

supplementary mineral resource  
and ore reserve information 2003



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# Ore Reserves by region

as at 31 December 2003

## Ore Reserves

		Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold tonnes	Tons Mt	Grade oz/t	Contained gold Moz
South Africa	Proved	54.8	2.96	162.0	60.4	0.086	5.2
	Probable	267.9	4.12	1,104.3	295.3	0.120	35.5
	<b>Total</b>	<b>322.6</b>	<b>3.93</b>	<b>1,266.4</b>	<b>355.6</b>	<b>0.114</b>	<b>40.7</b>
East & West Africa*	Proved	23.3	3.01	70.0	25.7	0.088	2.3
	Probable	48.2	3.52	169.4	53.1	0.103	5.4
	<b>Total</b>	<b>71.5</b>	<b>3.35</b>	<b>239.5</b>	<b>78.8</b>	<b>0.098</b>	<b>7.7</b>
South America*	Proved	10.6	7.27	77.4	11.7	0.212	2.5
	Probable	6.3	7.34	46.4	6.9	0.214	1.5
	<b>Total</b>	<b>17.0</b>	<b>7.30</b>	<b>123.8</b>	<b>18.7</b>	<b>0.213</b>	<b>4.0</b>
Australia*	Proved	46.9	1.31	61.3	51.7	0.038	2.0
	Probable	105.3	1.40	147.2	116.1	0.041	4.7
	<b>Total</b>	<b>152.2</b>	<b>1.37</b>	<b>208.6</b>	<b>167.8</b>	<b>0.040</b>	<b>6.7</b>
North America*	Proved	53.9	1.26	67.7	59.4	0.037	2.2
	Probable	64.7	0.87	56.1	71.3	0.025	1.8
	<b>Total</b>	<b>118.6</b>	<b>1.04</b>	<b>123.8</b>	<b>130.7</b>	<b>0.030</b>	<b>4.0</b>
Total*	Proved	189.5	2.31	438.5	208.9	0.067	14.1
	Probable	492.4	3.09	1,523.5	542.8	0.090	49.0
	<b>Total</b>	<b>681.9</b>	<b>2.88</b>	<b>1,962.0</b>	<b>751.7</b>	<b>0.084</b>	<b>63.1</b>

\* Reserves attributable to AngloGold.

# Mineral Resources by region

as at 31 December 2003

## Mineral Resources <sup>(1)</sup>

		Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold tonnes	Tons Mt	Grade oz/t	Contained gold Moz
South Africa	Measured	103.2	4.26	439.4	113.8	0.124	14.1
	Indicated	661.1	4.17	2,754.6	728.7	0.122	88.6
	Inferred	263.2	6.48	1,705.8	290.1	0.189	54.8
	<b>Total</b>	<b>1,027.5</b>	<b>4.77</b>	<b>4,899.7</b>	<b>1,132.6</b>	<b>0.139</b>	<b>157.5</b>
East & West Africa**	Measured	42.4	2.40	101.8	46.7	0.070	3.3
	Indicated	123.5	2.50	308.6	136.1	0.073	9.9
	Inferred	138.0	1.62	224.0	152.1	0.047	7.2
	<b>Total</b>	<b>303.8</b>	<b>2.09</b>	<b>634.3</b>	<b>334.9</b>	<b>0.061</b>	<b>20.4</b>
South America**	Measured	29.8	4.41	131.2	32.8	0.129	4.2
	Indicated	12.7	6.94	88.1	14.0	0.202	2.8
	Inferred	29.0	6.98	202.8	32.0	0.204	6.5
	<b>Total</b>	<b>71.5</b>	<b>5.90</b>	<b>422.2</b>	<b>78.8</b>	<b>0.172</b>	<b>13.6</b>
Australia**	Measured	63.0	1.36	85.5	69.4	0.040	2.7
	Indicated	149.9	1.30	195.1	165.2	0.038	6.3
	Inferred	87.2	1.29	112.2	96.1	0.038	3.6
	<b>Total</b>	<b>300.1</b>	<b>1.31</b>	<b>392.8</b>	<b>330.8</b>	<b>0.038</b>	<b>12.6</b>
North America**	Measured	109.4	1.17	128.1	120.6	0.034	4.1
	Indicated	110.8	0.88	97.7	122.1	0.026	3.1
	Inferred	38.0	1.05	39.7	41.9	0.031	1.3
	<b>Total</b>	<b>258.2</b>	<b>1.03</b>	<b>265.5</b>	<b>284.6</b>	<b>0.030</b>	<b>8.5</b>
Total**	Measured	347.7	2.55	885.9	383.3	0.074	28.5
	Indicated	1,058.0	3.26	3,444.1	1,166.2	0.095	110.7
	Inferred	555.4	4.11	2,284.5	612.2	0.120	73.4
	<b>Total</b>	<b>1,961.1</b>	<b>3.37</b>	<b>6,614.5</b>	<b>2,161.7</b>	<b>0.098</b>	<b>212.7</b>

\*\* Resources attributable to AngloGold.

<sup>(1)</sup> Inclusive of the Ore Reserve component.

# Ore Reserves by operation (attributable) as at 31 December 2003

Mine	Category	Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold t	Tons Mt	Grade oz/t	Contained gold Moz
<b>South Africa</b>							
Great Noligwa	Proved	4.0	9.46	37.6	4.4	0.276	1.2
	Probable	14.9	9.16	136.1	16.4	0.267	4.4
	<b>Total</b>	<b>18.8</b>	<b>9.22</b>	<b>173.6</b>	<b>20.7</b>	<b>0.269</b>	<b>5.6</b>
Kopanang	Proved	3.4	6.94	23.8	3.7	0.202	0.8
	Probable	19.8	7.19	142.3	21.8	0.210	4.6
	<b>Total</b>	<b>23.2</b>	<b>7.15</b>	<b>166.1</b>	<b>25.6</b>	<b>0.209</b>	<b>5.3</b>
Moab Khotsong	Proved	–	16.45	0.4	–	0.480	–
	Probable	18.8	13.93	262.4	20.7	0.406	8.4
	<b>Total</b>	<b>18.9</b>	<b>13.93</b>	<b>262.8</b>	<b>20.8</b>	<b>0.406</b>	<b>8.4</b>
Mponeng	Proved	2.8	8.74	24.5	3.1	0.255	0.8
	Probable	22.8	9.01	205.3	25.1	0.263	6.6
	<b>Total</b>	<b>25.6</b>	<b>8.98</b>	<b>229.9</b>	<b>28.2</b>	<b>0.262</b>	<b>7.4</b>
Savuka	Proved	0.4	6.79	2.7	0.4	0.198	0.1
	Probable	1.1	6.76	7.8	1.2	0.197	0.3
	<b>Total</b>	<b>1.5</b>	<b>6.77</b>	<b>10.5</b>	<b>1.7</b>	<b>0.197</b>	<b>0.3</b>
Tau Lekoa	Proved	7.4	5.05	37.2	8.2	0.147	1.2
	Probable	20.6	3.99	82.2	22.7	0.116	2.6
	<b>Total</b>	<b>28.0</b>	<b>4.27</b>	<b>119.4</b>	<b>30.9</b>	<b>0.125</b>	<b>3.8</b>
TauTona	Proved	1.6	13.11	21.3	1.8	0.382	0.7
	Probable	16.3	11.21	182.3	18.0	0.327	5.9
	<b>Total</b>	<b>17.9</b>	<b>11.38</b>	<b>203.6</b>	<b>19.7</b>	<b>0.332</b>	<b>6.5</b>
Western Ultra Deep Levels <sup>(1)</sup>	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Ergo	Proved	29.4	0.38	11.1	32.4	0.011	0.4
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>29.4</b>	<b>0.38</b>	<b>11.1</b>	<b>32.4</b>	<b>0.011</b>	<b>0.4</b>
Vaal River Surface	Proved	5.8	0.59	3.4	6.4	0.017	0.1
	Probable	153.6	0.56	86.0	169.3	0.016	2.8
	<b>Total</b>	<b>159.3</b>	<b>0.56</b>	<b>89.4</b>	<b>175.6</b>	<b>0.016</b>	<b>2.9</b>
West Wits Surface	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>

# Ore Reserves by operation (attributable) (continued) as at 31 December 2003

Mine	Category	Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold t	Tons Mt	Grade oz/t	Contained gold Moz
<b>East &amp; West Africa</b>							
Geita (50%)	Proved	14.2	3.30	46.8	15.7	0.096	1.5
	Probable	21.1	4.17	88.1	23.3	0.122	2.8
	<b>Total</b>	<b>35.3</b>	<b>3.82</b>	<b>134.9</b>	<b>38.9</b>	<b>0.111</b>	<b>4.3</b>
Morila (40%)	Proved	4.4	3.55	15.6	4.9	0.104	0.5
	Probable	5.9	3.88	22.9	6.5	0.113	0.7
	<b>Total</b>	<b>10.3</b>	<b>3.74</b>	<b>38.5</b>	<b>11.4</b>	<b>0.109</b>	<b>1.2</b>
Navachab	Proved	1.3	1.38	1.8	1.4	0.040	0.1
	Probable	10.1	1.81	18.2	11.1	0.053	0.6
	<b>Total</b>	<b>11.4</b>	<b>1.76</b>	<b>20.0</b>	<b>12.6</b>	<b>0.051</b>	<b>0.6</b>
Sadiola (38%)	Proved	2.5	1.93	4.8	2.8	0.056	0.2
	Probable	7.7	3.53	27.3	8.5	0.103	0.9
	<b>Total</b>	<b>10.2</b>	<b>3.14</b>	<b>32.1</b>	<b>11.2</b>	<b>0.092</b>	<b>1.0</b>
Yatela (40%)	Proved	0.9	1.12	1.0	1	0.033	–
	Probable	3.4	3.84	12.9	3.7	0.112	0.4
	<b>Total</b>	<b>4.3</b>	<b>3.25</b>	<b>13.9</b>	<b>4.7</b>	<b>0.095</b>	<b>0.4</b>
<b>South America</b>							
Amapari <sup>(2)</sup>	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Cerro Vanguardia (92.5%)	Proved	6.7	7.34	49.1	7.4	0.214	1.6
	Probable	0.5	10.16	5.6	0.6	0.296	0.2
	<b>Total</b>	<b>7.2</b>	<b>7.56</b>	<b>54.6</b>	<b>7.9</b>	<b>0.220</b>	<b>1.8</b>
Morro Velho	Proved	2.3	7.84	18.1	2.5	0.229	0.6
	Probable	5.2	7.01	36.2	5.7	0.205	1.2
	<b>Total</b>	<b>7.5</b>	<b>7.27</b>	<b>54.4</b>	<b>8.3</b>	<b>0.212</b>	<b>1.7</b>
Serra Grande (50%)	Proved	1.6	6.17	10.2	1.8	0.180	0.3
	Probable	0.6	7.59	4.6	0.7	0.221	0.1
	<b>Total</b>	<b>2.3</b>	<b>6.55</b>	<b>14.8</b>	<b>2.5</b>	<b>0.191</b>	<b>0.5</b>

# Ore Reserves by operation (attributable) (continued) as at 31 December 2003

Mine	Category	Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold t	Tons Mt	Grade oz/t	Contained gold Moz
<b>Australia</b>							
Boddington <sup>(3)</sup> (33.33%)	Proved	41.5	0.94	39.0	45.7	0.027	1.3
	Probable	88.4	0.84	74.3	97.4	0.024	2.4
	<b>Total</b>	<b>129.9</b>	<b>0.87</b>	<b>113.3</b>	<b>143.2</b>	<b>0.025</b>	<b>3.6</b>
Coyote <sup>(4)</sup>	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Sunrise Dam	Proved	5.4	4.16	22.3	6	0.121	0.7
	Probable	16.9	4.33	72.9	18.6	0.126	2.3
	<b>Total</b>	<b>22.2</b>	<b>4.29</b>	<b>95.3</b>	<b>24.5</b>	<b>0.125</b>	<b>3.1</b>
Tanami <sup>(5)</sup> (40%)	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Union Reefs <sup>(6)</sup>	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>North America</b>							
Jerritt Canyon <sup>(7)</sup>	Proved	–	–	–	–	–	–
	Probable	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Cripple Creek & Victor (70%)	Proved	53.9	1.26	67.7	59.4	0.037	2.2
	Probable	64.7	0.87	56.1	71.3	0.025	1.8
	<b>Total</b>	<b>118.6</b>	<b>1.04</b>	<b>123.8</b>	<b>130.8</b>	<b>0.030</b>	<b>4.0</b>
	<b>Proved</b>	<b>189.5</b>	<b>2.31</b>	<b>438.5</b>	<b>208.9</b>	<b>0.067</b>	<b>14.1</b>
	<b>Probable</b>	<b>492.4</b>	<b>3.09</b>	<b>1,523.5</b>	<b>542.8</b>	<b>0.090</b>	<b>49.0</b>
<b>Total Ore Reserves attributable to AngloGold</b>	<b>Total</b>	<b>681.9</b>	<b>2.88</b>	<b>1,962</b>	<b>751.7</b>	<b>0.084</b>	<b>63.1</b>

NB: Rounding of figures may result in computational discrepancies.

<sup>(1)</sup> The southerly down-dip extension of Mponeng, Elandsrand (Harmony) and Driefontein (Gold Fields Limited), with depths to reef exceeding 4,500m in the south.

<sup>(2)</sup> Sold 21 May 2003.

<sup>(3)</sup> The Ore Reserves associated with the Boddington Expansion have been based on the feasibility study completed in 2000 and assume a gold price of AUD\$425/oz.

<sup>(4)</sup> Sold – settlement due on 16 January 2004.

<sup>(5)</sup> Mine closed.

<sup>(6)</sup> Sold – settlement date still under negotiation.

<sup>(7)</sup> Sold 30 June 2003.



