Chairman's letter



Phakisa, South Africa



Dear shareholder

A year ago I had the pleasure of congratulating Harmony's committed team of managers and employees on their efforts in aiding the company to weather the economic storm of 2008. This year, I extend my thanks to a team that has continued to build and position Harmony for a safe, sustainable and profitable long-term future.

As we continue to strive to deliver on our key objectives of profitability, growth and safety, the experience and skills of our management team, enables us to competitively manage and operate our current and new mines. This combination of a world class management team, coupled with a good range of mining assets, provides a compelling endorsement of Harmony's investment merits.

Looking ahead, we anticipate cost challenges, notably the prospect of administered electricity costs that, in round figures, are set to rise by 25% in each of the next two years. However, this is manageable if our productivity advances and our target to remain South Africa's lowest-cost producer measured in terms of rands per underground tonnes mined is achieved.

Strategy

Harmony's focussed strategy is based on two main pillars: the competitive production of profitable ounces of gold and safety. This strategy has as its overall goal the production of 2 million, safe and profitable ounces annually by FY2013. In striving for this, the intention is to transform Harmony into a sustainable company that has free cash flow and that is able to generate earnings to fund both growth and dividends.

Growing the company and generating free cash flow will entail:

- optimising our asset portfolio so as to yield lower-cost, more profitable, high-margin ounces. To this end our portfolio was reviewed and restructured;
- increasing levels of operational efficiency and productivity, to which end capital projects are being commissioned and achievable plans have been compiled for the development of face length so as to optimise mining flexibility; and
- exploring and expanding into new geographic regions, developing mines, acquiring low-cost assets and entering into joint ventures.

Together, these actions will help us achieve the targeted growth in ounces and generate free cash flow.

Safety

It is with deep regret that I extend my condolences to the families and colleagues of the 22 miners who lost their lives at work during the year. Every fatality at our mines is one fatality too many.

Chairman's letter cont.

We remain determined in our efforts to continuously improve safety standards and records, and our target of zero fatalities remains steadfast. We make every effort to ensure that stringent safety procedures are implemented at all operations and that adherence to these procedures is so ingrained as to become second nature to every one of our employees.

I would like to extend my gratitude to those who have contributed to improving Harmony's safety efforts.

Mining

Harmony has significant growth potential in Papua New Guinea and together with our South African operations will continue to underpin planned growth as the key focus of our business.

Harmony has planned for increased production over the next five years and our fundamental aim is to generate profit for our shareholders, whilst continuing to grow. Equally, we are committed to profitable opportunities that can provide secure job opportunities and fair remuneration for our employees and that enable us to contribute to the betterment of the communities and the countries where we operate.

We met our sustainable operating margin objective of 26% in this past financial year. Maintaining this margin will almost inevitably lead to the closure of old and unprofitable shafts, as happened in the year under review. We cannot allow loss-making operations to threaten our overall economic security. Our immediate plans in this regard are described in more detail in the CEO's annual review.

We will continue to pursue appropriate opportunities for acquisitions or take overs. Fundamentally, though, Harmony's future will be tied principally to its own exploration successes, as indicated by our projects in Papua New Guinea. In that country, the Hidden Valley mine has reached commercial production, one of our exciting achievements of the year.

The gold market

Average monthly share price

Our confidence in gold has been and continues to be justified. The metal's price performance over the past year – reaching an all-time record of \$1 261/oz towards the end of our financial year, comes at the end of a decade of sustained increases and at a time when the prospects for some of the major economies in the world remain uncertain.

Harmony is not alone in its view on stronger gold prices. Normally cautious leading gold analysts such as GFMS and the World Gold Council forecast prices reaching heights of \$1 300/oz by December 2010. These levels were in fact breached by



Average monthly gold price



the end of September. These predictions are based on market fundamentals of supply and demand rather than on shortterm speculation. Our view is that the world's financial markets have not yet stabilised, indicating a steady gold price progression in the medium and long term.

On the demand side, the Asian giants, China and India, continue to build their official gold reserve holdings, while individuals across the globe increase their holdings either directly through their holdings of bullion or indirectly through exchange traded funds. By way of example, on the production side China, which has emerged as the single largest national producer of newly-mined gold, still has to import gold to meet both domestic private and official demand. In South Africa, though, overall production from the country's mature mines continues to decline.

While this positive outlook remains in place, Harmony's forward planning is conservative, which affords protection against adverse currency shifts as the company's operating costs are largely denominated in South African rands.

In the year under review, the rand continued to strengthen against the dollar, which squeezed our operating margins. The rand's exchange rate against the dollar averaged R7.58/\$ as compared with R9.00/\$ during the 2009 financial year. The result was that though the year's average gold price rose by 26% to \$1 092/oz from \$867/oz the previous year, in rand terms the average price received rose by only 6% to R266 009/kg from R250 826/kg.

Based solely on existing operations in South Africa and Papua New Guinea, our planning envisages a steady and substantial increase in gold production to an annual 2 million ounces over the next three years, while maintaining unit costs to less than R200 000/kg in real terms. In addition, our Wafi-Golpu project in Papua New Guinea is at the conceptual study stage. At present its equivalent gold mineral resource stands at 39 million ounces, with significant scope for additions – indeed a very exciting prospect for the company! Our target is to bring its gold-copper operations into commercial production by 2016.

Harmony, a sound investment case

Given the above, I firmly believe that Harmony represents a solid emerging-markets investment case. Its main attributes are:

- a sustained focus on profitable operations;
- steady production growth prospects with rising average grades;
- unhedged against the gold price and exchange rates;
- balance sheet in a net debt position with financial resources and cash flow to target future acquisitions;
- a large resource base on which to build production growth;
- a world class management team skilled in developing and operating mines at all stages of their mine lives; and
- a focussed commitment to delivering progressive returns to shareholders through dividends and share price growth.

Thanks

My unqualified thanks go to the board, the chief executive officer, Graham Briggs, for his outstanding leadership and to the firstrate team of managers and employees for their unstinting efforts and commitment towards growing Harmony into a leading world-class gold producer. I am confident that their contributions will ensure Harmony's sound future.

Lastly, I want to thank Frank Abbott, who, post year-end, has retired as an executive director, for his contribution to the growth of Harmony over many years. Frank will remain on our board as a non-executive director. I would also like to welcome Harry Ephraim "Mashego" Mashego, the new executive director at Harmony.

Patrice Motsepe Chairman 25 October 2010

Chief executive officer's review



Doornkop, South Africa



I am very pleased to present to shareholders this report for the year, on the occasion of Harmony's 60th year in business. While this report reviews the 2010 financial year (FY10), and our prospects going forward, it also reflects on pages 10 and 11 on the 60 years that have past.

There have been significant changes in this company in the past six decades. Harmony started out as a single operating entity running a modest, yet flagship operation, in the then new goldfields in South Africa's Free State Province. The company has transformed itself, particularly over the past 15 or so years, into a significant global producer with a substantial asset base in South Africa and PNG, a first-class management team, shareholders around the globe, and enviable growth prospects. Looking back, it is indeed a remarkable feat for a gold mining company to have provided jobs, delivered returns to shareholders, paid taxes, and made substantial investments into local communities as Harmony has done over a period of 60 years. And what is perhaps even more phenomenal is that – based on our current resource base and development projects – we will continue to do so for many years into the future.

Integrated reporting

This report provides an account of the operating and financial performance of the company. It also provides – we believe – insight into the way in which we work on a number of levels. As the information needs of our stakeholders have changed from the purely financial to requiring a broader view of the company, so our reporting has adapted. For the past five years, we have produced a separate Sustainable Development Report aligned with the principles and recommendations of the King Report on Corporate Governance 2002 (King II) and as well as the G3 guidelines of the GRI. This year, in line with changes in global best practice, we have taken constructive steps towards the further integration of the economic, social and environmental aspects of the business, both in our management structures and their accountability, and in the way in which we report. This, our first integrated annual report, is the product of these steps.

A year of continued delivery

I am pleased to report that we have maintained the impetus provided by the strategy we began developing three years ago. We have stuck to our guns and delivered results. Looking back at the year under review, we have enjoyed a number of highlights. Key among them were:

- the stability of our teams;
- the achievement of many of our objectives, on which I elaborate below; and
- the good support we have received from employees and unions on the direction in which we are steering the company.

Even for a good story there is always a flip side, the so-called lowlights:

• Safety is the first of these and I deal below with the way in which we are attempting to address this most significant of issues. Despite the tragic fatalities experienced, there is a glimmer of hope in that many of our leading safety indicators are moving in the right direction.

Chief executive officer's review cont.

- Another disappointment has been that production was not in line with our plans. Although some of this reduction was attributable to the deliberate closure of unprofitable operations, I am confident that we have made the right choices, sacrificing unprofitable ounces to protect our sustainability and profitability.
- Another lowlight and one that we share with our peers must be the negative view of the South African mining industry in general, and the gold mining industry in particular. I deal with a number of the issues that have given rise to this below.

While we continue to follow the path that our strategy dictates, this has continued to evolve as we have delivered on a number of milestones, adjusted our plans in accordance with market realities, and uncovered new opportunities.

Committed to working safely

Ensuring the safety, health and well-being of our employees is a primary area of focus for Harmony and we continue to strive for zero fatalities. We have taken active steps to ensure that the only acceptable production is safe production, and have linked remuneration to safety performance at all levels of our organisation. The OHSAS 18001 standard is being introduced across the group and 180 health and safety personnel were trained as lead auditors on this system in FY10.

It is with great regret, however, that I report that in South Africa 21 employees lost their lives in mine-related incidents in FY10 (FY09: 22), and there was one fatality in PNG (FY09: 0). The board and management extend their condolences to the families and colleagues of those who lost their lives. While it is disappointing that this fatal injury frequency rate (FIFR) remained unchanged year-on-year, at 0.21 per million hours worked, the lost-time injury frequency rate (LTIFR) improved by 17% to 7.72 (FY09: 9.35).

Positioned to deliver

At the heart of our strategy is the determination to create a sustainable company – one that generates earnings to fund dividends and growth. Four key objectives underpin this strategy, namely:

- optimising our asset portfolio, by improving cash costs and the quality of the ounces we produce;
- increasing operational efficiency and productivity, particularly through the commissioning of major capital projects;
- growing production ounces, by delivering into production the South African growth projects and by fully exploiting growth opportunities in PNG. An important element of this growth objective is the pursuit of geographic diversity; and
- growing through acquisitions and partnerships, through exploration and the acquisition of low-cost assets.

In the pages that follow I will show you how we will achieve this strategy, which is illustrated below.

Creating a sustainable company – generating earnings that fund dividends and growth... a company with free cash flow



Harmony's reportable injury frequency rate (RIFR) also improved by 16% to 4.19 compared to the previous year (FY09: 4.97), as did the all injury frequency rate (AIFR) which improved by 9% to 17.05 per million hours worked (FY09: 18.73).

In addition to our annual safety and health workshop, in which all role players make a contribution, our safety and health focus areas in FY10 were:

- fall of ground prevention initiatives. Falls of ground accounted for 66% of fatalities and 21% of lost-time injuries in FY10;
- preventing trucks and tramming accidents. These were the cause of 15% of fatalities and 14% of lost-time injuries;
- increased attention to occupational health and hygiene, particularly dust, noise and tuberculosis; and
- an emphasis on instilling safe behaviour in what should be the low-risk metallurgical plants.

We have conducted extensive back analysis to determine the root causes of accidents, what could have been done to prevent them, and what can be done to prevent them in the future. There is rarely a single, identifiable cause of an accident, even in the case of a fall of ground. It is often a combination of causes and our approach in dealing with safety must be holistic.

During the year, we focused a great deal of effort on behaviour on the one hand, and technology on the other. Regarding technology, for example, we have been developing safer locomotives, anti-collision devices and, in development ends, trailing with support netting to prevent falls of ground. We have the proof that such focused attention can deliver results: Kusasalethu (formerly Elandsrand) was one of our worst safety performers in FY08, and is now one of our best performers. I would also like to congratulate management, employees and unions at Evander 8 shaft for achieving two million fatality-free shifts during the year, once again showing that a fatality-free deep-level mining environment is possible.

Bullish about gold

Gold continues to be a store of value and a currency. Harmony's confidence in gold remains undimmed. Since January 2009, when it first became apparent that the financial setbacks of 2008 did not signify a deep world-wide economic recession, gold's dollar price performance has been little short of spectacular.

In part the price advance has been based on the searches by investors for safe havens, particularly through the increasingly popular global exchange traded funds (ETFs). But the fundamentals of supply and demand for physical gold are, arguably, more important. On the supply side, a number of new mines initiated some years back are coming on stream now and some existing producers are ramping up production. Against this, however, must be set falling production from countries such as South Africa where mines are mature. Recycling, too, has risen as holders have taken profits, but deliveries from this sector depend to a considerable extent on expectations of the future price direction.

In June 2009, on the eve of our past financial year, the London morning gold fix stood at \$941/oz. The dollar gold price than improved more or less steadily to around \$1 200/oz by late December 2009, which level it failed to hold for some months before sprinting to just short of \$1 260/oz on 21 June 2010. After a brief period of consolidation, the gold price had exceeded \$1 300/oz by end September 2010.

Our caution, however, stems from the strength of the South African rand. While gold rose by 26% in dollar terms in FY10, in rand terms the rise was only 6% to R266 009/kg. Our South African mine costs are measured in rands and we face some considerable pressure from rising costs over which the country's gold miners have limited control.

Our view on the rand is that it is more prone to downside than to upside. The currency has been supported by equity investment inflows, parallelling investors' views on emerging markets, particularly those with well-traded currencies. Investment flows however can quickly reverse.

There is always much debate about the exchange rate and what in fact it should be. Which is better – a weak rand, a strong rand or something in between? Obviously a weaker rand would suit us very well as our expenditure is in rands, with our earnings pegged in dollars. As a company we are very sensitive to the rand/dollar exchange rate, more so probably than the gold price. A significant issue in South Africa these days is employment and, indeed, the lack thereof. To create jobs the manufacturing and mining sectors need to improve their efficiency and productivity levels, and a weaker currency would be helpful.

Chief executive officer's review cont.

We are prudently basing this current financial year's operational planning on gold averaging R250 000/kg, based on a dollar gold price of \$950/oz and an exchange rate of R8.19:\$1. Our longer-term financial modelling – the basis on which we plan mine developments – is based on a price of R275 000/kg.

Harmony is not in the business of producing gold for the sake of size – our strict policy is to produce safe, profitable ounces only, even though that might lead to more closures of unprofitable shafts and deter us from making marginal acquisitions. In South Africa, our objective is to remain the lowest cost producer measured in terms of tonnes milled. Our target is to cut the group's overall on-mine cash costs to R160 000/kg in real terms (2010 money) by 2014 from the past financial year's average of R195 162/kg. However, if mining inflation persists, then we would at least aim to hold cash costs static in actual terms.

Operating and financial performance

A key feature of the year under review was the restructuring of Harmony's asset base in line with our strategy to deliver safe, profitable and sustainable ounces. Significant steps taken during the financial year to improve the quality of our portfolio include:

- closure of the Brand 3, Merriespruit 3, Harmony 2, and Evander 2, 5 and 7 shafts as their orebodies reached the end of their economic lives;
- continued investment in exploration and development at the Phakisa, Kusasalethu (formerly Elandsrand), Doornkop, Tshepong decline shaft and Hidden Valley growth projects, reaffirming their robust life-of-mine plans and reserve positions;
- acquisition of Pamodzi Gold Free State (Proprietary) Limited's (in liquidation) Free State assets which include the President Steyn 1 and 2 shafts, Loraine 3, Freddies 7 and 9, the Steyn plant and surface stockpiles;
- an international exploration programme resulting in the discovery of a new zone of mineralisation adjacent to the main Golpu
 resource in PNG;
- re-assessment of the Evander operation and projects; and
- post year-end, Mount Magnet in Western Australia was sold, allowing us to focus on growing, developing and operating our portfolio of quality assets in PNG.

Some of these issues are dealt with in greater detail below, and also in the *Review of Operations* and *Exploration Overview* on pages 48 and 96 respectively.

In last year's review I indicated that the decision to pay a dividend signalled the health of the company. This signal remains valid and I am very pleased to report that the company declared a final dividend of 50 SA cents per share for the second successive year. This dividend indicates Harmony's return to stability and continuing delivery on its strategy to attain sustainable profitability, funding dividends and growth.

Key features of our financial and operational performance in FY10 were:

- gold production remained steady at 1.429 million ounces or 44 433 kilograms (51 046 ounces (1 588 kg) were capitalised);
- gold price received rose by 6% to R266 009/kg, and by 26% to US\$1 092/oz
- revenue of R11 284 million;
- operating margin of 26%; and
- cash operating profit of R2 926 million.

Substantial reserve and resource base

In August 2010, Harmony published its annual statement of mineral resources and mineral reserves (as at 30 June 2010), which was produced in accordance with the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC Code) and the Australian Code (JORC Code). The measured and indicated mineral resources are inclusive of those mineral resources modified to produce the mineral reserves.

The review during the year was informed by our careful, considered restructuring of Harmony's asset base, focusing on better quality ounces. At the end of June 2010, Harmony's attributable gold mineral reserve was maintained at 48.1 million ounces, which is similar to the previous year's declared reserve, despite the shaft closures and depletion which took place during the year. Attributable gold mineral resources declined by 9% to 189.2 million ounces. A detailed account may be found in the *Mineral resources and mineral reserves* section on pages 114 to 163 of this report.

(1) Headline earnings adjusted for employee remuneration and restructuring costs

Delivering growth

This is an exciting time for Harmony as many of our growth projects start to deliver and come into their own over the next few years, a reward for the sacrifices made to the bottom line as we funded these projects.

So, while we seek greater diversity, we will continue to invest in our growth projects. These assets will, we believe, become the best gold mines in South Africa over the next three years and provide the cash flow necessary to allow us to fund growth in Wafi-Golpu and other opportunities that may arise. We remain committed to South Africa and see our South African assets as an important part of our portfolio.

Our growth in the short to medium term will come from four projects in South Africa – Doornkop, Kusasalethu, Phakisa and Tshepong – and from Hidden Valley in PNG. Most of the capital has been spent and we have already seen production benefits from these projects. Together these projects will drive the company down the cost curve. While we have revised our annual growth target to 2 million ounces (from 2.2 million ounces) by 2013, this still reflects a tremendous increase – some 570 000 ounces more than we are producing today.



Kusasalethu, South Africa

Chief executive officer's review cont.

Forecast gold production – FY13

Operation	Target ounces	Target kg	Life of mine	Comments
Kusasalethu	310 000	9 642	Approx 25 years	In build-up
Phakisa	250 000	7 776	18-21 years	In build-up
Doornkop	210 000	6 531	Approx 15 years	In build-up
Tshepong	230 000	7 154	Approx 17 years	Sub 66 and 71 decline in build-up
Target	200 000	6 220	12-17 years	Build up of Target 3: development of Block 3 at Target 1
Masimong	160 000	4 976	12 years	Steady state production
Hidden Valley*	140 000	4 354	10 years+	Exploration may increase life
Bambanani	130 000	4 043	Approx 11 years	Steady state production
Evander	90 000	2 799	Approx 11 years	8 shaft decline, targeting high grade areas
Virginia	85 000	2 644	Approx 10 years	Down from 280 000oz after three shaft closures
Joel	80 000	2 488	Approx 7 years	Recent exploration successes
Kalgold	45 000	1 400	14 years	Steady state production
Various				
surface sources	60 000	1 866	10-20 years	Tailings retreatment, rock dumps, clean up programmes
Total annual production	Approx 2Moz	Approx 62 000kg		

* This is the 50% attributable to Harmony.

Exploration

A cornerstone pillar of Harmony's growth strategy is the acquisition of quality assets that offer higher grades. During the past year we identified and evaluated a number of assets in South Africa, elsewhere in Africa and in South East Asia, which may potentially fit the Harmony portfolio. Although we have not been able to identify any projects of sufficient value at a reasonable price, we continue to assess acquisition opportunities, provided they meet our acquisition criteria. We will therefore not make rushed decisions.

We have, however, been very successful in acquiring valuable exploration tenements. Our aim is to enhance our competitive edge at an earlier stage in the pipeline, to expand our geographic diversity and to leverage off our existing base in one of the world's premier new gold regions, PNG. As a result we have increased our exploration budget significantly to R377 million for FY11 (\$49 million).

While returns may only come about in the long-term, we are confident that those returns will indeed be generated – our track record of success in PNG speaks for itself. In fact, our cost of exploration – less than \$10/oz discovered – is without equal among the major players.

Building on this success, we announced a significant increase in the mineral resource at the Wafi-Golpu porphyry copper-gold project, in partnership with Newcrest Mining Limited. This mineral resource for Wafi-Golpu now contains 16 million ounces of gold and 4.8 million pounds of copper. Expressed as gold equivalents, this resource amounts to 39 million ounces of gold. These results have a profoundly positive impact on our resource base and drilling results continue to prove that investing in exploration has been a very good long-term decision.

Doing business in South Africa

Increasingly, though sporadically, the question of sovereign risk arises and is frequently difficult to explain to people who take their cue from newspaper headlines.

At present there is a degree of uncertainty among some foreign investors of the possible nationalisation of the country's mines. South Africa's economy is currently growing slowly, at little more than 3% a year, a far slower rate than that of Asia's emerging growth economies or indeed some of Africa's growing economies. South Africa needs to grow much faster if benefits are to be spread rapidly.

The nationalisation debate continues both in and outside of government. I hope that this issue is clarified in the near future as I believe that investors in long-term capital projects may wait until the issue of nationalisation has been resolved before investing in the country. Unfortunately I cannot provide any clarity on what may transpire only to say that we will continue to conduct ourselves and continue to make informed decisions in the long-term interest of stakeholders and shareholders in particular

Government has, correctly in my opinion, sought to redress earlier inequities by means of various polices and initiatives which are aimed at making South Africa competitive and through the Mining Charter which specifies that ownership of at least 26% of the country's mines be in the hands of historically disadvantaged South Africans (HDSAs) by 2014. Deciding how and to whom transfers should be made was left largely to the discretion of the mining companies, and these were not free hand-outs. Harmony secured all of its new order mining rights two years ago and achieved compliance with the charter. We will continue to engage with government and other stakeholders to ensure that legislation applicable to the mining industry continues to position South Africa as a globally competitive and attractive country for investment. Since the end of the financial year, government has announced changes to the Mining Charter – changes which largely clarify uncertainties and ambiguities in the original charter.

Another complex issue we have faced is that of illegal or, in fact, criminal mining. Over the past two years we have been affected by scores of miners who have entered some of our mines illegally, stolen mine property or equipment and mined parts of our orebodies. It is not only theft, but worse it is a development that can threaten the underground safety of our own employees. Our mine security officials have taken the matter in hand, fully supported by the South African Police Service, the DMR and the Department of Justice. Nevertheless much remains to be done. Illegal mining is a very complex problem – in fact akin to organised crime with a global reach. We have to fight what we can. We try and secure shaft areas to prevent people from going underground illegally and stop them from destroying existing infrastructure. We have invested a significant amount of money in infrastructure and systems to do just that.

There are other immediate exogenous problems that we in the mining industry have to address. Input costs, over which we have little control, are rising sharply. After several years of under-investment in power generation, Eskom, the electricity

Chief executive officer's review cont.

parastatal, is hurrying to build more power stations and has been granted the right to increase power costs by 25% annually in the next two years. Electricity for pumping, milling, cooling and ventilation accounts for approximately 13% of our operating costs, costs that cannot be side-stepped. The effect of price increases of this magnitude cannot be over-stated.

Harmony has reduced its electricity consumption by 28% since 2008 but, despite the promises made by Eskom, there are still concerns over Eskom's build programme and ability to deliver. We have played our part, both to conserve energy and to cut costs, and have beaten our reduction targets considerably. Much of our intensive work is done at off-peak times between midnight and 4am, and cut-backs during the day are conducted in terms of our demand-side management programme. We have also installed generators for emergencies to ensure that any power cuts do not endanger lives.

The unions represented on our mines have generally been highly co-operative in helping restrain costs. Most unionised workers are well aware that jobs could be jeopardised by rising costs that threaten continuing operations.

Corporate citizenship

Central to our vision at Harmony is that we are good neighbours. To this end we have dedicated executives responsible for environmental management and community relations, including corporate social responsibility and local economic development. We report extensively on our engagement with communities and the challenges we face as well as our positive contributions in our Sustainable Development Report. In South Africa, we have made extensive progress in achieving compliance with all the initiatives of the Mining Charter, and indeed we aim – in most cases – to exceed compliance targets.

In PNG, we have worked very closely with government and community leaders in ensuring local employment, skills development and the development of economic activity. An area of significant concern to us has been the effects of mining activity on the Watut River, and in particular the build-up of sedimentation that has had a considerable impact on downstream communities. We have commissioned a series of studies to assess the current situation and make recommendations and are working closely with government, a local NGO and community members to ensure a fair and favourable outcome.

Listings

On 21 June 2010 and 30 August 2010, Harmony voluntarily terminated the listing of its American Depository Receipts on the NASDAQ Stock Exchange and its shares on the NYSE Euronext Paris Stock Exchange respectively. Harmony will continue to be listed on the JSE, New York Stock Exchange (NYSE Euronext) and the London Stock Exchange. This is yet another example of our cost-cutting and rationalisation exercise.

Recognition

Hannes Meyer was appointed to Harmony's executive management team as Financial Director Designate with effect from 1 August 2009 and then assumed the role of Financial Director on 1 November 2009. Frank Abbott, Harmony's Interim Financial Director since August 2007, handed over his financial director's responsibilities to Hannes on 1 November 2009, but continued to serve Harmony as an executive director until 31 July 2010.

We thank Frank for his extensive and unstinting contribution to the group and are delighted that he has agreed to remain on Harmony's Board of Directors as a non-executive director with effect from 1 August 2010.

In February 2010, we appointed Harry Ephraim Mashego, whom we know as "Mashego" Mashego, as an executive director, effective 24 February 2010. Mashego has more than 20 years' experience in human resources.

This is the new Harmony

In late August 2010, post year-end, we gave investors a full day of presentations, which culminated in the unveiling of the new Harmony. The presentations and accompanying discussions can be accessed by all shareholders and stakeholders via a webcast which is available at www.harmony.co.za. I invite all shareholders to take the time to view these and to get to know the fundamental detail of your company.

In essence, we put before our audience, our view that the new Harmony has a good mix of assets which are among the best gold mines in South Africa. Each shaft has its own business plan in place, designed in accordance with its own specific requirements. Together they provide us with a firm handle on the business, with the ability to address and pro-actively overcome challenges that may arise. Our plans are clear, and I am confident that we will achieve our targets regarding:

- improving productivity;
- commissioning projects;
- increasing production; and
- undertaking successful exploration.

Our growth target is to reach annual production of 2 million ounces by 2013 and, better still, most of the capital required to bring these projects to fruition has already been spent. We are positioned to generate sufficient cash to fund this growth and to pay dividends. We are and will continue to be the lowest cost South African underground gold producer on a R/tonne mined basis.

As a result, we believe that the new Harmony will be the South African gold miner of choice going forward.

Graham Briggs Chief executive officer 25 October 2010

Harmony and sustainability



Free State, South Africa

Harmony's approach to sustainability reporting

Harmony has adopted the principle of integrated reporting for its 2010 annual and sustainability reports. It recognises that integrated reporting combines reporting on its financial and non-financial performances, and provides a holistic view of the company by explaining and promoting understanding of the cause and effect of the various issues affecting the bottom-line.

The overall aim of Harmony's reporting effort is improved communication with shareholders and the broader group of stakeholders, to build up a formal, approved record of the company's financial and non-financial performance, and to comply with the listing requirements of the various stock exchanges on which Harmony is listed.

Social, environmental and economic considerations of the business, the opportunities and challenges they present, and the company's performance in these respects are presented throughout the annual report. Because Harmony believes that it is important to report in greater detail than is feasible in the annual report, and in line with its commitment to report in line with the Global Reporting Initiative (GRI), the company has also produced a separate, more detailed *Sustainable Development Report 2010* that is available online at www.harmony.co.za.

