprinted
by potassic alteration and in turn, cut by a sodic-calcic event. Potassic alteration, biotite and subordinate K-feldspar, occurs mainly
as a pervasive replacement of the porphyries, especially the early phases. The second sodic-calcic alteration clearly overprints the
potassic assemblage and is largely confined to irregular, centimetre-scale patches and well defined veinlets. The patches and veinlets
contain epidote, actinolite and chlorite, typically with white, 'albite-rich' haloes. Intermediate argillic and sericitic alteration are only
weakly developed and only form mappable zones in the dacite and in the northern limit of the deposit.
The three early porphyries appear to have been altered and mineralised at the same time, since there is scant evidence for veinlet
introduction between the three intrusive events. The gold content of the three early porphyry phases is similar.
The veinlets at La Colosa appear to span the potassic to sodic-calcic alteration events. The earliest veinlets are composed of only
biotite. However, most early veinlets are composed of quartz, magnetite, pyrite, pyrrhotite plus minor chalcopyrite and molybdenite.
The veinlets may be either quartz or magnetite dominated.
The main control of gold grade in the diorite or dacite intrusive stock is the intrusive phase where the mineralisation is hosted. Early
intrusive phases present the highest and more consistent gold grade (average >1.1g/t). The inter-mineral diorite has average gold
grades less than 0.7g/t, the late dacite phase generally only has >0.3g/t gold grades close to the contact with early diorite phases.

The Ca-Na and K alteration with or without chloritic alteration have the best gold grades. Areas with intense illite alteration generally have average gold grades less than 0.3g/t. The contact breccias and hornfels developed at the contact between porphyritic rock and schist present a mineralised halo of at least 60m with an average gold grade of >1g/t.

Gold deportment

Gold grains vary from almost pure gold to much lesser amounts of gold-silver telluride. The gold grains are generally fine grained around 15µ. Coarse grained gold (116µ) was found in samples from metamorphic rocks. Gold grains occur both liberated and 'locked' in sulphides and silicates. A significant amount of gold is associated with silicates such as K-feldspar and plagioclase.

Sulphide minerals associated with gold are dominantly pyrite, with lesser amounts of pyrrhotite and arsenopyrite.

Colombia

La Colosa

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Americas – La Colosa

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Colombia

La Colosa

Exploration

The current exploration strategy is to define the overall limits of the deposit. Drilling is being done with man-portable drill rigs, the heaviest part not surpassing 350kg. Platforms in the forest have been constructed to allow for metallurgical drilling and for Mineral Resource drilling in potentially high-grade sectors. Metallurgical samples to test for comminution and gold recovery have been collected from the intrusive rocks, schists, oxide and the San Antonio material.

The drilling programme is on-going and a total of 38,100m (110 holes) have been drilled to support the estimation of the Inferred Mineral Resource. The overall increase in the Mineral Resource at La Colosa is related to mineralisation found at the west-east striking contact between the intrusive diorite and hornfelsed schist. Mineralisation in the schists further to the south, however, becomes more structurally controlled (axial plane foliation, brittle structures) and intercepts become narrower with spotty high grades in proximity to the dykes.

An oxide potential has been recognised and is related to secondary enrichment above intermediate argillically altered quartz diorite and dacite, mostly occurring in the north and northeast of the subtracted exploration area.

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Projects
2012 will see a general change in focus from Mineral Resource drilling to geotechnical drilling for both pit and infrastructure sites.
The remaining Mineral Resource drilling plan will be as follows:
•
confirm the limits of mineralisation at La Colosa; and
•
define the oxide potential.
A detailed structural geological model is required to define the limits of mineralisation and high grade sectors. This work was initiated
in 2011 and is on-going. The La Colosa porphyry centre appears to be related to a north-east opening graben structure. High-grade
intercepts are related to northwest-southeast brittle structures.
The present drill spacing of 100m x 100m will be reviewed for Inferred and Indicated Mineral Resource classification. Narrower drill
spacing will require the construction of additional platforms in the forest reserve. The Environmental Ministry has been approached
to approve the construction of an additional 142 drilling platforms. Most of these platforms are in the forest reserve and require the
planning of ecotrails and in-forest raised platforms.
Details of average drill-hole spacing and type in relation to Mineral Resource classification
Type of drilling
Mine/
Spacing
Blast-
Project
Category
m (-x-)
Diamond
RC
hole
Other
Comments
La Colosa
Measured
–
–
–
–
–
–
Indicated
–
–
–
–
–
–
Inferred