# Mineral Resources by operation (attributable) as at 31 December 2003 (inclusive of the Ore Reserve component)

Mine	Category	Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold t	Tons Mt	Grade oz/t	Contained gold Moz
<b>South Africa</b>							
Great Noligwa	Measured	7.9	17.82	140.3	8.7	0.520	4.5
	Indicated	19.6	16.83	329.6	21.6	0.491	10.6
	Inferred	5.8	10.89	63.1	6.4	0.318	2.0
	<b>Total</b>	<b>33.2</b>	<b>16.03</b>	<b>533.0</b>	<b>36.6</b>	<b>0.468</b>	<b>17.1</b>
Kopanang	Measured	4.0	17.22	68.2	4.4	0.502	2.2
	Indicated	17.1	17.22	293.6	18.8	0.502	9.4
	Inferred	4.3	19.34	82.8	4.7	0.564	2.7
	<b>Total</b>	<b>25.3</b>	<b>17.57</b>	<b>444.6</b>	<b>27.9</b>	<b>0.513</b>	<b>14.3</b>
Moab Khotsong	Measured	–	18.97	0.6	–	0.553	–
	Indicated	12.9	26.54	342.7	14.2	0.774	11.0
	Inferred	1.5	29.19	43.8	1.7	0.851	1.4
	<b>Total</b>	<b>14.4</b>	<b>26.80</b>	<b>387.1</b>	<b>15.9</b>	<b>0.782</b>	<b>12.4</b>
Moab Khotsong Extension	Measured	–	–	–	–	–	–
	Indicated	2.5	16.31	41.0	2.8	0.476	1.3
	Inferred	–	–	–	–	–	–
	<b>Total</b>	<b>2.5</b>	<b>16.31</b>	<b>41.0</b>	<b>2.8</b>	<b>0.476</b>	<b>1.3</b>
Mponeng	Measured	4.5	15.34	68.8	5.0	0.447	2.2
	Indicated	56.7	11.60	657.5	62.5	0.338	21.1
	Inferred	9.4	7.87	74.3	10.4	0.229	2.4
	<b>Total</b>	<b>70.6</b>	<b>11.34</b>	<b>800.6</b>	<b>77.8</b>	<b>0.331</b>	<b>25.7</b>
Savuka	Measured	3.2	14.19	45.7	3.5	0.414	1.5
	Indicated	17.5	12.60	221.1	19.3	0.368	7.1
	Inferred	–	–	–	–	–	–
	<b>Total</b>	<b>20.8</b>	<b>12.85</b>	<b>266.8</b>	<b>22.9</b>	<b>0.375</b>	<b>8.6</b>
Tau Lekoa	Measured	8.9	6.32	56.4	9.8	0.184	1.8
	Indicated	45.1	5.56	251.1	49.7	0.162	8.1
	Inferred	24.0	5.97	143.4	26.5	0.174	4.6
	<b>Total</b>	<b>78.1</b>	<b>5.78</b>	<b>450.8</b>	<b>86.1</b>	<b>0.168</b>	<b>14.5</b>
TauTona	Measured	1.4	25.72	37.2	1.5	0.750	1.2
	Indicated	21.0	22.52	473.7	23.1	0.657	15.2
	Inferred	–	–	–	–	–	–
	<b>Total</b>	<b>22.5</b>	<b>22.72</b>	<b>510.9</b>	<b>24.8</b>	<b>0.663</b>	<b>16.4</b>
Western Ultra Deep Levels <sup>(1)</sup>	Measured	–	–	–	–	–	–
	Indicated	–	–	–	–	–	–
	Inferred	103.3	11.85	1,223.9	113.9	0.346	39.3
	<b>Total</b>	<b>103.3</b>	<b>11.85</b>	<b>1,223.9</b>	<b>113.9</b>	<b>0.346</b>	<b>39.4</b>
Ergo	Measured	73.3	0.30	22.2	80.8	0.009	0.7
	Indicated	–	–	–	–	–	–
	Inferred	–	–	–	–	–	–
	<b>Total</b>	<b>73.3</b>	<b>0.30</b>	<b>22.2</b>	<b>80.8</b>	<b>0.009</b>	<b>0.7</b>

# Mineral Resources by operation (attributable) as at 31 December 2003 (inclusive of the Ore Reserve component)

Mine	Category	Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold t	Tons Mt	Grade oz/t	Contained gold Moz
Vaal River Surface	Measured	–	–	–	–	–	–
	Indicated	306.1	0.34	102.9	337.4	0.010	3.3
	Inferred	101.7	0.65	66.4	112.1	0.019	2.1
	<b>Total</b>	<b>407.9</b>	<b>0.41</b>	<b>169.2</b>	<b>449.6</b>	<b>0.012</b>	<b>5.4</b>
West Wits Surface	Measured	–	–	–	–	–	–
	Indicated	162.5	0.25	41.4	179.1	0.007	1.3
	Inferred	13.2	0.62	8.2	14.6	0.018	0.3
	<b>Total</b>	<b>175.7</b>	<b>0.28</b>	<b>49.5</b>	<b>193.7</b>	<b>0.008</b>	<b>1.6</b>
<b>East &amp; West Africa</b>							
Geita (50%)	Measured	20.5	3.13	64.0	22.6	0.091	2.1
	Indicated	43.3	3.80	164.8	47.7	0.111	5.3
	Inferred	20.0	3.03	60.4	22.0	0.088	1.9
	<b>Total</b>	<b>83.7</b>	<b>3.45</b>	<b>289.2</b>	<b>92.3</b>	<b>0.101</b>	<b>9.3</b>
Morila (40%)	Measured	5.2	3.49	18.3	5.7	0.102	0.6
	Indicated	7.0	3.82	26.7	7.7	0.112	0.9
	Inferred	0.8	2.96	2.4	0.9	0.086	0.1
	<b>Total</b>	<b>13.0</b>	<b>3.64</b>	<b>47.5</b>	<b>14.3</b>	<b>0.106</b>	<b>1.5</b>
Navachab	Measured	8.7	0.79	6.8	9.6	0.023	0.2
	Indicated	56.9	1.31	74.7	62.7	0.038	2.4
	Inferred	60.8	1.04	63.1	67.0	0.030	2.0
	<b>Total</b>	<b>126.3</b>	<b>1.15</b>	<b>144.7</b>	<b>139.2</b>	<b>0.033</b>	<b>4.7</b>
Sadiola (38%)	Measured	6.5	1.68	11.0	7.2	0.049	0.4
	Indicated	10.1	2.62	26.4	11.1	0.077	0.8
	Inferred	54.7	1.76	96.2	60.3	0.051	3.1
	<b>Total</b>	<b>71.3</b>	<b>1.87</b>	<b>133.6</b>	<b>78.6</b>	<b>0.055</b>	<b>4.3</b>
Yatela (40%)	Measured	1.5	1.11	1.6	1.7	0.032	0.1
	Indicated	6.2	2.56	16.0	6.8	0.075	0.5
	Inferred	1.8	1.03	1.8	2.0	0.030	0.1
	<b>Total</b>	<b>9.5</b>	<b>2.05</b>	<b>19.4</b>	<b>10.5</b>	<b>0.060</b>	<b>0.6</b>
<b>South America</b>							
Amapari <sup>(2)</sup>	Measured	–	–	–	–	–	–
	Indicated	–	–	–	–	–	–
	Inferred	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Cerro Vanguardia (92.5%)	Measured	23.2	3.62	83.8	25.6	0.106	2.7
	Indicated	2.4	6.07	14.7	2.6	0.177	0.5
	Inferred	0.9	8.40	7.3	1.0	0.245	0.2
	<b>Total</b>	<b>26.5</b>	<b>4.00</b>	<b>105.8</b>	<b>29.2</b>	<b>0.117</b>	<b>3.4</b>
Morro Velho	Measured	4.8	7.24	34.9	5.3	0.211	1.1
	Indicated	9.6	7.07	67.9	10.6	0.206	2.2
	Inferred	26.6	6.93	184.1	29.3	0.202	5.9
	<b>Total</b>	<b>41.0</b>	<b>7.00</b>	<b>286.8</b>	<b>45.2</b>	<b>0.204</b>	<b>9.2</b>

# Mineral Resources by operation (attributable) (continued) as at 31 December 2003 (inclusive of the Ore Reserve component)

Mine	Category	Metric			Imperial		
		Tonnes Mt	Grade g/t	Contained gold t	Tons Mt	Grade oz/t	Contained gold Moz
Serra Grande (50%)	Measured	1.8	6.98	12.6	2.0	0.204	0.4
	Indicated	0.7	8.21	5.5	0.8	0.239	0.2
	Inferred	1.6	7.15	11.5	1.8	0.209	0.4
	<b>Total</b>	<b>4.1</b>	<b>7.25</b>	<b>29.5</b>	<b>4.5</b>	<b>0.211</b>	<b>0.9</b>
<b>Australia</b>							
Boddington <sup>(3)</sup> (33.33%)	Measured	43.0	0.93	40.1	47.4	0.027	1.3
	Indicated	123.0	0.83	102.3	135.6	0.024	3.3
	Inferred	76.2	0.81	61.4	84.0	0.023	2.0
	<b>Total</b>	<b>242.2</b>	<b>0.84</b>	<b>203.8</b>	<b>267.0</b>	<b>0.025</b>	<b>6.6</b>
Coyote <sup>(4)</sup>	Measured	–	–	–	–	–	–
	Indicated	–	–	–	–	–	–
	Inferred	1.3	6.89	9.1	1.4	0.201	0.3
	<b>Total</b>	<b>1.3</b>	<b>6.89</b>	<b>9.1</b>	<b>1.4</b>	<b>0.201</b>	<b>0.3</b>
Sunrise Dam	Measured	18.5	2.28	42.2	20.4	0.067	1.4
	Indicated	25.9	3.45	89.3	28.5	0.101	2.9
	Inferred	8.3	4.72	39.3	9.1	0.138	1.3
	<b>Total</b>	<b>52.7</b>	<b>3.24</b>	<b>170.8</b>	<b>58.1</b>	<b>0.095</b>	<b>5.5</b>
Tanami <sup>(5)</sup> (40%)	Measured	1.3	2.11	2.8	1.4	0.061	0.1
	Indicated	0.9	3.49	3.1	1.0	0.102	0.1
	Inferred	0.1	4.30	0.4	0.1	0.125	–
	<b>Total</b>	<b>2.3</b>	<b>2.73</b>	<b>6.3</b>	<b>2.5</b>	<b>0.080</b>	<b>0.2</b>
Union Reefs <sup>(6)</sup>	Measured	0.1	2.97	0.4	0.1	0.087	–
	Indicated	0.1	2.47	0.3	0.1	0.072	–
	Inferred	1.3	1.62	2.0	1.4	0.047	0.1
	<b>Total</b>	<b>1.5</b>	<b>1.81</b>	<b>2.7</b>	<b>1.7</b>	<b>0.053</b>	<b>0.1</b>
<b>North America</b>							
Jerritt Canyon <sup>(7)</sup> (70%)	Measured	–	–	–	–	–	–
	Indicated	–	–	–	–	–	–
	Inferred	–	–	–	–	–	–
	<b>Total</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
Cripple Creek & Victor	Measured	109.4	1.17	128.1	120.6	0.034	4.1
	Indicated	110.8	0.88	97.7	122.2	0.026	3.1
	Inferred	38.0	1.05	39.7	41.9	0.031	1.3
	<b>Total</b>	<b>258.2</b>	<b>1.03</b>	<b>265.5</b>	<b>284.6</b>	<b>0.030</b>	<b>8.5</b>
	<b>Measured</b>	<b>347.7</b>	<b>2.55</b>	<b>885.9</b>	<b>383.3</b>	<b>0.074</b>	<b>28.5</b>
	<b>Indicated</b>	<b>1,058.0</b>	<b>3.26</b>	<b>3,444.1</b>	<b>1,166.2</b>	<b>0.095</b>	<b>110.7</b>
	<b>Inferred</b>	<b>555.4</b>	<b>4.11</b>	<b>2,284.5</b>	<b>612.2</b>	<b>0.120</b>	<b>73.4</b>
<b>Total Mineral Resources attributable to AngloGold</b>	<b>Total</b>	<b>1,961.1</b>	<b>3.37</b>	<b>6,614.5</b>	<b>2,161.7</b>	<b>0.098</b>	<b>212.7</b>

NB: Rounding of figures may result in computational discrepancies

<sup>(1)</sup> The southerly down-dip extension of Mponeng, Elandsrand (Harmony) and Driefontein (Gold Fields Limited), with depths to reef exceeding 4,500m in the south.

<sup>(2)</sup> Sold 21 May 2003.

<sup>(3)</sup> The Mineral Resource associated with the Boddington Expansion have been based on the feasibility study completed in 2000 and assume a gold price of AUD\$650/oz.

<sup>(4)</sup> Sold – settlement due on 16 January 2004.

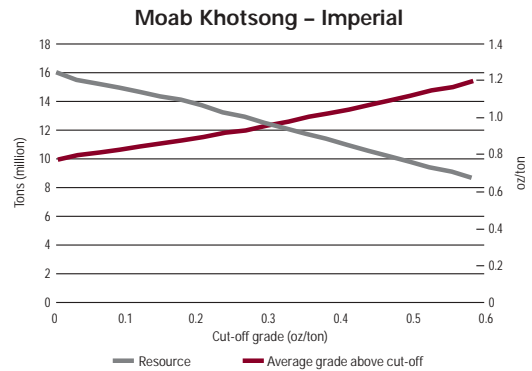
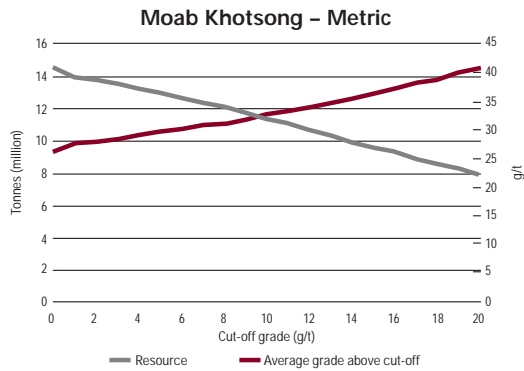
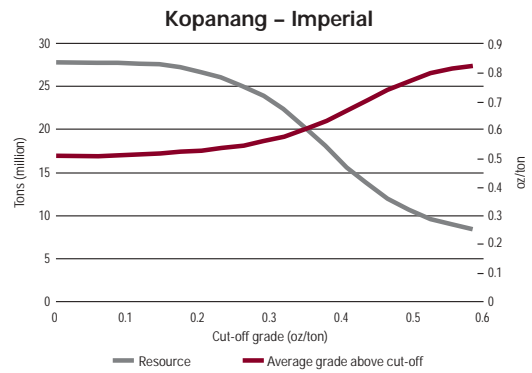
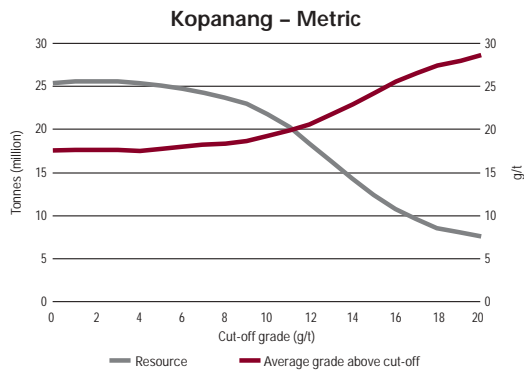
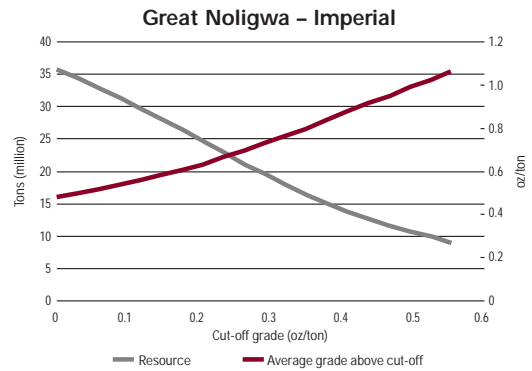
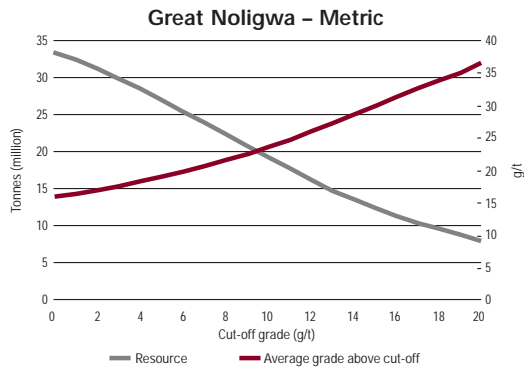
<sup>(5)</sup> Mine closed.

