SPECIAL REPORT



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CAPITAL PROJECTS

- an in-depth analysis

Substantial progress has been made on the company's growth projects during the past financial year. The five projects – four in South Africa and one in PNG – comprises 20.1Moz of Harmony's production profile over their respective mine lives. Importantly, this growth has been undertaken at a very reasonable level of capital cost per production ounce and will increase the average grade of mineable reserves (see table).

Progress on these projects and their current status is featured on the pages that follow.

Growth projects – low capital cost per production ounce						
	Life of mine ounces (million)	Total capital cost (US\$ million)	Total capital cost (US\$/oz)	g/t	Cash cost (US\$/oz)	Annual production (oz)
Expansion projects						
Tshepong	1.4	43	31	7.2	279	135 030
New mines through existing						
infrastructure						
Elandsrand	7.55	137	18	7.9	272	415 893
Doornkop South Reef	3.06	178	58	6.6	301	347 220
New mines under construction						
Phakisa	5.40	130	24	8.3	278	281 634
Hidden Valley	2.65	365	95	2.2	224	285 000

PHAKISA PROJECT

LOCATION: Free State, South Africa

Project description:

The project involves the establishment of infrastructure and the sinking and equipping of a primary shaft to a depth of 2 427m below surface. The mine will have five production levels (66, 69, 71, 73 and 75 levels) where access development will take place. 75 level will be host to a 1 500m, 9° twin decline, with another five levels (77, 79, 81, 83 and 85), from where there will be access development towards the reef horizon. The project was started in October 1993 and sinking during February 1994. Under the previous ownership, activity was suspended during May 1999 at 2 357.9m below collar. The shaft was part of the Freegold acquisition of AngloGold assets in 2002 and was re-established in July 2003.



Key statistics	
Expected annual gold production	282 000oz
Capital expenditure	R934 million
	\$130 million
LOM	22 years
Tonnes milled over LOM	19.97 million
Grade (average reserve head grade)	8.27g/t
LOM ounces	5.40 million

Key dates	
Project start	July 2003
Expected completion	April 2010

Phakisa: Capital expenditure to date (%)



Phakisa: Capital expenditure (Rm)



Project progress during the year:

Key milestones achieved:

Good progress was made in a number of areas. By year-end, the project was about 80% complete, which reflects a delay of some three months.

Main shaft:

The main shaft was commissioned in November 2006 following the completion of all in-circle development. Installation of the Koepe winder has been completed and the winder has been licensed for both men and materials.

On-level construction:

Access development has begun on all production levels and good progress was made, particularly in the second half of the year. However, some hoisting and tramming delays were experienced and various ore handling constraints resulted in slower-than-anticipated access development.

- Construction of the settler system has started.
- Construction of the clear water dam between 55 and 59 levels is in progress and was ahead of schedule at year-end.
- Excavations for the bulk air cooler and fridge plant were completed in May 2007 and civil construction is now under way.

Rail-veyor:

The rail-veyor was commissioned on 10 April 2007, with the commissioning of a second train planned for October 2007. A number of commissioning challenges were experienced, cycle times have continued to improve.

Going forward:

Production is scheduled to begin in June 2008.

Key milestones for FY08 are:

- Commissioning of the second rail-veyor train October 2008.
- Commissioning of 55 level bulk air cooler – March 2008
- Commissioning of the surface ice plant May 2008



DOORNKOP SOUTH REEF

LOCATION: Gauteng, South Africa

Project description:

The project involves the deepening of the Doornkop mine shaft to 1 973m and development to mine the South Reef.

The South Reef lies between 1 650m and 2 000m below surface; the upper levels of the shaft are currently accessing the lower grade Kimberley Reef, which lies between 900m and 1 100m below surface. This project is a joint venture with African Vanguard Resources (AVR), our BEE partner. Harmony owns 74% and AVR 26%.

Key statistics	
Expected annual gold production	10 796kg
(average during peak years)	347 000oz
Capital expenditure	R1 284 million
	\$178 million
LOM	11 years
Tonnes milled over LOM	14.6 million
Grade (average reserve head grade)	6.60g/t
LOM ounces	3.06 million
Key dates	
Project start	January 2003
Expected completion	July 2010



Doornkop: Capital expenditure to date (%)



Doornkop: Capital expenditure (Rm)



Project progress during the year:

The most significant achievement was the completion of the shaft sinking programme. The shaft was sunk from two positions simultaneously, a world first as far as we know. The programme culminated with the removal of the plug between 192 and 197 levels, where a deflector was installed on 197 level, allowing for the loading of rock from 197 level and for other operations to continue below 212 level. The programme was engineered and executed on time with few significant problems.