Certain key performance indicators have been assured by PricewaterhouseCoopers in accordance with their brief to assure these performance indicators and Harmony's reporting to a B+ level. This assurance statement my be found on pages 28 and 29.

Harmony identified what it considers to be the most material sustainability issues for inclusion in this year's *Sustainable Development Report*. This identification process was undertaken, discipline by discipline, by means of workshops and the gathering of feedback by the individual discipline heads through continuous and regular interaction and discourse with stakeholders. The material issues identified, Harmony's performance in FY2010 and targets for FY2011 are tabulated on the pages that follow.

For more detailed information, go to the Sustainable Development Report at www.harmony.co.za.

Independent assurance report to the Directors of Harmony Gold Mining Company Limited

Introduction

We have been engaged by the Directors of Harmony Gold Mining Company Limited (Harmony) to perform an independent assurance engagement in respect of certain South African Identified Sustainability Information included in Harmony's Annual Report 2010 for the year ended 30 June 2010. Additional indicators were also included and assured in the Harmony Sustainable Development Report 2010 and a separate assurance report is included therein.

Scope and subject matter

The following South African Identified Sustainability Information reported in the Annual Report was selected for an expression of limited assurance:

- BBBEE procurement expenditure in South African rands and this as a percentage of total expenditure (page 41)
- Total number of significant environmental incidents (page 45)
- Total energy consumption in MWh (page 44)
- Total CO₂ emissions in tonnes (page 45)
- Total amount of water used for primary activities in m³ (page 43)
- Total cyanide usage in tonnes (page 45)
- Total number of fatalities (page 34)
- Lost-time injury frequency rate (LTIFR) (page 34)
- Total number of shifts lost due to accidents and illnesses (page 34)
- Total number of individuals on highly active anti-retroviral therapy (HAART) (page 37)
- Total number of new tuberculosis (TB) cases identified (page 37)
- Total number of new silicosis cases identified (page 36)
- Total number of new noise-induced hearing loss (NIHL) cases reported (page 36)
- Staff turnover levels (page 38)
- Percentage of HDSAs in management (page 39)
- Percentage of women in mining (page 39)
- Total amount spent on corporate social responsibility (CSR) programme (page 40)
- Total amount spent on local economic development (LED) projects (page 40)
- Harmony's assertion that it has achieved a B+ Global Reporting Initiative (GRI) application level (page 27)

Our responsibilities do not extend to any other information.

Responsibilities of the Directors

Harmony's Directors are responsible for the preparation and presentation of the Identified Sustainability Information, as incorporated in the 2010 Annual Report, in accordance with their internally defined procedures and for maintaining adequate records and internal controls that are designed to support the reporting process.

Responsibility of the independent assurance provider

Our responsibility is to conduct a limited assurance engagement and, based on our assurance procedures, report our conclusions to the directors.

We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000, *Assurance engagements other than audits or reviews of historical financial information* issued by the International Auditing and Assurance Standards Board. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain assurance on the Identified Sustainability Information as per the terms of our engagement.

Summary of work performed

Our procedures included examination, on a test basis, of evidence relevant to the Identified Sustainability Information. It also included an assessment of the significant estimates and judgements made by the Directors in the preparation of the Identified Sustainability Information.

Our work consisted of:

- reviewing processes that Harmony have in place for determining the Identified Sustainability Information included in the Annual Report;
- obtaining an understanding of the systems used to generate, aggregate and report the Identified Sustainability Information at the sampled operations;
- conducting interviews with management at the sampled operations and at corporate head office;
- evaluating the data generation and reporting processes against the reporting criteria;
- performing key controls testing and testing the accuracy of data reported on a sample basis; and
- reviewing the consistency between the Identified Sustainability Information and related statements in Harmony's Annual Report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion. Harmony's internal corporate reporting criteria and the Global Reporting Initiative's (GRI) new generation (G3) guidelines were applied for evaluating the Identified Sustainability Information. The Glossary of Terms and Abbreviations (pages 359 and 364 respectively) provide detail on the applied definitions of the Identified Sustainability Information.

Inherent limitations

Non-financial data is subject to more inherent limitations than financial data, given both the nature and the methods used for determining, calculating, sampling or estimating such data. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgements.

Conversion factors used to derive CO_2 emissions and energy used from fuel and electricity consumed, is based upon information and factors derived by independent third parties. Our assurance work has not included an examination of the derivation of those factors and other third party information.

We have not carried out any work on data reported for prior reporting periods nor in respect of future projections and targets. We have not conducted any work outside of the agreed scope and therefore restrict our opinion to the Identified Sustainability Information.

Conclusion

Based on our work performed, nothing has come to our attention that causes us to believe that the Identified Sustainability Information selected for limited assurance has not been prepared, in all material respects, in accordance with the defined reporting criteria.

hicewater house Corners Inc

PricewaterhouseCoopers Inc. Director: HP Odendaal Johannesburg 25 October 2010

Governance and economic sustainability

The **economic dimension** of sustainability concerns the impact of the organisation on the economic conditions of its stakeholders and on economic systems at local, national and global levels. The company's economic imperatives are achieved within a context of sound **corporate governance**. Harmony believes that these two areas go hand in hand and reports on them in one combined section at www.harmony.co.za/sd/reports/2010/.

Governance

lagua	Derfermence in EV40	Torgoto for EV44
Issue	Performance in FY10	Targets for FYTT
Harmony has identified five	primary areas of focus in respect of governance, namely	
Compliance with	No significant fines were paid by the company in any	Ongoing compliance
legislation in the	areas of operation in FY10, and no actions were brought	
countries in which the	against the company for anti-competitive behaviour	
	and (or anti-trust or monopoly practices	
company operates.		
Implementation of good	In line with the company's primary listing on the JSE,	Implementation of King III and
practice in respect of	disclosure practices and policies are guided by the	requirements of the amended
governance and	South African Companies Act. JSE regulations and the	Companies Act, ensuring not
reporting	King Report on Corporate Governance 2002 (King II)	only compliance but also
	Larmony complies with the regulations of other	good practice
	Harmony complies with the regulations of other	good practice.
	exchanges on which it is listed, as well as that of the	
	United States Securities and Exchange Commission (SEC)	
	and the Public Company Accounting Reform and	
	Investor Protection Act of 2002 (Sarbanes-Oxlev Act	
	of 2002 or SOX) Harmony has adopted an integrated	
	approach to reporting which combines financial and	
	approach to reporting, which combines infancial and	
	non-financial reporting. Harmony's Sustainable	
	Development Report has been developed in alignment	
	with the requirements of the GRI.	



Hidden Valley, PNG

Governance cont.

Issue Performance in FY10 Targets for FY11 Establishment and Specific attention is paid to sustainability by the Implementation of King III and maintenance of board Sustainable Development Committee. Given the requirements of the amended and company structures special historical circumstances and the requirements Companies Act, ensuring not to uphold the rights of legislation in South Africa, Harmony also has in place only compliance, but also and interests of an Empowerment Committee. (See pages 179 to good practice. stakeholders and to 181 for further details). Harmony has paid specific report thereon. attention to the composition of its board, including representation by historically disadvantaged South Africans (HDSAs) and women. Composition of board – 30 June 2010 Composition of board – 30 June 2010 Independent HDSA 50% non-executive directors 57% **Executive directors** Non-HDSA 50% 29% Non-independent, non-executive directors 14% Ensuring integrity and Harmony's Code of Ethics commits the company, its The Code of Ethics will be ethics in all aspects of employees and contractors to a set of values that brought in line with the the business. embodies the highest ethical standards and prohibits provisions of King III. conflicts of interest. These values include transparency, trust, accountability, respect, equality and responsibility. An Ethics Committee meets quarterly to monitor ethical behaviour within Harmony's business environment. Harmony employees are encouraged to use the company's whistle-blowing or crime line, which is managed by an external security contractor and is accessible 24 hours a day.

Ensuring appropriate Harmony has a formal risk policy framework and an Ongoing adoption of best levels of risk extensive risk management structure to manage all practice and alignment with management and categories of risk. The risk factors and primary risks King III. mitigation. identified in FY10 and how they are being managed are comprehensively covered on pages 190 to 203 of this annual report and in the Form 20-F. Safety, health, environment and human rights risks are evaluated, and appropriate levels of due diligence are applied prior to engaging in significant contracts. A precautionary approach is taken in the planning and developing of new projects in compliance with South African legislation and good practice.

Governance and economic sustainability cont. Economic sustainability

Issue	Performance in FY10	Targets for FY11
The ability of the company to produce profitable, safe ounces of gold.	Harmony delivered a satisfactory financial performance for the year. Total gold production of 1.43 million ounces* (44 433 kilograms) declined by 2% compared with the previous year, largely as a result of the planned closures of shafts and mines in South Africa. Regrettably, there were 22 fatalities across the group during the year – see safety discussion below.	Harmony aims to produce 1.7 million ounces of gold in FY11, growing to 2 million ounces in FY13. Harmony's aim is to achieve these targets safely – eliminating all fatal accidents.
The gold market and exchange rates which influence the company's profitability.	Although international financial markets have not yet fully stabilised following the recent global economic crisis, Harmony believes that gold remains a profitable product and expects the gold price in dollar terms to be sustained and possibly even to increase in the medium to long term. Harmony is highly exposed to the R/\$ exchange rate, given that the bulk of the company's current operations are based in South Africa. While Harmony's earnings are determined by dollar gold prices, its costs are largely incurred in rands. The rand:dollar exchange rate has over the past year proved to be remarkably resilient. The strengthening of the rand against the US dollar throughout FY10 placed continued pressure on Harmony's profit margins.	Harmony remains positive on gold. However, the gold price and exchange rate are not within the company's control. Harmony's strategic plans for FY11 have been based on a gold price of R250 000/kg, assuming a gold price of \$950/oz and an exchange rate of R8.19/US\$, with financial modelling done at R275 000/kg.
The company's investment in the future – exploration and development to sustain operations and to grow.	A key feature of FY10 was the restructuring of Harmony's asset portfolio in line with its production targets. This is discussed further on page 20. In addition, the company spent R3.3 billion on capital expenditure in FY10, largely on the group's four growth projects in South Africa and the development of Hidden Valley in PNG. Harmony has spent R15.4 billion on capital projects over the past five years. For more detail on Harmony's growth projects, see pages 22, 51 and 92.	Ongoing development of growth projects. R3.4 billion allocated for capital expenditure and R377 million for exploration in FY11.

* Of this, 51 046 ounces were capitalised

Economic sustainability cont	Economic	sustainability	/ cont.
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Issue	Performance in FY10	Targets for FY11
Economic transformation	Harmony is committed to economic transformation	
and empowerment.	and empowerment in South Africa and PNG:	
	South Africa:	
	Harmony has achieved compliance with the Mining	Maintain HDSA interests at
	Charter through partnerships and the sale to HDSA	current levels.
	companies of interests in the company and its	
	underlying operations. At 30 June 2010, around 36%	
	of production was attributable to HDSA interests.	
	See discussion on affirmative procurement below.	
	PNG:	
	Contracts were awarded by MMJV to the landowner	Continue to maintain and
	company (NKW Holdings Limited) owned by three	develop relationships, and
	landowner groups – Nauti, Kwembu and Winima –	comply to all requirements
	for catering, fuel haulage, general freight, plant hire,	of the MOA.
	security, labour hire and bus services. MMJV is	
	complying to the Memorandum of Agreement (MOA)	
	on the Hidden Valley project and will continue to offer	
	business development opportunities to landowners	
	as the mine enters production and more opportunities	
	become available.	



Morobe Province, PNG

Social performance

The social dimension of sustainability concerns the impact the organisation has on the social environment in which it operates. Comprehensive discussions on the safety, occupational health and well-being, labour practices and community issues may be found in the Sustainable Development Report at www.harmony.co.za/sd/reports/2010/.

Safety

Issue	Performance in FY10	Targets for FY11
There are two primary mat	r Harmony, namely:	
The elimination of	Regrettably, 22 employees lost their lives in mine-	Elimination of fatalities.
accidents, by managing	related incidents in FY10 (FY09: 22). A total of 21 of	
risk and ensuring the	these fatalities were at the South African operations.	
appropriate structures,	South Africa:	
systems and training	The FIFR remained unchanged year-on-year at 0.21,	Ongoing improvement in lagging
are in place.	while the LTIFR improved by 17.3% to 7.73 per million	and leading indicators.
	hours worked (FY09: 9.35). The RIFR improved by 16%	
	to 4.19 per million hours worked compared to FY09	
	(4.97). The all injury frequency rate (AIFR) improved by	
	9% to 17.05 per million hours worked (FY09: 18.73).	
	A total of 27 254 shifts were lost as a result of	
	occupational injury or illness, a 19% improvement on	
	the previous year (FY09: 33 812). Comprehensive safety	
	programmes are in place to reduce the incidence of	
	accidents, particularly fatalities. While lost time and	
	all injuries have consistently declined, the FIFR	
	remained unchanged year-on-year.	



South Africa: LTIFR

(per million hours worked)



South Africa: FIFR





South Africa: AFIR

(per million hours worked)



Safety cont.



operations with regular security surveys underground

implemented to curb illegal mining activities.

Social performance cont.

Occupational health and well-being (including HIV & AIDS and TB)

Performance in FY10 Issue Targets for FY11 Appropriate levels of South Africa: In compliance with the Mine Health and Safety Act, Harmony has committed to surveillance and care for medical surveillance (57 045 medical surveillance safe, healthy and industry milestones for NIHL and productive employees. examinations) continued at the group's four medical silicosis under the auspices of surveillance centres. In total 442 cases of NIHL were the Mine Health and Safety identified in FY10 (FY09: 478), while a total of 452 cases Council (MHSC). See the were compensated. There were 881 suspected cases of Sustainable Development Report. silicosis identified and 400 cases were compensated. There has been a gradual downward trend in silicosis over the years. A large percentage of the silicosis cases submitted are non-compensable as the introduction of the sensitive digital X-ray technology in FY05 has resulted in early and over-reporting.

South Africa: New cases of NIHL identified (rate per 1 000 employees)



South Africa: New cases of silicosis identified (rate per 1 000 employees)



Continue ongoing surveillance for potential occupational illnesses.

PNG:

The medical centres at Wafi and Wau provide full-time primary healthcare and occupational health surveillance to PNG employees, their dependants and the local community (in emergency situations only). The Hidden Valley medical centre provides full-time primary healthcare and occupational health surveillance to employees only.

Occupational health and well-being (including HIV & AIDS and TB) cont.

Issue	Performance in FY10	Targets for FY11
Effective disease	South Africa:	
management among	Despite high HIV infection levels, the TB rate is in gradual	Maintain highly effective TB and
employees and	decline. A total of 1 302 cases were diagnosed	HIV programmes with the aim of
community members.	(1 485 in FY09). Access to Highly Active Anti Retroviral	continuing to see a decline in
	Therapy (HAART) for the treatment of HIV & AIDS is	TB, with more people under
	available to all company employees through the	active HIV & AIDS management.
	company's comprehensive HIV & AIDS programme,	
	at the company's health care facilities, or through	
	private medical aid schemes when appropriate.	
	In FY10, a total of 3 226 employees participated in	
	the company's HAART programme, compared with	
	4 255 in FY09. It is possible that fluctuations in	
	population numbers have contributed to this decline.	

South Africa: Number of employees on HAART (including contractors)



PNG:

Health contacts decreased in FY10 as a result of a reduction in staff and contractors on site as the Hidden Valley mine began production. Primary health issues are upper respiratory tract infections and malaria, neither of which are occupational illnesses. MMJV administered a cholera vaccination programme to high-risk staff at all its operations as well as an education programme for employees and the surrounding communities. No cases of cholera were identified at the MMJV medical centres.

Maintain health management programmes and be responsive to public health threats.

Social performance cont.

abour practices		
Issue	Performance in FY10	Targets for FY11
Recruiting, developing,	Total staff turnover – 15% in South Africa and 13% in	Ongoing training and
managing and retaining	PNG. This is a significant decrease in the turnover rate	development of employees.
employees through initiatives	and can be attributed to the company's range of	
such as ABET, training and	retention initiatives. In line with Harmony's goal of	
development and the	investing in the training and development of current	
leadership and supervisory	and potential employees, skills development	
development programmes.	programmes are offered by the company. A total of	
	30 747 employees were trained during the year in	
	South Africa, at a cost to company of some	
	R23.01 million. With the specific focus on the training	
	and development of HDSAs to facilitate transformation,	
	90% of the employees trained in FY10 were HDSAs	
	with 11% of them being women. To address the	
	skills needs in PNG, mentoring and skills development	
	programmes commenced in FY10. These programmes	
	will assist in the company's objective of retaining	
	its employees.	



Labour practices cont.

Issue	Performance in FY10	Targets for FY11
Developing and ensuring diversity above required compliance levels.	South Africa: In South Africa, recruitment, development and retention initiatives are focused on HDSAs in line with the Mining Charter's requirement that HDSA employees make up 40% of management in South Africa by 2009. Harmony's representation of HDSAs in management was 40% for FY10 (FY09: 37%). In line with the Mining Charter stipulation that 10% of the total workforce should be women, the representation of women across the Harmony group in FY10 was 12% (FY09: 11%).	Maintain or exceed target of 40% HDSAs in management and 10% women in mining.
South Africa – HDSAs in ma	nagement South Afric	ca – Women in mining
	HDSAS 40% Non HDSA 60%	Women 12% Men 88%
	PNG: The localisation process continued at PNG with an emphasis on locally recruited employees (LREs) being hired. Around 8% of the workforce was made up of foreign labour in FY10. Percentage of women employed was 15% at year-end.	96% LREs employed by FY12. New leadership development programme to support this. Target of 17% women in mining by FY13.
Promoting sound and constructive industrial relations.	South Africa: Harmony is committed to freedom of association for employees and collective bargaining. Around 88% of the South African workforce is unionised or covered by collective bargaining agreements. Industrial relations in South Africa were positive and constructive in FY10.	Maintain constructive relations with employees and unions and avoid industrial action.
	PNG: There are no active unions at MMJV and Harmony PNG sites. Industrial relations at the Hidden Valley site are currently overseen by the Employee Representative	Engage in constructive employee relations in PNG.

Committee (ERC) in conjunction with MMJV management.

Social performance cont.

Community		
Issue	Performance in FY10	Targets for FY11
There are four primary materia	l issues for Harmony in respect of working with our commu	nities for Harmony, namely:
Identifying and implementing	South Africa:	
sustainable socio-economic	Harmony undertakes corporate social responsibility	Continue to implement CSR
development initiatives such	(CSR)/local economic development (LED) in four key	and LED programmes in line
as enterprise and community	areas – education; socio-economic development; sports,	with the company's policy
skills development in line	arts and culture; and broad-based black economic	and in compliance with the
with Harmony's business	empowerment (BBBEE) support – in its mining and	Mining Charter.
philosophy, and in compliance	labour-sending communities. CSR further encompasses	
with our commitments.	broader community development and includes national	
	socio-economic development programmes such as	
	mathematics and science development. LED	
	initiatives are undertaken in line with the requirements	
	of the Mining Charter, MPRDA regulations and the	
	Codes of Good Practice for the Minerals and Mining	
	Industry. During FY10 Harmony spent a total of	
	R58.82 million (FY09: R10.7 million) on LED projects	
	and some R23.08 million (FY09: R16.9 million) on	
	CSR projects.	
	PNG:	
	In PNG Harmony's socio-economic development	Continue to implement
	programmes for the benefit of the communities in	socio-economic development
	which Harmony operates, were aimed at addressing	programmes in line with
	health, education, agriculture and infrastructure priorities.	agreements.



Jewellery School, South Africa

Community cont.

Issue	Performance in FY10	Targets for FY11
Affirmative procurement	South Africa:	
with an emphasis on	Harmony is committed to the transformation of its	Continue affirmative procurement
promoting business with	procurement practices and performance.	strategies in compliance with
HDSAs, women and	Harmony's broad-based black economic empowerment	the Mining Charter and DTI targets.
local communities.	(BBBEE) procurement expenditure in FY10 amounted	Target of 42% has been set
	to R2 036 million (38% of total expenditure). Harmony's	for FY11, and a progression plan
	BBBEE spend by category for FY10 was as follows:	of 2% per annum to end at 48%
	capital at R1 498 million (27%); services at R307 million	by FY14.
	(5%); and consumables at R231 million (4%).	
	Harmony's enterprise development centres, now	
	operational in Welkom and Soweto, were structured	
	to support affirmative procurement with the aim	
	of making it easier for BBBEE suppliers to conduct	
	business with Harmony.	

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2007 2008 2009 2010 2011 2012 2013

Improving employees' housing and living conditions.

30 20

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In South Africa, Harmony's housing strategy encompasses the promotion of home ownership as well as the integration of mining communities into local structures. In FY10 this strategy focused on the upgrading of hostels and the hostel de-densification project in compliance with Charter requirements. Approximately 80% of Harmony's hostels have been converted to accommodate two people per room. At PNG operations, employees are from the surrounding area and therefore live in their own accommodation when on field breaks. Continued compliance with SLP commitments.

Actual BBBEE spend

SLP targets

Social performance cont.

Community cont.		
Issue	Performance in FY10	Targets for FY11
Developing and	South Africa:	
promoting sound and	Harmony undertakes active and ongoing engagement	Continue to undertake
responsive internal and	with stakeholders. Harmony's LED priorities are	stakeholder engagement and to
external relationships	stakeholder-driven and guided by a stakeholder	deal constructively and rapidly
through effective	engagement process involving the appropriate	with any issues raised.
stakeholder engagement.	municipalities, communities, the DMR, NGOs and	
	governments of the labour-sending countries of	
	Lesotho, Mozambique and Swaziland.	
	PNG:	
	Harmony has undertaken extensive community	Continue to undertake
	engagement programmes to address the community's	stakeholder engagement and to
	concerns over the environmental impacts of the mine,	deal constructively and rapidly
	particularly those concerning the Watut River	with any issues raised.
	sedimentation issues.	



Environment

The environmental dimension of sustainability concerns an organisation's impact on living and non-living natural systems, including ecosystems, land, air, and water. Environmental indicators include performance related inputs (e.g. material, energy, water) and outputs (e.g. emissions, effluents, waste). In addition, they cover performance related to biodiversity and environmental compliance and other relevant information such as environmental expenditure and the impacts of products and services. A comprehensive discussion of the company's environmental performance may be found at www.harmony.co.za/sd/reports/2010/.

Environment

Issue	Performance in FY10	Targets for FY11	
There are four primary material issues in respect of environmental performance for Harmony, namely: (cont.)			
Implementing environmental	South Africa:		
management and auditing systems that ensure compliance with legislation and regulation in the countries in which Harmony operates as well as compliance with the company's own internal policies and standards.	Harmony is implementing environmental management systems that ensure compliance with legislation and regulation by all operations, and that environmental management is addressed formally and systematically. In line with the MPRDA, environmental management plans (EMPs) were drawn up for each operation and submitted and agreed to by the DMR. Amendments to these plans are made as and when required. Harmony is continuing with the implementation of ISO 14001 at all its operations – Doornkop has been certified as being compliant.	All operations will operate and comply with ISO14001 standards, while all new and long-life assets will be ISO certified within the next three years.	
	PNG: MMJV is currently developing an integrated sustainable business management system (SBMS) which, when implemented, will meet the requirements of ISO 14001 and other relevant international safety and community standards.	The development and implementation of the environmental principles and standards of the SBMS. Full implementation of the SBMS is targeted for FY12.	
The responsible use of resources such as energy and water.	South Africa: As Harmony's operations make extensive use of water, the company has embarked on a group-wide campaign to reduce the consumption of fresh water whilst optimising the re-use of process water. The total water used for primary activities in FY10 increased to 44 338 781m ³ . Potable water used declined by 7.7% Of the total volume of water used during the year, approximately 31% was recycled. Most of the energy consumed by Harmony is in the form of electricity drawn from Eskom, the national energy utility. Eskom is primarily driven by coal-fired power stations. Hoisting, cooling and ventilation systems all require significant amounts of electrical power and make the company a considerable user of electricity.	Group targets have been set for energy and fresh water usage. These targets include operations with total emissions exceeding 100 000 tonnes CO_2e to have and maintain energy conservation plans by 2012. The group target is to reduce energy consumption by 10% per tonne milled (base year 2005). In addition the company aims to reduce fresh water consumption by 2% by 2013 and to improve the use of affected water by 5% by 2013.	

Environment cont.

Issue Performance in FY10 Targets for FY11 South Africa: (cont.) Energy is therefore a major part of Harmony's operating costs with this being increased in the last two years by rising electricity tariffs. In FY10, total electrical energy consumption was 3 659 376MWh (FY09: 3 444 444MWh) for the South African operations, a negligible increase from FY09.

Water consumption (000m³)



South Africa – Energy consumption (000MWh) (Energy from electricity purchased)



PNG:

Water is the most significant resource used by MMJV. In FY10 modifications were made to the Hidden Valley processing plant to significantly reduce the amount of fresh water used and to increase the amount of treated recycled water utilised in the process. Total water usage at PNG in FY10 was 1 843 000m³. Further opportunities to reduce fresh water use will be explored. The most significant initiative to reduce the amount of energy used at Hidden Valley is the connection to the new national hydro-power transmission line planned for FY11. This will reduce the reliance on diesel-generated power on site. The main goal for MMJV operations is to switch the Hidden Valley mine's generation of electricity from diesel to hydroelectric sources through the PNG electricity grid. This major change in fuel consumption is on target for completion in FY11.

Environment cont.

Issue

Ensuring appropriate risk management practices and mitigation measures are in place to prevent or minimise the company's impact on the environment. Specific areas of concern include the management of cyanide, water pollution abatement, addressing acid mine drainage (AMD), and understanding and developing plans to deal with climate change.

Performance in FY10

Appropriate risk management practices and mitigation measures are in place to prevent or minimise the company's impact on the environment. Specific areas of concern include the management of cyanide, the discharge of water to the environment, addressing AMD, and understanding and developing plans to deal with climate change.

South Africa:

There were five significant environmental incidents reported in South Africa in FY10. Harmony has been a signatory to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the production of Gold (the Cyanide Code) since June 2007. The Cyanide Code, developed by the United Nations' Environment Programme and the International Council on Mining and Metals (ICMM), is a voluntary industry programme for companies involved in the production of gold using cyanide. Four plants in South Africa have been certified with substantial compliance. In FY10, Harmony used 7 884 tonnes of cyanide (FY09: 6 304 tonnes) in South Africa. Harmony participated in the global Carbon Disclosure Project (CDP) in FY10. Harmony's total scope 1 and 2 emissions in FY10 in South Africa were 4 402 675 tonnes CO2e (FY09: 4 183 373 tonnes CO₂e). These emissions are mostly indirect and a consequence of electricity used and purchased from Eskom.

PNG:

Apart from the impacts on the Watut River, which are discussed in detail in the Sustainable Development Report, there were a number of environmental incidents reported in PNG that have had a minor impact on the environment. These were not considered major or at a level that would have any effect on the ecosystem. Hidden Valley mine is implementing the Cyanide Code, and is preparing for certification in the latter part of FY11. The processing plant was designed to comply with the Cyanide Code and a gap analysis has been commissioned to identify any key actions necessary to meet Code's requirements.

Targets for FY11

Targets include ongoing risk management to prevent and mitigate environmental incidents, continued implementation of and compliance with the Cyanide Code, and reducing GHG emissions by 5% by 2013.

Targets for PNG include:

- Achieving compliance with environmental obligations and standardS.
- Developing environmental skills and expertise within MMJV.
- Developing environmental monitoring data appropriately and effectively.
- Meeting the environmental objectives of the Watut River Impact Management Project (WRIMP).

Environment cont.

