HARMONY GOLD MINING CO LTD Form 20-F October 29, 2008

As filed with the Securities and Exchange Commission on October 29, 2008

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 FORM 20-F

(Mark One)

o REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended June 30, 2008

OR

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

o SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

to

For the transition period from

Commission file number: 001 31545

#### HARMONY GOLD MINING COMPANY LIMITED

(Exact name of registrant as specified in its charter)

#### REPUBLIC OF SOUTH AFRICA

(Jurisdiction of incorporation or organization)

## RANDFONTEIN OFFICE PARK, CNR WARD AVENUE AND MAIN REEF ROAD, RANDFONTEIN, SOUTH AFRICA, 1760

(Address of principal executive offices)

Khanya Maluleke, Company Secretary

tel: +27 11 411 2019, khanya.maluleke@harmony.co.za, fax: +27 11 411 2070,

Randfontein Office Park, CNR Ward Avenue and Main Reef Road, Randfontein, South Africa, 1760

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Ordinary shares, with nominal value Rand 50 cents per share\*

(Title of Class)

American Depositary Shares (as evidenced by American Depositary Receipts),

each representing one ordinary share

(Title of Class)

Securities registered or to be registered pursuant to Section 12(g) of the Act:

Ordinary shares, with nominal value Rand 50 cents per share\*

(Title of Class)

American Depositary Shares (as evidenced by American Depositary Receipts), each representing one ordinary share

(Title of Class)

\* Not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission.

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

The number of outstanding shares of each of the issuer s classes of capital or common stock as of the close of the last full fiscal year covered by this Annual Report was:

403,253,756 ordinary shares, with nominal value of Rand 50 cents per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

YES b NO o

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

YES o NO b

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days:

YES b NO o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer b Accelerated filer o Non-accelerated filer o Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP o International financial Report Standards as

Other o

issued

by the International Accounting Standards

Board b

If Other has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow:

Item 17 o Item 18 b

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

YES o NO b

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

YES b NO o

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#### USE OF TERMS AND CONVENTIONS IN THIS ANNUAL REPORT

Harmony Gold Mining Company Limited is a corporation organized under the laws of the Republic of South Africa. As used in this Annual Report on Form 20-F, or this annual report, unless the context otherwise requires, the term **Harmony** refers to Harmony Gold Mining Company Limited; the term **South Africa** refers to the Republic of South Africa; the terms **we**, **us** and **our** refer to Harmony and, as applicable, its direct and indirect subsidiaries as a **Group**; the terms **South African government** and **Government** refer to the government of South Africa and, where the context requires, include the South African state.

In this annual report, references to  $\mathbf{R}$ ,  $\mathbf{Rand}$  and  $\mathbf{c}$ , cents are to the South African Rand, the lawful currency of South Africa,  $\mathbf{A}$ \$ refers to Australian dollars,  $\mathbf{Kina}$  or  $\mathbf{K}$  refers to Papua New Guinean Kina and references to \$ ,  $\mathbf{U}$  and  $\mathbf{U.S.}$  dollars are to United States dollars.

This annual report contains information concerning our gold reserves. While this annual report has been prepared in accordance with the regulations contained in Securities and Exchange Commission Guide 7, it is based on assumptions which may prove to be incorrect. See *Item 3. Key Information Risk Factors Harmony s gold reserve figures are estimated based on a number of assumptions, including assumptions as to mining and recovery factors, future cash costs or production and the price of gold and may yield less gold under actual production conditions than currently estimated.* 

This annual report contains descriptions of gold mining and the gold mining industry, including descriptions of geological formations and mining processes. We have explained some of these terms in the Glossary of Mining Terms included at the end of this annual report. This glossary may assist you in understanding these terms.

#### PRESENTATION OF FINANCIAL INFORMATION

We are a South African company and the majority of our operations are located in our home country. Accordingly, our books of account are maintained in South African Rand and our annual and interim financial statements are prepared in accordance with International Financial Reporting Standards ( IFRS ) as issued by the International Accounting Standards Board ( IASB ). Prior to fiscal year ended June 30, 2008, our annual financial statements (translated into U.S. dollars) were prepared and filed with the U.S. Securities and Exchange Commission ( SEC ) in accordance with generally accepted accounting principles in the United States ( U.S. GAAP ). On December 21, 2007, the SEC adopted rules allowing foreign private issuers that file Annual Reports on Form 20-F to file financial statements with the SEC in accordance with IFRS as issued by the IASB without reconciliation to U.S. GAAP. As per these new rules, we changed our basis of presentation and included in this annual report our consolidated financial statements prepared in accordance with IFRS as issued by the IASB, translated into U.S. dollars. All financial information, except as otherwise noted, are stated in accordance with IFRS as issued by the IASB.

In this annual report, we also present total cash costs and total cash costs per ounce , which have been determined using industry standards promulgated by the Gold Institute and are non-GAAP measures. The Gold Institute was a non-profit international industry association of miners, refiners, bullion suppliers and manufacturers of gold products that ceased operation in 2002, which developed a uniform format for reporting production costs on a per ounce basis. The Gold Institute has now been incorporated into the National Mining Association. The guidance was first adopted in 1996 and subsequently revised in November 1999. An investor should not consider these items in isolation or as alternatives to production costs, cost of sales or any other measure of financial performance presented in accordance with IFRS as issued by the IASB. While the Gold Institute has provided definitions for the calculation of total cash costs, the calculation of total cash costs and total cash costs per ounce may vary significantly among gold mining companies and, by themselves, do not necessarily provide a basis for comparison with other gold mining companies. For further information, see *Item 5*. *Operating and Financial Review and Prospects Costs Reconciliation of Non-GAAP Measures* 

We have included the U.S. dollar equivalent amounts of certain information and transactions in Rand, Kina and A\$. Unless otherwise stated, we have translated (i) balance sheet items at the noon buying rate of the Federal Reserve Bank of New York on the last business day of the period (R7.80 per U.S.\$1.00 as at June 30, 2008 and R7.04 per U.S.\$1.00 as at June 30, 2007), (ii) acquisitions, disposals and specific items included within equity at the rate prevailing at the date the transaction was entered into and (iii) income statement items at the average rate for the year (R7.26 per U.S.\$1.00 for fiscal 2008, R7.20 per U.S.\$1.00 for fiscal 2007, and R6.36 per U.S.\$1.00 for fiscal 2006).

Capital expenditures for fiscal 2009 have been translated at the rates used for balance sheet items. By including these U.S. dollar equivalents in this annual report, we are not representing that the Rand, Kina and A\$ amounts actually represent the U.S. dollar amounts, as the case may be, or that these amounts could be converted at the rates indicated.

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#### FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 with respect to our financial condition, results of operations, business strategies, operating efficiencies, competitive positions, growth opportunities for existing services, plans and objectives of management, markets for stock and other matters. In particular, among other statements, certain statements in *Item 4*. *Information on the Company, Item 5. Operating and Financial Review and Prospects* and *Item 11. Quantitative and Qualitative Disclosures About Market Risk* are forward-looking in nature. Statements in this annual report that are not historical facts are forward-looking statements for the purpose of the safe harbor provided by Section 21E of the Securities Exchange Act of 1934, as amended (the **Exchange Act**), and Section 27A of the Securities Act of 1933, as amended.

These forward-looking statements, including, among others, those relating to our future business prospects, revenues and income, wherever they may occur in this annual report and the exhibits to this annual report, are necessarily estimates reflecting the best judgment of our senior management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. As a consequence, these forward-looking statements should be considered in light of various important factors, including those set forth in this annual report. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation: overall economic and business conditions in South Africa and elsewhere;

the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions;

fluctuations in the market price of gold;

the occurrence of hazards associated with underground and surface gold mining;

the occurrence of labor disruptions;

availability, terms and deployment of capital;

changes in government regulation, particularly mining rights and environmental regulation;

fluctuations in exchange rates;

currency devaluations/appreciations and other macroeconomic monetary policies; and

socio-economic instability in South Africa and other countries in which we operate.

We undertake no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this annual report or to reflect the occurrence of unanticipated events.

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#### **PART I**

## Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

#### Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

## Item 3. KEY INFORMATION SELECTED FINANCIAL DATA

The selected consolidated financial data below should be read in conjunction with, and are qualified in their entirety by reference to, our consolidated financial statements and the notes thereto and with Item 5. Operating and Financial Review and Prospects, both included elsewhere in this annual report. Historical results are not necessarily indicative of results to be expected for any future period.

#### SELECTED HISTORICAL CONSOLIDATED FINANCIAL DATA

We are a South African company and the majority of our operations are located in our home country. Accordingly, our books of account are maintained in South African Rand and our annual and interim financial statements are prepared in accordance with IFRS as issued by the IASB. Prior to fiscal year ended June 30, 2008, our annual financial statements (translated into U.S. dollars) were prepared and filed with the SEC in accordance with U.S. GAAP. On December 21, 2007, the SEC, adopted rules allowing foreign private issuers that file Annual Reports on Form 20-F to file financial statements with the SEC in accordance with IFRS as issued by the IASB without reconciliation to U.S. GAAP. As per these new rules, we changed our basis of presentation and have included in this annual report our consolidated financial statements prepared in accordance with IFRS as issued by the IASB, translated into U.S. dollars.

The selected historical consolidated financial data for the last five fiscal years are, unless otherwise noted, stated in accordance with IFRS as issued by the IASB, and has been extracted from the more detailed information and financial statements prepared in accordance with IFRS as issued by the IASB, including our audited consolidated financial statements as of June 30, 2008 and 2007 and for each of the years in the three years ended June 30, 2008 and the related notes, which appear elsewhere in this annual report. The historical consolidated financial data at June 30, 2006, 2005 and 2004, and for each of the years in the two years ended June 30, 2005, has been extracted from our audited consolidated financial statements not included in this annual report as adjusted for discontinued operations and the accounting changes described below.

During fiscal 2008, we early adopted IAS 23 (Revised) Borrowing Costs. In accordance with the Revised Standard's transitional provisions, we designated July 1, 2000 (the earliest commencement date of current qualifying projects) as the effective date and applied the requirements of the Revised Standard to all qualifying projects for which the commencement date of capitalization was on or after that date.

During fiscal 2008, we classified the assets and liabilities of the Cooke operation as held for sale and also classified the results of this operation as discontinued operations for all periods presented below in the selected historical financial data. Discontinued operations also include the results of the Orkney and Australian operations that were classified as held for sale and discontinued operations during fiscal 2007. These reclassifications were done in terms of IFRS 5 Non-Current Assets held for sale and Discontinued Operations. See note 14 of the consolidated financial statements and *Item 4*. *Information of the Company Business International Operations*, *Information of the Company Business Orkney Operations* and *Item 4*. *Information of the Company Business Cooke Operations*.

	Fiscal year ended June 30,				
	2008	2007	2006	2005	2004
	(\$ in millions, except per share				
	amounts)				
Income Statement Data					
Revenue	1,269	1,116	937	953	955
Operating profit/(loss)	73	154	(104)	(322)	(73)
Loss from associates	(11)	(3)	(17)		

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(Loss)/profit from continuing					
operations before taxation	(39)	156	(91)	(517)	(3)
Taxation	(65)	(39)	(22)	87	1
(Loss)/profit from continuing					
operations	(104)	117	(113)	(430)	(2)
Profit/(loss) from discontinued					
operations	74	(66)	22	(70)	(35)
Net (loss)/profit	(30)	51	(91)	(500)	(37)
	5				

Pacia (locs)/agraings par	2008	2007	-	r ended June ( 2006 ept per share	2005	2004
Basic (loss)/earnings per share from continuing operations (\$) Diluted (loss)/earnings	(0.26)	0.29		(0.29)	(1.19)	(0.01)
per share from continuing operations (\$) Basic (loss)/earnings per	(0.26)	0.29		(0.29)	(1.19)	(0.01)
share (\$) Diluted (loss)/earnings	(0.08)	0.12		(0.23)	(1.38)	(0.15)
per share (\$) Weighted average	(0.08)	0.12		(0.23)	(1.38)	(0.15)
number of shares used in the computation of basic (loss)/earnings per share Weighted average number of shares used in	400,750,167	397,910,797	393	3,727,012	361,816,512	253,558,000
the computation of diluted (loss)/earnings per share Dividends per share	402,894,248	402,382,011	393	3,727,012	361,817,512 0.05	254,888,334 0.10
Other Financial Data Cash cost per ounce of gold from continuing operations (\$/oz) (1)	591	479		440	383	339
Total cash cost per ounce of gold (\$/oz) (1)	589	486		436	379	333
		2008	2007	June 30 2006 (\$ in millio	2005	2004
<b>Balance Sheet Data</b>				<b>、</b>	,	
Assets Property, plant and equipm Non-current assets classifie		3,531	3,484	3,263	3,385	3,731
for sale		197	182	1 422	1 422	1.056
Other assets		982 4.710	1,494	1,432	1,433	1,256
Total assets		4,710	5,160	4,695	4,818	4,987
Equity and liabilities						
Total equity		3,172	3,366	3,249	3,489	3,464
Borrowings (current and no	on-current)	525	653	500	563	461
Other liabilities		1,013	1,141	946	766	1,062
Total equity and liabilities		4,710	5,160	4,695	4,818	4,987

Total cash costs and total cash costs per ounce are non-GAAP measures. We have calculated cash costs per ounce by dividing total cash costs, as determined using the guidance provided by the Gold Institute, by gold ounces sold for all periods presented. The Gold Institute was a non-profit industry association comprised of leading gold producers, refiners, bullion suppliers and manufacturers. This institute has now been incorporated into the National Mining Association. The guidance was first issued in 1996 and was revised in November 1999. Total cash costs, as defined in the guidance provided by the Gold Institute, include mine production costs, transport and refinery costs, applicable general and administrative

costs, costs

associated with movements in production inventories and ore stockpiles, ongoing environmental rehabilitation costs as well as transfers to and from deferred stripping and costs associated with royalties.

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Ongoing

employee

termination

costs are

included,

however,

employee

termination

costs associated

with major

restructuring

and shaft

closures are

excluded. Total

cash costs have

been calculated

on a consistent

basis for all

periods

presented.

Changes in cash

costs per ounce

are affected by

operational

performance, as

well as changes

in the currency

exchange rate

between the

Rand and the

U.S. dollar.

Because total

cash costs and

total cash costs

per ounce are

non-GAAP

measures, they

should therefore

not be

considered by

investors in

isolation or as

an alternative to

production

costs, cost of

sales, or any

other measure

of financial

performance

calculated in accordance with IFRS as issued by the IASB. While the Gold Institute has provided a definition for the calculation of total cash costs and total cash costs per ounce, the calculation of cash costs per ounce may vary from company to company and may not be comparable to other similarly titled measures of other companies. However, we believe that cash costs per ounce is a useful indicator to investors and management of a mining company s performance as it provides (1) an indication of the cash generating capacities of the mining operations, (2) the trends in cash costs as the company s operations mature, (3) a measure of a company s

performance, by comparison of cash costs per

ounce to the spot price of gold and (4) an internal benchmark of performance to allow for comparison against other companies. For further information, see Item 5. Operating and Financial Review and Prospects Costs Reconciliation of non-GAAP measures .

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#### **EXCHANGE RATES**

Unless otherwise stated, balance sheet item amounts are translated from Rand to U.S. dollars at the exchange rate prevailing on the last business day of the period (R7.80 per U.S.\$1.00 as at June 30, 2008), except for acquisitions, disposals and specific items included within equity that are converted at the exchange rate prevailing on the date the transaction was entered into, and income statement item amounts that are translated from Rand to U.S. dollars at the average exchange rate for the period (R7.26 per U.S.\$1.00 for fiscal 2008).

As of October 21, 2008, the noon buying rate of the Federal Reserve Bank of New York per U.S.\$1.00 was R10.67.

The following table sets forth, for the past five fiscal years, the average and period end noon buying rates in New York City for cable transfers in Rand and, for the past six months, the high and low noon buying rates in New York City for cable transfers in Rand, in each case, as certified for customs purposes by the Federal Reserve Bank of New York for Rand expressed in Rand per U.S.\$1.00.

#### Fiscal Year Ended

		Period
June 30,	Average <sup>(1)</sup>	End
2004	6.89	6.23
2005	6.18	6.67
2006	6.36	7.17
2007	7.20	7.04
2008	7.26	7.80
Month of	High	Low
May 2008	7.76	7.47
June 2008	8.12	7.70
July 2008	7.92	7.31
August 2008	7.90	7.24
September 2008	8.28	7.77
October 2008 (through October 21, 2008)	10.67	8.27

the noon buying rates provided by the Federal Reserve Bank of

New York on

The average of

the last day of

each full month

during the

relevant period.

Fluctuations in the exchange rate between Rand and the U.S. dollar will affect the dollar equivalent of the price of ordinary shares on the Johannesburg Stock Exchange, which may affect the market price of the ADSs on the New York Stock Exchange. These fluctuations will also affect the dollar amounts received by owners of ADSs on the conversion of any dividends paid in Rand on ordinary shares.

## **CAPITALIZATION AND INDEBTEDNESS**

Not applicable.

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## REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

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#### RISK FACTORS

In addition to the other information included in this annual report and the exhibits, you should also carefully consider the following factors related to our ordinary shares and ADSs. There may be additional risks that we do not currently know of or that we currently deem immaterial based on information currently available to us. Any of these risks could have a materially adverse effect on our business, financial condition or results of operations, leading to a decline in the trading price of our ordinary shares or our ADSs. The risks described below may, in retrospect, turn out to be incomplete and therefore may not be the only risks to which we are exposed. Additional risks and uncertainties not presently known to us or that we now believe are immaterial, could also adversely affect our businesses, results of operations or financial condition. The order of presentation of the risk factors below does not indicate the likelihood of their occurrence or the magnitude or the significance of the individual risks. The risks described below could occur individually or cumulatively and intensify in case of a cumulative occurrence.

## Risks Relating to Our Business and the Gold Mining Industry

The profitability of our operations, and the cash flows generated by those operations, are affected by changes in the Rand price of gold, such that a fall in the price of gold below our cash cost of production for any sustained period may lead us to experience losses and to curtail or suspend certain operations.

Substantially all of our revenues come from the sale of gold. Historically, the market price for gold has fluctuated widely and has been affected by numerous factors over which we have no control, including:

the demand for gold for industrial uses and for use in jewelry;

international or regional political and economic trends;

the strength or weakness of the U.S. dollar (the currency in which gold prices generally are quoted) and of other currencies;

financial market expectations regarding the rate of inflation;

interest rates;

speculative activities;

actual or expected purchases and sales of gold bullion held by central banks or other large gold bullion holders or dealers;

forward sales by other gold producers; and

the production and cost levels for gold in major gold-producing nations, such as South Africa, China, the United States and Australia.

In addition, the current demand for and supply of gold affects the price of gold, but not necessarily in the same manner as current demand and supply affect the prices of other commodities. Historically, gold has retained its value in relative terms against basic goods in times of inflation and monetary crisis. As a result, central banks, financial institutions and individuals hold large amounts of gold as a store of value and production in any given year constitutes a very small portion of the total potential supply of gold. Since the potential supply of gold is large relative to mine production in any given year, normal variations in current production will not necessarily have a significant effect on the supply of gold or its price.

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The volatility of gold prices is illustrated in the following table, which shows the annual high, low and average of the afternoon London Bullion Market fixing price of gold in U.S. dollars for the past ten calendar years:

		Price per	
	ounce		
	High	Low	Average
Calendar Year	(\$)	(\$)	(\$)
1998	313	273	294
1999	326	253	279
2000	313	264	282
2001	293	256	271
2002	332	278	309
2003	412	322	361
2004	427	343	389
2005	476	411	434
2006	725	525	604
2007	841	608	695
2008 (through October 21, 2008)	1,011	741	775

On October 21, 2008, the afternoon fixing price of gold on the London Bullion Market was U.S.\$772.00 per ounce. While the aggregate effect of these factors is impossible for us to predict, if gold prices should fall below our cash cost of production and remain at such levels for any sustained period, we may experience losses and may be forced to curtail or suspend some or all of our operations. In addition, we would also have to assess the economic impact of low gold prices on our ability to recover any losses we may incur during that period and on our ability to maintain adequate reserves. Our cash cost per ounce of gold sold from continuing operations was U.S.\$591 in fiscal 2008, U.S.\$479 in fiscal 2007 and U.S.\$440 in fiscal 2006.

As the majority of our production costs are incurred in Rand and other non-U.S. currencies, and gold is sold in U.S. dollars, our financial condition could be materially harmed by an appreciation in the value of the Rand and other non-U.S. currencies against the U.S. dollar.

Gold is sold throughout the world in U.S. dollars, but most of our operating costs are incurred in Rand and other non-U.S. currencies. As a result, any significant and sustained appreciation of the South African Rand or other non-U.S. currencies against the dollar will serve materially to reduce our revenues and overall net income. Estimations of our gold reserves are based on a number of assumptions, including assumptions as to mining and recovery factors, future cash costs of production and the price of gold and may yield less gold under actual production conditions than currently estimated.

The ore reserve estimates contained in this annual report are estimates of the mill delivered quantity and grade of gold in our deposits and stockpiles. They represent the amount of gold which we believe can be mined, processed and sold at prices sufficient to recover our estimated future cash costs of production, remaining investment and anticipated additional capital expenditures. Our ore reserves are estimated based upon a number of factors, which have been stated in accordance with SEC Industry Guide 7. Our ore reserve estimates are calculated based on estimates of:

future cash costs (which in some cases are assumed to decrease significantly);

future gold prices; and

future currency exchange rates.

These factors, which are beyond our control, significantly impact these ore reserve estimates. As a result, the reserve estimates contained in this annual report should not be interpreted as assurances of the economic life of our gold and other precious metal deposits or the future profitability of operations.

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Since these ore reserves are estimates based on assumptions related to the factors detailed above, should there be changes to these, we may in the future need to revise these estimates. In particular, if our cash operating and production costs increase or do not decrease as assumed (whether in dollar, Rand, or other non-U.S. currencies terms, or in relative terms due to appreciation of the Rand and other non-U.S. currencies against the U.S. dollar) or the gold price decreases, the recovery of a portion of our ore reserves may become uneconomical. This will, in turn, will lead us to reduce our estimated reserves.

In order to maintain gold production beyond the expected lives of our existing mines or to increase production materially above projected levels, we will need to access additional reserves through exploration or discovery.

Our operations have limited proven and probable reserves and exploration and discovery is necessary to maintain current gold production levels at these operations. Exploration for gold and other precious metals is speculative in nature, is frequently unsuccessful and involves many risks, including those related to:

locating orebodies;

identifying the metallurgical properties of orebodies;

estimating the economic feasibility of mining orebodies;

developing appropriate metallurgical processes;

obtaining necessary governmental permits; and

constructing mining and processing facilities at any site chosen for mining.

Our exploration efforts might not result in the discovery of mineralization, and any mineralization discovered might not result in an increase in our proven and probable reserves. To access additional reserves, we will need to successfully complete development projects, including extensions to existing mines and, possibly, that of new mines. Development projects would also be necessary to access any new mineralization discovered through our exploration activities around the world. We typically use feasibility studies to determine whether or not to undertake significant development projects. Feasibility studies include estimates of expected or anticipated economic returns, which are based on assumptions about:

future gold and other metal prices;

anticipated tonnage, grades and metallurgical characteristics of ore to be mined and processed;

anticipated recovery rates of gold and other metals from the ore, and

anticipated total costs of the project, including capital expenditure and cash costs.

Actual cash costs of production, production and economic returns may differ significantly from those anticipated by our feasibility studies for new development projects.

It can take a number of years from the initial feasibility study until development is completed and, during that time, the economic feasibility of production may change. In addition, there are a number of uncertainties inherent in the development and construction of an extension to an existing mine or any new mine, including:

the availability and timing of necessary environmental and governmental permits;

the timing and cost of constructing mining and processing facilities, which can be considerable;

the availability and cost of skilled labor, power, water and other materials;

the accessibility of transportation and other infrastructure, particularly in remote locations;

the availability and cost of smelting and refining arrangements; and

the availability of funds to finance construction and development activities.

We currently maintain a range of focused exploration programs, concentrating on areas not too distant from our operational mines, as well as a number of prospective known gold mineralized regions around the world. During fiscal years 2008 and 2007, the bulk of exploration expenditure was allocated to activities in South Africa, Papua New Guinea ( **PNG** ) and Australia. However, there is no assurance that any future development projects will extend the life of our existing mining operations or result in any new commercial mining operations.

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## The costs associated with the pumping of water inflows from closed mines adjacent to our operations could adversely affect our results of operations.

Certain of our mining operations are located adjacent to the mining operations of other mining companies. A mine closure may have an adverse impact on the continued operations at an adjacent mine if appropriate preventative steps are not taken. In particular, this impact can include the ingress of underground water where pumping operations at the closed mine are suspended. Such ingress could result in damage to property, operational disruptions and additional pumping costs, which would adversely affect any one of our adjacent mining operations.

## The supply of electricity and increases in the cost of power may adversely affect our results of operations and our financial condition.

Each of our mining operations is dependent on a sufficient supply of electricity. The electricity supply was interrupted by the South African governmental entity, ESKOM, during fiscal 2008 thereby halting production at certain of our mines. This led to management restructuring operating processes to control and reduce our consumption of electricity at all our operations. Nevertheless, an insufficient supply of electricity may adversely affect our results of operations and financial condition.

As a result of ESKOM s planned capital expansion program to deal with the current power constraints, an increase in rates charged to consumers costs has been approved by the National Energy Regulator South Africa (NERSA). More increases are anticipated in the future, which will also be driven by increases in input costs, primarily coal. These increases will have a negative impact on our results of operations going forward.

## As we currently do not enter into forward sales, commodity, derivatives or hedging arrangements with respect to our future gold production, we are exposed to the impact of any significant decrease in the gold price.

As a general rule, we sell our gold at the prevailing market price. Currently, we generally do not enter into forward sales, commodity, derivative or hedging arrangements to establish a price in advance for the sale of future gold production, although we may do so in the future. As a result, we may realize the benefit of any short-term increase in the gold price, but are not protected against decreases in the gold price, and if the gold price decreases significantly, our revenues may be materially adversely affected.

## We may experience problems in identifying, financing and managing new acquisitions and integrating them with our existing operations.

Acquiring new gold mining operations involves a number of risks including:

our ability to identify appropriate assets for acquisition and/or to negotiate acquisitions on favorable terms;

obtaining the financing necessary to complete future acquisitions;

difficulties in assimilating the operations of the acquired business;

difficulties in maintaining our financial and strategic focus while integrating the acquired business;

problems in implementing uniform standards, controls, procedures and policies;

increasing pressures on existing management to oversee a rapidly expanding company; and

to the extent we acquire mining operations outside South Africa or Australasia, encountering difficulties relating to operating in countries in which we have not previously operated.

Our ability to make successful acquisitions and any difficulties or time delays in achieving successful integration of any of such acquisitions could have a material adverse effect on our business, operating results, financial condition and share price.

## Certain factors may affect our ability to support the carrying value of our property, plant and equipment, goodwill and other assets on our balance sheet.

We review and test the carrying value of our assets on an annual basis when events or changes in circumstances suggest that the carrying amount may not be recoverable.

If there are indications that impairment may have occurred, we prepare estimates of expected future cash flows for each group of assets. These estimates of future cash flows are prepared at the lowest level for which identifiable cash flows are identified as being independent of the cash flows of other mining assets and liabilities. Expected future cash flows are inherently uncertain, and could materially change over time. Such cash flows are significantly affected by reserve and production estimates, together with economic factors such as spot and forward gold prices, discount rates, currency exchange rates, estimates of costs to produce reserves and future capital expenditures.

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As of June 30, 2008, we have substantial amounts of property, plant and equipment, goodwill and other assets on our consolidated balance sheets. We have recorded impairment charges relating to these assets and, if any one or a combination of the uncertainties described above occur, management may be required to recognize further impairment charges, which could adversely affect our financial results and condition.

Given the nature of mining and the type of gold mines we operate, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and pollution.

The business of gold mining by its nature involves significant risks and hazards, including environmental hazards and industrial accidents. In particular, hazards associated with underground mining include:

Rock bursts: seismic events: underground fires; cave-ins or falls of ground; discharges of gases and toxic chemicals; release of radioactive hazards: flooding; pillar mining accidents; and other conditions resulting from drilling, blasting and the removal and processing of material from a deep-level mine. Hazards associated with open cast mining (also known as open-pit mining) include: flooding of the open-pit; collapse of the open-pit walls; accidents associated with the operation of large open-pits and rock transportation equipment; and accidents associated with the preparation and ignition of large-scale open-pit blasting operations. Hazards associated with waste-rock mining include: accidents associated with operating a waste dump and rock transportation; pillar mining; and production disruptions caused by weather.

We are at risk of experiencing any or all of these environmental or other industrial hazards. The occurrence of any of these hazards could delay production, increase cash costs and result in our financial liability.

## The nature of our mining operations presents safety risks.

The environmental and industrial risks identified above also present safety risks for our operations and our employees and can lead to the suspension and potential closure of operations for indeterminate periods. For example, in October 2007, an incident occurred at the Elandsrand operation involving a compressed pipe column which broke off below the shaft surface bank and fell to the bottom of the men-and-material shaft, causing extensive damage to the

shaft steel work and electrical cables. The incident resulted in 3,000 workers being underground for more than 30 hours. Mining operations were temporarily suspended for 42 days to allow for repairs to be undertaken at the shaft. These and other safety risks, even in situations where no injuries occur, can have a material adverse effect on our operations and production.

## Our insurance coverage may prove inadequate to satisfy future claims against us.

We have third-party liability coverage for most potential liabilities, including environmental liabilities. While we believe that our current insurance coverage for the hazards described above is adequate and consistent with industry practice, we may be subject to liability for pollution (excluding sudden and accidental pollution) or other hazards against which we have not insured or cannot insure, including those in respect of past mining

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activities. Further, we maintain and intend to continue to maintain, property and liability insurance consistent with industry practice, but such insurance contains exclusions and limitations on coverage. In addition, there can be no assurance that insurance will continue to be available at economically acceptable premiums. As a result, in the future, our insurance coverage may not cover the extent of claims against us for environmental or industrial accidents or pollution.

## Our operations may be negatively impacted by inflation.

Our operations have been materially affected by inflation in recent years. At June 30, 2008, inflation in South Africa was 11.6%, a high level in recent years and may rise further. In addition, working costs and wages especially, have increased considerably over the past three years resulting in significant cost pressures for the mining industry. Our profits and financial condition could also be affected adversely in the absence of a concurrent devaluation of the Rand and an increase in the price of gold.

## The socio-economic framework in the regions in which we operate may have an adverse effect on our operations and profits.

We have operations in South Africa and PNG. As a result, changes or instability to the economic or political environment in any of these countries or in neighboring countries could affect an investment in us. It is difficult to predict the future political, social and economic direction in these countries, or any other country in which we operate, and the impact government decisions may have on our business.

## Actual and potential shortages of production inputs may have an adverse effect on our operations and profits.

Our results of operations may be affected by the availability and pricing of raw materials and other essential production inputs. The price of raw materials may be substantially affected by changes in global supply and demand, along with weather conditions, governmental controls and other factors. A sustained interruption to the supply of any of these materials would require us to find acceptable substitute suppliers and could require us to pay higher prices for such materials. Any significant increase in the prices of these materials would increase our operating costs and affect production considerations.

## Our financial flexibility could be materially constrained by exchange control regulations as imposed by the South African Reserve Bank (SARB).

In terms of South Africa s exchange control regulations, the export of capital from South Africa is restricted. As a result, our ability to raise and deploy capital outside South Africa is limited. In particular, we are:

generally not permitted to export capital from South Africa, to hold foreign currency or incur indebtedness denominated in foreign currencies without the approval of the South African exchange control authorities;

generally not permitted to acquire an interest in a foreign venture without the approval of the South African exchange control authorities and first having complied with the investment criteria of the South African exchange control authorities;

generally required to repatriate to South Africa profits of foreign operations; and

limited in our ability to utilize profits of one foreign business to finance operations of a different foreign business.

These restrictions could hinder our normal corporate functioning, including our ability to make foreign investments and procure foreign currency denominated financings in the future.

Since 1995, certain exchange controls in South Africa have been relaxed. The extent to which the South African government may further relax such exchange controls cannot be predicted with certainty, although the government has committed itself to a gradual approach to the relaxation of exchange control. Because South Africa has a fully floating exchange rate and a flexible interest rate policy, this could result in a rapid depreciation of the Rand exchange rate relative to world s currencies which could serve to stem this withdrawal and could also result in an increase in interest rates due to the depreciation of the Rand.

We compete with mining and other companies for key human resources.

We compete with mining and other companies on a global basis to attract and retain key human resources at all levels with the appropriate technical skills and operating and managerial experience necessary to continue to operate our business. The global shortage of key mining industry human resource skills, including geologists, mining engineers, metallurgists and skilled artisans has been exacerbated in the current environment of increased mining activity across the globe. There can be no assurance that we will attract and retain skilled and

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experienced employees and, should we lose any of our key personnel, our business may be harmed and our results of operations and financial condition could be adversely affected.

Since our South African labor force has substantial trade union participation, we face the risk of disruption from labor disputes and new South African labor laws.

Despite a history of positive and constructive engagement with labor unions, there are periods during which the various stakeholders are unable to agree on dispute resolution processes. Disruptive activities on the part of labor, which normally differ in intensity, then become unavoidable. Due to the high level of union membership among our employees, we are at risk of having, and have experienced in recent years, production stoppages for indefinite periods due to strikes and other disputes. Significant labor disruptions have affected our operations and financial condition before and we are not able to predict whether or not we will experience significant labor disputes in the future.

South African employment law sets out minimum terms and conditions of employment for employees. Though these minimum terms and conditions may be improved by agreements between us and the trade unions, the prescribed minimum terms and conditions forms the benchmark for all employment contracts.

We are required to submit a report in terms of South African employment law detailing the progress made towards achieving employment equity in the workplace. In the event this report is not submitted, we could incur substantial penalties.

Developments in South African employment law may increase our cash costs of production or alter our relationship with our employees and trade unions, which may have an adverse effect on our business, operating results and financial condition.

## We may suffer adverse consequences as a result of our reliance on outside contractors to conduct our operations.

A portion of our operations are currently conducted by outside contractors. As a result, our operations are subject to a number of risks, including:

negotiating agreements with contractors on acceptable terms;

the inability to replace a contractor and its operating equipment in the event that either party terminates the agreement;

reduced control over those aspects of operations which are the responsibility of the contractor;

failure by a contractor to perform in terms of its agreement with us;

interruption of operations in the event that a contractor ceases to operate due to insolvency or other unforeseen events;

failure of a contractor to comply with applicable legal and regulatory requirements, to the extent it is responsible for such compliance; and

contractor s problems regarding management of its workforce, labor unrest or other employment issues.

In addition, we may incur liability to third parties as a result of the actions of its contractors. The occurrence of one or more of these risks could have a material adverse effect on our business, operational results and financial condition. See *Directors, Senior Management and Employees Employees*.