100 x 100
X
–
–
–
Plus additional drillholes at different
spacing, angles and depths
Grade control
–
–
–
–
–
–
Mineral Resource
as at 31 December 2011
Tonnes
Grade
Contained gold
La Colosa
Category
million
g/t
Tonnes
Moz
Open pit
Measured
–
–
–
–
Indicated
–
–
–
–
Inferred
515.98
0.98
505.99
16.27
Total
515.98
0.98
505.99
16.27
La Colosa
Total
515.98
0.98
505.99

16.27

Exclusive Mineral Resource

The La Colosa Mineral Resource is reported at a cut-off grade of 0.5g/t. The mineralisation has been classified as an Inferred Mineral Resource and it represents a drill-hole spacing of 100m x 100m. The Exclusive and Inclusive Mineral Resource numbers are currently identical due to the absence of an Ore Reserve.

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Americas – La Colosa

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Colombia
La Colosa
0.5
0.0
1.0
1.5
2.0
2.5
La Colosa
– surface (metric)
Tonnes above
cut - off (millions)
Average grade above
cut - off (g/t)
1,000
900
800
700
600
500
400
300
200
100
0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off
12.44
2010
0.00
Depletion
0.68
Gold
price
0.00
Cost
3.15
Explo-
ration
0.00
Metho-

dology
0.00
Other
16.27
2011
La Colosa
Mineral Resource reconciliation: 2010 to 2011
Ounces
(millions)
Change
16.5
16.0
15.5
15.0
14.5
14.0
13.5
13.0
12.5
12.0
Inclusive Mineral Resource in business plan
This project is still in the prefeasibility stage and no business plan has been drawn up yet.
Competent Person
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Rudolf Jahoda
MAusIMM
990544
20 years

Country overview

In March 1999 AngloGold Ashanti acquired the Pikes Peak Mining Company and its interests in the Cripple Creek & Victor Gold Mining Company (CC&V) and the Jerritt Canyon joint ventures. Due to the merger of Golden Cycle Gold Corporation into a wholly-owned subsidiary of AngloGold Ashanti effective July 1, 2008, CC&V became an indirect, wholly-owned joint venture of AngloGold Ashanti Limited.

CC&V currently controls over 85% of the patented claims within the district and 100% of the land containing the 2011 Mineral Resource. The Ore Reserve and Mineral Resource are stated at 100% ownership basis, although portions of the Ore Reserve are subject to third party royalties that vary according to individual agreements with the underlying property owner.

Mineral Resource estimation

A single unified Mineral Resource model has been developed for the entire district. The unified model encompasses all known deposits and drilling within the CC&V property. The estimation method is multiple indicator kriging and the primary variable estimated is the recoverable gold.

An estimated iron and oxide model is utilised to interpolate block specific coefficients for input into the metallurgical recovery function.

The method for calculating nominal shake leach values is a regression technique using geologically logged categorical variables.

The modelling software used is MineSight® and updated drillhole information is used throughout. The drillhole database is thoroughly reviewed before each Mineral Resource estimation and the estimation domains are based on lithology and structural domains for each deposit.

Ore Reserve estimation

The Ore Reserve pit designs were based on LG optimisations of the Mineral Resource model. The LG algorithm applies economic values to individual blocks and then generates a pit shell based on geotechnical constraints. Successive nested shells are generated until the economic limits of the pit are established. These shells are then used as a template for final mine design. Pit slope designs for all deposits were based on geotechnical studies and range between 32° and 57°. All pits were designed using a 35 feet (10.7m) bench height except South Cresson, which utilises 20 feet (6.1m).

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United States of America

CC&V

Location

The mining operations at CC&V are located in central Colorado, USA, approximately 25km east of Colorado Springs. The mining
district is located between the communities of Cripple Creek, to the northwest, and Victor, in the south. CC&V currently controls over
85% of the patented claims within the district and 100% of the land within the year-end 2011 Mineral Resource.