Environment cont.			
Issue	Performance in FY10	Targets for FY11	
	PNG: (cont.) Harmony is developing a framework for establishing an internal GHG management strategy, including standardised emission measurements and estimation techniques at PNG. GHG emissions in PNG are only direct and treated as scope 1 emissions as they are all generated from diesel generators and no electricity is purchased. In FY10, total emissions increased by 65% to 128 371 CO ₂ e. This is because the Hidden Valley mine, previously in development, is now fully operational.		
Ensuring that closure plans are in place, including appropriate funding mechanisms, and that rehabilitation and closure are planned for during the life of mine, and undertaken at closure.	Closure plans are developed as required, and appropriate funding mechanisms are in place at all operations. As far as possible, rehabilitation and closure are planned for during the life of mine, and undertaken at closure. This is a key priority for Harmony. South Africa: The total rehabilitation liability was estimated at R2 229 million at June 2010, while funding was R1 987 million. PNG: A closure plan has been developed for Hidden Valley and the provision for rehabilitation and closure liabilities is USEC2.7 million	Develop closure plans for all operations. Conduct annual review of closure liabilities and continue provision for rehabilitation and closure funding.	

Wafi, PNG
Review of operations



Hidden Valley, PNG 10

Introduction

Harmony's gold mining operations are located in South Africa and Papua New Guinea (PNG). In South Africa these operations are found on the world- renowned Witwatersrand Basin and the Kraaipan Greenstone Belt. In PNG, Harmony's assets are in located in Morobe Province, a highly prospective gold mining region.

Harmony produced 1 428 544 ounces of gold (44 433 kilograms)* in FY10 at an overall grade of 2.39g/t, generating revenue of R11.28 billion and an operating profit of R2.93 billion. Operating cash costs for the group as a whole were R195 162/kg (US\$801/oz) to give an operating margin of 26%.

The largest contributors to group production were the South African operations Tshepong (15%), Kusasalethu (12%), Virginia (12%) and Masimong (11%), which together accounted for half of total production.

Harmony has in recent years embarked on a process to transform itself into a sustainable, lower-cost, high-margin gold producer with a significant production pipeline. In line with this, a review of the asset portfolio was conducted during FY10, following which certain of the Virginia and Evander shafts ceased production sooner than initially planned. In addition, given the focus on profitability, the group's strategic production target was revised to 2 million ounces by FY13. More importantly, the plan is for Harmony's South African assets to generate sufficient cash to fund the company's growth ambitions.

More detailed information on the economic performance and consequences of Harmony's operations is provided in the online *Sustainable Development Report* which is available on the corporate website, www.harmony.co.za. A summary of this report is to be found in this annual report on pages 26 to 46.

* Of this total production, 51 046 ounces (1 588 kilograms) were capitalised Note: In the key statistics tables throughout this section, the term operating profit is comparable to the term production profit in the segment report, and not the operating profit line item in the income statement



South Africa

The South African operations include 10 underground mines and several surface operations that include Kalgold and the Phoenix project as well as assorted other surface operating entities. Its South African operations also house nine gold plants. Together these operations produced 1 367 372 ounces (42 530 kilograms)* of gold, at an average grade of 2.40g/t (FY09: 2.54g/t) – the average grade for the year for the underground operations was 4.54g/t (FY09: 4.64g/t) and for the surface operations, 0.41g/t (FY09: 0.40g/t). Given its importance in creating mining flexibility and improved operational productivity, ore reserve development continued to be a key area of focus.

During FY10, the group acquired the President Steyn 1 and 2 shafts, Lorainne 3 and the Free State 7 and 9 shafts, together with the President Steyn gold plant, collectively known as the Pamodzi Free State assets. Steyn 1 and 2 have been incorporated under the management of Bambanani, Lorraine 3 has been renamed Target 3 and incorporated under the management of the Target operation and Free State 7 and 9.

The average cash operating cost for these South African operations was R194 621/kg (US\$799/oZ) (FY09: R168 661/kg; US\$583/oZ) – increases of 15% and 37% respectively. Cost increases in dollar terms were aggravated by the strength of the rand. In terms of tonnes mined, costs were R467/tonne (US\$56/ton) as compared to R428/tonne (US\$43/ton) in FY09. These increases were driven largely by the escalating cost of electricity and labour as well as by the introduction of royalty payments from March 2010 in terms of the Mineral and Petroleum Resources Royalty Act.

Capital expenditure at the South Africa operations totalled R2.8 billion (US\$371 million) as compared to R2.6 billion (US\$289 million) the previous year. The increase in capital expenditure was due in large part to the equipping of the Steyn 2 shaft and shaft pillar arch at Bambanani east.

* Of this total South African production, 4 823 ounces (150 kilograms) were capitalised Note: In the key statistics tables throughout this section, the term operating profit is comparable to the term production profit in the segment report, and not the operating profit line in the income statement.







Total cash operating cost: R194 621/kg (US\$799/oz) (Exchange rate of US\$1: R7.58)

Total cash operating cost per tonne: R467/per tonne (US\$56/ton)

Project update

		Milestones		Capital	
		achieved in	Full	expenditure	Outstanding
Project	Phase	FY10	production	to date	expenditure
Doornkop South Reef Project	Ramping up – production of 46 422 ounces in FY10	 Equipping of the man winder compartments Equipping of the rock winder compartments Completion of the main pump station 207 level 	 FY15/16 Annual full production of 250 000 ounces at a LOM grade of 4.96g/t 	R1.47 billion	R294 million
Kusasalethu New Mine Project	Ramping up – production of 95 836 ounces in FY10	 More than half of production now sourced from the new mine No 3 backfill shaft sunk to 109 level 115 level pump station commissioned 	 FY13/14 Annual full production of 286 000 ounces at a LOM grade of 6.37g/t 	R1 034 million	R77 million
Phakisa Project	Ramping up – production of 44 079 ounces in FY10	 Rail-veyor infrastructure completed with commissioning of third rail-veyor train Phase 1 (ice plants, surface buildings and change houses) implemented Installation of permanent water handling system 	 FY13/14 Annual full production of 245 000 ounces at a LOM grade of 7.70g/t 	R1.5 billion	R228 million
Tshepong Sub–71 decline Project	Development still in progress – first gold production scheduled for July 2012	New raise lines developed from the decline shaft	 July 2019 Annual full production of 73 000 ounces at a LOM grade of 5.73g/t 	R133 million	R114 million



payments will constitute 2% of total costs at the South African operations.

Bambanani



Description

Harmony's Bambanani mine is located in the Free State, near Welkom. One of the group's older mines, it consists of a surface shaft and a sub-shaft. Ore mined is conveyed to Harmony 1 plant, seven kilometres away, for processing. This deep-level operation conducts mostly scattered mining on the Basal Reef with around a quarter of its mining activities involving remnant pillar extraction. Development is under way in preparation for the extraction of the shaft pillar, due to begin in 2012. Following the acquisition of the Pamodzi Gold's Free State assets, the President Steyn (1 and 2 shafts) operation was incorporated into Bambanani.

Bambanani employed 3 887 people in all in FY10 – 3 611 were employees and 276 contractors.

Detailed information on Bambanani's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

The improved safety performance in FY08 and FY09 stalled somewhat in FY10. Bambanani regrettably had one fatality in FY10 (FY09: one) and reported a LTIFR of 9.29 per million hours worked (FY09: 7.48).

Bambanani key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	528	517	827
	000t (imperial)	582	570	912
Gold produced ^{††}	kg	4 137	3 780	4 817
	OZ	133 007	121 530	154 879
Average grade	g/t	7.77	7.32	5.82
	oz/t	0.227	0.213	0.170
Financial				
Revenue	R million	1 114	924	932
	US\$ million	147	103	128
Operating cost*	R/kg	176 253	176 834	148 671
	US\$/oz	723	611	639
Operating profit	R million	369	273	191
	US\$ million	49	31	26
Capital expenditure	R million	207	52	107
	US\$ million	28	6	15
Sustainability				
Number of employees				
Employees		3 611		
Contractors		276		
Total		3 887		
HDSAs in management**	%	44		
Women in mining**	%	9		
Expenditure on training				
and development	R million	13		
Safety				
No. of fatalities		1		
LTIFR	per million hours worked	9.29		
Environment				
Energy used	000MWh	467		
Water used for primary activities	000m ³	3 505		
GHG emissions	000t CO ₂ e	559		
Expenditure on local economic development	R million	4		
Status of mining right	New order mining right gr	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

++ 33 kilograms (1 061 ounces) were capitalised

Bambanani cont.

Operations review

In all, 528 000 tonnes were milled in FY10, an increase of 2% from 2009. The head grade improved by 9% to 8.07g/t, contributing to a 9% increase in gold produced to 133 007 ounces, of which 4 104 ounces were capitalised.

The conversion of Bambanani into a high-grade, low-volume operation continued during FY10. There was increased emphasis on disciplined mining throughout the year and in particular on the achievement of daily tramming and hoisting targets as well as efficient vamping and clean mining.

Following a fatal fall of ground incident in the second quarter, extensive changes were made to the mining method in the steeply dipping, high-stope-width panels in the lower levels of the sub-shaft. Although these changes, from breast to down-dip mining, temporarily led to reduced volumes mined while alterations to mining plans and methods were implemented, these revisions proved to be successful regarding both safety and production performance. The application of down-dip stoping is now well entrenched.

Greater attention is also being given to the improvement of the blast cycle by increasing the number of blasts per panel in the sub-shaft (historically difficult, high channel steep stopes) and the delivery of higher volumes to maintain plant throughput at targeted levels.

Regarding development, two raise lines were completed in the sub-shaft area and on-reef development in this area has come to an end. Development grade was boosted at year-end with the development of the high-grade shaft pillar raise, although this is considered as stoping.

Mining in the sub-shaft area will come to an end in the next three years, following which mining will take place around the high-grade shaft pillar. Mining of the shaft pillar will take eight years. Backfill will be used to minimise ground control-related risks when mining begins in the shaft pillar in June 2012.

This project will involve the mining of 2.2Mt at an average grade of 11.08g/t, yielding just over 26 000 kilogram (835 900 ounces) of gold.

Equipping of the Steyn 2 shaft is under way. Face length flexibility, infrastructural shortcomings and heat are the main obstacles to production here. Progress was made with the decline shaft infrastructure and the haulage from 73 level to Bambanani is being rehabilitated to assist Steyn 2 in maintaining its shaft bottom and keeping it clean of spillage. Areas affected by heat problems at Steyn 2 are now being supplied with chilled water from Bambanani and temperatures have substantially improved.

Steyn 2 is expected to yield around 46 000oz of gold annually over six years at an average grade of 6.92g/t.

Financial review

Revenue and cash operating profit increased significantly in both rand and dollar terms, a result of the higher average gold price received for the year. Revenue was R1 114 million (US\$147 million) and cash operating profit, R369 million (US\$49 million), up by 21% and 35% respectively. Production cost of R745 million (US\$98 million) for the year was 14% higher (36% up in dollar terms). The major contributors to increased costs were rises in electricity and labour costs.

Capital expenditure more than quadrupled in FY10 to R207 million due to the inclusion of an amount of R94 million capital costs of the Steyn operations. The majority of the remaining capital at Bambanani East was for the shaft pillar work amounting to R66 million.

Outlook*

Production is planned to increase to around 766 000 tonnes in FY11, at an average grade of 6.98 g/t. Grade is expected to improve further once the shaft pillar is exploited, rising from FY12 onwards. Gold production will peak in FY13 at 6 000 kilograms (193 000 ounces). Cash costs** are expected to be stable at around R190 000/kg (\$775/oz), with a substantial decline expected with the mining of the shaft pillar from FY13.

Excluding Steyn: Capital expenditure** of R197 million (US\$26 million) is planned for FY11 – R14 million (US\$2 million) on ongoing development, R19 million (\$3 million) on major equipment maintenance and R164 million (US\$21 million) on project capital.

Including Steyn: Capital expenditure** of R250 million (US\$33 million) is planned for FY11 – R16 million (US\$2 million) on ongoing development, R24 million (US\$3 million) on major equipment maintenance, R30 million (US\$4 million) on other shaft capital and R180 million (US\$24 million) on project capital.

Current productivity levels of 140.0g/TEC are forecast to improve to an average of 205g/TEC during peak production.

- * Please refer to the forward-looking statements
- ** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.



Bambanani, South Africa

Doornkop



Description

Located 30 kilometres west of Johannesburg in Gauteng, Doornkop is a single-shaft operation mining to a depth of just less than 2 000m. Doornkop mines the Kimberley and South reefs by means of both narrow-reef conventional mining and mechanised bord-and-pillar mining. Ore mined is processed at Doornkop's carbon-in-pulp plant. Production at Doornkop's South Reef Project which accesses the higher grade South Reef continues to ramp up. Full production at this project is scheduled for FY15.

Doornkop employed 2 649 people in FY10, of whom 1 645 were employees and 1 004 contractors.

Detailed information on Doornkop's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 143 to 146.

Safety

Although there was an improvement in certain safety indicators at Doornkop in FY10, there were most regrettably two fatalities (FY09: no fatalities). The LTIFR improved to 5.50 per 1 million hours worked (FY09: 6.25). A greater focus on safety-related matters led to streamlined procedures and improved training, maintenance and behaviour.

Doornkop key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	540	549	448
	000t (imperial)	595	605	494
Gold produced	kg	1 950	1 311	1 370
	OZ	62 694	42 150	44 038
Average grade	g/t	3.61	2.38	3.06
	oz/t	0.105	0.070	0.089
Financial				
Revenue	R million	517	343	258
	US\$ million	68	38	35
Operating cost*	R/kg	200 324	232 699	175 178
	US\$/oz	822	804	749
Operating profit	R million	107	62	33
	US\$ million	14	7	4
Capital expenditure	R million	342	395	349
	US\$ million	45	44	48
Sustainability				
Number of employees				
Employees		1 645		
Contractors		1 004		
Total		2 649		
HDSAs in management**	%	38		
Women in mining**	%	8	-	
Expenditure on training				
and development	R million	10		
Safety				
No. of fatalities		2		
LTIFR	per million hours worked	5.50		
Environment			-	
Energy used	000MWh	155		
Water used for primary activities	000m ³	2 725		
GHG emissions	000t CO ₂ e	184		
Expenditure on local economic development	R million	4		
Status of mining right	New order mining right gr	anted	-	
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Doornkop cont.

Operations review

Despite a 2% decline in volumes milled to 540 000 tonnes, an increase of 52% in grade contributed to gold produced being 49% up at 62 694 ounces year-on-year. The much improved grade was a result of the growth in high-grade volumes mined from the South Reef and under achievement on the low-grade Kimberley Reef as well as a high mine call factor for the shaft as a whole.

The greater volume of South Reef ore mined was in line with the build up of production at the South Reef project. Tonnes mined from South Reef mining areas accounted for 50% of total tonnes mined in FY10 – up from 30% the year before – while the contribution from the Kimberley Reef declined from 70% to 50%. The average grade of South Reef tonnes mined rose to 5.4g/t while that of the Kimberley Reef remained flat.

The low-grade Kimberley Reef operation is mechanised and production during the year was compromised by the lack of availability of trackless machinery. The new trackless fleet that has been purchased will improve production in the coming year.

There was a steady improvement in development metres achieved which will help to ensure that the build-up in the South Reef project is achieved and that targets are met. Problems were however encountered with the equipping of the shaft in terms of the South Reef project given the temporary shaft time constraints experienced. The winder compartments were subsequently equipped and the conveyor belt on 212 level (shaft bottom) was completed.

Much effort has been put into increasing our understanding of the geology of the South Reef orebody. This work has led to an increase in South Reef reserve ounces with the move in resources from inferred to indicated and measured categories, and has also increased confidence in the life-of-mine production plan. Further work to improve the geological model of the South reef continues.

There is currently a four-year plan in place for the mining of the Kimberley Reef in terms of which production areas on the Kimberley Reef will account for up to 75% of Doornkop's total gold production annually. This proportion will decline as higher-grade volumes from the South Reef project build up. A new geological model has been developed of the Kimberley Reef to identify target areas for exploration, the results of which may extend the four-year plan currently in place.

The mine as a whole is building up to mine and process 1.6Mt annually.

Financial review

The higher gold price received together with the significant increase in ounces produced resulted in revenue for the year being 51% higher in rand terms and 79% up in dollar terms. Production costs of R410 million (\$54 million) were 46% and 74% up in rand and dollar terms respectively. These increases were largely driven by higher labour costs, owing to the build up in the staff complement in anticipation of the operation's future production profile, by once-off transport costs incurred around the surface conveyor belt fire, and by additional store costs related to the equipping of the South Reef workplaces.

Despite the cost increases, cash operating profit increased by 73% to R107 million. Capital expenditure of R342 million (\$45 million) exceeded the planned amount of R305 million owing to repairs done to a fire-damaged surface conveyor belt (R28 million), the purchase of trackless equipment for the Kimberley Reef section and an approved change in the scope of the South Reef project following on the delays resulting from the lack of shaft time. In all, the bulk of this expenditure (66%) was on the South Reef project.

Outlook*

The build-up of production from the South Reef continues with full production from this project scheduled for the last quarter of FY15. Tonnes mined are forecast at around 993 000 tonnes in FY11, at a recovered grade of 3.59g/t. South Reef ore is expected to account for 53% of the total milled and 74% of the gold produced in FY11. Cash costs** are anticipated to improve to approximately R181 200/kg (US\$739/oz) in FY11.

Planned capital expenditure** for FY11 is R320 million (\$42 million) – R 136 million (\$18 million) on on-going development, R49 million (\$6 million) on other shaft capital and major equipment maintenance and R 135 million (\$18 million) on the South Reef project.

Currently productivity levels of 122g/TEC are forecast to improve to 131g/TEC in FY11.

* Please refer to the forward-looking statements

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.



Evander



Description

The Evander operation (Evander 8), located in Mpumalanga, mines the Kimberley Reef in the Evander Basin. Ore mined is milled and processed at the Kinross plant, which has a hybrid CIP/CIL process. Evander 8 shaft has an expected life-of-mine of around 11years. A project to deepen this shaft, by means of an additional twin decline system down to 25 level and extensions to the infrastructure, is currently under way. Following a review by Harmony of uneconomical operations, the Evander 7 shaft ceased production given that its orebody had been depleted while the Evander 2 and 5 shafts were closed.

The Evander operation employed 3 331 people – 3 052 employees and 279 contractors – in FY10.

Detailed information on Evander's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 150 to 152.

Safety

There were most regrettably two fatalities (FY09: two fatalities) at Evander in FY10. Despite this, the LTIFR improved to 7.41 per 1 million hours worked (FY09: 10.39).

Evander key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	788	1 125	1 312
	000t (imperial)	869	1 241	1 447
Gold produced	kg	3 475	5 912	7 210
	OZ	111 724	190 075	231 799
Average grade	g/t	4.41	5.25	5.50
	oz/t	0.129	0.153	0.160
Financial				
Revenue	R million	910	1 514	1 402
	US\$ million	120	168	193
Operating cost*	R/kg	248 190	165 377	121 641
	US\$/oz	1 018	572	526
Operating profit	R million	51	516	486
	US\$ million	7	57	66
Capital expenditure	R million	175	210	242
	US\$ million	23	24	33
Sustainability				
Number of employees				
Employees		2 865		
Contractors		466		
Total		3 331		
HDSAs in management**	%	31		
Women in mining**	%	8	-	
Expenditure on training				
and development	R million	22		
Safety				
No. of fatalities		2		
LTIFR	per million hours worked	7.41		
Environment				
Energy used	000MWh	397		
Water used for primary activities	000m ³	5 267		
GHG emissions	000t CO ₂ e	491		
Expenditure on local economic development	R million	5		
Status of mining right	New order mining right gr	anted	-	
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Evander cont.

Operations review

Ore milled for the year totalled 788 000 tonnes, a decline of 30% on FY09. This together with a decline in grade resulted in a 41% decrease in gold produced to 111 724 ounces. This drop in operational performance was caused by a combination of factors, the most significant being the restructuring during the year of the Evander operations. A due diligence of these operations – Evander 2, 5, 7 and 8 – led to the conclusion that the only economically viable shaft was Evander 8. Mining operations at Evander 2, 5 and 7 shafts thus ceased during the year and Evander 8 was restructured. The shaft infrastructure at Evander 7 will be utilised by Evander 8 for the pumping of water and the hoisting of rock as well as being available for use as a second escape. High temperatures underground, caused by ventilation return capacity restrictions at Evander 8 remained problematic and hampered production.

Once the restructuring of Evander had been completed, a feasibility study was undertaken which proved the viability of Evander 8. Greater attention was thus given to this shaft and a re-engineering project was implemented which involves not just the deepening of the decline but its repositioning within the payshoot. This will give immediate access to the high-grade areas between 24 and 25 level, and will contribute to improved productivity with consequent financial benefits. The project's parameters include the optimisation of logistics, cooling and ventilation as well as an upgrade of the refrigeration plant. It is estimated that, on a monthly basis, this project will yield 245 kilograms (7 876 ounces) from 29 000tpm at an average grade of 8.56g/t. The monthly capacity of the conveyor belt is to be upgraded to 46 000tpm.

Following the closure of the Evander 2 and 5 shafts as well as the Winkelhaak plant, a one-year clean up programme was begun at and in the vicinity of the plant. The aim of this programme, which will continue into FY11, is to clean up any metal contained in the plant footprints, to process rock from the dumps on the vicinity, to rehabilitate the Winkelhaak plant, and to clean the surface rail network. In FY10, around 292 642 tonnes were treated via this programme at a recovered grade of 1.81g/t, yielding 528 kilograms (16 975 ounces) of gold.

Current productivity rates of 93g/TEC are planned to increase to an average of 145g/TEC over the remaining life of this operation.

Financial review

Revenue declined by 40% in rand terms to R910 million while production costs fell by 14% in rand terms to R859 million and were almost constant in dollars at \$113 million. Unit costs however rose by 50% to R248 190/kg and by 78% to \$1 018/oz, a result of reduced production. Operating profit plunged to R51 million (\$7 million).

Capital expenditure of R175 million, which declined by 17%, was spent mostly on ongoing development (R84 million), major equipment maintenance (R18 million) and on shaft capital (R45 million) with the balance being spent on major project capital for Evander 8 (R28 million).

Outlook*

Mining will continue to take place on the edges of the higher grade payshoot during FY11 while development takes place to make the high-grade areas available.

In FY11, 514 000 tonnes are expected to be milled at an average recovered grade of 4.52g/t. Capital expenditure** of R196 million (\$26 million) is planned for FY11 – R56 million (\$7 million) on on-going development, R21 million (\$3 million) on major equipment maintenance and R119 million (\$16 million) on major project and other shaft capital.

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

^{*} Please refer to the forward-looking statements

Joel



Description

Joel mine, which is located in the Free State, on the south-western edge of the Witwatersrand Basin, comprises two shafts, North and South shafts. Previously ore mined at Joel was transported to Central Plant, 38km away for processing but, since the recommissioning of the Joel Plant in November 2009, is now processed on site. Scattered mining takes place on the Beatrix Reef, down to a depth of some 1 400m. Upgrading of the infrastructure at North Shaft is currently in progress.

Joel employed 1 470 in FY10, of which 1 436 were employees and 34 contractors.

Detailed information on Joel's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

Safety performance at Joel deteriorated in FY10. Having had no fatalities for two years, there was tragically one fatality in FY10, the result of a rockfall, while the LTIFR for the year was 4.26 per million hours worked (FY09: 2.59).

Joel cont.

Joel key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	439	513	407
	000t (imperial)	484	566	449
Gold produced	kg	2 006	2 043	1 852
	OZ	64 495	65 684	59 557
Average grade	g/t	4.57	3.98	4.55
	oz/t	0.133	0.116	0.133
Financial				
Revenue	R million	524	503	375
	US\$ million	69	56	52
Cash costs*	R/kg	193 019	183 925	148 035
	US\$/oz	792	636	638
Operating profit	R million	145	137	91
	US\$ million	19	15	13
Capital expenditure	R million	88	56	39
	US\$ million	10	6	5
Sustainability				
Number of employees				
Employees		1 436		
Contractors		34		
Total		1 470		
HDSAs in management**	%	50		
Women in mining**	%	10		
Expenditure on training				
and development	R million	6		
Safety				
No. of fatalities		1		
LTIFR	per million hours worked	4.26		
Environment				
Energy used	000MWh	79		
Water used for primary activities	000m ³	682		
GHG emissions [†]	000t CO ₂ e	94		
Expenditure on local economic development	R million	3		
Status of mining right	New order mining right gr	ranted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

† Includes Joel plant

Operations review

Despite a 15% improvement in grade mined, volumes milled declined by 14% to 439 000 tonnes in FY10, resulting in an overall decline of 2% in gold produced to 2 006 kilograms (64 495 ounces). The improved grade was a result of increased face grade in the west, greater vamping in the upper mine and reduced stoping widths.

Volumes mined were negatively affected by a mud slide at the bottom of North shaft, a guided rope shaft. A temporary mud press was subsequently installed and mud is removed daily from the bottom of the shaft. Despite this, raise boring of the North shaft expansion to 129 level was completed although hoisting constraints resulted in the equipping of the shaft deepening project to 129 level being delayed.

An extensive programme to rectify the problems experienced with North shaft had begun by the end of June 2010. While production at Joel has progressively moved to the deeper portions of the mine, some 1 400 metres below surface, the North Shaft, which accesses these areas, was never fully equipped for this and adjustments to the shaft spillage arrangements are now being made retrospectively. The modifications being made include: changing the winder from sinking to production mode; installing larger skips; ensuring that emergency egress is available; raise boring the lift shaft from 121 to 129 level; and improving cleaning arrangements at the shaft bottom.

Operations were halted while these changes were under way. The shaft resumed operations in August 2010, once repairs to the shaft bottom had been completed. In the interim, the Joel plant has been processing waste to maximise gold production. The opportunity will be taken to install the permanent spillage arrangement during December 2010.

Once mining from 129 level has begun, production is expected to peak at around 78 000oz annually at an average grade of 5.82g/t and an average cost in real terms of R180 103/kg. To ensure that these production targets are met, plans have been put in place to ensure the operability of the North shaft and conduct a planned maintenance programme to minimise breakdowns, to maintain blast advances and to assess the feasibility of mining below 129 level to 137 level. A successful drilling programme has been completed and a pre-feasibility study is in progress.

Financial review

Revenue increased by 4% to R524 million and by 23% to \$69 million, boosted by the higher gold price. Cash operating costs in rand terms were contained, rising by 5% to R193 019/kg. Consequently, operating profit was up by 6% to R145 million (up 27% to US\$19 million). Capital expenditure of R88 million was 57% higher than in FY09 mainly due to capital spent on the programme to upgrade the North shaft.

Outlook*

Production at Joel is expected to decrease marginally to 426 000 tonnes in FY11, while the average grade mined will rise to around 4.74g/t. Gold production will consequently be slightly higher at around 2 029 kilograms (65 234 ounces). Cash costs are expected to be approximately R217 085/kg (US\$885/oz).

Total capital expenditure** planned for FY11 is R66 million (US\$9 million) – R32million (US\$4 million) on on-going development and R34 million (US\$5 million) on major equipment maintenance and other shaft capital.

Current productivity levels of 125g/TEC are forecast to improve to an annual average of 152g/TEC during peak production.

- * Please refer to the forward-looking statements
- ** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

Kusasalethu



Description

The Kusasalethu mine (formerly Elandsrand), which is located on the Gauteng-North West Province border, comprises twin vertical and twin sub-vertical shaft systems. Mining at Kusasalethu is undertaken using conventional mining methods in a sequential grid layout. The deepening project, which is almost complete, involves the extension of the sub-vertical shafts to access the deeper parts of the Ventersdorp Contact Reef up to a depth of 3 600 metres. Work on the project is currently focussed on accessing and opening up areas of the new mine and the development and construction of the necessary support infrastructure. Ore mined at Kusasalethu is treated at the Kusasalethu plant.

The rebranding and name change of this operation in February 2010 was based on entrenching a culture, endorsed by both management and the unions, to ensure safe, productive mining. The five core values of this new culture are safety as the first priority; accountability; respect; honesty; and rewarding excellence.

Kusasalethu employed 5 685 people – 5 049 employees and 636 contractors – in FY10.

Detailed information on Kusasalethu's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 143 to 149.