#### HIV & AIDS poses risks to us in terms of productivity and costs.

The incidence of HIV & AIDS in South Africa and PNG, which is forecast to increase over the next decade, poses risks to us in terms of potentially reduced productivity, and increased medical and other costs. If a significant increase in the incidence of HIV & AIDS infection and HIV & AIDS-related diseases among the workforce over the next several years occurs, this may have an adverse impact on our operations, projects and financial status.

#### The cost of occupational healthcare services may increase in the future.

Our operations in South Africa are subject to health and safety regulations which could impose significant costs and burdens. The present Mine Health and Safety Act 29 of 1996 ( Mine Health and Safety Act ) imposes various

duties on us at our mines, and grants the authorities broad powers to, among other things, close unsafe mines and order corrective action relating to health and safety matters.

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The Occupational Diseases in Mines and Works Act 78 of 1973, or the Occupational Diseases Act, governs the payment of compensation and medical costs related to certain illnesses contracted by persons employed in mines or at sites where activities ancillary to mining are conducted. Occupational healthcare services are available to our employees from our existing healthcare facilities in South Africa. There is a risk that the cost of providing such services could increase in future depending on changes in the nature of underlying legislation and the profile of our employees. This increased cost, should it transpire, is currently indeterminate. We have embarked on a number of initiatives focused on improving the quality of life of our workforce, although there can be no guarantee that such initiatives will not be adversely affected by increased costs.

## Laws governing mineral rights affect our business.

We are governed by the South African Mineral and Petroleum Resources Development Act 2002 ( MPRDA ). See *Regulation Health and Safety Matters South Africa* for a description of the principal objectives set out in the MPRDA. Under the MPRDA, tenure over established mining operations is secured for up to 30 years (and renewable for periods not exceeding 30 years each thereafter), provided that mining companies apply for new order mining rights over existing operations within five years of May 1, 2004 or before the existing right expires, whichever is the earlier date and fulfill requirements specified in the MPRDA and the Broad-Based Socio-Economic Empowerment Charter for the South African mining industry ( Mining Charter ).

The Mining Charter was signed by government and stakeholders in October 2002, and contains principles relating to the transfer, over a 10-year period, of 26% of South Africa s mining assets (as equity or attributable units of production) to Historically Disadvantaged South Africans ( HDSAs ), as defined in the Mining Charter. An interim target of 15% HDSA participation over five years has also been set and to this end, the South African mining industry has committed to securing financing to fund participation by HDSAs in an amount of R100.0 billion within the first five years of the Mining Charter s tenure. The Mining Charter provides for the review of the participation process after five years to determine what further steps, if any, are needed to achieve target participation of 26%. In order to measure progress in meeting the requirements of the Mining Charter, companies are required to complete a Scorecard, in which the levels of compliance with the objectives of the Mining Charter can be ticked off after five and ten years, respectively. The Mining Charter and Scorecard require programs for black economic empowerment and the promotion of value-added production, such as jewelry-making and other gold fabrication, in South Africa. In particular, targets are set out for broad-based black economic empowerment in the areas of human resources and skills development; employment equity; procurement and beneficiation. In addition, the Mining Charter addresses socio-economic issues, such as migrant labor, mine community and rural development and housing and living conditions.

We actively carry out mining and exploration activities in all of our material mineral rights areas. All of our South African operations have been granted their mining licenses. We will be eligible to apply for new licenses over existing operations, provided that we comply with the Mining Charter. We have taken steps to comply with the expected provisions of the Mining Charter, such as promoting value-added production, exploring black empowerment initiatives and increasing worker participation. Failure to comply with the conditions of the mining licenses could have a material adverse effect on our operations and financial condition.

The MPRDA also makes reference to royalties payable to the South African state in terms of the envisaged Mineral and Petroleum Resources Royalty Bill which has not yet been enacted. The fourth draft of the Mineral and Petroleum Resources Royalty Bill was tabled in the South African government on August 21, 2008 and provides for the payment of a royalty according to a formula based on earnings before interest, tax and depreciation, after the deduction of capital expenditure. This rate is then applied to revenue to calculate the royalty amount due, with a minimum of 0.5% and a maximum of 5% for gold. It is estimated that the formula could translate to a royalty rate of more than 2% of gross sales in terms of current pricing assumptions. The latest proposal results in a large increase from the 1.5% rate proposed in the second draft in 2006. The royalty is to become effective on May 1, 2009, if the Bill is passed by the South African government in its current form. The introduction of the Mining and Petroleum Royalty Act will have an adverse impact on the profits generated by our operations in South Africa.

In PNG, the mining license for Hidden Valley was approved in March 2005. Once production in PNG is commenced, our PNG mining operations will be subject to royalty payments to the government of PNG. Should we

desire to expand any of our initiatives in PNG operations into additional areas under exploration, these operations would need to convert the existing exploration licenses prior to the start of mining, and that process could require landowner title approval. There can be no assurance that any approval would be received. Please also see *Regulation* for further information.

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#### We are subject to extensive environmental regulations.

As a gold mining company, we are subject to extensive environmental regulation. We have experienced and expect to continue to experience increased cash costs of production arising from compliance with South African and PNG environmental laws and regulations. The MPRDA, certain other environmental legislation and the administrative policies of the South African government regulate the impact of our prospecting and mining operations on the environment.

Pursuant to these regulations, upon the suspension, cancellation, termination or lapsing of a prospecting permit or mining authorization in South Africa, we will remain liable for compliance with the provisions of the MPRDA, including any rehabilitation obligations. This liability will continue until such time as the South African Department of Minerals and Energy ( **DME** ) certifies that we have complied with such provisions.

In the future, we may incur significant costs associated with complying with the increasingly stringent requirements being imposed under new legislation and regulations. This may include the need to increase and accelerate expenditure on environmental rehabilitation and to alter provisions for this expenditure, which could have a material adverse effect on our results and financial condition. We may also face increased environmental costs should other mines in the vicinity of our mines fail to meet their obligations with regard to the pumping or treatment of water.

The South African government has reviewed requirements imposed upon mining companies to ensure environmental restitution. For example, following the introduction of an environmental rights clause in South Africa s constitution, a number of environmental legislative reform processes have been initiated. Legislation passed as a result of these initiatives has tended to be materially more onerous than laws previously applied in South Africa. Examples of such legislation include the MPRDA, the South African National Nuclear Regulator Act 1999, the South African National Water Act of 1998 and the South African National Environmental Management Act 1998, which include stringent polluter-pays provisions. The adoption of these or additional or more comprehensive and stringent requirements, in particular with regard to the management of hazardous waste, the pollution of ground and ground-water systems and the duty to rehabilitate closed mines, may result in additional costs and liabilities.

Our PNG operations are also subject to various laws and regulations relating to the protection of the environment, which are similar in scope to those of South Africa.

Investors in the United States may have difficulty bringing actions, and enforcing judgments, against us, our directors and our executive officers based on the civil liabilities provisions of the federal securities laws or other laws of the United States or any state thereof.

We are incorporated in South Africa. Each of our directors and executive officers (and our independent registered public accounting firm) reside outside of the United States. Substantially all of the assets of these persons and substantially all of our assets are located outside the United States. As a result, it may not be possible for investors to enforce a judgment against these persons or ourselves obtained in a court of the United States predicated upon the civil liability provisions of the federal securities or other laws of the United States or any state thereof. A foreign judgment is not directly enforceable in South Africa, but constitutes a cause of action which will be enforced by South African courts provided that:

the court that pronounced the judgment had jurisdiction to entertain the case according to the principles recognized by South African law with reference to the jurisdiction of foreign courts;

the judgment is final and conclusive;

the judgment has not lapsed;

the recognition and enforcement of the judgment by South African courts would not be contrary to public policy, including observance of the rules of natural justice which require that the documents initiating the United States proceeding were properly served on the defendant and that the defendant was given the right to be heard and represented by counsel in a free and fair trial before an impartial tribunal;

the judgment does not involve the enforcement of a penal or revenue law; and

the enforcement of the judgment is not otherwise precluded by the provisions of the Protection of Business Act 99 of 1978, as amended, of the Republic of South Africa.

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## Compliance with new and changing corporate governance and public disclosure requirements adds uncertainty to our compliance policies and increases our costs of compliance.

Laws, regulations and standards relating to accounting, corporate governance and public disclosure, new SEC regulations and other listing regulations applicable to us are subject to change and can create uncertainty for companies like us. New or changed laws, regulations and standards could lack specificity or be subject to varying interpretations. Their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs of compliance as a result of ongoing revisions to such governance standards.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management on our internal control over financial reporting. The report in this annual report contains, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year, including a statement as to whether or not our internal controls over financial reporting are effective. We are required to have our independent registered public accounting firm publicly disclose their conclusions regarding the evaluation.

During fiscal 2007, we identified certain material weaknesses in our internal controls over financial reporting, in particular relating to the information technology control environment and the financial reporting closing process which led to material adjustments being required in our financial statements and which also negatively impacted the report issued by our independent registered public accounting firm regarding our internal controls over financial reporting. We made improvements to our internal control over financial reporting during fiscal 2008 to mediate these material weaknesses, and concluded that the controls related to the remediation of the material weaknesses previously disclosed in the 2007 Annual Report on Form 20-F were designed, in place and operating effectively for a sufficient period of time for management to determine that each of the material weaknesses was remediated as of June 30, 2008. See *Item 15*. *Disclosure Controls and Procedures*.

We are committed to maintaining high standards of corporate governance and public disclosure, and our efforts to comply with evolving laws, regulations and standards in this regard have resulted in, and are likely to continue to result in, increased general and administrative expenses.

## Investors may face liquidity risk in trading our ordinary shares on the JSE Limited.

The primary listing of our ordinary shares is on the JSE Limited. Historically, the trading volumes and liquidity of shares listed on the JSE have been low relative to other major markets. The ability of a holder to sell a substantial number of our ordinary shares on the JSE in a timely manner, especially in a large block trade, may be restricted by this limited liquidity. See *The Offer and Listing The Securities Exchange in South Africa*.

Because we have a significant number of outstanding share options and convertible debt instruments, our ordinary shares are subject to dilution.

We have employee share option schemes as well as other share schemes. The employee share option schemes came into effect in 1994, 2001 and 2003 respectively, and a new share scheme was introduced in 2006. Our Board has authorized up to 14% of the issued share capital to be used for these plans. Additionally, we have convertible uncollaterized fixed rate bonds in the amount of U.S.\$208 million which are due on May 21, 2009. These bonds may be converted into equity at the option of the bondholder at any time after July 1, 2004 and up to and including May 15, 2009 at a specific conversion price based on the outstanding principal amount divided by the conversion price in effect on that date. As a result, shareholders—equity interests in us are subject to dilution to the extent of the future exercises of the options, through share schemes and convertible debt instruments.

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# Item 4. INFORMATION ON THE COMPANY BUSINESS

# **History and Development**

We conduct underground and surface gold mining and related activities, including exploration, processing and smelting. We are currently the third largest producer of gold in South Africa, producing approximately 23.4% of the country s annual gold output, and we ranked among the top 10 gold producers in the world, with operations and projects in South Africa and PNG. Our gold sales have increased from 650,312 ounces of gold in fiscal 1995 to approximately 1.9 million ounces of gold in fiscal 2008. As at June 30, 2008, our mining operations reported total proven and probable reserves of 50.5 million ounces, primarily from South African sources. In fiscal 2008, we processed approximately 25.4 million tons of ore.

In fiscal 2008, approximately 95% of our total gold production took place in South Africa, and approximately 5% in Australasia. In fiscal 2008, approximately 93% of our South African gold came from underground mines, and approximately 7% came from our surface operations (which include Kalgold opencast operation and Phoenix operation). For more detailed information about our activities, see *Item 4*. *Information on the Company Business Harmony s Mining Operations Overview* and the notes to the consolidated financial statements included in this annual report. Mining is a highly regulated industry, and we operate under a variety of statutes and regulations. For more detailed information about these statutes and regulations, see *Item 4*. *Information on the Company Regulation* and *Item 10*. *Additional Information Memorandum and Articles of Association*.

The majority of our exploration and evaluation done during fiscal 2008 has been focused on PNG. Our PNG exploration and evaluation opportunities are handled through the international office in Brisbane, Australia.

We were incorporated and registered as a public company in South Africa on August 25, 1950 (under registration number 1950/038232/06). We poured our first gold on September 11, 1954. In the early 1970 s, we merged with the Anglovaal mines, Merriespruit and Virginia, forming Harmony Gold Mining Company Limited. In 1995, we were rejuvenated. We expanded from a single lease-bound mining operation into an independent, world-class gold producer. We acquired additional mineral rights in the Free State, Mpumalanga, Gauteng and North West provinces in South Africa when we acquired Lydex in 1997, Evander in 1998, Kalgold in 1999, Randfontein in 2000, ARMgold in 2003 and Avgold in 2004. In building our Australian portfolio, we acquired Hill 50 and New Hampton in Western Australia in 2001 and 2002, respectively, and started our exploration portfolio in PNG with projects in the Morobe province originally through our acquisition of Abelle in 2003. During fiscal 2008, we disposed of several operations in South Africa and Australia. See *Item 4*. *Disposals*.

Our principal executive offices are located at Randfontein Office Park, Corner of Main Reef Road and Ward Avenue, Randfontein, 1760, South Africa and the telephone number at this location is +27-11-411-2000.

# South African Operations

In South Africa, we operate a total of 11 underground operations, one open cast mine, and nine processing plants which are located in all of the currently known goldfields in the Witwatersrand basin of South Africa as well as the Green Stone belt. These operations produced 1.8 million ounces in fiscal 2008, and South Africa represented approximately 94% (or 47.5 million ounces) of our total proven and probable reserves. The deep level gold are located in four provinces in this basin, being the Free State province, Mpumalanga, the West Rand Goldfields in Gauteng province and the North West province. Surface operations are located in all these provinces as well.

Ore from the shafts and surface material are treated at nine metallurgical plants in South Africa, located near the operations (four in the Free State province, two in the North West province, one in Mpumalanga and two in Gauteng). There are two plants on care and maintenance which can be restarted if additional processing capacity is required (Joel and St. Helena plants in the Free State province).

As part of our Back to Basics strategy, management reassessed and restructured the manner in which operations are managed and evaluated. Each operation, consisting anywhere from a single shaft to a group of shafts, is managed by a team headed up by a general manager. See *Item 4*. *Operational Strategy: Back to Basics* and *Harmony s Management Structure*.

As a result of this reorganization, operations are classified as Underground or Surface, as opposed to the previous classification of Growth, Quality, Leveraged or Surface. The reportable segments in South Africa are as follows:

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Tshepong, Phakisa, Bambanani, Doornkop, Elandsrand, Target, Evander operations, Masimong, Virginia operations and Cooke operations (classified as discontinued operations); and

all other shafts and surface operations, including those that treat historic sand dumps, rock dumps and tailings dams, are grouped together under Other Underground or Other Surface .

### **International Operations**

Our interests internationally are currently mainly located in PNG and represent 6% (or 3.0 million ounces) of our total proven and probable reserves.

Our interests in Australia now consist solely of one site located at Mt. Magnet in Western Australia. This site has been closed down and the plant has been put on care and maintenance since December 2007. The South Kalgoorlie operational assets and tenements, which we previously owned and which was also located in Western Australia, were sold to Dioro Exploration NL ( **Dioro** ) on November 30, 2007.

The Mt. Magnet operations produced 77,097 ounces in fiscal 2008, compared to 136,428 ounces in fiscal 2007. The decrease was due to the mine being placed on care and maintenance in December 2007. The South Kalgoorlie operations produced 27,778 ounces in fiscal 2008, compared to 88,371 ounces in fiscal 2007. The results for 2008 are for the five months up to the sale to Dioro. Ore from the underground and surface material were treated at the two metallurgical plants in Australia (one at Mt. Magnet and, prior to it being sold, at South Kalgoorlie). We classified the Western Australia operations as held for sale in April 2007. These operations also met the criteria to be classified as discontinued operations.

In July 2007, we entered into an agreement with Dioro pursuant to which Dioro acquired our South Kalgoorlie assets. The total purchase price was A\$45 million (U.S.\$39.8 million), consisting of both a cash and share component. The share component entailed the issuance of 11.4 million Dioro shares valued at A\$20 million (U.S.\$17.7 million), and a cash component of A\$25 million (U.S.\$22.1 million). The transaction was subject to various conditions precedent, including a minimum capital raising by Dioro of A\$35 million (U.S.\$30.9 million) by the completion date. On November 30, 2007, all conditions precedent were satisfied, and the transaction was completed and accounted for on that date.

During fiscal 2008, we entered into an agreement with Monarch Gold Mining Company ( Monarch Gold ) for the sale of our Mount Magnet operations. The Mount Magnet operations include Hill 50, Great Fingall, St George, Star and Big Bell mines, and comprises a resource inventory of 2.7 million ounces of gold, tenements covering approximately 62,000 hectares, 166 exploration license blocks and a 2.7 million ton a year capacity plant. However, subsequent to year-end, we were advised that Monarch had placed itself in voluntary administration and, on August 1, 2008, the Administrator indicated that Monarch will not proceed with the proposed purchase and consequently the purchase agreement has been terminated. We have since resumed management of the Mt. Magnet operation which is still classified as held for sale. See Recent Developments

In PNG, we, through our wholly-owned PNG-based subsidiaries, Morobe Consolidated Goldfields Limited ( **Morobe** ) and Wafi Mining Limited ( **Wafi** ), own development and exploration prospects in the Morobe Province. Following the end of fiscal 2008, Newcrest Mining Limited ( **Newcrest** ) acquired a 30.01% interest in our PNG assets and tenements (See *Recent Developments* ). We, in a joint venture with Newcrest, are in the process of building the Hidden Valley mine, with project completion expected by the middle of calendar 2009.

In addition, we completed a number of stand alone pre-feasibility studies ( **PFS** ) in Golpu during the June 2007 quarter and in Wafi during the December 2007 quarter, which included the Wafi gold resources and examined the development of three production scenarios:

Golpu stand alone (an update of the Golpu PFS scenario);

Golpu + Link Zone (high grade lenses within Zone B); and

Golpu + Link Zone + Non-Refractory gold ore ( **NRG1** );

The June 2007 PFS reports were subject to Harmony Gate Reviews ( **Gate Reviews** ) and a Competent Persons Report ( **CPR** ). Neither the Gate Reviews nor the CPR identified any fatal flaws in the PFS reports. However, a

number of outstanding issues were identified and the December 2007 PFS report are still subject to the Gate Review process. The returns projected by the June 2007 studies did not meet the

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requirements, and it was decided then not to immediately proceed to the feasibility stage. Further studies are planned for fiscal 2009 to address outstanding issues and to investigate alternative production scenarios which may improve projected returns. PNG represents approximately 6% (or 2.99 million ounces) of our proven and probable reserves.

# **Strategy**

During fiscal year 2008, we endeavoured to focus on three key aspects all of which we have delivered on during the year under review.

First, we undertook to review our operational performance and maintain a clear operational focus. This entailed developing an understanding of what our operations were capable of delivering, devising and putting in place the plans to ensure delivery, and holding management responsible for that delivery.

Second, we assessed our assets, to focus our attention on those operations that were core to the business and had the ability to be profitable. At the same time, we identified and initiated joint ventures we believed where these assets could better cater for the medium- and longer-term health of the company and bring about greater value.

Finally, we undertook to improve the financial viability of the business and to substantially overhaul the balance sheet. In so doing, we focused on improving operational performance, combined with the sale of non-core assets and partnering in joint ventures. We undertook to identify opportunities to sustain and grow production. While our exploration work in PNG continues, we are also about to begin with some organic exploration work at Evander in South Africa. This element of our strategy is at an early stage and will be an area of increased attention during the year ahead.

We believe that the following strengths provide us with a competitive advantage:

# Leading market position in the attractive gold industry

We believe that our size and leading market position enables us to undertake exploration and simultaneously develop multiple projects around the world, as well as secure capital on competitive terms.

The global gold industry offers a number of attractive industry fundamentals from which we benefit. This includes the absence of available substitutes, relatively high barriers to entry, and increasing gold producer concentration.

We are developing new mines at a planned lower cost per ounce than our current operations, which we believe will help make them robust enough to survive any margin squeeze and to withstand any reversal in the gold price. We expect the gold price to continue its upward trend in the medium term

# Significant reserves with long mine lives

Our ore reserves as of June 30, 2008 amounted to 50.5 million ounces of gold spread across our assets in South Africa and PNG. This ore reserve base is sufficient to support our existing production profile in excess of 10 years at current production levels. Year-on-year depletion accounted for a decrease of 1.9 million ounces in the reserves. Corporate activity, the exclusion of operations held for sale, restructuring of certain shafts and geological related changes accounts for a further decrease of 5.7 million ounces of reserves. On the positive side there is a net addition of 4.4 million ounces of reserves from surface stockpiles.

Of our 50.5 million ounces of reserves, 38.3 million ounces are classified as above infrastructure and 12.2 million ounces are classified as below infrastructure (reserves for which capital expenditure has still to be approved).

# Highly attractive project pipeline

We have a diverse portfolio of gold development projects spread across South Africa and PNG. These projects include Elandsrand, Doornkop, Tshepong and Phakisa in South Africa, and Hidden Valley in PNG, which, when developed, could deliver up to 1.4 million ounces of additional production by 2012.

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We believe the relatively higher grade of these South African deposits and/or lower cost base will result in these ounces being produced at highly competitive cash costs. This in turn may result in a reduction in our overall cash cost position as these new projects are commissioned.

In addition to these projects, we have a number of additional development prospects that are being considered and progressed, including the processing of sand dumps and tailings dams in our Mega Dumps projects, the processing of rock dumps, and developing the Wafi/Golpu copper/gold deposit in PNG, which, when all developed, could increase production by 1.0 million ounces per annum.

We have also expanded our exploration skill base, evidenced by our progress in PNG.

We formed Rand Uranium (Proprietary) Limited ( Rand Uranium ), to which we will transfer our Cooke assets to optimize the value of our uranium deposits.

# Positive gold market outlook

In the midst of volatile tumultuous global investment markets, the gold market has demonstrated great resilience and a positive upside. The price performance throughout fiscal 2008 supports our positive outlook for gold and, given our operational imperatives, we will seek to contain costs, increase output and optimize our margins.

The gold price hit a high of U.S.\$1,030 per ounce on March 17, 2008 and, while it was a more subdued U.S.\$772 per ounce as of October 21, 2008, this is 3% higher than it was for the same time the previous year.

We believe the fundamental drivers behind increased demand and decreased new supply of gold will remain in the future, which will in turn support a higher gold price over this period. As an unhedged gold producer, we will benefit from a rising gold price environment.

# Increased focus on earnings margins and cost

Our aim remains to return to profitability. At an operational level we have put in place an intensive process of business planning, with benchmarks and targets we believe to be realistic.

We are committed to lower our cost base and extensively benchmark our costing parameters both internally among our operations, and externally against other gold producers. Stringent cost cutting and cost control programs have been implemented.

We are confident that the benefits of our restructuring process and ongoing cost focus will be sustained in the long term, and as a result, our ability to withstand any future adverse market conditions has been significantly enhanced.

# Conservative balance sheet and low gearing

We maintain a conservative gearing policy and seek to fund ongoing capital expenditure (excluding growth projects) through cash generated from existing operations.

Our low level of gearing should provide us with the ability to utilize debt to fund capital and development expenditure requirements for our new projects.

# Experienced management team with significant industry expertise

Our senior management team consists of experienced mining executives with extensive industry backgrounds combined with geological and metallurgical expertise.

Our senior management team has a proven track record in developing and managing the operations under its control, and has demonstrated an ability to optimize underperforming assets as well as developing new projects around the world.

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### Leading Black Economic Empowerment strategy

We are proud to be a South African company and fully embraces the country stransformation initiatives. We are 16% owned by African Rainbow Minerals Limited ( **ARM Limited** ), a black empowerment company in which our chairman, Patrice Motsepe, owns an interest.

We believe that we have gone beyond the requirements of the Mining Charter by ensuring that our HDSA partners are truly empowered, that we are largely managed by a HDSA Board, and that we continue to engage with black shareholders and/or partners to find more opportunities to invest in BEE transactions and involve HDSA partners.

We will continue to embrace empowerment as part of our growth strategy and we acknowledge that empowerment forms a fundamental part of our business into the future.

# Strategy of organic growth

Our organic growth strategy is focused on the extraction of high-quality ounces and developing and operating our long-life mines. Through our back to basics approach of disciplined mining, we aim to reduce costs and increase productivity. Our dedicated and participative management team endeavours to meet production targets, reduce costs and optimize the orebodies for the benefit of all our stakeholders.

# Organic growth focused on high quality ounces

Our extensive experience and established track record of successfully identifying, exploring and developing our own projects is a core component of our value creation strategy.

Our ongoing exploration program is focused on both on-mine exploration, which targets resources within the economic radius of existing mines, and new mine exploration, which targets promising early to advanced stage projects around the world.

We are currently expanding our production base in South Africa and PNG, with a focus on developing new mines at competitive cash costs and upgrading the overall quality of our portfolio.

We currently have a diverse project pipeline, comprising five projects that are well advanced and, if all developed, could deliver up to 1.4 million ounces of low-cost production by 2012. These projects include Elandsrand New Mine, Doornkop South Reef, Tshepong Sub 66 and Sub 71 Declines and Phakisa in South Africa, and Hidden Valley in PNG, which, if all developed, would contribute to a reduction in our overall cash costs per ounce when they come on-stream.

In addition to these projects, we have a number of additional development prospects that are being progressed, including surface sand dumps, rock dumps and tailings dams, reviewing the potential of our uranium deposits, and developing the Wafi/Golpu copper/gold deposit in PNG, which, when an investment decision is taken by the board to develop them once feasibility studies are complete, could increase production by up to 1.0 million ounces.

We have also expanded our exploration skill base, evidenced by our progress in PNG.

### Operational Strategy: Back to Basics:

Our operational strategy is underpinned by the back to basics strategy of disciplined mining, cost control, ore reserve management and efficiency. *Safety* 

We have dedicated a significant amount of attention to our safety initiatives during the year, and have seen improvements. These initiatives have been a key part of our restructuring and refocusing initiative, and also part of the broader transformation of the workplace.

The commitment to zero fatalities starts at the top of the company and has filtered to every level through a conscious and programmatic

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effort. The second round of a comprehensive safety auditing program was completed in June 2008 including physical workplace audits, fall of ground regulations audits, shaft audits and metallurgical audits. Key non-negotiable principles that have been agreed upon include:

management to lead by example;

continuous verbal communication with all team members:

visible creation of awareness of safety-related issues;

award and recognize safety achievements; and

the involvement of all stakeholders.

While the workforce is motivated to become involved in taking responsibility for their own safety and that of their colleagues, a key management focus has been to improve underground conditions. In this respect, emphasis has been placed on those areas that are deemed to be of the highest potential risk, namely, shaft infrastructure and physical conditions in the workplace. Again, in respect of the latter, the focus is on compliance with standards, the monitoring and management of ground conditions and logistics to and from the workplace.

# Empowered management teams

At each mining site, we have established small, multi-disciplinary, focused management teams responsible for planning and implementing the mining operations at the site. Each of these teams is accountable for the results at its particular site and reports directly to the Board.

# Active involvement and management

Annual operational goals and targets, including cost, volume and grade targets are established in consultation with our executive committee for each mining site. Each management team develops an operational plan to implement the goals and targets for its mine site. Members of our executive committee review and measure the results at each mining site on a regular basis throughout the year.

### Focus on increased productivity

Gold mining in South Africa is labor intensive, accounting for about 50% of our South African operating costs. To control these costs, we structures our operations to achieve maximum productivity with the goal of having 60% of our workforce directly engaged in stoping, or underground excavation, and development rock breaking activities.

### Commitment to cost control

We are committed to reducing our cost base and, to this end, we benchmark our costing parameters both internally among our operations and externally against other gold producers.

### Proactive maintenance practices

We apply a principle of appropriate maintenance which allows us to spend capital commensurate with the life of a specified operation. This principle ensures safe operation and reduces capital that may be used ineffectively on mines that have a limited life.

### Implementation of new systems

We have implemented cost accounting systems and strict ore accounting and ore reserve management systems to measure and track costs and ore reserve depletion accurately, so as to enable us to be proactive in our decision-making.

# Increasing consistency at our operations

We are committed to increasing the consistency of our operations, in terms of both gold ore grades and production levels, in order to extract optimal value from our orebodies. To achieve this, we are continuing with our intensive program to significantly improve the mining flexibility of our operations by increasing our development expenditure and focusing on comprehensive ore

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reserve management. We have made significant progress on this objective, as evidenced by our development rates.

We are currently reviewing potential opportunities in respect of certain deposits and assets which we may develop independently of our core gold business, and in particular, our uranium assets, of which the underground resources are not currently reflected on our balance sheet or reserve statement.

Selected acquisitions that diversify our operations and complement our competitive strengths

We have a long track-record of acquisitions, having completed over 25 transactions and successfully integrating each of these operations into the Company.

We possess broad and extensive gold mining experience gained through the development and operation of both surface, opencast mines and mechanized, underground mines. This breadth of expertise provides us with a competitive advantage when evaluation acquisition opportunities.

Targeted disposals that will upgrade our overall portfolio quality

We have accumulated a diverse portfolio of assets, a number of which are nearing the end of their productive lives for us and are considered non-core to our business. However, these assets may be of higher value to smaller producers who are less concerned about short mine lives, and can still profitably operate these assets for a number of years.

As a result, we believe our disposal strategy will create value through the targeted sale of these assets, which for us have relatively higher cost bases and/or shorter mine lives. See *Disposals* below.

Initiatives that target specific opportunities

We acknowledge significant capital expenditure and a commitment to a long time horizon are required to develop our projects into new mines. However, we firmly believe that this is the foundation of our future, and to this end, have made substantial investments in our major projects both in South Africa and PNG.

### **Principal Investments**

We have concluded several other strategic transactions within and outside South Africa in the last three fiscal years, which are summarized below.

On February 27, 2008, the Group acquired a 32.4% interest in Pamodzi Gold Limited ( **Pamodzi** ) after disposing of its Orkney assets. See *Item 4*. *Disposals* .

In March 2007, we concluded negotiations with Rio Tinto plc ( **Rio Tinto** ) in which we purchased Rio Tinto s rights to the royalty agreement entered into prior to our acquisition of the Hidden Valley and Kerimenge deposits in PNG. The remaining condition precedent, which was to obtain approval of the relevant PNG minister on the recommendation of the Mining Advisory Council that the royalty rights may be transferred to us, was met in March 2008. Our cost of U.S.\$22.5 million was met through the issue of shares and a cash payment of U.S.\$2.5 million. The effect of the transaction will be to reduce the cost of gold produced at Hidden Valley and all further extensions to the project, mine life and reserves will be free of this royalty.

On December 8, 2006 we exchanged our Western Areas Limited ( **Western Areas** ) shares in exchange for Gold Fields Limited ( **Gold Fields** ) ordinary shares. See *Item 4*. *Disposals* . We received 15.7 million Gold Fields shares, issued at R135.02 (U.S.\$19.15) per share, for our 44.9 million Western Areas shares. During the fiscal years 2008 and 2007, we disposed of our interest in Gold Fields. See *Item 4*. *Disposals* .

On June 21, 2006, we announced that we acquired 37.8% of the issued share capital of Village Main Reef Gold Mining Company Limited ( Village ) for an amount of R458,775 (U.S.\$0.1 million). The equity stake was purchased from ARM Limited at a price of SA 20 cents per share. Due to the fact that the acquisition surpasses the 35% mark, we were obliged under the securities Regulation Code on Takeovers and Mergers to extend an offer to the remaining shareholders of Village to acquire all of their shares at the same price at which it acquired the

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37.8% stake. On August 14, 2006, we announced that minority shareholders holding 3,163 shares in Village (being 0.08% of the shares in respect of which the offer was made) had accepted its offer. At June 30, 2008, we held 2,295,663 shares, representing 37.83% of the issued share capital of Village. See *Item 7*. *Related Party Transactions*.

On March 9, 2006, we announced that we acquired a total of 44.9 million shares in Western Areas for R2 billion (U.S.\$321 million), representing a 29.2% stake. This was done by acquiring 37.37 million shares from Allan Gray and buying a total of 7.62 million shares on the open market. To finance this acquisition, we entered into a term loan facility of R1.0 billion (U.S.\$280.8 million) with Rand Merchant Bank ( RMB ), for the purpose of partially funding the acquisition of the 29.2% stake in Western Areas. See *Item 7. Related Party Transactions* .

# **Disposals**

See Item 8. Recent Developments for post year-end disposals.

On February 27, 2008, we disposed of our Orkney operations to Pamodzi in exchange for 30 million listed ordinary shares, the market value of which was R345 million (U.S.\$46.5 million).

On November 30, 2007 the South Kalgoorlie operations were sold to Dioro in exchange for 11.6 million listed ordinary shares, the market value of which was U.S.\$17.5 million (A\$20 million), as well as a cash of U.S.\$18.7 million (A\$21 million). A loss of U.S.\$8.76 million (A\$9.8 million), net of tax, was realized.

On August 24, 2007, the Group disposed of the remaining 13,095,079 ordinary Gold Fields shares. The proceeds amounted to R1,310 million (U.S.\$182.9 million), resulting in a loss of R459 million (U.S.\$63.2 million).

In April 2007, the surface assets and metallurgical plant at Deelkraal was sold to Ogoerion Construction CC for R98 million (U.S.\$13.7 million). It was agreed that the purchase price be paid in installments over a 24-month period.

In a range of transactions between January 22, 2007 and February 12, 2007, we disposed of 1,150,000 Gold Fields shares for U.S.\$19.7 million. The total cost of these shares was U.S.\$21.4 million, resulting in a loss of U.S.\$1.7 million. During May and June 2007, a further 1.5 million shares with a cost of U.S.\$28.3 million were disposed of for U.S.\$25.1 million, resulting in a loss of U.S.\$3.2 million.

On December 8, 2006, we disposed of our interest in Western Areas in exchange for ordinary shares in Gold Fields. This was in terms of an offer by Gold Fields whereby every 100 Western Areas Shares were exchanged for 35 Gold Fields shares.

On October 19, 2006, Randfontein 4 Shaft was sold to Simmer & Jack Limited for an amount of R60 million (U.S.\$8.5 million).

On March 31, 2006, we disposed of the entire share capital of Buffalo Creek Mines (Pty) Ltd for A\$24 million (U.S.\$17.2 million). According to the agreement the A\$24 million (U.S.\$17.2 million) was to be settled as follows: (i) A\$4.3 million (U.S.\$3.1 million) to be paid in cash; (ii) 1,907,892 shares in GBS Gold International, valued at A\$5 million (U.S.\$3.6 million); (iii) A\$5 million (U.S.\$3.6 million) to be paid in cash in September 2006; (iv) Shares in GBS Gold International, equal in value to A\$4.4 million (U.S.\$3.1 million), to be issued in September 2006; and (v) A\$5.4 million (U.S.\$3.8 million) to be paid in cash in September 2007. The net asset value of Buffalo Creek Mines (Pty) Ltd was A\$20.1 million (U.S.\$14.2 million), resulting in a profit of A\$3.1 million (U.S.\$3 million). Final settlement was received as per contract in September 2007.