The upper portion of the shaft (from 132 level to 192 level) has been equipped as a dual purpose compartment allowing for materials to be transported to the levels as they are equipped. 192 level is currently equipped to provide all the stoping materials required for the mining programme that started in July 2007. Sustaining the development programme via the sub-shaft infrastructure has been a challenge, as has the development of our people to take on the operation of a new mine.

Key milestones achieved:

- The commissioning of a second service winder in the sub-shaft has allowed for a step change in throughput from this facility which has provided more flexibility to support the requirements for access development.
- The shaft bottom was excavated to 45m below 212 level and the plug between 192 and 197 levels was removed in March 2007.
- The dual purpose winder (rock and material conveyance) compartment was equipped to 192 level in the main shaft in March 2007.

The station on 192 level was equipped to receive materials through the dualpurpose compartment.

Going forward:

The first gold was produced from the project in July 2007 and full production is expected to be reached in December 2009.

Key milestones to be achieved in FY08:

- The rock winder installation will be completed by December 2007.
- The main shaft will be partially equipped by the of end December 2007; and will be partially commissioned to hoist 90 000tpm by the end of March 2008.
- The rock winder is expected to be commissioned by June 2008.



ELANDSRAND NEW MINE

LOCATION: Gauteng, South Africa

Project description:

The project involves the development of a 'new mine' beneath the original Elandsrand mine at depths of between 3 000m and 3 600m. Originally started by AngloGold in 1991, the project was restarted by Harmony in FY01 following the purchase of Elandsrand in February 2001. The new mine will exploit the southern, deeper portion of the higher grade VCR payshoot.



Key statistics	
Expected annual gold production	12 933kg
	415 806oz
Capital expenditure	R989 million
	\$137 million
LOM	20 years
Tonnes milled over LOM	29.6 million
Grade (average reserve head grade)	7.94g/t
LOM ounces	7.55 million
Key dates	
Project start	May 2001
Expected completion	December 2010





Elandsrand: Capital expenditure (Rm)



Project progress during the year:

Good progress was made with all the targeted project milestones having been achieved. The project remains on schedule. Sinking of the No 2 service shaft from 95 level down to 105 level was completed.

Key milestones achieved: Infrastructure:

- Sinking and equipping of the No 2 service shaft to its final depth (105 level) was completed during the year.
- The 92 level turbine dam was sunk to its depth of 26m, and supported and sealed.
- The Man 1 winder stations on the sub-shaft were commissioned on all five levels (102, 105, 109, 113 and 115). The sub-shaft can now hoist men and material with both winders on the project levels.
- All the electrical main sub-stations on the project levels (except 115 level) have now been completed and commissioned. This includes all main feeder cables below 100 level. All the services cables have been installed from 100 level to 115 level. These will be commissioned during the first quarter of FY08.

- The 22kV system from surface to 100 level was completed and is awaiting installation of the 10MVA transformer on 100 level.
- The installation of the No 1 settler was completed and is planned to be brought on line towards the end of December 2007.
- The winder and headgear chamber for the No 3 service shaft was completed.

Access development:

- In March 2007, 109 level access development reached the 'end of project capital' position and is continuing as ongoing capital. Development of 738m was achieved.
- 113 level advanced by 780m for the year and is forecast to reach 'end of project capital' in May 2008.

Going forward:

There were scope changes to the refrigeration and ventilation requirements for the mine. These included changes to the 100 level condenser cooling arrangement, the installation of horizontal evaporator dams on 100 level, permanent bulk air coolers on both the east and west sides of the mine on the project levels, and the introduction of mobile refrigeration plants for the development on 109 and 113 levels.

Key milestones for FY08:

- Commissioning of the 115 level main electrical sub-station by October 2007.
- Commission of 100 level 22kV substation by November 2007.
- Commissioning of the 115 level pump station (No 1 settler, mud pumps, clear water pumps and shaft pump column) by December 2007.
- Completion of access development on 113 level by May 2008.
- Completion of the No 3 service shaft subbank, headgear and winder installation by May 2008.



TSHEPONG SUB 66 DECLINE

LOCATION: Free State, South Africa

Project description:

The Tshepong decline project involves an extension at depth of the mine from the current shaft bottom to a depth of some 2 200m, with the construction of a 1 200m twin-decline system accessing 69 and 71 levels.