Safety

Historically, this mine has had a less than impressive safety record which affected the ability to meet targets and achieve plans. Hand-in-hand with the new vision for the mine has gone a concerted effort to focus on creating a safe working environment at Kusasalethu. This has borne fruit and overall safety performance improved in FY10, but there were most regrettably two fatalities (FY09: five fatalities). The LTIFR improved to 6.68 per million hours worked (FY09: 12.67). Seismicity continued to be a risk and steps were taken to improve the quality of the pre-conditioning at the stope face so as to reduce the possibility of face ejection during small, volatile seismic events.

Kusasalethu key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	1 035	962	890
	000t (imperial)	1 141	1 061	981
Gold produced	kg	5 444	5 422	5 108
	OZ	175 029	174 321	164 215
Average grade	g/t	5.26	5.64	5.74
	oz/t	0.153	0.164	0.167
Financial				
Revenue	R million	1 392	1 422	964
	US\$ million	184	158	133
Operating cost*	R/kg	208 864	191 097	152 611
	US\$/oz	857	660	652
Operating profit	R million	301	366	213
	US\$ million	40	41	30
Capital expenditure	R million	430	422	318
	US\$ million	57	47	44
Sustainability				
Number of employees				
Employees		5 049		
Contractors		636		
Total		5 685		
HDSAs in management**	%	33		
Women in mining**	%	10		
Expenditure on training				
and development	R million	39		
Safety			-	
No. of fatalities		2		
LTIFR	per million hours worked	6.68		
Environment			-	
Energy used	000MWh	629		
Water used for primary activities	000m ³	2 138		
GHG emissions	000t CO ₂ e	765		
Expenditure on local economic development	R million	10		
Status of mining right	New order mining right gr	anted	-	
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Kusasalethu cont.

Operations review

Although volumes milled rose by 8% to just over 1Mt, a 7% decline in grade resulted in gold produced being fractionally higher on the 2009 financial year at 175 029 ounces. Currently, 60% of production at Kusasalethu is from production areas below 100 level (the new mine expansion project) and 40% from production areas in the 'old' mine, above 100 level.

Underperformance on square metres broken was the mine's biggest challenge in FY10. Scaling in the main reef and waste ore pass systems resulted in blockages in both systems, which contributed to waste dilution and resulted in the lower recovered grade during the year.

By year-end it was decided to separate reef and waste and to continue with the removal of the blockage in the waste pass system between the old mine (above 100 level) and the new mine (below 100 level). Once the blockage has been removed, waste rock and reef ore will again be tipped into one ore pass system to accommodate the rehabilitation of both ore pass systems. While this will dilute the recovered grade, it will not affect gold production.

Productivity, which is currently at 84g/TEC, is a concern. Plans are in place to increase this to 158g/TEC in 2013, once peak production has been achieved, by increasing volumes from the new mine where the mining operation is more efficient. The mine deepening project infrastructure is 95% complete. The shaft infrastructure is in place and work over the next two years will focus mainly on the provision of sufficient cooling and ventilation into the new mine areas.

Financial review

The stronger rand over the year has resulted in revenue in rand terms declining by 2% to R1 392 million, negating the effect of the higher dollar gold price received. Cash operating cost rose by 9% to R208 864/kg and by 30% to \$857/oz, also a function of the strength of the rand. This also had an impact on cash operating profit which declined by 18% in rand terms to R301 million and by 2% in dollars terms to \$40 million.

Capital expenditure for the year totalled R430 million (\$57 million), spent mostly on on-going development (R266 million), the maintenance of equipment (R34 million) and development of the new mine project (R90 million).

Outlook*

The planned build-up in production at Kusasalethu will continue in line with the life-of-mine plan for the new mine project. Milling volumes of 1.3 million tonnes are planned for FY11, at an average grade of 5.16g/t, yielding 200 000oz. Once levels 109 and 113 have come into production by July 2013, gold output is scheduled to rise to more than 300 000oz. The grade mined will increase progressively, averaging 6.45g/t, as the mine reaches full production by 2013 and as more mining takes place in the high-grade facies where the Elsburg Reef sub-outcrops against the Ventersdorp Contact Reef, causing localised enrichment on the western side of the mining lease area.

Total capital expenditure** planned for FY11 is R414 million (US\$54 million) – R284 million (US\$37 million) on on-going development, R39 million (US\$5 million) on major equipment maintenance and R39 million (US\$5 million) on other shaft capital. The balance of R52 million (US\$7 million) is planned for the Kusasalethu new mine project.

* Please refer to the forward-looking statements

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

Masimong



Description

Masimong, which is in the central Free State, consists of an operating shaft – 5 shaft – and 4 shaft which, although closed, is used for ventilation, pumping and as a second outlet. Ore mined at Masimong is processed at the Harmony 1 Plant around 23 kilometres away. Conventional drilling, blasting and scraping operations are focussed on the Basal and B reefs. The shafts are intermediate in depth, extending to around 2 300 metres.

Masimong employed 3 205 in FY10, of which 3 067 were employees and 138 contractors.

Detailed information on Masimong's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

Overall safety performance at Masimong improved in FY10, but there was most regrettably one fatality (FY09: two fatalities). The LTIFR improved to 7.37 per 1 million hours worked (FY09: 8.67).

Masimong cont.

Masimong key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	899	890	809
	000t (imperial)	991	981	892
Gold produced	kg	4 840	4 791	3 621
	OZ	155 609	154 034	116 424
Average grade	g/t	5.38	5.38	4.48
	oz/t	0.157	0.157	0.131
Financial				
Revenue	R million	1 277	1 215	698
	US\$ million	168	135	96
Operating costs*	R/kg	146 674	137 598	175 593
	US\$/oz	602	476	756
Operating profit	R million	575	554	61
	US\$ million	76	62	8
Capital expenditure	R million	177	130	114
	US\$ million	23	14	16
Sustainability				
Number of employees				
Employees		3 067		
Contractors		138		
Total		3 205		
HDSAs in management**	%	19		
Women in mining**	%	12		
Expenditure on training				
and development	R million	14		
Safety				
No. of fatalities		1		
LTIFR	per million hours worked	7.37		
Environment				
Energy used	000MWh	229		
Water used for primary activities	000m ³	1 722		
GHG emissions	000t CO ₂ e	274		
Expenditure on local economic development	R million	13		
Status of mining right	New order mining right gra	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Operations review

Volumes milled increased marginally year-on-year by 1% to 899 000 tonnes and grades were maintained. Consequently, gold produced was also 1% up at 155 609 ounces.

Maintaining grades on the B Reef proved challenging as mining moved out of the high-grade channels while those mined on the Basal Reef generally remained constant. Nevertheless grades were maintained overall for the year at 5.38g/t. Productivity levels improved to average 28.81t/TEC for the year.

The infrastructural upgrade, which began in FY09 and included improved resource management and the installation of new tracks, locomotives and compressors, was completed in FY10. Masimong will reap the benefits of this upgrade by way of improved productivity, efficiencies and output in coming years.

Ventilation is a challenge at Masimong as the booster fans currently installed themselves generate heat and consume electricity. Steps are being taken to counter this. Pressure doors have been installed as an interim measure and a new ventilation system is being installed.

A new refrigeration plant is to be installed by September 2011 at a cost of R61 million. Following the upgrade programme, full production is scheduled for 2012 at a forecast average rate of annual production of around 158 000 ounces at an average grade of 5.11g/t. To help achieve this, face advances are planned to increase from 2m²/TEC to 7m²/TEC and every effort has been made to ensure that panels are well equipped and crews motivated, and steps have been taken to overcome the erratic grade of the B reef.

Financial review

Revenue was 5% up in rands to R1 277 million while in dollars, it increased by 24% to US\$168 million. Cost increases were well controlled during the year with unit costs rising by 7% to R146 674/kg and, in dollars, by 26% to US\$602/oz, making Masimong the lowest cost producer among Harmony's operations. The higher gold price achieved in dollars was countered by the strong rand, resulting in operating profit increasing by 4% to R575 million and by 21% to \$76 million. Capital expenditure of R177 million (\$23 million) was spent largely on booster fans, emergency generators and the infrastructure upgrade.

Outlook*

Volumes milled are expected to rise to 1 million tonnes in FY11 at a grade of around 4.9g/t. Gold production is forecast to be approximately 4 900 kilograms (158 000 ounces) at a cash cost** in the region of R167 132/kg (US\$681/oz).

Capital expenditure** of R208 million (US\$27 million) is planned for FY11 – R119 million (US\$16 million) on on-going development and R89 million (US\$12 million) on major equipment maintenance and other shaft capital. Of this, the major items are R28 million (US\$4 million) to be spent on the refrigerator plant at Masimong 5 shaft and R19 million (US\$2 million) on the upgrading of rail bound equipment.

Current productivity levels of 138g/TEC are forecast to improve to an annual average of 172g/TEC during peak production.

* Please refer to the forward-looking statements

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

Phakisa



Description

Phakisa mine, located in the Free State, mines the Basal Reef. Once the mine expansion project has been completed this mine will operate to a depth of some 2 400 metres and have a monthly capacity of 83 000 tonnes. Phakisa came into production in FY08. This operation includes the Nyala shaft, 5.5 kilometres away, which is used to hoist rock and is available as a second escape route. Ore mined at Phakisa is processed at Harmony 1 Plant, some 20 kilometres away.

Phakisa employed 3 034 in FY10, of which 2 858 were employees and 176 contractors. This is scheduled to increase to 3 181 people in FY11.

Detailed information on Phakisa's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

During FY10, Phakisa had three fatal accidents (FY09: no fatalities). Two fatalities were a result of a fall of ground in the development section and one was caused by a training accident. Post year-end, an explosion underground tragically resulted in five fatalities. The LTIFR for FY10 improved to 8.40 per million hours worked (FY09: 9.19).

Phakisa key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	339	185	31
	000t (imperial)	374	204	34
Gold produced	kg	1 371	691	125
	OZ	44 079	22 216	4 024
Average grade	g/t	4.04	3.74	4.04
	oz/t	0.118	0.109	0.118
Financial				
Revenue	R million	375	171	28
	US\$ million	50	19	4
Operating costs*	R/kg	232 190	160 712	129 853
	US\$/oz	953	555	497
Operating profit	R million	49	64	11
	US\$ million	7	7	2
Capital expenditure	R million	486	461	293
	US\$ million	64	51	40
Sustainability				
Number of employees				
Employees		2 858		
Contractors		176		
Total		3 034		
HDSAs in management**	%	32	_	
Women in mining**	%	11	-	
Expenditure on training				
and development	R million	10		
Safety			_	
No. of fatalities		3		
LTIFR	per million hours worked	8.40		
Environment				
Energy used	000MWh	67		
Water used for primary activities	000m ³	408		
GHG emissions	000t CO ₂ e	81		
Expenditure on local economic development	R million	2		
Status of mining right	New order mining right gra	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Phakisa cont.

Operations review

Milled volumes increased by 83% year-on-year. This together with an 8% improvement in the grade mined contributed to a 98% increase in gold produced to 44 079 ounces.

The increase in volumes was in line with the build-up in production currently under way. Plans are still on track to attain monthly production capacity of 83 000 tonnes by FY13. The build-up was affected by geological issues, illegal mining activities and down-time on the new infrastructure. The rail-veyor infrastructure necessary for full production was completed and the third rail-veyor was commissioned in December 2009. Implementation of phase 1 was concluded with the replacement of the original skips and cages by an eight-tonne skip and a detachable cage. Fine-tuning of this infrastructure and of the ice plants and rock handling systems in particular, continued. The five ice plants were found to be underperforming and the original equipment manufacturers have been engaged to assist with remedial action and to advise on ways of improving performance.

Mining was also undertaken at the Nyala shaft where payable pillars are available for mining. For FY10, 32% of total combined Phakisa/Nyala production came from Nyala.

Since it is a new mine, development at Phakisa is currently centred close to the shaft in the lower grade southern areas. The major drive is on development of the area to the north to access higher grade areas and to move closer to the average reserve grade. Grades will improve as development progresses towards the north and more reef is exposed within the major north-west to south-east trending Basal Reef payshoot. A steep build-up in production is planned, building up to annual production of more than 1Mt a year at an average grade of 7.94g/t and yielding around 270 000oz.

Financial review

Revenue for the year rose by 119% to R375 million, boosted by the increase in production and the higher gold price received. In dollar terms, revenue was up 163% to US\$49 million. Costs increased as a result of production build up costs as well as the cost of employees transferred from shafts that had been closed to Phakisa. With the transition from project phase into production, a portion of Phakisa's commissioning costs were capitalised. Cash operating costs in rands increased by 44% to R232 190/kg and were 72% up in dollar terms to \$953/oz.

Capital expenditure for the year was R486 million (\$64 million), the bulk of which was spent on the expansion project as well as on on-going development and the maintenance of major equipment.

Outlook*

As the mine continues with its build-up to full production and given greater flexibility and availability of face length, the grade at Phakisa is expected to improve further in FY11. The mine is on track to attain full production during FY13. The average grade mined should increase from FY12 onwards when mining is scheduled to move into the higher-grade north areas.

Volumes milled will continue to increase in FY11, rising to 563 470 tonnes, while the grade is expected to average approximately 4.2 g/t. Gold production of 2 350 kilograms (75 555 ounces) is planned for FY11 at a cash cost** of R242 080/kg (US\$987/oz). Cash costs should decline once this operation has reached full production.

Planned capital expenditure** for FY11 is R391 million (US\$51 million). Of this, R182 million (US\$24 million) will be spent on on-going development and R44 million (US\$6 million) on major equipment maintenance and other shaft capital. Capital planned for the major project is R165 million (US\$22 million).

Current productivity levels of 46g/TEC are forecast to improve to an annual average of 224g/TEC during peak production.

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

^{*} Please refer to the forward-looking statements

Target



Description

Located in the Free State, Target mine consists of a single surface shaft system with a sub-shaft and a decline. Ore is processed at the Target plant situated adjacent to the shaft. Both mechanised (86%) and conventional (14%) mining are undertaken on the geologically complex Elsburg and Dreyerskraal reefs. Mining operations extend to a depth of some 2 350 metres. With the acquisition of Pamodzi's Free State assets, one of these, the Target 3 shaft (formerly Loraine 3) was incorporated into Harmony's Target operation in the second half of the year.

Target employed 3 078 in FY10, of which 2 676 were employees and 402 contractors.

Detailed information on Target's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

A concerted effort has been made in recent years to improve safety at Target. Although safety performance improved in terms of LTIFR in FY10, there were regrettably two fatalities during the year (FY09: two), the result of falls of ground. These are now a major focus of the safety programme at Target. The LTIFR improved to 3.39 per million hours worked (FY09: 9.66).

Target cont.

Target key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	777	644	622
	000t (imperial)	857	710	686
Gold produced ^{††}	kg	3 539	2 713	2 476
	OZ	113 782	87 225	79 602
Average grade	g/t	4.40	4.21	3.98
	oz/t	0.128	0.123	0.116
Financial				
Revenue	R million	878	688	503
	US\$ million	116	76	69
Operating costs*	R/kg	190 720	186 749	167 990
	US\$/oz	783	645	716
Operating profit	R million	214	152	129
	US\$ million	28	16	18
Capital expenditure	R million	382	342	256
	US\$ million	51	38	35
Sustainability				
Number of employees				
Employees		2 676		
Contractors		402		
Total		3 078		
HDSAs in management**	%	34		
Women in mining**	%	11		
Expenditure on training				
and development	R million	13		
Safety				
No. of fatalities		2		
LTIFR	per million hours worked	3.73		
Environment				
Energy used	000MWh	228		
Water used for primary activities	000m ³	2 755		
GHG emissions [†]	000t CO ₂ e	279		
Expenditure on local economic development	R million	3		
Status of mining right	New order mining right gr	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

† Includes Target plant

++ 117 kilograms (3 762 ounces) capitalised

Operations review

Work done in FY09 to open up and increase the availability of the massive stopes at Target resulted in increased output. Volumes milled rose by 21% to 777 000 tonnes and this together with a 5% increase in grade resulted in ounces produced being 31% up on the year at 113 782 ounces.

FY10 at Target was notable for the consistent quarterly performance achieved, in line with plans. The programme to remodel and re-estimate the Target orebody was completed early in the year and led to much improved planning and design, which resulted in greater availability of the massive stopes, and the resolution of ventilation and cooling problems which enabled the return to production of all 10 narrow-reef, conventional mining panels. This programme will also permit Target to better manage its ore reserves which is crucial to the mine's future success.

The pre-feasibility study for the Block 3 project was completed, giving management a more thorough understanding of the orebody, which facilitated grade predictions and the mine planning function.

Good values were sampled in two raises currently being developed for narrow stoping at Target 1. Development at Target 3 is being done on the Elsburg Reef while, owing to logistical constraints, development of the better grade Basal reef has been delayed.

At Target 3, there were several challenges to be resolved including face length flexibility, infrastructural shortcomings and the build-up of mud and water at the bottom of the shaft. Progress is being made with the cleaning of the sub-shaft infrastructure so as to access the higher-grade Basal Reef mining area. A fridge plant has been installed and should be operational by the first quarter of FY11. This will enable access to more panels in the sub-shaft, contributing in turn to higher grades.

Financial review

Higher production and a higher gold price achieved for the year contributed to revenue rising in terms of both rand and dollars by 28% and 53% to R878 million and US\$116 million. Cost increases were well controlled. Cash operating costs were 2% up in rand terms at R190 720/kg and in terms of dollars, up 21% to US\$783/oz.

Capital expenditure of R382 million (US\$51 million) included R178 million (US\$23 million) on on-going development, R44 million (US\$6 million) on major equipment maintenance and R77 million (US\$10 million) on other shaft capital and major projects. In addition, R70 million (US\$9 million) was spent on preparing the Target 3 shaft for full production following the Pamodzi acquisition.

Over-expenditure related mostly to ongoing development which was necessary to achieve the additional development metres required to provide the desired level of mining flexibility. This was achieved and had a positive impact on both tonnes milled and the grade recovered.

Target cont.

Outlook*

Target 1: The revised and improved geological modelling will continue to bear fruit in FY11 and volumes produced are expected to increase to 814 000 tonnes, and the grade to increase to 4.51g/t. Grades should continue to rise to a peak of around 5g/t in FY16. Gold production in FY11 is planned to be around 3 979 kilograms (127 928 ounces) at a cash cost** of approximately R183 060/kg (US\$ 746/oz).

Target 3: Volumes for FY11 are expected to be around 283 000 tonnes in FY11, and the grade, 5.16g/t. Gold production in FY11 is planned at around 1 462 kilograms (47 000 ounces) at a cash cost** of approximately R202 736/kg (US\$826/oz).

Combined capital expenditure** for both the Target 1 and Target 3 shafts of R457 million (US\$60 million) is planned for FY11 – R202 million (US\$27 million) on on-going development, R47 million (US\$6 million) on major equipment maintenance and R207 million (US\$27 million) on other shaft capital and major capital (R101 million; US\$13 million) on Block 3.

Current productivity levels of 156g/TEC (Target 1) are forecast to improve to an annual average of 216g/TEC at Target 1 and 153g/TEC at Target 3 during peak production.

- * Please refer to the forward-looking statements
- ** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.



Tshepong



Description

Located in the Free State, Tshepong is Harmony's largest operation. The Tshepong mine comprises a single vertical shaft extending to a depth of 2 161 metres below collar. Ore is transported to the Harmony 1 plant, 23 kilometres away. The Tshepong sub-71 decline project is in progress and will extend mining to a depth of 2 366m below surface while the sub-66 project is currently building up production. The mine undertakes conventional undercut mining on the Basal Reef. The B reef is exploited as a high-grade secondary reef.

Tshepong employed 5 064 people in FY10, of whom 4 901 were employees and 163 contractors.

Detailed information on Tshepong's resources and reserves is available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

Overall safety performance improved in FY10. There were regrettably two fatalities during the year, compared with seven the previous year and the LTIFR declined to 12.22 per million hours worked (FY09: 15.82). In addition, Tshepong achieved 1 million fatality-free shifts on 18 February 2010 and came seventh in the category for the most improved LTIFR at the second Hard Rock Safety Summit.

Tshepong cont.

Tshepong key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	1 518	1 375	1 495
	000t (imperial)	1 674	1 516	1 649
Gold produced	kg	6 749	7 178	8 271
	OZ	216 986	230 778	265 914
Average grade	g/t	4.45	5.22	5.53
	oz/t	0.130	0.152	0.161
Financial				
Revenue	R million	1 823	1 780	1 621
	US\$ million	241	198	223
Operating costs*	R/kg	164 938	139 901	105 800
	US\$/oz	677	483	455
Operating profit	R million	676	802	715
	US\$ million	90	89	98
Capital expenditure	R million	261	249	195
	US\$ million	35	28	27
Sustainability				
Number of employees				
Employees		4 901		
Contractors		163		
Total		5 064		
HDSAs in management**	%	30		
Women in mining**	%	11		
Expenditure on training				
and development	R million	23		
Safety				
No. of fatalities		2		
LTIFR	per million hours worked	12.22		
Environment				
Energy used	000MWh	288		
Water used for primary activities	000m ³	1 144		
GHG emissions	000t CO ₂ e	347		
Expenditure on local economic development	R million	6		
Status of mining right	New order mining right gr	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Operations review

Tonnes milled rose by 10% to 1.5Mt in FY10. However, a 15% decline in grade resulted in a 6% reduction in gold produced to 216 986 ounces. The increase in ore milled, which exceeded expectations, was a result of the increase in square metres mined (from 378 039m² in FY09 to 385 978m² in FY10) and the additional volumes of development waste from the decline which had been trammed to reef. The latter however added to the challenge posed by the lower face grade as mining is currently taking place at the edge of the payshoot where values are more erratic.

Currently under development, the sub-71 project, which will connect Tshepong with Phakisa, remains on track for completion in May 2012. This project extends the existing double decline from 71 to 76 level to enable mining on both the 73 and 75 levels. The project's ultimate goal is to sink the decline to 76 level by May 2012.

Tshepong's full production of around 236 000 ounces annually is scheduled for 2015 with 1.41Mt being mined at an average recovered grade of 5.19 g/t. The average productivity target at full production is 139g/TEC.

Much of the development at the start of the year took place at the edges of the Basal Reef payshoot which resulted in lower development grades. These improved in the second half of the year when new raise lines became available within the deeper extension payshoots in the sub-66 and sub-71 decline areas. Development on the higher-grade channels of the B Reef stalled with the intersection of areas of non-deposition.

Financial review

Revenue rose by 2% to R1 823 million and by 22% to \$241 million. Cash operating cost rose by 18% to R164 938/oz and by 40% to US\$677/oz with cost pressure coming from increases in wages, electricity tariffs and the cost of supplies and equipment.

Capital expenditure was 5% higher at R261 million (US\$35 million), spent primarily on on-going development, major equipment maintenance and other shaft capital, and the sub-71 decline project. Total expenditure to date on this project is R133 million (US\$18 million).

Outlook*

Tshepong should achieve its reserve grade of 1 132cmg/t once the mine is fully able to access the orebody through the declines. Volumes are expected to decrease 9% to 1.38Mt in FY11 at a recovered grade of 4.75g/t. Gold production of 6 532 kilograms (210 000 ounces) is planned at an anticipated cash cost** of R187 913 /kg (US\$766 /oz).

Total capital expenditure** of R273 million (US\$36 million) is planned for FY11 – R177 million (US\$23 million) on on-going development, R17 million (US\$2 million) on major equipment maintenance and R22 million (US\$3 million) on other shaft capital. The balance of R57 million (US\$8 million) is planned for the sub-71 decline project.

Current productivity levels of 122g/TEC are forecast to remain constant despite the forecast decrease in gold production.

- * Please refer to the forward-looking statements
- ** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

Virginia



Description

The Virginia operations, situated in the Free State province, are among the oldest in the group and at year-end comprised Unisel and Merriespruit 1. Ore from Unisel is processed at Harmony 1 plant, while that from Merriespruit 1 is treated at Central Plant. These operations, which are of intermediate depth, ranging from 1 000 to 2 000 metres, employ scattered mining and pillar reclamation to access the Basal, Leader, Middle and A reefs.

Virginia employed 4 036 in FY10, of which 3 979 were employees and 57 contractors. This will decrease to approximately 2 500 people in FY11.

Detailed information on Virginia's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 132 to 142.

Safety

There were most regrettably five fatalities at the Virginia operations in FY10 as compared with one the previous year. Following a significant improvement in FY09, there was a slight deterioration in the LTIFR to 12.86 per million hours worked in FY10 (FY09: 12.38).

Virginia key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	1 656	2 261	2 130
	000t (imperial)	1 826	2 493	2 349
Gold produced	kg	5 288	8 030	7 708
	OZ	170 013	258 170	247 820
Average grade	g/t	3.19	3.55	3.62
	oz/t	0.093	0.104	0.106
Financial				
Revenue	R million	1 415	2 033	1 488
	US\$ million	187	226	204
Operating costs*	R/kg	252 537	184 538	169 544
	US\$/oz	1 036	638	726
Operating profit	R million	75	545	180
	US\$ million	10	61	24
Capital expenditure	R million	180	199	152
	US\$ million	24	22	20
Sustainability				
Number of employees				
Employees		3 979		
Contractors		57		
Total		4 036		
HDSAs in management**	%	36		
Women in mining**	%	13		
Expenditure on training			-	
and development	R million	27		
Safety				
No. of fatalities		5		
LTIFR	per million hours worked	12.86		
Environment				
Energy used	000MWh	406		
Water used for primary activities	000m ³	10 380		
GHG emissions	000t CO ₂ e	491		
Expenditure on local economic development	R million	4		
Status of mining right	New order mining right gr	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter
Virginia cont.

Operations review

Following a review of Harmony's asset portfolio and the economic viability of the Virginia operations, and given the depletion of their orebodies, mature infrastructure and low grades, production ceased at Brand 3, which has been placed on care and maintenance, and at Harmony 2 and Merriespruit 3. To enable certain sections of Merriespruit 1 to continue operating, a job preservation and profitability agreement was signed with organised labour. As a result of the restructuring of the Virginia operations, production for the year was down 27% to 1.7Mt milled. Together with a 10% decline in grade, this resulted in gold production of 170 013 ounces, a decrease of 34%.

The development at Merriespruit 1 focused on those areas with the best short-term grade potential and better grades are expected as a result. At Unisel, Basal Reef development produced good results while Leader Reef development was negatively affected by poor environmental conditions which will be addressed by the cooling project. Middle Reef development focused on the decline area in pillars and was negatively affected by reef pinch outs and reef variability. B Reef development was undertaken in a fault block which made access easy but results were poor and development was halted. Overall, the shaft produced reserves on the Basal and Leader reefs. Future development will focus more on the better grade E block.

Financial review

Revenue of R1 415 million was down by 30%, which combined with an increase in cash operating cost of 37% to R252 537/kg (US\$1 036/oz), resulted in operating profit declining by 86% to R75 million (US\$10 million). Capital expenditure of R180 million (US\$24 million) was spent largely on on-going development (72%) and on maintenance and other shaft capital (28%).

Outlook*

In FY11, volumes mined are expected to be around 1.1Mt at a grade of 3.75 g/t. Gold production is expected to be 4 212 kilograms (135 419 ounces), while cash costs** are forecast to be approximately R224 000/kg (US\$ 913/oz). This forecast is highly dependent on the success of mining and costs at Merriespruit 1.

A great deal of development is still required to access the Basal Reef at Unisel, and the high-grade shaft pillar will be exploited at the end of its life-of-mine.

Capital expenditure** of R78 million (US\$10 million) is planned for FY11 – R57 million (US\$7 million) on on-going development and R21 million (US\$3 million) on major equipment maintenance and other shaft capital.

Current productivity levels of 84g/TEC are forecast to improve to an annual average of 140g/TEC during peak production.

* Please refer to the forward-looking statements

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

Kalgold



Description

Kalgold is an open-pit mining operation close to Mafikeng in North West Province. The mine accesses gold-bearing ore in a banded ironstone formation in a shear zone within the Kraaipan Greenstone Belt. Tonnage mined at Kalgold is treated at a carbon-in-leach plant on site.