<sup>(6)</sup> Sold – settlement date still under negotiation.

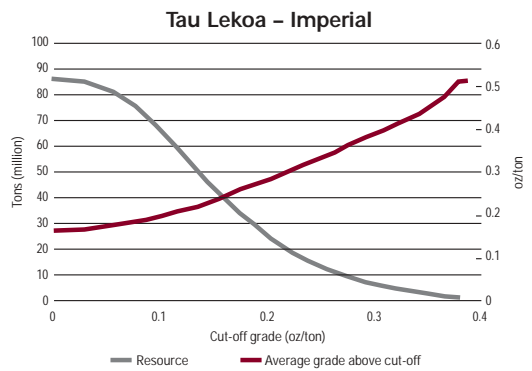
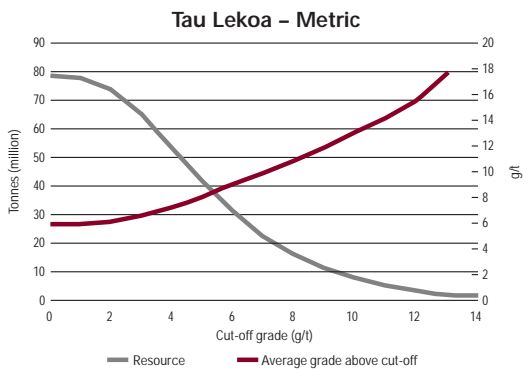
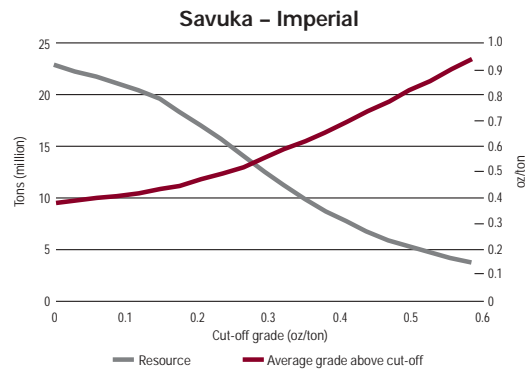
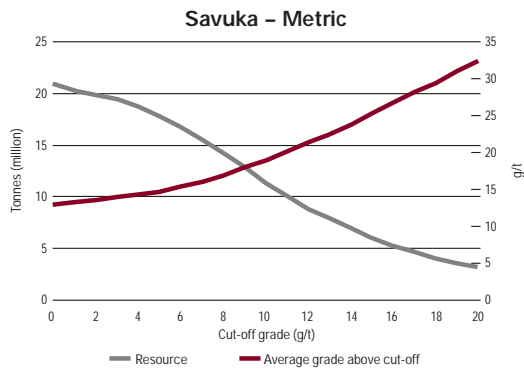
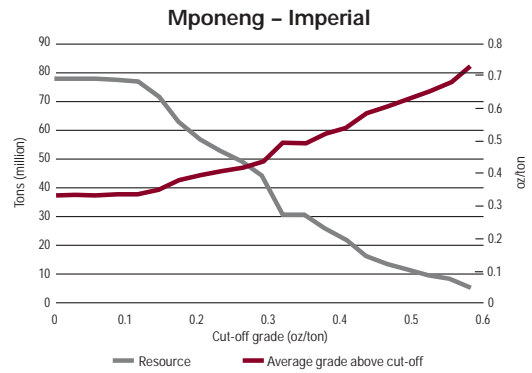
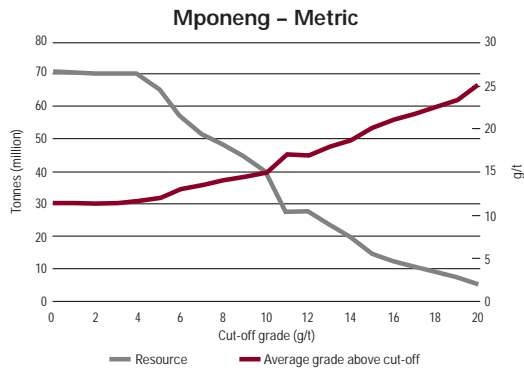
<sup>(7)</sup> Sold 30 June 2003.

# Grade tonnage curves of the Mineral Resource

## South Africa

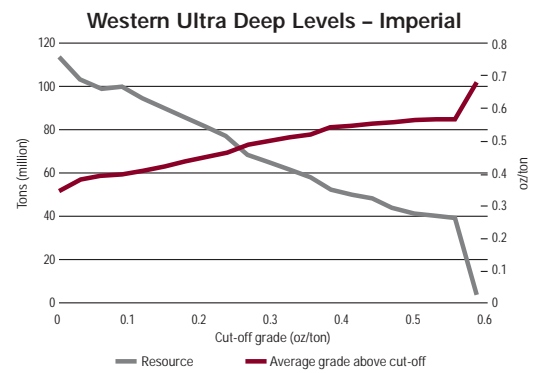
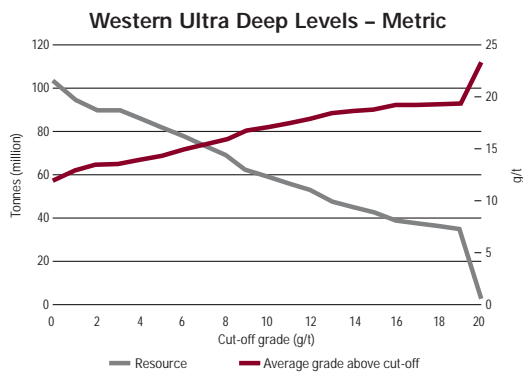
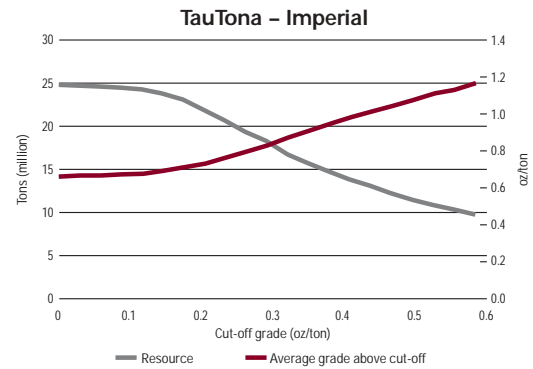
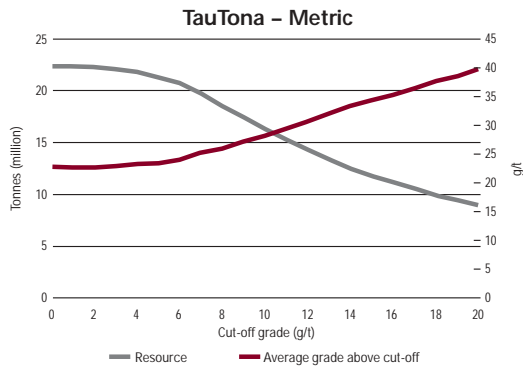


South Africa (continued)

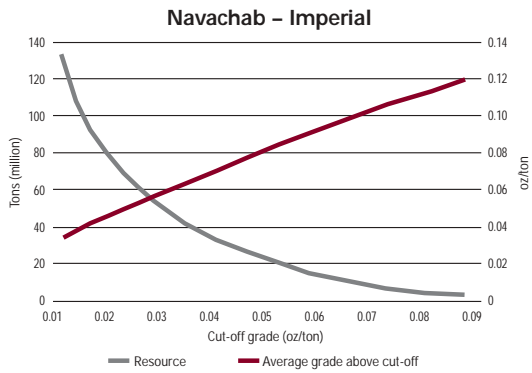
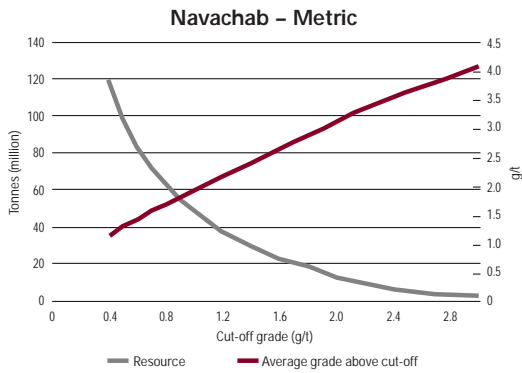
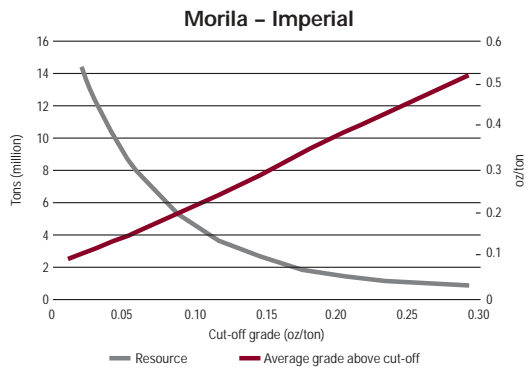
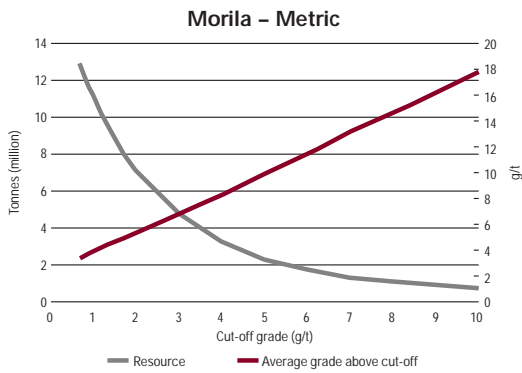
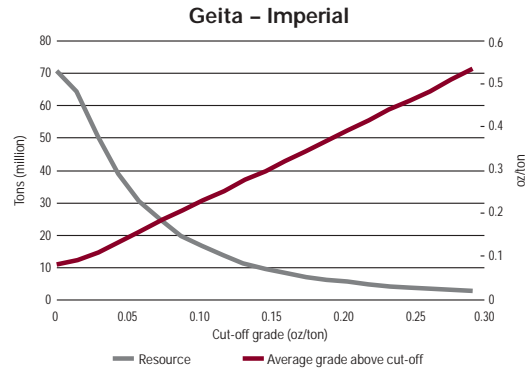
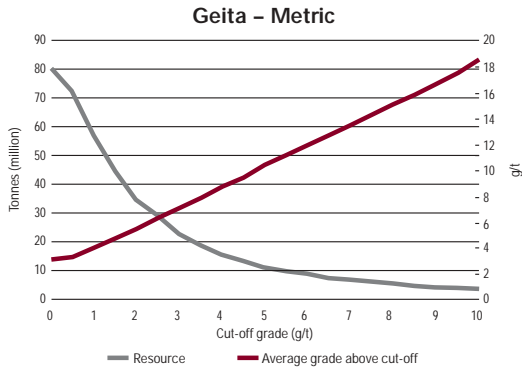


# Grade tonnage curves of the Mineral Resource (continued)

## South Africa (continued)

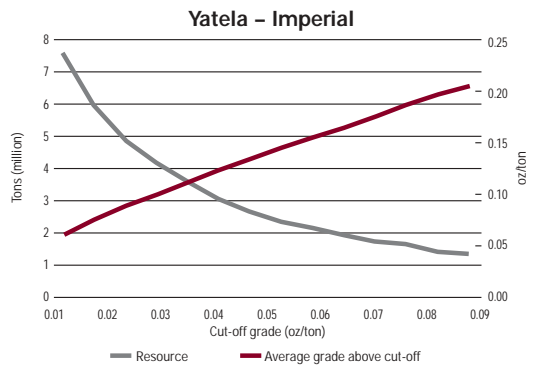
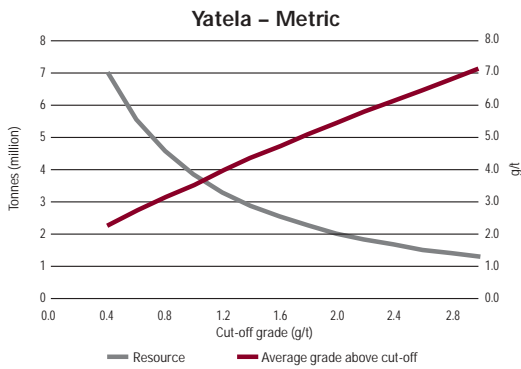
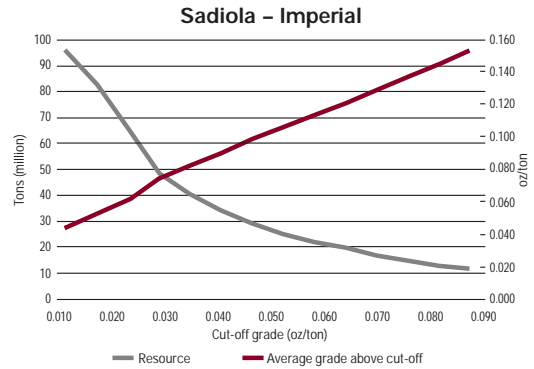
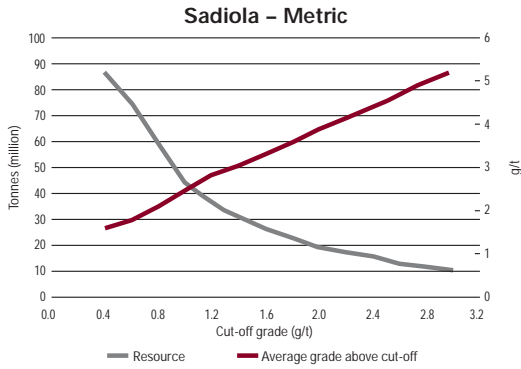