On January 18, 2006, we disposed of our investment in Atlas Gold Limited for A\$0.2 million (U.S.\$0.15 million). The investment of 500,000 shares was carried at a total cost of A\$0.1 million (U.S.\$0.07 million), resulting in a profit of A\$0.1 million (U.S.\$0.07 million).

On December 29, 2005, we disposed of our investment in San Gold Corporation for R19 million (U.S.\$3.1 million). The investment was carried at a total cost of R20 million (U.S.\$3.2 million), resulting in a loss of R1 million (U.S.\$0.1 million).

On November 16, 2005, we disposed of the remaining portion of the Gold Fields investment purchased in fiscal 2005 for R2.4 billion (U.S.\$361.8 million). The process was concluded through market disposals which began on November 10, 2005 and an open market offering on November 15 and 16, 2005. The investment was acquired at a cost of R2.1 billion (U.S.\$316.4 million), resulting in a profit of R307 million (U.S.\$45.4 million).

### **Hedging Policy**

We have consistently maintained a policy of not entering into forward sales, commodity, derivatives or hedging arrangements to establish a

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price in advance for the sale of our future gold production, although we may do so in the future. As a result of this policy, Board approval is required when hedging arrangements are to be entered into.

Where any such gold hedging position is acquired, our policy is to eliminate any such positions existing within acquired companies as soon as this can be achieved through sound, commercially advantageous transactions. There may, however, be instances where certain hedge positions in acquired companies need to be kept in place for contractual or other reasons. In line with this policy, we have historically closed out hedging arrangements inherited through our acquisitions. Our revenues are sensitive to the exchange rate of the Rand and other non-U.S. currencies to the U.S. dollar, as all the revenues are generated by gold sales denominated in U.S. dollars. We do not enter into forward sales, commodity, derivatives or other hedging arrangements to establish a Rand to U.S. dollar exchange rate in advance for the sales of our future gold production, although we may do so in the future.

In May 2007, we closed out the remainder of our Australian hedge book, which we inherited with the acquisition of the Hill 50 mine. In these transactions, some 220,000 ounces were closed out at an average spot rate of A\$809/ounce, for a total cost of A\$72.8 million (U.S.\$60.0 million). As a result, we are completely unhedged.

# **Description of Mining Business**

### **Exploration**

Exploration activities are focused on the extension of existing orebodies and identification of new orebodies, both at existing sites and at undeveloped sites.

Our gold-focused exploration program has two components:

on-mine exploration, which looks for resources within the economic radius of existing mines, and

new mine exploration, which is the global search for early to advanced stage projects.

Once a potential orebody has been discovered, exploration is extended and intensified in order to enable clearer definition of the orebody and the potential portions to be mined. Geological techniques are constantly refined to improve the economic viability of prospecting and mining activities.

We conduct exploration activities on our own or with joint venture partners. As at June 30, 2008, our prospecting interest in South Africa measured 28,039 hectares (69,286 acres), 220,600 hectares (545,114 acres) in PNG and 97,491 hectares (240,906 acres) in Australia. We spent U.S.\$28 million on exploration in fiscal 2008 and the bulk of exploration expenditure was allocated to activities in PNG and South Africa. In fiscal 2009, we intend to carry out exploration in PNG and South Africa.

# Mining

The mining process can be divided into two main phases: (i) accessing the orebody and (ii) mining the orebody. This basic process applies to both underground and surface operations.

Accessing the orebody.

In our South African underground mines, access to the orebody is by means of shafts sunk from the surface to the lowest economically and practically mineable level. Horizontal development at various intervals of a shaft (known as levels) extends access to the horizon of the reef to be mined. On-reef development then provides specific mining access. Horizontal development at various intervals of the decline extends access to the horizon of the ore to be mined. The declines are advanced on a continuous basis to keep ahead of the mining taking place on the levels above. In our open-pit mines, access to the orebody is provided by overburden stripping, which removes the covering layers of topsoil or rock, through a combination of drilling, blasting, loading and hauling, as required.

Mining the orebody.

The process of ore removal starts with drilling and blasting the accessible ore. The blasted faces are then cleaned, and the ore is transferred to the transport system. In open-pit mines, gold-bearing material may require drilling and blasting, and is usually collected by bulldozers or shovels to transfer it onto trucks, which transport it to the mill.

In our South African underground mines, once ore has been broken, train systems collect ore from the faces and transfer it to a series of ore passes that gravity feed the ore to hoisting levels at the bottom of the shaft. The ore is then hoisted to the surface in dedicated conveyances and

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transported either by conveyor belts directly or via surface railway systems or roads to the treatment plants. In addition to ore, waste rock broken to access reef horizons must similarly be hoisted and then placed on waste rock dumps.

### **Processing**

We currently have nine operational metallurgical plants and two metallurgical plants on care and maintenance in South Africa. We also have a metallurgical plant at the Hidden Valley project in PNG. The principal gold extraction processes we use are carbon in leach, or CIL, and carbon in pulp, or CIP.

The gold plant circuit consists of the following:

Comminution.

Comminution is the process of breaking up the ore to expose and liberate the gold and make it available for treatment. Conventionally, this process occurs in multi-stage crushing and milling circuits, which include the use of jaw and gyratory crushers and rod and tube and ball mills. Our more modern milling circuits include semi- or fully-autogenous milling where the ore itself is used as the grinding medium. Typically, ore must be ground to a minimum size before proceeding to the next stage of treatment.

Treatment.

In most of our metallurgical plants, gold is extracted into a leach solution from the host ore by leaching in agitated tanks. Gold is then extracted onto activated carbon from the solution using the CIL or CIP processes.

Gold in solution, at one of our plants, is recovered using zinc precipitation. Recovery of the gold from the loaded carbon takes place by elution and electro-winning. Cathode sludge or dore bars produced from electro- winning is now currently sent directly to Rand Refinery. Most of the South African plants no longer use smelting to produce rough gold bars (dore). Our South African zinc precipitation plants continue to smelt precipitate to produce rough gold bars. These bars are then transported to the Rand Refinery which is responsible for refining the bars to a minimum of good delivery status.

In fiscal 2006, we operated the only independent gold refinery and fabrication plant in South Africa. In fiscal 2006, approximately 84% of our South African gold production was refined at our refinery and the remainder was refined at the Rand Refinery, which is owned by a consortium of the major gold producers in South Africa. Since July 2006, all of our gold produced in South Africa has been sent to the Rand Refinery, as a decision was made to close the Harmony Refinery for economic reasons. The Australian gold production for fiscal years 2006 to 2008 was refined in Australia at an independent refiner, AGR Matthey.

The South African government has emphasized that the production of value-added fabricated gold products, such as jewelry, is an important means for creating employment opportunities in South Africa and has made the promotion of these beneficiation activities a requirement of the Mining Charter described in *Item 4*. *Information on the Company Regulation Mineral Rights*. We support jewelry ventures in South Africa.

### Harmony s Management Structure

We have a de-centralized management structure that is based on small, empowered management teams led by General Managers at each of our operations. In South Africa, the General Managers report to Alwyn Pretorius and Tom Smith, the Chief Operations Officers, and are responsible for business optimization, ore reserve optimization, and for developing a business culture at the operations. They also focus on long-term viability and growth of the operations. The General Managers are supported by an Ore Reserve Manager, a Business Analyst and a Human Resources Leader in ensuring the growth and long-term sustainability of the operations, and additional expertise and skill is obtained from the Mining Managers, Engineers and Human Resource Managers who also report to the respective General Managers.

### **Capital Expenditures**

Capital expenditures for continuing operations incurred for fiscal 2008 totalled U.S.\$500 million, compared with U.S.\$320 million for fiscal 2007 and U.S.\$205 million for fiscal 2006. The increase in capital expenditure in fiscal 2008 compared with 2007 was primarily related to the development of the PNG assets, which accounted for 66% of

the project capital expended. Capital was also expended on the Doornkop South Reef Project, Tshepong Sub 66 and 71 Declines, Phakisa and the Elandsrand New Mine. During fiscal 2007, the increased development in PNG accounted for 45% of the project capital expended in the year. This was also the primary reason for the increase in capital expenditure in fiscal 2007 compared with fiscal 2006. Expenditure was also incurred at Doornkop South Reef Project, Phakisa, Tshepong Sub 66 Decline and Elandsrand New Mine.

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Reserves

The focus of our capital expenditures in recent years has been underground development and plant improvement and upgrades. Several of these projects will be completed during fiscal 2009. The remainder of the projects will still require a great deal of capital expenditure over the next two to three years until they are substantially completed. During fiscal 2008, various funding options were investigated. These included entering into a partnering deal for the PNG assets. The transaction was concluded after year end. See *Item 4*. *Recent Developments*.

Capital expenditure for discontinued operations, including the non-cash portion, incurred for fiscal 2008 totaled U.S.\$42 million, compared with U.S.\$61 million for fiscal 2007 and U.S.\$60 million for fiscal 2006.

We have budgeted approximately U.S.\$379 million for capital expenditures in fiscal 2009. Details regarding the capital expenditures for each operation are found in the individual mine sections under *Business Harmony s Mining Operations*. We currently expect that our planned operating capital expenditures will be financed from operations and new borrowings as needed. However, if we decide to expand major projects such as the Poplar Project and the Rolspruit Project at Evander beyond our current plans, we may consider alternative financing sources. See *Item 4. Information on the Company Business Harmony s Mining Operations Evander Operations*.

As at June 30, 2008, we have declared proven and probable reserves of 50.5 million ounces, broken down as follows: 47.5 million ounces in South Africa and 3.0 million ounces in PNG. Of our 50.5 million ounces of ore reserves, 12.2 million ounces are classified as below infrastructure (that is, reserves for which capital expenditure has yet to be approved). There has been a 3.2 million ounces year-on-year negative variance in ore reserves due to the following reasons:

normal depletion of 1.9 million ounces;

corporate activity, the exclusion of operations held for sale, restructuring of certain shafts and geological-related changes resulting in a decrease of 5.7 million ounces; and

a net addition of 4.4 million ounces of ore reserves from surface stockpiles.

We use the South African Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves ( SAMREC Code ), which sets out the internationally recognized procedures and standards for reporting of mineral resources and ore reserves. We use the term ore reserves herein, which has the same meaning as mineral reserves , as defined in the SAMREC code. Our reporting of its PNG Ore Reserves complies with the Australian Code for the Reporting of Mineral Resources and Ore Reserves ( JORC ) of the Australian Institute of Mining and Metallurgy. This code is materially the same as SAMREC . In reporting of reserves, we have complied with Industry Guide 7 of the U.S. Securities and Exchange Commission.

For the reporting of Ore Reserves at our South African and PNG operations, we use a gold price of U.S.\$750 per ounce. An exchange rate of R7.46 per U.S. dollar is used for South Africa and for PNG an exchange rate of U.S.\$0.80 per Australian dollar is used giving a gold price of R180,000 per kilogram and AU\$850 per ounce, respectively. These gold prices have also been used in mine planning.

In order to define that portion of a measured and indicated mineral resource that can be converted to a proven and probable ore reserve at our underground operations, we apply the concept of a cut-off grade. This is done by defining the optimal cut-off as the lowest grade at which an orebody can be mined such that the total profits, under a specified set of mining parameters, are maximized. The cut-off grade is determined using our Optimizer computer program which requires the following as input:

the database of measured and indicated resource blocks (per shaft section);

an assumed gold price which, for this ore reserve statement, was taken as R180,000 per kilogram;

planned production rates;

the mine recovery factor (MRF) which is equivalent to the mine call factor ( MCF ) multiplied by the plant recovery factor; and

planned cash costs (cost per tonne).

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Rand per tonne cash costs of the mines are historically based, but take into account distinct changes in the cost environment, such as the future production profile, restructuring, right-sizing, and other cost reduction initiatives which we expect in the aggregate to lead to lower unit costs, and for below-infrastructure ounces, an estimate of capital expenditure.

The block cave reserve at Golpu (PNG) used the PCBC computer program to define the optimal mine plan and sequencing.

The open pit reserve at Hidden Valley (PNG) is constrained by the capacity of the tailings storage facility with Whittle optimisation program guiding the most efficient mine design given this constraint.

The ore reserves represent that portion of the measured and indicated resources above cut-off in the life-of-mine plan and have been estimated after consideration of the factors affecting extraction, including mining, metallurgical, economic, marketing, legal, environmental, social, and governmental factors. A range of disciplines which includes geology, survey, planning, mining engineering, rock engineering, metallurgy, financial management, human resources management, and environmental management have been involved at each mine in the life-of-mine planning process and the conversion of resources into reserves. The ore flow-related modifying factors used to convert the mineral resources to ore reserves through the life-of-mine planning process are stated for each individual shaft. For these factors, historical information is used, except if there is a valid reason to do otherwise. Because of depth and rock engineering requirements, some shafts design stope support pillars into their mining layouts which accounts for approximately 7% to 10% discounting. Further discounting relates to the life-of-mine extraction to provide for unpay and geological losses.

Our standard for narrow reef sampling with respect to both proven and probable reserve calculations for underground mining operations in South Africa is applied on a 6 meter by 6 meter grid. Average sample spacing on development ends is at 2 meter intervals in development areas. For the massive mining at the Target operations, our standard for sampling with respect to both proven and probable reserves are fan drilling with B sized diamond drill holes (43mm core) sited at 50 meter spaced sections along twin access drives. The Kalgold open cast operations are sampled on diamond drill and reverse circulation drill spacing of no more than 25 meters on average. Surface mining at South African operations other than Kalgold involves recovering gold from areas previously involved in mining and processing, such as metallurgical plants, waste rock dumps and tailing dams (slimes and sand) for which random sampling is used.

The PNG resources are hosted in large porphyry or related mesothermal geological systems. Data is gained through diamond drilling using PQ down to NQ sized core. The core is cut in half, one half sampled at a maximum of 2 meter intervals and the other half stored in designated core storage facilities. Drill spacing is typically on less than 20 meter centres for Measured category, 20 to 40 meter centres for the Indicated category and greater than 40m for Inferred category material. Assaying for gold is by fire assay and various methods are used for copper and other elements. All assays informing the resource calculation are analysed at a NATA accredited commercial laboratory. Some sample preparation is done at the mine site laboratory. Extensive QA/QC work is undertaken and data is stored in electronic database.

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Our mining operations reported total proven and probable reserves as of June 30, 2008 are set out below:

Ore reserve statement (Imperial) as at June 30, 2008<sup>(2)</sup>

Gold

	]	PROVEN		P	ROBABLI	E		TOTAL	
Onevetions	Tons (million)	Grade (oz/ton)	Gold <sup>(1)</sup> (Moz)	Tons (million	Grade (oz/ton)	Gold <sup>(1)</sup> (Moz)	Tons (millions)	Grade (oz/ton)	Gold <sup>(1)</sup>
Operations	(IIIIIIOII)	(02/1011)	(IVIOZ)	(111111011	(OZ/tOII)	(IVIOZ)	(IIIIIIIIIII)	(OZ/LOII)	(Moz)
South Africa Underground									
Tshepong	6.64	0.177	1.18	19.32	0.176	3.39	25.96	0.176	4.57
Phakisa	0.09	0.217	0.02	21.87	0.243	5.30	21.96	0.242	5.32
Bambanani	3.15	0.283	0.89	1.09	0.268	0.29	4.24	0.279	1.18
Doornkop	0.37	0.118	0.04	1.11	0.124	0.14	1.48	0.123	0.18
Elandskraal	4.83	0.186	0.90	39.56	0.195	7.73	44.39	0.194	8.63
Masimong Virginia	4.01	0.147	0.59	1.09	0.155	0.17	5.1	0.148	0.76
operations	5.92	0.127	0.75	2.63	0.144	0.38	8.55	0.132	1.13
Evander Evander(below	3.08	0.202	0.62	8.12	0.163	1.32	11.20	0.173	1.94
infrastructure)				57.24	0.213	12.21	57.24	0.213	12.21
Target	9.22	0.214	1.97	12.72	0.179	2.28	21.94	0.194	4.25
Other underground <b>Total S.A.</b>	0.90	0.144	0.13	2.14	0.149	0.32	3.04	0.145	0.45
Underground	38.21	0.185	7.09	166.89	0.201	33.53	205.10	0.198	40.62
South Africa surface									
Kalgold	12.46	0.026	0.33	1.79	0.037	0.07	14.25	0.028	0.39
Free Gold	803.16	0.007	5.68	77.39	0.010	0.80	880.55	0.007	6.47
Total S.A.									
Surface	815.62	0.007	6.01	79.18	0.011	0.87	894.80	0.008	6.88
<b>PNG</b> Hidden Valley									
and Kaveroi	3.64	0.067	0.24	24.46	0.059	1.46	28.10	0.060	1.70
Hamata				4.33	0.074	0.32	4.33	0.074	0.32
Golpu				54.63	0.018	0.97	54.63	0.018	0.97
Total PNG	3.64	0.067	0.24	83.42	0.033	2.75	87.06	0.034	2.99
Grand total	857.47	0.016	13.34	329.49	0.113	37.15	1,186.96	0.043	50.49

<sup>(1)</sup> Gold oz figures are fully inclusive of all mining dilutions and gold losses,

and are reported

as

mill-delivered

tons and head

grades.

Metallurgical

recovery factors

have not been

applied to the

reserve figures

stated above.

The

approximate

metallurgical

recovery factors

for the table

above are as

follows:

Elandskraal

96%; Free State

95%;

Randfontein

95%; Evander

97%; Kalgold

90%; Freegold

96%; Target

97%; PNG 93%.

In order to

derive the

appropriate

plant recovery

factors for ore

reserve

estimates a

process have

been followed

where realistic

assumptions

based on

historical

performance

have been

applied. There

may be short

term fluctuation

either positive

or negative

which can lead

to small

discrepancies

between actual

and planned recovery factors.

Cut-off grades are calculated per individual shaft, each having its own unique cost structure, ore flow and recovery factors, which are entered into our Optimizer software for a cut-off calculation per shaft and expressed in oz/t units.

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In addition to the gold reserves, we also report our equity reserves for silver, copper and molybdenum from our PNG operations. Metal prices are assumed at U.S.\$12/oz for silver, U.S.\$2.40/lb for copper and U.S.\$20/lb for molybdenum.

SII	VER

	Proven Reserves				Probable Reserves			Total Reserves		
PNG	Tons (millions)	Grade (oz/ton)	Silver oz (millions)	Tons (millions)	Grade (oz/ton)	Silver oz (millions)	Tons (millions)	Grade (oz/ton)	Silver oz (millions)	
Hidden Valley and Kaveroi <b>GRAND</b>	3.64	1.197	4.36	24.46	1.077	26.35	28.10	1.093	30.71	
TOTAL	3.64	1.197	4.36	24.46	1.077	26.35	28.10	1.093	30.71	

# **COPPER**

	Proven Reserves		Probable Reserves			Total Reserves	
	Tons Grade	Cu lbs Tons	Grade	Cu lbs	Tons	Grade	Cu lbs
PNG	(millions) (%) (1	millions) (millions)	(%)	(millions)	(millions)	(%)	(millions)
Golpu		54.63	1.025	1,234.0	54.63	1.025	1,234.0
GRAND							
TOTAL		54.63	1.025	1,234.0	54.63	1.025	1,234.0

### **MOLYBDENUM**

		Proven			Probable			Total	
		Reserves			Reserves			Reserves	
			Mo						
	Tons	Grade	lbs	Tons	Grade	Mo lbs	Tons	Grade	Mo lbs
PNG	(million	(lbs/ton)	nillions	) (millions)	(lbs/ton)	(millions)	(millions)	(lbs/ton)	(millions)
Golpu				54.63	0.238	13.00	54.63	0.238	13.00
GRAND TOTAL				54.63	0.238	13.00	54.63	0.238	13.00

Our methodology for determining our reserves is subject to change and is based upon estimates and assumptions made by management regarding a number of factors as noted above in this section.

# **Worldwide Operations**

# **Description of Property**

The following is a map of our worldwide operations:

Our operational mining areas in South Africa are set forth below:

	Hectares	Acres
Doornkop	2,941	7,267
Elandsrand	5,113	12,634
Free State (includes Masimong and Virginia operations)	22,583	55,802
Tshepong and Phakisa	10,799	26,683
Bambanani	2,356	5,821
Joel	2,162	5,342
St Helena	5,856	14,471
Kalgold	615	1,520

36,898	91,174
7,952	19,649
97,275	240,363
	7,952

### **Table of Contents**

Our discontinued operational mining areas are set forth below:

	Hectares	Acres
Mt. Magnet	97,491	240,906
Cooke (Randfontein)	7,875	19,460
Lindum (Randfontein)	3,231	7,983
Total	108,597	268,349
In PNG, we hold granted tenements as set forth below:		
	Hectares	Acres
PNG	220,600	545,114
Total Worldwide Operations	426,472	1,053,826

In line with the rest of the South African mining industry, and in an effort to reduce costs, we have been rationalizing our mineral rights holdings in recent years. Accordingly, over the past three years, we have disposed of our shares and participation rights in areas within and outside of South Africa in which we have not actively pursued mining. However, in some cases we have retained certain participation rights and option clauses in disposed of properties and mining rights. We may continue to investigate further disposals.

# Geology

The major portion of our South African gold production is derived from mines located in the Witwatersrand Basin in South Africa. The Witwatersrand Basin is an elongated structure that extends approximately 300 kilometers in a northeast-southwest direction and approximately 100 kilometers in a northwest-southeast direction. It is an Archean sedimentary basin containing a six kilometer thick stratigraphic sequence consisting mainly of quartzites and shales with minor volcanic units. The majority of production is derived from auriferous placer reefs situated at different stratigraphic positions and at varying depths below the surface in three of the seven defined goldfields of the Witwatersrand Basin.

Our Hidden Valley project comprises low sulphidation carbonate-base metal-gold epithermal deposits within the Morobe Goldfield, in the Morobe Province of PNG. In the Hidden Valley project area, a batholith of Morobe Granodiorite (locally a coarse grained monzogranite) is flanked by fine metasediments of the Owen Stanley Metamorphics. Both are cut by dykes of Pliocene porphyry ranging from hornblende-biotite to feldspar-quartz porphyries. A number of commonly argillic altered and gold anomalous breccias are known, including both hydrothermal and over printing structural breccias. The Hidden Valley deposit area is dominated by a series of post Miocene faults controlling the gold mineralization, including an early north trending set and the main northwest faulting.

Our Wafi project comprises the sedimentary/volcaniclastic rocks of the Owen Stanley Formation that surround the Wafi Diatreme and host the gold mineralization. Gold mineralization occurs as extensive high-sulphidation epithermal alteration overprinting porphyry mineralization and epithermal style vein-hosted and replacement gold mineralization with associated wall-rock alteration. The Golpu Copper-Gold project is located about one kilometer northeast of the Wafi gold orebody. It is a porphyry (diorite) copper-gold deposit. The host lithology is a diorite that exhibits a typical zoned porphyry copper alteration halo and the mineralized body can be described as a porphyry copper-gold pipe .

### Harmony s Mining Operations Overview

Previously, we discussed our South African operations per legal entity, which by design were geographically grouped. These were Free State (owned by Harmony Company), Freegold, Elandsrand (originally known as the Elandskraal operations), Randfontein, Evander, Avgold, ARMgold and Kalgold. The shafts were then further divided into categories of Quality , Leveraged , Growth and Surface .

As discussed under *Item 4*. *South African Operations* , we have changed the way in which we manage our operations. In line with this change, we have amended the manner in which we discuss our operations.

# **Table of Contents**

In South Africa, we conduct underground mining at 11 operations:

Tshepong (formerly part of Freegold)

Phakisa (formerly part of Freegold)

Bambanani (formerly part of Freegold)

Doornkop (formerly part of Randfontein)

Cooke operations (consists of Cooke 1, 2 and 3 shafts, formerly part of Randfontein)

Elandsrand

Masimong (formerly part of the Free State region)

Virginia operations (consists of Harmony 2, Merriespruit 1 & 3, Unisel and Brand 3 & 5, all formerly part of the Free State region)

Target (forms part of Avgold s operations)

Evander (consists of Evander 5, 7 and 8)

Joel (formerly part of Freegold, now included under Other Underground )

We conduct surface mining at five sites (all included in Other Surface ):

Free State (also known as Phoenix)

Randfontein (Cooke plant has been classified as discontinued operations along with the Cooke operations)

Freegold

Kalgold

**Target** 

Surface mining conducted at the South African operations other than Kalgold involves recovering gold from areas previously involved in mining and processing, such as metallurgical plants, waste rock dumps and tailings dams (slimes and sand).

Internationally, our mining was previously conducted at the following two sites in Australia:

Mt. Magnet The site has put on care and maintenance as at the end of December 2007. On August 1, 2008, the Monarch Gold s administrator indicated that Monarch Gold would not proceed with the proposed purchase, and consequently the agreement was terminated. We have since resumed management of the of the Mt. Magnet operations and recommenced the sales process See *International Operations* above.

South Kalgoorlie we finalized the sale of this operation with Dioro on November 30, 2007 See *Disposals* above.

Underground and surface mining was conducted at each of these operations, with underground access through two declines at Mt. Magnet and one decline at South Kalgoorlie and surface access principally through open-pits. Surface mining at South Kalgoorlie ceased in fiscal 2006 with treatment consisting of Mt. Marion ore and low grade stockpiles. Open-pit mining recommenced at South Kalgoorlie mines during fiscal 2007. The Mt. Marion underground operation at South Kalgoorlie Mines ceased in June 2007, with only open-pit operations continuing on that site until

the date of sale to Dioro.

The following discussion is a two-part presentation of our operations:

an overview of our South African mining operations with a discussion and production analysis of each of our operating segments; and

an overview of our International (Australian and PNG) operations.

Where we have translated the Rand amount budgeted for capital expenditures in 2009 into U.S. dollars, we have used the closing rate at the balance sheet date.

# **South African Mining Operations**

Unless indicated otherwise, the discussions below are for continuing operations.

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### **Underground**

# Tshepong, Phakisa and Bambanani

**Introduction:** We acquired Tshepong, Phakisa and Bambanani when we, in January 2002, acquired the Freegold operations from AngloGold through a 50 % joint venture with ARMgold. In September 2003, we acquired 100% of these operations when ARMgold became a wholly owned subsidiary. These operations are located in the Free State province. Production from the operations is processed through two processing facilities (the Free State 1 ( **FS 1 Plant** ) and Central plant, the latter forms part of our Virginia operations).

**History:** Exploration, development and production history in the area of the Freegold assets dates from the early 1900 s, leading to commercial production by 1932. Subsequent consolidation and restructuring led to the formation of Free State Consolidated Gold Mine (Operations) Limited, which became a wholly-owned subsidiary of AngloGold in June 1998.

**Geology:** The operations are located in the Free State Goldfield, which is on the southwestern edge of the Witwatersrand basin. The Bambanani, Tshepong and Phakisa mines are located to the north and west of Welkom. Mining is primarily conducted in the Basal reef, with limited exploitation of the B Reef at Tshepong. The reefs generally dip towards the east or northeast while most of the major faults strike north-south. B Reef is being mined at Tshepong with potential of being exploited elsewhere.

**Mining Operations:** These operations are subject to the underground mining risks detailed in the Risk Factors section. The management teams regularly revisit their mining strategy and management procedures in order to minimize risks.

Mining is conducted at depths ranging from 1,911 and 3,129 meters at Bambanani and between depths of 1,671 and 2,245 meters at Tshepong. The primary mining challenges at these operations are seismic risks, ventilation and fire avoidance. Bambanani is classified as a seismically active operation with seismic activity monitoring systems installed to do active seismic risk evaluation. Seismic activity monitoring systems are upgraded on a continuous basis to ensure that it is kept abreast of emerging technology. Current ventilation and refrigeration systems were evaluated and improved with refrigeration plants installed at the Bambanani and Tshepong Mines. We believe this will improve productivity and safety after operations at Tshepong were hampered by a number of fires and seismic events that significantly affected production in the first half of fiscal 2008.

The Tshepong Decline project, which started in April 2003, has accessed an additional two levels (69 and 71) of the Tshepong North Shaft. The Sub 66 project neared completion at the end of June 2008 with a total capital expenditure of R289 million (U.S.\$39.8 million). The balance of the final estimated capital of R291million (U.S.\$40 million) will be spent during the first quarter of fiscal 2009. Production commenced at Sub 66 Decline during the year, with the build-up to continue over the next two years. Emphasis is now being placed on significantly increasing mineable reserves. Poor ground conditions caused some delays to the project, with the final mining component being completed in June 2008, and all project work scheduled for completion by December 2008. Good progress was made at the Sub 71Decline project during fiscal 2008, with a total of 1,089 metres being developed by year-end. The escalation of input costs, combined with skills shortages (design and engineering draughting personnel) had a negative impact on the project. First production is expected in August 2012, with full production anticipated in July 2017. The total estimated value of this project is R132 million (U.S.\$18 million).

The development at Phakisa, a surface shaft, sunk to 75 level elevations and a planned decline shaft to 85 levels will access the ore reserves to a depth of 2,662 meters below surface. It is estimated that the area will yield 22.0 million tons, recovering 182.5 tons of gold over a project life of 22 years. Project completion requires sinking of a decline shaft, equipping and commissioning of the shaft with access development and stoping to maximum production build-up at a capital cost of R1,348 million (U.S.\$185.5 million). To date, R866 million (U.S.\$119.2 million) has already been spent. Good progress was achieved during fiscal 2008, with the reef ore passes, reef hoisting facility and Rail-veyor reef and waste handling on 55 level completed. The second train on the Rail-veyor is planned for October 2008. Installation of the permanent water handling systems (i.e., Settlers, Main Pump Station on 77 Level, Mud press and underground dams) has progressed and expected completion is October 2008. The cooling systems of Phakisa Shaft will include a first phase 10MW Ice Plant on surface. This will be a first in the gold

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mining industry. Phakisa started the first production during September 2007 and will be opening up ore reserves for the next two years. The project is expected to be in full production in June 2011 at 83,000 tons per month. The average production rate per annum over the peak period of life of mine is 253,360 ounces.

Bambanani was restructured during the third quarter of fiscal 2008 due to the power shortages in the country. This resulted in the tonnages being reduced by 50%. There was also a significant reduction in the labor complement, with 2,086 people leaving through transfers and voluntary retrenchments. Bambanani now operates as a low tonnage high grade mine (8.0g/t recovered grade).

Conops was introduced at the operations during the quarter ended December 31, 2003. Conops were stopped at Bambanani during April 2005. Conops was officially stopped at Tshepong during January 2008 after a due diligence study conducted during fiscal 2007 indicated that Conops was not delivering at the planned levels. For a detailed discussion on Conops and the evaluation process that was followed, see *Item 5*. *Operating and Financial Review and Prospects Conops*.

During fiscal 2008, Tshepong accounted for 14% (14% in 2006 and 2007) of our total gold sales, with Phakisa accounting for 0.2% (nil in 2006 and 2007) and Bambanani 8% (8% in 2006 and 2007).

**Safety:** During fiscal 2008, the safety statistics for the operations compared to the Group average for lost time frequency rate ( **LTFR** ) of 12.83 per million hours worked and fatality frequency rate ( **FFR** ) of 0.18 are as follows:

	LTFR	FFR
Tshepong	18.52	0.17
Phakisa	4.83	0.37
Bambanani	11.18	0.40

Safety standards receive constant and high-level attention at all the operations.

**Plants:** The ore from theses operations are sent to FS 1 Plant for processing. This plant, which processes underground ore, waste rock and various surface accumulations, was commissioned in 1986 and is a conventional CIP plant processing ore that has been milled by semi-autogenous grinding. Gold is recovered from the eluate solution using zinc precipitation and a precoat vacuum filter. The precipitate recovered from the filter is calcined and smelted to bullion.

The following table sets forth processing capacity and average tons milled during the fiscal 2008 for the FS 1 Plant:

		Average Milled for
	Processing	the Fiscal Year
		Ended June 30,
Plant	Capacity	2008
	(tons/month)	(tons/month)
FS 1	420,000	416,447

In fiscal 2008, FS 1 Plant recovered approximately 97% of the gold contained in the ore delivered for processing. **Production analysis:** 

	Fiscal Year Ended June 30,				
Tshepong		2008	2007	2006	
Production					
Tons ( 000)		1,649	1,824	1,786	
Recovered grade (ounces/ton)		0.166	0.175	0.188	
Gold sold (ounces)		273,119	318,887	335,289	
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	Fiscal Year Ended June 30,				
Tshepong	2008	2007	2006		
<b>Results of operations</b> (millions) (\$)					
Product sales	223	203	180		
Cash cost	125	112	111		
Cash profit	98	91	69		
Cash costs					
Per ounce of gold (\$)	457	351	332		
Capex (millions) (\$)	27	26	21		

Tons milled from the Tshepong shaft increased to 1,824,000 in fiscal 2007, compared with 1,786,000 in fiscal 2006. Ounces sold were 318,887 in fiscal 2007, compared with 335,289 in fiscal 2006. This decrease was attributable to the decrease in recovery grade to 0.175 in fiscal 2007, compared with 0.188 in fiscal 2006. The decrease in recovery grade was primarily due to decreases in the shaft call factor, plant call factor and the average mining grade which was 1365 cmg/t in fiscal 2007, compared to 1440 cmg/t in fiscal 2006, in line with the Life of Mine (LOM) profile. Industry standard practice in South Africa is to report drill results and cut-off grades for resource estimates in gold as thickness-grade values (cmg/t).

Cash costs for the Tshepong shaft were U.S.\$112 million in fiscal 2007, compared with U.S.\$111 million in fiscal 2006. Cash costs per ounce were U.S.\$351 in fiscal 2007, compared with U.S.\$332 in fiscal 2006. This increase in unit cost was attributable primarily due to decrease in the number of ounces of gold produced.

Tons milled declined by 10% from 1,824, 000 tons in fiscal 2007 to 1,649,000 in fiscal 2008, with gold production decreasing by 14% from 318,887 ounces in fiscal 2007 to 273,119 ounces in fiscal 2008. The decrease was attributable to the decrease in the recovery grade to 0.166 in fiscal 2008, compared with 0.175 in fiscal 2007. The decrease in recovery grade was primarily due to the decrease in the shaft call factor and the average mining grade which was 1275 cmg/t in fiscal 2008, compared to 1365 cmg/t in fiscal 2007. The drop in the average mining grade is in line with the Life of Mine profile. During fiscal 2007 the mining in the east south block was in the main high grade pay shoot and as we continued mining south during fiscal 2008 we where mining closer to the edge of this high grade channel. The continuation of this channel will be mined once the sub66 and sub 71 decline is completed. Tshepong was hampered by a number of fires and seismic events that significantly affected production in the first half of fiscal 2008. The cessation of Conops also resulted in lower production.