Kalgold employed 480 people – 230 employees and 250 contractors – in FY10.

Detailed information on the Kalgold's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 153 to 154.

Safety

There were no fatalities at Kalgold in FY10 while the LTIFR for the year was 1.49 per million hours worked compared to 2.94 in FY09.

More detailed information on safety performance and Harmony's sustainable development concerns in South Africa can be found in the online *Sustainable Development Report* on the corporate website, www.harmony.co.za. A summary of this can be found on pages 26 to 46 of this annual report.

Review of operations - South Africa

Kalgold cont.

Kalgold key statistics

Production		FY1 <u>0</u>	FY09	FY <u>08</u>
Volumes milled	000t (metric)	1 700	1 542	1 530
	000t (imperial)	1 873	1 700	1 687
Gold produced	kg	1 526	2 015	2 869
	OZ	49 063	64 784	92 229
Average grade	g/t	0.90	1.31	1.87
	oz/t	0.026	0.038	0.055
Financial				
Revenue	R million	390	512	557
	US\$ million	51	57	77
Operating costs*	R/kg	182 215	146 314	94 312
	US\$/oz	748	506	401
Operating profit	R million	116	220	279
	US\$ million	15	25	39
Capital expenditure	R million	11	10	10
	US\$ million	1	1	1
Sustainability	FY10 FY09 FY08 000t (metric) 000t (imperial) 1 700 1 542 1 530 kg 1 526 2 015 2 869 oz 49 063 64 784 92 229 g/t 0.90 1.31 1.87 oz/t 0.026 0.038 0.035 million 51 57 77 R million 51 57 77 R/kg 182 215 146 314 94 312 US\$ million 51 52 39 R million 116 220 279 US\$ million 15 25 39 R million 11 10 10 US\$ million 1 1 1 VS\$ million 1 1 1 Kg 63 63 63 % 63 63 63 % 63 63 64 % 63 65 65 ootic Kop			
Number of employees				
Employees		230		
Contractors		250		
Total		480		
HDSAs in management**	%	63		
Women in mining**	%	13		
Expenditure on training				
and development	R million	1		
Safety				
No. of fatalities		0		
LTIFR	per million hours worked	1.49		
Environment				
Energy used	000MWh	77		
Water used for primary activities	000m ³	2 337		
GHG emissions	000t CO ₂ e	65		
Expenditure on local economic development	R million	1		
Status of mining right	New order mining right gr	anted		
	in December 2007			

* Includes royalty payment in FY10

** Indicator reported in terms of the MPRDA and the South African Mining Charter

Operations review

Kalgold performed in line with expectations in FY10. Volumes processed rose by 10% to 1.7Mt as planned.

Gold production declined by 24% to 1 526kg (49 063oz), a result of the planned decline in grade to 0.90g/t as operations at the high-grade D Zone pit came to an end in March 2009. The sulphide material, which does not present the same problems as the oxidised material, is now being mined at the lower-grade Watertank pit. Mining at the A zone pit, where grades will be similar to those at the Watertank pit, is scheduled to start in 18 months' time.

Harmony continued with the brownfields exploration in areas surrounding the Kalgold operation.

Financial review

Despite the lower level of production and cash costs of R182 215/kg (US\$748/oz), Kalgold reported an operating profit of R116 million (US\$15 million). Capital expenditure for the year was R11 million (US\$1 million), spent mostly on the maintenance of major equipment. Productivity levels at Kalgold in FY10 were 331g/TEC, the highest in the group.

Outlook*

Mining will continue in the Watertank pit during the next year and volumes and grade are expected to be in line with those reported in FY10

Tonnes milled annually will remain stable at around 1.7Mt. An average recovered grade of 0.74g/t over the life of mine will not vary significantly. Annual gold production should therefore be around 1 226kg (39 400 ounces). Cash costs** are expected to be in the region of R216 500/kg in FY11 (US\$883/oz), partly due to increased contractor costs resulting from the deeper pit design.

Total capital expenditure** planned for FY11 is R67 million (US\$9 million). This will mainly be spent on the upgrade of old plant equipment so as to improve availability.

* Please refer to the forward-looking statements

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.



Kalgold, South Africa

Review of operations – South Africa – Surface Operations

Free State Surface Operations (including Project Phoenix)



Description

Harmony's Free State surface operations comprise in the main the Phoenix project and the waste rock dumps processing programme.

- The Phoenix operation, located adjacent to Harmony's current and historical operations in the Free State, involves the retreatment of tailings from tailings storage facilities in the region to extract any residual gold. The Phoenix operation makes use of the Saaiplaas plant, located next to the historic Saaiplaas 2 shaft area and in close proximity to the Masimong 4 shaft.
- Around 11 million tonnes of reserves are available in the form of rock dumps in the vicinity of the Free State operations. A programme, run by metallurgical services, to mill and process these dumps as and when there is spare capacity available, has begun.

Combined, these surface operations employed 321 in FY10, of whom 104 were employees and 217 contractors.

Detailed information on the surface operation's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 133 to 135.

Safety

There were no fatalities at the surface operations in FY10. The Phoenix and surface operations achieved an LTIFR of 1.46 and 1.40 per million hours worked respectively for the year.

More detailed information on safety performance and Harmony's sustainable development concerns in South Africa can be found in the online *Sustainable Development Report* on the corporate website, www.harmony.co.za. A summary of this can be found on pages 26 to 46 of this annual report.

Free State Surface Operations key statistics

Production		FY10	FY09	FY08
Volumes milled	000t (metric)	7 062	5 965	6 378
	000t (imperial)	7 787	6 578	7 033
Gold produced	kg	1 639	695	1 002
	OZ	52 693	22 345	32 215
Average grade	g/t	0.23	0.12	0.19
	oz/t	0.007	0.003	0.005
Financial				
Revenue	R million	442	175	191
	US\$ million	58	19	26
Operating costs*	R/kg	170 041	154 426	75 784
	US\$/oz	698	534	381
Operating profit	R million	147	68	102
	US\$ million	19	8	14
Capital expenditure	R million	5	3	4
	US\$ million	1	-	-

* Includes royalty payment in FY10



Project TPM, South Africa

Review of operations – South Africa – Surface Operations

Free State Surface Operations (including Project Phoenix) cont.

Operations review

Combined the Free State surface operations processed 7Mt which yielded 1 639 kilograms (52 693 ounces) of gold. Of this, the Phoenix project accounted for 647 kilograms (20 801 ounces), the waste rock dump programme and other surface operations in the Free State accounted for the balance. Recovered grades of 0.12g/t and 0.64g/t were achieved respectively by Project Phoenix and the waste rock programme and surface operations.

Project Phoenix, which began three years ago, involves the retreatment of 6 million tonnes annually (500 000tpm) at plant capacity. Plans are being considered to increase tonnages processed to up to 900 000tpm, at which rate the life of the project is around 12 years. This is a function of the current deposition capacity. Should the permitted deposition capacity increase within this period, additional resources will be available for retreatment.

Extensive sampling has been done at the water-based tailings dams which are available for retreatment in the Free State, located mostly between the Bambanani and Unisel operations, as well as in the area of the Merriespruit shafts. There are currently a total of seven dams that have been identified and those will be processed through the Steyn, Central and Target gold plants over the next few years.

Financial review

Project Phoenix's cash operating cost for the year was R185 762/kg, up by 20%. Ore recovered from the waste rock programme and surface operations yielded 992 kilograms (31 924 ounces) of gold at a cost of R159 787/kg for the year. Combined, these surface operations generated revenue of R442 million.

Outlook*

Combined, it is estimated that volumes processed at the Free State surface operations will increase to 9Mt in FY11, excluding the expansion to the Phoenix Project and the St Helena tailings retreatment project which are not included in the plan. The Phoenix recovery grade is expected to increase from 0.12g/t to 0.13g/t when dam 21 is commissioned towards the end of 2010/beginning 2011, to replace dam 22 which is nearing depletion. The grade of other surface sources is expected to increase from 0.71g/t to 1.01g/t due to the higher grades expected from the retreatment of the water-based tailings dams.

Cash costs** of R169 633/kg (US\$691/oz) and R138 428/kg (US\$564/oz) are estimated for the year for Project Phoenix and the waste rock programme and surface source operations respectively.

Planned capital expenditure for the Free State surface operations as a whole is R78 million, to be spent on the commissioning of Dam 21, the rehabilitation of equipment, feed dewatering of cluster cyclones, residue flotation testing and to expand the CIL section to a sixth stage for the Phoenix operation. Capital will also be spent on surface sources for slimes dam repairs, site establishment and the commissioning of the dredging projects.

* Please refer to the forward-looking statements

** June 2010 money terms. The exchange rate of R7.63/US\$ as at 30 June 2010 has been used for all forward-looking conversions.

Review of operations - Papua New Guinea



Hidden Valley, PNG

Papua New Guinea

Harmony's activities, including those undertaken in association with its joint venture partner, Newcrest Mining Limited (Newcrest) in Papua New Guinea (PNG) are managed out of Brisbane, Australia. These activities in Morobe Province, PNG, include:

- Hidden Valley, an open-cast gold and silver mine which has just begun commercial production, and
- the Wafi Golpu project, for which feasibility and concept studies have begun and which are reported on in detail in the *Exploration overview* in this report on page 96.

Outside of the joint venture with Newcrest, Harmony has acquired 8 000km² of exploration tenements which have promising upside potential.

Review of operations - Papua New Guinea

Hidden Valley



Description

The Hidden Valley mine is located in Morobe Province, Papua New Guinea, around 300km north-west of Port Moresby, and is part of the 50:50 joint venture between Harmony and Newcrest Mining Limited. The mine, which has a significant gold and silver reserve, was commissioned during the year and had its first gold pour in June 2009. Ore mined was stockpiled ahead of the full commissioning of the carbon-in-leach gold and silver processing plant in FY10.

Hidden Valley has in production two pits, approximately 5km apart: the Hamata pit, which exploits the Hamata gold orebody, and the larger Hidden Valley pit, which exploits the Hidden Valley and Kaveroi gold and silver orebodies. The operation is located in a highly prospective area and current estimates are that at annual full production over 14 years, Hidden Valley will process an average of 4.7Mt from both pits to produce around 250 000oz of gold and 3.4Moz of silver annually. The joint venture is actively exploring and if potential new resources are identified on the mining lease, the life of the process facility could be extended. A resource development drilling programme is currently under way to support potential resource expansion, while potential plant expansion studies are being reviewed.

Hidden Valley employed 1 698 people in FY10, of whom 806 were employees and 892 contractors. Detailed information on Hidden Valley's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 155 to 159.

Safety

With the start of full-scale operations and the ramping up of production at Hidden Valley, the joint venture has continued with the implementation of its risk management strategy, a key aspect of which is a safety analysis aimed at ensuring that each work function is completed safely and efficiently. Identifying and managing hazards is essential to improving and maintaining safety performance.

There was regrettably one fatality during the year, a result of a vehicle accident. The LTIFR of 0.7 per million hours worked was worse than the 0.1 reported in FY09 as fewer people were on site, once construction personnel had been demobilised.

More detailed information on safety performance and Harmony's sustainable development programme in PNG can be found in the online sustainable development section of the corporate website, www.harmony.co.za. A summary of this can be found on pages 26 to 46 of this annual report.

Hidden Valley key statistics

			F	Planned LOM
		FY10		annual
Production	p	roduction**	capitalised*	average**
Volumes milled	000t (metric)	304	_	4 700
	000t (imperial)	335		5 180
Gold produced	kg	465	1 438	7 915
	OZ	14 939	46 234	254 000
Silver produced	kg	2 423	4 504	123 300
	OZ	77 896	144 821	3 400 000
Gold – average recovered grade	g/t	1.53	_	1.84
	oz/t	0.045	-	0.054
Silver – average recovered grade	g/t	7.97	_	32.1
	oz/t	0.233	-	0.94
Financial				
Revenue	R million	79	_	
Noronao	US\$ million	10	_	
Operating costs	R/kg	244 721		130.00
operating costs	US\$/07	1 003	_	130 00
Operating profit	D million	14		
Operating profit		10	_	
	Diss Illing	2	407	
Capital expenditure	R Million	333 1 3 3 100 465 1 438 7 915 46 234 254 000 2 423 4 504 123 300 123 300 77 896 144 821 3 400 000 3 400 000 1.53 - 1.84 0.054 7.97 - 32.1 0.233 - 0.94 799 - 32.1 0.94 - - 7797 - 32.1 0.94 - - 0.233 - 0.94 -		
	022 11111011	0	60	
Sustainability				
Number of employees				
Employees		806		
Contractors		892		
Total		1 698		
Expenditure on training				
and development	R million	2.9		
Safety				
No. of fatalities		1		
LTIFR	per million hours worked	0.7		
Environment				
Energy used	MWh	105		
Water used for primary activities	000m ³	1 843		
GHG emissions	Tonnes CO2e	128		

* Commercial production began in May 2010.

** The LOM annual averages represent 100%.

† Represents Harmony's 50%.

A business, production and safety improvement programme, based on the Six Sigma Lean Programme, was developed at Hidden Valley in FY10. This programme is designed to actively involve management in the process of continually improving and meeting targets in all aspects of the business, especially safety.

Review of operations - Papua New Guinea

Hidden Valley cont.

Operations review

Commercial levels of production were achieved in May 2010 and by year-end monthly plant throughput had risen to 300 000t, equivalent to 87% of nameplate capacity. This reflected a more stable operating performance and consistent plant use. During FY10, 2.7 million tonnes were processed to yield 122 346 ounces of gold and 445 435 ounces of silver on a 100% basis, 50% of which is attributable to Harmony.

Despite construction delays resulting from unseasonally heavy rains which hampered progress and restricted site access by causing damage to the access road, both the overland conveyor and the Hidden Valley crushing facilities were completed by December 2009, following which ore from both pits was supplied to the plant.

A programme to systematically identify and address bottlenecks in the production pipeline, eliminate system constraints and improve critical performance efficiencies and plant availability is under way. The process plant is being modified to enable it to better deal with the oxidised material and greater incidence of fines and clay in the weathered feed that is currently being mined in the initial stages of the open pit and supplied to the plant. These modifications are expected to improve overall recoveries. As the mining in the pit progresses into more transitional and fresh material during the next financial year, plant metallurgical recoveries are expected to improve. A project to increase plant capacity to 112% of initial nameplate capacity of 4.2 million tonnes per annum, at a nominal additional cost, will be completed by the end of FY11.

An ongoing programme of employee recruitment and training to build up and enhance operational competence and capability has been instituted to address the problem of operator staff turnover which has had an effect on mining productivities.

The limited availability of competent fresh rock, which is linked to the deep weathering profile of the area at Hidden Valley, has restricted progress made in the construction of stable waste dump facilities. Supplies of suitable rock have been identified and established offsite, which together with innovative waste dump designs that require less rock, have overcome some of these problems. Construction of these stable waste dumps will be ongoing in the next few years.

Hidden Valley management continued its policy of community engagement and local employment as well as the training of local employees. Work continues to mitigate the miner's impact on the Watut River, with significant operational improvements made to date. Stakeholder engagement on this and other matters is continuing.

Progress is also being made with power supply to the mine and the intention is to connect Hidden Valley to the national electricity grid in FY11. Once fully connected to, this will enable the mine to reduce its reliance on diesel power generators.

Financial review

Revenue generated for the financial year amounted to R79 million (\$10 million) with total cash operating costs after silver credits of R244 721 (US\$1 003/oz). Attributable capital expenditure by Harmony during the year totalled R541 million (US\$71million), which included work on approved mine development (sustaining capital) projects, process plant de-bottlenecking, mine expansion feasibility studies and final close-out costs for the Hidden Valley construction project.

Outlook*

The post-commissioning and performance improvement programme under way will enable Hidden Valley to achieve consistent full-scale mining and production levels in FY11 and to ultimately achieve increased annual plant capacity of 4.7 million tonnes. Capital requirements over the next three years will consist of the project services fleet replacement, which will be used for the construction of the tailings dam and waste dumps, which will be ongoing for the next few years and the de-bottlenecking of the mill.

Estimated attributable gold production from Hidden Valley in FY11 is between 100 000 and 120 000**ounces. Attributable capital expenditure for project completion, development and sustaining capital is expected to be A\$50 million (US\$42.5 million)** in FY11.

- * Please refer to the forward-looking statements
- ** June 2010 money terms.



Hidden Valley, PNG

Exploration overview



Hidden Valley, PNG

Harmony's exploration strategy to target key prospective geological terranes to create shareholder value through the discovery of large long-life gold ore bodies, has proven successful.

The strategic focus that underpins Harmony's exploration investment includes:

- Brownfields exploration work to maximise value from existing infrastructure around current operations.
- Greenfields exploration in highly prospective, under-explored mineral provinces and emerging gold districts to build a balanced pipeline of projects across all stages of the exploration process (ie project generation, advanced projects, resource definition, and projects moving into pre-feasibility).

The approach to exploration investment is also integrated with new business activities and Harmony remains flexible in accessing quality projects through joint venture partnerships, acquisition, or through in-house development. New growth projects are subject to the rigorous application of filter criteria based on project and country related risks and the ability to meet minimum size requirements.

Papua New Guinea Exploration projects

The New Guinea mobile belt stands out amongst the world's most prospective geological terrane for porphyry copper-gold and epithermal gold mineralisation, with world class deposits including Grasberg-Ertzberg (copper-gold), Porgera (gold), and Ok Tedi (copper-gold). Importantly, the belt is under-explored.

Harmony have built a quality project portfolio comprising over 12 000 square kilometres of exploration and mining tenure in some of the most prospective mineral provinces and emerging gold and copper districts of the New Guinea mobile belt.

In the Morobe Province, Harmony has been active in exploration for the last seven years and the resource base has grown from 7Moz to over 45Moz (gold equivalent – refer resource growth profile on pages 155 to 159). Harmony owns 50% of this inventory, and the discovery cost for Harmony's equity ounces is less than \$10/oz.

Outside of the Morobe Mining Joint Ventures (MMJV) area, Harmony continued to expand its 100%-owned tenement portfolio and exploration activities. During FY10, new applications were lodged to secure projects generated in the Southern Highlands and Central provinces. Exploration work began at Amanab in the Sandaun Province, and at Mt Hagen in the Western Highlands Province. These projects represent quality greenfield gold and copper-gold opportunities in highly prospective, under-explored districts of the New Guinea mobile belt.

Exploration achievements in PNG – FY10

- Wafi-Golpu resource expanded to:
 - 16Moz Au, 4.8Mt Cu, 55,000t Mo
 - Equivalent to a total gold endowment of 38.5Moz of which Harmony owns 50%
- PNG discovery cost now less than \$10/oz, among the best in the world
- Significant expansion of exploration effort in PNG:
 - Exploration portfolio grown to over 8 000km² outside of the MMJV area
 - Development of a new and exciting portfolio of first-class gold targets throughout PNG to underpin further growth in the region

Exploration overview cont.



Resource growth profile of the Morobe Mining joint venture in PNG

Highlighting impact of recent exploration success

* 100% resource figures quoted.

Gold equivalent based on prices of US\$950/oz Au, \$4 412/t Cu, at 100% recovery for both metals. Molybdenium not included in metal equivalents.

PNG – Harmony tenement locations and major projects

Location of Harmony tenement and project areas in relation to the New Guinea Mobile belt and that of major PNG mines and projects.



Grade comparison of selected South-East Asia porphyry systems

Bubble-size indicates the gold-equivalent endowment (based on US\$950/oz Au, \$4 412/t Cu at 100% recovery for both metals). The Wafi-Golpu porphyry is one of the highest grade porphry systems in south-east Asia.



Source: MEG Database and company reports.

Morobe Mining Joint Ventures (Harmony 50%)

The MMJV land holding comprises some 4 046 square kilometres of tenure encompassing the Wafi-Golpu and Hidden Valley projects and is a 50-50 joint venture between Harmony and Newcrest Mining Limited. The tenement package sits within a broader "strategic alliance" area where both Harmony and Newcrest operate as joint venture partners.

The Morobe district is a growing gold province. Currently the total known gold endowment is over 24.8Moz. Copper (4.8Mt), molybdenum (55,000t), and silver (84Moz) all add significant value to the known resources in the district.

During FY10, exploration expenditure for the joint venture totalled A\$27.7 million. Work programmes were undertaken on 29 separate prospects in the MMJV area, with exploration statistics including:

- 29 931 metres diamond drilling
- 12 654 surface samples (soils, rock chips, trenches)
- Over 7 000 line kilometres of detailed airborne magnetics.

The outstanding highlight of the 2010 work programme was the discovery and definition of extensions to the Golpu copper-gold deposit.

The exploration programme is set to grow in FY11. The venture partners have approved a FY11 budget of A\$48.9 million for the Morobe exploration joint venture (17.6% for greenfield and 82.4% for brownfield activities).

Wafi-Golpu will be advanced through pre-feasibility studies with 47 000 metres of drilling scheduled, while the strategic focus of exploration will shift to brownfield exploration around the Hidden Valley deposits and the development of greenfield targets in the regional project pipeline.

Exploration overview cont.

Wafi-Golpu

Wafi-Golpu brownfields exploration

Drilling at the Wafi-Golpu project during FY10 was particularly successful with the discovery of a new zone of copper-gold mineralisation directly adjacent to the Golpu orebody. As a result, the Golpu resource has been upgraded to 500.6Mt @ 0.95% Cu, 0.54g/t Au, and 111ppm Mo (equivalent to 8.8Moz of gold, 4.8Mt of copper and 55 000 kilograms of molybdenum). On a gold equivalent basis, Golpu now stands at 30.9Moz (at a gold price of US\$950/oz and a copper price of US\$4 412/t). This represents an increase of 20Moz gold equivalent from the 2007 Golpu pre-feasibility resource, now making the deposit a truly world class discovery.

The outlook for additional growth at Golpu is excellent as the deposit remains open both along strike to the north and at depth. Drilling remains ongoing and new zones of high-grade mineralised porphyry have already been intersected which will add to the June 2010 model.

The Golpu copper-gold mineralisation displays features that are typical of most porphyry deposits with zoned alteration and mineralisation patterns. The resource takes this into account and can be categorised into two major components:

- "Porphyry" mineralisation: consists of the very high-grade mineralised core of stockwork veined and altered diorite porphyry. This component of the resource totals 173Mt @ 1.57% copper and 0.88g/t gold and accounts for approximately 60% of the contained copper and gold in the deposit.
- "Metasediment" mineralisation: consists of a halo of copper-gold stockwork vein mineralisation developed in the metasedimentary host rocks that surround the porphyry. The vein intensity and mineralisation is best developed at the diorite porphyry contact, and gradually decreases away from the contact. This style of mineralisation comprises 314Mt @ 0.59% Cu and 0.36g/t Au (ie approximately 40% of the deposit's contained copper and gold).

A third component of supergene mineralisation is also included in the Golpu mineral resource classification, but volumetrically this accounts for less than 3% of the deposit tonnage and less than 2% of the deposits contained copper and gold.

The current resource areas at the Wafi Golpu project (Wafi gold, Nambonga and the Golpu copper-gold deposits) are part of a large intrusive system with extensive and complex overprinting alteration patterns. Drill coverage outside of the existing resource areas remains patchy, and the full potential of the system is yet to be realised.

In addition to Golpu extension drilling, the FY10 exploration programme at the Wafi Golpu project included early stage prospect testing at the Northern Margin, Dokerton, and Miapili prospects. Results have been highly encouraging.

Northern Margin

The Northern Margin gold target lies midway between the Nambonga and Golpu deposits, where drilling across the Northern Margin of the Wafi diatreme has outlined a new zone of epithermal gold-silver mineralisation. The target was based on an area of elevated surface gold geochemistry adjacent to the diatreme contact, which had seen little previous drill testing.

A single hole was drilled, with results including:

WR318: 21.8 metres @ 1.45g/t Au 9.02g/t Ag from 66 metres
17.8 metres @ 1.0g/t Au 5.22g/t Ag from 110 metres
58 metres @ 1.07g/t Au 5.27g/t Ag from 140 metres
35 metres @ 1.02g/t Au 1.9g/t Ag from 304 metres

The Northern Diatreme Margin is sparsely drill tested and the results highlight the potential to significantly expand the known gold mineralisation footprint outside of the current resource areas.

Follow-up drilling to determine the potential size and tenor of this new zone of mineralisation will be scheduled as drill capacity becomes available in FY11.

Miapili

Miapili is a grassroots prospect located within the Wafi Transfer Structure, approximately 900 metres north-east of Golpu. Initial drilling targeted a discrete magnetic anomaly. The drilling intersected porphyry-related vein stockwork mineralisation and returned 97 metres @ 0.75g/t Au and 0.15% Cu from 387 metres in WR315.

Two follow up holes, WR323 and 326, were completed during FY10 with broad intervals of anomalous stockwork mineralisation encountered:

WR323: 6 metres @ 0.32g/t, Au 0.12% Cu from 515 metres
 WR326: 78 metres @ 0.2g/t, Au 0.09% Cu from 385 metres
 30 metres @ 0.18g/t, Au 0.12% Cu from 566 metres

The mineralisation is similar in style to that at Golpu and additional follow up drilling is planned to determine the extent and source of this porphyry-related mineralisation in FY11

Dokerton

The Dokerton gold prospect also lies on the Wafi Transfer Structure, approximately 500 metres south-west of the Golpu deposit. Initial drilling was undertaken during the year to test along strike from broad anomalous gold intercepts in historic drill holes. WR320 returned significant intersections including:

WR320: 33 metres @ 2.32g/t Au from 83 metres 27 metres @ 2.4g/t Au from 126 metres

The results highlight the potential to extend the limits of the Wafi gold resource to the east and follow-up drilling is scheduled for FY11.



Wafi-Golpu drilling, November 2009

Exploration overview cont.

Golpu – Section 21000N:

June 2010 resource outline in relation to drill intercepts and the previous model.





Wafi-Golpu WR333; 1 040.3 metres. Mineralised and altered diorite porphyry showing abundant chalcopyrite. Assays for this interval (1 040 to 1 041m) returned 1.4 g/t Au, 2.5% Cu.

Wafi Golpu Project:

Deposit locations and exploration targets



Exploration overview cont.

Wafi-Golpu concept study

The recent major exploration success at Golpu and step changes in mining and processing practices have led to a re-examination of previous studies and Harmony, as part of Morobe Mining Joint Ventures, entered into a new concept study in late 2009 on the project.

The current concept study on Wafi-Golpu builds on previous studies and evaluated a number of development alternatives for the Wafi gold system and Golpu copper system, either individually or in combination;

Fast

Golpu deposit block cave x 2

~1000 m

Wafi A zone

- Block cave on Cu-Au porphyry ore from Golpu (two lifts)
- Block cave on Wafi higher grade epithermal gold
- Small open pits based on oxide portion of Wafi and Golpu gold cap
- Large open pit encapsulating most of the Wafi resource (oxide and sulphide)

Schematic section (looking north)



Wáfi link zone block cave

System is untested below limit of drilling

The Wafi-Golpu resources include porphyry copper gold mineralisation and high sulphidation epithermal gold deposits that contain both refractory and non-refractory gold mineralisation. Processing routes have been designed to accommodate the varying natures of these ores.

The study considered producing copper concentrate from Golpu porphyry and gold dore bars from the Wafi ores and the Golpu copper tails.

The location of Wafi-Golpu is advantageous for development. The deposit lies 80km by road from the deep water port of Lae, Papua New Guinea's second largest city. The lodes lie under moderately mountainous terrain at ~500 metres ASL but are only 4 kilometres from the broad flat valley of the Watut River and further on to the Markham River and the coastal flats. The plan is to use this flat land for access and infrastructure, thereby mitigating the challenge of topography in this rugged country.

Infrastructure options 460000 480000 Nadzab Airport MARKHAN LAE 🗯 Demakwa 2 Mafi Legend Processing plant / mill options TSF options QZenag Farm Road / pipeline options Port / upgrade options \bigcirc Exploration decline Waste dump options 480,000

The concept study, which will be finalised early in FY11, has confirmed that the Wafi-Golpu project presents a viable business case that satisfies all of our tollgate hurdles. It is proposed to begin a pre-feasibility study to test the various development options.