Geology

The dominant geological feature of the district is a 32Ma to 28Ma diatreme-intrusive complex hosted in Precambrian rocks located
between the towns of Cripple Creek and Victor. The diatreme-intrusive complex is 6.4km long, 3.2km wide and consists of diatremal
breccia that has been intruded by stocks, dykes and discordant breccias. Diatremal breccia lithologies include breccias composed
exclusively of volcanic, Precambrian or sedimentary material or any combination of the three. Early intrusions are predominantly within
these alkaline phonolite-phonotephrite series of rocks and were followed by later lamprophyres. All rocks have undergone a complex
history of structural deformation and hydrothermal alteration. Gold mineralisation, dated between 27.8Ma and 26.6Ma, is hosted in
all rock types as veins. The mineralisation can also be disseminated or can occur in structurally-controlled orebodies. Primary ore
minerals include microscopic native gold, native gold with pyrite and gold tellurides. Silver is present but has minimal economic
importance.

Exploration

Exploration activities during 2011 focused on three different programmes:

- conversion of the Inferred Mineral Resource to Indicated Mineral Resource for the low-grade, heap-leach operations;
- further definition of higher-grade zones within the open-pit design shells; and
- drill testing of high-grade zones that lie outside the pit designs, but could be mined by underground methods.

The total budget for the three programmes was $6.8m. A total of 56,600m was drilled during 2011 that included 49,700m of
RC drilling and 6,800m of DD drilling.

Projects

The exploration activities were conducted under the Mine Life Extension–2 (MLE-2) project. This project is evaluating the extension
of the mine life by adding low-grade, heap-leach tonnes with the construction of a plant to process high grade zones of mineralisation
that are intersected during the open pit mining activity. This project is designed to extend the mine life from the currently-permitted
2016 to 2025.

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

Type of drilling
Mine/
Spacing

Project	Category	m (-x-)	Diamond	RC	Blast-hole	Other	Comments
CC&V	Measured	30 x 30	X	X	–	–	–
	Indicated	45 x 45	X	X	–	–	–
	Inferred	75 x 75	X	X	–	–	–
	Grade control	5 x 6	–	–	X	–	–

Mineral Resource

as at 31 December 2011

		Tonnes	Grade	Contained gold	
CC&V	Category	million	g/t	Tonnes	Moz
Cresson	Measured	280.58	0.78	217.65	7.00
	Indicated	227.03	0.68	155.09	4.99
	Inferred	96.04	0.65	62.16	2.00
	Total	603.65	0.72	434.90	13.98
CC&V	Total	603.65	0.72	434.90	13.98

Exclusive Mineral Resource

The Exclusive Mineral Resource at CC&V contains nearly 7.5Moz of gold. This material lies immediately outside the designed shells
that hold the Ore Reserve. The ore zones are generally extensions of those seen within the Ore Reserve shells and some of these
tonnes will convert to Ore Reserve with additional drilling.

Exclusive Mineral Resource

as at 31 December 2011

Tonnes

Grade
Contained gold
CC&V
Category
million
g/t
Tonnes
Moz
Measured
119.80
0.71
85.17
2.74
Indicated
140.43
0.66
93.03
2.99
Inferred
82.15
0.66
54.08
1.74
CC&V
Total
342.39
0.68
232.28
7.47

Inferred Mineral Resource in business plan

The total amount of Inferred Mineral Resource within the Ore Reserve design is 13.2Mt, containing 0.23Moz of gold. This is
approximately 4.8% of the Proved and Probable Ore Reserve tonnes and 3.8% of the Proved and Probable Ore Reserve of gold.

The Inferred Mineral Resource is not used in the optimisation process for the Ore Reserve shells. The Inferred Mineral Resource
tonnes are generally located near the surface of pits that have not yet been mined. Some of this material is also found at the bottom
of the Ore Reserve pits where the drill density is not as quite as uniform as in other areas.