Cash costs for the Tshepong shaft were U.S.\$125 million in fiscal 2008, compared with U.S.\$112 million in fiscal 2007. Cash costs per ounce were U.S.\$457 in fiscal 2008, compared with U.S.\$351 in fiscal 2007. This increase in unit cost is attributable primarily to decrease in the number of ounces of gold produced. Cash costs have increased by 11% in fiscal 2008, primarily due to increases in the costs of labor and supplies and the effect of inflation on supply contracts.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 26.0 million tons (4.6 million ounces) will be sufficient for Tshepong to maintain underground production until approximately 2024. Any future changes to the assumptions upon which the ore reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R195 million (U.S.\$26.8 million) in capital expenditures at the Tshepong shaft in the fiscal 2008, primarily for the decline project and ongoing development. We have budgeted R74.7 million (U.S.\$10.3 million) for project capital expenditures in fiscal 2009. This capital includes R60.6 million (U.S.\$8 million) for the additional two levels 73 and 75 and B Reef exploration project of R10.8 million (U.S.\$1.5 million).

Fiscal Year Ended June 30,
Phakisa 2008 2007 2006
Production

Tons ( 000)		34
Recovered grade (ounces/ton)		0.123
Gold sold (ounces)		4,212
	39	

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	Fiscal Year Ended June 30,		
Phakisa	2008	2007	2006
Results of operations (millions) (\$)			
Product sales	4		
Cash cost	2		
Cash profit	2		
Cash costs			
Per ounce of gold (\$)	556		
Capex (millions) (\$)	40	32	23

The expected capacity of the Phakisa shaft will be 131,175 tons per month. Phakisa has no rock hoisting facilities and all rock will be transported via a Rail system on 55 level to the Nyala shaft for hoisting to surface. First production took place during October 2007, with a build up to full production expected in the next two to three years.

On a simplistic basis reported proven and probable underground ore reserves of 21.9 million tons (5.3 million ounces) will be sufficient for the Phakisa shaft to, once production commence, maintain production until approximately fiscal 2030. Any future changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R293 million (U.S.\$40 million) in capital expenditures at the Phakisa operations in the fiscal year ended June 30, 2008. We have budgeted Rand 330 million (U.S.\$45 million) for capital expenditures in fiscal 2009, primarily for the establishing and development of the shaft.

	Fiscal Year Ended June 30,		
Bambanani	2008	2007	2006
Production			
Tons ( 000)	912	1,283	1,402
Recovered grade (ounces/ton)	0.174	0.154	0.143
Gold sold (ounces)	158,985	197,060	200,739
Results of operations (millions) (\$)			
Product sales	128	126	106
Cash cost	102	115	101
Cash profit	26	11	5
Cash costs			
Per ounce of gold (\$)	641	586	502
Capex (millions) (\$)	15	17	14

Tons milled from the Bambanani shaft decreased to 1,283,000 in 2007 compared with 1,402,000 in fiscal 2006. An underground fire in March 2007 resulted in production loss of 4,180 ounces in fiscal 2007. Ounces sold were 197,060 in fiscal 2007, compared with 200,739 in fiscal 2006. The decrease in volumes was offset by an increase in the recovered grade, which increased from 0.143 in fiscal 2006 to 0.154 in fiscal 2007.

Cash costs for Bambanani were U.S.\$586 in fiscal 2007, compared with U.S.\$502 in fiscal 2006. The costs per ounce increased by 17% in fiscal 2007, due primarily to increases in the costs of labor and supplies and the effect of inflation on supply contracts.

Tons milled from the Bambanani shaft decreased to 912,000 in 2008 compared with 1,283,000 in fiscal 2007. Ounces sold were 158,985 in fiscal 2008, compared with 197,060 in fiscal 2007. This decrease was due to the restructuring of the shaft due to power constraints but was offset by a better recovered grade, which increased from 0.154 in fiscal 2007 to 0.174 in fiscal 2008.

Cash costs for Bambanani were U.S.\$641 in fiscal 2008, compared with U.S.\$586 in fiscal 2007. The costs per ounce increased by 9% in fiscal 2008, due to the slow start up after the collapsing of the old ore pass system and increases in the costs of labor and supplies and the effect of inflation on supply contracts

The rock hoisting capacity at Bambanani is 116,000 tons per month. The average tons milled in fiscal 2008 was 76,000 tons per month due to the restructuring during the latter half of the fiscal year. 46,000 tons per month are planned for fiscal 2009, offset by an increased recovered grade.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven

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and probable ore reserves of 4.2 million tons (1.2 million ounces) will be sufficient for Bambanani to maintain underground production until approximately 2020. Any future changes to the assumptions upon which the ore reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R107 million (U.S.\$14.7 million) in capital expenditures at Bambanani in the fiscal 2008, primarily for ongoing development. We have budgeted R25.3 million (U.S.\$3.5 million) for capital expenditures in fiscal 2009 for access development for the shaft pillar extraction and R26.3 million (U.S.\$3.6 million) for ongoing development.

#### Doornkop

**Introduction**: Doornkop is located in the Gauteng Province of South Africa, approximately thirty kilometers west of Johannesburg. The operation is owned by Randfontein Estates Limited ( **Randfontein** ). Doornkop currently operates under its own mining authorization of 2,941 hectares. Production is treated at the Doornkop plant.

**History**: We acquired this operation when Randfontein became a wholly-owned subsidiary during calendar year 2008. **Geology**: These operations are situated in the West Rand Goldfield of the Witwatersrand Basin, the structure of which is dominated by the Witpoortjie and Panvlakte Horst blocks, which are superimposed over broad folding associated with the southeast plunging West Rand Syncline.

During the 2008 year the gathering of additional geological information from on-reef development and exploration drilling on the South Reef has increased our knowledge about the sedimentology and grade characteristics of this ore body. This new knowledge has been incorporated into a process whereby the geological depositional model has been extensively reviewed. This led to a change in the model from an original more channelized deposit to what we now see as being a more sheet-like deposit that was formed in a lower energy environment where the grade is distributed more evenly across the ore body. This change resulted in an overall drop in the grade estimate of the South Reef. In practice, less selective mining would be taking place as a result and that would enable higher percentage extractions of the total ore body.

There are six identified main reef groupings in the area: the Black Reef; the Ventersdorp Contact Reef; the Elsburg Formations; the Kimberleys; the Livingstone Reefs; and the South Reef. Within these, several economic reef horizons have been mined at depths below surface between 600 and 1,260 meters.

The reefs comprise fine to coarse grained pyritic mineralization within well developed thick quartz pebble conglomerates or narrow single pebble lags, which in certain instances are replaced by narrow carbon seams.

Mining Operations: These operations are subject to the underground mining risks detailed in the Risk Factors section. Due to the shallow to moderate depths of the operations, seismicity and pressure related problems are infrequent. There is a risk of subterranean water and/or gas intersections in some areas of the mines. However, this risk is mitigated by active and continuous management and monitoring, which includes the drilling of boreholes in advance of faces. Where water and/or gas are indicated in the drilling, appropriate preventative action is taken.

Currently, the Kimberley Reef is mined on the upper levels of the Doornkop Shaft between 900 and 1,100 meters below surface. Most of this mining is taking place on channel edges, which results in sporadic high, but mostly low recovered grades. Mining from conventional sections of this reef ceased during fiscal 2008 while the trackless section will continue for two years during the build-up phase of production from the South Reef. During fiscal 2008, production was suspended for 18 days due to equipping relating to the Doornkop South Reef project. These overlapped with the Eskom power shortages to some degree, and both had an impact on the production.

The Doornkop South Reef Project was announced on January 22, 2003. The project involved the deepening of the Doornkop main shaft to 1,973 meters to the South Reef, which lies between 1,650 and 2,000 meters below surface, and includes development towards these mining areas. The estimated final capital cost is R1.634 million (U.S.\$224.8 million), with R956 million (U.S.\$131.6 million) spent as of June 30, 2008.

The most significant achievement for fiscal 2008 was the completion of the sinking operations and equipping of winding plant compartments. The rock winder on surface was commissioned during March 2008. The Rock winder compartments in the shaft will be equipped by January 2009. Milestones for fiscal 2008 included the completion of station development and water and rock storage facilities

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which will facilitate the first years of production build-up to full production. Remaining work includes development of two additional silos, development to reef on 192, 197 and 202 levels and pump station commissioning in October 2008. Full production is expected in July 2012.

During fiscal 2008, Doornkop accounted for 2% (2% in 2006 and 2007) of our total gold sales.

**Safety**: The safety record at these operations during fiscal 2008 was as follows: in terms of LTFR of 8.55 per million hours worked achieved at Doornkop compared favourably with the group average of 12.83. The FFR (0.19) compared unfavorably with the group average of 0.18.

Safety at the operations receives constant and high-level attention and where problems are identified, steps are taken to address the situation.

**Plants**: The processing facilities presently comprises of one operating plant, the Doornkop metallurgical plant, which is serviced by a surface rail network. The Doornkop metallurgical plant, commissioned in 1985, is a conventional CIP plant, which was used to treat waste rock and other surface accumulations. It is now treating all ore from underground mining at the Doornkop and Cooke operations.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for the Doornkop plant:

			Average Milled for
			the
		Processing	Fiscal Year Ended
	Plant	Capacity	<b>June 30, 2008</b>
		(tons/month)	(tons/month)
Doornkop		220,000	144,537

In fiscal 2008, the Doornkop plant recovered approximately 95% of the gold contained in the ore delivered for processing. During fiscal 2006, the Doornkop plant was upgraded and all underground tons were moved from Cooke to Doornkop plant.

## **Production analysis:**

	Fiscal Year Ended June 30,		
Doornkop	2008	2007	2006
Production			
Tons ( 000)	494	597	515
Recovered grade (ounces/ton)	0.089	0.096	0.085
Gold sold (ounces)	44,413	57,364	43,593
<b>Results of operations</b> (millions) (\$)			
Product sales	35	37	23
Cash cost	31	25	24
Cash profit	4	12	(1)
Cash costs			
Per ounce of gold (\$)	703	439	558
Capex (millions) (\$)	48	38	26

Tons milled from Doornkop shaft were 597,000 in fiscal 2007, compared with 515,000 in fiscal 2006. Mining continues in the old, upper areas of the mine on the Kimberley reef, while the South Reef project is developed. Volumes increased, mainly as a result of flexibility created during the year by increasing development of the orebody. Ounces sold were 57,364 in fiscal 2007, compared with 43,593 in fiscal 2006. This increase in ounces sold was primarily due to the increase in recovered grade and additional tons milled. The recovered grade improved to 0.096 in fiscal 2007, compared with 0.085 in fiscal 2006.

Cash costs per ounce of gold were U.S.\$439 in fiscal 2007, compared with U.S.\$558 in fiscal 2006. This decrease was attributable primarily to the higher production volumes and the higher recovered grade.

Tons milled from Doornkop shaft were 494,000 in fiscal 2008, compared with 597,000 in fiscal 2007. Volumes were negatively affected mainly as a result of an 18 day planned production stoppage to facilitate required shaft work

and a reduction in volume at the conventional Kimberley mining section due to low grades. The shaft work was related to the South Reef project sinking program. In addition three days were lost to the industry through the Eskom power management process. Ounces sold were 44,143 in fiscal 2008, compared 57,364 in fiscal 2007.

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The decrease in ounces sold was primarily due to the lower recovery grade and decrease in tons milled. The recovered grade deteriorated to 0.089 in fiscal 2008, compared with 0.096 in fiscal 2007, due to the depletion of higher grade reserves in the Kimberley reef section of the mine. The conventional mining sections of this reef mined in the channel edge areas and production was stopped during June 2008. Production from trackless areas will continue during the build-up phase of mining from the project South Reef areas

Cash costs per ounce of gold were U.S.\$703 in fiscal 2008, compared with U.S.\$439 in fiscal 2007. This increase was attributable primarily to the lower production volumes and industry wide cost increases. It was also adversely influenced by the movement out of Capital areas into production areas which resulted in costs previously incurred as capital expenditure, now being spent as operational costs.

The hoisting capacity of the Doornkop shaft is 185,000 tons per month. The average tons milled in fiscal 2008 were 41,166 tons per month.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 1.5 million tons (0.2 million ounces) will be sufficient for the Doornkop shaft to maintain production until approximately fiscal 2019. Any future changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R349 million (U.S.\$48.0 million) in capital expenditures in fiscal 2008 at Doornkop, primarily for the shaft completion & equipping, supporting infrastructure and development. We have budgeted R271.2 million (U.S.\$37.3 million) for capital expenditures at the Doornkop South Reef project in fiscal 2009.

#### Elandsrand

**Introduction:** Elandsrand is located near Carletonville in the North West province of South Africa. The assets and associated liabilities were purchased during fiscal 2001 for approximately R1 billion (U.S.\$128.4 million) from Anglogold. Production from the operation is treated at the Elandskraal plant.

**History:** Gold mining began at Elandsrand in 1978 following approval of the project in 1974 by Elandsrand Gold Mining Company. Two surface shafts and two adjoining sub-vertical shafts were sunk at Elandsrand. The sub-vertical shafts at Elandsrand, which accessed the deeper part of the VCR reef in the lease area, were completed in 1984. The deepening of the sub-vertical shafts to approximately 3,600 meters below surface, has been completed. Activities are currently focused on accessing and opening up areas of the new mine and on the development and construction of support infrastructure.

**Geology:** Elandsrand contains three identified main reef groupings, the Ventersdorp Contact Reef, or VCR, the Carbon Leader Reef, or CLR and the Mondeor Reef. Only the VCR is economic to mine and has been mined at depths below surface between 1,600 and 2,800 meters with future production to take place up to 3,600 meters below surface at the Elandsrand operations. The VCR and CLR consist of narrow (20 centimeters to 2 meters) tabular orebodies of quartz pebble conglomerates hosting gold, with extreme lateral continuity.

At the Elandsrand operation, the vertical separation between the VCR and CLR increases east to west from 900 meters to 1,300 meters as a result of the relative angle of the VCR unconformity surface to the regional stratigraphic strike and dip. The CLR strikes west-southwest and dips to the south at 25 degrees. The VCR strikes east-northeast and has a regional dip of 21 degrees to the south-southeast. Local variations in dip are largely due to the terrace-and-slope palaeotopography surface developed during VCR deposition.

**Mining Operations:** The Elandsrand mine is subject to the underground mining risks detailed in the Risk Factors section.

The Elandsrand mine, a mature mine with a declining production profile, has the challenge of a new mine being developed underneath the old mine. The implementation of Conops between August 2004 and February 2005 improved production. However, after an assessment done during fiscal 2008, Conops was stopped during February 2008. The operation is still hampered by the lack of flexibility, an issue that will be addressed by the full commissioning of the new mine. Due to the operating depths of the Elandsrand underground operations, seismicity and high rock stress are significant risks at the mine. We regularly review our mining strategy and management procedures at all of mining operations in our efforts to mitigate these risks. The primary challenges facing the

Elandsrand operations are the lowering of working costs, increasing mining flexibility, controlling capital expenditure and the timely completion of the Elandsrand New Mine by fiscal 2010.

Capital development on three levels of the New Mine has been completed and these levels are producing 54% of the total ounces from the Mine. Ongoing development is taking place in both easterly and westerly directions on these levels. Access development delays on two other levels resulted from slow progress of the access haulages through the Cobra Dyke.

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During 2008, further progress was made with the project, notably:

22 kv system to 100 level was completed and commissioned.

The turbine dam between 92 and 95 level was completed during the year.

The development of the refrigeration chambers on 98 and 100 level was completed.

The centre hole of the No.3 Backfill shaft was drilled during the year and the preparation for the sinking of the sub-bank was started in June 2008.

The end of capital position was reached on 113 level RAW East.

The centralized blasting system was installed and commissioned on 102, 105, 109 and 113 levels.

All piping associated with the pumping on 115 level was installed during the year including all electrical panels associated with the pumping.

The chilled water feed and return shaft columns were installed in No.2 Backfill shaft from 95 to 105 level. The project is expected to be completed by fiscal 2010 and is expected to have a life of mine of 20 years. From the inception of the project through the end of fiscal 2008, R776 million (U.S.\$106.8 million) has been expended. A further R228 million (U.S.\$31.4 million) has been budgeted to complete the project.

In October 2, 2007, an incident occurred at the Elandsrand operation involving a compressed pipe column which broke off below the shaft surface bank and fell to the bottom of the men and - material shaft, causing extensive damage to the shaft steel work and electrical cables. The incident resulted in 3,000 workers being stranded underground for more than 30 hours. Mining operations were temporarily suspended for 42 days to allow for repairs to be conducted in the shaft. On November 16, 2007, we announced that a tripartite team, consisting of management, unions and the Department of Minerals and Energy had found the shaft to be in good working condition. Elandsrand mine was brought back into operation on November 19, 2007 after it followed precautionary safety procedures during the start up of underground workings. Management presented its findings of the investigation to the DME relating to the pipe failure, emergency power, water and evacuation services and procedures, as well as the impact of Conops on maintenance. While the emergency services were found to be acceptable, we have revised our emergency procedures and are in the process of completing a new Code of Practice relating to emergency preparedness. Conditions in the working places, following a 42 day period during which no production took place, were found to be better than expected. Production at Elandsrand has resumed, and the shaft was back in full production in December 2007.

In fiscal 2008, our Elandsrand operations accounted for approximately 8% (8% in fiscal years 2007 and 2006) of our total gold sales.

**Safety**: During fiscal 2008, the safety record at the Elandsrand mine in terms of lost time frequency rate 18.49 per million hours worked compared unfavourably with the group average of 12.83. Significant work was done to address the seismic risk described above and the fatality frequency rate (0.08) returned to a more consistent ratio with the group average of 0.18 for underground operations. Safety standards from our other operations are being applied at Elandsrand and receive constant and high-level attention.

Plants: Commissioned in 1978, the Elandsrand Plant has milling in closed circuit with primary and secondary hydrocyclones, secondary ball milling in closed circuit with hydrocyclones, thickening and cyanide leaching in a CIP pump cell carousel circuit. The CIP was commissioned after an upgrade of the facility in 1999. Loaded carbon from the Elandsrand Plant is transported by road to the Central Plant at Virginia for elution, electro-winning and smelting to produce gold. Residues from the CIP are pumped either to a backfill plant or directly to the tailings facility. Ore from Elandsrand underground operations are delivered to the plant for treatment via conveyor belt after being hoisted from underground. Due to a high percentage of freegold, a gravity concentration circuit is used to extract a large percentage of the gold. The sludge from this concentrator is then transported by air to the Target Plant for extraction and

smelting.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for the plant:

				Average Milled for the
	Plant		Processing Capacity	Fiscal Year June 30, 2008
			(tons/month)	(tons/month)
Elandsrand Plant			185,000(1)	81,713
		44		

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(1) Processing capacity will reach its optimal capacity upon completion of the Elandsrand New Mine Project.

In fiscal 2008, the Elandsrand Plant recovered approximately 96.31% of the gold contained in the ore delivered for processing.

### **Production analysis:**

	Fiscal Year Ended June 30,		
Elandsrand	2008	2007	2006
Production			
Tons ( 000)	981	1,117	987
Recovered grade (ounces/ton)	0.162	0.174	0.173
Gold sold (ounces)	158,631	194,710	170,867
<b>Results of operations</b> (millions) (\$)			
Product sales	133	124	90
Cash cost	103	103	89
Cash profit	30	21	1
Cash costs			
Per ounce of gold (\$)	652	527	523
Capex (millions) (\$)	44	33	31

Tons milled from the Elandsrand shaft were 1,117,000 in fiscal 2007, compared with 987,000 in fiscal 2006. Ounces sold increased to 194,710 in fiscal 2007, compared with 170,867 in fiscal 2006 as a result of the increased volumes in production. Mining continues in the old, upper areas of the mine, while the new mine project is completed. Recovered grades increased during fiscal 2007, resulting in an average of 0.174 in fiscal 2007, compared to the average of 0.173 in fiscal 2006.

The increase in labor rates and inflation were the main contributors to the increase in cash cost from U.S.\$523 per ounce in fiscal 2006 to U.S.\$527 per ounce in fiscal 2007.

Tons milled from the Elandsrand shaft were 981,000 in fiscal 2008, compared with 1,117,000 in fiscal 2007, and ounces sold were 158,631 in fiscal 2008, compared with 194,710 in fiscal 2007. Volumes were negatively affected, mainly as a result of days lost to the shaft accident, namely 42, and the continued lack of flexibility in face length to deal with erratic face grades and seismicity. The recovered grade declined during fiscal 2008 as a result of higher channel widths on the Western section of the mine, as well as a delay in starting up some of the higher grade areas, due to it taking longer than expected to bring the environmental conditions within standard in deeper mining areas, after the shaft incident in October 2007.

The increase in labor rates and inflation were the main contributors to the increase in cash cost from U.S.\$527 per ounce in fiscal 2007 to U.S.\$652 per ounce in fiscal 2008. Costs per ounce have increased in fiscal 2008 by 24%, due primarily to the reduced ounces as a result of the shaft incident causing the mine to stand for 42 days. Increases in the costs of labor and supplies, especially steel and the effect of inflation on supply contracts further contributed to the increase in cash cost. Electricity increases in excess of current inflation also negatively impacted on costs.

Elandsrand currently operates one production shaft, with a current hoisting capacity of 190,000 tons per month which will be utilized to its full capacity, once the Elandsrand New Mine Project is complete and production build reaches its maximum. The average tons milled in fiscal 2008 was 81,750 tons per month.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 44.4 million tons (8.6 million ounces) will be sufficient for the Elandsrand shaft to maintain underground production until approximately calendar year 2026. Any future changes to the assumptions upon which the ore reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations

**Capital Expenditure:** We incurred approximately R318.4 million (U.S.\$43.8 million) in capital expenditures at the Elandsrand operations in fiscal 2008 mainly for the sub shaft deepening project and ongoing development.

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We have budgeted R433.6 million (U.S.\$59.7 million), for capital expenditures at the Elandsrand operations in fiscal 2009, primarily for the sub-shaft deepening project and ongoing development expenditure.

## Masimong

**Introduction:** Masimong is located in the Free State province, near Riebeeckstad. The Masimong complex comprises of Masimong 4 and 5 shaft. Mining is conducted at depths ranging from 1,518 meters to 1,994 meters. Ore is treated at the Central Plant and FS 1 Plant.

**History:** Masimong is located in the Free State Goldfield on the south-western edge of the Witwatersrand Basin. We purchased the Masimong complex (formerly know as Saaiplaas Shafts 4 and 5) on September 1998.

**Geology:** Masimong is located in the Free State Goldfield on the south-western edge of the Witwatersrand Basin. The operation, which originally exploited the Basal Reef, is also mining secondary reefs, most notably the Leader Reef (15-20m above Basal), the B Reef (100m above Basal) and the A Reef (40m above the B Reef). Harmony 2 is continuing to mine high grade Basal Reef pillars, as well as Leader Reef, but the majority of its production comes from the A Reef. The A Reef is highly channelized and mining is confined to these distinct channels. Dips are shallow towards the east, becoming steeper approaching the De Bron Fault in the west.

Mining Operations: The operations are subject to the underground mining risks detailed in the Risk Factors section. Due to the shallow to moderate depths of the underground operations, seismicity related problems are relatively infrequent. We regularly revisit our mining strategy and management procedures in connection with our efforts to mitigate risks of these problems. There is a risk of subterranean water and/or gas intersections in some areas of the mine. However, this risk is mitigated by active and continuous management and monitoring, which includes the drilling of boreholes in advance of faces. Where water and/or gas is indicated in the drilling, appropriate preventative action is taken. The principal challenges at the operations of achieving optimal volumes and grades of ore production are addressed by stringent ore reserve management.

In fiscal 2002, we began implementing the Masimong Expansion Project, which includes developing the Basal and B Reef orebodies in the Masimong shaft area and equipping the shaft. The envisaged growth from the project was not realized in 2005 and 2006, and as a result the project was halted in June 2006. Conops was implemented in the third quarter of fiscal 2006 but, after a reassessment, was stopped at Masimong 5 Shaft during the second quarter of fiscal 2008.

In fiscal 2008, Masimong accounted for approximately 6% (7% in fiscal 2007 and 6% in fiscal 2006) of our total gold sales.

**Safety**: The safety record at Masimong during fiscal 2008 in terms of LTFR of 9.57 per million hours worked compared favorably with the group average of 12.83. The FFR of 0.12 at Masimong compared favorably with the group average of 0.18 for underground operations.

**Plants**: Ore from Masimong is treated at the Central and Saaiplaas plants. See *Item 4*. *South African Mining Operations Virginia Operations Plants*.

### **Production analysis:**

	Fiscal Year Ended June 30,		
Masimong Shaft Complex	2008	2007	2006
Production			
Tons ( 000)	892	1,074	1,020
Recovered grade (ounces/ton)	0.132	0.138	0.133
Gold sold (ounces)	117,575	147,958	136,153
Results of operations (millions) (\$)			
Product sales	96	95	73
Cash cost	88	82	67
Cash profit	8	13	6
Cash costs			
Per ounce of gold (\$)	745	559	489
Capex (millions) (\$)	16	15	14

Tons milled from the Masimong shaft complex were 1,074,000 in fiscal 2007, compared with 1,020,000 in fiscal 2006, and ounces sold were 147,958 in fiscal 2007, compared with 136,153 in fiscal 2006. Year on year production was slightly higher with a slightly higher recovery grade.

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Cash costs were U.S.\$82 million in fiscal 2007 compared with U.S.\$67 million in fiscal 2006 with cash costs per ounce at U.S.\$559 in fiscal 2007 compared with U.S.\$489 in fiscal 2006. This increase in cash cost is mainly attributable to increase in labor costs as a result of the annual wage increases as well as a 21% increase in number of employees. This increase in people was to fully staff the operation for Conops. This was the first year that Masimong was fully on a Conops cycle. The effect of Conops is increased costs in the short-term as additional people are utilized without being fully operational, but increased profitability in the longer-term as higher volumes have a positive impact on the bottom-line.

Tons milled from the Masimong shaft complex were 892,000 in fiscal 2008, compared with 1,074,000 in fiscal 2007. Ounces fold were 117,575 in fiscal 2008, compared with 147,958 in fiscal 2007. This is mainly attributable to the reduction in tons milled.

The drop in recovered grade by 0.006 ounces per ton from fiscal 2008 to fiscal 2007 can be attributed to a 2.63% drop in grade mined and a 0.715% drop in the mine call factor. Both these parameters were negatively influenced by the B Reef, as mining of B Reef in fiscal 2008 was significantly focussed in the South Eastern portion of the 5 shaft lease area. This area is typically a highly channelized deposit with economic channels occurring at oblique to perpendicular angles to the normal depositional axis of the B Reef. These channels are generally small measured on the latitudinal axis and highly unpredictable, thus making mining and valuation extremely difficult.

Cash costs were U.S.\$88 million in fiscal 2008 compared with U.S.\$82 million in fiscal 2007 with cash costs per ounce at U.S.\$745 in fiscal 2008 compared with U.S.\$559 in fiscal 2007. This increase in cash cost is mainly attributable to increase in labor costs as a result of the annual wage increases.

The total shaft hoisting capacity is 134,000 tons per month. The average tons milled in fiscal 2008 were 74,354 tons per month.

The Conops production cycle was stopped on Masimong in December 2007. Through restructuring and reengineering, the excess labor was identified and relocated to other shafts. This process was completed in March 2008. Additional Conops costs were incurred during the phasing out period (lower production with the full complement of Conops labor).

The year on year decrease in tonnage from fiscal 2007 to fiscal 2008 is a result of the abovementioned stoppage of Conops The mine plan was revised during January 2008 to adjust to the non-Conops production cycle.

During the initial stages of restructuring significant production upsets were encountered due to the redeployment of mine employees and termination of contractors and labor hire employees.

This upset was especially evident in the March 2008 quarter, when production dropped to 160,832 tons which equates to a 20.7% drop from the previous (December 2007) quarter. the June 2008 quarter was the first full normalized production quarter after the stoppage of Conops production cycle.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 5.1 million tons (0.8 million ounces) will be sufficient for the Masimong shaft complex to maintain underground production until approximately fiscal 2018. Any future changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R114.0 million (U.S.\$15.7 million) in capital expenditures at Masimong in fiscal 2008. We have budgeted a total of R109.4 million (\$15.0 million) for capital expenditures at Masimong in fiscal 2009. Of this, R17.0 million (U.S.\$2.3 million) is for upgrading of the rail bound equipment, with the remainder budgeted for ongoing development.

### Virginia operations

**Introduction:** The Virginia operations are located in the Free State province, near Virginia. The Virginia operations consist of the original Harmony mines, the Unisel mine, Brand shafts 2, 3 and 5. Mining is conducted at these operations at depths ranging from 682 meters to 2,042 meters. Ore is treated at the Central Plant and FS 1 Plant. **History:** Our operations in the Free State began with the Harmony mine, which is an amalgamation of the Harmony, Virginia and Merriespruit mines. Beginning in 1996, we began purchasing neighboring mine shafts. The Unisel mine was purchased in September 1996, the Saaiplaas mine Shafts 2 and 3 were purchased in April 1997, the Brand mine Shafts 2, 3 and 5 were purchased in May 1998.

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**Geology:** These operations are located in the Free State Goldfield on the south-western edge of the Witwatersrand Basin. The operations, which originally exploited the Basal Reef, are also mining secondary reefs, most notably the Leader Reef (15-20m above Basal), the B Reef (100m above Basal) and the A Reef (40m above the B Reef). Harmony 2 is continuing to mine high grade Basal Reef pillars, as well as Leader Reef, but the majority of its production comes from the A Reef. The A Reef is highly channelized and mining is confined to these distinct channels.

Merriespruit 1 is exploiting the Basal and Leader reefs, as well as locally developed high grade Middle Reef pockets. The mining operations of the Middle Reef was discontinued during 2008 at Merriespruit 1 shaft. Dips at Merriespruit 1 shaft tend to be at 8° to the north west with numerous east west trending Faults/Dykes which cut through the shaft pillar , the Dolfin Sill which disrupt the reef horizoning the north east and the De Bron Fault in the west. Merriespruit 3 shaft is mining Leader and Basal reef, with the majority being concentrated on the Leader reef due to the fact that a large area of the shaft is beyond the zone of convergence with the Basal reef. Dips tend to be between 10° and 20° to the Northwest. The structure is fairly complicated with the De Bron fault in the west, the Virginia fault in the east and the Merriespruit thrust fault in the south, resulting in significant strike and dip changes and large overlapping reef blocks.

At Unisel, the Basal, Middle and Leader Reefs are mined, with reefs dipping 30° to the east. The structure is complex due to a number of north-south trending faults as well as sills close to the Basal Reef. Brand 1/3 is mining Basal pillars together with the A Reef. The structure is dominated by north-south trending faults, often with lateral shift. Brand 2 and 5, currently on care and maintenance, have mined mostly Basal and Leader Reefs.

Mining Operations: The operations are subject to the underground mining risks detailed in the Risk Factors section. Due to the shallow to moderate depths of the underground operations, seismicity related problems are relatively infrequent with the exception of Unisel and Harmony shafts and Merriespruit 1 shaft pillar, where these problems receive constant attention. We regularly revisit our mining strategy and management procedures in connection with our efforts to mitigate risks of these problems. There is a risk of subterranean water locally at Merriespruit 1, referred to as water pillar area, and/or gas intersections in some areas of the mine. However, this risk is mitigated by active and continuous management and monitoring, which includes the drilling of boreholes in advance of faces. Where water and/or gas is indicated in the drilling, appropriate preventative action is taken. The principal challenges at the operations of achieving optimal volumes and grades of ore production are addressed by stringent ore reserve management.

Development was restarted at the Virginia operations in 2006, a positive life of mine has been re-established on all the shafts and the shafts have returned to profitability.

Merriespruit 1 installed a floating shaft tower in the shaft barrel in 2005, to allow mining of the shaft pillar. Mining of the inner shaft pillar commenced in October 2006 and is being successfully mined. Approximately 70% of the pillar is mined out.

Merriespruit 3 shaft improved its haulage and tramming conditions during fiscal 2007 and 2008, allowing the shaft to improve its safety and tonnage profile. Equipping of basal reef on 12 level took place during 2008 and limited mining of the basal reef will resume for the first time since 2002.

Harmony 2 shaft re-started the H2 shaft pillar Leader reef exploration program in 2005, following the improvement in the gold price. This ground has been successfully mined and the extension of the pay shoot towards H3 shaft is currently being explored. The evaluation and quantification of the A reef vent project block were completed in 2007 (drilling etc.) and development started in 2008. Basal reef pillars belonging to Merriespruit 1 are being accessed through the shaft. The 1<sup>st</sup> pillar is currently being mined and equipping towards further pillars is ongoing.

Brand 1 shaft is being utilized to mine the Brand 1 and 3 ore bodies. Major effort has been done to improve the infrastructure of the shaft, which has allowed the shaft to improve its tonnage handling to the current levels of some 44 000t per month. A loop is currently being developed in the 40 level haulage to allow access to the A reef in the Brand 3 area. This will allow improved servicing of the area and a 2,5 Km reduction in tramming distances.

At Brand mine the grade remained constant year on year at 0.103g/t, while the tonnage increased from 445,000 tons to 459,000 tons. This resulted in an increased gold production, up from 45611 oz s in 2007 to 47101 oz,s in 2008. The tonnage increased as a result of improved efficiencies in 2008 in spite of Eskom power supply problems in the second half of the production year.

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Unisel experienced a decrease in tonnage from 614,000 tons in 2007 to 547,000 tons in 2008. This was primarily a consequence of the Eskom power cuts in February and lower subsequent production as a result of power restrictions. At the same time the mine experienced a decline in grade from 0.130 in 2007 to 0.124 in 2008 due to the depletion of higher grade Middle Reef panels. The combined factors of tonnage and grade led to the decrease in ounces from 79,992 in 2007 to 67,613 in 2008

The Brand 2 and Brand 5 Shafts are currently on care and maintenance whilst Brand 5 serves as a major pumping shaft for the President Steyn, Brand, Bambanani and Unisel mining areas. Harmony 3 shaft is currently used only as a service shaft for pumping although some of its reserves are mined through the adjacent Harmony 2 shaft.

In fiscal 2008, Virginia operations accounted for approximately 13% (12% in fiscal 2006 and 2007) of Harmony s total gold sales.

**Safety:** The safety record during fiscal 2008 in terms of LTFR of 19.79 per million hours worked compared unfavorably to the group average of 12.83. The FFR of 0.20 compared unfavorably to the group average of 0.18 for underground operations.

**Plants:** There are two metallurgical plants at the Free State operations, namely Central and Saaiplaas plants. A third plant, Virginia plant, was closed in fiscal 2005 and clean-up operations implemented and, during fiscal 2008, a project was initiated on the demolition of the plant which will continue through into fiscal 2010. The Central plant was commissioned in 1986 and employs CIP/CIL hybrid technology. It is currently dedicated to the treatment of both underground ore and waste rock. The Saaiplaas plant, commissioned in the late 1950 s, has been converted from the zinc precipitation filter process to the CIL. It currently processes reclaimed slime at 6 million tons per annum.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for each of the plants:

		Average Milled for the Fiscal Year
	Processing	Ended
Plant	Capacity	<b>June 30, 2008</b>
	(tons/month)	(tons/month)
Central	168,000	141,500
Saaiplaas	500,000	583,650

In fiscal 2008, our Central plant recovered approximately 95% of the gold contained in the ore delivered for processing and approximately 48.7% at the Saaiplaas plant.