The development strategy also generates future opportunities for value creation that will also be tested in the pre-feasibility study, including:

- Expansion of the Golpu resources to the north and at depth
- Improved Wafi resource recovery through enhanced resource modelling;
- Development of Wafi at depth and the Northern and Western zones adjacent to Wafi A zone;
- Further metallurgical process development and enhancement.

An 18-month timeframe has been allocated for the pre-feasibility study. Part of the study work will include early access to the orebodies for detailed geotechnical and metallurgical analysis. This work is expected to begin during FY11.

Exploration overview cont.



Wafi Golpu greenfields exploration

Wafi Transfer Structure

The Wafi Transfer Structure comprises approximately 17 kilometres of strike and includes the Wafi-Golpu project area. There has been very little previous exploration and the area remains highly prospective for gold and porphyry copper-gold resources similar to those at Wafi Golpu.

A major regional exploration programme began during FY10 which included both grid-based and ridge and spur soil sampling, stream sediment sampling, rock chip sampling, magnetic interpretation and geological mapping. Over 2 100 surface samples were collected and results from the Bavaga and Pekumbe prospect areas were outstanding.

Bavaga

The Bavaga prospect lies approximately 5 kilometres north of the Wafi-Golpu project on EL1105. Results from stream sediment reconnaissance sampling have outlined a 2 kilometre by 1 kilometre +1g/t gold anomaly. Visible gold is readily panned from anomalous drainages. The area has not been explored previously owing to access issues. The anomaly represents a first-class grassroots gold target and follow-up ridge and spur soils and reconnaissance mapping and sampling are planned.

Pekumbe

The Pekumbe prospect lies approximately 5.5 kilometres south-west of Golpu on EL1103. The prospect was generated based on the results of reconnaissance mapping and stream sediment sampling. Initial reconnaissance samples collected in the fourth quarter of the year returned assay results of up to 25g/t Au, 64g/t Ag and 0.3% Cu.

Work during FY10 included some 9.5 line kilometres of geological mapping, 150 soil samples, 409 channel rock chip samples and 233 grab rock chip samples. Reprocessing and imagery of detailed airborne magnetics were also completed and results have outlined a distinct linear target with over 1.6 kilometres of strike.

Results received to date have been highly encouraging with numerous >1g/t Au values from in situ rock chips taken from mineralised sediment, fault pug, massive sulphide lenses and quartz-feldspar porphyry over the strike length of the magnetic target. Soil sampling results have outlined a number of drill targets with surface anomalies up to 0.4g/t Au and 0.2% Cu.

Hidden Valley brownfields exploration

Exploration in the region around Hidden Valley aims to add value through the discovery of major satellite resources, or to provide high grade ore to supplement feed for the Hidden Valley plant. This remains a key strategic focus for the exploration team in FY11.

Work during FY10 continued on integrating the geological and geochemical datasets with detailed helimagnetics to generate new targets. Channel sampling and mapping at the Tais Creek and Waterfall prospects on ML151 have outlined significant zones of carbonate-base metal-style gold mineralisation, directly south of the Hidden Valley orebody.

Waterfall

The Waterfall prospect lies immediately south of the Hidden Valley orebody in the footwall of the Hidden Valley fault. It comprises a stockwork vein network of carbonate base metal veins accompanied by gold mineralisation. Mapping suggests a dominant north-northwest structural control to the mineralisation, similar to the Kaveroi orebody. Initial channel sampling results include:

TCR001: 6 metres @ 3.07g/t Au TCR002: 20 metres @ 2.46g/t Au 10 metres @ 1.61g/t Au 14 metres @ 2.36g/t Au

Drilling to test the near-surface bedrock potential of the Waterfall prospect is scheduled to begin during the first quarter of FY11.

Tais Creek

Tais Creek is located approximately 700 metres south-west of Hidden Valley. Historic surface soil sampling defined a coincident gold-silver geochemical anomaly over the area, and review work recommended the prospect for drill testing in FY11. Channel sampling and mapping of tracks constructed to access the prospect has confirmed a major carbonate base metal system. Results to date include:

TCR004: 6 metres @ 14.85g/t Au from 436 channel samples TCR004: 4 metres @ 10.81g/t Au from 486 channel samples TCR005: 24 metres @ 1.71g/t Au

The intercepts relate to zones of structurally controlled, thin quartz-carbonate-pyrite-base metal sulphide veins within strongly sericite altered granodiorite and metasediments. Elevated silver (up to 1 070ppm), lead, zinc and arsenic occur with elevated gold grades.

Morobe regional greenfields exploration

Regional work continued with the development of greenfields prospects on the broader tenement package. Some 6 400 surface samples were collected from 13 separate prospect areas. In addition, a detailed helicopter-borne magnetic survey was completed at the Morobe Coast to provide context for interpreting mapping and geochemical datasets. Key FY011 regional projects include the broader Kerimenge area, Morobe Coast and the Nimo and Giu prospects.

Exploration overview cont.



Dutcropping sulphide mineralisation Bakil Prospect – Mt Hagen Project

PNG exploration projects (Harmony 100%)

Harmony's exploration activities outside of the MMJV were expanded significantly during FY10, with work programmes now under way at both the Amanab and Mt Hagen projects. A total of A\$3.9 million was spent on greenfield exploration outside of the MMJV.

This trend is set to continue. A budget of A\$14 million has been approved for FY11 greenfield prospect development on Harmony's 100% owned PNG projects. The expanded programme will include work on two new project areas:

- Southern Highlands Project: Located approximately 50 kilometres south-west of Porgera where new exploration licence applications have been lodged to encompass several Porgera-style magnetic targets.
- Central Province Project: Covering a highly prospective portion of the New Guinea Mobile belt between the Tolokuma gold mine and Morobe Province. Several significant geochemical targets exist which have not been followed up by previous explorers.

Outside of the MMJV area, Harmony now holds interest in over 8 000 square kilometres of exploration and mining tenure in PNG.

Mt Hagen

The Mt Hagen project forms a contiguous block of tenure covering 1 330 square kilometres. It consists of two granted exploration licences (EL1596 and EL1611) and several tenement application areas (ELA 1864-1867). The tenements are located approximately 20 kilometres north-north-east of Mt Hagen and are readily accessible via the Highlands Highway that connects Lae and Porgera. The two main projects occurring here are Kurunga and Bakil.

The region is transected by a number of major regional transfer structures and numerous mineralisation styles have been mapped in the area, including porphyry copper-gold mineralisation, quartz sulphide vein stockwork mineralisation, and copper-gold skarn mineralisation.

The Highlands regional stream sediment dataset (a European Union SYSMIN funded Mining Sector Support Programme – released April 2010) has highlighted the area north of Mt Hagen as an emerging copper-gold province. The dataset highlights several high order Cu-Au anomalies within a 200 kilometre long zone, extending from Malamunda in the west to the Yandera Cu-Au porphyry deposit in the east. Harmony's Mt Hagen project tenements lie in the central portion of this zone and encompass some of the highest tenor Cu-Au anomalies in the dataset, with stream sediment sample assays of up to 4.08g/t Au and 1 200ppm Cu.

Kurunga

The focus of exploration activities during the year was the Kurunga prospect where local artisanal miners were winning gold from outcropping copper-gold skarn mineralisation. First pass drill testing was under way at year-end with four holes having been completed. Widespread gold and copper-gold anomalism was intersected in all holes drilled to date with initial results including:

KUDD001: 7 metres @ 2.55g/t Au, 0.44% Cu from 63 metres

4 metres @ 2.76g/t Au from 167 metres KUDD002: 9 metres @ 0.91g/t Au from 101 metres KUDD003: 10.5 metres @ 1.46 g/t Au from 9.8 metres

Two styles of mineralisation were encountered in the drilling, suggesting potential for the existence of a major porphyry coppergold system. These include:

- Copper-gold mineralisation associated with magnetite skarn
- Epithermal gold mineralisation associated with quartz sulphide veining.

Drilling is scheduled for completion during the first quarter of FY11. Follow-up work will include a detailed helimagnetic survey for integration with surface geochemistry, geology and drill results.



Kurunga prospect drilling operations

Exploration overview cont.

Bakil

The Bakil prospect lies approximately 8 kilometres south-west of Kurunga. Geology of the prospect area is dominated by an extensive system of altered volcaniclastic sediments and intrusive units. Rock chip samples returned to date include assays of up to 9.3% Cu.

Greenfields reconnaissance work including ridge and spur soil sampling, mapping and rock-chip sampling of drainages continues.

Amanab

The Amanab project (EL1708) was granted on 6 July 2009 and comprises 932 square kilometres of tenure. The tenement is located approximately 160 kilometres north of the Ok Tedi copper-gold mine in the Sandaun Province of western PNG. Access to the area is by air via the regional centre at Vanimo some 180 kilometres to the north.

The project area encompasses one of 17 recognised alluvial goldfields in PNG. Major deposits at Porgera, Bougainville and Morobe (including Hidden Valley, Wau and Edie Creek) all have similar alluvial goldfields nearby.

A review of historical data highlighted several high-tenor stream sediment anomalies for follow-up work including Yup River, Biaka, Dio River, Akraminag, Mouri and Akrani North.

Initial sampling began in the Yup River area where historic stream sediment data outlined a +0.5g/t anomaly over a 7-kilometre by 3-kilometre drainage catchment. This work is set to continue, with additional ridge and spur soil sampling campaigns planned for the Biaka and Dio River prospects during FY11.



Wafi-Golpu drilling, April 2010

South Africa Brownfields exploration

Evander South

An 18-month drilling programme was completed early in FY10 involving 24 671 metres of percussion and diamond drilling from 43 holes. The information provided was used to evaluate and update the geological resource model. These results were in turn incorporated into the pre-feasibility study.

Results of the initial drilling programme showed a shift in the location of the Kimberley Reef sub-crop to the east, which removed a significant portion of the shallow part of the target area. However, an additional, larger, less shallow resource was identified. New estimates are of a total resource of 8.1 million ounces (64.31 million tonnes at an average grade of 3.92g/t), a slight increase when compared to the 2007 estimate.

The results of a new pre-feasibility study showed that the orebody could be mined profitably however insufficient higher grade ore exists to significantly overcome the initial capital cost. A further phase of drilling to convert inferred resources to higher grade indicated resources is required to improve this projects' ranking within Harmony's portfolio of projects

Poplar

Exploration at the Poplar area, which is located six kilometres to the north of Evander South, has been conducted by the many previous owners of this property over the past 50 years. The June 2010 resource and reserve declaration reports an indicated resource of 17.2Mt an in-situ grade of 9.28g/t.

The Poplar resource is located at relatively shallow depths of between 500 metres and 1 300 metres, which will allow the project, once it has been approved, to produce its first gold within five years.

Harmony began a 12-month drilling programme in the last quarter of FY10. This programme involves the drilling of 20 holes, (19 000 metres) made up of holes that are to be twinned alongside old boreholes, infill drilling and holes drilled to test the location of the sub-crop. By year end, 4 180 metres had been drilled and two holes completed, both of which intersected the Kimberley reef facies. Samples results are awaited. Results from this drilling programme will be used to update and revise the 2003 pre-feasibility study.

Joel North

A surface drilling programme was undertaken and completed at Joel during the course of FY10. In all, 8 883 metres were drilled. The results of this programme, which involved the drilling to a depth of between 1 250 and 1 400 metres in the area to the north of the current working of the Joel mine, will be used to upgrade the Joel mine's resource between levels 129 (currently the lowest operational level at Joel) and 137. Accessing this ground will involve either the re-equipping of the main shaft, deepening of the lift shaft or the development of a one level decline.

Initial drilling results indicate a wide variety of facies types are present from west to east. In the west (LB27 and LB28), the presence of the Aandenk reef below the Beatrix reef appears to considerably enhance the grade. All intersections showed unfaulted reef bands except for LB25, in the centre, which intersected two reefs, separated by a small reverse fault. The reef is a hybrid composite of VS5, Beatrix and Aandenk. LB24 indicates Beatrix reef, while in the east (LB23 and LB22), VS5 and BV (a reworked VS5/Beatrix composite) dominate.

As a result of this drilling programme and on-shaft facies investigation, the geozones for Joel have been altered to include the area of Aandenk reef in the north-west. This resulted in a re-evaluation of 129, 137 and 145 levels, based on the new geozones. Initial indications are that the Joel North resource has been substantially increased.

Retreatment projects

Project Saints

Project Saints, a proposed retreatment project similar to that of Project Phoenix, has been approved by the board at a cost of R792 million. Project Saints, which is also located in Free State province, involves demothballing and upgrading the St Helena gold plant to enable the retreatment of 1 million tonnes of tailings per month. The focus of this project will be the eight tailings dams found in the Virginia and Welkom area which together make up about a third of the total resource available for retreatment.

Detailed modelling of each dam and the project feasibility study was completed, with particular attention paid to grade distribution and the mining methodology to be used. Additional drilling was undertaken, and the models updated once the assay results had been received. The environmental management programmes have been approved by the Department of Environment and Tourism (DEAT). A final feasibility gate-keeping session was held during the year.

The first phase of the project has an estimated capital expenditure budget of R792 million (the R314 million capital budget for the second and last phase of this project will only be spent in year 8 and will be funded by the project itself). Project Saints is expected to yield a monthly average of 4 225 ounces of gold over a projected life of 20 years. Production should begin 15 months from the start of construction.

A related pre-feasibility study has begun on extracting uranium from the exactly the same Free State tailings dam material as will be treated by Project Saints. This will involve the construction of a newly built uranium extraction plant at an estimated cost of R1 097 million. This pre-feasibility study is due to be completed by the end of December 2010. Indications are that this related project could yield 930 000lbs per annum of U_3O_8 .

Project Saints and its related uranium treatment project has several environmental advantages. Following the reprocessing of the material from the eight old tailings dams, the resultant waste material will be disposed of in two larger new tailings dams, to be built using modern, improved technology that incorporates stricter design and construction specifications and is more environmentally friendly. As material from these old dams is re-treated, the resultant tailings will be deposited onto the new larger tailings dams, the first of which will be full after eight years (hence the need for further capital in year 8) and the second of which will have enough capacity to see the project through to completion. This project is expected to create approximately 200 permanent jobs in the Free State.

Project Libra

Based on an extensive drilling programme undertaken in the vicinity of Evander, a planned surface retreatment project is being considered. Results from drilling done on three tailings dams (Kinross, Winkelhaak and Bracken/Leslie) indicate that a viable business case can be made for such a project, Project Libra. The three tailings dams contain 203 million tonnes of plant tailings at an average grade of 0.29g/t.

Having considered various options, it was decided to conduct an initial pre-feasibility study on a mini-retreatment (mini-Libra), lower tonnage option that makes use of spare capacity at the Kinross plant. This initial evaluation of the Kinross plant equipment and the available deposition sites has indicated that such an operation could be implemented at a cost of R126 million. If successful, the pre-feasibility study, scheduled for completion by December 2010, will be followed by a feasibility study that is due to be completed by May 2011. Should mini-Libra be approved, it will require a 12-month construction period. Estimates are that mini Libra will yield 370 kilograms (12 000 ounces) per annum at an operating cost of R126 300/kg over the 10-year duration of the operation.

Project TPM

Ore from Harmony's Free State mines contains uranium as a by-product of gold processing and the TPM Project envisages treating current arisings from the Tshepong, Phakisa and Masimong (TPM) mines primarily for uranium. The initial concept is to reroute the milled ore from these mines, which is treated at the Harmony 1 gold plant, to a uranium plant initially, from where, once the uranium has been extracted, the arisings will be returned to the gold plant for gold extraction. This has the added advantage of improving subsequent gold recovery rates.

A sampling programme was conducted over a period of 12 months and the results used to develop resource models for the TPM shafts. A comprehensive set of procedures relating to uranium sampling and assaying was also finalised. Environmental impact specialist studies on the building of a new uranium plant were completed and incorporated in the environmental management plan (EMP) that was submitted in March 2010.

A pilot flotation plant was constructed and flotation test work performed. The primary aim of the plant was to confirm sulphur recoveries and to optimise the reagent suite for uranium extraction, using live feed from the Harmony 1 plant.

Capital was approved for a feasibility study, which will include a resin-in-pulp demonstration plant, that is scheduled for completion in May 2011. The demonstration plant will start in October 2010 with the test work programme scheduled for completion by the end of December 2010. The feasibility study will develop and present a comprehensive and detailed description of the final optimised process and plant design for the project. Thereafter, and upon final project approval, the actual plant is scheduled to take two years to build, after which first production will begin.

The aim is to have plant that can extract 750 000 lbs/annum of U_3O_8 at a cost of around US\$25/lb. The initial capital outlay is estimated to be around R1.4 billion.

In addition, studies to investigate the viability of extracting uranium from tailings facilities at Harmony's other Free State operations are under way. The most likely source of tailings for such a venture would be directly from the current gold tailings retreatment operation of Project Phoenix (Saaiplaas plant) and the envisaged Project Saints (St Helena).



Mineral resources and mineral reserves



Jewellery School, South Africa

As at 30 June 2010, Harmony reported attributable mineral reserves of 48.1 million ounces and mineral resources of 189.2 million ounces. The measured and indicated mineral resources are inclusive of those resources modified to produce the mineral reserves. Mineral reserves are reported as mill delivered tonnes at the grade delivered to the mill. Of the company's 48.1 million ounces of mineral reserves, 9.9 million ounces are classified as being below infrastructure, i.e. capital expenditure for the development of these reserves into projects and ultimately mines has yet to be approved.

We use certain terms in this report such as 'measured', 'indicated' and 'inferred' resources, which the SEC guidelines strictly prohibit US-registered companies from including in their filings with the SEC. US investors are urged to consider closely the disclosure in our Form 20-F. We also use the term 'mineral reserves' herein which has the same meaning as 'ore reserves' as defined in the SAMREC Code.

Steps to improve the quality of our assets in line with Harmony's strategy have included:

- Closure of the Brand 3, Merriespruit 3, Harmony 2, Evander 2,5 and 7 shafts (a total of six shafts) as a result of the current economic situation making it no longer economically viable to operate;
- Continued investment in the exploration and development at the company's Phakisa, Kusasalethu, Doornkop and Hidden Valley growth projects, reaffirming their robust life-of-mine plans and reserve positions;
- Acquisition of the Free Sate assets of Pamodzi Gold Mining Limited which include President Steyn 1 and 2 shafts, Lorraine 3, Freddies 7 and 9, the President Steyn plant and surface stockpiles;
- The reassessment of the Evander operations and projects. Following a review of the economic viability of the Evander South project under various economic scenarios, it was decided to exclude it from Harmony's reserves, while the Libra project (the retreatment of Evander tailings) has been included in the reserve statement;
- An international exploration programme leading to the discovery of a new zone of mineralisation adjacent to the main Golpu resource in Papua New Guinea; and
- The sale of the Mount Magnet project, in Western Australia, so as to allow Harmony to focus on growing, developing and operating its portfolio of quality assets in Papua New Guinea.

Commodity prices

In converting mineral resources to mineral reserves the following parameters were applied:

- gold price of US\$950/oz
- an exchange rate of US\$/R8.19 for South African operations
- a gold price of R250 000/kg which is a function of the two parameters above
- for the Papua New Guinea operations held within Morobe Mining Joint Ventures, prices of AUD\$1 000/oz (gold), AUD\$15.33/oz (silver), AUD\$5 883/ton (copper) and AUD\$17.33 (molybdenum) were used with an exchange rate of PGK/AUD2.30.

Auditing

Harmony's mineral resources and mineral reserves were comprehensively audited by a team of internal competent persons that functions independently of the operating units. The internal audit team verifies compliance with the Harmony's standards in terms of blocking, valuation, classification, cut-off calculations and development of life-of-mine plans which support Harmony's annual mineral resource and mineral reserve statement. This audit process is specifically designed to ensure that Harmony complies with the requirements for internationally recognised procedures and standards such as:

- South African Code for Reporting Mineral Resources and Mineral Reserves SAMREC Code
- Industry Guide 7 of the United States Securities Exchange Commission
- Sarbanes-Oxley requirements

In addition to the internal audits, Harmony's South African resources and reserves (excluding Rand Uranium (Pty) Ltd) were reviewed and audited by SRK Consulting Engineers and Scientists for compliance with the above. Harmony's Papua New Guinea mineral resources and mineral reserves were independently reviewed by AMC Consultants. for compliance with the standards set out in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves – The JORC Code.

Mineral resources and mineral reserves cont.

Competent person's declaration

Harmony employs an ore reserve manager at each of its operations who takes responsibility for the reporting of the mineral resources and mineral reserves of the mines for which they are responsible.

The mineral resources and mineral reserves in this report are based on information compiled by the following competent persons:

Reserves and resources South Africa:

Jaco Boshoff, Pri.Sci.Nat who has 15 years' relevant experience and is registered with the South African Council for Natural Scientific Professions (SACNASP).

Reserves and resources PNG:

Michael Smith for the Wafi Golpu mineral resource, Gregory Job for the Golpu mineral reserve, James Francis for the Hidden Valley mineral resource and Anton Kruger for the Hidden Valley mineral reserve.

Messrs Smith, Job, Francis and Kruger are corporate members of the Australian Institute of Mining and Metallurgy and have relevant experience in the type and style of mineralisation on which they report. They are 'Competent Persons' as defined by the code.

Gregory Job takes ultimate responsibility for the PNG operations.

These competent persons consent to the inclusion in the report of the matters based on the information in the form and context in which it appears. Mr Boshoff, Mr Smith and Mr Job are full-time employees of Harmony Gold Mining Company Limited Ltd. Mr Francis and Mr Kruger are full-time employees of Newcrest Mining Limited.

Jaco Boshoff

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Reconciliation FY09/FY10

Mineral resources

Year-on-year, attributable mineral resources had a negative variance of 26.5 million ounces. This was mainly a result of the restructuring of operations in South Africa. Attributable mineral resources in PNG increased by 3.0 million ounces to 10.8 million ounces while South African mineral resources decreased by 29.5 million ounces to 178.4 million ounces.

Mineral reserves

Mineral reserves were maintained at 48.1 million ounces, as indicated in the table below.

	Gold (tonnes)	Gold (million oz)
Balance at June 2009	1 498	48.2
Reductions		
Mined during FY10	(54)	(1.7)
Mine closures	(13)	(0.4)
Projects (Evander South)	(53)	(1.7)
Geology and scope changes	(14)	(0.5)
Increases		
New acquisitions	36	1.2
Rand Uranium equity (40%)	37	1.1
Projects (Libra)	59	1.9
Balance at June 2010	1 496	48.1



Wafi Golpu, PNG

Mineral resources and mineral reserves cont.

a New Guinea Australi South Africa . Ok Tedi • Porgera Papua • Mt Hagen New New Wafi-Golpu • Lae Guinea • Hidden Valley Botswana Namibia Limpopo Polokwane Kus lethu Mpumalanga Gauteng Daru Port Moresby Kalgo North West Province ande Free State KwaZulu-Natal South Africa Free State operations Northern Cape Bambanani Durban Joel Eastern Cape Masimong Phakisa Western Cape Target Cape Town Port Elizabeth Tshepong Virginia

Location of Harmony assets in South Africa and Papua New Guinea

Summary tables: Harmony's mineral resources and mineral reserves South Africa underground operations

	Mineral reso	ources (tota	I)	Mineral reserves (total)			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes Grade Gold Golc (Mt) g/t (000kg) (000q		
	784.1	5.45	4 275	137 452	127.9 6.16 788 25.32		
	Reported as in situ mineralisation estimates				Reported as mineable production estimates		
	Inferred						
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)			
	452.4	4.53	2 049	65 887			
	Indicated				Probable		
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes Grade Gold Golc (Mt) g/t (000kg) (000o		
	193.7	6.39	1 238	39 796	76.9 6.24 480 15 42		
	Measured				Proved		
0	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes Grade Gold Gold (Mt) g/t (000kg) (000o		
	137 9	7.16	988	31 769	→ 51.0 6.04 308 9 90 ²		

South Africa projects (below infrastructure)

	Mineral reso	ources (tota	l)			Mineral reserves (total)			
e	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)		Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
den	115.5	6.73	777	24 985		42.3	7.28	308	9 895
Ē	Reported as in situ mineralisation estimates					Reported as mineable production estimates			
ŭ p	Inferred								
dge ar	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)					
Mie	45.4	3.36	153	4 908					
c kno									
Ē	Indicated					Probable			
sciel	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)		Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
r geo	70.1	8.90	624	20 077	\longleftrightarrow	42.3	7.28	308	9 895
evel u	Measured					Proved			
sing i	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)		Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
rea		-	-	-	<>		-	-	-
≝	Consideration of	of mining, meta	allurgical, econor	nic, marketing, l	gal, environme	ntal, social and g	governmental fa	actors (the modif	ying factors)
J									
Summary tables: Harmony's mineral resources and mineral reserves cont. South Africa surface (including Kalgold)

	Mineral reso	urces (total)		Mineral reserves (total)
ce	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes Grade Gold Gold (Mt) g/t (000kg) (000oz)
den	1 638.0	0.30	495	15 928	1 198.2 0.27 322 10 355
onfi	Reported as in	situ mineralis	ation estimates	5	Reported as mineable production estimates
о р	Inferred				
dge ar	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	
vlec	234.1	0.32	74	2 392	
knov					
tific	Indicated				Probable
scien	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes Grade Gold Gold (Mt) g/t (000kg) (000oz)
gec	1 248.0	0.29	357	11 471	1 145.7 0.26 295 9 494
evel of	Measured				Proved
sing le	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes Grade Gold Gold (Mt) g/t (000kg) (000oz)
rea	155.9	0.41	64	2 065	52.5 0.51 27 861
Inc	Consideration c	of mining, meta	Illurgical, econor	nic, marketing, l	gal, environmental, social and governmental factors (the modifying factors)
V					

Papua New Guinea*

Tonnes	Grade	Gold	Gold	Tonnes	Grade	Gold	Gold
(Mt)	g/t	(000kg)	(000oz)	(Mt)	g/t	(000kg)	(00002
373.4	0.90	336	10 809	66.4	1.19	79	2 532
Reported as i	า situ mineralis	sation estimate	S	Reported as I	nineable prodi	uction estimates	S
Inferred							
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)				
256.4	0.67	172	5 530				
Indicated				Probable			
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (0000
112.8	1.38	155	4 992	62.6	1.13	71	2 272
Measured				Proved			
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz
	2 07	9	287	3.8	2.14	8	260

* Represents Harmony's equity portion of 50%



Harmony – total underground and surface (including below infrastructure)



Hidden Valley, PNG

Mineral resources statement (Metric)

Gold

	Measured			I	ndicated	cated In		Inferred		Total		
			Gold			Gold			Gold			Gold
	Tonnes	Grade	kg	Tonnes	Grade	kg	Tonnes	Grade	kg	Tonnes	Grade	kg
Operations	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)
Free State												
Underground	78.8	8.75	690	90.8	8.76	795	229.5	6.01	1 380	399.1	7.18	2 865
Surface	_	-	-	971.9	0.24	234	206.9	0.24	49	1 178.8	0.24	283
Total	78.8	8.75	690	1 062.7	0.97	1 029	436.4	3.27	1 429	1 577.8	1.99	3 148
West Rand												
Underground	45.8	4.38	201	77.2	4.26	329	199.3	2.52	502	322.3	3.20	1 032
Evander												
Underground	3.8	14.01	53	3.7	15.48	57	13.1	11.15	146	20.6	12.46	256
Evander												
(below infrastrue	cture) –	-	-	70.1	8.90	624	45.4	3.36	153	115.5	6.73	777
Surface	-	-	-	202.9	0.29	59	_	-	-	202.9	0.29	59
Total	3.8	14.01	53	276.7	2.68	740	58.5	5.11	299	339.0	3.22	1 092
Rand Uranium	1											
Underground	9.5	4.68	45	22.1	2.56	56	10.6	2.07	22	42.2	2.92	123
Surface	121.9	0.29	35	9.4	0.45	4	_	_	-	131.3	0.30	39
Total	131.4	0.60	80	31.5	1.93	60	10.6	2.07	22	173.5	0.93	162
Kalgold	34.0	0.86	29	63.8	0.94	60	27.2	0.93	25	125.0	0.92	114
٥٨												
Underground	137 9	7 16	989	263.9	7.06	1 861	497.9	1 12	2 203	899 7	5 62	5 053
Surface	155.9	0.41	64	1 248.0	0.29	357	234.1	0.32	74	1 638.0	0.30	495
Total	293.8	_	1 053	1 511 9	_	2 218	732	_	2 277	2 537 7	_	5 548
	270.0		1 000	1011.7		2 210	, 02		2 277	2 007.17		0 0 10
Papua												
New Guinea ²	4.3	2.07	9	112.8	1.38	155	256.4	0.67	172	373.4	0.90	336
Grand total	298.1	_	1 062	1 624.7	_	2 373	988.4	_	2 449	2 911.1	_	5 884