## East & West Africa



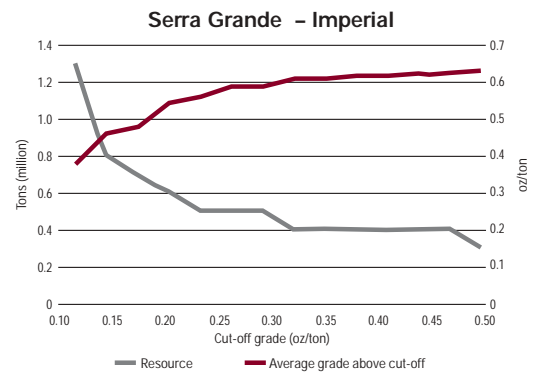
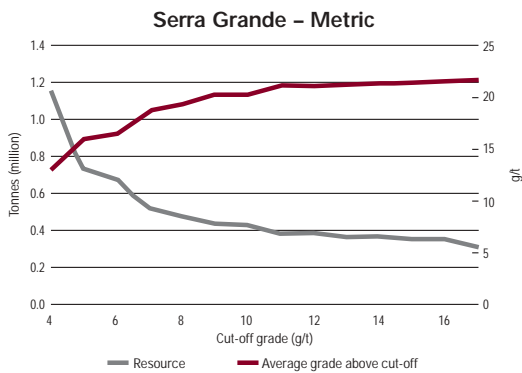
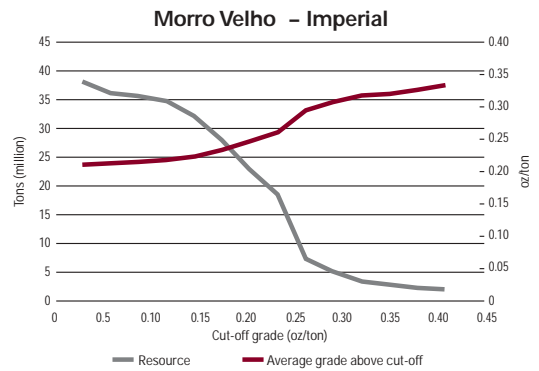
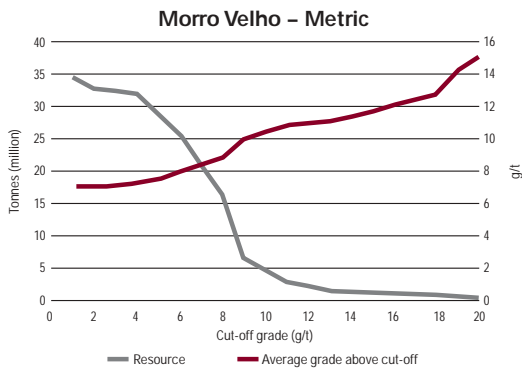
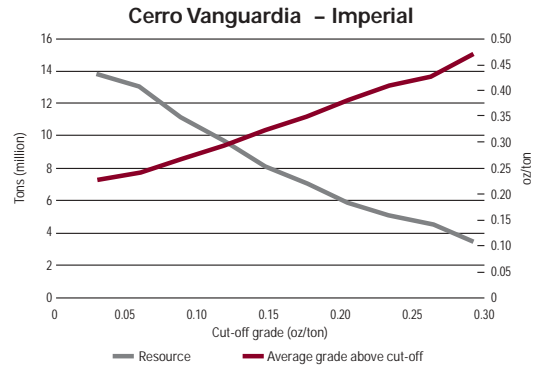
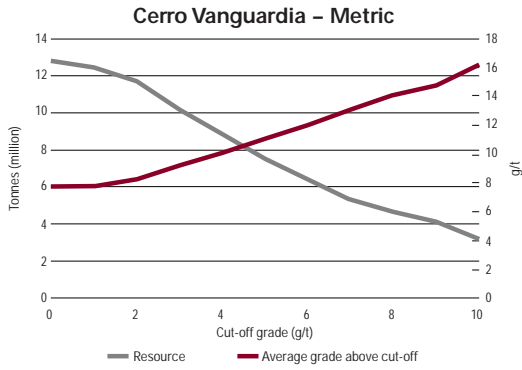
# Grade tonnage curves of the Mineral Resource (continued)

## East & West Africa (continued)



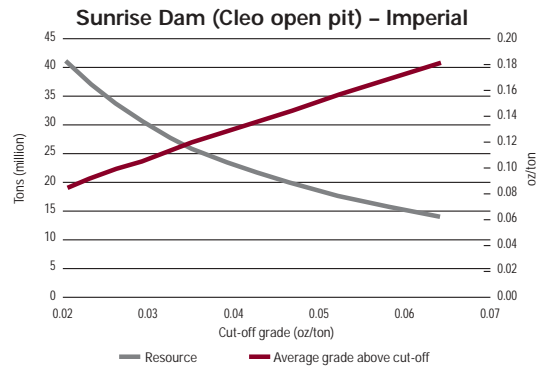
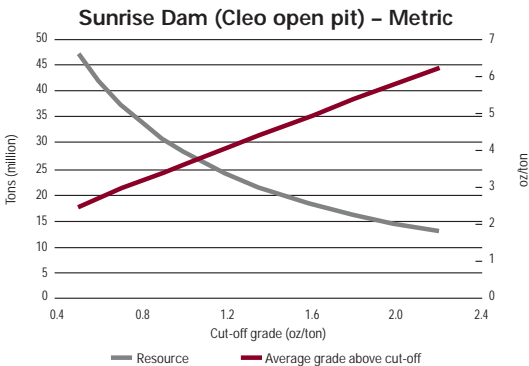
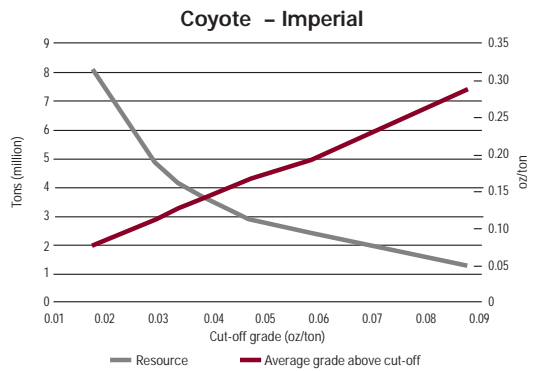
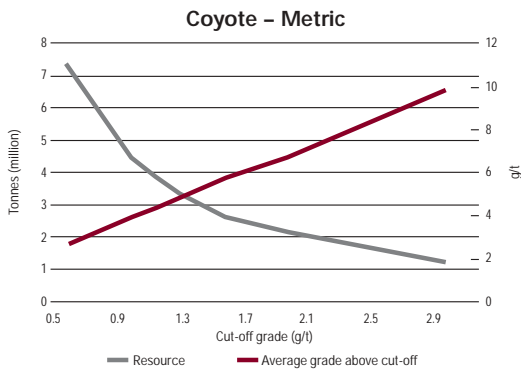
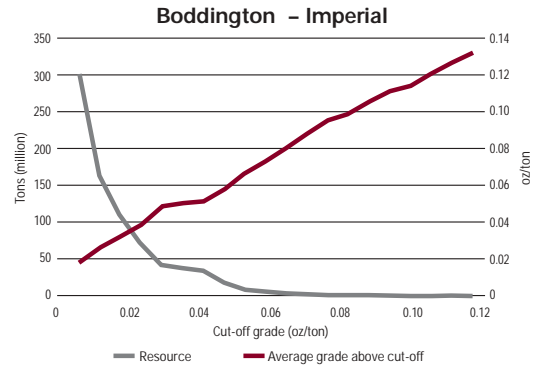
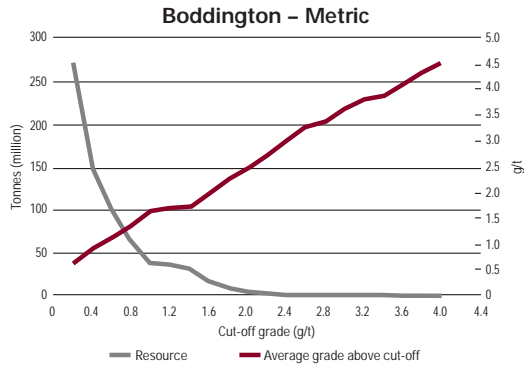


## South America

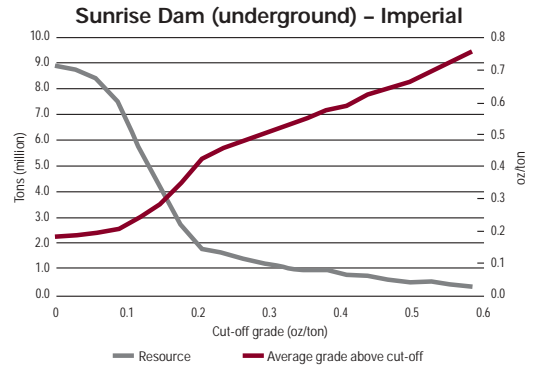
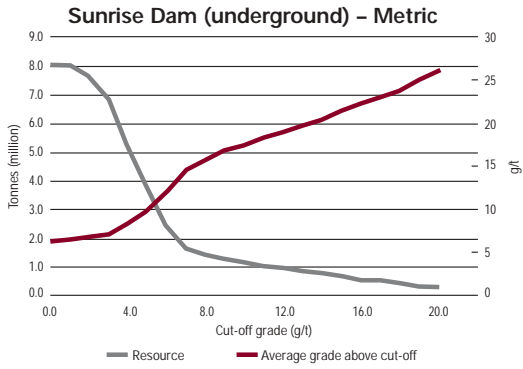


# Grade tonnage curves of the Mineral Resource (continued)

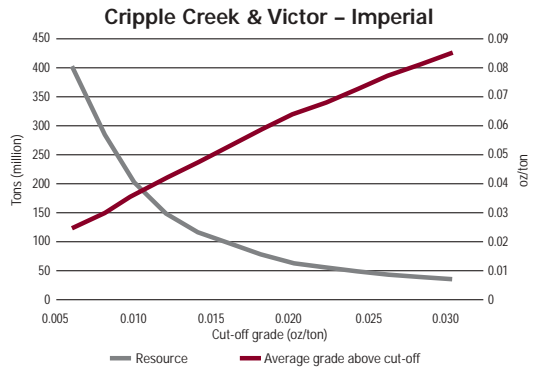
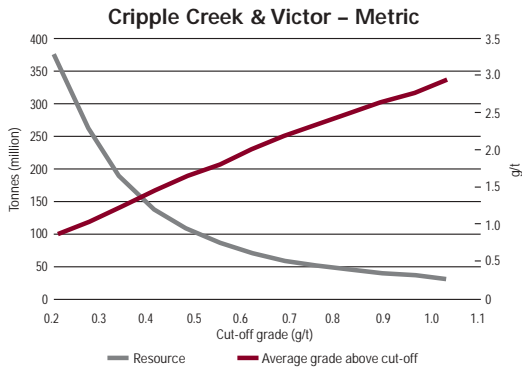
## Australia



Australia (continued)



North America



# Year-on-year Mineral Resource and Ore Reserve comparison by operation

as at 31 December 2003

Gold content (attributable) Moz								
Operation	Category	2002	Depletion <sup>(1)</sup>	Model change <sup>(2)</sup>	Scope change <sup>(3)</sup>	2003	Net diff	%
<b>South Africa</b>								
Great Noligwa	Resource	18.4	-1.1	-0.2	0.1	17.1	-1.2	-7
	Reserve	6.9	-0.8	-0.5	-	5.6	-1.3	-19
Kopanang	Resource	14.8	-0.7	0.6	-0.4	14.3	-0.5	-3
	Reserve	6.0	-0.5	-0.1	-	5.3	-0.6	-11
Moab Khotsong	Resource	12.8	-0.0	-0.4	-	12.4	-0.4	-3
	Reserve	9.0	-0.0	-0.6	0.1	8.4	-0.5	-6
Mponeng	Resource	26.7	-0.5	-2.1	1.7	25.7	-1.0	-4
	Reserve	9.5	-0.5	-1.1	-0.5	7.4	-2.2	-23
Savuka	Resource	8.8	-0.2	0.9	-0.9	8.6	-0.2	-3
	Reserve	2.7	-0.2	-	-2.2	0.3	-2.4	-88
Tau Lekoa	Resource	17.4	-0.4	-0.4	-2.1	14.5	-2.9	-17
	Reserve	3.9	-0.3	0.3	-	3.8	-0.1	-2
TauTona	Resource	15.9	-0.7	0.1	1.2	16.4	0.6	4
	Reserve	6.3	-0.7	0.9	-	6.5	0.2	4
WUDL	Resource	104.1	0.0	-	-64.8	39.4	-64.8	-62
	Reserve	0.0	0.0	-	-	0.0	0.0	0
Moab Khotsong Extention	Resource	0.0	0.0	-	1.3	1.3	1.3	0
	Reserve	0.0	0.0	-	-	0.0	0.0	0
Surface	Resource	9.7	-0.3	-	-1.7	7.7	-2.0	-20
	Reserve	3.2	-0.6	-0.5	1.1	3.2	0.0	1
<b>Totals</b>	<b>Resource</b>	<b>228.6</b>	<b>-3.9</b>	<b>-1.5</b>	<b>-65.7</b>	<b>157.5</b>	<b>-71.0</b>	<b>-31</b>
	<b>Reserve</b>	<b>47.5</b>	<b>-3.6</b>	<b>-1.7</b>	<b>-1.6</b>	<b>40.7</b>	<b>-6.8</b>	<b>-14</b>

## Comments

Change primarily due to depletion, with a minor value decrease on the Vaal Reef and movement out of resource to inventory.

A decrease in the Mine Call Factor (MCF) of 5.8%, coupled with a 10% reduction of in-situ grade, resulted in the drop off in reserves.

A drop in value of the Vaal Reef, an increase due to structure (C Reef), evaluation boundary changes and movements to inventory.

The drop in average in-situ grade of 12% over life-of-mine due to revised modelling resulted in the drop off in reserves.

Reduction due to evaluation change in boundary methodology.

The decrease of 0.5Moz was due to updates to the geological model, which resulted in lower gold values.

Loss due to geology model changes and revised relative density. Increase due to upgrading from inventory.

A decrease of 1.7Moz was due to the exclusion of the Carbon Leader Reef (CLR) Below 120 Level project and a reduction in the VCR Below 120 Level project. The lower Rand per kilogram gold price at the end of 2003 resulted in the Carbon Leader Reef Below 120 Level project no longer being feasible and it has now been excluded from Ore Reserves as at 31 December 2003. The project is currently the subject of a revised feasibility study.

Increase in value due to new data is offset by transfer of Mineral Resource to TauTona.

The Savuka reserve is down due to economic factors. It is expected that the mine will be operational for another two years with an orderly closure in 2006.

Scope changes due to movement out of resource to inventory due to increased resource cut-off. Increases due to geology model changes and new information .

An increase of 0.3Moz was due to the assumption of a higher MCF, as well as extensions of the Ore Reserve due to exploration in new mining areas.