	Fiscal Year Ended June 30,		
Virginia operations	2008	2007	2006
Production			
Tons ( 000)	2,349	2,507	2,368
Recovered grade (ounces/ton)	0.107	0.106	0.117
Gold sold (ounces)	250,324	266,948	276,285
Results of operations (millions) (\$)			
Product sales	204	172	146
Cash cost	180	147	135
Cash profit	24	25	11
Cash costs			
Per ounce of gold (\$)	719	546	487
Capex (millions) (\$)	20	19	14

Tons milled from the Virginia operations increased to 2,507,000 in fiscal 2007, compared with 2,368,000 in fiscal 2006. This is partially attributable to the increase in volumes at Merriespruit 1, mainly as a result of being able to commence mining in the shaft pillar area, after completion of the shaft tower installation project.

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Equipping and development was enhanced enabling entry to panels at an increased rate. Also contributing to this increase in tons milled was the improved blasting frequency at Unisel. This increase was offset by a decrease in tons milled of 81,000 at Harmony 2, primarily due to an underground fire experienced in the Basal pillar.

Ounces sold were 266,948 in fiscal 2007, compared with 276,285 in fiscal 2006. The decrease in ounces sold was negatively influenced by the lower grade. Contributing to the decrease in average grade was the fire in the high grade basal pillar area at Harmony 2, where the grade decreased from 0.116 in fiscal 2006 to 0.089 in fiscal 2007. The erratic grade of the Middle reef at Merriespruit 1 also attributed to the decrease in grade. The negative impact of the grade on the ounces sold was partially offset by the increase in ounces sold from the other operations, mainly due to an increase in volumes.

Cash costs were U.S.\$147 million in fiscal 2007, compared with U.S.\$135 million in fiscal 2006. This increase was primarily attributed to higher production levels and an increase in labor cost. Included is approximately R3.1million (U.S.\$0.4 million) for costs to fight the fire at Harmony 2 and replace critical items lost in the fire. Merriespruit 1 experienced an increase in costs as a result of the additional support required in the shaft pillar area. At Unisel, additional costs were incurred for upgrade of the refrigeration plant and infrastructure. Cash costs per ounce were U.S.\$546 in fiscal 2007, compared with U.S.\$487 in fiscal 2006. This increase was attributable primarily to a lower recovery grade resulting in lower ounces as well as an increase in cash costs.

Tons milled from the Virginia operations decreased from 2,507,000 in fiscal 2007 to 2,349,000 in fiscal 2008. A fire at Merriespruit 1 affected production in the first quarter of fiscal 2008 and also adversely affected the flexibility at this operation. Labor shortages and power outages also affected production negatively in the latter part of the year. Industrial action by labor unions led to loss of production shifts. Stoping restrictions as recommended by rock engineers affected production in the pillar areas.

Lack of availability of replacement ground at Merriespruit 3 also impacted negatively on the volumes for fiscal 2008. Stoping width restrictions to 2.5m by Rock engineering recommendations, adversely affected both tons and gold content (less channel exposure resulting in lower gold content, and lower stope width in lower tons.) The marginality of the ore body and the subsequent stop-start history of the development on the shaft during periods of lower gold price have created an availability and flexibility problem on the shaft. Labor availability was problematic, with less than planned crews available for a significant period of the year. (17 out of 18 crews) The location and opening of the downdip extension of a wide leader pay shoot and a change of mining direction to parallel the pay trend to reduce the crew moves proved successful.

Harmony 2 shaft was affected by power shortages during the third quarter resulting in a number of lost production shifts. Coupled with this was an incident at the substation at Harmony 2 Shaft which led to a loss of 2 shifts in March 2008. Seismicity in high grade basal pillars leading to a drop in the face grade and production stoppages during fiscal 2008. A low strike rate from development led to a slow opening up of payable reserves resulting in a lack of flexibility. Labor shortages were also experienced especially after the Voluntary Retrenchment Scheme during which no outside labor could be hired as replacement prior to the relocation of labor from other Harmony shafts.

Ounces sold were 250,524 in fiscal 2008, compared with 266,948 in fiscal 2007. The decrease in ounces was primarily due to a decrease in tons milled. The grade for fiscal 2008 of 0.107 was similar to the recovered grade of 0.106 for fiscal 2007.

Cash costs were U.S.\$180 million in fiscal 2008, compared with U.S.\$147 million in fiscal 2007. This can be partly attributed to an increase in labor cost as well as costs at Merriespruit 1 for additional support required in the shaft pillar area and the cost related to the fire in the first quarter. Cash costs per ounce were U.S.\$719 in fiscal 2008, compared with U.S.\$546 in fiscal 2007. This increase was attributable primarily to increased labor rates and inflationary escalations as well as the decrease in ounces produced.

The upgrading of the old infrastructure at Brand 3 and Unisel during fiscal 2008 led to the increase in their cash cost. Labor in fiscal 2008 on Brand 3 increased due to the inclusion of equipping crews to assist with the opening up of old areas, which were previously stopped. This led to the increase in the tons and an increase in plant costs. The inclusion of the Bobebe employees, previously carried by Central Services contributed to the increase in our cash costs. The upgrading of rails and the loco conversions on Unisel and Brand 3, to comply to new railbound specifications, also contributed to the higher cash costs in fiscal 2008.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 8.5 million tons (1.1 million ounces) will be sufficient for the Virginia operations to maintain production until approximately 2015. However, any future

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changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of the future operations.

**Capital Expenditure**: We incurred approximately R152 million (U.S.\$20 million) in capital expenditures at the Virginia operations in fiscal 2008, principally for ongoing capital development. We have budgeted R138 million (U.S.\$18 million) for ongoing capital development in fiscal 2009, as well as R7 million (U.S.\$0.9 million) for upgrading rail bound equipment. An additional R10 million (U.S.\$1 million) has been earmarked for various drilling exploration projects.

## **Target**

**Introduction:** We acquire the Target mine when Avgold became a wholly owned subsisdiary in fiscal 2004. Target is situated near the town of Allanridge in the Free State Province, some 270 kilometers southwest of Johannesburg. Located at approximately latitude 28 (LOGO) 00 S and longitude 26 (LOGO) 30 E on the northern limit of the Welkom Goldfields, the site is accessed via the R30 motorway situated between the towns of Bothaville and Welkom.

**History:** The Target Operations area was initially explored through surface drilling in the late 1980s with further exploration being undertaken from a 5.6 kilometers long decline, commenced in 1995, driven from 203L at Lorraine No. 1 Shaft. A positive feasibility study into the development of a 105 ktpm operation was produced in May 1998 resulting in the decision to develop the Target mine. A detailed mine design was produced in 2000 and the mine officially opened in May 2002. Upon closure of the Lorraine mine in August 1998, the Lorraine No. 1 and No. 2 Shafts were transferred to the Target mine, becoming Target No. 1 and No. 2 Shafts, respectively.

**Geology:** The gold mineralization currently exploited by Target mine is contained within a succession of Elsburg and Dreyerskuil quartz pebble conglomerate reefs hosted by the Van Heeverrust and Dreyerskuil Members of the Eldorado Formation, respectively. Additional mineral resources have been delineated in the Big Pebble Reefs of the Kimberley Formation but these are not planned to be exploited in the current life of mine plan.

The majority of the mineral reserves at Target mine are contained within the Eldorado fan, a structure with dimensions of some 135 meters vertically, 450 meters down-dip and 500 meters along strike. The Eldorado fan is connected to the subsidiary Zuurbron fan, located between the Target mine and Lorraine, by a thinner and lower grade sequence of Elsburg reefs termed the Interfan area. To the north of the Eldorado fan, a number of fans have been intersected by surface drilling of which the Siberia and Mariasdal fans are the most significant. These fans are subject to ongoing technical studies and do not form part of the current Target mine life of mine mineral reserve.

A number of faults that displace the reefs of the Target mine have been identified of which the most prominent are the north-south trending Eldorado fault and the east-west trending Dam and Blast faults. The Eldorado uplifts the more distal portions of the Elsburg and Dreyerskuil Reefs while the Blast fault forms the northern border of the Target mine

Target North is sub-divided into the Paradise, Siberia and Mariasdal areas by the east-west trending Siberia and Mariasdal faults. To the north of the Siberia fault, the Eldorado fault continues trending more to the northwest and an additional north-south trending fault, the Twin fault has uplifted the distal portions of the reefs. North of the Maraisdal fault, the reef horizons are at a depth greater than 2,500 meters below surface. Resources have been delineated on strike up to 15 kilometers north of the Target mine

Approximately 40 kilometers north of Target mine, surface boreholes have intersected gold bearing reefs in the Oribi area close to the town of Bothaville. Resources have been delineated at Oribi on the VCR and Elsburg at depths of approximately 2,750 meters below surface.

**Mining operations:** Target is subject to the risks associated with underground mining detailed in the Risk Factors section.

Mining operations comprise one primary underground mine commissioned in May 2002, making use of information systems and mechanization, combined with process-driven organizational design that relies on a multi-skilled workforce. The majority of the production is derived from mechanized mining; however, conventional stoping is still employed primarily to de-stress areas ahead of the mechanized mining.

In fiscal 2008, Target experienced a number of issues, including falls of ground, flooding, the low availability of mechanized equipment and belt systems and poor fragmentation in the massive stopes. These all contributed to significantly reduce volumes and flexibility. The mine also

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continued to contend with issues such as grade and grade estimation, an area which received a great deal of attention in the last quarter, and which showed signs of improvement.

Some of the new trackless fleet arrived in the second half of fiscal 2008 and the water handling problems (that caused flooding of the ends) had largely been addressed by June 2008.

In fiscal 2008, Target s operations accounted for 4% of our total gold sales (6% in fiscal years 2007 and 2006). **Safety:** The safety record at Target during fiscal 2008 in terms of lost time frequency rate of 10.76 per million hours worked compared favorably with the group average of 12.83 while the fatality frequency rate of 0.0 compared favorably with the group average of 0.18 for underground operations.

Safety at the operations receives constant and high-level attention and where problems are identified steps are taken to address the situation.

**Plants:** Target Plant was commissioned towards the end of 2001, and currently treats both underground ore and surface waste rock dump. The process route comprise primary crushing, open circuit primary SAG milling, secondary ball milling closed with hydrocyclones, thickening, cyanide leaching, CIP adsorption, elution, electrowinning, smelting and tailings disposal. The milling circuit incorporates gravity concentration, the concentrates from which are processed via intensive cyanidation and electrowinning.

The installation of a ROM mill to enable the mills to run autogenously is complete and the ROM mill was commissioned in November 2007. The total project capital expenditure was R22 million (U.S.\$3 million). The objective is to save R 1.2 million on grinding media monthly. All capital on this project has been spent and the project was closed during May 2008.

The following table sets forth processing capacity and average tons milled during fiscal 2008:

			Average willed For
			the
		Processing	Fiscal Year Ended
	Plant	Capacity	June 30, 2008
		(tons/month)	(tons/month)
Target Plant		105,000	97,973

In fiscal 2008, the Target Plant recovered approximately 96% of the gold contained in the ore delivered for processing.

## **Production analysis:**

	Fiscal Year Ended June 30,		
Target	2008	2007	2006
Production			
Tons ( 000)	686	904	813
Recovered grade (ounces/ton)	0.124	0.158	0.185
Gold sold (ounces)	85,006	142,433	150,196
Results of operations (millions) (\$)			
Product sales	69	91	81
Cash cost	51	53	52
Cash profit	18	38	29
Cash costs			
Per ounce of gold (\$)	605	370	346
Capex (millions)(\$)	35	16	10

Tons milled from the Target shaft increased to 904,000 in fiscal 2007, compared with 813,000 in fiscal 2006. The age of the current fleet (vehicles) is of a big concern.

Ounces sold were 142,433 in fiscal 2007, compared with 150,196 in fiscal 2006. The decrease in ounces sold, was negatively influenced by the lower grade. The recovery grade decreased from 0.185 in fiscal 2006 to 0.158 in fiscal 2007.

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Cash costs for Target were U.S.\$53 million in fiscal 2007, compared with U.S.\$52 million in fiscal 2006. This increase was primarily attributed to higher production levels, and an increase in labor cost. Cash costs per ounce were U.S.\$370 in fiscal 2007, compared with U.S.\$346 in fiscal 2006. This increase was attributable primarily to a lower recovery grade as well as an increase in cash costs.

Tons milled from the Target shaft decreased from 904,000 in fiscal 2007 to 686,000 in fiscal 2008. The main issues contributing to the drop in production include trackless fleet availability, flooding of mining block, fragmentation problems in massive stopes and lack of face length especially for massive stopes. Problems encountered in the massive stopes were the main contributor to grade and volume decreases.

Ounces sold were 85,006 in fiscal 2008, compared with 142,433 in fiscal 2007. The decrease in ounces sold was negatively influenced by the lower grade. The recovery grade decreased from 0.158 in fiscal 2007 to 0.124 in fiscal 2008.

Cash costs for Target were U.S.\$51 million in fiscal 2008, compared with U.S.\$53 million in fiscal 2007. This decrease was primarily attributed to lower production levels. Cash costs per ounce were U.S.\$605 in fiscal 2008, compared with U.S.\$370 in fiscal 2007. This increase was attributable primarily to a lower recovery grade.

The fleet replacement project is progressing well and it is expected to have a newer fleet with better availability by December 2008. The flooding problems are largely due to inferior dam capacity and pumping infrastructure at the main dam. A new dam is being constructed and is expected to be completed by March 2009. In the interim period, the current dam and pumping arrangements have been upgraded and the risk of flooding will be reduced significantly by September 2008. Fragmentation in the massive stopes was as a result of excessive hydraulic radius used in the planning phase. This has been addressed and all new massive stopes that have come into operation from July 2008 are at smaller dimensions to address the fragmentation issue.

The focus for fiscal 2009 will be the development of the new decline to access the Block 3 area which contains 40% of the mines gold reserves. Production is expected to be a steady state of 65 000 tonnes per month for the next two years after which we expect to ramp up to the 80 000 tonnes per month at a grade of 5.5g/t to 6g/t.

The Target shaft s hoisting capacity is 110,000 tons per month. The average tons milled in fiscal 2008 was 57,259 tons per month.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 21.9 million tons (4.25 million ounces) will be sufficient for the Target shaft to maintain production until approximately 2028. However, any future changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of the future operations.

**Capital Expenditure:** We incurred approximately R257 million (U.S.\$35 million) in capital expenditures at the Target shaft in fiscal 2008, principally for underground development and the replacement of the underground fleet. We have budgeted R370 million (U.S.\$51 million) for capital expenditures at Target in fiscal 2009, primarily for underground development, as well as the replacement of the underground vehicles.

#### **Evander Operations**

**Introduction:** The Evander operations are located in the province of Mpumalanga in South Africa and are comprised of an amalgamation of the former Kinross, Bracken, Leslie and Winkelhaak mines and 36,898 hectares of mineral rights adjacent to these mines. Mining at our Evander operations is conducted at depths ranging from 300 meters to 2,100 meters.

**History:** Gold mining in the Evander Basin began in 1955. Eventually, four mining operations were established at Evander. In 1996, as a result of depletion of ore reserves, all four mining areas were merged to form Evander. In August 1998, we acquired Evander as a wholly-owned subsidiary.

**Geology:** The area covered by Evander s mining authorization and mineral rights is situated within the Evander basin, a geologically discrete easterly extension of the main Witwatersrand Basin. Only one economic placer unit, the Kimberley Reef, is mined at Evander. In addition to the faulting of the reef horizon, there are numerous dykes and sills that complicate the mining layouts, the most significant of which is an extensively developed dolerite footwall sill that occasionally intersects the Kimberley Reef, causing displacements within it.

**Mining Operations:** The Evander operations are primarily engaged in underground mining. The Evander operations also process a limited amount of waste rock as and when necessary to allow the plants to operate efficiently. These operations are subject to the underground mining risks detailed in the Risk Factors section.

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Due to the shallow to moderate depths of the Evander underground operations, seismicity and pressure high rock stress-related problems are relatively infrequent. There is a risk of subterranean water and/or gas intersections in some areas of the mine. However, this risk is mitigated by active and continuous management and monitoring, which includes the drilling of boreholes in advance of faces. Where water and/or gas is indicated in the drilling, appropriate preventative action is taken. In fiscal 2004, an agreement was reached with the unions for the implementation of Conops at Evander. Downsizing and restructuring of the 7 Shaft area resulted in labor surpluses and it was also decided to stop Conops in fiscal 2008 at Evander 5 shaft. Parts of Evander 8 shaft continue to work on Conops.

During fiscal 2005, the Evander 2 and 5 Shafts were combined and downscaled, while the Evander 9 Shaft was closed successfully and placed on care and maintenance. The Evander 9 Shaft employees were transferred to other Evander operations. The Evander 7 Shaft (Decline No. 3, phase 3) project was terminated in fiscal 2008.

Potential exists at several areas in Evander:

#### **Evander South**

Project currently at an exploration stage following the prefeasibility study;

Surface exploration drilling to be carried out in order to improve quality of and confidence in the current estimate; and

Drilling to commence in October 2008.

Shaft 7 portion of the 2010 Payshoot.

Project at an initial exploration stage following the geological study;

Underground development and drilling, underground and from surface, is planned in order to investigate the 7 Shaft flank of the postulated payshoot; and

Feasibility study to follow, pending confirmation of the ore resource in this area.

#### Twistdraai and Shaft 6

Joint Venture with the African Precious Minerals ( APM ) is being formed to explore these two target areas;

APM is going to earn in the 52% equity stake upon completion of the full bankable feasibility study for each area; and

The geological studies are under way and drilling will commence in fiscal 2009.

## Rolspruit

It is a future mining area of the current Shaft 8;

Pre-feasibility study is being updated with more recent cost and gold price factors; and

Synergies with the current Shaft 8 deepening could be considered.

#### **Poplar**

Surface exploration drilling is required to bring this project into the full bankable feasibility study;

Pre feasibility study is due to be updated (after the Rolspruit study) with costs and gold price factors; and

The surface exploration drilling at Evander South is likely to produce information that will enhance the Poplar geological interpretation.

In fiscal 2008, the Evander operations accounted for approximately 12% (10% in fiscal 2007 and 12% in fiscal 2006) of our total gold sales.

**Safety:** The safety record at the Evander operations in terms of LTFR of 16.64 per million hours worked during fiscal 2008 is unfavorable when compared to the group average of 12.83. The FFR of 0.07 during fiscal 2008 is favorable

when compared to the group average of 0.18 for underground operations.

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**Plants:** Evander has one active processing plant, the Kinross-Winkelhaak plant, which is operated as two geographically distinct sections. Ore from Evander 7 and 8 is hoisted directly to and treated at the Kinross plant, which is a CIL plant. All of the ore from Shafts 2 and 5 is milled and thickened at the Winkelhaak plant, and the slurry is pumped to the Kinross plant for further processing.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for the operating plant:

		Average Milled for
		the
	Processing	Fiscal Year Ended
Plant	Capacity	June 30, 2008
	(tons/month)	(tons/month)
Kinross-Winkelhaak	200,000	120,564

In fiscal 2008, the plant at Evander operations recovered approximately 96.4% f the gold contained in the ore delivered for processing.

## **Production analysis:**

	Fiscal Year Ended June 30,		
Evander operations	2008	2007	2006
Production			
Tons ( 000)	1,447	1,667	1,700
Recovered grade (ounces/ton)	0.166	0.141	0.161
Gold sold (ounces)	240,037	235,443	274,439
<b>Results of operations</b> (millions) (\$)			
Product sales	193	151	142
Cash cost	127	113	111
Cash profit	66	38	31
Cash costs			
Per ounce of gold (\$)	525	481	404
Capex (millions) (\$)	33	28	26

Tons milled at the Evander operations were 1,667,000 in fiscal 2007, compared with 1,700,000 in fiscal 2006, and ounces sold were 235,443 in fiscal 2007, compared with 274,439 in fiscal 2006. The decrease in tons milled was due to the depletion of the open raise lines on 24 level at Evander 5. The decrease in tons milled partially offset by an increase in tons from the mining of pillar areas at Evander 7 and 8. The decrease in ounces was due to the significantly lower production in reef tons as the shafts started to hoist waste with reef that dilutes the quality of the ore. At Evander 7, the grade decreased, primarily due to the depletion of a very high grade pay shoot in the No 3 decline areas and the increase in mining in the lower grade pillar area of the shaft. The recovered grade at Evander 8 decreased as well as a result of payshoot variability due to sequential mining. The decrease in recovered grade was partially offset by an improvement of the MCF from 62% in 2006 to 70.5% in 2007 at Evander 5.

The increase in cash costs from U.S.\$404 per ounce in fiscal 2006 to U.S.\$481 per ounce in fiscal 2007 was attributable primarily to the decrease in ounces produced as a result of the decrease in recovery grade.

Tons milled at the Evander operations were 1,447,000 in fiscal 2008, compared with 1,667,000 in fiscal 2007, and ounces sold were 240,037 in fiscal 2008, compared with 235,443 in fiscal 2007. The decrease in tons milled is partially attributable to the reduction of the development at Evander 7 in November 2007 and the closure of the pillars in the old mine in February 2008. At Evander 8, tons milled decreased by 113,000 tons due to poorer environmental conditions in the decline area which affected mining from this area. The shaft is currently busy with a raise-borehole from 17 Level to 24 Level which will alleviate the medium term ventilation constraints. Recovered grade was 0.166 in fiscal 2008, compared with 0.141 in fiscal 2007. The higher recovered grade is partially due to an improvement of the MCF at Evander 5 from 70,5% in 2007 to 71,7% in 2008, as well as mining in higher grade areas at the shaft. At

Evander 7 and 8, the closure of the more marginal pillar sections and focusing on the higher grade decline sections also contributed to the higher recovered grade.

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The increase in cash costs from U.S.\$481 per ounce in fiscal 2007 to U.S.\$525 per ounce in fiscal 2008 was attributable primarily due to the increase in cash costs from U.S.\$113 million in fiscal 2007 to U.S.\$127 million in fiscal 2008 as result of labor increases and inflation on consumables and electricity increases in excess of current inflation. Excess employees from Evander 7 in lieu of the restructuring as impacted negatively on the cash costs.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 11.2 million tons (1.9 million ounces) will be sufficient for the Evander operations to maintain production until approximately fiscal 2027. Any future changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R242 million (\$33 million) in capital expenditures at the Evander operations in fiscal 2008. The expenditure was primarily for ongoing development as well as deepening of the decline shaft systems at Evander 7 and 8. We have budgeted R174 million (\$22 million) for capital expenditures in fiscal 2009 primarily for ongoing development and the upgrading of major equipment. Included is also an amount for phases 6 and 7 of the No 2 decline at Evander 8 and two ventilation bore holes. The No 3 decline project at Evander 7 was stopped in November 2007.

## Other Underground

**Introduction:** Other Underground consists of several shafts, including Joel and St Helena. As the most significant portion of the results from this segment is attributable to Joel, we have only disclosed the relevant information for Joel.

**History:** Joel was purchased from a subsidiary of AngloGold at the same time as the rest of the Freegold assets in January 2002.

**Geology**: The mine is located in the Free State Goldfield, which is on the southwestern edge of the Witwatersrand basin. Joel is located 30 kilometers south of Welkom and is mining the shallow flat-dipping Beatrix/VS5 Reef.

**Mining operations**: These operations are subject to the underground mining risks detailed in the Risk Factors section. Mining takes place at an average depth of approximately 1,200 meters at Joel.

During fiscal 2008, Joel accounted for 3% of our total gold sales (3% in fiscal 2007 and 2% in fiscal 2006 **Safety**: During fiscal 2008, the LTFR at Joel of 4.91 per million hours worked compared favorably with the group average of 12.83. The FFR at Joel of 0.00 compared favorably with the group average of 0.18.

**Plants:** The Joel plant is a hybrid CIP/CIL plant and was commissioned in 1987. During fiscal 2005, it was decided to close the Joel Plant and place the plant under care and maintenance. A feasibility study is underway to investigate the possibility of reopening the Joel plant around January 2009.

### **Production analysis:**

	Fisca	Fiscal Year Ended June 3	
Joel	2008	2007	2006
Production			
Tons ( 000)	449	504	436
Recovered grade (ounces/ton)	0.136	0.158	0.134
Gold sold (ounces)	61,215	79,923	58,595
<b>Results of operations</b> (millions) (\$)			
Product sales	52	51	31
Cash cost	39	33	29
Cash profit	13	18	2
Cash costs			
Per ounce of gold (\$)	639	418	498
Capex (millions) (\$)	5	4	4
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Tons milled from Joel shaft increased to 504,000 in fiscal 2007, compared with 436,000 in fiscal 2006, attributable primarily to the commissioning of the mineshaft loading arrangement on 137 level. Tons milled were negatively influenced in fiscal 2007 due to ceasing hoisting operations at North Shaft on March 15, 2007 for the sinking stage removal, guide rope installation and the installation of a proper spillage arrangement at shaft bottom. Ounces sold were 79,923 in fiscal 2007, compared with 58,595 in fiscal 2006. The improved recovered grade and the increased tons positively influenced ounces sold. Recovered grade improved to 0.158 in fiscal 2007 compared with 0.134 in fiscal 2006.

Cash costs for Joel increased to U.S.\$33 million in fiscal 2007, compared with U.S.\$29 million in fiscal 2006. This increase was primarily attributed to higher production volumes and increased labor costs to support the build-up in production. Cash costs per ounce were U.S.\$418 in fiscal 2007, compared with U.S.\$498 in fiscal 2006. This decrease was primarily attributable to the higher production levels and an increased grade.

The decrease in tons milled from 504 000 in fiscal 2007 to 449 000 in fiscal 2008 is due to the fact that the rehabilitation work on North Shaft was only completed at the end of October 2007. Consequent teething problems at North Shaft also impacted here, for instance shaft bottom cleaning, installation of ventilation pipes on platform, Winder motor burnout which resulted in a delay as another motor had to be sourced from Anglogold Ashanti.

Grade was affected by long distance up dip scraping which was caused by change in hoisting from North to South Shaft due to South Shaft rehabilitation. Higher than expected stoping widths was encountered which affected the face grams per ton. Joel has a centralised high grade area with the outskirts being of lower grade. Due to no flexibility and availability Joel was forced to move to the outskirts therefore causing a lower recovery grade.

Ounces sold were 61,215 in fiscal 2008, compared to 79,923 in fiscal 2007. This was mainly due to a combination of lower tons milled as well as a lower recovery grade.

The increase in cash costs from U.S.\$33 million in fiscal 2007 to U.S.\$39 million in fiscal 2008 is due to wage and salary increases granted to labor as well as an increase in the skilled labor complement to address skills shortage on Joel. As Joel does not have its own plant, ore is transported to a plant in Virginia which is 33 kilometers away. This is done by means of trucks. Due to the increase in diesel, a fuel levy is charged to compensate the cartage contractor for the fuel increases. This also resulted in increased costs.

Cash costs for Joel increased to U.S.\$39 million in fiscal 2008, compared with U.S.\$33 million in fiscal 2007. This increase was primarily attributed to increased labor costs. Cash costs per ounce were U.S.\$639 in fiscal 2008, compared with U.S.\$418 in fiscal 2007. The increase was primarily attributable to the decrease in tonnage due to the re-equipping where after the shaft was not fully operational for the first two quarters of fiscal 2008.

The rock hoisting capacity at Joel is 180,000 tons per month. The average tons milled in fiscal 2008 was 37,420 tons per month.

On a simplistic basis, assuming no additional reserves are identified, at expected production levels, it is foreseen that the reported proven and probable ore reserves of 4.1 million tons (0.6 million ounces) will be sufficient for Joel to maintain underground production until approximately 2017. Any future changes to the assumptions upon which the ore reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R39 million (U.S.\$5.4 million) in capital expenditures at Joel in fiscal 2008, on development on 129 level, general replacement, maintenance and ongoing development and have budgeted R24.0 million (U.S.\$3.3 million) for 129 Level Development capital expenditures in fiscal 2009, and R15.4 million (U.S.\$2.1 million) for ongoing development.

### Other Surface

**Introduction**: Other Surface consists of Kalgold, Phoenix and the surface operations owned by the Freegold and Avgold companies. As the results of operations for Other Surface consists primarily of the results from Kalgold and Phoenix, these two operations have been discussed separately. *Kalgold* 

**Introduction:** We conduct a surface mining operation at the Kalgold gold mine, 60 kilometers south of Mafikeng in the North West Province of South Africa. Through Kalgold, we also control extensive mineral rights on the Kraaipan Greenstone Belt in the North West Province of South Africa.

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**History:** We acquired Kalgold on July 1, 1999 and fully incorporated Kalgold into our operations in October 1999. Prior to our acquisition, the Kalgold mine had operated for more than three years.

Geology: The Kalgold operations are situated on the Kraaipan granite-greenstone belt, which is a typical gold-bearing greenstone formation. It has undergone intense structural deformation that has led to its dislocation into separate units.

Within the mining lease area, mineralization occurs in shallow dipping quartz veins, which occur in clusters or swarms, within the steeply dipping magnetite-chert banded iron formation. Disseminated sulphide mineralization, dominated mostly by pyrite, occurs around and between the shallow dipping quartz vein swarms.

The first zone to be exploited by open cast mining has been an area known as the D-Zone. The D-Zone orebody has a strike length of 1,300 meters. Mineralization has also been found in the Mielie Field Zone (adjacent to the D-Zone), the A-Zone and A-Zone West (along the strike to the north of the D-Zone), and the Watertank and Watermill areas to the north of the A-Zone.

Mining Operations: The Kalgold operations are engaged in open-pit mining. This operation is subject to the open cast mining risks detailed in the Risk Factors section. Small subterranean water intersections in the pit are common and are actively managed and appropriate action is taken when necessary. The primary mining challenges at the Kalgold operations of achieving optimal volumes and grades of ore production are addressed by stringent ore reserve management. Water shortages, due to drought in the area, were experienced for most of fiscal 2007 and the first quarter of fiscal 2008, which had a significant impact on production. These water shortages were followed by abnormally high rainfall and electricity disruptions, resulting in a number of days of production lost during the 2008 fiscal year, which was further compounded by a number of plant breakdowns. Kalgold is on the domestic electricity grid and was subject to extensive load shedding.

In fiscal 2008, the Kalgold operations accounted for approximately 5% (2% in fiscal 2007 and 3% in fiscal 2006) of our total gold sales.

Safety: The Kalgold operations had a lost time injury frequency rate of 4.97 per million hours worked in fiscal 2008, and recorded no fatal accidents in fiscal 2008.

**Plants:** Ore is trucked from the pit and is directly tipped into the feed bin to the pre-primary crusher or stockpiled. The ore then undergoes a four phase crushing process before it reaches the Dome stockpile. Three ball mills are used to grind the ore down to between 70-80% less than 75 micron for the leaching process.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for the plant:

			Average Milled for the
		Processing	Fiscal Year Ended
	Plant	Capacity	<b>June 30, 2008</b>
		(tons/month)	(tons/month)
CIL		135,000	127,552
Hoop Leach(1)			

Heap Leach<sup>(1)</sup>

Active use of heap leaching was discontinued in July 2001.

In fiscal 2008, the plant at our Kalgold operations recovered approximately 86.89% of the gold contained in the ore delivered for processing.

**Production analysis:** 

Fiscal Year Ended June 30, Kalgold 2008 2007 2006 **Production** 

Tons ( 000)	1,687	1,740	2,008
Recovered grade (ounces/ton)	0.055	0.032	0.038
Gold sold (ounces)	93,172	56,129	77,071
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	Fiscal Year Ended June 30,		
Kalgold	2008	2007	2006
<b>Results of operations</b> (millions) (\$)			
Product sales (\$)	77	36	39
Cash cost (\$)	38	27	32
Cash profit (\$)	39	9	8
<b>Cash costs</b>			
Per ounce of gold (\$)	411	485	412
Capex (\$)	1		

Ounces sold decreased to 56,129 in fiscal 2007, compared with 77,071 in fiscal 2006, due to a combination of lower tons milled as well as a lower recovered grade. Tons milled decreased from 2,008,000 in fiscal 2006 to 1,740,000 in fiscal 2007. This decrease was due to lower plant throughput as a result of water shortages encountered from March 2007. The recovered grade decreased to 0.032 in fiscal 2007, compared with 0.038 in fiscal 2006. Mining was stopped on the A Zone pit during the December 2006 quarter for geotechnical reasons.

Cash costs at Kalgold were U.S.\$485 per ounce in fiscal 2007, compared with U.S.\$412 per ounce in fiscal 2006. This increase was due to the lower volumes produced.

Tons milled decreased from 1,740,000 in fiscal 2007 to 1,687,000 in fiscal 2008. Ounces sold increased to 93,172 in fiscal 2008, compared with 56,129 in fiscal 2007, primarily due to the higher grade mined from the D Zone pit. The recovered grade increased to 0.055 in fiscal 2008, compared with 0.032 in fiscal 2007.

Cash costs increase from U.S.\$27 million in fiscal 2007 to U.S.\$38 million in 2008 as result of the write off of the deferred stripping account as mining in the D-zone pit reached completion. In spite of this, cash costs at Kalgold were U.S.\$411 per ounce in fiscal 2008, compared with U.S.\$485 per ounce in fiscal 2007. The decrease was mainly due to the increase in ounces produced as a result of higher recovered grade.

The processing capacity of the Kalgold operation is 165,000 tons per month. The average tons milled in fiscal 2008 were 140,580 tons per month.

Active use of heap leaching was discontinued in July 2001; however, Harmony expects to put the material on the heap leach pad through the processing mills at the end of the life of mine to recover the residual gold.

On a simplistic basis, assuming no additional reserves are identified and at expected production levels, it is foreseen that the reported proven and probable ore reserves of 14.3 million tons (0.40 million ounces) will be sufficient for the Kalgold operations to maintain production until approximately fiscal 2016. However, any future changes to the assumptions upon which the reserves are based, as well as any unforeseen events affecting production levels, could have a material effect on the expected period of future operations.

**Capital Expenditure:** We incurred approximately R9.8 million (U.S.\$1.3 million) in capital expenditures at the Kalgold operations in the fiscal 2008. We have budgeted R8.8 million (U.S.\$1.2 million) for capital expenditures in fiscal 2009, primarily for exploration drilling and mining of the new orebodies.

#### **Phoenix**

**Introduction**: Phoenix is a tailings retreatment operation, located at Virginia and adjacent to our current and historical mining operations in the Free State province.

**History**: The project commenced during fiscal 2007 and is aimed at treating the surface sources from our operations in the Free State province.

**Mining operations**: Slimes tonnage reclamation steadily increased during fiscal 2008, to an average of 550,000 tons per month by year end, which is full capacity. The focus during the year was on improving efficiencies, recoveries and ultimately profitability.

During fiscal 2008, Phoenix accounted for 2% of our total gold sales (less than 1% in fiscal 2006 and 2007).