Silver

	Measured			Indicated				Inferred				Total		
			Silver			Silver			Silver			Silver		
	Tonnes	Grade	kg	Tonnes	Grade	kg	Tonnes	Grade	kg	Tonnes	Grade	kg		
Operations	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)		
Papua New Gu														
Hidden Valley	4.2	35.00	147	33.1	33.40	1 105	10.9	31.10	340	48.2	33.02	1 592		

Copper

	Measured			I	ndicated	1		Inferred	I	Total			
Operations	Tonnes (Mt)	Grade (%)	Cu (Mkg)										
Papua New G	uinea²												
Golpu	-	_	-	44.9	1.38	621	205.4	0.86	1 763	250.3	0.95	2 384	
Nambonga	_	-	-	_	_	-	19.9	0.22	44	19.9	0.22	44	
Total	-	-	-	44.9	1.38	621	225.3	0.80	1 807	270.2	0.90	2 428	

Molybdenum

	IV	leasured	ł		Indicated	l		Inferred	I	Total		
Tonnes Grade			Мо	Tonnes	Grade	Мо	Tonnes	Grade	Мо	Tonnes	Grade	Мо
Operations	(Mt)	(ppm)	(Mkg)	(Mt)	(ppm)	(Mkg)	(Mt)	(ppm)	(Mkg)	(Mt)	(ppm)	(Mkg)
Papua New Gu	uinea²											
Golpu	_	-	-	44.9	107.72	5	205.4	111.33	23	250.3	110.68	28

Uranium

	IV	leasured	I	I	ndicated	I		Inferred			Total	
	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)
South Africa	Undergro	ound										
Free State												
Masimong	9.7	0.284	3	10.7	0.278	3	76.7	0.238	18	97.1	0.247	24
Phakisa	0.5	0.160	0	22.2	0.196	4	12.7	0.196	2	35.4	0.196	6
Tshepong	0.3	0.209	0	3.5	0.198	1	33.3	0.160	5	37.1	0.164	6
Total	10.5	0.276	3	36.4	0.220	8	122.7	0.212	25	169.6	0.218	36
Rand Uranium	1											
Cooke 2	3.5	0.243	1	6.8	0.228	2	1.1	0.224	0	11.4	0.232	3
Cooke 3	4.0	0.389	2	11.7	0.286	3	6.9	0.280	2	22.6	0.303	7
Total	7.5	0.321	3	18.5	0.265	5	8.0	0.273	2	34.0	0.279	10
Total SA												
Underground	18.0	0.295	6	54.9	0.235	13	130.7	0.216	27	203.6	0.228	46
South Africa	Surface											
Free State Regi	on –	_	_	159.9	0.107	17	13.5	0.336	5	173.4	0.125	22
Rand Uranium ¹	24.5	0.206	5	31.2	0.097	3	-	-	-	55.7	0.145	8
Total SA												
Surface	24.5	0.206	5	191.1	0.105	20	13.5	0.336	5	229.1	0.130	30
Grand total	42.5	-	11	246	-	33	144.2	-	32	432.7	-	76

1 Represents Harmony's equity portion of 40%

2 Represents Harmony's equity portion of 50%

NB Rounding of numbers may result in slight computational discrepancies Note: 1 tonne = 1 000 kg = 2 204 lbs

Mineral resources statement (Imperial)

Gold

	I	Measure	ed	I	ndicated	1	I	nferred	ferred 1 Grade Gold G			Total	
		Grade	Gold		Grade	Gold		Grade	Gold		Grade	Gold	
	Tons	(oz/	oz	Tons	(oz/	oz	Tons	(oz/	oz	Tons	(oz/	ΟZ	
Operations	(Mt)	ton)	(000)	(Mt)	ton)	(000)	(Mt)	ton)	(000)	(Mt)	ton)	(000)	
Free State													
Underground	86.8	0.255	22 170	100.1	0.256	25 571	253.0	0.175	44 358	439.9	0.209	92 099	
Surface	-	-	-	1 071.3	0.007	7 515	228.0	0.007	1 574	1 299.3	0.007	9 089	
Total	86.8	0.255	22 170	1 171.4	0.028	33 086	481.0	0.095	45 932	1 739.2	0.058	101 188	
West Rand													
Underground	50.5	0.128	6 455	85.0	0.124	10 573	219.7	0.073	16 141	355.2	0.093	33 169	
Evander													
Underground	4.2	0.409	1 709	4.1	0.451	1 836	14.4	0.325	4 686	22.7	0.363	8 231	
Evander													
(below infrastrue	cture) –	-	-	77.3	0.260	20 077	50.0	0.098	4 908	127.3	0.196	24 985	
Surface	-	-	-	223.7	0.008	1 897	-	-	-	223.7	0.008	1 897	
Total	4.2	0.409	1 709	305.1	0.078	23 810	64.4	0.149	9 594	373.7	0.094	35 113	
Rand Uranium) ¹												
Underground	10.5	0.137	1435	24.3	0.075	1816	11.6	0.060	702	46.4	0.085	3 953	
Surface	134.4	0.008	1121	10.4	0.013	137	-	-	-	144.8	0.009	1 258	
Total	144.9	0.018	2556	34.7	0.056	1953	11.6	0.060	702	191.2	0.027	5211	
Kalgold	37.5	0.025	944	70.3	0.027	1922	30.0	0.027	818	137.8	0.027	3 684	
SA													
Underground	152	0.209	31 769	290.8	0.206	59 873	548.7	0.129	70 795	991.5	0.164	162 437	
Surface	171.9	0.012	2 065	1 375.7	0.008	11 471	258.0	0.009	2 392	1 805.6	0.009	15 928	
Total	323.9	_	33 834	1 666.5	_	71 344	806.7	_	73 187	2 797.1	_	178 365	
Papua													
New Guinea ²	4.8	0.060	287	124.3	0.040	4 992	282.6	0.020	5 530	411.7	0.026	10 809	
Grand total	328.7	_	34 121	1 790.8	_	76 336	1 089.3	_	78 717	3 208.8	_	189 174	

Silver

	Measured			I	ndicated		I	nferred		Total		
		Grade	Silver		Grade	Silver	er Grade		Silver		Grade	Silver
	Tons	(oz/	ΟZ	Tons	(oz/	ΟZ	Tons	(oz/	οz	Tons	(oz/	οz
Operations	(Mt)	ton)	(000)	(Mt)	ton)	(000)	(Mt)	ton)	(000)	(Mt)	ton)	(000)
Papua New Guinea ²												
Hidden Valley	4.6	1.021	4 739	36.5	0.974	35 537	12.0	0.907	10 920	53.1	0.963	51 196

Copper

	Measured				Indicated	1		Inferred	I		Total	
Operations	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)
Papua New Gu	linea²			40 F	1.05/	1.2/0	224 4	0 779	2.007	07E 0	0.974	
Nambonga	_	_	_	49.5	1.200	- 1 309	220.4 21.9	0.200	3 880 97	275.9	0.864	5 255 97
Total	_	-	-	49.5	1.256	1 369	248.3	0.727	3 983	297.8	0.815	5 352

Molybdenum

	Measured			Indicated			Inferred		Total			
	Tons Grade Mo			Tons	Grade	Мо	Tons	Grade	Мо	Tons	Tons Grade	
Operations	(Mt)	(lb/ton)	(Mlb)	(Mt)	(lb/ton)	(Mlb)	(Mt)	(lb/ton)	(Mlb)	(Mt)	(lb/ton)	(Mlb)
Papua New Gui	nea ²											
Golpu	-	_	-	49.5	0.215	11	226.4	0.223	50	275.9	0.221	61

Uranium

	I	Measured	l		Indicated			Inferred			Total	
	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (MIb)	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)
South Africa U	Indergi	round										
Free State												
Masimong	10.7	0.567	6	11.8	0.556	7	84.6	0.475	40	107.1	0.493	53
Phakisa	0.5	0.320	0	24.4	0.393	10	14.0	0.393	5	38.9	0.392	15
Tshepong	0.3	0.417	0	3.8	0.396	2	36.7	0.320	12	40.8	0.328	14
Total	11.5	0.551	6	40.0	0.441	19	135.3	0.425	57	186.8	0.436	82
Rand Uranium ¹												
Cooke 2	3.9	0.486	2	7.5	0.455	3	1.2	0.447	1	12.6	0.464	6
Cooke 3	4.4	0.778	3	12.9	0.572	7	7.6	0.561	4	24.9	0.605	14
Total	8.3	0.642	5	20.4	0.529	11	8.8	0.546	5	37.5	0.558	20
Total SA												
Underground	19.8	0.589	11	60.4	0.471	30	144.1	0.432	62	224.3	0.456	102
South Africa S	urface											
Free State Region	n 0.0	0.000	0	176.2	0.214	38	14.9	0.672	10	191.1	0.250	48
Rand Uranium ¹	27.0	0.412	11	34.4	0.194	7	0.0	0.000	0	61.4	0.290	18
Total SA												
Surface	27.0	0.412	11	210.6	0.211	45	14.9	0.672	10	252.5	0.259	66
Grand total	46.8	-	22	271	-	75	159.0	-	72	476.8	-	168

1 Represents Harmony's equity portion of 40%

2 Represents Harmony's equity portion of 50%

NB Rounding of numbers may result in slight computational discrepancies Note: 1 ton = 907 kg = 2 000 lbs

Mineral reserve statement (Metric)

Gold

		Proved	I	Probable	е	Total			
		Gold			Gold			Gold	
	Tonnes	Grade	kg ¹	Tonnes	Grade	kg ¹	Tonnes	Grade	kg1
Operations	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)	(Mt)	(g/t)	(000)
Free State									
Underground	32.5	5.98	194	45.1	6.46	291	77.6	6.26	485
Surface	_	_	-	926.5	0.24	224	926.5	0.24	224
Total	32.5	5.98	194	971.6	0.53	515	1 004.1	0.71	709
West Rand									
Underground	14.0	6.30	88	25.9	6.14	159	39.9	6.20	247
Evander									
Underground	2.2	7.20	16	1.6	9.12	15	3.8	8.00	31
Evander (below infrastructure)	-	_	-	42.3	7.28	308	42.3	7.28	308
Surface	-	_	-	202.9	0.29	59	202.9	0.29	59
Total	2.2	7.20	16	246.8	1.55	382	249.0	1.60	398
Rand Uranium ²									
Underground	2.2	4.20	9	4.4	3.45	15	6.6	3.70	24
Surface	30.6	0.29	9	8.8	0.45	4	39.4	0.33	13
Total	32.8	0.55	18	13.2	1.45	19	46.0	0.81	37
Kalgold	21.9	0.82	18	7.5	1.07	8	29.4	0.88	26
SA									
Underground	50.9	6.04	307	119.3	6.61	788	170.2	6.44	1 095
Surface	52.5	0.51	27	1 145.7	0.26	295	1 198.2	0.27	322
Total	103.4	_	334	1 265	_	1 083	1 368.4	-	1 417
Papua New Guinea ³	3.8	2.14	8	62.6	1.13	71	66.4	1.19	79
Grand total	107.2	_	342	1 327.5	-	1 154	1 434.8	-	1 496

Silver

	Proved			F	Probable	9	Total		
			Silver			Silver			Silver
Operations	Tonnes	Grade	kg ¹	Tonnes	Grade	kg ¹	Tonnes	Grade	kg ¹
	(1910)	(g/t)	(000)	(1910)	(8/1)	(000)	(IVIL)	(g/t)	(000)
Papua New Guinea ³		05 50			05 50	0.40		05 50	
Hidden Valley	3.8	35.58	134	24.3	35.52	862	28.1	35.53	996

Copper

	Proved			F	Probable	е	Total			
Operations	Tonnes (Mt)	Grade (%)	Cu (Mkg ¹)	Tonnes (Mt)	Grade (%)	Cu (Mkg ¹)	Tonnes (Mt)	Grade (%)	Cu (Mkg ¹)	
Papua New Guinea ³										
Golpu	-	-	-	35.4	1.13	400	35.4	1.13	400	

Molybdenum

	Proved			F	Probable	•	Total			
Operations	Tonnes (Mt)	Grade (ppm)	Mo (Mkg¹)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg ¹)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg¹)	
Papua New Guinea ³										
Golpu	-	_	-	35.4	121.00	4	35.4	121.00	4	

1 Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.

2 Represents Harmony's equity portion of 40%

 Represents Harmony's equity portion of 50%
NB Rounding of numbers may result in slight computational discrepancies Note: 1 tonne = 1 000 kg = 2 204 lbs



Tshepong, South Africa

Mineral reserve statement (Imperial)

Gold

			Probab		Total				
		Grade	Gold		Grade	Gold		Grade	Gold
	Tons	(oz/	0Z ¹	Tons	(oz/	OZ ¹	Tons	(oz/	OZ ¹
Operations	(Mt)	ton)	(000)	(Mt)	ton)	(000)	(Mt)	ton)	(000)
Free State									
Underground	35.8	0.174	6 242	49.7	0.188	9 356	85.5	0.182	15 598
Surface	_	_	-	1 021.3	0.007	7 212	1 021.3	0.007	7 212
Total	35.8	0.174	6 242	1 071.0	0.015	16 568	1 106.8	0.021	22 810
West Rand									
Underground	15.5	0.184	2 840	28.5	0.179	5 111	44.0	0.181	7 951
Evander									
Underground	2.5	0.210	520	1.8	0.266	470	4.3	0.234	990
Evander (below infrastructure)	_	-	-	46.6	0.212	9895	46.6	0.212	9 895
Surface	_	-	-	223.7	0.008	1 897	223.7	0.008	1 897
Total	2.5	0.210	520	272.1	0.045	12 262	274.6	0.047	12 782
Rand Uranium ²									
Underground	2.4	0.122	299	4.8	0.100	484	7.2	0.108	783
Surface	33.8	0.008	286	9.7	0.013	127	43.5	0.010	413
Total	36.2	0.016	585	14.5	0.042	611	50.7	0.024	1 196
Kalgold	24.1	0.024	575	8.3	0.031	258	32.4	0.026	833
SA									
Underground	56.2	0.176	9 901	131.4	0.193	25 316	187.6	0.188	35 217
Surface	57.9	0.015	861	1 263	0.008	9 494	1 320.9	0.008	10 355
Total	114.1	_	10 762	1 394.4	_	34 810	1 508.5	_	45 572
Papua New Guinea ³	4.2	0.062	260	69.0	0.033	2 272	73.1	0.035	2 532
Grand total	118.3	_	11 022	1 463.4	-	37 082	1 581.6	-	48 104

Silver

		Proved			Probabl	е		Total			
		Grade	Silver		Grade	Silver		Grade Si			
	Tons	(oz/	oz	Tons	(oz/	oz	Tons	(oz/	oz		
Operations	(Mt)	ton)	(000)	(Mt)	ton)	(000)	(Mt)	ton)	(000)		
Papua New Guinea ³											
Hidden Valley	4.2	1.038	4 320	26.8	1.036	27 726	31	1.036	32 046		

Copper

	Proved				Probab	le	Total			
Operations	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade	Cu (Mlb)	Tons (Mt)	Grade	Cu (Mlb)	
Papua New Guinea ³	((10)		((10)		((10)		
Golpu	-	-	-	39.0	1.025	882	39.0	1.025	882	

Molybdenum

	Proved				Probabl	е	Total			
	Tons	Grade	Мо	Tons	Grade	Мо	Tons	Grade	Мо	
Operations	(Mt)	(lb/ton)	(Mlb)	(Mt)	(lb/ton)	(Mlb)	(Mt)	(lb/ton)	(Mlb)	
Papua New Guinea ³										
Golpu	-	_	-	39.0	0.231	9	39.0	0.231	9	

1 Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill delivered tonnes and head grades. Metallurgical recovery factors have not been applied to the reserve figures.

2 Represents Harmony's equity portion of 40%

NB Rounding of numbers may result in slight computational discrepancies Note: 1 ton = 907 kg = 2 000 lbs



Wafi Golpu, PNG

³ Represents Harmony's equity portion of 50%





Free State operations

Geology

Harmony's Free State operations are located on the south-western corner of the Witwatersrand Basin, between the towns of Allanridge, Welkom, Theunissen and Virginia. The basin, situated on the Kaapvaal Craton, has been filled by a 6-kilometre thick succession of sedimentary rocks, which extends laterally for hundreds of kilometres.

The Free State goldfield is divided into two sections, cut by the north-south striking De Bron Fault. This major structure has a vertical displacement of about 1 500 metres in the region of Bambanani, as well as a lateral shift of 4 kilometres. This lateral shift can allow a reconstruction of the orebodies of Unisel to the west of the De Bron Fault and Merriespruit to the east. A number of other major faults (Stuirmanspan, Dagbreek, Arrarat and Eureka) lie parallel to the De Bron Fault.

To the west of the De Bron, the mines and shafts currently in operation are Target, Tshepong, Phakisa, Nyala, Unisel, Bambanani and Joel. Dips are mostly towards the east, averaging 30 degrees but become steeper as they approach the De Bron Fault. To the east of the fault lie Merriespruit 1 and Masimong. These mostly dip towards the west at 20 degrees, although Masimong is structurally complex and dips of up to 40 degrees have been measured. Between these two blocks lies the uplifted horst block of West Rand Group sediments with no reef preserved.

The western margin area is bound by synclines and reverse thrust faults and is structurally complex. Towards the south and east, reefs sub-crop against overlying strata, eventually cutting out against the Karoo to the east of the lease area.

Most of the mineral resource tends to be concentrated in reef bands located on one or two distinct unconformities. A smaller portion of the mineral resource is located on other unconformities. Mining that has taken place is mostly deep-level underground mining, exploiting the narrow, generally shallow dipping tabular reefs.

The Basal Reef is the most common reef horizon and is mined at all shafts except Target and Joel. It varies from a single pebble lag to channels of more than 2 metres thick. It is commonly overlain by shale, which thickens northwards. Tshepong has resorted to undercutting of its mining panels to reduce the effect of shale dilution.

The second major reef is the Leader Reef, located 15-20 metres above the Basal Reef. This is mined mostly at shafts to the south – Unisel and Merriespruit 1. Further north, it becomes poorly developed with erratic grades. The reef consists of multiple conglomerate units, separated by thin quartzitic zones, often up to 4 metres thick. A selected mining cut on the most economic horizon is often undertaken.

The B Reef is a highly channelised orebody located 140 metres stratigraphically above the Basal Reef. Because of its erratic nature, it is only mined at Masimong and Tshepong. Within the channels, grades are excellent, but this reduces to nothing outside of the channels. Consequently, both shafts have undertaken extensive exploration to locate these pay channels.

The A Reef is also a highly channelised reef, located some 40 metres above the B Reef. This is currently only mined at Harmony 2 and Brand, although an extensive channel lies along the western margin from Nyala to Lorraine. It consists of multiple conglomerate bands of up to 4 metres thick and a selected mining cut is usually required to optimise the orebody.

Joel Mine, located 30 kilometres south of Welkom, is the only Harmony Free State operation to mine the Beatrix Reef. This varies from a single-pebble lag to a multiple conglomerate, often showing mixing of the reef with some of the overlying lower grade VS5 (mixed pebble conglomerate) material. None of the other reefs are present this far south, having sub-cropped against the Beatrix Reef.

The Target operations are located at the northern extent of the Free State goldfields, some 20 kilometres north of Welkom. The reefs currently exploited are the Elsburg-Dreyerskuil conglomerates, which form a wedge-shaped stacked package, comprising 35 separate reef horizons, often separated by quartzite beds. The Elsburg Reefs are truncated by an unconformity surface at the base of the overlying Dreyerskuil Member. Below the sub-crop, the Elsburg dips steeply to the east, with dips becoming progressively shallower down dip. Close to the sub-outcrop,

the thickness of the intervening quartzites reduces, resulting in the Elsburg Reefs coalescing to form composite reef packages that are exploited by massive mining techniques at the Target mine. The Dreyerskuil also consists of stacked reefs dipping shallowly to the east. These reefs tend to be less numerous, but more laterally extensive than the underlying Elsburg Reefs.

		Me	easure	d		Indic	ated		Inferred		Total					
			Gold	Gold			Gold	Gold			Gold	Gold			Gold	Gold
	Tonn	es	(000	(000)	Tonne	es	(000	(000)	Tonne	es	(000	(000	Tonne	s	(000	(000
Operations	(Mt	:) g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)
Underground																
Bambanani																
Bambanani	117	11 47	134	4.318	32	9 75	31	1 009	10	10.67	11	356	15 9	11 07	176	5 683
Stevn 2	32	11 49	.37	1 190	0.2	12 04	8	272	0.9	10.01	9	284	4.8	11.30	.70	1 746
	0.2					.2.0		272	017			201				
Total	14.9	11.47	171	5 508	3.9	10.16	39	1 281	1.9	10.37	20	640	20.7	11.12	230	7 429
Joel	5.0	6.85	34	1 096	5.5	7.27	40	1 276	12.5	6.06	76	2 439	23.0	6.52	149	4 811
Masimong 5	11.1	7.68	85	2 732	6.0	7.09	43	1 371	79.7	5.89	469	15 073	96.8	6.17	597	19 176
				4.050					<i>(</i> 0 -						- 40	
Phakisa	4.6	7.06	33	1 052	25.7	10.90	279	8 986	60.7	6.69	407	13 074	91.0	7.90	/19	23 112
Target																
Target 1	54	10 11	55	1 770	14 4	7 37	106	3 411	51	6 32	32	1 038	24 9	7 75	193	6 2 1 9
Target 3	7.1	9.83	70	2 240	10.1	8.67	88	2 827	5.5	6.85	38	1 210	22.7	8.59	196	6 277
Total	12 5	0 05	125	1 010	24.5	7 01	10/	6 238	10.6	6 50	70	2 2/18	17.6	8 15	380	12 /06
lotal	12.5	7.75	125	4 0 10	24.5	7.71	174	0 200	10.0	0.57	70	2 240	47.0	0.15	507	12 470
Tshepong	12.8	11.00	141	4 527	12.5	10.90	136	4 371	11.3	9.55	108	3 473	36.6	10.52	385	12 371
Virginia																
Merriespruit 1	8.1	5.47	44	1 417	3.3	4.21	14	444	35.4	3.88	137	4 410	46.8	4.18	195	6 271
Unisel	9.8	5.82	57	1 828	9.4	5.29	50	1 604	17.3	5.39	93	3 001	36.5	5.48	200	6 433
Total	17.9	5.66	101	3 245	12.7	5.01	64	2 048	52.7	4.37	230	7 411	83.3	4.75	395	12 704
Tatal Free Ctat	_															
Underground	e 78.8	8 75	690	22 170	90.8	8 76	795	25 571	229 4	6 01	1 380	44 358	399.0	7 18	2 864	92 099
Curfage	70.0	0.70	070	22 170	70.0	0.70	,,,,	20 07 1	227.4	0.01	1 000		077.0	7.10	2 004	, 2 0, ,
Surface	<i>.</i>															
Free State Sur	tace				<u> </u>											
Phoenix	-		-	-	92.4	0.30	28	899	1.2	0.22	0	9	93.6	0.30	28	908
St Helena	-		-	-	288.5	0.25	/2	2 319	-	-	-	-	288.5	0.25	/2	2 319
Waste rock dur	nps –		-	-	9.0	0.56	5	162	22.0	0.49	11	345	31.0	0.51	16	507
Slimes dams	-	-	-	-	582.0	0.22	129	4 135	183.6	0.21	38	1,220	765.6	0.22	167	5 355
Total Free Stat	Δ															
Surface	с _	_	_		971 0	0.24	221	7 515	204.8	0.24	10	1 57/	1 179 7	0.24	283	0 0 20
JUILUE					77 1.7	0.24	204	7 515	200.0	0.24	47	1 374	1 170.7	0.24	203	7 007
Grand total	78.8	- 3	690	22 170	1 062.7	- 1	1 029	33 086	436.2	-	1 429	45 932	1 577.7	-	3 147	101 188

Gold – Mineral resources

Free State operations cont.

Uranium – Mineral resources

		Mea	sured			Indicated			Inferred				Total			
Operations	Tonne: (Mt)	s kg/t	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)	Tonnes (Mt)	s kg/t	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)	Tonne Mt)	s kg/t	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)	Tonnes (Mt)	s kg/t	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)
Underground														Ŭ		
Masimong 5 Phakisa	9.7 0.5	0.28 0.16	3 0	6 0	10.7 22.2	0.28 0.20	3 4	7 10	76.7 12.7	0.24 0.20	18 2	40 5	97.1 35.4	0.25 0.20	24 6	53 15
Tshepong	0.3	0.21	0	0	3.5	0.20	1	2	33.3	0.16	5	12	37.1	0.16	6	14
Total Free State Underground	10.5	0.28	3	6	36.4	0.22	8	19	122.7	0.21	25	57	169.6	0.22	36	82
Surface	0.0	0.00	_	0	159.9	0.11	17	38	13.5	0.34	5	10	173.4	0.12	22	48
Total Free State Surface	0.0	0.00	_	0	159.9	0.11	17	38	13.5	0.34	5	10	173.4	0.12	22	48
Grand total	10.5	0.28	3	6	196.3	0.13	25	56	136.2	0.22	30	67	343	0.17	58	130

Modifying factors

Operations	MCF	SW	MW	PRF
	(%)	(cm)	(cm)	(%)
Bambanani	82	187	206	96
Steyn 2	81	142	173	96
Joel	88	150	176	95
Masimong 5	68	135	156	96
Phakisa	82	106	127	96
Target 3	76	100	119	96
Tshepong	66	105	130	96
Merriespruit 1	68	173	214	94
Unisel	76	186	203	95



MW = Milling width PRF = Plant recovery factor

Operations	MCF	PRF
	(%)	(%)
Target 1	100	96
Free State (Phoenix)	100	55
Free State (St Helena)	100	55
Free State (Other)	100	55

MCF = Mine call factor

PRF = Plant recovery factor



Gold – Mineral reserves

		Pro	ved			Pro	bable			Total		
			Gold	Gold			Gold	Gold			Gold	Gold
	Tonnes		(000	(000)	Tonnes		(000)	(000	Tonnes		(000	(000
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)
Underground												
Bambanani												
Bambanani	3.9	10.41	40	1 301	_	_	_	-	3.9	10.41	40	1 301
Steyn 2	0.5	7.26	3	105	0.1	6.95	1	25	0.6	7.20	4	130
Total	4.4	10.08	43	1 406	0.1	6.95	1	25	4.5	10.00	44	1 431
Joel	1.2	6.25	7	240	1.5	5.61	8	264	2.7	5.90	15	504
Masimong 5	5.4	5.11	28	894	1.9	5.09	10	306	7.3	5.10	38	1 200
Phakisa	0.6	4.65	3	94	19.4	8.13	158	5 065	20.0	8.02	161	5 159
Target												
Target 1	4.0	5.50	22	702	7.6	4.49	34	1 104	11.6	4.84	56	1 806
Target 3	1.0	7.59	8	252	3.6	6.33	23	743	4.6	6.61	31	995
Total	5.0	5.93	30	954	11.2	5.08	57	1 847	16.2	5.34	87	2 801
Tshepong	13.1	5.33	70	2 247	9.4	5.36	51	1 626	22.5	5.34	121	3 873
Virginia												
Merriespruit 1	0.4	4.01	2	58	0.1	3.55	0	9	0.5	3.94	2	67
Unisel	2.3	4.71	11	349	1.4	4.67	7	214	3.7	4.70	18	563
Total	2.7	4.60	13	407	1.5	4.62	7	223	4.2	4.60	20	630
Total Free State												
Underground	32.4	5.98	194	6 242	45	6.46	292	9 356	77.4	6.26	486	15 598
Surface												
Free State Surface												
Phoenix	_	_	_	-	92.4	0.30	28	899	92.4	0.30	28	899
St Helena	-	-	_	-	288.5	0.25	72	2 319	288.5	0.25	72	2 319
Waste rock dumps	_	_	_	_	5.1	0.61	3	99	5.1	0.61	3	99
Slimes dams	_		-	-	540.5	0.22	121	3 895	540.5	0.22	121	3 895
Total Free State												
Surface	_	_	_	_	926.5	0.24	224	7 212	926.5	0.24	224	7 212
Grand total	32.4	-	194	6 242	971.5	_	516	16 568	1 003.90	-	710	22 810

Free State operations cont.