Increase due to inclusion of new ground purchased from Driefontein (656,000oz) and transfers in from Savuka (434,000oz) and Mponeng (117,000oz).

An increase of 0.9Moz was partially as a result of the purchase of new ground from Gold Fields' Driefontein Gold Mine.

Reduced mining limit depth from 5km below datum to 4.5km below datum and increased Mineral Resource cut-off.

Held under prospecting permit – south of Kopanang Mine.

Reduction due to depletion and transfers to inventory.

# Year-on-year Mineral Resource and Ore Reserve comparison by operation (continued)

as at 31 December 2003

Gold content (attributable) Moz								
Operation	Category	2002	Depletion <sup>(1)</sup>	Model change <sup>(2)</sup>	Scope change <sup>(3)</sup>	2003	Net diff	%
<b>East &amp; West Africa</b>								
Geita	Resource	8.1	-0.4	1.2	0.3	9.3	1.2	14
	Reserve	4.7	-0.4	0.3	-0.3	4.3	-0.4	-8
Morila	Resource	2.1	-0.4	-0.2	-	1.5	-0.6	-27
	Reserve	1.7	-0.3	-0.1	-	1.2	-0.4	-27
Navachab	Resource	4.6	-0.1	-	0.1	4.7	0.0	1
	Reserve	0.6	-0.1	0.1	-	0.6	0.0	2
Sadiola	Resource	5.1	-0.2	-0.2	-0.5	4.3	-0.8	-16
	Reserve	1.1	-0.2	0.1	-	1.0	-0.1	-10
Yatela	Resource	0.8	-0.1	-	-0.1	0.6	-0.1	-18
	Reserve	0.5	-0.1	-	-	0.4	-0.1	-11
<b>Totals</b>	<b>Resource</b>	<b>20.7</b>	<b>-1.1</b>	<b>0.8</b>	<b>-0.1</b>	<b>20.4</b>	<b>-0.3</b>	<b>-2</b>
	<b>Reserve</b>	<b>8.7</b>	<b>-1.1</b>	<b>0.4</b>	<b>-0.3</b>	<b>7.7</b>	<b>-1.0</b>	<b>-11</b>
<b>South America</b>								
Amapari	Resource	2.4	0.0	-	-2.4	0.0	-2.4	-100
	Reserve	0.7	0.0	-	-0.7	0.0	-0.7	-100
Cerro Vanguardia	Resource	3.6	-0.2	0.3	-0.2	3.4	-0.2	-5
	Reserve	2.2	-0.2	0.0	-0.2	1.8	-0.4	-19
Morro Velho	Resource	9.4	-0.2	-	-	9.2	-0.2	-2
	Reserve	1.7	-0.2	0.2	-	1.7	0.0	0
Serra Grande	Resource	0.9	-0.1	0.1	-	0.9	0.1	6
	Reserve	0.5	-0.1	0.1	-	0.5	-0.0	-1
<b>Totals</b>	<b>Resource</b>	<b>16.3</b>	<b>-0.5</b>	<b>0.4</b>	<b>-2.6</b>	<b>13.6</b>	<b>-2.8</b>	<b>-17</b>
	<b>Reserve</b>	<b>5.1</b>	<b>-0.6</b>	<b>0.3</b>	<b>-0.9</b>	<b>4.0</b>	<b>-1.1</b>	<b>-22</b>

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**Comments**

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Additions due to drilling at Nyankanga and Geita Hill during 2003 and further additions due to incorporation of low-grade ore greater than 0.7g/t.  
Ridge 8 and Star & Comet added to reserves; Nyankanga Cut 7 excluded to maintain drainage channel.

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Model change due to new drill information and anisotropic remodelling.

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Depletion and loss of Deep Sulphide below new \$400/oz shell and revised modelling of the North Pit area.

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Sold 21 May 2003.

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Increase in waste mining costs.

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# Year-on-year Mineral Resource and Ore Reserve comparison by operation (continued)

as at 31 December 2003

Gold content (attributable) Moz								
Operation	Category	2002	Depletion <sup>(1)</sup>	Model change <sup>(2)</sup>	Scope change <sup>(3)</sup>	2003	Net diff	%
<b>Australia</b>								
Boddington	Resource	6.6	0.0	-	-	6.6	0.0	0
	Reserve	3.6	0.0	-	-	3.6	0.0	0
Coyote	Resource	0.3	0.0	-	-	0.3	0.0	0
	Reserve	0.0	0.0	-	-	0.0	0.0	n/a
Sunrise Dam	Resource	4.6	-0.4	1.5	-0.1	5.5	0.9	20
	Reserve	2.6	-0.4	0.9	0.1	3.1	0.5	19
Tanami	Resource	0.2	0.0	-	-	0.2	-0.0	-2
	Reserve	0.0	0.0	-	-	0.0	0.0	n/a
Union Reefs	Resource	0.2	-0.1	-	-	0.1	-0.1	-50
	Reserve	0.1	-0.1	-	-	0.0	-0.1	-100
<b>Totals</b>	<b>Resource</b>	<b>11.8</b>	<b>-0.5</b>	<b>1.5</b>	<b>-0.2</b>	<b>12.6</b>	<b>0.8</b>	<b>7</b>
	<b>Reserve</b>	<b>6.3</b>	<b>-0.5</b>	<b>0.9</b>	<b>0.1</b>	<b>6.7</b>	<b>0.4</b>	<b>6</b>
<b>North America</b>								
Cripple Creek & Victor	Resource	8.1	-0.6	1.0	-	8.5	0.4	5
	Reserve	4.3	-0.5	0.2	-	4.0	-0.3	-7
Jerritt Canyon	Resource	2.0	0.0	-	-2.0	0.0	-2.0	-100
	Reserve	0.4	-0.1	-	-0.3	0.0	-0.4	-100
<b>Totals</b>	<b>Resource</b>	<b>10.1</b>	<b>-0.6</b>	<b>1.0</b>	<b>-2.0</b>	<b>8.5</b>	<b>-1.6</b>	<b>-16</b>
	<b>Reserve</b>	<b>4.7</b>	<b>-0.6</b>	<b>0.2</b>	<b>-0.3</b>	<b>4.0</b>	<b>-0.7</b>	<b>-15</b>
<b>AngloGold totals</b>	<b>Resource</b>	<b>287.6</b>	<b>-6.6</b>	<b>2.2</b>	<b>-70.5</b>	<b>212.7</b>	<b>-74.9</b>	<b>-26</b>
	<b>Reserve</b>	<b>72.3</b>	<b>-6.3</b>	<b>0.1</b>	<b>-3.0</b>	<b>63.1</b>	<b>-9.2</b>	<b>-13</b>

<sup>(1)</sup> **Depletion:** reduction in reserves based on ore delivered to the plant and corresponding reduction in resource.

<sup>(2)</sup> **Model change:** difference between the reserves based on the start of year and end of year resource models. In both cases the end of year mine design and mining faces are applied.

<sup>(3)</sup> **Scope change:** difference resulting from change in cut-off grade, MCF, new project studies and any other factors influencing Mineral Resource and Ore Reserve estimation.



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**Comments**

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No change.  
Pending implementation.

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Sold – settlement due on 16 January 2004.

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Revised Mineral Resource modelling of open pit. Underground resource additions. Additional exploration information in open pit and underground.  
New modelling techniques, additional drilling and new underground design.

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Mine closed.

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Sold – settlement date still under negotiation.

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Revised Mineral Resource modelling more than compensated for depletion.  
New drilling, geostats parameters and recovery functions.

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Sold 30 June 2003.

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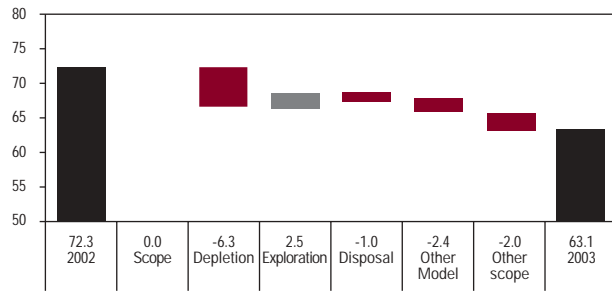
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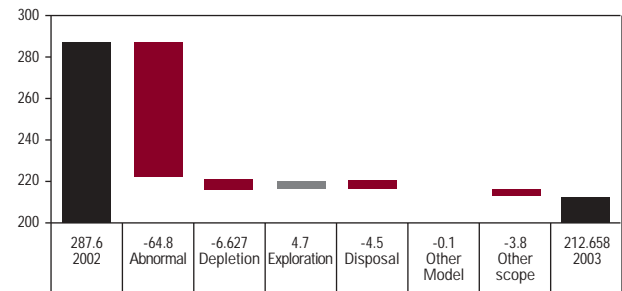
# Year-on-year Mineral Resource and Ore Reserve changes

## Global: 2002 vs 2003 Moz

Ore Reserve changes

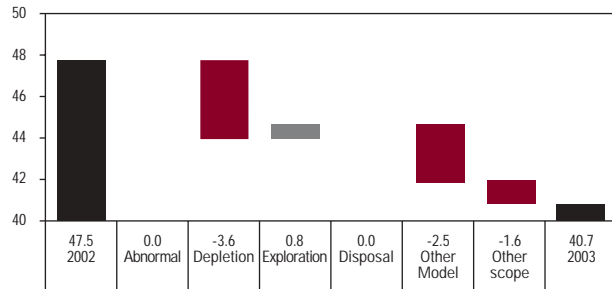


Mineral Resource changes

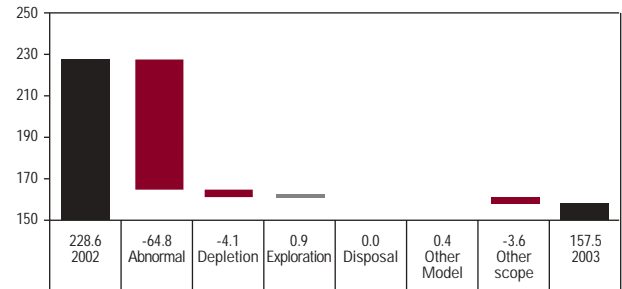


## South Africa: 2002 vs 2003 Moz

Ore Reserves

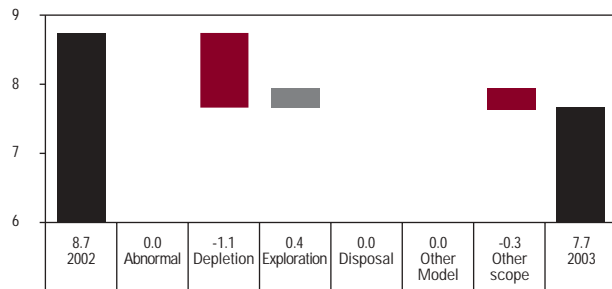


Mineral Resources

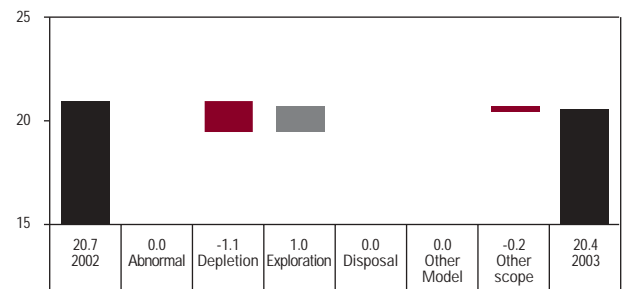


## East and West Africa: 2002 vs 2003 Moz

Ore Reserves

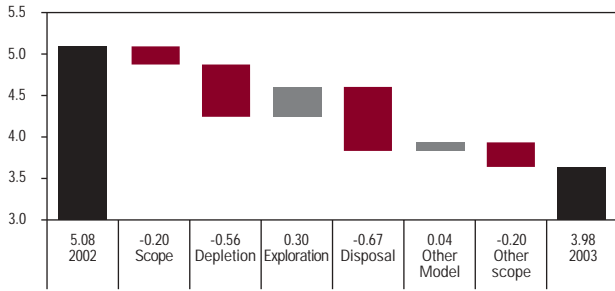


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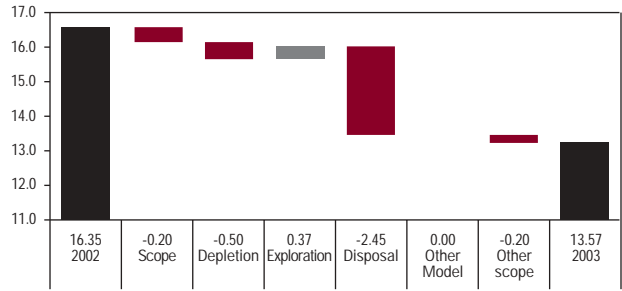