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### **Production analysis:**

Free State (Phoenix)	Fisca	Fiscal Year Ended June 30,		
	2008	2007	2006	
Production				
Tons ( 000)	7,033	2,368	897	
Recovered grade (ounces/ton)	0.005	0.009	0.018	
Gold sold (ounces)	32,215	21,346	15,902	
<b>Results of operations</b> (millions) (\$)				
Product sales	26	14	9	
Cash cost	12	6	6	
Cash profit	14	8	3	
Cash costs				
Per ounce of gold (\$)	381	293	404	
Capex (millions) (\$)	5	5	4	

Tons treated from Phoenix were 2,368,000 in fiscal 2007, compared with 897,000 in fiscal 2006, primarily due to Phoenix having been fully commissioned during the year and treating 500,000 tons per month tailings material. The recovered grade decreased to 0.009 in fiscal 2007, compared with 0.018 in fiscal 2006 as a result of an increase in slimes dam reclamation. Ounces sold increased to 21,346 in fiscal 2007, compared with 15,902 in fiscal 2006, primarily due to the increase in tons treated.

Cash costs per ounce decreased during fiscal 2007 to U.S.\$293 per ounce, compared with U.S.\$404 in fiscal 2006, due to the increase in ounces produced.

Tons treated from Phoenix were 7,033,000 in fiscal 2008, compared with 2,368,000 in fiscal 2007. Ounces sold increased to 32,215 in fiscal 2008, compared with 21,346 in fiscal 2007, primarily due to the increase in tons treated. The recovered grade decreased from 0.009 in fiscal 2007 to 0.005 in fiscal 2008. The grade of the tons treated is dependent on the time at which the original deposition was done.

Cash costs were U.S.\$12 million in fiscal 2008, compared with U.S.\$6 million in fiscal 2007, primarily due to the increase in volumes as well as the higher costs of reagents. Cash costs per ounce increased during fiscal 2008 to U.S.\$381 per ounce, compared with U.S.\$293 in fiscal 2007 due to increase in volume and increase in transport rates and the price of consumables.

**Capital Expenditure:** We incurred approximately R33.3 million (U.S.\$4.6 million) in capital expenditures at the Free State operations in fiscal 2008. We have budgeted R14.2 million (U.S.\$2 million) for Phoenix, primarily for upgrading of major equipment at Central Plant.

## **Cooke operations**

**Introduction**: The Cooke operations are located in the Gauteng Province of South Africa, approximately thirty kilometers west of Johannesburg. These operations are owned by Randfontein. The operations currently operate under a mining authorization with an area of 7,875 hectares. Production is treated at the Doornkop plant.

During fiscal 2008, an agreement was entered into for the sale of the Cooke operations, together with the associated surface assets. As a result, the assets and related liabilities have been classified as held for sale and the results from operations have been included under Discontinued Operations in the income statement.

**Geology**: These operations are situated in the West Rand Goldfield of the Witwatersrand Basin, the structure of which is dominated by the Witpoortjie and Panvlakte Horst blocks, which are superimposed over broad folding associated with the southeast plunging West Rand Syncline. At the Cooke operations, two major fault trends are present. The first is parallel to the Panvlakte Fault and strikes north to north-east, having small throws and no lateral shift. The second trend, which runs north-west to west, has small throws, but significant lateral shift, resulting in the payshoots becoming displaced.

There are six identified main reef groupings in the area of these operations: the Black Reef; the Ventersdorp Contact Reef; the Elsburg Formations; the Kimberleys; the Livingstone Reefs; and the South Reef. Within these, several economic reef horizons have been mined at depths below surface between 600 and 1,260 meters.

The reefs comprise fine to coarse grained pyritic mineralization within well developed thick quartz pebble conglomerates or narrow single pebble lags, which in certain instances are replaced by narrow carbon seams.

Mining Operations: These operations are subject to the underground and waste rock mining risks detailed in the Risk Factors section. Due to the shallow to moderate depths of the operations, seismicity and pressure related problems are infrequent. There is a risk of subterranean water and/or gas intersections in some areas of the mines. However, this risk is mitigated by active and continuous management and monitoring, which includes the drilling of boreholes in advance of faces. Where water and/or gas are indicated in the drilling, appropriate preventative action is taken.

The Cooke assets and related liabilities were classified as a disposal group and held for sale during fiscal 2008. We incurred R53.7 million (U.S.\$7.4 million) in capital expenditure in fiscal 2008 at Cooke 3 Shaft for accessing the reserves in the 128 South Area to extend the life of mine reserves. The area contains an estimated total insitu resource of approximately 4.9 million tons at 5.5 grams per ton. It is intended to extract the UE1A reef band which is mainly a conglomerate type reef.

Production at the Cooke operations was negatively affected in fiscal 2008 by a change in the mining mix, with less ore from the high grade VCR reef at Cooke 3 shaft and lower than expected grades from 128 South project at Cooke 3 shaft and from the 90 North 6 area at Cooke 2 shaft. The power shortages during the third quarter in 2008 also impacted negatively on volumes.

During fiscal 2008, the Cooke operations accounted for 12% (10% in 2006 and 2007) of our total gold sales. **Safety**: The safety record at these operations during fiscal 2008 was as follows: in terms of LTFR of 8.98 per million hours worked achieved compared favourably with the group average of 12.83. The FFR (0.38) at Cooke compared unfavorably with the group average of 0.18.

Safety at the operations receives constant and high-level attention and where problems are identified steps are taken to address the situation.

**Plants:** The processing facilities at the operations presently comprises of the Cooke metallurgical plant, which is serviced by a surface rail network. The Cooke metallurgical plant, commissioned in 1977, is a hybrid CIP/CIL plant, which processes the tailings from the surface sands dumps around Randfontein.

Feasibility studies are being done for a proposed Uranium Plant of an approximate capacity of 500,000 tons per month. It is envisaged that the plant will be completed in approximately three years when it will treat uranium ore from the Cooke dumps as well as from the Cooke 3 underground operations.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for the Cooke plant:

			Average Milled for
			the
		Processing	Fiscal Year Ended
	Plant	Capacity	June 30, 2008
		(tons/month)	(tons/month)
Cooke		280,000	215,241

In fiscal 2008, the Cooke plant recovery has been approximately 81% of the gold contained in the ore delivered for processing. During fiscal 2006, the Doornkop plant was upgraded and all underground tons were moved from Cooke to Doornkop plant. Cooke plant was mothballed in January 2006; however, it was re-commissioned during fiscal 2007 to treat surface sources.

## **Production analysis:**

		Fiscal Year Ended June 30,		
Cooke operations		2008	2007	2006
Production				
Tons ( 000)		3,906	2,327	2,034
- Underground		1,323	1,432	1,495
- Surface		2,583	895	539
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	Fisca	Fiscal Year Ended June 30,			
Cooke operations	2008	2007	2006		
Recovered grade (ounces/ton)	0.060	0.105	0.126		
- Underground	0.153	0.157	0.163		
- Surface	0.013	0.021	0.022		
Gold sold (ounces)	236,242	243,219	256,739		
- Underground	201,937	224,245	245,089		
- Surface	34,305	18,974	11,650		
Results of operations (millions) (\$)					
Product sales	194	154	137		
Cash cost	123	118	102		
Cash profit	71	36	35		
Cash costs					
Per ounce of gold (\$)	517	484	396		
- Underground	516	499	395		
- Surface	520	305	431		
Capex (millions) (\$)	22	19	25		

During fiscal 2008, the assets and related liabilities for Cooke 1, 2 and 3 as well as the Cooke plant were classified as a disposal group and are held for sale. The results from the operations were also classified as discontinued operations in the income statement. As a result, the table above and the discussion below include the results of the surface operations.

Tons milled from the Cooke operations were 2,327,000 in fiscal 2007, compared with 2,034,000 in fiscal 2006, and ounces sold were 243,219 in fiscal 2007, compared with 256,739 in fiscal 2006. The increase in tons milled was due to the recommissioning of the Cooke Plant to treat surface sources. The decrease in ounces sold was primarily due to a decrease in the recovery grade for the underground operations. The decrease in recovery grade at the underground operations from 0.163 ounces per ton in fiscal 2006 to 0.157 in fiscal 2007 was due to lower volumes from the high grade VCR reef at Cooke 3 shaft and lower than expected grades from the 128 South project at Cooke 3 shaft and from the 90 North 6 area at Cooke 2 shaft.

Cash costs per ounce of gold were U.S.\$484 in fiscal 2007, compared with U.S.\$396 in fiscal 2006. This increase was attributable primarily to the decrease in grade from the underground operations, as well as an increase in the amount of pillar mining from Cooke 1 at higher cost. Pillar mining is more costly to undertake due to increased support cost and lower mining volumes. Increases in the costs of labor and supplies and the effect of inflation on supply contracts resulted in an increase in cash costs. Electricity increases in excess of current inflation also negatively impacted on costs

Tons milled were 3,906,000 in fiscal 2008, compared with 2,327,000 in fiscal 2007, and ounces sold were 236,242 in fiscal 2008, compared with 243,219 in fiscal 2007. The increase in tons milled can mainly be attributed to the Cooke plant, used for the treating of tailings from sand surface dumps, coming into full production during fiscal 2008. The plant is treating on average of 215,000 tons per month. This was offset by a decrease in tons milled from underground due to the stopping of Conops, electricity constraints and a reduction in volume from Cooke 1. The decrease in ounces sold was primarily due to lower volumes from underground as a result of the reasons mentioned above. The recovery grade from surface decreased from 0.021 in fiscal 2007 to 0.013 in fiscal 2008, mainly due to the replacement of higher grade waste rock with lower grade sand from Dump 20.

Cash costs per ounce of gold were U.S.\$517 in fiscal 2008, compared with U.S.\$484 in fiscal 2007. The increase was influenced by decreased efficiency of the machinery in the Trackless areas, increased maintenance cost on those machines, increases in the costs of labor and supplies and the effect of inflation on supply contracts also negatively affected cash costs.

**Capital Expenditure:** We incurred approximately R158.8 million (U.S.\$21.9 million) in capital expenditures at the Cooke operations in fiscal 2008 for ongoing development and other abnormal expenditure seen as capital.

Also included was expenditure for accessing the reserves in the 128 South Area at Cooke 3. We have budgeted R201.7 million (U.S.\$27.8 million) in fiscal 2009, mostly for ongoing development as well as the upgrade of all Rail Bound Equipment to comply with the legislation and improve safety.

### Other Discontinued operations

**Introduction:** The results of operation from Other Discontinued Operations consists of results from the Orkney operations, Mt Magnet and South Kalgoorlie. Mt Magnet and South Kalgoorlie form part of our International operations. Refer to *Western Australia* below for a discussion on their operations and results.

The discussion on Orkney follows below.

**Introduction:** We acquired the Orkney operations when on September 22, 2003, we merged with ARMgold via a share exchange which resulted in ARMgold becoming our wholly-owned subsidiary. In September 2007, we announced that we had entered into formal agreements with Pamodzi for the sale of the Orkney Shafts. The sale was finalized on February 27, 2008 and the related assets and liabilities derecognized.

**History:** Exploration and development at Orkney started from 1886 and following dormant periods, large-scale production commenced during the 1940s with the formation of Vaal Reefs Gold Mining and Exploration Company Limited in 1944.

**Geology:** At the Orkney operations, the Vaal Reef is the most significant reef mined. The reef strikes northeast, dipping southeast and is heavily faulted to form a series of graben structures. The dip is generally less than 30 degrees but can vary locally in direction and magnitude to exceed 45 degrees. The VCR is also exploited, as well as the Elsburg Reef. There are several major faults in the lease area, being Nooitgedacht, Buffelsdoorn, Witkop, WK2, No 3 BU, No 5 BU and No 2 BU Fault. These faults typically have throws of tens of meters and further divide the reef into blocks of up to 100 meters in width.

**Mining operations:** These operations are subject to all of the underground mining risks detailed in the Risk Factors section. Mining depths ranged from 1,600 meters to 2,000 meters below the surface at the Orkney operations.

During February 2008, the Orkney shafts were sold to Pamodzi. These shafts had been managed by Pamodzi since October 2007.

For fiscal years 2008, 2007 and 2006, the Orkney operations accounted for approximately 5% of our total gold sales

**Safety:** For the eight months to February 2008, the safety record at the Orkney operations in terms of LTFR of 19.07 million hours worked compared unfavorably with the group average of 11.55 at that time. The FFR of nil compared favorably with the group average of 0.14.

**Plants:** Ore from the Orkney operations was treated at Vaal River Operations (**VRO**) No. 1 Gold Plant (of Anglo Gold Ashanti). Various agreements between us and VRO governed the supply and quality of the ore and gold apportionment.

## **Production analysis:**

		Fiscal Year Ended June 30,		
Orkney operations		<b>2008</b> <sup>(1)</sup>	2007	2006
Production				
Tons ( 000)		571	947	753
Recovered grade (ounces/ton)		0.100	0.126	0.171
Gold sold (ounces)		57,132	119,109	128,774
<b>Results of operations</b> (millions) (\$)				
Product sales		40	77	68
Cash cost		52	64	59
Cash (loss)/profit		(12)	13	9
Cash costs				
Per ounce of gold (\$)		910	543	458
Capex (millions) (\$)		4	15	7
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(1) The results are for the eight months ended February 2008.

Tons milled from the Orkney operations were 947,000 in fiscal 2007, compared with 753,000 in fiscal 2006. The increase is as a result of the approval of the re-opening of the Orkney 7 shaft. The shaft started producing in the first quarter of fiscal 2007. This was offset by a decrease in tons milled due to seismic events resulting in the loss of face length flexibility and volume at Orkney 2.

Ounces sold were 118,984 in fiscal 2007, compared with 128,774 in fiscal 2006. The decrease in ounces sold is primarily attributed to lower recovery grade. Recovered grade was 0.126 in fiscal 2007, compared with 0.171 in fiscal 2006. The increase is due to the reopening of Orkney 7. This was offset by a change in mining mix at Orkney 4 as a result of seismicity experienced from the higher grade shaft pillar to lower grade areas. There was also down scaling of production in the shaft pillar area which resulted the mining of more remote areas.

Cash costs were U.S.\$65 million in fiscal 2007 compared with U.S.\$59 million in fiscal 2006. Cash costs per ounce were U.S.\$543 in fiscal 2007 compared with U.S.\$458 in fiscal 2006. This increase was attributable primarily due to increases in the costs of labor and supplies and the effect of inflation on supply contracts.

The Orkney operations were sold to Pamodzi during fiscal 2008 and therefore the results for fiscal 2008 are only for eight months.

**Capital Expenditure:** We incurred R26.3 million (U.S.\$3.6 million) on capital expenditures at the Orkney operations in fiscal 2008.

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## **International Mining Operations**

## **Western Australia Operations**

We had two operational mines in Western Australia during fiscal 2008, the Mt. Magnet operations and the South Kalgoorlie operations. These operations were acquired as part of the purchase of two Australian gold mining companies: New Hampton, acquired in April 2001 and Hill 50 acquired in April 2002. The New Hampton transaction included two operations in Western Australia, Big Bell in the Murchison region (which ceased operations in July 2003 and its plant sold in November 2003) and Jubilee in the Eastern Goldfields near Kalgoorlie as well as two processing plants associated with these operations and related exploration rights. The Hill 50 transaction included the Mt. Magnet operations in the Murchison region, the New Celebration operations in the Eastern Goldfields near Kalgoorlie as well as two plants associated with these operations and related exploration rights.

Each of our Australian operations conducted surface mining (principally through open-pit methods) and underground mining, with access through two declines at Mt. Magnet and one decline at South Kalgoorlie. The Mt. Marion underground mine at South Kalgoorlie Mine ceased operating in June 2007. Open-pit mining at South Kalgoorlie recommenced during fiscal 2007 with the start-up of the Shirl and Hampton Boulder Jubilee ( **HBJ** ) open-pit projects. We used mostly mechanized mining at our Australian operations in comparison to the South African operations (excluding operations at Target). Contractors conducted much of this mechanized mining. The contractors were responsible for provision of the equipment and personnel needed for production of the ore under guidance of management.

We have classified our Western Australian assets as being held for sale as of April 2007 as they do not fit with our strategy for operating large, long-life mines. These operations also met the criteria for discontinued operations.

In July 2007, we entered into an agreement with Dioro pursuant to which Dioro acquired our South Kalgoorlie assets. The total purchase price was A\$45 million (U.S.\$39.8 million), consisting of both a cash and share component. The share component entailed the issuance of 11.4 million Dioro shares (valued at A\$20 million (U.S.\$17.7 million)), and a cash component of A\$25 million (U.S.\$22.1 million). The transaction was subject to various conditions precedent, including a minimum capital raising by Dioro of A\$35 million (U.S.\$30.9 million) by the completion date. On November 30, 2007, all conditions precedent were satisfied, and the transaction was completed and accounted for on that date. The results of production below therefore reflect only the 5 months ended November 30, 2007.

During fiscal 2008, we entered into an agreement with Monarch Gold for the sale of our Mount Magnet operations. However, subsequent to year-end, we were advised that Monarch had placed itself in voluntary administration and, on August 1, 2008, the Administrator indicated that Monarch will not proceed with the proposed purchase and consequently the purchase agreement has been terminated. We have since resumed management of the St. Magnet operations which is still classified as for sale.

As of June 30, 2008, our Western Australian operations had 2 employees (the care and maintenance personnel on the Mt. Magnet site).

In fiscal 2008, our Australian operations accounted for approximately 5% of our total gold sales, as compared to 10% in fiscal years 2007 and 2006.

## Mt. Magnet Operations

**Introduction.** In 2002, we acquired Mt. Magnet as part of the Hill 50 transaction. In fiscal 2008, Mt. Magnet s operations accounted for approximately 4% of our total gold sales, as compared to 6% in fiscal years 2007 and 2006. This change was the result of the site being placed on care and maintenance as from December 31, 2007. **History:** Mining at Mt. Magnet began after the discovery of gold in 1896. From that time to June 30, 2008, the Mt. Magnet area has produced approximately 5.8 million ounces. The current Mt. Magnet operations commenced production in the late 1980s on the Hill 50 and Star underground mines and nearby open-pits, and the processing of low grade ore from previously accumulated stockpiles. Production ceased at the Star underground mine in June 2005.

The Star underground mine was subsequently replaced by St. George, a new underground mine. The Mt. Magnet site was put on care and maintenance as from December 31, 2007 until such time that the site is sold.

Geology: The Mt. Magnet operations are located near the town of Mt. Magnet in the Murchison region, 560 kilometers northeast of Perth. The geology consists of folded basaltic and komatiitic greenstones with intercalated banded iron formations and volcaniclastic units. In addition to having been intensely folded, the area has undergone substantial faulting and later intrusion by felsic intrusives. Mineralization within the Murchison belt consists of sulphide replacement style (characteristic of the Hill 50 mine) and quartz lode and shear-hosted hydrothermally emplaced bodies proximal to fault conduits. Smaller stockwork bodies within felsic intrusives are also common. As is typical of the Archaean Shield, the deep weathering profile at Mt. Magnet has resulted in supergene enrichment and hypogene dispersion of gold in the oxidizing environments. These effects lend themselves well to the process of small scale open-pit mining. Historically underground mining of primary lodes was the largest contributor to Mt. Magnet s gold production.

**Mining Operations:** The Mt. Magnet operations were engaged in underground, open-pit and waste rock mining prior to site closure. These operations are subject to the underground, open-pit, and waste rock mining risks detailed in the Risk Factors section.

Underground operations at Mt. Magnet consisted of the Hill 50 and St. George mines, each of which operates a decline. The Hill 50 mine, which is approaching 1,525 meters in depth, was one of Australia s deepest underground mines. The St. George Mine was approximately 300 meters in depth. Underground mining was conducted by decline tunnel access. The principal challenges confronted by the Hill 50 underground mine related to its continuing depth and the geotechnical, ventilation and cost impediments that increased depth imposes, including increased ground stress and potential increased seismic activity. A decision was made in May 2007 which placed the Hill 50 mine s decline development on hold due to significant seismic activity, and effectively put the mine in harvest mode.

With the closure of Star, the development of the new underground mine at the St. George open-pit provided additional underground tonnage for the Mt. Magnet operations. Underground development at St. George started in December 2005. The first stope was mined in the second quarter of fiscal 2006. Underground mining continued at this mine during fiscal 2007. This mine reached its economic depth limit during fiscal 2007, and was put in harvest mode, with mining operations ceasing in October 2007. Open-pit production was hindered by the delay in the start up of the Cue open-pits until the last quarter of fiscal 2005 as a result of delayed mining approvals and extended contractor negotiations, although these were subsequently resolved and mining commenced in fiscal 2006. Open-pit mining mainly took place around Mt. Magnet during fiscal years 2007 and 2008.

Surface operations at Mt. Magnet exploited several medium-sized open-pits, as well as numerous smaller open-pits. Surface materials from areas previously involved in production, including waste rock dumps and tailings dams, are also processed at Mt. Magnet. The principal challenge faced by the Mt. Magnet operations involved the short mine lives which result from that the open-pits being situated on small orebodies. The Mt. Magnet site was put on care and maintenance as from December 31, 2007 until such time that the site is sold.

**Plant**: The Mt. Magnet operations include one metallurgical plant which was built in 1989 as a CIL plant and upgraded in 1999 to a CIP plant. Actual throughputs of the Mt. Magnet plant varies based upon the blend of oxide and sulphide ores in their feed. Processing capacity is an estimate of nominal throughput based on a 70% hard (sulphide) and 30% oxide (soft) blend.

The following table sets forth processing capacity and average tons milled during fiscal 2008 for the Mt. Magnet plant:

 $\begin{array}{c|cccc} & & & & the \ Year \ Ended \ June \\ \hline 30,2008 & & & \\ Processing & (for 6 \ operational \\ Plant & & Capacity & months) \\ \hline & & & (tons/month) & (tons/month) \\ Mt. \ Magnet & & 243,000 & 161,000 \\ \end{array}$ 

**Average Milled for** 

Throughput rates at Mt. Magnet decreased in fiscal 2008 due to the site being closed and the plant being placed on care and maintenance.

In fiscal 2008, the Mt. Magnet plant recovered approximately 91.9% of the gold contained in the ore delivered for processing.

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#### **Production analysis:**

	Fiscal Year Ended June 30,			
	2008	2007	2006	
Production				
Tons ( 000)	966	1,875	1,918	
Recovered grade (ounces/ton)	0.080	0.073	0.078	
Gold sold (ounces)	77,097	136,428	148,822	
<b>Results of operations</b> (millions) (\$)				
Product sales	56	86	80	
Cash cost	41	71	59	
Cash profit	15	15	21	
Cash costs				
Per ounce of gold (\$)	537	518	399	
Capex (millions) (\$)	4	20	24	

Tons milled in fiscal 2007 were 1,875,000 compared with 1,918,000 in fiscal 2006, and ounces sold in fiscal 2007 were 136,428, compared with 148,822 in fiscal 2006, mainly as a result of significantly less production from open-pits during the year and a seismic event at Hill 50 in May 2007, which also resulted in the reduction in the recovery grade from 0.078 ounces per ton in fiscal 2006 to 0.073 ounces per ton in fiscal 2007. Cash costs per ounce were U.S.\$518 in fiscal 2007 compared to U.S.\$399 in fiscal 2006, this increase mainly the result of an increase in underlying mining costs in Western Australia.

Recovered grade was 0.080 ounces per ton in fiscal 2008 compared to 0.073 ounces per ton in fiscal 2007. This was due to higher grades produced from the Hill 50 underground mine. Tons milled were 966,000 in fiscal 2008 compared to 1,785,000 in fiscal 2007. Ounces sold decreased to 77,097 in fiscal 2008, compared to 136,428 in fiscal 2007. The decrease in both tons and ounces in fiscal 2008 are a reflection of the Mt. Magnet production figures representing just 6 months of production due to the site being placed on care and maintenance.

Cash costs per ounce were U.S.\$537 for fiscal 2008, compared to U.S.\$518 for fiscal 2007. This increase was due to higher underground and open-pit contracting cost due to the underlying mining cost increases in the Western Australian and a wider Australian mining market environment.

The majority of declared ore reserves were mined during fiscal 2008. The mines were closed and the processing plant has been put on care and maintenance until such time that the site is sold.

**Capital Expenditure:** We spent U.S.\$4.3 million in capital expenditure at the Mt. Magnet operations in fiscal 2008, primarily for underground development and plant components. We have not budgeted for capital expenditure for fiscal 2009, as we will only undertake critical maintenance in anticipation of the Mt. Magnet site being sold.

**Exploration:** Activities at Mt. Magnet, Western Australia, were performed to the minimum level required to keep the tenements in good standing as the site and plant is currently on care and maintenance. We expended A\$2.9 million (U.S.\$2.7 million) on exploration during fiscal 2008.

## South Kalgoorlie Operations

**Introduction:** The South Kalgoorlie Operations are made up of New Hampton s Jubilee Operations and Hill 50 s New Celebration operations. Since the commencement of operations to November 30, 2007, total gold production from the mines in the South Kalgoorlie area has exceeded 2.5 million ounces. In fiscal 2008, South Kalgoorlie operations accounted for 1% of Harmony s total gold sales, and accounted for 4% of our total gold sales in 2007 and 3% in fiscal 2006.

In July 2007, we announced the sale of the South Kalgoorlie Mine to Dioro. The total purchase price was A\$45 million (U.S.\$39.8 million), which consists of a cash component and a shares component. On November 30, 2007, all conditions precedent to the transaction were satisfied. The results for fiscal 2008 below reflect only the 5 months ended November 30, 2007.

**History:** The South Kalgoorlie operations included several open-pits at Jubilee and New Celebration, as well at the Mt. Marion underground

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mine. The Jubilee operations were originally comprised of the large Jubilee open-pit and a number of smaller open-pits. The New Celebration operations were initially developed in 1987 by Newmont exploiting the same ore body that hosted the Jubilee Pit. Hill 50 acquired these operations from Newcrest Mining Ltd. in June 2001. The Mt. Marion decline was established in 1998. Open-pit mining ceased at the South Kalgoorlie Operations at the end of fiscal 2005, with only low grade stockpiles treated during fiscal 2006 together with Mt. Marion ore. During fiscal years 2008 and 2007, open-pit mining recommenced at South Kalgoorlie Mines, with a cutback on the HBJ pit, as well as the Shirl open-pit.

Geology: The South Kalgoorlie mines were located approximately 30 kilometers south of Kalgoorlie in the Eastern Goldfields region of Western Australia. The South Kalgoorlie orebodies were located in a number of geological domains including the Kalgoorlie-Kambalda belt, the Boulder-Lefroy Structure, the Zuleika Shear, the Coolgardie Belt and Yilgarn-Roe Structures. At South Kalgoorlie, the mining tenure and geology straddled the three major fault systems or crystal sutures considered to be the main ore body plumbing systems of the Kalgoorlie Goldfield. The geology consisted of Archaean greenstone stratigraphy of basalts and komatiites with intercalated sediments, tuffs, volcaniclastics and later felsic intrusives. Late stage and large scale granitic (Proterozoic) intrusion stoped out large sections of the greenstone. Quartz filled lode and shear-hosted bodies are the most dominant among many mineralization styles. Large scale stockwork bodies hosted in felsic volcanics were an important contributor to bulk tonnage of relatively low grade deposits.

**Mining Operations:** The South Kalgoorlie operations are engaged in open-pit, underground and waste rock mining. These operations are subject to the underground, open pit and waste rock mining risks detailed in the Risk Factors section.

At the South Kalgoorlie operations during fiscal 2008, open cast mining took place at Shirl open-pit, together with a cutback project on the HBJ open-pit. The HBJ open-pit will have a mine life of three years and consist of 3.3 million tons of 0.048 ounces per ton. The Shirl and HBJ open-pit feedstock as well as low grade stockpiles were processed during the year. The discovery of the Shirl prospect during fiscal 2006, which resulted in an open-pit reserve of 50,000 ounces and a 15 month mine life, together with an improved gold price environment, lead to the recommencement of open-pit mining at South Kalgoorlie mines during fiscal years 2008 and 2007. The primary challenge that faced the South Kalgoorlie operations involved identifying adequate sources of new open-pit and underground reserves and managing the geotechnical risk on the HBJ pit cutback. See *Risk Factors Risks Relating to Our Business and Our Industry To maintain gold production beyond the expected lives of Harmony s existing mines or to increase production materially above projected levels, Harmony will need to access additional reserves through development or discovery.* 

**Plant:** The South Kalgoorlie operation had a metallurgical plant located at Jubilee. This CIL treatment plant was capable of treating the planned production from the mining operations. Ore was hauled from the open-pits and from low grade Shirl stockpiles to the treatment plant by conventional road trains. Actual throughputs of the Jubilee plant varied based upon the blend of oxide and sulphide ores in their feed. Processing capacity was an estimate of nominal throughput based on a 70% hard (sulphide) and 30% soft (oxide) blend.

The New Celebration plant was sold during fiscal 2006 for A\$3.0 million. This plant was originally commissioned in 1986 as a CIP plant and later upgraded in 1988 by the addition of a larger parallel circuit.

The following table sets forth processing capacity and average tons milled during fiscal 2008, prior to the completion of the sale of the South Kalgoorlie plant:

 $\begin{tabular}{lll} Average Milled & for \\ the Year Ended \\ June \\ \hline Processing \\ Plant & Capacity & 30, 2008 \\ \hline (tons/month) & (tons/month) \\ Jubilee & 122,000 & 95,400 \\ \hline \end{tabular}$ 

Throughput rates in fiscal 2008 were lower than capacity due to tank refurbishments at the Jubilee plant. In fiscal 2008, the Jubilee plant recovered approximately 82.4% of the gold contained in the ore delivered for processing compared to 89% in 2007.

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#### **Production analysis:**

	Fiscal Year Ended June 30,		
	<b>2008</b> <sup>(1)</sup>	2007	2006
Production			
Tons ( 000)	477	1,391	1,480
Recovered grade (ounces/ton)	0.058	0.064	0.056
Gold sold (ounces)	27,778	88,371	82,639
<b>Results of operations</b> (millions) (\$)			
Product sales	19	56	42
Cash cost	14	45	38
Cash profit	5	11	4
Cash costs			
Per ounce of gold(\$)	517	504	454
Capex (millions)(\$)	12	7	4

(1) The results are for the five months ended November 2007.

Tons milled in fiscal 2007 were 1,391,000, compared to 1,480,000 in fiscal 2006, while ounces recovered in fiscal 2007 were 88,371 as compared to 82,639 in fiscal 2006. This increase in ounces compared with the decrease in milled tons in fiscal 2007 were primarily attributable to the increases in the recovery grade from 0.056 ounces per ton from fiscal 2006 to 0.064 ounces per ton in fiscal 2007. The increase in the recovery grade resulted from the mining of predominantly higher-grade underground ore. The decrease in throughput in fiscal 2007 from 2006 was due largely to tank refurbishments at the Jubilee plane.

Cash costs per ounce were U.S.\$504 for fiscal 2007, compared to U.S.\$454 for fiscal 2006. This increase was due to higher underground and open-pit contracting costs due to the continuing increase in the underlying Western Australian mining environment and higher gold production levels.

Tons milled in fiscal 2008 were 477,000 compared with 1,391,000 in fiscal 2007, and ounces sold in fiscal 2008 were 27,778 compared with 88,371 in fiscal 2007. This decrease in ounces, and increase in tons, was primarily attributable to the sale of the South Kalgoorlie operations to Dioro on November 30, 2007.

Cash costs per ounce were U.S.\$517 for fiscal 2008, compared to U.S.\$504 for fiscal 2007. This increase was due to the higher underground and open-pit contracting costs due to the underlying market increase in the Australian mining environment and lower gold production levels. Recovered grade was 0.058 ounces per ton in fiscal 2008, compared to 0.064 ounces per ton in fiscal 2007. This decrease in ounces and tons was primarily attributable to a number of factors, namely the open pit throughout for the year being replaced by low grade stockpiles (which also caused the reduction in grade) and the sale of the operations to Dioro.

**Capital Expenditure:** In fiscal 2008, we spent U.S.\$12 million in capital expenditures at South Kalgoorlie, primarily for the Shirl open-pit and plant refurbishments. Due to the sale of the South Kalgoorlie operations, we have not budgeted for capital expenditures for fiscal 2009.

**Exploration:** Exploration activities were scaled back in the first half of fiscal 2008 in anticipation of the sale of the South Kalgoorlie operations, with A\$1 million expended.

### **PNG Operations**

### **Overview**

**Introduction:** As at the end of fiscal 2008, our lease holding in PNG is located southwest of Lae in the Morobe Province and encompasses over 3,480 square kilometers of tenure. The tenements are outlined in the figure below and fall into three main blocks centered in the Morobe province. These include the Wafi leases (440 square kilometers), the Morobe Hidden Valley leases (971 square kilometers) and the Morobe Coast EL (2,069 square kilometers).

*Harmony PNG tenement locations*. In terms of regional geological setting, the tenements cover a portion of the PNG mobile belt. The mobile belt comprises tract of metamorphosed Lower Jurassic and Cretaceous sediments and oceanic crust. These rocks have undergone deformation

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in the collision zone between the Australian and Pacific Plates and multiple intrusive events including Tertiary granodiorite and younger mineralized porphyries. The PNG mobile belt hosts a number of major gold and copper-gold deposits including the Wafi-Golpu and Hidden Valley Projects which are 100% owned by us.

Exploration expenditure outlook for fiscal 2009 is currently estimated at A\$19.6 million. Results from this work have been highly encouraging, as a number of targets with the potential for major stand-alone gold and copper/gold deposits have been identified and advanced to the drill testing phase.

We currently have offices in Lae, Wau and at the Hidden Valley site, to facilitate the development of the Hidden Valley project and support both the exploration efforts in the region and the pre-feasibility work on the Wafi Golpu copper gold project. In 2006 a technical support office was opened in Brisbane to support the construction phase of the Hidden Valley project as well as the evaluation of the Wafi and Golpu prospects.

We completed stand alone PFS in Golpu during the June 2007 quarter and in Wafi during the December 2007 quarter, which included the Wafi gold resources and examined the development of three production scenarios:

Golpu stand alone (an update of the Golpu PFS scenario);

Golpu + Link Zone; and

Golpu + Link Zone + NRG1;

The PFS reports were subject to Gate Reviews and a CPR. Neither the Gate Reviews nor the CPR identified any fatal flaws in the PFS reports. However, a number of outstanding issues were identified. The returns projected by the studies did not meet our requirements, and it was decided then not to immediately proceed to the feasibility stage. Further studies are planned for fiscal 2009 to address outstanding issues and to investigate alternative production scenarios which may improve projected returns.

## Hidden Valley Project

**Introduction:** The Hidden Valley project entails the construction of a significant gold and silver mine. This mine will process 4.6Mt of ore a year from the two open-pits. The Hamata orebody is one small pit and the Hidden Valley and Kaveroi orebodies are in a much larger open-pit. The mine is located in a highly prospective exploration lease area and it is envisaged that, as active exploration continues, the life of the process facility may be extended as it is fed from a number of sources. We own the Hidden Valley Project through our wholly-owned PNG subsidiary, Morobe Consolidated Goldfields Ltd. Subsequent to the year ended 2008, our interest in the Hidden Valley project and other PNG assets and tenements were reduced to 69.99% due to Newcrest Mining Limited ( **Newcrest** ) acquiring interests in the PNG assets. See *Recent Developments* .