Masimong: Grade tonnage curve (measured and indicated resources)



Phakisa: Grade tonnage curve

(measured and indicated resources)





Tshepong: Grade tonnage curve

(measured and indicated resources)



Merriespruit: Grade tonnage curve





Unisel: Grade tonnage curve

(measured and indicated resources)



Free State operations cont.

Bambanani – Basal reef



Joel mine – Beatrix reef





Masimong mine – Basal reef

Masimong mine – B reef





Free State operations cont.

Phakisa mine, Tshepong mine – Basal reef

Target mine – Elsburg and Dreyerskuil reefs



Target mine



Free State operations cont.

Unisel – Basal reef



Unisel – Leader reef



West Rand

Doornkop

Geology

The structure of the West Rand goldfield is dominated by the Witpoortjie and Panvlakte Horst blocks, which are superimposed over broad folding associated with the south-east plunging West Rand syncline. At the Doornkop mine, both the Kimberley Reef and the South Reef are exploited.

The Doornkop shaft lease area is bounded by and lies to the south-east of the major north-easterly striking Roodepoort Fault, which dips to the south and constitutes the southern edge of the Witpoortjie Horst Block or Gap. This Horst Block is comprised of the stratigraphically older sediments of the West Rand Group, the overlying Central Rand Group sediments having been removed by erosion. A number of other faults, forming part of and lying south-east of the Roodepoort Fault, including the Saxon Fault, also constitute conspicuous structural breaks. A second major fault, the Doornkop Fault, which trends in an east-west direction occurs towards the southern portion of the lease area. This fault dips to the south and has an up-throw to the north.

Nearly the entire upper Witwatersrand section is present in the Doornkop lease area and therefore all the major zones are present, though, due to the distance of the area from the fan head, the number of economic bands and their payability is limited. Eight of the well-known reefs are present in the area, but only the Kimberley Reef and South Reef are considered viable at this stage.

The resource is concentrated in the Kimberley and South Reefs. The Kimberley Reef is contained in the Vlakfontein member of the Westonaria Formation. This reef, also known as the K9 Reef horizon, rests on an unconformity and is a complex multi-pulse conglomerate, which can be separated into four facies or cycles. All four cycles consist on average of an upper conglomerate and a lower quartzite. The characteristics of every cycle are area-dependent and the grades are variable within each cycle.

The South Reef is approximately 900 metres below the current Kimberley Reef mining area, and between 7.5 and 60 metres above the Main Reef horizon. The hanging wall to the South Reef consists of siliceous quartzites with non-persistent bands of 'blue-shot' grit and thin argillite partings. The footwall to the South Reef is a light coloured and fairly siliceous quartzite. Secondary conglomerate bands and stringers in the hanging wall and footwall of the South Reef may contain sporadic gold values.

The general strike of the reef is east-west, with a dip from 10 to 20 degrees. The orebody at Doornkop has a strike length of 4 kilometres and a width of 4 kilometres from west to east.

Kusasalethu

Geology

The structure of the orebody on the Far West Rand is dominated by a series of east-trending normal faults with throws of up to 40 metres, as well as a series of north-north-east striking normal faults with generally smaller displacements in the north-west. Faulting is generally less prevalent than in other Witwatersrand Basin goldfields. The primary reefs exploited are the Ventersdorp Contact Reef (VCR) and the Carbon Leader, which are 900 to 1 300 metres apart, increasing from east to west. Secondary targets are the Middelvlei Reef (50 to 75 metres above the Carbon Leader) and the Mondeor Conglomerate Reef Zone, which sub-crops beneath the VCR at Deelkraal and on the western side of Kusasalethu.



Doornkop

Gold – Mineral resources

	Measured				Indica	ted		Inferred				Total				
	Tonne	es	Gold (000	Gold (000	Tonnes	;	Gold (000	Gold (000	Tonne	s	Gold (000	Gold (000	Tonnes	;	Gold (000	Gold (000
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	Mt)	g/t	kg)	OZ)	(Mt)	g/t	kg)	oz)
Underground																
Doornkop																
Kimberley Reef	31.8	2.22	71	2 269	50.4	1.86	93	3 006	177.9	1.81	321	10 335	260.1	1.87	486	15 610
South Reef	1.0	7.08	7	229	1.9	6.42	12	398	20.0	8.35	167	5 366	22.9	8.13	186	5 993
Grand total	32.8	2.37	78	2 498	52.3	2.01	105	3 404	197.9	2.47	488	15 701	283.0	2.37	672	21 603

Modifying factors

Operations	MCF (%)	SW (cm)	MW (cm)	PRF (%)
Doornkop				
Kimberley Reef	95	434	434	95
South Reef	75	124	151	95

MCF = Mine call factor MW = N

SW = Stoping width

MW = Milling width PRF = Plant recovery factor

Gold – Mineral reserves

	Gold Gold <th< th=""><th></th><th>Pro</th><th>bable</th><th></th><th colspan="4">Total</th></th<>					Pro	bable		Total			
Operations	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)
Underground												
Doornkop												
Kimberley Reef	0.9	1.79	2	53	1.0	2.16	2	68	1.9	1.98	4	121
South Reef	0.7	5.06	3	107	1.5	4.41	7	209	2.1	4.61	10	316
Grand total	1.6	3.13	5	160	2.5	3.6	9	277	4.0	3.5	14	437

Doornkop South Reef: Grade tonnage curve

(measured and indicated resources)



Cooke 1/Doornkop geological section looking west Not to scale



Doornkop cont.

Doornkop mine – South reef



Doornkop mine – Kimberley reef



Kusasalethu

Gold – Mineral resources

		Меа	asured		Indicated				Inferred				Total			
	Tonne	S	Gold (000	Gold (000	Tonne	S	Gold (000	Gold (000	Tonne	S	Gold (000	Gold (000	Tonne	S	Gold (000	Gold (000
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	OZ)
Underground																
Kusasalethu	13.0	9.46	123	3 957	24.8	8.97	223	7 169	1.5	9.35	14	440	39.3	9.15	360	11 566
Grand total	13.0	9.46	123	3 957	24.8	8.97	223	7 169	1.5	9.35	14	440	39.3	9.15	360	11 566

Modifying factors

Operations	MCF (%)	SW (cm)	MW (cm)	PRF (%)
Kusasalethu	87	129	158	96
MCF = Mine call factor	MV	V = Millin	g width	
SW = Stoping width	PR	F = Plant	recovery i	factor

Gold – Mineral reserves

	Proved Gold Gold Tonnes (000 (000 (Mt) g/t kg) oz) 12.4 6.70 83 2 680					Pro	bable		Total				
	Tonnes		Gold (000	Gold (000	Tonnes		Gold (000	Gold (000	Tonnes		Gold (000	Gold (000	
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	
Underground													
Kusasalethu	12.4	6.70	83	2 680	23.4	6.42	150	4 834	35.9	6.51	234	7 514	
Grand total	12.4	6.70	83	2 680	23.4	6.42	150	4 834	35.9	6.51	234	7 514	



Kusasalethu cont.

Kusasalethu – Section through main shaft and sub-shaft looking east – Not to scale





Doornkop, South Africa



Kusasalethu: Grade tonnage curve

Kusasalethu Ventersdorp Contact Reef (VCR)



East Rand

Evander

Geology

The Evander Basin is a tectonically preserved sub-basin outside the main Witwatersrand Basin and forms an asymmetric syncline, plunging to the north-east. It is structurally complex with a series of east-north-east striking normal faults. At the south-east margin of the basin, vertically to locally overturned reef is present. The only economic reef horizon exploited in the Evander Basin is the Kimberley Reef. The Intermediate Reef is generally poorly mineralised, except where it erodes the sub-cropping Kimberley Reef to the south and west of the basin.



		Mea	sured		Indicated				Inferred				Total			
Operations	Tonne (Mt)	es g/t	Gold (000 kg)	Gold (000 oz)	Tonne (Mt)	s g/t	Gold (000 kg)	Gold (000 oz)	Tonne Mt)	s g/t	Gold (000 kg)	Gold (000 oz)	Tonne: (Mt)	s g/t	Gold (000 kg)	Gold (000 oz)
Underground																
Evander 8 Evander 9	3.7 0.1	14.02 13.69	52 2	1 659 50	3.6 0.1	15.51 13.99	56 1	1 805 31	12.4 0.6	11.13 11.57	138 7	4 446 240	19.7 0.8	12.47 12.07	246 10	7 910 321
Total	3.8	14.2	54	1 709	3.7	15.48	57	1 836	13	11.15	145	4 686	20.5	12.46	256	8 231
Projects - Belo Evander South Rolspruit Poplar	w Infra – – –	structu – –	re _ _ _	- - -	23.9 29.1 17.2	5.35 11.59 9.28	128 337 159	4 107 10 847 5 123	40.4 4.9 -	3.08 5.69 –	125 28 _	4 006 902 –	64.3 34.0 17.2	3.92 10.74 9.28	253 365 159	8 113 11 749 5 123
Total	_	_	-	-	70.2	8.90	624	20 077	45.3	3.36	153	4 908	115.5	6.73	776	24 985
Subtotal	3.8	14.01	53	1 709	73.9	9.23	681	21 913	58.3	5.11	298	9 594	136	7.59	1 032	33 216
Surface																
Libra Project	-	-	_	-	202.9	0.29	59	1 897	-	-	_	-	202.9	0.29	59	1 897
Total	-	-	-	-	202.9	0.29	59	1 897	-	-	-	-	202.9	0.29	59	1 897
Grand total	3.8	14.01	53	1 709	276.8	2.68	740	23 810	58.3	5.11	298	9 594	338.9	3.22	1 091	35 113

Gold – Mineral resources

Modifying factors

Operations	MCF (%)	SW (cm)	MW (cm)	PRF (%)
Evander 8	74	120	169	96
Rolspruit	80	110	137	95
Poplar	70	110	139	95

MCF = Mine call factor MW = Milling width

SW = Stoping width PRF =

PRF = Plant recovery factor

Operations	MCF (%)	PRF (%)
Libra Project	100	45

MCF = Mine call factor PRF = Plant recovery factor



Gold – Mineral reserves

		Pro	oved			Proba	able			Тс		
			Gold	Gold			Gold	Gold			Gold	Gold
	Tonnes		(000	(000)	Tonnes		(000	(000)	Tonnes		(000	(000
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)
Underground												
Evander 8	2.2	7.20	16	520	1.6	9.12	15	470	3.8	8.00	31	990
Total	2.2	7.20	16	520	1.6	9.12	15	470	3.8	8.00	31	990
Projects - Below Infr	astructure											
Rolspruit	-	_	-	-	26.2	8.08	211	6 790	26.2	8.08	211	6 790
Poplar	-	-	-	-	16.1	5.99	97	3 105	16.1	5.99	97	3 105
Total	-	_	-	-	42.3	7.28	308	9 895	42.3	7.28	308	9 895
Subtotal	2.2	7.20	16	520	43.9	7.35	323	10 365	46.1	7.34	339	10 885
Surface												
Libra Project	_	_	-	_	202.9	0.29	59	1 897	202.9	0.29	59	1 897
Total	_	_	-	_	202.9	0.29	59	1 897	202.9	0.29	59	1 897
Grand total	2.2	7.20	16	520	246.8	1.55	382	12 262	249.0	1.60	398	12 782

Section across Evander Basin

Not to scale



Evander operations

Evander 8 shaft and 9 shaft, Poplar, Rolspruit and Evander South - Kimberley reef



Far West

Kalgold Geology

The Kalgold operation is located within the Kraaipan Greenstone Belt, 60 kilometres south of Mafikeng. This belt is part of the larger Amalia-Kraaipan Greenstone terrain, consisting of north trending linear belts of Archaean meta-volcanic and metasedimentary rocks, separated by granitoid units. Mineralisation occurs in shallow dipping quartz veins, which occur in clusters or swarms, within the steeply dipping magnetitechert banded iron formation. Disseminated sulphide mineralisation, dominated mostly by pyrite, occurs around and between the shallow dipping quartz vein swarms. The D Zone, the largest orebody encountered here, has been extensively mined within a single open-pit operation, along a strike length of 1 300 metres. Mineralisation has also been found in the Mielie Field Zone (adjacent to the D Zone), the A Zone and A Zone West (along strike to the north of the D Zone), and the Watertank and Windmill areas to the north of the A Zone.

Gold - Mineral resources

	Ν	/leasured			Indica	ted		Inferred				Total			
	Tonnes	Gold (000	Gold (000	Tonne	S	Gold (000	Gold (000	Tonne	S	Gold (000	Gold (000	Tonnes	5	Gold (000	Gold (000
Operations	(Mt) g/	't kg)	oz)	(Mt)	g/t	kg)	oz)	Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)
Kalgold	34.0 0.3	36 29	944	63.8	0.94	60	1 922	27.2	0.93	25	818	125.0	0.92	115	3 684
Grand total	34.0 0.8	36 29	944	63.8	0.94	60	1 922	27.2	0.93	25	818	125.0	0.92	115	3 684

Modifying factors

Operations	MCF (%)	Dilution PRF (%) (%)					
Kalgold	100	2	85				
MCF = Mine call factor	PRF = Plant recovery factor						



Gold – Mineral reserves

		Р	roved			Pro	bable		Total			
	Tonnes		Gold (000	Gold (000	Tonnes		Gold (000	Gold (000	Tonnes		Gold (000	Gold (000
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)
Kalgold	21.9	0.82	18	575	7.5	1.07	8	258	29.4	0.88	26	833
Grand total	21.9	0.82	18	575	7.5	1.07	8	258	29.4	0.88	26	833

3D view of Watertank pit Waste dump A-Zone Waste dum Slimes dam north Topsoil dump A Zone Legend Waste dum Mining right area south Pit outline D Zone Waste dump outline Mined out

Kimberley reef

800

400

Metres

200

Papua New Guinea Mineral resources and mineral reserves

Geology

PNG lies at the northern end of the Australian Plate and has three major components: a continental cratonic platform, an arc of volcanic islands and a central collisional fold belt, consisting of Mesozoic sediments, ophiolite sequences, tertiary sediments and diorite intrusions. During collision, the Wau Graben, the host of major gold and silver deposits, was formed in the fold belt. It coincided with a phase of volcanic activity, resulting in precious and base metals deposits being formed. These include epithermal gold deposits at Hidden Valley, Hamata, Kerimenge and Wafi and porphyry-style copper deposits such as Golpu. Numerous other gold and copper-gold prospects, which are at various stages of exploration and evaluation, occur on Harmony's lease areas.



Note: The mineral resources and mineral reserves detailed in the following tables represent Harmony's 50% equity portion of the Morobe Mining Joint Ventures.

	Measured				li	Indicated				Inferred				Total			
Operations	Tonne (Mt)	es g/t	Gold (000 kg)	Gold (000 oz)	Tonne: (Mt)	s g/t	Gold (000 kg)	Gold (000 oz)	Tonne Mt)	s g/t	Gold (000 kg)	Gold (000 oz)	Tonne (Mt)	s g/t	Gold (000 kg)	Gold (000 oz)	
Hidden Valley	4.2	2.08	9	282	33.1	1.71	57 7	1 819	10.9	1.28	14	449	48.2	1.64	80	2 550	
Wafi	-	-	-	-	31.9	2.34 1.97	63	2 017	19.8	1.73	34	1 099	51.7	1.88	97	3 116	
Golpu Nambonga	-	_	-	-	44.9 -	0.65 –	29 _	935 –	205.4 19.9	0.52 0.79	107 16	3 440 505	250.3 19.9	0.54 0.79	136 16	4 375 505	
Grand total	4.3	2.07	9	287	112.8	1.38	156	4 992	256.4	0.67	172	5 530	373.4	0.90	337	10 809	

Gold – Mineral resources
Papua New Guinea - Mineral resources and mineral reserves cont.

Modifying factors

Operations	MCF (%)	PRF (%)
Hidden Valley	95	91
Hamata	95	92
Golpu	100	56

MCF = Mine call factor PRF = Plant recovery factor

Gold – Mineral reserves

		Pr	oved			Prob	able		Total				
	Tonnes		Gold (000	Gold (000	Tonnes		Gold (000	Gold (000	Tonnes		Gold (000	Gold (000	
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	
Hidden Valley	3.8	2.14	8	260	24.3	1.99	43	1 382	28.1	1.82	51	1 642	
Hamata	-	_	-	-	2.9	2.00	6	196	2.9	2.10	6	196	
Golpu	_	-	-	-	35.4	0.61	22	694	35.4	0.61	22	694	
Grand total	3.8	2.14	8	260	62.6	1.13	71	2 272	66.4	1.19	79	2 532	

Silver – Mineral resources

	Measured				Indicated				Inferred					Total			
			Silve	r Silver			Silver	Silver			Silver	Silver			Silver	Silver	
	Tonne	S	(000	(000	Tonne	S	(000)	(000	Tonnes	5	(000	(000	Tonne	s	(000	(000	
Operations	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	oz)	
Hidden Valley	4.2	35.00	147	4 739	33.1	33.40	1 105	35 537	10.9	31.10	340	10 920	48.2	33.02	1 592	51 196	
Grand total	4.2	35.00	147	4 739	33.1	33.40	1 105	35 537	10.9	31.10	340	10 920	48.2	33.02	1,592	51 196	

Modifying factors

Operations	MCF (%)	PRF (%)
Hidden Valley	100	77

MCF = Mine call factor PRF = Plant recovery factor

Silver – Mineral reserves

		Pi	roved			Prob	able		Total				
	Tonnes		Silver	Silver	Tonnes		Silver	Silver	Tonnes		Silver	Silver	
Operations	(Mt)	g/t	kg)	(000 0Z)	(Mt)	g/t	kg)	oz)	(Mt)	g/t	kg)	(000 0Z)	
Hidden Valley	3.8	35.58	134	4 320	24.3	35.52	862	27 726	28.1	35.53	997	32,046	
Grand total	3.8	35.58	134	4 320	24.3	35.52	862	27 726	28.1	35.53	997	32 046	

Copper – Mineral resources

	r	Mea	sured			Indicated			Inferred				Total			
	Tonnes		Cu	Cu	Tonnes	S	Cu	Cu	Tonne	S	Cu	Cu	Tonne	S	Cu	Cu
Operations	(Mt)	%	(Mkg)	(Mlb)	(Mt)	%	(Mkg)	(Mlb)	Mt)	%	(Mkg)	(Mlb)	(Mt)	%	(Mkg)	(Mlb)
Golpu	_	_	_	-	44.9	1.38	621	1 369	205.4	0.86	1 763	3 886	250.3	0.95	2 384	5 255
Nambonga	_	-	-	-	_	_	-	-	19.9	0.22	44	97	19.9	0.22	44	97
Grand total	-	-	-	-	44.9	1.38	621	1 369	225.3	0.80	1 807	3 983	270.2	0.90	2 428	5 352

Modifying factors

Operations	MCF	PRF
	(%)	(%)
Golpu	100	88
MCF = Mine call factor	PRF = Plant recovery	factor

Copper – Mineral reserves

		roved			Prot	oable		Total				
	Tonnes		Cu	Cu	Tonnes		Cu	Cu	Tonnes		Cu	Cu
Operations	(Mt)	%	(Mkg)	(Mlb)	(Mt)	%	(Mkg)	(Mlb)	(Mt)	%	(Mkg)	(Mlb)
Golpu	-	_	_	-	35.4	1.13	400	882	35.4	1.13	400	882
Grand total	-	-	-	-	35.4	1.13	400	882	35.4	1.13	400	882

Molybdenum – Mineral resources

	Measured				I	ndicate	d		Ir	nferred			Total				
	Tonnes	;	Мо	Мо	Tonnes	S	Мо	Мо	Tonne	S	Мо	Мо	Tonnes	;	Мо	Мо	
Operations	(Mt)	ppm	(Mkg)	(Mlb)	(Mt)	ррт	(Mkg)	(Mlb)	Mt)	ррт	(Mkg)	(Mlb)	(Mt)	ppm	(Mkg)	(Mlb)	
Golpu	_	_	_	-	44.9	107.72	5	11	205.4	111.33	23	50	250.3	110.68	28	61	
Grand total	-	-	-	-	44.9	107.72	5	11	205.4	111.33	23	50	250.3	110.68	28	61	

Papua New Guinea – Mineral resources and mineral reserves cont.

Modifying factors

Operations		MCF	PRF
		(%)	(%)
Golpu		100	36
	005	Diant un an un un	(

MCF = Mine call factor PRF = Plant recovery factor

Molybdenum – Mineral reserves

		Prov	/ed			Prob	able			Total				
	Tonnes		Мо	Мо	Tonnes		Мо	Мо	Tonnes		Мо	Мо		
Operations	(Mt)	ppm	(Mkg)	(Mlb)	(Mt)	ppm	(Mkg)	(Mlb)	(Mt)	ррт	(Mkg)	(Mlb)		
Golpu	-	-	_	-	35.4	121.00	4	9	35.4	121.00	4	9		
Grand total	-	-	-	-	35.4	121.00	4	9	35.4	121.00	4	9		

Hamata open pit

Hidden Valley



Wafi-Golpu project

Golpu block cave, Wafi Project





Appendix

Reporting code

Harmony uses the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC Code), which sets out the internationally recognised procedures and standards for reporting of mineral resources and ore/mineral reserves in South Africa. This code was developed by the South African Institute of Mining and Metallurgy and is the recommended guideline for reserve and resource reporting for companies listed on the JSE Limited. Harmony's reporting of its Australian and PNG mineral resources and mineral reserves also complies with the Australian Code for the Reporting of Mineral Resources and Mineral Resources and Mineral Resources and Mineral Resources and mineral reserves, distinct cognisance has also been taken of Industry Guide 7 of the United States Securities Exchange Commission.

Definitions as per the SAMREC code

Mineral resources

A mineral resource is a concentration (or occurrence) of material of economic interest in or on the earth's crust in such form, quality and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a mineral resource are known, estimated from specific geological evidence and knowledge, or are interpreted from a well constrained and portrayed geological model.

Mineral resources are sub-divided in order of increasing confidence in respect of geoscientific evidence into inferred, indicated and measured categories.

An inferred mineral resource is that part of a mineral resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and sampling, and assumed but not verified geologically and/or through analysis of grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that may be limited or of uncertain quality and reliability.

An indicated mineral resource is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and the testing of information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

A measured mineral resource is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Mineral reserves

A mineral reserve is the economically mineable material derived from a measured and/or indicated mineral resource. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a pre-feasibility study for a project, or a life of mine plan for an operation, must have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors). Such modifying factors must be disclosed.

A **probable mineral reserve** is the economically mineable material derived from a measured and/or indicated mineral resource. It is estimated with a lower level of confidence than a proved mineral reserve. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a pre-feasibility study for a project, or a life of mine plan for an operation, must have been carried out, including

consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Such modifying factors must be disclosed.

A proved mineral reserve is the economically mineable material derived from a measured mineral resource. It is estimated with a high level of confidence. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a pre-feasibility study for a project, or a life of mine plan for an operation, must have been carried out, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Such modifying factors must be disclosed.

Harmony reporting in compliance with SAMREC

In order to meet the requirements of the SAMREC code that the material reported as a mineral resource should have "reasonable and realistic prospects for eventual economic extraction", Harmony has determined an appropriate cut-off grade which has been applied to the quantified mineralised body according to a process incorporating a long-term view on future economic modifying factors. In applying this process, Harmony uses a gold price of R370 000/kg to derive a cut-off grade to determine the mineral resources at each of its South African underground operations. Mineral resources have been estimated on the basis of geoscientific knowledge with input from the company's mineral reserve managers, geologists and geostatistical staff. Each mine's mineral resources are categorised, blocked-out and ascribed an estimated value. At most mines computerised geostatistical estimation processes are used.

In order to define that portion of a measured and indicated mineral resource that can be converted to a proved and probable mineral reserve, Harmony applies the concept of a cut-off grade. At our underground South African mines, 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 maximised. The cut-off grade is determined using the company's Optimiser software which requires the following as input: the database of measured and indicated resource blocks (per shaft section); an assumed gold price which, for this mineral reserve statement, was taken as R250 000/kg; planned production rates; the mine recovery factor (MRF) which is equivalent to the mine call factor (MCF) multiplied by the plant recovery factor (PRF); and planned cash operating costs (rand per tonne). Rand per tonne cash operating costs are historically based but take cognisance of distinct changes in the cost environment such as restructuring, right-sizing, and other cost reduction initiatives, and for below-infrastructure ounces, an estimate of capital expenditure.

The block cave reserve at Golpu in PNG uses PCBC software to define the optimal mine plan and sequencing. The open-pit reserve at Hidden Valley in PNG is constrained by the capacity of the tailings storage facility with the Whittle optimisation programme guiding the most efficient mine design given this constraint.

The mineral reserves represent that portion of the measured and indicated resources above cutoff 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, including geology, survey, planning, mining engineering, rock engineering, metallurgy, financial management, human resources management and environmental management, has been involved at each mine in the life-of-mine planning process and the conversion of resources into reserves.

The modifying factors related to the oreflow that are used to convert the mineral resources to mineral reserves through the lifeof-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. As a result of the depth at which mining occurs and the resulting rock engineering requirements at our South African underground mines, some shafts include stope support pillars into the design of their mining layouts which accounts for discounts of 7% to 10%. A further 15% discount is applied as a life-of-mine factor to provide for unpay and off-reef mining. In general, life-of-mine plan extraction factors do not exceed 85% and are reflected in the mineral reserves.

Tshepong, South Africa

Glossary of geological terms

Below infrastructure	That part of a company's mineral reserve that can only be accessed following certain capital expenditure which has yet to be approved.
Craton	A part of the earth's crust that has attained stability and has been little deformed for a long period of geological time.
Diorite	A group of plutonic rocks intermediate in composition between acidic and basic.
Felsic:	An igneous rock having abundant light coloured minerals.
Graben	A block of rock that lies between two faults and has moved downward to form a depression between two adjacent fault blocks.
Greenstone	A field term for any compact dark green altered or metamorphosed basic igneous rock that owes its colour to chlorite.
Horst	A block of rock that lies between two faults and has moved upward relative to the two adjacent fault blocks.
Kaapvaal Craton	The ancient protocontinental basement of South Africa.
Lacustrine	Pertaining to sediments formed in lakes.
Mafic	An igneous rock composed chiefly of dark, ferromagnesium minerals.
Ophiolite	A group of mafic and ultramafic igneous rocks derived by metamorphism, whose origin is associated with an early phase of the development of a geosyncline.
Plunge	The inclination of a fold axis or other linear feature, measured in the vertical plane.
Sub-outcrop	A rock stratum that unconformably underlies another rock stratum.
Syncline	Concave fold in stratified rock, in which strata dip down to meet in a trough.
Witwatersrand Basin	A sedimentary basin in South Africa.