Schedule to full production



Key statistics	
Expected average annual gold production*	3 982kg
	128 046oz
Capital expenditure	R280 million
	\$43 million
LOM	13 years
Tonnes milled over LOM	6.10 million
Grade (average reserve head grade)	7.21g/t
LOM ounces	1.4 million

Key dates	
Project start	April 2003
Expected completion	May 2008

*At full production

Tshepong: Capital expenditure to date (%)



Tshepong: Capital expenditure (Rm)



Project progress during the year:

Good progress continued to be made with the Tshepong decline project during the year, with 219 metres on-reef development having been recorded by June 2007. Production build-up will increase steadily during FY08 with the completion of the ore passes and raises.

The capital scope of work for 69 level and the sinking of the material/chairlift decline haulages were completed. The project remains on budget.

The total project was 90% complete at year-end, which was only slightly later than originally planned. This was a notable achievement given the delays experienced during the previous year.

Most of the remaining development is on 71 level, where the access development and raise lines will be completed in FY08.

Key milestones: 69 level

- Reef and incline waste development on capital is now 100% complete. During the period that the project was delayed in the previous year, crews were redeployed to ongoing capital projects. As a result, seven cross-cuts with raise development were completed compared with the four raises originally planned.
- 77% of the capital raise line metres were completed, that is, 90 line (35%), 92 line (55%), 93 line (49%), 95 line (100%), 96 line (94%), 98 line (65%) and 99 line (100%). The balance of the capital raise line metres (23%) will be done on 71 level.

71 level access development

- 71% of total work was completed by year-end, including development and construction.
- Access development to the south is in progress with 663m of access development and 440m of raise line development to be completed by June 2008.

Going forward:

The primary challenge during FY08 will be the remaining construction work. Although 75% of the development/raise bore metres for the planned ore passes has been completed, equipping will only start once this has been completed. The rehabilitation of the ore passes before commissioning has added work to the scope of the project.

Key milestones for FY08 are:

- The chairlift which is currently being installed is due for completion in September 2008.
- The installation of the pump station and pipes for the 72 level dam began in July 2007 when materials were delivered.
- The extension of the conveyor and monotrain to the end of the decline will be completed by December 2007.
- Equipping of the ore passes and 72 belt cross-cut is scheduled for completion by March 2008.



HIDDEN VALLEY PROJECT

LOCATION: Morobe Province, Papua New Guinea

Project description:

The Hidden Valley project entails the construction of a significant gold and silver mine. This mine will process 4.2Mt 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.

Key statistics	
Expected annual gold production	285 000oz
Expected annual silver production	3.845Moz
((60 000 oz gold equivalent)
Capital expenditure (construction capital)	A\$475 million
	R2 684 million
	US\$365 million
LOM	10.3 years
Tonnes milled over LOM	43 million
Grade (average reserve)	2.2 g/t
LOM ounces	2.65 million (gold)
LOM Tonnes milled over LOM Grade (average reserve) LOM ounces	43 million 2.2 g/t 2.65 million (gold)

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Project start	
Access road construction:	October 2005
Mine and infrastructure constructions:	September 2006
Mine pre-strip:	June 2007
Expected completion	March 2009

Hidden Valley: Capital expenditure to date (%)

Hidden Valley: Capital expenditure (A\$m)

Project progress during the year:

Excellent progress was made with the Hidden Valley project during the year and, although a number of delays were experienced, efforts were made to ensure that these did not have an impact on the overall project schedule

The project slipped behind schedule by four months during FY07 mainly due to production problems with the SAG mill in the Czech Republic. The main challenges to maintaining the revised schedule are production of the SAG mill, timely availability of the permanent camp and construction of the process plant platform.

A detailed review of the project budget was undertaken in FY07. The current project budget is US\$365 million (excluding mine fleet capital), which represents a 23% increase 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.

The only significant change in the scope of work was the move of the Hidden Valley ROM pad from the west to the eastern side of the pit. This was necessary because geotechnical drilling and advice received identified an unacceptable level of risk regarding potential slope stability. This change reduced capital costs and schedule risks but had an impact on operating costs. The mining schedule is being reworked to optimise it for the eastern ROM pad.

Key milestones:

Site access

Work started on the construction of the Hidden Valley access road to the site from Bulolo in October 2005 and the mining lease boundary was reached in May 2006. Since then the road network has been extended to the Hidden Valley mine: Hamata Junction was reached in September 2006, and the Hamata plant site was reached in February 2007.

Engineering procurement and construction management (EPCM) contract:

 In July 2006 an agreement was reached with the engineering group Ausenco Limited to provide EPCM services for the project. Engineering work has generally been running to plan and is being undertaken in Brisbane in Australia and Manila in the Philippines. Detailed design of the process plant started in February 2007, following finalisation of process design and specification of process equipment for procurement purposes. Detailed design was 45% complete at the end of June 2007.