The project comprises four exploration licenses of 966 square kilometers in the Wau District of Morobe Province, PNG and is located 210 kilometers north-northwest of Port Moresby and 90 kilometers south-southwest of Lae, the two largest cities in PNG. Access to the project is presently by sealed road from the deepwater port of Lae to Bulolo. We have constructed an all-weather gravel road from Bulolo to the Hidden Valley mine site to access the site. History: Alluvial gold was first discovered at Hidden Valley in 1928 but it was not until the early 1980 s that the area was investigated by CRA Exploration using modern exploration techniques that resulted in the discovery of the Hidden Valley and Kaveroi gold deposits on EL 677. A number of feasibility studies have been prepared for the Hidden Valley Project by the various owners, including one by Abelle in 2003. We have extensively reviewed and updated the Abelle feasibility study during fiscal 2006 in order to: (a) reflect changes in the project s ore body interpretation; (b) incorporate increases in capital and operating costs as a result of energy prices and scarce resources in the mining industry as well; and (c) resolve technical aspects that were outstanding from the previous study. The updated feasibility study was presented to the Board during June 2006 and they approved construction of the project. In late 2007, we began a search for a partner to partake in all of our PNG mining and exploration activities. Following a selection process, we selected Newcrest to buy into our PNG activities and to form a joint venture with us. Newcrest s holdings in the PNG assets and tenements is expected to increase to 50% up to a maximum of U.S.\$306 million by the middle of calendar year 2009.

Site Access. The Hidden Valley site is located approximately 90 kilometers south-southwest of Lae, which is the nearest deepwater port for the project, and the Capital of Morobe Province. Access to the site from Lae uses an

existing 110 kilometers sealed two-lane main road to the town of Bulolo, continuing to Hidden Valley via an all-weather two-lane access road constructed by us. Work commenced on the construction of the Hidden Valley access road to the site from Bulolo town in October 2005. The road reached the mining lease boundary in May 2006 and the in-filled road network has been extended to the Hidden Valley deposit, Pihema Creek and the Hamata plant site. Pihema Creek has been

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diverted and platforms have been established for most of the project infrastructure, such as the permanent camp and the administration building. Work has commenced on the Tailings Storage Facility and the Hamata plant site. We contracted a road construction manager and a core of operators with extensive PNG road-building experience to undertake this part of the project, utilizing equipment we bought for construction purposes.

Engineering Procurement and Construction Management Contract. Following Board approval, a small owners team of experienced construction professionals was recruited, including several key individuals with extensive PNG experience, to ensure that project objectives, scope of work and all other project requirements are met. In July 2006 an agreement was reached with the engineering group Ausenco Limited to provide engineering procurement and construction management services for the project. Ausenco started immediately with the preparation of a project execution plan as well as the detailed design stage of the project which is set for completion at the end of December 2007. At the end of fiscal 2008, the detailed design was approximately 90% complete and 100 out of 110 planned procurement/contract packages have been put out to enquiry. To date, 100 packages have been awarded.

*Power supply*. The ability to obtain an alternate power supply from PNG s national power supplier, PNG Power Limited (PPL), is of critical importance to the economics of the project. On May 14, 2007, we announced that we had signed an agreement with PPL to supply the Hidden Valley mine with electricity. PPL has committed to construct new transmission lines and infrastructure in order to supply hydro-electricity from the Yonki Dam. Contracts for this work have already been awarded, and supply is expected to commence by the middle of calendar 2010.

In addition, we acquired diesel generators and will install them for the purpose of providing 100% backup power supply to the project, if required, and will be powering the site until hydro-electricity is supplied.

Customs and Excise. In November 2006 the PNG National Executive Committee approved exemptions to customs and excise on a range of commodities that will be required for the construction of the project. This was gazetted, and customs officials at Lae port are already applying the exemptions, based on the draft gazettal notice.

*Mining Fleet.* The mining equipment required for the project consists of: four 180t excavators, a fleet of nine 175t haul trucks and a range of ancillary equipment. Supply and maintenance agreements for this fleet were signed in September 2006. The delivery of the first batch of mining equipment for pre-stripping took place in the second quarter of fiscal 2007 and the delivery of the remainder of the fleet was taken during fiscal 2008.

**Geology:** The proven and probable gold reserves for the Hidden Valley/Kaveroi/Hamata deposits are 2.02 million ounces at 0.062 ounces per ton. Silver proven and probable reserves at Hidden Valley/Kaveroi and Hamata amount to 30.71 million ounces at 1.093 ounces per ton. Extensive drilling is currently being undertaken at the Kaveroi prospect adjacent to the Hidden Valley ore body, with the intention to add additional reserves to the project.

Environment. The Environment Management Plan, which is a requirement of the mining lease, has been approved by the PNG Department of Environment. The key environmental issue for the project is the effective management of water quality in the Bulolo and Watut rivers. A range of control measures will be implemented for acid rock drainage, sediment runoff and tailings facility discharge water quality. Work continues on baseline studies and monitoring programs required for both the construction and operational phases of the project. Re-engineered surface designs have led to the tailings storage facility capacity being increased to 46.3 million tons and the waste dump s design now complying with acid rock drainage and other environmental commitments.

Community affairs/landowner discussions. Community support and development of the mine in compliance with the memorandum of agreement with landowner groups is critical to the success of the project. Meetings are held regularly with these groups and officials from the provincial and national government to monitor progress and ensure these objectives are met. A range of opportunities for the commercial participation of landowner groups in the development of the project are being considered as a priority, and community relations initiatives focused on positive outcomes for health, education and infrastructure are ongoing.

**Project Overview:** Once fully developed, the Hidden Valley Mine is expected to process 4.6 million tons of ore per annum from ore mined at two open-pits, the Hamata ore body in one small pit and the Hidden Valley and Kaveroi orebodies in a much larger pit. Expected annual production will be 250,000 ounces of gold per annum, with a peak production of 275,000 ounces, and 4 million ounces of silver. Expected mine life is 14 years. The construction period is estimated to be 30 months, with the mine expected to be commissioned by March 2009.

The resources will be mined in a sequence that sees the low silver, high gold Hamata ore mined first, with plant and infrastructure

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development for the project developed in close proximity to the Hamata deposit. The next ore mined will be the Hidden Valley/Kaveroi oxide/transition ores (high silver) followed by the Hidden Valley/Kaveroi primary ores. **Plant:** As part of the project a treatment plant was brought from Misima Mines Limited and transported to Lae in April 2005. Parts of the plant that will be utilized in the project have been identified and refurbished in fiscal 2007 with the remainder to be disposed of. The plant is stored in Lae and its components will be transported to Hidden Valley for installation as the project proceeds.

Once completed, the processing plant is expected to process ore at a rate of approximately 4.6 million tons per annum and has been designed with three distinct process routes that complement the metallurgical characteristics of the three ore types to be mined. The processing plant will commence as a primary crushing, grinding (with the incorporation of a gravity gold recovery circuit), CIL, Merrill-Crowe zinc precipitation, goldroom and tailings detox plant for the low silver Hamata ores, revert to a primary and secondary crushing, grinding, flotation, concentrate regrind, counter-current decantation circuit with Merrill-Crowe zinc precipitation, flotation concentrate and tailing CIL, goldroom and tailings detox for the high silver oxide/transition ores and then a similar circuit without flotation tail CIL for high silver sulphide ores from Hidden valley/Kaveroi ores. The gravity gold recovered will be processed through an intensive cyanide leach followed by electrowinning circuit to produce a high quality ore product.

Ore will be delivered by truck to the Hamata and Hidden Valley crusher stations. Crushed Hamata ore will be delivered by conventional conveyor to the primary stockpile and Hidden Valley ore will be delivered via an overland pipe conveyor to the same stockpile.

All tailings will be stored in a tailings storage facility, and all water recovered will be subject to detoxification prior to being re-cycled or released to the environment. The processing plant and tailings storage facility will be built to meet or exceed the requirement of the International Cyanide Management Code. Construction completion is planned for the second quarter of fiscal 2009 with initial gold production anticipated by middle of calendar 2009.

Government royalty and other rights. The gold and silver production from the Hidden Valley Project will be subject to a 2% royalty, payable on the net return from refined production if refined in PNG or 2% royalty on the realized price if refined out of PNG.

The government of PNG also has a statutory right to acquire up to a 30% participatory interest in mining development projects, at sunk cost. However the memorandum of agreement signed between the government and ourselves reduced the participation right to 5%, should the government wish to exercise it. Once an interest is acquired by the government of PNG, it contributes to the further exploration and development costs on a pro rata basis.

Third Party Royalties. On March 28, 2007, we announced that we had concluded negotiations with Rio Tinto pursuant to which we would purchase the Rio Tinto rights under a royalty agreement relating to Hidden Valley, which was entered into prior to our acquisition of the Hidden Valley and Kerimenge deposits in PNG. Under the royalty agreement, Rio Tinto had the right to receive a portion of between 2% and 3.5% of future ounces produced by the Hidden Valley mine in PNG. The consideration we paid to Rio Tinto totaled U.S.\$22.5 million, which was settled with our issue of ordinary shares valuing U.S.\$20 million, with the balance of U.S.\$2.5 million paid in cash.

The transaction will reduce the cash costs per ounce of gold produced at Hidden Valley, and all further extensions to the project, mine life and reserves will be free of this royalty.

Capital Expenditure: Capital expenditure on the project for fiscal 2008 was U.S.\$162 million (A\$181 million) compared to the U.S.\$71 million (A\$90 million) spent in fiscal 2007. Capital was mainly spent on completing earthworks within the mining lease, particularly the process plant platform, construction of the Hamata permanent camp and related infrastructure. Other areas of significant expenditure were for process equipment and management related costs.

The total project capital cost is estimated to be U.S.\$579 million (A\$605 million), which represents a 27% increase in A\$ terms on the last reported budget. Increases in costs were primarily caused by market forces resulting from the high demand created by resource development projects in the region. There were no significant changes in the scope of work of the project. This value excludes U.S.\$37 million for mine fleet repayments post the construction phase as well as U.S.\$22.5 million for the Rio Tinto royalty buy-out which is not considered part of the construction capital.

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#### Morobe Consolidated Goldfields Limited (MCG) Tenements

The MCG tenements comprises some 2,157 square kilometers of tenure and include the Hidden Valley Mining lease (ML151), four granted Exploration licenses (EL497, EL677, EL1193 and EL1403) and three Exploration Licenses (EL1629, EL1630 and EL1631). The tenement boundaries are outlined below in figure 1.

The tenements are under-explored and remain highly prospective for large-scale porphyry Cu-Au deposits, low-grade bulk mineable epithermal Au-Ag deposits (similar to Hidden Valley) and for high-grade epithermal Au satellite resources. Focus of the exploration program on the Morobe Consolidated tenements is three-fold:

Major new stand alone discoveries;

High-grade drivers to improve cash flows of the Hidden Valley Project; and

Additional reserves to substantially increase mine life of the Hidden Valley Project.

Exploration programs undertaken during fiscal 2008 included those on the Hidden Valley Mining Lease, the area surrounding the Kerimenge Prospect, and on the Morobe Coast EL1403. However, in addition to these areas, project generation continued, such as the capturing of historical data and grassroots exploration activities (which include mapping, stream sediment sampling and integration of results with regional magnetic data).

### Hidden Valley ML

**Introduction:** Minimal drilling occurs outside of the deposit areas at Hidden Valley. Project generation work which comprised ridge and spur soil sampling (2,824 samples), mapping (over 25 line kilometers) and sampling new road cuttings (7,675 samples) were completed during fiscal 2008. Work integrating the geological and geochemical datasets together with detailed helimagnetics is in progress, and will provide a new solid geology interpretation to identify additional targets on the Hidden Valley Mining Lease.

**Project Status:** Continuous channel sampling on new trenches has resulted in some major intercepts of high grade gold mineralization at the Upper Bulolo prospect, located approximately 1 km east of the Hidden Valley open-pit. Trenching work designed to scope out the extent of surface mineralization continues and, due to high grades, first pass drilling at this prospect will be a priority in fiscal 2009.

## Kerimenge and the broader prospect potential

**Introduction:** The Kerimenge deposit lies approximately 7 kilometers east of the proposed Hamata Processing Plant site. Work completed during fiscal 2008 was focused on trenching and reconnaissance away from the deposit area to outline mineralization controls. Some 2,036 samples were collected and assayed from over 4 line kilometers of hand-dug trenches.

**Project Status:** Results from the trenching work have identified 2 drill targets for follow-up work in fiscal 2009. If successful, this drilling should also increase understanding of the main mineralization controls of this highly prospective project. Compilation work has also highlighted the Kauri Prospect (located approximately 1 kilometer north of the Kerimenge deposit) as having potential for a major stand-alone Au deposit similar to that of Hidden Valley. Certain follow-ups in this area are planned for the third quarter of fiscal 2009.

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## Figure 1: Tenement Location Map Morobe Coast Exploration License

**Introduction:** The Morobe Coast exploration license, EL1403, encompasses some 1,041 square kilometers of tenure. A compulsory 50% reduction was completed in April 2008. The area lies to the southeast of the Morobe Goldfield, and we believe it presents grassroots exploration potential. Historical exploration work has been limited, but returned anomalous gold assays in rock chip and stream sediment samples from the Lokaniu volcanics.

Giu Prospect. The Giu prospect falls approximately 10 kilometers southwest of the Morobe township on the east coast of PNG, and has been the main focus of exploration activities on EL1403. The prospect represents a district scale anomaly, 20 kilometers in diameter with elevated gold rock chip and stream sediment geochemistry. The aim of the work programs is to identify and develop prospect areas with the potential for stand-alone-gold (+/- related metal) orebodies.

Mapping to date has outlined several areas of structurally controlled epithermal vein mineralization, hosted in vesicular basalts. Rock chip results have been encouraging with anomalous values of copper, gold, molybdenum and zinc returned.

**Project Status:** Some 400 stream sediment and rock chip samples were collected during fiscal 2008, and several highly anomalous drainages have been identified. Field work in the form of ridge and spur soil sampling is scheduled for fiscal 2009 in order to trace the anomaly to its bedrock source. Airborne magnetics are also planned for fiscal 2009 to provide additional base data for integration with surface geochemical results and assist with drill targeting.

## Wafi Golpu Project Area

**Introduction:** The Wafi prospect is owned through Wafi Mining Limited, our wholly-owned subsidiary. The first exploration at Wafi dates back to the nationwide porphyry copper search by CRA Exploration Ltd in the late 1960 s. Elders Resources farmed-in to the project from 1989-1991, and AGF subsequently farmed-in to the project for a short period in 1997 prior to going into administration in 1998. Aurora subsequently acquired the project from Rio Tinto (CRA) in 1999, with ownership passing to Abelle when it merged with Aurora in 2002. We assumed control of the Wafi Project by way of its acquisition of Abelle in 2003.

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The project is held under 4 contiguous exploration licenses (EL 440, EL 1316, EL 1103 and EL 1105), totaling 440.6 square kilometers. A further 688.7 square kilometers of tenure has been applied for in 2 separate exploration license applications, namely ELA 590 and ELA 1612. Tenements are outlined above in figure 1. The Wafi Golpu Project comprises 2 separate ore systems located within close proximity of each other known as the Wafi Gold Project and the Golpu Copper/Gold Project, respectively. The Wafi gold mineralization is hosted by sedimentary/volcanoclastic rocks of the Owen Stanley Formation which surrounds the intrusive Wafi Diatreme. Gold mineralization occurs in the form of extensive high-sulphidation epithermal alteration overprinting porphyry mineralization and epithermal style vein-hosted and replacement gold mineralization with associated wall-rock alteration. Exploration expenditure (including Pre-feasibility studies) on the project for fiscal 2008 was U.S.\$13.2 million (K38 million).

Geography: The Wafi prospect is located near Mt. Watut in the Morobe Province of PNG, approximately 60 kilometers southwest of Lae and about 60 kilometers northwest of Wau. The Wafi camp is located at an elevation of approximately 400 meters above sea level in terrain that is mountainous and forested in most areas. The site is accessed by sealed road (Lae to Bulolo) which comes within 5 kilometers of the eastern edge of the tenements and 15 kilometers from the Wafi camp. From the sealed road, a 38 kilometer dirt-base access track to the prospect is accessible during dry weather conditions. The site is serviced by helicopter when the road access is cut due to wet weather. Watut Valley is located immediately west of the project, and the foothills of Watut Valley are planned to be utilized for placement of ore processing and mine infrastructure.

*Mining Reserves*. Following completion of the Golpu Copper/Gold pre-feasibility study, a probable ore reserve has been declared. See *Item 4*. *Reserves*.

The Golpu Ore Reserve is derived from the Golpu Stand Alone Project Pre Feasibility Study. This study assumes a block cave underground mine with ore processed on site to produced a copper and gold concentrate for shipping to smelter. Metallurgical Studies indicate that recoveries of 88% for copper, 54% for gold and 36% for molybdenum can be expected. Metal prices are assumed at U.S.\$2.30/lb for copper, U.S.\$520/oz gold and U.S.\$20/lb for molybdenum. In declaring the probable reserve, the following considerations are required:

- 1. The PFS is completed to industry accepted standards for a PFS (±20-25% accuracy). The outcome of further more detailed studies may affect the reserve.
- 2. The location for the tailings storage facility has not been finalized, however two potential sites proximal to the project have been defined.
- 3. There are outstanding issues associated with traditional land owners required to be resolved before the project is able to be constructed.
- 4. The Board has not yet committed to completing subsequent phases of study, or to project construction. A reserve for the Wafi gold ore bodies has not been declared.

Government Royalty and Other Rights. The metal production from the Wafi Project is subject to a 2% royalty payable on the net return from refined production if refined in PNG or a 2% royalty payable on the realized price if refined outside of PNG. The government royalty has been accounted for in project financial models. PNG also has a statutory right to acquire up to a 30% participatory interest in mining development projects at sunk cost. Once an interest is acquired by the government of PNG, it contributes to the further exploration and development costs on a pro rata basis.

Third Party Royalties. Pursuant to the sale agreement of Wafi Mining Ltd to Abelle (via wholly owned subsidiary companies) from Rio Tinto, a royalty of 2% on gold production or a 2% NSR (net smelter return) from copper-gold concentrates is payable to Rio Tinto as a deferred acquisition cost. The royalty has been accounted for in project financial models.

**Capital Expenditures:** No capital expenditures were incurred during fiscal 2008 as the pre-feasibility study was still underway, and costs were expensed as a result.

Pre-Feasibility Studies: Two pre-feasibility studies for the Wafi Golpu project have been completed in the past year:

The Golpu stand alone Pre-Feasibility Study ( **Golpu PFS** ), dated July 2007, which examined solely the development of Golpu copper gold resources;

The Wafi Pre-Feasibility Study ( **Wafi PFS** ), dated October 2007, which included the Wafi gold resources and examined the development of the following three product scenarios:

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Golpu stand alone (an update of the Golpu PFS scenario);

Golpu + Link Zone; and

Golpu + Link Zone + NRG1;

The PFS reports were subject to Gate Reviews and a Competent Persons Report. Neither the Gate Reviews nor the CPR identified any fatal flaws in the PFS reports but a number of outstanding issues were identified. The returns projected by the studies did not meet our requirements and it was decided not to immediately move to Feasibility stage. Further studies are planned for the fiscal 2009 to address outstanding issues and investigate alternative production scenarios which may improve projected returns.

## Wafi Gold Projects

**Introduction:** The Wafi Gold resource is comprised of three main zones: Zone A, Zone B and the Link Zone (high grade lenses within Zone B). In addition to the Wafi resource, the Western Zone is an advanced exploration project. **Geology:** The pre-feasibility study we undertook focused on extraction of the high grade Link Zone material, and on delineation of shallower oxidized mineralization, amenable to high gold recovery under standard cyanide leach conditions (associated with Zones A and B). Additional exploration activities have focused on the discovery of additional Link Zone style mineralization (such as the Western Zone) which may have the potential to improve Wafi gold project economics.

Metallurgical test work for the Link Zone has focused on comminution test work and whole ore pressure oxidation that has demonstrated the technical viability of the processing method, with gold recoveries of approximately 95% achieved. The Wafi PFS showed the Link Zone not to be an economic scenario based on estimated costs and the assumed gold price.

Metallurgical test work for the Non-Refractory gold ore ( NRG1 ) focused on the establishment of cyanide recoveries in both the transitional and fully oxidized ores across the known mineralization. Test work has shown that the 95% recovery of gold in completely oxidized ores was consistently achieved. Recovery in the transitional material remains variable with indications that recoveries averaging 84% to 86% are able to be achieved. The Wafi PFS showed the NRG1 resource not to be an economic scenario based on estimated costs and the assumed gold price. Project Status: Geotechnical, mining, infrastructure, and environmental investigations were undertaken as part of the Link Zone and NRG1 study, in parallel with the Golpu studies. Synergies between the Wafi Gold projects and the Golpu Copper project were utilized during the studies to minimize cost as far as possible. Despite these synergies the gold resources were not determined to be economic. Further work to expand gold resources and examine development alternatives are planned for the coming year.

## Golpu Copper-Gold Project

**Introduction:** The Golpu Copper-Gold Project, or Golpu Project, is located approximately one kilometer northeast of the Wafi gold orebodies.

**Geology:** The Golpu host lithology is a typical zoned porphyry copper alteration halo, grading from potassic to phyllic to advanced argillic upwards in the core. Outwards from the core, the alteration grades from the above to argillic potassic, to propylitic. The mineralized body is a porphyry copper-gold pipe with approximately 200 meters by 200 meters plan dimensions, slightly north plunging and still displaying strong mineralization at grades similar to those in the rest of the potassic alteration zone at 1.2 kilometers depth (the maximum depth to which it has been drilled). Recent drilling and reinterpretation have shown that copper and gold mineralization extend some way into the metasediment host rock immediately adjacent to the porphyry body. The mineralized metasediment has potential to add up to 75% to the volume of the porphyry stock if additional exploration defines the mineralization as part of the resource.

The surface expression is oxidized and leached to about 150 meters vertical depth, resulting in a residual gold only mineralization from which the copper has been leached. At the oxidation interface, a strong 20- to 30 meters thick zone of supergene copper enrichment is developed which transitions at depth into a lower grade covellite-enargite ore. Beneath this is a zone of more covellite rich mineralization that contains lesser enargite and consequently less arsenic. From approximately 300 meters below surface, the ore exists in a covellite-rich (arsenic-poor) form grading into a

chalcopyrite-bornite rich zone from approximately 500 meters to its current known depth of approximately 1.2 kilometers. We completed the pre-feasibility study for Golpu during the last quarter of fiscal 2007. The PFS identified a reserve of 78.5Mt at

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1.1% Cu, 0.6g/t gold and 121 ppm Molybdenum. There is potential to significantly increase the mining inventory if additional mineralized metasediment material is able to be included in the resource estimate following further exploration activities.

The metasediment domain comprises mineralization peripheral to the porphyry stock that is hosted in the metasediments. Mineralization in this zone is distributed irregularly around the porphyry stock with the majority occurring on the western side of the porphyry. Mineralization occurs in all three alteration types: advanced argillic, phyllic and potassic. Further work during subsequent phases of study will be planned with a view to converting the mineralized metasediment to an indicated resource, and subsequently a probable reserve.

**Project Status:** The Golpu PFS was undertaken as a standalone scenario and also in parallel with the Link Zone and NRG1 resources (Wafi PFS). The pre-feasibility studies indicate that an annual production rate of 10 million tons is achievable, utilizing the block cave mining method. Ore is planned to be mined from the block cave, and conveyed via an underground decline to a processing plant located in the Eastern foothills of the Watut River Valley, some 4 kilometers west of the deposit. Concentrate produced will be either pumped or truck-hauled to the port of Lae for dispatch to smelting markets. Production of copper metal on site has not been considered during the current phase of study. The cost of power at the site is presently high, with on site heavy fuel oil generation. It is not expected that on-site metal production will be viable unless power cost can be substantially reduced.

Additional Prospects and Exploration Potential: The Golpu and Wafi pre-feasibility studies focused on developing the Golpu copper-gold, the high-grade gold link zone mineralization and the non-refractory (oxide) portion of the A and B zone gold mineralization. However, excellent prospects remain in the immediate vicinity of the existing resource areas for porphyry Cu-Au and related epithermal Au mineralization. During fiscal 2008, the focus of the exploration program was within a 2 km radius of the Wafi Golpu deposits, and the Nambonga North Prospect has been identified where drilling has obtained a number of significant porphyry Cu-Au intercepts. At Western Zone, drilling has intersected high-grade Au mineralization similar to that of the Link Zone.

## Nambonga North

**Introduction:** Nambonga North prospect lies approximately 2 km northwest of the Golpu deposit off the northwest margin of the diatreme. Initial exploration drilling tested a magnetic target with a coincident Cu-Mo geochemical anomaly at surface, and an Electromagnetic anomaly at depth outlined potential for a major zone of Au-Cu stock work mineralization associated with a separate porphyry intrusive. The drilling also intersected massive sulphide mineralization containing zinc lead and silver. Drilling during fiscal 2008 totaled 13 holes for 5,827m.

**Project Status:** Systematic step-out drilling at the prospect remains in progress on sections spaced 80m apart. This program will continue into the first half of fiscal 2009 to outline the limits of mineralization.

#### Western Zone

**Introduction:** Western Zone is located approximately 1.8 km west of the Golpu deposit and lies approximately 400m north of the Link zone off the western margin of the diatreme. Drilling during fiscal 2008 comprised 3 holes for 1,484m. Several intervals of high grade gold mineralization have been intersected, and like the Link Zone mineralization are associated with arsenical pyrite.

**Project Status:** Additional drill testing are planned in fiscal 2009 to test the down dip continuity of the mineralization.

### Wafi Regional Exploration

**Introduction:** Porphyry copper-gold and stand-alone gold targets represent the best potential to crystallize value from the Wafi tenement group. Reprocessing of regional magnetics has outlined 7 discrete magnetic targets within a 14 km radius of the Wafi Golpu project. These all have the potential to deliver major gold or copper-gold systems in areas where there has been little or no previous exploration.

**Project Status:** Fiscal 2008 exploration focused on the Biamena Prospect. Planned for fiscal 2009 is first-pass exploration by way of soil and stream sediment sampling, mapping and reconnaissance rock chip sampling, and first pass reconnaissance drilling is planned for the remaining 6 targets (Mt. Tonn, Kendix, Bawaga, Zenapu, Mid Nambonga Yor Creek, Kesiago).

Biamena

**Introduction:** Biamena prospect lies approximately 12 km south of the Golpu deposit on EL1316. The prospect area was prioritized for follow-up work based on highly anomalous Cu-Au stream sediment geochemistry coincident with an intrusive unit evident in the magnetics.

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**Project Status:** Work during fiscal 2008 has included surface trenching and soil sampling (1500 Samples), IP survey (80 line kilometers), and first pass drilling (2 holes 749m). Gold and copper results obtained from this work have been encouraging. Follow-up diamond drilling will be planned and scheduled based on integrated geochemical, geological and geophysical datasets during fiscal 2009.

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#### REGULATION

# Mineral Rights South Africa

South African law provides for the separate ownership of surface and mineral rights. Prior to the promulgation of the MPRDA on May 1, 2004, it was therefore possible for one person to own the surface of a property, another to own rights to precious metals, and yet another to own rights to base minerals. In terms of the MPRDA, all mineral rights in South Africa are now vested in the South African state. The principal objectives of the Act are:

to recognize the internationally accepted right of the state of South Africa to exercise full and permanent sovereignty over all the mineral and petroleum resources within South Africa;

to give effect to the principle of South Africa s custodianship of its mineral and petroleum resources;

to promote equitable access to South Africa s mineral and petroleum resources to all the people of South Africa;

to substantially and meaningfully expand opportunities for HDSAs including women, to enter the mineral and petroleum industry and to benefit from the exploitation of South Africa s mineral and petroleum resources;

to promote economic growth and mineral and petroleum resources development in South Africa;

to promote employment and advance the social and economic welfare of all South Africans;

to provide security of tenure in respect of prospecting, exploration, mining and production operations;

to give effect to Section 24 of the South African Constitution by ensuring that South Africa s mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development; and

to ensure that holders of mining and production rights contribute towards socio-economic development of the areas in which they are operating.

Under the MPRDA, tenure over established mining operations is secured for up to 30 years (and renewable for periods not exceeding 30 years each thereafter), provided that mining companies apply for new order mining rights over existing operations within five years of May 1, 2004, or before the existing right expires, whichever is the earlier date and fulfill requirements specified in the MPRDA and the Mining Charter.

The Mining Charter was signed by government and stakeholders in October 2002 and contains principles relating to the transfer, over a ten-year period, of 26% of South Africa's mining assets (as equity or attributable units of production) to HDSAs, as defined in the Mining Charter. An interim target of 15% HDSA participation over 5 years has also been set and to this end, the South African mining industry has committed to securing financing to fund participation of HDSAs in an amount of R100.0 billion within the first five years of the Mining Charter's tenure. The Mining Charter provides for the review of the participation process after five years to determine what further steps, if any, are needed to achieve the 26% target participation. In order to measure progress in meeting the requirements of the Mining Charter, companies are required to complete a Scorecard', in which the levels of compliance with the Mining Charter can be ticked-off after five and ten years respectively. The Mining Charter and Scorecard require programs for black economic empowerment and the promotion of value-added production, such as jewelry-making and other gold fabrication, in South Africa. In particular, targets are set out for broad-based black economic empowerment in the areas of human resource and skills development; employment equity; procurement beneficiation and direct ownership. In addition, the Mining Charter addresses socio-economic issues such as migrant labor, mine community and rural development, and housing and living conditions.

We actively carry out mining and exploration activities in all of our material mineral rights areas. Accordingly, the MPRDA has not had a significant impact on these mining and exploration activities because we are eligible to apply

for new licenses over our existing operations, provided that we continue to comply with the Mining Charter. All of our new order licenses have been granted.

We have already complied with the requirements of the Mining Charter, with an equivalent of 34% of production ounces qualifying as empowerment credit ounces. We have been working on our program of licensing since 2004, which involved the compilation of a mineral assets register and the identification of all of our economic, mineral and mining rights. We have secured all old mining rights and validated existing mining authorizations. Our strategy has been to secure all strategic mining rights on a region-by-region basis. The first application for conversion from old order to new order mining rights was for the Evander Operations and was lodged on May 21, 2004. The Evander

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mining license was the first conversion application in the region and in October 2004 we became the first senior company to convert old order to new order mining rights for our Evander and Randfontein operations. We have worked closely with the DME to help ensure, to the extent we are able, that the licenses are granted as swiftly as possible. The conversion of licenses for all our remaining operations were granted during November 2007 and Doornkop will be executed in October 2008.

The MPRDA makes reference to royalties being payable to the South African government in terms of the Mineral and Petroleum Resources Royalty Bill which has not yet been enacted by Parliament. The fourth draft of the Mineral and Petroleum Resources Royalty Bill was tabled in Parliament on August 21, 2008 and provides for the payment of a royalty according to a formula based on earnings before interest, tax and depreciation. This rate is then applied to revenue to calculate the royalty amount due, with a minimum of 0.5% and a maximum of 5% for gold. It is estimated that the formula could translate to a royalty rate of more than 2% of gross sales in terms of current pricing assumptions. The latest proposal results in a large increase from the 1.5% rate proposed in the second draft in 2006. Should the bill be passed by Parliament in its current form, the royalty will become effective on May 1, 2009.

The MPRDA intends to, among other things:

give effect to the Minister s stated intention to promote investment in the South African mining industry;

establish objective criteria for compliance with the MPRDA s socio- economic objectives;

remove the technical deficiencies of the MPRDA:

align the MPRDA with the Promotion of Administrative Justice Act, 2000; and

coordinate the environmental requirements between the MPRDA and the National Environmental Management Act.

#### **PNG**

The Mining Act of 1992 (PNG) is based on Australian legislation. Accordingly, mineral rights in PNG also belong to the government of PNG and they have a statutory right to obtain up to a 30% participating interest in mining development projects. The government then issues and administers mining tenements under the relevant mining legislation, and mining companies must pay royalties to the government based on production.

The key difference in PNG is that citizens have the right to carry out non-mechanized mining of alluvial minerals on land owned by them. These customary rights do not extend over a mining lease, unless an alluvial mining lease is obtained.

Almost all land in PNG is owned by a person or group of persons, and is not generally overlaid by landowner title issues. There is, however, considerable difficulty in identifying landowners of a particular area of land because land ownership may arise from both contract and inheritance, and because of the absence of a formal written registration system.

Prior to commencing exploration, compensation for loss or damage must be agreed with the landowners. Prior to commencing mining, a written agreement must be entered into with landowners dealing with compensation and other matters.

In PNG, Morobe Consolidated Goldfields Limited ( **Morobe''**) holds a mining lease and various exploration licenses granted by the Department of Mining for the Hidden Valley Project. Morobe has also entered into a memorandum of agreement with the state, local government and the landowners.

Wafi Mining Limited holds various exploration licenses granted by the Department of Mining for the Wafi/Golpu Project, and has entered into a compensation agreement with landowners on one of its exploration licenses.

In PNG there are no applicable exchange control restrictions but the PNG central bank does have to be informed of all transactions and has to approve lending facilities and interests rates charged.

**Environmental Matters** 

South Africa

We are committed to conducting our business in an ethically, morally socially and environmentally responsible manner that will protect human health, natural resources and the environment in which we live. We aim to balance our economic, social and environmental goals and responsibilities to achieve sustainable, profitable growth in our business and, more importantly, to work with communities and regulatory agencies to implement sound management practices which will ensure that our mining is conducted in an environmentally-safe manner. In addition, with regard to legacy mining impacts, we remain committed to identifying and implementing coordinated remediation plans that are acceptable to all relevant parties.

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In support of the above commitment, our environmental policy stipulates that:

## **Compliance**

We will integrate environmental policies, programs and practices into all activities and policies of the organization as well as monitor the performance of these programs. We will strive to comply with all applicable municipal, provincial and national laws and regulations, as well as the other requirements to which we subscribe that are relevant to the environmental aspects of our activities, and encourage such compliance from those organizations with whom we do business;

## **Continual Improvement**

We will evaluate and continually improve the effectiveness of our environmental management system through periodic audits, management reviews, and by achieving our environmental objectives. We will review this Environmental Policy annually and make it available to the public;

#### **Pollution Prevention**

We will actively design, operate, and maintain our mining activities with a focus on pollution prevention. We will strive towards the continual reduction of adverse environmental effects, supporting the principle of sustainable development;

#### Awareness

We will communicate this Environmental Policy to employees, contractors and suppliers to ensure their awareness of our commitment to the environment. We will provide appropriate training to all employees to ensure their continuing awareness of environmental responsibilities.