### South America: 2002 vs 2003 Moz

Ore Reserves

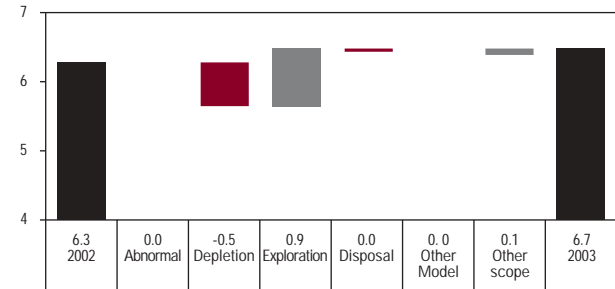


Mineral Resources

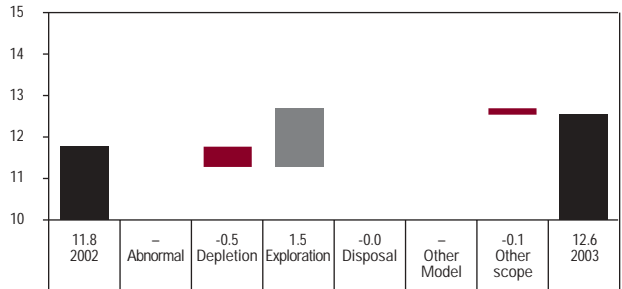


### Australia: 2002 vs 2003 Moz

Ore Reserves

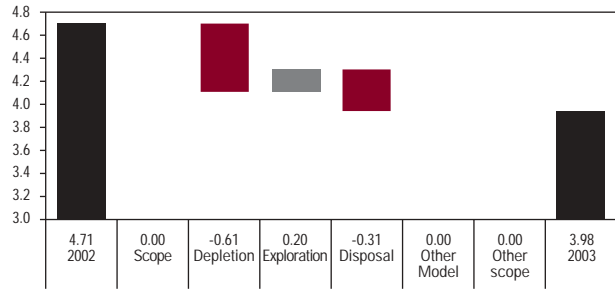


Mineral Resources

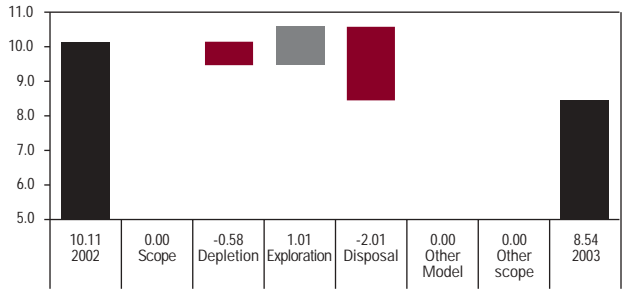


### North America: 2002 vs 2003 Moz

Ore Reserves



Mineral Resources



# Modifying factors as at 31 December 2003

Mine	Gold price used US\$/oz	Cut-off grade g/t Au <sup>(1)</sup>	Stoping Width cm	Dilution* % <sup>(2)</sup>	Mine Call** Factor (MCF) %
<b>South Africa</b>					
Great Noligwa	350	5.60	151.9	37	70
Kopanang	350	9.31	102.0	66	69
Tau Lekoa	350	4.77	151.1	19	86
Moab Khotsoeng	350	4.10	122.0	40	82
Mponeng	350	4.08	130.0	43	97
TauTona	350	11.36	96.8	111	89
Savuka	350	4.61	108.4	44	92
Western Ultra Deep Levels	n/a	n/a	n/a	n/a	n/a
Ergo	350	n/a	n/a	n/a	n/a
Surface (excl Ergo)	350	n/a	n/a	n/a	n/a
<b>East &amp; West Africa</b>					
Geita – Nyankanga	350	0.8 to 1.0	n/a	13	n/a
Geita – Area 3W	350	1.3 to 2.2	n/a	13	n/a
Geita – Chipaka	350	1.0 to 1.3	n/a	16	n/a
Geita – Geita Hill	350	0.9 to 1.1	n/a	13	n/a
Geita – Kukuluma	350	1.1 to 1.9	n/a	9	n/a
Geita – Lone Cone	350	0.9 to 1.0	n/a	18	n/a
Geita – Matandani	350	1.3 to 2.7	n/a	12	n/a
Geita – Ridge 8	350	1.0 to 1.2	n/a	15	n/a
Geita – Roberts	350	1.0 to 1.2	n/a	10	n/a
Geita – Star & Comet	350	1.0 to 1.2	n/a	18	n/a
Morila	350	1.30	n/a	10	95
Navachab	350	0.8 to 0.9	n/a	n/a	100
Sadiola – Main Pit	350	1.0 to 2.0	n/a	n/a	100
Sadiola – Blue Dam	350	1.0 to 2.0	n/a	n/a	100
Sadiola – Tabakoto	350	1.0 to 2.0	n/a	n/a	100
Yatela – Main Pit	350	0.9 to 1.3	n/a	n/a	100
Yatela – Alamoutala	350	1.3 to 1.5	n/a	n/a	100
<b>South America</b>					
Cerro Vanguardia	325	2.40	n/a	n/a	96
Morro Velho – Cuiabá	350	2.8 to 3.8	n/a	n/a	95
Mineracao AngloGold – Engenho d'Água	325	1.00	n/a	9	n/a
Mineracao AngloGold – Córrego Do Sítio	325	2.00	n/a	21	n/a
Mina Serra Grande – Mina III	350	3.6 – 5.4	n/a	5	95
Mina Serra Grande – Mina Nova	350	1.90	n/a	5	95
<b>Australia</b>					
Boddington	234	0.40	n/a	n/a	n/a
Sunrise Dam – surface	350	0.8 to 1.2	n/a	n/a	100
Sunrise Dam – underground	350	3.00	n/a	20 to 25	100
<b>North America</b>					
Cripple Creek & Victor	325	0.28	n/a	n/a	n/a

Notes: (1) Where a range of cut-off grades is shown this indicates variable ore types.

(2) Where no dilution factor is indicated the dilution is inherent in the resource model estimate.

(3) Where a range of plant recoveries is shown this indicates variable ore types.

\* Dilution: The difference between the tonnage broken in stopes and the tonnage milled from underground sources. For example, if every 100 tonnes broken in stopes the tonnes milled amounts to 132 tonnes, the dilution is 32%.

\*\* Mine Call Factor (MCF): The ratio expressed as a percentage, which the specific product accounted for in the recovery, plus residues, bears to the corresponding product called for by the mine's measuring methods.

**Metallurgical  
recovery  
factor %<sup>(3)</sup>**

**Comments**

96.5  
96.9  
96.4  
97.7  
98.2  
97.8  
97.7  
53.2  
74.3

No reserves

92.5 to 95.3  
83.5 to 60.4  
89.2 to 92.0  
85.0 to 85.5  
66.7 to 94.0  
91.4 to 91.5  
47.1 to 81.4  
95  
95  
95  
92  
87 to 92  
82 to 95  
82 to 95  
82 to 95  
75 to 85  
75 to 85

Assumes N\$105000/kg gold price

Includes some marginal ore

95.8  
92.8  
93  
87  
96.6  
93.2

1m dilution added to vein width

83 to 92  
82  
80 to 85

Based on 2000 feasibility study that assumed a gold price A\$425/oz

63

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

	Category	Spacing m (-x-)	Diamond	Type of drilling		Other
				RC	Blasthole	
South African Mines	Measured	5 x 5				X
	Indicated	> 40 x 40		X		
	Inferred	> 800 x 800		X		
	Grade/Ore Control	5 x 5				X
Geita	Measured	40 x 20	X	X		
	Indicated	40 x 40	X	X		
	Inferred	80 x 80	X	X		
	Grade/Ore Control	10 x 5		X		
Morila	Measured	20 x 20	X	X		
	Indicated	40 x 40	X	X		
	Inferred	> 40 x 40	X	X		
	Grade/Ore Control	10 x 10	X	X		
Navachab	Measured	20 x 20		X	X	
	Indicated	30 x 30	X	X		
	Inferred	50 x 50	X	X		
	Grade/Ore Control	3.2 x 3.7			X	
Sadiola North Pit (and outer anomalies)	Measured					
	Indicated	25 x 25		X		
	Inferred	>25 x 25		X		
	Grade/Ore Control	5 x 10		X		
Sadiola South Pit	Measured	25 x 25		X		
	Indicated	25 x 50	X	X		
	Inferred	>25 x 50	X	X		
	Grade/Ore Control	5 x 10		X		
Yatela	Measured	5 x 10		X		
	Indicated	25 x 25	X	X		
	Inferred	50 x 50	X	X		
	Grade/Ore Control	5 x 10		X		
Alamoutala	Measured	10 x 10		X		
	Indicated	25 x 25		X		
	Inferred	>25 x 25		X		
	Grade/Ore Control	5 x 10		X		

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**Comments**

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Based on optimised kriging to a minimum regression slope of 0.6  
Based on a > 20% estimated error  
Based on a > 80% estimated error  
Chipped channel samples

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Evaluated using a combination of diamond drilling and RC boreholes  
Evaluated using a combination of diamond drilling and RC boreholes  
Evaluated using a combination of diamond drilling and RC boreholes  
Evaluated using a combination of diamond drilling and RC boreholes

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From grade control

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From advanced grade control

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# Details of average drillhole spacing and type in relation to Mineral Resource classification (continued)

	Category	Spacing m (-x-)	Diamond	Type of drilling		Other
				RC	Blasthole	
MMV (including Cuiabá)	Measured	20 X 60	X			
	Indicated	20 X 60	X			
	Inferred	>20 X 60				
	Grade/Ore Control	5 x 5				X
Serra Grande	Measured	30 x 15	X			
	Indicated	55 X 100	X			
	Inferred	>55 X 100	X			
	Grade/Ore Control	5 x 5				X
Cerro Vanguardia	Measured	< 40 X 40	X	X		X
	Indicated	40 x 80	X	X		X
	Inferred	> to 40 x 80	X	X		X
	Grade/Ore Control	10 x 5		X		X
Sunrise Dam	Measured	25 x 25	X	X		
	Indicated	40 x 40	X	X		
	Inferred	50 x 100	X	X		
	Grade/Ore Control	7 x 5		X	(X)	
Boddington	Measured	25 x 25	X	X		
	Indicated	50 x 50	X	X		
	Inferred	100 x 200	X	X		
	Grade/Ore Control					
Tanami	Measured	20 x 20	X	X		
	Indicated	40 x 40	X	X		
	Inferred	> 40 x 40	X	X		
	Grade/Ore Control					
Cripple Creek & Victor	Measured	50 x 50	X	X		
	Indicated	50 x 50	X	X		
	Inferred	>50 x 50	X	X		
	Grade/Ore Control	6 x 5				X



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**Comments**


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Drilling spacing for Cuiabá Expansion Project and above level 11 since 2002  
 Drilling spacing for Cuiabá Expansion Project and above level 11 since 2002

Channel sampling

Disseminated ore

Channel sampling

With in-fill drilling  
 Grid drilling is less than 20 by 40 metres

Resources classified using a combination of drillhole spacing, number of samples in estimate, average distance to samples and confidence in geological interpretation/estimate.

(Blastholes were historically used for grade control in Sunrise Pit by Placer.)

Resources classified using a combination of drillhole spacing, number of samples in estimate, average distance to samples

Not Applicable

Resources classified using a combination of drillhole spacing, number of samples in estimate, average distance to samples

Not Applicable

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# Ore Reserves by project

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
<b>South Africa</b>				
TauTona – CL Shaft Pillar (Level1)	Proved Probable	– 912,760	– 17.87	– 16,307,240
	<b>Total</b>	<b>912,760</b>	<b>17.87</b>	<b>16,307,240</b>
TauTona – CL East of Bank (Level1)	Proved Probable	– 1,448,701	– 11.25	– 16,294,305
	<b>Total</b>	<b>1,448,701</b>	<b>11.25</b>	<b>16,294,305</b>
TauTona – CL Below 120 Project	Proved Probable	– 4,397,514	– 10.61	– 46,659,700
	<b>Total</b>	<b>4,397,514</b>	<b>10.61</b>	<b>46,659,700</b>
TauTona – VCR Shaft Pillar	Proved Probable	– 562,703	– 12.49	– 7,026,641
	<b>Total</b>	<b>562,703</b>	<b>12.49</b>	<b>7,026,641</b>
TauTona – VCR Area "A"	Proved Probable	– 707,937	– 5.59	– 3,954,664
	<b>Total</b>	<b>707,937</b>	<b>5.59</b>	<b>3,954,664</b>
Mponeng – Deepening Project	Proved Probable	798,907 14,011,291	9.64 8.88	7,697,484 124,422,641
	<b>Total</b>	<b>14,810,198</b>	<b>8.92</b>	<b>132,120,125</b>
Mponeng – VCR 120 to 125 plus tailings	Proved Probable	– 7,303,696	– 9.20	– 67,174,284
	<b>Total</b>	<b>7,303,696</b>	<b>9.20</b>	<b>67,174,284</b>
Moab Khotsonq – Upper Mine	Proved Probable	28,659 7,643,822	16.00 16.65	458,418 127,248,266
	<b>Total</b>	<b>7,672,481</b>	<b>16.64</b>	<b>127,706,684</b>
Moab Khotsonq – Extension	Proved Probable	– 7,960,601	– 13.50	– 107,431,944
	<b>Total</b>	<b>7,960,601</b>	<b>13.50</b>	<b>107,431,944</b>
Moab Khotsonq – Lower mine	Proved Probable	– 3,232,028	– 8.61	– 27,837,277
	<b>Total</b>	<b>3,232,028</b>	<b>8.61</b>	<b>27,837,277</b>
Tau Lekoa – S5 Area	Proved Probable	– 1,822,904	– 3.92	– 7,139,744
	<b>Total</b>	<b>1,822,904</b>	<b>3.92</b>	<b>7,139,744</b>

# Ore Reserves by project (continued)

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
<b>East and West Africa</b>				
Geita – Nyankanga Pit	Proved	6,672,533	4.89	32,628,686
	Probable	23,732,701	4.82	114,296,688
	<b>Total</b>	<b>30,405,234</b>	<b>4.83</b>	<b>146,925,374</b>
Geita – Kukuluma Pit	Proved	2,683,532	3.53	9,472,868
	Probable	187,659	3.53	662,436
	<b>Total</b>	<b>2,871,191</b>	<b>3.53</b>	<b>10,135,304</b>
Geita – Lone Cone Pits	Proved	501,326	3.34	1,674,429
	Probable	1,128,183	2.83	3,192,758
	<b>Total</b>	<b>1,629,509</b>	<b>2.99</b>	<b>4,867,187</b>
Geita – Geita Hill Pits	Proved	14,410,028	2.57	37,033,772
	Probable	6,136,496	3.62	22,221,715
	<b>Total</b>	<b>20,546,524</b>	<b>2.88</b>	<b>59,255,487</b>
Geita – Matandani Pit	Proved	3,021,483	3.49	10,544,976
	Probable	13,437	1.72	23,103
	<b>Total</b>	<b>3,034,920</b>	<b>3.48</b>	<b>10,568,078</b>
Geita – Area 3 West Pit	Proved	–	–	–
	Probable	333,672	2.91	970,986
	<b>Total</b>	<b>333,672</b>	<b>2.91</b>	<b>970,986</b>
Geita – Star and Comet Pits	Proved	–	–	–
	Probable	3,305,358	4.99	16,493,736
	<b>Total</b>	<b>3,305,358</b>	<b>4.99</b>	<b>16,493,736</b>
Geita – Roberts Pit	Proved	–	–	–
	Probable	3,913,561	2.52	9,862,174
	<b>Total</b>	<b>3,913,561</b>	<b>2.52</b>	<b>9,862,174</b>
Geita – Chipaka Pit	Proved	–	–	–
	Probable	2,102,774	2.24	4,707,223
	<b>Total</b>	<b>2,102,774</b>	<b>2.24</b>	<b>4,707,223</b>
Geita – Ridge 8 Pit	Proved	–	–	–
	Probable	1,388,504	2.73	3,790,616
	<b>Total</b>	<b>1,388,504</b>	<b>2.73</b>	<b>3,790,616</b>
Geita – Nyankanga underground	Proved	–	–	–
	Probable	–	–	–
	<b>Total</b>	<b>0</b>	<b>–</b>	<b>0</b>
Navachab – Main Pit	Proved	1,315,376	1.38	1,810,074
	Probable	10,064,950	1.81	18,219,624
	<b>Total</b>	<b>11,380,326</b>	<b>1.76</b>	<b>20,029,698</b>