Inferred Mineral Resource

as at 31 December 2011
Tonnes
Grade
Contained gold
CC&V
million
g/t
Tonnes
Moz
Comments
Cresson

4.25
0.65
2.77
0.09
–
South Cresson
0.44
0.90
0.39
0.01
–
Wild Horse Extension
4.38
0.53
2.33
0.07
–
Globe Hill
3.85
0.55
2.11
0.07
–
Schist Island
0.96
0.49
0.47
0.02
–
Total
13.89
0.58
8.08
0.26

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United States of America
CC&V
Ore Reserve modifying factors
as at 31 December 2011
Cut-off
% RRF
% RRF
% MRF
% MRF
Gold
value
Dilution (based on
(based
(based on
(based
MetRF
CC&V
price
g/t Au
%
tonnes)
on g/t)
tonnes)
on g/t) MCF %
%
Cresson
1,100
0.17
–
98.0
95.0
103.0
98.0
–
43 to 95
14.10
2010
-0.45
Depletion
1.75
Gold
price
-0.00
Cost
-0.07
Explo-
ration
-0.12
Metho-

dology
-1.23
Other
13.98
2011
CC&V
Mineral Resource reconciliation: 2010 to 2011
Ounces
(millions)
Change
15.6
15.4
15.2
15.0
14.8
14.6
14.4
14.2
14.0
13.8
13.6
5.73
2010
-0.45
Depletion
-0.14
Model
change
0.47
Change in
Economics
0.00
New
ounces
from
projects
0.65
Scope
change
0.00
Other
6.26
2011
CC&V
Ore Reserve reconciliation: 2010 to 2011
Ounces
(millions)
Change
6.4
6.2
6.0

5.8
5.6
5.4
5.2
5.0

Magnetic survey of the Cripple Creek diatreme complex

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Competent Persons
Professional
Registration
Relevant
Category
Name
organisation
number
experience
Mineral Resource
Tim Brown
MAusIMM
226857
25 years
Ore Reserve
Jeff Gaul
SME
4156989
21 years
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Americas – CC&V
Ore Reserve
as at 31 December 2011
Tonnes
Grade
Contained gold
CC&V
Category
million
g/t
Tonnes
Moz
Cresson
Proved
65.63
0.85
56.03
1.80
Probable
38.75
0.81
31.36
1.01
Total
104.38
0.84
87.39
2.81
South Cresson

Proved
14.84
0.84
12.51
0.40
Probable
4.03
0.83
3.36
0.11
Total
18.87
0.84
15.87
0.51
Wild Horse Extension
Proved
36.72
1.07
39.15
1.26
Probable
20.10
0.75
15.09
0.49
Total
56.82
0.95
54.24
1.74
Globe Hill
Proved
26.29
0.50
13.16
0.42
Probable
17.29
0.48
8.36
0.27
Total
43.59
0.49
21.52
0.69
Schist Island
Proved
17.30
0.67

11.62
0.37
Probable
6.42
0.61
3.90
0.13
Total
23.72
0.65
15.52
0.50
CC&V
Total
247.38
0.79
194.54
6.25
0.2
0.0
0.4
0.6
0.8
1.0
1.2
CC&V
– surface (metric)
Tonnes above
cut - off (millions)
Average grade
above cut - off
(g/t)
500
450
400
350
300
250
200
150
100
50
0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0

0.5
Cut-off grade (g/t)
Tonnes above cut-off
Ave grade above cut-off

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Mineral Resource
The JORC definition of a Mineral Resource is as follows:
A 'Mineral Resource' is a concentration or occurrence of material of intrinsic economic interest in or on the earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are subdivided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
The Mineral Resource is estimated using all drilling and sampling information along with a detailed geological model. The geological models are based on core logging, mapping, geophysics, geochemistry and geological understanding that have been developed for each deposit. Most of the AngloGold Ashanti deposits have been the subject of research by world experts in the class of gold deposit.
The grade estimation for each deposit has been developed over the life of the mine and is constantly reviewed in terms of grade control information and reconciliation with the metallurgical plant. In general, the deep South African mines utilise a process of compound log normal macro kriging for the estimation of the Mineral Resource, while the open pits and shallow underground mines generally use recoverable Mineral Resource models, estimated using uniform conditioning or multiple indicator kriging.
In order to comply with the economic requirement of the definition of Mineral Resource, all AngloGold Ashanti Mineral Resources are constrained at an upside gold price, with all other parameters being kept the same as used for estimation of the Ore Reserve. In the underground gold mines, scoping studies are conducted on all coherent blocks of ground that lie above the calculated Mineral Resource cut-off. These studies include all cost and capital requirements to access the block. In the case of open pit operations, pit optimisations are conducted at the Mineral Resource gold price and all material outside these shells is excluded from the Mineral Resource, unless it is potentially mineable from underground.
It is the opinion of AngloGold Ashanti that the Mineral Resource represents a realistic view of an upside potential to the Ore Reserve.
In interpreting the Mineral Resource it is critical to factor in the following:

- The Mineral Resource is quoted in situ and has not been corrected for dilution, mining losses or recovery.
- The Mineral Resource includes a high percentage of Inferred material, which, following further exploration drilling may be converted to an Indicated or Measured Mineral Resource.
- Many of the areas lying in the exclusive Mineral Resource are currently being actively drilled and are the subject of economic and technical studies. It can, however, not be assumed at this stage that the company has intent to mine these areas.

Mineral Resource classification is based on the ‘15% Rule’. A Measured Mineral Resource should be expected to be within 15% of the quarterly metal estimate at least 90% of the time, while for an Indicated Mineral Resource estimate the annual metal estimate should be within 15% of the metal estimated at least 90% of the time. For an Inferred Mineral Resource the annual error may for 90% of the time, be greater than 15%.

Definitions

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The process and methodology of classification are at the discretion of the Competent Person and involves expressing the '15% Rule'
as a required level of information, in tangible terms the spacing of the drill-hole or tunnel spacing in a particular deposit. Techniques
such as conditional simulation or even an empirical reconciliation-based approach are employed. However, all operations are
responsible for demonstrating, through reconciliation, that their classification system conforms to the 15% rule set out above.
AngloGold Ashanti quotes its Mineral Resource as inclusive of the Ore Reserve. However, in this document the exclusive Mineral
Resource is also quoted. The exclusive Mineral Resource is defined as the inclusive Mineral Resource less the Ore Reserve before
dilution and other factors are applied.
The exclusive Mineral Resource consists of the following components:

- Inferred Mineral Resource within the optimised shell;
- Other Inferred Mineral Resource;
- Measured and Indicated Mineral Resource that lies between the LOM pit shell/mine design and the Mineral Resource pit shell. This material will become economic if the gold price increases; and
- Mineral Resource where the technical studies to engineer an Ore Reserve have not yet been completed.

Ore Reserve
The JORC definition of an Ore Reserve is as follows:
An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting
materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies
have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical,
economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time
of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence
into Probable Ore Reserves and Proved Ore Reserves.
In the underground operations, the Ore Reserve is based on a full mine design and in the case of open pits on a pit optimisation
followed by a final pit design. The Ore Reserve is reported according to tonnage, mean grade(s), and contained metal inclusive of
mining dilution, mining ore losses and mine call factors. These modifying factors are based on measurements, rather than estimates.
Tonnage and grade estimates for surface stockpile materials that meet Ore Reserve criteria are itemised separately.
Only the Ore Reserve included for treatment in the business unit plan production schedule is considered in the Ore Reserve
statement. These sometimes include marginal or sub-grade ores as well as the Inferred Mineral Resource. This Inferred Mineral
Resource is not included in the Ore Reserve statement.

For all new projects, an audited prefeasibility (as a minimum requirement) must have been completed that demonstrates the viability of the project and meets the company's investment requirements. This study must be signed off at the appropriate executive level in order to demonstrate an intent on the part of the company to proceed to feasibility and ultimately to implement the project.