- The first major piece of process equipment was ordered in September 2006. This was for supply of the SAG mill. It is estimated approximately 100 orders or contracts will be placed by the Ausenco procurement section. By the end of FY07 more than 80 packages had been issued to tender and 52 had been awarded. Excluding the SAG mill, all suppliers are on schedule to supply their equipment in time to meet the overall project schedule.
- The construction of the permanent camp is one of the major construction contracts to be handled by Ausenco. The initial tender resulted in no suitable bids and an alternative delivery process was undertaken. The camp is now under construction but is currently behind schedule. However, construction is being expedited so as to reduce any possible impact on the overall project schedule.

Roads and earthworks:

A road construction manager and a core of operators with extensive PNG road-building experience were contracted to undertake the road and earthworks using Harmony-owned equipment. In addition to the access roads, the team is also building the platforms for the process plant and other infrastructure as well as the dams and related facilities for the tailings storage facility. The platform for the

permanent camp was completed in December 2006 and construction of the permanent camp started in May 2007.

By year-end, most infrastructure platforms had been completed and work was focused on the process plant platform and the Tailings Storage Facility (TSF). Work on the TSF is running to schedule but work on the process plant platform is behind schedule for a variety of reasons. A range of initiatives have been or are being undertaken to ensure this activity does not have an impact on the overall project schedule.

Power supply

- While sufficient diesel-powered generator capacity will be installed to cover the full site electrical load, the ability to obtain an alternative, cheaper power supply from PNG Power Limited (PNG's national power supplier) has been of critical importance to the project.
- A power supply agreement was signed with PNG Power in April 2007 to provide hydro-generated power to the project. This involves the construction of a new hydro-generator at the existing Yonki Dam power site as well as a new 132kV transmission line from Nadzab (Lae Airport) to Hidden Valley. The agreement requires the power to be available by 1 January 2009.

Mining

- Supply and maintenance agreements for Hidden Valley mining equipment were signed with PNG Komatsu dealer UMW in November 2006.
- The first two mining fleets consisting of two PC2000 excavators and eight 785 haul trucks were commissioned in May and June 2007. This equipment was initially used for excavation of a ROM pad for the Hidden Valley crusher.
- Construction of the Hidden Valley South dump and pre-stripping of the Hidden Valley open pit started towards the end of June 2007. It is planned to pre-strip over 20Mt of material during FY08, with additional mining equipment scheduled to be commissioned in November 2007 and February 2008.

Geological update

A resource definition drilling programme was completed during the year on the Hamata orebody giving a 160 000oz increase in gold reserve. Gold resources increased by 198 000oz over the previous year. The geological model indicates potential for extension of the orebody at depth and to the north-east.

A resource definition drilling programme on the Kaveroi orebody started during the year with completion planned for February 2008. This programme has the potential to add significantly to gold and silver reserves at Hidden Valley in FY08.

Environment

- An amendment to the Environmental Permit reflecting project improvements identified in the Updated Feasibility Study was approved as a minor amendment by the Department of Environment and Conservation in November 2006.
- The Environmental Management Plan (EMP) has been approved. An acid rock drainage and waste dump strategy was submitted to the Department of Environment and Conservation in March 2007, along with a South Dump design report.
- The final tailings dam design was submitted to the Department of Mines in accordance with the Mining (Safety) Act in June 2007.

Community affairs

- Significant landowner employment opportunities have been delivered with the development of a traineeship program for heavy equipment operators. Aptitude tests were performed with more than 500 local people using an immersive truck simulator prior to hiring 48 landowners to operate the first two fleets of mining equipment.
- Commercial participation of landowner groups in the development of the project has started. The business development arm of the landowner association (NKW) has either been awarded or is bidding on contracts for catering, bus transportation, fuel freight, general freight, labour hire, road maintenance and security services. This will provide a solid financial platform to develop sustainable landowner businesses in the longer term.

Going forward:

Key activities in FY08 will be:

- completion of the detailed design;
- ongoing procurement activities;
- continuation of pre-stripping for both Hamata and Hidden Valley;

- completion of the Hamata plant site earthworks;
- mobilisation and completion of the site civil works;
- start of structural, mechanical, piping, electrical and instrumentation work; and
- start of commissioning planning.

Key milestones to be achieved in FY08:

- Start process plant civil works
 December 2007
- Start process plant structural/mechanical installation – February 2008
- Completion of permanent camp
 December 2007
- Start overland conveyor construction
 January 2008
- Start electrical and instrumentation installation – April 2008
- Complete site civil works June 2008
- Commission mining fleets 3 and 4
 November 2007 and February 2008 respectively