# Ore Reserves by project (continued)

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
Sadiola – Main Pit	Proved	6,512,860	1.93	12,560,279
	Probable	18,187,571	3.55	64,626,773
	<b>Total</b>	<b>24,700,431</b>	<b>3.12</b>	<b>77,187,052</b>
Sadiola – (FE3)	Proved	–	–	–
	Probable	737,456	3.09	2,276,900
	<b>Total</b>	<b>737,456</b>	<b>3.09</b>	<b>2,276,900</b>
Sadiola – (FE4)	Proved	–	–	–
	Probable	1,459,286	3.47	5,063,900
	<b>Total</b>	<b>1,459,286</b>	<b>3.47</b>	<b>5,063,900</b>
Yatela – Main Pit	Proved	1,946,681	0.99	1,922,319
	Probable	7,085,266	4.00	28,310,817
	<b>Total</b>	<b>9,031,947</b>	<b>3.35</b>	<b>30,233,137</b>
Yatela – Alamoutala Pit	Proved	354,773	1.82	644,133
	Probable	1,303,609	2.97	3,865,700
	<b>Total</b>	<b>1,658,382</b>	<b>2.72</b>	<b>4,509,833</b>
<b>South America</b>				
Morro Velho – Cuiabá	Proved	1,713,047	8.16	13,981,425
	Probable	5,061,540	7.07	35,781,062
	<b>Total</b>	<b>6,774,588</b>	<b>7.35</b>	<b>49,762,487</b>
Morro Velho – Engenho d'Água	Proved	42,543	4.48	190,529
	Probable	–	–	–
	<b>Total</b>	<b>42,543</b>	<b>4.48</b>	<b>190,529</b>
Morro Velho – Córrego Do Sítio	Proved	558,043	7.11	3,967,686
	Probable	101,503	4.28	434,433
	<b>Total</b>	<b>659,546</b>	<b>6.65</b>	<b>4,402,119</b>
<b>Australia</b>				
Sunrise Dam – Open Pit (incl. Stockpile)	Proved	5,377,236	4.16	22,347,255
	Probable	15,349,904	4.05	62,188,614
	<b>Total</b>	<b>20,727,140</b>	<b>4.08</b>	<b>84,535,869</b>
Sunrise Dam – Underground	Proved	–	–	–
	Probable	1,504,000	7.15	10,761,000
	<b>Total</b>	<b>1,504,000</b>	<b>7.15</b>	<b>10,761,000</b>

# Mineral Resources by project

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
<b>South Africa</b>				
Tau Lekoa – Tau Lekoa	Measured	8,419,651	6.38	53,750,466
	Indicated	15,171,367	6.42	97,388,652
	Inferred	11,172,524	5.82	65,045,142
	<b>Total</b>	<b>34,763,542</b>	<b>6.22</b>	<b>216,184,260</b>
Tau Lekoa – Goedgenoeg	Measured	–	–	–
	Indicated	–	–	–
	Inferred	12,847,359	6.10	78,338,300
	<b>Total</b>	<b>12,847,359</b>	<b>6.10</b>	<b>78,338,300</b>
Tau Lekoa – Weltevreden	Measured	498,462	5.28	2,633,565
	Indicated	29,954,456	5.13	153,663,002
	Inferred	–	–	–
	<b>Total</b>	<b>30,452,918</b>	<b>5.13</b>	<b>156,296,567</b>
Moab Khotsong – Upper Mine	Measured	29,909	18.97	567,271
	Indicated	5,796,968	29.72	172,293,872
	Inferred	643,160	37.60	24,180,787
	<b>Total</b>	<b>6,470,037</b>	<b>30.45</b>	<b>197,041,930</b>
Moab Khotsong – Lower Mine	Measured	–	–	–
	Indicated	7,115,426	23.95	170,386,406
	Inferred	858,390	22.89	19,650,467
	<b>Total</b>	<b>7,973,816</b>	<b>23.83</b>	<b>190,036,873</b>
Moab Khotsong – Extension	Measured	–	–	–
	Indicated	2,515,160	16.31	41,023,612
	Inferred	–	–	–
	<b>Total</b>	<b>2,515,160</b>	<b>16.31</b>	<b>41,023,612</b>
Mponeng – Above 120 Level	Measured	4,485,746	15.34	68,795,685
	Indicated	56,676,039	11.60	657,500,420
	Inferred	9,439,494	7.87	74,253,896
	<b>Total</b>	<b>70,601,280</b>	<b>11.34</b>	<b>800,550,001</b>
Ergo	Measured	73,286,620	0.30	22,214,660
	Indicated	–	–	–
	Inferred	–	–	–
	<b>Total</b>	<b>73,286,620</b>	<b>0.30</b>	<b>22,214,660</b>
West Wits Surface – WWGO	Measured	–	–	–
	Indicated	162,539,742	0.25	41,373,126
	Inferred	13,153,049	0.62	8,174,692
	<b>Total</b>	<b>175,692,791</b>	<b>0.28</b>	<b>49,547,818</b>
Vaal River Surface – VRGO	Measured	–	–	–
	Indicated	306,130,490	0.34	102,869,425
	Inferred	101,730,869	0.65	66,369,888
	<b>Total</b>	<b>407,861,359</b>	<b>0.41</b>	<b>169,239,313</b>

# Mineral Resources by project (continued)

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
<b>East and West Africa</b>				
Geita – Kukuluma	Measured	3,909,200	3.15	12,313,980
	Indicated	1,185,800	3.07	3,640,406
	Inferred	93,100	3.04	283,024
	<b>Total</b>	<b>5,188,100</b>	<b>3.13</b>	<b>16,237,410</b>
Geita – Lone Cone	Measured	1,067,600	3.23	3,448,348
	Indicated	2,490,600	2.67	6,649,902
	Inferred	804,300	1.90	1,528,170
	<b>Total</b>	<b>4,362,500</b>	<b>2.67</b>	<b>11,626,420</b>
Geita – Geita Hill	Measured	18,051,000	2.65	47,835,150
	Indicated	16,398,500	3.11	50,999,335
	Inferred	19,177,700	3.01	57,724,877
	<b>Total</b>	<b>53,627,200</b>	<b>2.92</b>	<b>156,559,362</b>
Geita – Matandani	Measured	9,610,400	2.61	25,083,144
	Indicated	2,650,000	2.52	6,678,000
	Inferred	2,370,700	3.27	7,752,189
	<b>Total</b>	<b>14,631,100</b>	<b>2.70</b>	<b>39,513,333</b>
Geita – Area 3 West	Measured	–	–	–
	Indicated	2,973,900	1.94	5,769,366
	Inferred	1,232,500	2.29	2,822,425
	<b>Total</b>	<b>4,206,400</b>	<b>2.04</b>	<b>8,591,791</b>
Geita – Star and Comet	Measured	–	–	–
	Indicated	5,030,900	4.59	23,091,831
	Inferred	1,622,100	3.03	4,914,963
	<b>Total</b>	<b>6,653,000</b>	<b>4.21</b>	<b>28,006,794</b>
Geita – Roberts	Measured	–	–	–
	Indicated	9,932,700	2.09	20,759,343
	Inferred	–	–	–
	<b>Total</b>	<b>9,932,700</b>	<b>2.09</b>	<b>20,759,343</b>
Geita – Chipaka	Measured	–	–	–
	Indicated	5,527,800	1.88	10,392,264
	Inferred	–	–	–
	<b>Total</b>	<b>5,527,800</b>	<b>1.88</b>	<b>10,392,264</b>
Geita – Ridge 8	Measured	–	–	–
	Indicated	6,009,500	2.93	17,607,835
	Inferred	6,285,700	2.72	17,097,104
	<b>Total</b>	<b>12,295,200</b>	<b>2.82</b>	<b>34,704,939</b>

# Mineral Resources by project (continued)

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
Geita – Nyankanga Surface	Measured	7,201,300	5.15	37,086,695
	Indicated	30,611,900	4.85	148,467,715
	Inferred	7,218,900	2.94	21,223,566
	<b>Total</b>	<b>45,032,100</b>	<b>4.59</b>	<b>206,777,976</b>
Geita – Nyankanga Underground	Measured	–	–	–
	Indicated	3,798,200	9.34	35,475,188
	Inferred	1,123,500	6.65	7,471,275
	<b>Total</b>	<b>4,921,700</b>	<b>8.73</b>	<b>42,946,463</b>
Geita – Stockpile	Measured	1,088,754	2.06	2,242,833
	Indicated	–	–	–
	Inferred	–	–	–
	<b>Total</b>	<b>1,088,754</b>	<b>2.06</b>	<b>2,242,833</b>
Navachab – Anomaly 16	Measured	–	–	–
	Indicated	–	–	–
	Inferred	1,706,078	0.94	1,602,519
	<b>Total</b>	<b>1,706,078</b>	<b>0.94</b>	<b>1,602,519</b>
Navachab – Grid A	Measured	–	–	–
	Indicated	82,234	1.45	118,857
	Inferred	1,158,563	1.78	2,062,197
	<b>Total</b>	<b>1,240,797</b>	<b>1.76</b>	<b>2,181,054</b>
Navachab – Main Pit	Measured	981,479	1.37	1,341,175
	Indicated	56,771,820	1.31	74,594,160
	Inferred	57,929,132	1.03	59,466,792
	<b>Total</b>	<b>115,682,431</b>	<b>1.17</b>	<b>135,402,127</b>
Navachab – Stockpile	Measured	7,679,132	0.71	5,489,217
	Indicated	–	–	–
	Inferred	–	–	–
	<b>Total</b>	<b>7,679,132</b>	<b>0.71</b>	<b>5,489,217</b>
Sadiola – FE2	Measured	–	–	–
	Indicated	–	–	–
	Inferred	2,959,099	1.41	4,171,274
	<b>Total</b>	<b>2,959,099</b>	<b>1.41</b>	<b>4,171,274</b>
Sadiola – FE3	Measured	344,202	1.91	658,590
	Indicated	1,694,751	2.01	3,407,809
	Inferred	–	–	–
	<b>Total</b>	<b>2,038,953</b>	<b>1.99</b>	<b>4,066,399</b>

# Mineral Resources by project (continued)

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
Sadiola – FE4	Measured	–	–	–
	Indicated	2,117,650	3.21	6,804,718
	Inferred	65,523	2.92	191,276
	<b>Total</b>	<b>2,183,173</b>	<b>3.20</b>	<b>6,995,994</b>
Sadiola – FN3	Measured	–	–	–
	Indicated	–	–	–
	Inferred	1,406,256	1.09	1,533,958
	<b>Total</b>	<b>1,406,256</b>	<b>1.09</b>	<b>1,533,958</b>
Sadiola – Sekokoto	Measured	–	–	–
	Indicated	–	–	–
	Inferred	1,964,750	1.43	2,800,093
	<b>Total</b>	<b>1,964,750</b>	<b>1.43</b>	<b>2,800,093</b>
Sadiola – Tambali South	Measured	–	–	–
	Indicated	–	–	–
	Inferred	6,073,675	1.30	7,884,246
	<b>Total</b>	<b>6,073,675</b>	<b>1.30</b>	<b>7,884,246</b>
Yatela – Main Pit	Measured	2,691,038	0.95	2,568,066
	Indicated	13,617,192	2.57	35,056,188
	Inferred	3,492,856	0.80	2,792,059
	<b>Total</b>	<b>19,801,087</b>	<b>2.04</b>	<b>40,416,313</b>
Yatela – Alamoutala Pit	Measured	957,708	1.56	1,493,192
	Indicated	1,969,572	2.49	4,902,675
	Inferred	931,991	1.88	1,751,810
	<b>Total</b>	<b>3,859,271</b>	<b>2.11</b>	<b>8,147,677</b>
<b>South America</b>				
Morro Velho – Cuiabá	Measured	2,649,097	8.17	21,639,980
	Indicated	6,355,615	7.74	49,180,172
	Inferred	16,483,314	7.44	122,569,098
	<b>Total</b>	<b>25,488,025</b>	<b>7.59</b>	<b>193,389,251</b>
Morro Velho – Lamego	Measured	–	–	–
	Indicated	766,525	5.39	4,131,570
	Inferred	5,574,821	6.04	33,671,919
	<b>Total</b>	<b>6,341,346</b>	<b>5.96</b>	<b>37,803,489</b>
Morro Velho – Other Resources	Measured	1,433,533	5.32	7,620,528
	Indicated	1,641,541	5.68	9,316,721
	Inferred	2,738,016	6.21	16,990,381
	<b>Total</b>	<b>5,813,090</b>	<b>5.84</b>	<b>33,927,630</b>



# Mineral Resources by project (continued)

Mine/project name	Category	Tonnes	Grade g/t	Contained gold grams
Morro Velho – Engenho d'Água	Measured	14,197	3.76	53,381
	Indicated	489,634	4.17	2,041,774
	Inferred	1,223,978	4.34	5,312,065
	<b>Total</b>	<b>1,727,809</b>	<b>4.29</b>	<b>7,407,219</b>
Morro Velho – Córrego Do Sítio	Measured	720,691	7.70	5,549,321
	Indicated	356,293	9.10	3,242,266
	Inferred	546,172	10.09	5,510,875
	<b>Total</b>	<b>1,623,156</b>	<b>8.81</b>	<b>14,302,462</b>
Cerro Vanguardia – Pits	Measured	8,897,814	8.22	73,110,668
	Indicated	1,643,269	9.18	15,085,209
	Inferred	840,153	9.35	7,855,431
	<b>Total</b>	<b>11,381,236</b>	<b>8.44</b>	<b>96,051,308</b>
Cerro Vanguardia – Heap Leach	Measured	9,375,298	0.90	8,435,569
	Indicated	979,372	0.86	837,852
	Inferred	100,581	0.44	43,983
	Stock pile	6,766,384	1.33	9,028,966
	<b>Total</b>	<b>17,221,635</b>	<b>1.07</b>	<b>18,346,370</b>
<b>Australia</b>				
Sunrise Dam – Open Pit (inc. Stockpiles)	Measured	15,152,773	2.08	31,593,141
	Indicated	21,534,696	3.17	68,264,986
	Inferred	282,465	3.30	932,135
	<b>Total</b>	<b>36,969,934</b>	<b>2.73</b>	<b>100,790,261</b>
Sunrise Dam – Underground	Measured	–	–	–
	Indicated	1,444,305	9.92	14,323,847
	Inferred	5,385,639	6.31	33,979,774
	<b>Total</b>	<b>6,829,944</b>	<b>7.07</b>	<b>48,303,621</b>
Sunrise Dam – North Wall Cutback	Measured	3,329,814	3.19	10,622,107
	Indicated	1,870,985	2.59	4,845,851
	Inferred	6,799	2.65	18,017
	<b>Total</b>	<b>5,207,598</b>	<b>2.97</b>	<b>15,485,975</b>
Sunrise Dam – Golden Delicious	Measured	–	–	–
	Indicated	1,038,000	1.84	1,909,920
	Inferred	2,643,000	1.64	4,334,520
	<b>Total</b>	<b>3,681,000</b>	<b>1.70</b>	<b>6,244,440</b>