AngloGold Ashanti Mineral Resource and Ore Reserve Report 2011

Definitions

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All terms
BIF
Banded Ironstone Formation. A chemically formed iron-rich sedimentary rock.
By-products
Any products that emanate from the core process of producing gold, including silver, uranium and sulphuric acid.
Calc-silicate rock
A metamorphic rock consisting mainly of calcium-bearing silicates such as diopside and wollastonite, and formed by metamorphism
of impure limestone or dolomite.
Capital expenditure
Total capital expenditure on tangible assets which includes stay-in-business and project capital.
Carbon-in-leach (CIL)
Gold is leached from a slurry of gold ore with cyanide in agitated tanks and adsorbed on to carbon granules in the same circuit. The
carbon granules are separated from the slurry and treated in an elution circuit to remove the gold.
Carbon-in-pulp (CIP)
Gold is leached conventionally from a slurry of gold ore with cyanide in agitated tanks. The leached slurry then passes into the CIP
circuit where carbon granules are mixed with the slurry and gold is adsorbed on to the carbon. The granules are separated from the
slurry and treated in an elution circuit to remove the gold.
Comminution
Comminution is the crushing and grinding of ore to make gold available for treatment. (See also ‘Milling’).
Contained gold
The total gold content (tons multiplied by grade) of the material being described.
Cut-off grade – surface mines (COG)
The minimum grade at which a unit of ore will be mined to achieve the desired economic outcome.
Dense media separation (DMS)
Dense media separation (using high density liquids to separate ore).
Depletion
The decrease in quantity of ore in a deposit or property resulting from extraction or production.
Development
The process of accessing an orebody through shafts and/or tunnelling in underground mining operations.
Electro-winning
A process of recovering gold from solution by means of electrolytic chemical reaction into a form that can be smelted easily
into gold bars.
Glossary of terms

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Elution
Recovery of the gold from the activated carbon into solution before zinc precipitation or electro-winning.
Full grade ore (FGO)
FGO is ore material with sufficient grade to carry the full operating cost. FGO cut-off is the break-even grade where cost is representative of all costs to carry the full operation excluding direct mining cost.
Gold produced
Refined gold in a saleable form derived from the mining process.
Grade
The quantity of gold contained within a unit weight of gold-bearing material generally expressed in ounces per short ton of ore (oz/t), or grams per metric tonne (g/t).
Induced polarisation (IP)
A geophysics technique widely used in the exploration for orebodies.
Leaching
Dissolution of gold from crushed or milled material, including reclaimed slime, prior to adsorption on to activated carbon.
Life of mine (LOM)
Number of years that the operation is planning to mine and treat ore, and is taken from the current mine plan.
Marginal ore (MO)
MO is ore material with grade below the FGO cut-off that can be economically treated at the end of mine life when overhead and mining costs are reduced. MO cut-off is the break-even grade where cost is representative of the reduced cost that will be experienced after mining has ended.
Metallurgical plant
A processing plant erected to treat ore and extract gold.
Milling
A process of reducing broken ore to a size at which concentrating can be undertaken. (See also ‘Comminution’)
Mine call factor (MCF)
The ratio, expressed as a percentage, of the total quantity of recovered and unrecovered mineral product after processing with the amount estimated in the ore based on sampling. The ratio of contained gold delivered to the metallurgical plant divided by the estimated contained gold of ore mined based on sampling.
Metallurgical recovery factor (MetRF)
A measure of the efficiency in extracting gold from the ore deposit.
Mineral deposit
A mineral deposit is a concentration (or occurrence) of material of possible economic interest in or on the Earth’s crust.

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Mining reconciliation factor (MRF)

This is the variance between the gold called for as defined by the ore perimeters and what the processing plant receives. It is expressed in both a grade and tonnage number.

Net present value (NPV)

The difference between the present value of cash inflows and the present value of cash outflows.

Ounce (oz) (troy)

Used in imperial statistics. A kilogram is equal to 32.1507 ounces. A troy ounce is equal to 31.1035 grams.

Pay limit

The grade of a unit of ore at which the revenue from the recovered mineral content of the ore is equal to the total cash cost including Ore Reserve Development and stay-in-business capital. This grade is expressed as an in-situ value in grams per tonne or ounces per short ton (before dilution and mineral losses).

Reclamation

In the South African context, reclamation describes the process of reclaiming slimes (tailings) dumps using high-pressure water cannons to form a slurry which is pumped back to the metallurgical plants for processing.

Recovered grade

The recovered mineral content per unit of ore treated.

Reef

A gold-bearing sedimentary horizon, normally a conglomerate band that may contain economic levels of gold.

Refining

The final purification process of a metal or mineral.

Region

Defines the operational management divisions within AngloGold Ashanti, namely South Africa, Continental Africa (Ghana, Guinea, Mali, Namibia and Tanzania), Australasia and the Americas (Argentina, Brazil and the United States of America).