In order to address and minimize the impact of our operations on the environment and take cognizance of the regulatory requirements, the following 5-year targets have been approved by the Board:

Scope of			Measurement	Comparable	
Regulation	Aspect	Element	Criteria	Standard (GRI)	Target
APPA/AQA	Air	Electricity	kWh/ton	X	15%
	<b>Emissions</b>		treated/mined		reduction
		Fuels (Diesel/Petrol)	Litres/CO <sub>2</sub>	$\checkmark$	15%
			equivalents		reduction
		Dust	g/m²/day	X	15%
					reduction
		Methane	CO <sub>2</sub> equivalents	$\sqrt{}$	30%
					reduction
		Coal (domestic)	t/year	$\sqrt{}$	50%
					reduction
NWA	Water	Consumptive Use	m <sup>3</sup> /ton treated/mined	X	10%
					reduction
		Metal/Salt Discharge:			
		- surface	tons	X	70%
					reduction
		- underground	tons	X	20%
				1	reduction
		steel	tons	$\sqrt{}$	

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MPRDA and NNRA	Land - recycle	plastic	tons	X	All waste will be handled
		*		1	
		timber	tons	<b>V</b>	through
					designated
					areas.
		Oil/grease	litres	$\checkmark$	50%
					recycled
	Land - use	impacted	ha	$\checkmark$	10%
					reduction

Our approach to environmental management encompasses the following four broad principles: all relevant environmental risks should be identified and prioritized;

environmental issues should be dealt with promptly;

environmental issues, particularly relating to continuous non-compliance or potentially serious environmental impacts, should be notified and dealt with at the board level; and

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we will adopt the best practicable environmental option; that is, the option that has most benefit, or causes the least damage to the environment, at a cost acceptable to society and affordable to us.

We developed our environmental policy in consultation with various stakeholders such as mine managers, employees and unions, and which has the approval of the Chairman of the Sustainable Development Committee and the Chief Executive. It has also been adopted by each mine manager at signing ceremonies held at each shaft. It commits shafts to returning their areas of operation—as close as possible to the pre-mining state, thus creating sustainability and economic viability for generations to come—.

The main areas of the policy are:

that environmental management is a corporate priority;

that environmental policies, programs and practices will be integrated into our activities;

that we will strive for continued improvement and efficiency;

that we will work with government departments and the public to come up with the best sustainable solutions;

that contractors and suppliers will be required to comply with our policy; and

that employees will be informed and educated regarding their environmental responsibilities.

The focus was on implementing an environmental management policy at an operational level during fiscal 2007. During fiscal 2008, we continued the adoption of the ISO 14001 specification as the Environmental Management System ( **EMS** ) for the South African operations. The EMS is a structured approach for addressing the triple bottom-line (that is, social, economic and environmental), and forms the basis of environmental management at an operation level. ISO 14001 is a recognized and widely adopted EMS framework.

The ISO4001 EMS is being introduced progressively throughout our South African operations. The planned program completion for this region is 2012. As at September 30, 2008, the implementation status is as follows:

**Operation:** Implementation Status:

**Doornkop** 85% (with the Stage 1 external audit scheduled by end of November 2008)

Target 65% Elandsrand 65% Phakisa 55%

Environmental policy and strategy within our business, as well as the environmental impact of our operations on regional communities, are overseen by the Sustainable Development Committee. The management of environmental issues at operational level is the responsibility of each divisional Chief Operational Officer, who is supported by line management in the various regions. Structure and reporting mechanisms are in place to ensure that the Board is kept fully informed, on a quarterly basis, of environmental matters within the group as well as progress made towards achieving targets set for key parameters.

The Environmental Management Function ( **EMF** ) has been structured to support operational goals. Primarily, this means it will ensure reasonably practicable compliance with legislation, and the promotion of environmental awareness. At a regional level, environmental management managers provide advice and support to the relevant operational management teams. Given the diversity of the environmental issues being dealt with, one of the environmental challenges facing the operations is to effectively access the diverse range of skills necessary to address environmental issues. Concurrent rehabilitation and mitigation capacity resides within the various operational functions, such as surface engineering, metallurgy, etc. Where specific capacity is lacking in-house, use is made of external consultants with appropriate specialist expertise. Operational personnel are assisted by the EMF to determine the scope of work and consultants are selected and employed as the need arises. Their selection is conducted in terms of our procurement policy. Regional environmental managers meet on a quarterly basis as part of a process to encourage networking, information sharing and joint problem-solving. Staff members are encouraged to develop their

skills through on-the-job training and external opportunities such as conferences and short courses. Current complements provide for further strengthening of the skills base of the EMF in line with our commitments. We support future staffing in the environmental area by mentoring two graduates (in the discipline) to fill future roles within our business. The process of rehabilitation has been given a boost with the appointment of a group level

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Environmental Manager specifically charged with accelerating the rehabilitation of specific target areas with a view to obtain concurrent closure instead of the approach of viewing final mine closure at the end of life of mine.

With this new appointment, we have initiated a process of identification and planning around environmentally sensitive sites in both the north and south regions to be rehabilitated in line with the requirements of the MPRDA and other relevant legislation. These areas have been identified for rehabilitation as part of our progressive rehabilitation and closure planning program, a predecessor program to the final mine closure plan (for the entire mine) for activities which must be carried out after production of minerals from the mine or when mining has ceased.

Rehabilitation and closure plans are being developed internally for targeted areas where an urgent need for rehabilitation and formal closure has been identified. External expertise will be utilized should the need arise. Obtaining approval from the relevant authorities (notably DME, Department of Water Affairs and Forestry ( DWAF ) and, in some cases, National Nuclear Regulator ( NNR )) for the rehabilitation and closure plans is essential.

The rehabilitation programs are aimed at making the area suitable for future land development with a goal of achieving positive socio-economic spin-offs.

Land use objectives are established in consultation with relevant government departments, local authorities, landowners and all relevant Interested and Affected Parties ( IAP ). IAP consultation forms part of the planning and development process as it is a prerequisite to closure plan approval. Obtaining the authorities approval (notably DME, DWAF and in some cases the NNR) on the rehabilitation and closure plans is of the essence. The rehabilitation programme is aimed at making the area suitable for future land development with positive socio- economic spin- offs to be realised therefrom. Land use objectives are established in consultation with relevant government departments, local authorities, landowners and all relevant interested and affected parties. IAP consultation forms part of the planning and development process which is a prerequisite to closure plan approval.

Our environmental management strategy, which has been updated and given the full support of our Board and CEO, is guided by the environmental policy by prevailing environmental laws and the EMPRs developed by us for each operation and approved by the DME which are legally binding. We are not aware of any litigation, current or pending, against us in this regard.

During the fiscal 2005, we were issued with directives from DWAF related to the collection, removal and re-use or disposal of extraneous groundwater in the Klerksdorp, Orkney, Stilfontein and Hartebeestfontein ( **KOSH** ) area. This follows the liquidation of the DRDGOLD North West operations in this area and the subsequent liquidation of Stilfontein, which brought an end to their pumping activities and threatened to flood other mines in the area. In February 2007, Harmony, AngloGold Ashanti and Simmer Jack Mines Limited entered into an agreement pursuant to which Margaret Water Company ( **MWC** ) was formed to manage the water emanating from the now defunct Stilfontein Gold Mine. MWC and the three mining companies entered into a loan agreement for the provision of a loan of R18.0 million (U.S.\$2.56 million) from each mining company to MWC as seed funding for stabilization of the infrastructure.

The Western Basin Environmental Corporation ( **WBEC** ) is in the process of funding the necessary infrastructure improvements to ensure the sustainability of the pumping operations. It continues to be managed by directors appointed by each of the relevant mining houses. The Western Utilities Corporation ( **WUC** ) established in order to fund the treatment of the water on a sustainable basis has secured sufficient offshore funding from offshore investor. WUC has entered into a management agreement with WBEC and has built and successfully operated three pilot plants over the last 8 months. The results of these trials are being analyzed and the full viability report will be available by the end of calendar 2008.

The KOSH obligations have passed to Pamodzi with the sale of the Orkney operations to that company. We are expecting a revised DWAF directive pertaining to the water management of the Western Mining Void

water decant during October 2008, which is expected to cover operating conditions leading up to final solution following the pilot work. Currently, we are in compliance with the regulators—requirements within the operating constraints of the water treatment plan. We are also in regular contact with DWAF in this regard, and are actively minimizing our water discharge quantity by re-use in our metallurgical facilities.

EMS forms the basis for the implementation of the environmental policy and monitoring compliance. All of the South African operations function within the requirements and conditions of the EMPRs that have been approved by

the DME. These EMPRs contain specific as well as generic principles relating to environmental management during the operation of the mine. Closure objectives are set and closure plans

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formulated within the EMPR. The latter includes investigation of the potential for re-use of existing infrastructure, preparation of a rehabilitation plan, rehabilitation and vegetation of the affected area and post-closure monitoring. Conversion to new order mining rights in line with the MPRDA requires that mining companies report on the extent of compliance with their approved EMPRs. The EMPRs identify individual impacts, mitigation measures and rehabilitation requirements. These have been used as the basis for the development of a proprietary EMS, which is currently being tested, populated with information, and rolled out to the various operations. This proprietary EMS, which encompasses the principles of ISO 14000, is an electronic-based system. The proprietary EMS encompasses the following activities:

*Environmental inspection:* general inspections are performed routinely and systematically with collected data entered into the system to enable follow-up actions.

*Risk assessment:* detailed and specific risk assessments are conduced to help identify deviations that may not have been otherwise anticipated.

*Stakeholder communication:* all communication is managed and may result in action items for the organization for which the stakeholder will require follow-up feedback. All such communication is logged.

*Monitoring:* impact monitoring is focused on collecting and analyzing environmental data that may well result in follow-up actions.

Licenses/permits: all details relating to licenses or permits can be registered in the system.

Major loss, incident and accident notification: when an incident occurs, initial information about the incident is recorded to trigger a notification process.

The bulk of our significant impacts are historic, and are currently managed in terms of site-specific procedures or codes of practice. Any major operational changes will, in future, take cognizance of the Environmental Impact Assessment ( EIA ) process and adhere to the outcomes of such studies. Furthermore, the continued development of EMSs, with respect to site monitoring and risk assessment, will allow for the inclusion of specific evaluation criteria in the decision-making process. We have conducted internal compliance assessments on all of our EMPRs. Assessments and non-compliance areas are being addressed. The results of the compliance assessment have been included in the application for conversion to new order mining rights.

In accordance with legislation, we have established seven independent environmental rehabilitation trust funds to make adequate financial provision for the expected cost of environmental rehabilitation at mine closure and for the discharge of our obligations and contingency liability. Each operation estimates its expected environmental closure liability annually and this estimated amount is used to calculate the contributions to be made to the rehabilitation trust funds. The contributions are spread over the operational life-of-mine and contributions are made by each operation on an annual basis. The accumulated amount in the various South African rehabilitation trust funds as at June 30, 2008 was U.S.\$205.5 million, while the total rehabilitation liability was U.S.\$173.6 million in current monetary terms.

The assets of each mine within each fund are ring-fenced and may not be used to cross-subsidize one another. Contributions to the various funds will continue to be made over the operations life-of-mine and each fund is expected to be fully-funded at the time of closure. Sudden and accidental pollution is covered under our public liability insurance policy. The Asset Management Committee formed during fiscal 2006 continues to co-ordinate the activities related to the disposal of assets and subsequent closure of redundant operational sites to an environmentally acceptable standard. The EMF is represented on the committee at senior management level. An important element of this committee is work is to investigate alternative and appropriate land use, particularly in respect of those assets for which closure is being planned.

Pursuant to South African law, mine properties must be rehabilitated upon closure. Mining companies are required by law to submit EMPRs, to the DME. EMPRs identify the rehabilitation issues for a mine and must also be approved by other South African government departments including, but not restricted to the DWAF.

EMPRs have been prepared and submitted for all of our South African operations. All of our South African mining operations have permanent mining authorizations as required in terms of the previous Minerals Act 1991. We have already obtained all new order mining rights. We meet with and intend to continue to meet on a regular basis with the relevant government departments to continue the information sharing process that we have with them and to ensure the environmental impact of our mining operations are managed in accordance with applicable regulatory requirements and industry standards.

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All water uses are now in the process of being licensed, and we have submitted water-use registrations required by the National Water Act of 1998. We have also developed water management plans for all of our South African operations. This process is now extended to a full review and submission of Water Use License applications, which will take into account all water-related issues as well as planned projects.

In addition, an environmental surveillance system has been implemented at slimes dams at our operations to monitor dust generation and fall-out in residential and other areas. This will assist in future dust suppression and the design and measurement of rehabilitation programs. In excess of R5 million (U.S.\$0.7 million) has been spent in contouring the tops of the slimes dams concerned and to provide wind erosion containment measures and the supply of sewage discharge water to initiate vegetation growth in the coming season has been completed. In addition, spraying of the leading edges of the dams and dumps with eco-friendly palliatives to bind the soils in the short term is ongoing, although the palliatives have had limited success in binding the dust particles, further tests are ongoing. *Australia* 

Our Western Australian Mt. Magnet operations are subject to applicable environmental legislation, and also specific site conditions attaching to the mining tenements imposed by the Department of Industry and Resources, to the operating licenses issued by the Department of Environmental Protection, and also to the water abstraction licenses issued by the Water and Rivers Commission.

As a result, we must make provision for environmental rehabilitation whenever mining operations are conducted. While we believe that our current provision for compliance with such requirements is reasonable, any future changes and development in Australian environmental laws and regulations may adversely affect these Australian operations. The total Australian rehabilitation liability was A\$20.3 million (U.S.\$19.4 million) at the end of fiscal 2008.

In Western Australia, rehabilitation obligations under the Mining Act are covered by environmental securities issued by us, or by performance bonds issued by our bankers and cash-backed by us. These bonds cannot be relinquished or cancelled without the approval of the Department of Industry and Resources. The amount of the bond is established prior to issuance of the tenement and commencement of operations, and generally is audited by the regional inspector. Thereafter, the amount is reviewed on an annual basis following our issuance of an annual environmental report. As areas are successfully rehabilitated, the bond requirement is reduced.

Audits are generally conducted on a bi-annual basis by the Australian Department of Environmental Protection to determine compliance with the relevant operating license(s). There are currently no outstanding material non-compliance issues against our licenses.

At each of our mines, we appointed a person dedicated to environmental matters who, in addition to organizing the implementation of the environmental management programs, monitors the impact of mining on the environment and responds to impacts that require specific attention outside of the normal program of environmental activities.

The primary environmental focus at most of our operations is water management and the administration of areas outside the operating plants and shafts. The major objective is to ensure that water is of a quality fit for use by downstream users.

Based on current environmental and regulatory requirements, we accrue for the estimated rehabilitation expense in full when mining commences and then amortizes these environmental rehabilitation costs over the operating life of a mine.

#### **PNG**

Our PNG operations are in exploration, pre-feasibility study and project construction phases, and mining has not yet commenced. We are subject to applicable environmental legislation including specific site conditions attaching to the mining tenements imposed by the PNG Government Department of Environment and Conservation ( **DEC** ), to the terms and conditions of operating licenses issued by the Department of Mines and DEC, and also to the environment permit for water abstraction and discharge issued by DEC.

The current status of our PNG projects can be summarized as follows:

The Hidden Valley project is in the construction phase. The project has obtained and is in compliance with all permits and licenses required for the current stage of the project s development. The access road to the Hidden Valley project site has been completed with part of the road sides successfully re-vegetated. The foundations have been completed for accommodation and administration buildings for the general mine

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infrastructure. Excavation is underway for the plant site, tailings storage facility and the access road to the open-pit. Government approval has been given to amend the environment permit based on an updated feasibility study for the site.

The Wafi Golpu project is presently undertaking pre-feasibility studies. The project has obtained, and is in compliance with, all permits and licenses for the current stage of the project s development.

Harmony PNG is committed to working within the framework of corporate EMS in accordance with the international EMS standard, ISO 14001:2004, adapted for use in Australia and New Zealand as AS/NZS ISO 14001:2004 and the Equator Principles of the World Bank. These standards provide Harmony PNG with the elements of an effective EMS, that is, a procedure for implementing, achieving, reviewing and maintaining our environmental policy, and also incorporates good industry environmental management practices, which form the basis of a project-specific EMS.

An EMS is a structured approach to managing an environmental program, and provides a quality system to guide: development and implementation of environmental management procedures;

monitoring of environmental impacts and performance; and

review of procedures to ensure continual improvement.

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## **Health and Safety Matters**

#### South Africa

The Mine Health and Safety Act

For many years, the safety of persons working in South African mines and quarries was controlled by the Mines and Works Act of 1956 and then by the Minerals Act of 1991 which was replaced by the Mine Health and Safety Act. The Minerals Act of 1991 has subsequently been repealed and the MPRDA promulgated. The findings of the Leon Commission of Inquiry into Health and Safety in the Mining Industry (held in April 1994) culminated in the Mine Health and Safety Act, which was a product of intensive discussion and debate between government, employers and employee representatives over an extended period of time. The objectives of the Mine Health and Safety Act are:

to protect the health and safety of employees and other persons at mines;

to promote a culture of health and safety;

to require employers and employees to identify hazards and eliminate, control and minimize the risks relating to health and safety at mines;

to give effect to the public international law obligations of South Africa that concern health and safety at mines;

to provide for employee participation in matters of health and safety through health and safety representatives and health and safety committees at mines;

to provide for the effective monitoring of health and safety conditions at mines;

to provide for the enforcement of health and safety measures at mines; and

to foster and promote co-operation and consultation on health and safety between the Department of Minerals and Energy, employers, employees and their representatives.

The Mine Health and Safety Act prescribes general and specific duties for employers and others, determines penalties and a system of administrative fines, and provides for employee participation by requiring the appointment of health and safety representatives and the establishment of health and safety committees. It also entrenches the right of employees to refuse to work in dangerous conditions. Finally, it describes the powers and functions of the mine health and safety inspectorate and the process of enforcement.

Government, through the Department of Minerals and Energy, ordered the institution of audit teams to conduct legal compliance and systems and explosives control audits on mines across all commodities.

It is anticipated that mining companies will incur additional expenditure in order to comply with the prescribed legislative requirements. Management anticipates that such additional expenditure will not have a material adverse effect upon our operational results or financial condition.

## HIV & AIDS Policy

We are actively pursuing holistic HIV & AIDS awareness campaigns with our South African workforce and are also providing medical assistance and anti-retroviral treatment. Employees who decide to leave their place of work and return home for care are cared for at their homes through the TEBA home based care system, to which we contribute. See *Risk Factors Risks Relating to Our Business and Our Industry HIV & AIDS poses risks to Harmony in terms of productivity and costs* and *Risk Factors Risks Relating to Our Business and Our Industry The cost of occupational healthcare services may increase in the future*.

In South Africa, we have an agreement with the relevant stakeholders concerning the management of HIV & AIDS in the workplace. This agreement, originally signed in 2002 with the National Union of Mine Workers ( NUM ) and the United Association of South Africa ( UASA ) was amended for the third time in August 2006. While many aspects of the policy have remained unaltered, the most fundamental change is the inclusion in the policy of a broad spectrum of chronic manageable diseases other than HIV & AIDS such as diabetes, asthma and hypertension. This was done in

order to minimize the stigma surrounding stand alone HIV & AIDS treatment centers and also to emphasize our view that HIV & AIDS should no longer be viewed as a death sentence, but rather a chronic, manageable disease. The agreement also serves to reassure our employees of our commitment to the respect of all human rights. During the early stages of the implementation of the HIV & AIDS program, the agreement was also used as a marketing tool to encourage employee participation in the Harmony HIV & AIDS Program.

Our HIV & AIDS Program, fully supported at all levels of management, is overseen by a qualified medical practitioner together with the assistance of qualified consultants and experts. In September 2005, an independent consultant, the Health Monitor Group, undertook a second

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business impact assessment for the group. Based on actuarial information, the assessment revealed that the prevalence rates of HIV & AIDS within our business have stabilized at around 30%. This result was in line with the first or baseline assessment that was done in 2003. The introduction of Highly Active Anti-Retroviral Therapy has also helped to manage the treatment of HIV & AIDS infected employees. The effectiveness of these measures will only be determined over time. We are currently negotiating an agreement on the Traditional Health Practitioners with the NUM and we have a contracted a dually qualified Western Doctor/Traditional Health Practitioner who attends to patients once weekly at the clinic in Randfontein and also advises us in view of the pending National Traditional Health Practitioners Bill. A third HIV & AIDS impact assessment will be completed by the end of December 2008, and the effects of the availability of anti-retroviral drugs will only begin to show on the current analysis. The issue has not yet been finalized by the Harmony Council because through these negotiations management identified a need for a workshop on the bill to ensure that all negotiating parties have the same information and understanding on the contents of the bill. We are currently awaiting a date for the workshop from the National Department of Health s Traditional Health Practitioner s Office.

In fiscal 2008, there were 82 documented AIDS related deaths as compared to 52 in fiscal 2007 and 49 in 2006. In addition, 166 employees left as a result of medical repatriation in fiscal 2008 as compared to 783 in fiscal 2007 and 1,572 in fiscal 2006. Medical repatriations refer to those employees who are not sufficiently well to continue working with us and are thus provided with an early and humane exit.

We embarked upon a holistic and integrated campaign in fiscal 2008 in which approximately R19.0 million (U.S.\$2.6 million) was spent.

#### Australia

Australia has a well regulated system of occupational health and safety, comprised of legislation and regulations in each of its states. Several of these specifically apply to the mining industry, including extensive codes of practice and guidelines. There is also a well developed certification and licensing system for employees and the usage of certain items of equipment. The legislation and regulations governing this area include the Australian Standards 4804, the Safety Management Systems and the Western Australian Mining Regulation Act 1994, the Occupational Safety and Health Act 1984 (WA), the Occupational Safety and Health Regulations 1996, the Mines Safety and Inspection Act 1994 (WA) and the Mines Safety and Inspection Regulations 1995.

In the event of injury while at work, employees are protected by a compulsory workers compensation scheme. We currently believe that the prevalence of HIV & AIDS-related diseases among our Australian workforce is not material to our Australian operations.

#### **PNG**

PNG has a significant mining industry, and a developing system of occupational health and safety. The Mining (Safety) Act of 1977 (PNG) is the principal legislation that addresses a range of issues such as working hours, minimum safety and reporting requirements. Other legislation and regulations also apply.

Although reliable statistics with regard to infection rates are not readily available, preliminary results indicate that PNG is in the early stages of an AIDS pandemic. As part of the development of the Hidden Valley project, and other exploration activities carried out by us in PNG, we have rolled out a health care strategy for our employees to increase Aids awareness. See \*Risk Factors\*\* Risks Relating to Our Business and Our Industry HIV/AIDS poses risks to Harmony in terms of productivity and costs\*\* and \*Risk Factors\*\* Risks Relating to Our Business and Our Industry The cost of occupational healthcare services may increase in the future .

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# Item 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

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#### Item 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

You should read the following discussion and analysis together with the consolidated financial statements, including the related notes, appearing elsewhere in this annual report.

#### Overview

We conduct underground and surface gold mining and related activities, including exploration, processing, smelting and beneficiation. Our operations have grown significantly since 1995, largely through acquisitions. Since 1995, we have expanded from a lease-bound mining operation into an independent world-class gold producer. We are currently the third largest producer of gold in South Africa, producing some 23.4% of the country s gold output, and are among the world s top ten gold producers. Our gold sales have increased from 650,312 ounces of gold in fiscal 1995 to approximately 1.9 million ounces of gold in fiscal 2008. As at June 30, 2008, our mining operations reported total proven and probable reserves of approximately 50.5 million ounces and in fiscal 2008, we processed approximately 25.4 million tons of ore.

Previously, the South African underground operations were treated as three separate reporting segments for management and reporting purposes, being Quality , Leveraged and Growth . After the Back to Basics restructuring management now distinguishes between Underground and Surface , with each shaft or group of shafts managed by a team (headed by a single general manager) being considered to be an operating segment.

Our South African reportable segments are as follows:

Tshepong, Phakisa, Bambanani, Doornkop, Elandsrand, Target, Evander operations, Masimong, Virginia operations and Cooke operations (classified as discontinued operations); and

all other shafts and surface operations, including those that treat historic sand dumps, rock dumps and tailings dams, are grouped together under Other Underground or Other Surface .

## **Critical Accounting Policies and Estimates**

The preparation of our financial statements in accordance with IFRS as issued by the IASB requires management to make estimates and assumptions that affect the reported results of our operations. Actual results may differ from those estimates. We have identified the most critical accounting policies upon which our financial results depend. Some of our accounting policies require the application of significant judgment and estimates by management in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty and are based on our historical experience, terms of existing contracts, management s view on trends in the gold mining industry and information from outside sources.

Our significant accounting policies are described in more detail in note 2 to the consolidated financial statements. This discussion and analysis should be read in conjunction with the consolidated financial statements and related notes included in reporting *Item 18. Financial Statements*. Management has identified the following as critical accounting policies because estimates used in applying these policies are subject to material risks and uncertainties. Management believes the following critical accounting policies, together with the other significant accounting policies discussed in the notes to the consolidated financial statements, affect its more significant judgments and estimates used in the preparation of the consolidated financial statements and could potentially impact our financial results and future financial performance.

# Depreciation and Amortization of Mining Assets

Depreciation and amortization expense is calculated using the units of production method and is based on our current gold production as a percentage of total expected gold production over the lives of our mines. The lives of the mines are estimated by our geology department using proven and probable mineral reserves, as determined in accordance with SAMREC, JORC and SEC Industry Guide 7.

The estimate of the total expected future lives of our mines could be materially different from the actual amount of gold mined in the future and the actual lives of the mines due to changes in the factors used in determining our mineral reserves, such as the gold price, foreign currency exchange rates, working costs and working rates. We regularly review the lives of the mines and economic capacity of those assets with reference to any events or circumstances that may indicate an adjustment is needed. Given the significance of mining assets to our financial statements, any changes to the life of mine could have a material impact on the annual amortization charge and

materially impact on our results of operations and financial conditions. See *Item 3*. Key Information Risk Factors Harmony s gold reserve figures are estimated based on

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a number of assumptions, including assumptions as to mining and recovery factors, future cash costs of production and the price of gold and may yield less gold under actual production conditions than currently estimated.

## Impairment of Property, Plant and Equipment

We review and evaluate our mining assets for impairment when events or changes in circumstances indicate the related carrying amounts may not be recoverable. An impairment loss is recognized for the amount by which the asset s carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset s fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Each operating shaft, along with allocated common assets such as plants and administrative offices, is considered to be a cash generating unit as each shaft is largely independent of the cash flows of other shafts and assets.

Future cash flows are estimated based on estimated quantities of recoverable minerals, expected gold prices (considering current and historical prices, price trends and related factors), production levels and cash costs of production, capital and reclamation costs, all based on detailed life-of-mine plans. The significant assumptions in determining the future cash flows for each individual operating mine at June 30, 2008, apart from production cost and capitalized expenditure assumptions unique to each operation, included a long-term gold price of U.S.\$750 per ounce and South African and Australian dollar exchange rates of U.S.\$1 = R7.46 and A\$1 = U.S.\$0.80, respectively. The term recoverable minerals refers to the estimated amount of gold that will be obtained from proven and probable reserves and related exploration stage mineral interests, except for other mine-related exploration potential and Greenfields exploration potential discussed separately below, after taking into account losses during ore processing and treatment. Estimates of recoverable minerals from such exploration stage mineral interests are risk adjusted based on management s relative confidence in such materials. With the exception of other mine-related exploration potential and Greenfields exploration potential, estimates of future undiscounted cash flows are included on an area of interest basis, which generally represents an individual operating mine, even if the mines are included in a larger mine complex. In the case of mineral interests associated with other mine-related exploration potential and Greenfields exploration potential, cash flows and fair values are individually evaluated based primarily on recent exploration results and recent transactions involving sales of similar properties.

As discussed above under Depreciation and amortization of mining assets , various factors could impact our ability to achieve our forecasted production schedules from proven and probable reserves. Additionally, gold prices, capital expenditure requirements and reclamation costs could differ from the assumptions used in the cash flow models used to assess impairment. The ability to achieve the estimated quantities of recoverable minerals from exploration stage mineral interests involves further risks in addition to those factors applicable to mineral interests where proven and probable reserves have been identified, due to the lower level of confidence that the identified mineralized material can ultimately be mined economically. Assets classified as other mine-related exploration potential and Greenfields exploration potential have the highest level of risk that the carrying value of the asset can be ultimately realized, due to the still lower level of geological confidence and economic modeling.

During fiscal 2008, we recorded impairments of U.S.\$27 million, and during fiscal 2007 and 2006, reversals of impairments of U.S.\$19 million and U.S.\$30 million, respectively, on property, plant and equipment, all from continuing operations. Material changes to any of these factors or assumptions discussed above could result in future impairment charges.

#### Carrying Value of Goodwill

We evaluate, on at least an annual basis, the carrying amount of goodwill to determine whether current events and circumstances indicate that such carrying amount may no longer be recoverable. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Each operating shaft, along with allocated common assets such as plants and administrative offices, is considered to be a cash generating unit as each shaft is largely independent of the cash flows of other shafts and assets. To accomplish this, we compare the recoverable amounts of our cash generating units to their carrying amounts. The recoverable amount is the higher of an asset s fair value less costs to sell and value in use. If the carrying value of a cash generating unit were to exceed its recoverable amount at the time of the evaluation, we would compare the implied fair value of the cash generating unit s goodwill to its carrying amount and any shortfall would be charged

to consolidated income statements. Assumptions underlying fair value estimates are subject to risks and uncertainties. If these assumptions change in future, we may need to record impairment charges on goodwill not previously recorded.

During fiscal 2008, we recorded an impairment of U.S.\$13 million on goodwill.

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#### Provision for environmental rehabilitation

Our mining and exploration activities are subject to various laws and regulations governing the protection of the environment. Estimated long term environmental obligations, comprising pollution control, rehabilitation and mine closure, are based on the Group's environmental management plans. Annual changes in the provision consist of finance costs relating to the change in the present value of the provision and inflationary increases in the provision estimate, as well as changes in estimates. The present value of environmental disturbances created is capitalized to mining assets against an increase in the rehabilitation provision. The rehabilitation asset is depreciated as discussed above. Rehabilitation projects undertaken, included in the estimates are charged to the provision as incurred. The cost of ongoing current programs to prevent and control pollution is charged against income as incurred.

## Deferred Tax Asset

We do not recognize a deferred tax asset when it is more likely than not that the asset will not be utilized. Assessing recoverability of deferred tax assets requires management to make significant estimates related to expectation of future taxable income. Estimates of future taxable income are based on forecasted cash flows from operations, reversals of deferred tax liabilities and the application of existing tax laws in each jurisdiction. To the extent that future taxable income differs significantly from estimates, our ability to realize the net deferred tax assets recorded at the balance date could be impacted. Additionally, future charges in tax laws in the jurisdictions in which we operate could limit our ability to obtain the future tax benefits represented by deferred tax assets recorded at the balance date.

#### Revenue

Substantially all of our revenues are derived from the sale of gold. As a result, our operating results are directly related to the price of gold. Historically, the price of gold has fluctuated widely. The gold price is affected by numerous factors over which we do not have control. See *Item 3. Key Information Risk Factors The profitability of Harmony s operations, and the cash flows generated by those operations, are affected by changes in the market price for gold, which in the past has fluctuated widely.* 

As a general rule, we sell our gold produced at market prices to obtain the maximum benefit from increases in the prevailing gold price and do not enter into hedging arrangements such as forward sales or derivatives that establish a price in advance for the sale of our future gold production.

A substantial proportion of the production at each of New Hampton and Hill 50 in Australia was already hedged when we acquired them. Since fiscal 2002, in line with our strategy of being generally unhedged, we evaluated the hedge agreements as well as market conditions and closed out the hedge contracts at the time that provided the most benefits. The last of the contracts were closed out during fiscal 2007, which resulted in our being unhedged in line with our stated company policy to give shareholders full exposure to the gold price.

Our costs of closing out certain operations hedge positions in fiscal years 2007 and 2006 was approximately U.S.\$60 million and U.S.\$34 million, respectively, before taxes.

Significant changes in the price of gold over a sustained period of time may lead us to increase or decrease our production in the near-term.

#### Harmony s Realized Gold Price

The average gold price in U.S. dollars received by us has generally increased since January 1, 2002. In fiscal 2008, the average gold price in U.S. dollars received by us for continuing operations was U.S.\$818 per ounce. The market price for gold (and, accordingly, the price received by us) is affected by numerous factors over which we have no control. See *Item 3*. Key Information Risk Factors The profitability of Harmony s operations, and the cash flows generated by those operations, are affected by changes in the market price for gold, which in the past has fluctuated widely.

The following table sets out the average, the high and the low London Bullion Market price of gold and our average U.S. dollar sales price during the past three fiscal years:

Fi	scal Year Ended	ì
	June 30	
2008	2007	2006

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			( <b>\$/oz</b> )	
Average		821	638	527
High		1,011	692	726
Low		649	561	418
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			Fiscal Year Ended June 30		
		2008	2007 (\$/oz)	2006	
Harmony s average sales price	continuing operations	818	638	529	

(1) Our average sales price differs from the average gold price due to the timing of our sales of gold within each year.

#### Costs

Our cash costs and expenses typically make up over 80% of our total costs. The remainder of our total costs consists primarily of exploration costs, employment termination costs, corporate and sundry expenditure, and depreciation and amortization. Our cash costs consist primarily of production costs exclusive of depreciation and amortization. Production costs are incurred on labor, stores and utilities. Labor costs are the largest component and typically comprise approximately 50% of our production costs.

Our cash costs for continuing operations has increased from U.S.\$440 per ounce in fiscal 2006 to U.S.\$591 per ounce in fiscal 2008, mainly as a result of lower production volumes, the impact of increased labor and energy costs as well as inflationary pressures on supply contracts. In U.S. dollar terms, these increases were offset by the depreciation of the Rand-U.S. dollar exchange rate.

Our U.S. translated costs are very sensitive to the exchange rate of the Rand and other non-U.S. currencies to the U.S. dollar. See *Item 5. Operating and Financial Review and Prospects Exchange Rates*. Appreciation of the Rand and other non-U.S. currencies against the U.S. dollar increases working costs at our operations when those costs are translated into U.S. dollars. See *Item 3. Key Information Risk Factors Because most of Harmony s production costs are in Rand and other non-U.S. currencies, while gold is generally sold in U.S. dollars, Harmony s financial condition could be materially harmed by an appreciation in the value of the Rand and other non-U.S. currencies*.

The South African Rand depreciated approximately 11% against the U.S. dollar in fiscal 2008 compared to fiscal 2007. In the case of our International operations, both the Australian dollar and Kina appreciated 13% and 12%, respectively, against the U.S. dollar in fiscal 2008 compared to fiscal 2007.

#### Reconciliation of Non-GAAP Measures

Total cash costs and total cash costs per ounce are non-GAAP measures.

Our cash costs consist primarily of production costs and are incurred to access ore to produce current mined reserves and are expensed as incurred. Cash costs do not include capital development costs, which are incurred to allow access to the ore body for future mining operations and are capitalized and amortized when the relevant reserves are mined.

We have calculated total cash costs and total cash costs per ounce by dividing total cash costs, as determined using the guidance provided by the Gold Institute, by gold ounces sold for all periods presented. Total cash costs, as defined in the guidance provided by t