# Development sampling results – South Africa region

for the year ended 31 December 2003

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

Mine	Metric						
	Advanced metres	Sampled metres	Channel width cm	Average gold value		Average uranium value	
				g/t	cm. g/t	kg/t	cm.kg/t
Great Noligwa mine							
Vaal Reef	15,766.4	2,222	108.1	21.3	2,302	1.01	108.74
Kopanang mine							
C Reef	667.3						
Vaal Reef	29,026	3,886	12.7	133.39	1,694	5.33	67.69
Moab Khotsoang mine							
Vaal Reef	5,827.3	48	67.9	25.7	1,745	0.71	48.44
Mponeng mine							
Ventersdorp Contact Reef	21,324	1,420	75.5	23.92	1,806	0	0
Savuka mine							
Carbon Leader Reef	6,125.9	374	86.5	21.82	1,887	0.01	0.67
Ventersdorp Contact Reef	2,918.6						
Tau Lekoa mine							
Ventersdorp Contact Reef	16,614.7	2558	93.4	8.72	814	0.12	11.25
TauTona mine							
Carbon Leader Reef	16,676.8	118	17.7	122.71	2,172	1.81	32.09
Ventersdorp Contact Reef	190.6						

Imperial							
Mine	Advanced feet	Sampled feet	Channel width inches	Average gold value		Average uranium value	
				oz/t	ft.oz/t	lb/t	ft.lb/t
Great Noligwa mine							
Vaal Reef	51,727	7,290	42.56	0.62	2.2	2.02	7.16
Kopanang mine							
C Reef	2,189						
Vaal Reef	95,230	12,749	5	3.89	1.62	10.66	4.44
Moab Khotsoang mine							
Vaal Reef	19,118	157	26.73	0.75	1.67	1.42	3.16
Mponeng mine							
Ventersdorp Contact Reef	69,961	4,659	29.72	0.7	1.73	0	0
Savuka mine							
Carbon Leader Reef	20,098	1,227	34.06	0.64	1.82	0.02	0.06
Ventersdorp Contact Reef	9,575						
Tau Lekoa mine							
Ventersdorp Contact Reef	54,510	8,392	36.77	0.25	0.77	0.24	0.74
TauTona mine							
Carbon Leader Reef	54,714	387	6.97	3.58	2.08	3.62	2.1
Ventersdorp Contact Reef	625						

# Competent persons

Competent Persons or “recognised mining professionals”, designated in terms of the JORC Code and responsible for the generation of the Mineral Resources and Ore Reserves on the various mines and ventures, are listed below:

## South Africa

### Great Noligwa

#### *Mineral Resources*

- H Eybers – BSc Hons (Geology), GDE (Mineral Economics), Pr.Sci.Nat., 17 years experience.
- H A Kruger – HND (Mine Surveying), GDE (Mineral Economics), MSCC, PLATO, 25 years experience.
- F J G Putter – BSc Hons (Geology), BCom, Pr.Sci.Nat., 22 years experience.

#### *Ore Reserves*

- P Enslin – HND (Mineral Resource Management), MSCC, PLATO, 21 years experience.
- H A Kruger – HND (Mine Surveying), GDE (Mineral Economics), MSCC, PLATO, 25 years experience.

### Kopanang

#### *Mineral Resources*

- A C De Wet – HND (Mine Surveying), MSCC, 25 years experience.
- A J Johnston – BSc (Geology), GDE (Mineral Economics), MSc (Engineering), Pr.Sci.Nat., 16 years experience.
- A N Johnson – ND (Survey), HND (Mineral Resource Management), PLATO<sup>(2)</sup>, 9 years experience.

#### *Ore Reserves*

- A C De Wet – HND (Mine Surveying), MSCC, 25 years experience.
- J Oberholzer – HND (Mine Surveying), MSCC, 14 years experience.

### Moab Khotsong

#### *Mineral Resources*

- T Adam – BSc Hons (Geology), GDE (Mineral Economics), 27 years experience.
- A C Barnard – HND (Mineral Resource Management), 5 years experience.
- M Biddulph – BSc Hons (Geology), GDE (Mineral Economics), Pr.Sci.Nat., 8 years experience.

#### *Ore Reserves*

- M Biddulph – BSc Hons (Geology), GDE (Mineral Economics), Pr.Sci.Nat., 8 years experience.
- P Venter – HND (Mineral Resource Management), 23 years experience.

### Mponeng

#### *Mineral Resources*

- R Brokken – HND (Mine Surveying), MSCC, PLATO, 22 years experience.
- H Husselman – HND (Mineral Resource Management), PLATO<sup>(2)</sup>, 16 years experience.
- D J Kershaw – BSc Hons (Mining Geology), Pr.Sci.Nat., 24 years experience.

#### *Ore Reserves*

- R Brokken – HND (Mine Surveying), MSCC, PLATO, 22 years experience.

### Savuka

#### *Mineral Resources*

- I Frith – MSc (Geology), Pr.Sci.Nat.<sup>(1)</sup>, 24 years experience.
- R Orton – HND (Mineral Resource Management), MSCC, PLATO<sup>(2)</sup>, 20 years experience.

#### *Ore Reserves*

- M W Armstrong – MSCC, PLATO, 19 years experience.
- W Kinner – HND (Mineral Resource Management), MSCC, PLATO<sup>(2)</sup>, 14 years experience.

### Tau Lekoa

#### *Mineral Resources*

- W Britz – BSc Hons (Geology), Pr.Sci.Nat.<sup>(1)</sup>, 8 years experience.
- R Downing – BSc Hons (Geology), GDE (Mineral Economics), Pr.Sci.Nat.<sup>(1)</sup>, 16 years experience.
- V. Govindsammy – BSc Hons (Statistics), HND (Economic Geology), GDE (Mineral Economics), Pr.Sci.Nat., 11 years experience.

#### *Ore Reserves*

- R Downing – BSc (Hons) (Geology), GDE (Mineral Economics), Pr.Sci.Nat.<sup>(1)</sup>, 16 years experience.
- J Wall – HND (Mine Surveying), PLATO, 13 years experience.

### TauTona

#### *Mineral Resources*

- S Kelly – HND, PLATO<sup>(2)</sup>, 20 years experience.
- P van Zyl – BSc Hons, Pr.Sci.Nat.<sup>(1)</sup>, 6 years experience.

#### *Ore Reserves*

- M W Armstrong – MSCC, PLATO, 19 years experience.
- G Hall – BSc Hons (Geology), GDE (Mineral Economics), Pr.Sci.Nat., 6 years experience.
- C Nel – HND, PLATO<sup>(2)</sup>, 26 years experience.

# Competent persons (continued)

## Western Ultra Deep Levels

### *Mineral Resources*

- R K Lavery – BSc Eng (Mining Geology), GDE Mining, Pr.Sci.Nat., 22 years experience.

### *Ore Reserves*

- Not applicable

## Ergo

### *Mineral Resources*

- R K Lavery – BSc Eng (Mining Geology), GDE Mining, Pr.Sci.Nat., 22 years experience.

### *Ore Reserves*

- J vZ Visser – BSc (Mineral Resource Management), PLATO, 17 years experience.

## Vaal River Surface

### *Mineral Resources*

- R K Lavery – BSc Eng (Mining Geology), GDE Mining, Pr.Sci.Nat., 22 years experience.

### *Ore Reserves*

- J vZ Visser – BSc (Mineral Resource Management), PLATO, 17 years experience.

## West Wits Surface

### *Mineral Resources*

- R K Lavery – BSc Eng (Mining Geology), GDE Mining, Pr.Sci.Nat., 22 years experience.

### *Ore Reserves*

- J vZ Visser – BSc (Mineral Resource Management), PLATO, 17 years experience.

## East & West Africa

### Geita

#### *Mineral Resources*

- R Adofo – MSc (Mineral Exploration), MAusIMM, 10 years experience.

#### *Ore reserves*

- M Hill – BSc (Mining), MAusIMM, 10 years experience.
- D Purdey – BEng (Mining), MAusIMM, 8 years experience.

### Morila

#### *Mineral Resources*

- R Peattie – BSc Hons (Geology), Pr.Sci.Nat., MAusIMM, 12 years experience.
- C Poulin – BSc Hons (Geology), 29 years experience.
- A Sisokko – BSc Hons (Geology), 2 years experience.

- D Stephen – BSc Hons (Geology), 11 years experience.
- S Walton – BSc Hons (Geology), MAusIMM, 12 years experience.

### *Ore Reserves*

- P Christians – BSc (Mining Engineering), 19 years experience.

## Navachab

### *Mineral Resources*

- F P Badenhorst – MSc (Geology), Pr.Sci.Nat., 12 years experience.
- R Peattie – BSc Hons (Geology), Pr.Sci.Nat., MAusIMM, 12 years experience.

### *Ore Reserves*

- D L Worrall – ACSM, MAusIMM, 28 years experience.

## Sadiola

### *Mineral Resources*

- S Bamforth – BSc (Geology), MAusIMM, 7 years experience.
- G Cooper – BSc Hons (Geology), MAusIMM, 19 years experience.
- T Gell – BSc Hons (Geology), MAusIMM, 13 years experience.

### *Ore Reserves*

- E Smuts – BEng (Mining), SAIMM, MAusIMM, 9 years experience.
- M Thiel – BSc (Mining Engineering), AIME, MAusIMM, 28 years experience.
- R vd Westhuizen – MSc (Mining), Pr.Sci.Nat., 7 years experience.

## Yatela

### *Mineral Resources*

- G Cooper – BSc Hons (Geology), MAusIMM, 19 years experience.
- T Gell – BSc Hons (Geology), MAusIMM, 13 years experience.
- S P Robins – BSc Hons (Geology), Pr.Sci.Nat., 7 years experience.

### *Ore Reserves*

- M Thiel – BSc (Mining Engineering), AIME, MAusIMM, 27 years experience.
- R vd Westhuizen – MSc (Mining), Pr.Sci.Nat., 7 years experience.

# Competent persons (continued)

## South America

### Cerro Vanguardia

#### Mineral Resources

- E R López – Geologist, Consejo Superior de Geología, 9 years experience.
- A Medeiros – Geologist, CREA, 5 years experience.
- P Noriega – Geologist, SJBUNP, 4 years experience.
- L L Rivera – Geologist, Consejo Superior de Geología, 11 years experience.
- C A Riveros – Geologist, Consejo Superior de Geología, 18 years experience.
- V Scavuzzo – Geologist, Consejo Superior de Geología, 5 years experience.

#### Ore Reserves

- E R López – Geologist, Consejo Superior de Geología, 9 years experience.
- A Medeiros – Geologist, CREA, 5 years experience.
- P Noriega – Geologist, SJBUNP, 4 years experience.
- L L Rivera – Geologist, Consejo Superior de Geología, 11 years experience.
- M Roldán – Mining Engineer, SJNU, 7 years experience.

## Morro Velho

### Mineral Resources

- E E Biase – Engineering Geologist, CREA, 26 years experience.
- E A de Souza (Jnr) – Geologist, CREA, 17 years experience.
- P de Tarso Ferreira – Geologist, CREA, 19 years experience.
- J Duchini – Engineering Geologist, CREA, 21 years experience.
- C R P Ferreira (Jnr) – Geologist, CREA, 9 years experience.
- J M Lopez – Engineering Geologist, CREA, 16 years experience.
- A H Medeiros Silva – Geologist, CREA, 5 years experience.
- F W Reis Vieira – Geologist, CREA, 19 years experience.
- A H M Silva – Geologist, CREA, 5 years experience.
- C Silva Ferreira – Mining Engineer, CREA, 3 years experience.
- J W Soares – Geologist, CREA, 15 years experience.

#### Ore Reserves

- E A de Souza (Jnr) – Geologist, CREA, 17 years experience.
- P de Tarso Ferreira – Geologist, CREA, 19 years experience.

- J M Lopez – Engineering Geologist, CREA, 16 years experience.
- A H Medeiros Silva – Geologist, CREA, 5 years experience.
- S B R Pinto – Mining Engineer, CREA, 18 years experience.
- C Silva Ferreira – Mining Engineer, CREA, 3 years experience.
- J W Soares – Geologist, CREA, 15 years experience.
- P M Sobrinho – Mining Engineer, CREA, 23 years experience.

## Serra Grande

### Mineral Resources

- E M de Araújo – Geologist / Geostatistician, CREA, 18 years experience.
- A Medeiros – Geologist, CREA, 5 years experience.
- W N Yamaoka – Geologist, CREA, 18 years experience.

#### Ore Reserves

- E M de Araújo – Geologist / Geostatistician, CREA, 18 years experience.
- E S Barbosa – Geologist, CREA, 12 years experience.
- C A Neves – Mining Engineer, CREA, 6 years experience.
- M G Simoni – Mining Engineer, CREA, 6 years experience.
- W N Yamaoka – Geologist, CREA, 18 years experience.

## Australia

### Boddington

#### Mineral Resources

- K Gleeson – BSc (Hons) (Geology), MAusIMM, 12 years experience.

#### Ore Reserves

- S Williams – B Min Tech (Hons), MAusIMM, 14 years experience.

## Coyote

### Mineral Resources

- G Tangney – BSc Hons (Geology), MAusIMM, 11 years experience.

#### Ore Reserves

- S Khosrowshahi – PhD (Geology), MAusIMM, 21 years experience.

# Competent persons (continued)

## Sunrise Dam

### *Mineral Resources*

- R Gaze – BEng Hons (Mining), MSc, MAusIMM, 9 years experience.
- D Gibbs – BSc Hons (Geology), MAusIMM, 16 years experience.
- M Erickson – BSc Hons (Geology), MAusIMM, 18 years experience.
- M Kent – BSc Hons (Geology), MAusIMM, 7 years experience.
- S Khosrowshahi – PhD (Geology), MAusIMM, 21 years experience.

### *Ore Reserves*

- Q de Klerk – HND (Mining), MAusIMM, 15 years experience.
- M Reed – BEng (Mining), MSc, MAusIMM, 25 years experience.

## Tanami

### *Mineral Resources*

- W Makar – Dip Min Sc & Min Tech, MAusIMM, 26 years experience.

## Union Reefs

### *Mineral Resources*

- W Makar – Dip Min Sc & Min Tech, MAusIMM, 26 years experience.

## North America

### Cripple Creek and Victor

#### *Mineral Resources*

- R Largent – BSc (Mining Engineering), SME, 20 years experience.
- G Seibel – MSc (Economic Geology), SME, 22 years experience.
- D Vardiman – BSc (Engineering Geology), 26 years experience.

#### *Ore Reserves*

- R Largent – BSc (Mining Engineering), M.B.A., SME, 20 years experience.
- S Montelius – BSc (Mining Engineering), 15 years experience.
- L Newcomer – BSc (Metallurgy), 26 years experience.
- G Seibel – MSc (Economic Geology), SME, 22 years experience.

<sup>(1)</sup> Pr.Sci.Nat. application being processed

<sup>(2)</sup> PLATO application being processed