Rehabilitation

The process of reclaiming land disturbed by mining to allow an appropriate post-mining use. Rehabilitation standards are defined by country-specific laws including, but not limited to the South African Department of Mineral Resources, the US Bureau of Land Management, the US Forest Service, and the relevant Australian mining authorities, and address among other issues, ground and surface water, topsoil, final slope gradient, waste handling and re-vegetation issues.

Resource to Reserve reconciliation factor (RRF)

This is the variance between the resource model and the ore perimeters.

Seismic event

A sudden inelastic deformation within a given volume of rock that radiates detectable seismic energy.

Glossary of terms

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Shaft
A vertical or subvertical excavation used for accessing an underground mine; for transporting personnel, equipment and
supplies; for hoisting ore and waste; for ventilation and utilities; and/or as an auxiliary exit.
Smelting
A pyro-metallurgical operation in which gold is further separated from impurities.
SMU
The selective mining unit (SMU) reflects mining selectivity and it is the smallest unit that can be mined at a particular operation
with the equipment available at that site.
Stay-in-business capital
Capital expenditure to maintain existing production assets. This includes replacement of vehicles, plant and machinery,
ore reserve development and capital expenditure related to safety, health and the environment.
Stope
Underground excavation where the orebody is extracted.
Stoping
The process of excavating ore underground.
Stripping ratio
The ratio of waste tonnes to ore tonnes mined calculated as total tonnes mined less ore tonnes mined divided by ore tonnes mined.
Tailings
Finely ground rock of low residual value from which valuable minerals have been extracted.
Tailings dam (slimes dam)
Dam facilities designed to store discarded tailings.
Tonne
Used in metric statistics. Equal to 1,000 kilograms.
Ton
Used in imperial statistics. Equal to 2,000 pounds. Referred to as a short ton.
Tonnage
Quantity of material measured in tonnes or tons.
Waste
Material that contains insufficient mineralisation for consideration for future treatment and, as such, is discarded.

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°
Degrees
$
United States dollars
ASX
Australian Securities Exchange
Au
Contained gold
capex
Capital expenditure
CLR
Carbon Leader Reef
C Reef
Crystalkop Reef
DRC
Democratic Republic of the Congo
ESIA
Environmental and social impact assessment
g
Grams
g/t
Grams per tonne
JORC
Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves
JSE
JSE Limited
kg
Kilograms
km
Kilometres
LIB
Long inclined borehole
LOM
Life of mine
M or m
Metre or million, depending on the context
MCF
Mine Call Factor
MetRF
Metallurgical Recovery Factor
Moz
Million ounces
MRF
Mining Reconciliation Factor
Mt
Million tonnes or tons
Mtpa
Million tonnes/tons per annum
NPV

Net present value
oz
Ounces (troy)
oz/t
Ounces per ton
R or ZAR
South African rands
RRF
Resource to Reserve reconciliation factor
SAMREC
The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the SAMREC Code)
SMU
Selective mining unit
t
Tons (short) or tonnes (metric)
tpa
Tonnes/tons per annum
tph
Tonnes/tons per hour
tpm
Tonnes/tons per month
VCR
Ventersdorp Contact Reef
VR
Vaal Reef
Abbreviations

5102/11

AngloGold Ashanti Limited

Registration No. 1944/017354/06

Incorporated in the Republic of South Africa

Share codes:

ISIN:	ZAE000043485
JSE:	ANG
LSE:	AGD
NYSE:	AU

ASX:

AGG

GhSE (Shares):

AGA

GhSE (GhDS):

AAD

JSE Sponsor:

UBS

Auditors:

Ernst & Young Inc.

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W A Nairn
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AngloGold Ashanti posts information that is important to investors on the main page of its website at www.anglogoldashanti.com and under the "Investors" tab on the main page. This information is updated regularly. Investors should visit this website to obtain important information about AngloGold Ashanti.

Administrative information

PURE GOLD
www.anglogoldashanti.com
Download the full
Mineral Resource and
Ore Reserve Report 2011

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AngloGold Ashanti Limited

Date: May 10, 2012

By:

/s/ L Eatwell

Name: L EATWELL

Title: Company Secretary